

GOLDEN HILLS STUDY

A Management Plan

August, 1986

Prepared for the Conservation Commissions of Saugus and Wakefield,
Massachusetts by Geoffrey A. Rogers, M.R.P.

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This report could not have been prepared without the assistance of the following individuals and agencies:

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I offer my apologies to anyone who I have left out.
 August 15, 1986

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1. INTRODUCTION

1.1: Purpose.

The purpose of this report is to compile a comprehensive inventory of physical and cultural resources of the Golden Hills area in Wakefield and Saugus, Massachusetts, and to propose management strategies and preservation schemes for important parcels in the area.

1.2: Background.

The towns of Saugus and Wakefield, located about 10 miles north of Boston, have little room left for development. Land values have soared in recent years, placing extreme pressure on the few remaining tracts of open land in this area.

The Golden Hills area, subject of this report, is one of these remaining areas with significant open space, and it is no exception to the rule of development pressure. Although much of the study area is already developed with residential housing, there exist some three hundred acres of open land, mostly in the northern part of the region. Since a portion of this land is steep, ledgy, or wet, the result is additional pressures on the more easily developable tracts.

A group of concerned citizens, known as the Golden Hills Association, initiated this study, under the auspices and financial support of the Saugus and Wakefield Conservation Commissions, and with assistance from State Representatives Angelo and Tisei and the

Reservations and Interpretive Services division of the Metropolitan District Commission. An independent environmental planning consultant, Geoffrey A. Rogers, contracted with the two towns to perform the study, with assistance from the Golden Hills Association, Conservation Commissions, Representatives Angelo and Tisei, and MDC.

1.3: Description of Study Area.

The Golden Hills area is located in western Saugus and southeastern Wakefield, about 10 miles north of Boston (see Figure 1.1). Although the southwestern part of the study area is largely developed with houses, most of the northern section is open land. The study area consists of some 450 acres, with approximately 300 acres of open land, much of which is extremely hilly and stony, with large rock outcrops (ledge).

Topography of the Golden Hills Area is variable. As the name implies, the terrain is generally hilly, and in fact the highest elevation in the town of Saugus (approximately 245 feet above MSL) is found in the study area. However, there are also low, flat areas in the Golden Hills, and the three ponds which contributed to the area's popularity as a place for summer cottages, and, later, year-round residences, are in one of these flat areas. The southernmost pond, known informally as First Pond, is at approximately 81 feet above MSL. Wetlands have formed in depressions throughout the study area, often indicating the presence of a "perched" water table, where downward movement of groundwater is prevented or retarded.

The undeveloped areas of the Golden Hills are large enough to support a large and diverse population of wild animals. As urbanization in the surrounding areas continues, the Golden Hills

will become an island in a sea of urbanization more and more. Already the area is becoming the home of formerly rare species such as foxes, and there have been many reported sightings recently of a fisher, an animal that ordinarily will not tolerate any human contact. The varied terrain, forested areas, and wetlands make excellent wildlife habitat.

2. METHODS

This chapter describes the methodology used in the Golden Hills Study and discusses the format used for findings.

The study was performed by Geoffrey A. Rogers, independent planning consultant to the towns of Saugus and Wakefield, with input from members of the Saugus Conservation Commission, Wakefield Conservation Commission, Golden Hills Association, and staff from the offices of Massachusetts State Representatives Angelo and Tisei. This group, known as the Golden Hills Study Committee, met approximately every two weeks to discuss the study progress and offer suggestions to the Consultant. A public hearing was held at the end of the project.

2.1: Inventory

This phase consisted of conducting an in-depth survey of natural, cultural, esthetic, economic, and other resources of the study area. Tools used were ✓ Essex County Soil Survey, ✓ US Geological Survey quadrangle for Boston North, ✓ Open Space Plans for both Saugus and Wakefield, aerial photographs, ✓ Lakes and Ponds Inventory for Essex County, ✓ assessors records from both towns, discussions with residents and other individuals, and extensive field survey.

2.2: Analysis

In this phase of the study, ecological, cultural, esthetic, recreational, and economic values were examined for the area. Critical Environmental Areas (CEA's) were assigned, on the basis of presence of rare or unusual species or habitats or "unbuildable"

areas, such as extreme slopes, rock outcrops, and wetlands.

WHAT IS AN UNBUILDABLE SLOPE?

40%

2.3: Evaluation

The Evaluation phase consisted of examining various management approaches, to reflect different biases, according to the values determined in the Analysis phase. The approach favored by the Study Committee and the Consultant is explained in detail in the Findings section.

2.4: Synthesis

In the final, or Synthesis, phase, recommendations were developed and a final report was prepared for distribution to Study Committee members for comments. At this time, a public hearing was held to discuss the report and its findings and to solicit input from the public. Wherever possible, these comments were incorporated into the final draft of the report.

3. FINDINGS

In this chapter, the results of the Inventory and Analysis phases of the study, and their implications, are discussed. The Critical Environmental Areas (CEA's) are explained in some detail.

3.1: Inventory

The following topics were covered in the Inventory section:

Topography	Geology and Soils
Vegetation	Wildlife
Surface Water	Visual Characteristics
Land Use	Ownership

Land Use

Of the approximately 450 acres in the study area, roughly 300 are undeveloped land. The vast majority of development in the study area consists of residential single family dwellings, and most of this is centered around First, Griswold, and Spring Ponds in the southern end. At one time, the Golden Hills, like much of the other land in Saugus and Wakefield, was considered a resort area, and wealthy Bostonians built summer cottages there in profusion around the turn of the century. Many of these cottages are still standing, and the majority have been converted to year-round use. There are two playgrounds in the study area, and the Wakefield Municipal Light Corporation operates an electric power substation in the northern part of the study area at the corner of Farm Street and Harmon Road. Power lines running south and southwest from this substation form the boundary of the study area. The only other land use in the Golden Hills is a tree farm operated by Bedford Chandler, behind Old Nahant

Road.

Topography

As the name Golden Hills implies, the study area is hilly. In fact, much of the area is rough, steep, exposed bedrock, with extreme slopes. A slope map has been prepared, showing only slopes of over 40 percent, and this is included in the Development Restricted Lands map (see Figure 3.1). The figure of 40 percent was chosen, because it would be hard to dispute that this high a figure represents serious development constraints. The area represented by the 40 percent or greater slopes is large enough that one may extrapolate the area covered by other, lesser, slopes, in the Golden Hills. The topography around the three large ponds in the southern part of the study area is quite a bit flatter than that of the northern section, although parts of this area are still quite hilly, especially along the shoreline of Spring Pond.

Geology and Soils

Both Saugus and Wakefield are in the Fells Upland geomorphic district. This district is named from the Middlesex Fells, and is bounded by a bold escarpment that ranges in height from 100 to 300 feet above mean sea level (MSL). The district is largely less than 250 feet above MSL and contains large areas of exposed bedrock.

Principal rock formations in the study area include the Middlesex Fells Volcanics, Lynn Volcanics, and the Westboro Formation. All of these formations date from Upper Precambrian times.

Topography of the Golden Hills Area is variable. As the

name implies, the terrain is generally hilly, and in fact the highest elevation in the town of Saugus (approximately 245 feet above MSL) is found in Breakheart Reservation, just north of the study area. However, there are also low, flat areas in the Golden Hills, and the three ponds which contributed to the area's popularity as a place for summer cottages, and, later, year-round residences, are in one of these flat areas. Wetlands have formed in depressions throughout the study area, often indicating the presence of a "perched" water table, where downward movement of groundwater is prevented or retarded.

Soils in the Golden Hills are generally thin and bouldery, and bedrock outcrops, or ledge, are prevalent throughout the area (especially in hilly sections). Soils data for the Wakefield side have not been revised since the 1925 Middlesex County Soil Survey was prepared, which identified general groupings of soil types. However, Saugus data are available from the 1984 Essex County Soil Survey, and these findings may be extrapolated to the relatively small part of the study area that includes Wakefield. In brief, there are only three soil types identified in the Saugus portion of the Golden Hills study area: Chatfield, Whitman, and Freeport. These soils are all considered poor for building and most other uses because of steepness, shallow depth to bedrock, or in the case of the latter two soil types, excessive wetness. The Whitman and Freeport soils are organic soils found in wetland areas, and their permeability and strength are quite low. According to the US Department of Agriculture Soil Conservation Service (USDA SCS), principal values of these soils are for wildlife habitat or limited passive recreation. Some Merrimack soils were identified in Wakefield in the 1925 report,

but these are exclusively in extremely hilly areas, posing limitations to building. Merrimack soils are also too porous for safe filtration in the case of on-site septic disposal. The following is a summary of characteristics, uses, and limitations of these soil types.

Chatfield-Hollis-Rock Outcrop Association (CrC, CrD):

These soils are grouped together into an association because they are intermingled throughout the study area, and are found in such small, interspersed pockets that mapping them individually would be almost impossible. The association is comprised of well-drained Chatfield soils and somewhat excessively drained Hollis soils. The Chatfield soils are moderately deep, while the Hollis soils tend to be shallow. Also found in this association are rock outcrops and poorly drained organic soils in depressions. Principal uses for soils in this grouping is woodland. Erosion hazard is described as "slight", while equipment limitations are "moderate". White pine, red pine, Norway spruce, and European larch are the recommended trees to plant. Site indices for sugar maple, red oak, and white ash are 65, 70, and 75, respectively. These soils are also suitable for passive recreation, although active, or "developed", recreation is not recommended. Limitations for

any type of building, which includes construction requiring excavation or the emplacement of any permanent structures, are "severe". However, there are only "slight" limitations on the construction of trails and paths, and soils in this group are considered "good" wild herbaceous plant habitat.

Freetown Muck, Ponded (Fp)

This soil is found in depressions and along streams and rivers. Typically, it is covered by standing water for much of the year, and it supports a community of grasses and other emergent aquatic plants. Due to wetness and very poor drainage, Freetown soils are considered unsuitable for any type of construction. They are not good forestry soils, with site indices for red maple, Atlantic white cedar, and Eastern hemlock at 50, 60, and 55, respectively. Freetown soils are good wildlife and aquatic plant habitat, but have "severe" limitations for developed recreation.

Merrimack Fine Sandy Loam (MmD)

Merrimack soils are moderately deep and somewhat excessively drained. The Merrimack soils found in the study area are on steep hillsides, and are unsuitable for timber harvesting with heavy

machinery because of this steepness. Otherwise, they are good soils for forestry. This soil has extreme permeability, and is therefore unsuitable for septic tank installation because rapid permeability makes for poor filtration. Construction limitations are "moderate" to "severe", because of steepness. Site indices for northern red oak, eastern white pine, and sugar maple are 51, 64, and 58, respectively. Pines are the recommended species to plant, especially white and red pine.

Whitman Extremely Stony Loam (Wh)

Whitman soils are deep and gently sloping, and very poorly drained. Although they are usually wooded, soils in this category are poor for forestry because of wetness. They have a slight erosion hazard, but the dangers of equipment damage, seedling mortality, and windthrow are "severe". Site indices for white pine, red spruce, and red maple are 56, 44, and 55, respectively. The soils are well suited for wetland wildlife habitat, but limitations on any type of building are considered "severe".

Vegetation

The major part of the study area is

forested with mixed deciduous trees of uneven ages. White pines and hemlocks are not uncommon in places, but the dominant trees are oaks and maples throughout the Golden Hills. Relatively thick underbrush grows beneath the deciduous stands, and there is a healthy crop of ericaceous shrubs (including blueberries and huckleberries) in the rocky areas to the north, especially where fires have burned out competing, less fire-tolerant understory plants. Typically, soils in the study area are thin and bouldery, or wet, and are not well suited for forestry. For a list of trees and shrubs, see Figure 3.2.

In wetland areas, typical wetland communities consist of emergent aquatic plants, such as cattails, sedges, water lilies, and small trees such as red maples, grey birches, and alders. While this type of environment, and the thin, rocky soils of the upland sections are not good forestry areas, they do support a rich and varied community of wildflowers. Many of these species are listed in Figure 3.3.

Figure 3.2: Trees and Shrubs of the Golden Hills

Eastern white pine	Highbush blueberry
Eastern hemlock	Sweetfern
White birch	Witch hazel
Grey birch	Shadbush
Black birch	Lowbush blueberry
Yellow birch	Huckleberry
Red oak	Blackberries (various)
Sassafras	Barberry ✓
Black cherry	
American ash	
Slippery elm ✓	
Red maple	
Sugar maple	
Black locust	
Red pine	
Red spruce	
Quaking aspen	
Staghorn sumac	
Shagbark hickory	

Figure 3.3: Wildflowers of the Golden Hills

(In no particular order):

Blue-eyed grass ✓	Indian pipe
Solomon's seal	Lizard's tail ✓
Wild strawberry	Common thistle
Poison ivy	Pale corydalis ✓
Poison sumac ✓	Pokeweed
Wild grape	Wild bleeding heart ✓
Common flax	Periwinkle ✓
Phlox ✓	Common milkweed
Mullein	Rabbit-foot clover
Butterwort ✓	Bellwort ✓
Yellow-eyed grass ✓	Great blue lobelia ✓
Common cattail	Starflower ✓
Jack-in-the-pulpit	Wild rose (Rugosa)
Moccasin flower ✓	Orange day lily ✓
Wild columbine ✓	
Arrow arum ✓	
Marsh marigold ✓	
Wild oats ✓	
Yellow goldenrod ✓	
Pond lilies (Nuphar and Nymphaea)	
Common buttercup	
Butter & eggs	
Goldthread ✓	
Wild lily of the valley ✓	
Lily of the valley	
Wood anemone ✓	
Queen Anne's lace	
Sweet white violet ✓	
Foamflower ✓	
Field chickweed ✓	
Daisy fleabane ✓	
Common chickory	
Yellow milfoil ✓	
Dandelion	
Wild lettuce	
Hawkweed	
Common violet	
Forget-me-not ✓	
Skunk cabbage	
Ox-eye daisy ✓	
Pink lady's slipper	
Wild geranium ✓	
Bull thistle	
Fireweed ✓	
Bluets ✓	

Wildlife

Wildlife is abundant in the Golden Hills area because of the abundant undeveloped habitat found there. In suburban communities of the Boston Metropolitan Region, the Golden Hills represents an island in a sea of urbanization, and wildlife species have been pushed back into these areas more and more in recent years, as development encroached further into existing habitats. As a result, the diversity and occurrence of some relatively rare wildlife species, such as fishers, foxes, and owls, has increased alongside more common animals like skunks, raccoons, and opossums.

Birds are extremely plentiful in the study area, including many wetland-loving species such as geese, ducks, and warblers. Shorebirds are frequent visitors, and Canada geese raised a brood on one of the large ponds in the spring of 1986 for the first time in many years. The existence of open water, brooks, swamp, woods, and open areas makes excellent habitat for songbirds, and dozens of species of these may be seen in the Golden Hills in the spring and fall, during migration. A partial bird list is presented in Figure 3.4.

Figure 3.4: Birds of the Golden Hills

Sparrows (field, swamp, tree, others)
Red-winged blackbird
Baltimore oriole
Scarlet tanager
Indigo bunting
Rufous-sided towhee
Northern junco
Whip-poor-will
Common grackle
Vireo
Purple martin
Tree swallow
Cardinal
American finch
Purple finch
House finch
Ruby-throated hummingbird
Ringneck pheasant
Sparrow hawk
Red-tailed hawk
Mallard
Canada goose
Yellow warbler
Yellow-rumped warbler
Common yellowthroat
Palm warbler
Prairie warbler
Blackbird
European starling
House wren
Bluejay
American crow
Screech owl
Barn owl
Saw-whet owl
Barred owl (?)
Mourning dove
Downy woodpecker
Black-capped chickadee
Nuthatch
Tufted titmouse
Mockingbird
Grey catbird
Mockingbird
Brown thrasher
Veery
Robin
Wood thrush

Surface Water

There are three minor watersheds in the study area. Ultimately, all drain east to the Atlantic Ocean via the Saugus River through a network of rills and small brooks, most of which are not named.

The study area is rich in both wetlands and water bodies. Major bodies of water include three ponds in the southern part of the study area on the Saugus side, known as First, Griswold, and Spring Ponds. The three ponds are owned by the Town of Saugus, as voted at the Special Town Meeting of October 19, 1970. First Pond is a kettle pond, which formed from a block of melting ice left behind by the glacier some 6,000 years ago. It covers about 3.4 acres. Griswold Pond is an "enhanced" pond, which means its size has been increased by, in this case, an earthen dam at the outlet. Griswold covers 12.9 acres, with a maximum depth of 28 feet. Spring Pond, also an enhanced pond, is about 7.7 acres in size, with an average depth of eight feet. These ponds have residences scattered along their shores, although a good amount of undeveloped shoreline exists, especially on Spring Pond. There are several small ponds in the Golden Hills, including Blueberry Pond to the north and several unnamed ponds scattered throughout the area, some of which virtually dry up in the dry summer months. All contain abundant emergent vegetation and provide excellent wildlife habitat, although old refrigerators, beer kegs, and other debris have been dumped in some of the ponds. Emergent palustrine wetlands and red maple swamps are also found throughout the study area. These and other water bodies are shown on the Development Restricted Lands Map (see Figure 3.1). To the north is a fairly large (about six acres) emergent wetland, containing a

shallow pond at its southern extremity. It is partially in the Wakefield Town Forest, near the former site of Castle Clare, from whence a brook drains into the wetland.

Visual Characteristics

One of the study area's greatest assets is its visual quality, especially of the undeveloped sections to the north and east. The relief of the land is great for this section of the state, which is rather flat; the highest point in the Town of Saugus is in Breakheart Reservation, just north of the Study area. In the study area itself, the highest point is in the Wakefield Town Forest atop a hill just northwest of Spring Pond, at 230 feet. The lowest section of the Golden Hills study area is in a swamp at the extreme south, which has an elevation of 65 feet.

This relief lend itself to excellent views, particularly from the ledgy areas near the site of Castle Clare. From these spots, the city of Boston may be seen to the south, Wakefield Town Center to the north, and a vast expanse of green trees to the west. This expanse is broken up in places by open water and swampland.

Ownership

Nearly all of the Golden Hills has been subdivided at one time or another. In the 'teens and 'twenties, a developer named Griswold owned most of the land near the three large ponds, and he recorded subdivision plans with the towns at that time, with most of the land divided into tiny lots (many of these 30 by 90 feet!), for the purpose of constructing summer cottages near the water.

Fortunately, most of these tiny lots were never built upon, but a great many of them were sold to individuals. As a result, there are many landowners in the study area. Large parcels are owned by both towns and by some private landowners: Wakefield owns some 50 acres, which are mostly Town Forest land, while Saugus owns several acres along some paper streets, which was taken for nonpayment of taxes. The Saugus land is under the jurisdiction of the Conservation Commission. Landowners of the significant properties suggested for protection or acquisition are listed in the Synthesis chapter.

3.2: Analysis.

This phase of the study examines values of the Golden Hills area, from ecological, cultural, esthetic, recreation, and economic perspectives. Once these values are determined, they may be evaluated and priorities assigned for preservation or development.

I. Ecological Values.

A. Wildlife Habitat: Certainly one of the important values of the Golden Hills area is its worth as a wildlife habitat. The area may be viewed as an island in a sea of urbanization that spreads north from the Boston area, and it is to this "island" that many wild animals have been forced to retreat. The list of species is long, and is included in Chapter 2 in the Inventory section of this report, so it will not be repeated in this section. Suffice it to say, however, that relatively common species, such as racoons, rabbits, and opossums, share the forests and wetlands of the Golden Hills with rarer species such as owls and even fishers.

Reasons for the abundance and diversity of wildlife in the area include the spread of urbanization that has occurred throughout the Boston metropolitan region, forcing wildlife species to retreat to undeveloped environments, and the excellent, diverse types of habitats found in the Golden Hills. The ponds and wetlands afford comparatively unusual habitat, suitable for waterfowl, songbirds, and a variety of predators, including foxes, owls, hawks, and perhaps coyotes (although there have been no actual reported sightings, the Eastern coyote is repopulating New England). Diverse habitats make for diverse wildlife, and the study area boasts woods with varying understory vegetation, interspersed with rock outcrops for foraging in the open. In short, diversity of both habitats and wildlife species in the Golden Hills is high, and this is certainly a valuable commodity in this urbanized region.

B. Unique or Rare Habitats: In addition to the diversity of wildlife species that live in the Golden Hills because of the varied habitats available there, there are some species which live in the study area because it offers unique or rare habitats necessary for the species to survive. For example, Canada geese raised a brood on one of the ponds in the spring of 1986, the first time this has happened in many years. Nesting geese require relative seclusion, and a large enough water area to teach the young to swim and escape predators, and this combination is available in the Golden Hills. The presence of many rare songbirds during migration, or of rare wildflowers seen in the Golden Hills, are other examples.

C. Bird Migration Corridor: As every experienced birder knows, thousands of birds migrate through our area each spring and

fall on their way to breeding or wintering grounds. Many of these fly literally thousands of miles each way, so it is essential that they have places to stop for rest and food along the way. In areas such as the Boston metro region, these stopover places are dwindling, and so undeveloped lands like the Golden Hills are increasingly valuable from the point of view of migrating birds.

II. Cultural Values

A. Farming Economy Remnants: It is sometimes hard to imagine that nearly all the land in New England was once farmed, but around 1830, this was certainly the case. Before the railroads were built, opening up the fertile lands of the Ohio Valley to settlement, New Englanders had to provide essentially all their own food, and, as a result, nearly all of the land in Massachusetts was used for agriculture. The Golden Hills is no exception. Remnants of farm economy can still be found in the woods throughout the study area, especially to the southeast, where stone walls still cross the landscape, reminders that cattle once roamed the pastures there. As more and more of our farming heritage is destroyed by development, it is ever refreshing to have historical reminders such as these of our farming heritage.

B. Former Vacation Community: The Golden Hills, like much of Saugus and Wakefield, was once regarded by Bostonians as a resort community. The developer Griswold, who owned a great deal of the study area in the early twentieth century, divided his land into tiny lots for purposes of selling cottages near the water. The story goes that he used to drive around in a gold leaf-covered Cadillac, tossing

fake gold coins at people in Boston, proclaiming "There's gold in them thar hills!". Mr. Griswold apparently was involved in land fraud schemes and later went to jail, but not before he had amassed a considerable fortune from his land promotions. At one time, there was a recreation hall built on pilings in the middle of Griswold Pond, where residents used to meet for cocktails and merriment in the evenings (they all, apparently, had boats). The hall burned one night. Another story is that an Indian totem pole once stood on the shore of one of the ponds, although that, too, is long gone.

C. Castle Clare: Perhaps the best known cultural event of the Golden Hills was the construction of Castle Clare at the end of Montclare avenue in Wakefield. Built entirely by Clarence Bradshaw Hoag, a successful Boston printer who had emigrated from Nova Scotia, the castle was a replica of a Scottish fortress. Hoag began construction in 1933, in his 57th year. The country was in the depths of depression and Hoag was in failing health, so his neighbors said he would never see the project finished. But twenty years later, it was in fact finished, and Mr. Hoag went on to live in Castle Clare for another twenty years. He died in 1969 on his 92nd birthday, and the castle fell into disrepair after that. It burned one Saturday night in October, 1974. The foundation, stonework, and the remains of some outbuildings are still there, however, a testimony to perseverance and a monument of sorts to one man's castle.

III. Esthetic Values

A. Value of Undeveloped Land: This is a difficult thing to assign a dollar value to, but suffice it to say that open space is one of the most urgent needs of communities in the Metropolitan Region, and it has been identified as a priority in the open space plans of both towns. The cash value of land which abuts permanent open space is always higher than that of land which does not have this luxury, and this is undoubtedly true for land in the Golden Hills. If existing open space is preserved, property values for private land in the study area will certainly increase. The greatest value of undeveloped land, however, is the unquantifiable characteristic of quality of life. To assign a dollar value to the quality of life in Saugus and Wakefield would be near impossible, but it would certainly be lower if the open lands in the Golden Hills were developed.

B. Viewscape Values: Once again, this is a difficult thing to assign a value to, but the views from the hills near Castle Clare are beyond comparison in the two towns. Many residents of Wakefield and Saugus currently enjoy hiking and walking in the study area, and a common thread that many seem to value highly is the quality of the views.

C. Landscape Diversity: In the Massachusetts Department of Environmental Management's Landscape Inventory, one of the criteria used to evaluate landscape quality was diversity. That is, landscapes with relief, or those with fields, woods, and stone walls ranked higher than those with only woods or flat land with no notable

views. The Golden Hills has forested area, relief unmatched in the region, open water, swamp, and large rock outcrops, so it would be rated highly.

IV. Recreational Values

A. Active Recreation: The definition of active recreation is that which requires developed facilities, such as tennis, roller skating, or baseball. The two playgrounds in the study area provide the much-needed function of ballfield and playground equipment facilities. Active recreation is, unfortunately, relatively expensive to provide, and facilities generally require flat, developable land, which is a rarity in the Golden Hills.

B. Passive Recreation: Passive recreation is that which does not require developed facilities, such as bird watching, hiking, bicycling, or cross-country skiing. The greatest recreation values of the study area are in the "passive" category, as it is used frequently by hikers, birders, picnickers, cross-country skiers, joggers, fishermen, and other types of passive recreators. The area is of extreme importance for this function, as it is becoming increasingly difficult to find places to be out in the woods in this region. The ability to go to a nearby place where one may indulge in passive recreation is certainly a factor in the quality of life in Saugus and Wakefield.

V. Economic Values

A. Developed versus Undeveloped Land: It is no secret that

a piece of property with a house on it is worth more than one with only rocks and trees. What is less obvious, however, is the value of the surrounding land, which increases in less developed areas, and decreases as more development takes place. It is simply a question of the worth of a piece of property to the individual who owns it as compared to the worth of the abutters' land, and the costs to the community in terms of lowered quality of life for all residents and the more easily quantifiable costs of municipal services, such as road maintenance, sewer (essential in ledgy areas such as the Golden Hills), and schooling.

B. Municipal Costs of Developed Land: The "hidden" costs to the town of residential structures, especially single-family type, are becoming general knowledge. In addition to the incremental costs of increased maintenance on existing roads, maintenance and snow removal on new roads, and the extension of sewer and water lines (where applicable), the major expense of providing public schooling for the children in new dwellings remains a difficult encumbrance for many communities. It is generally acknowledged that single-family dwellings cost the town more than they provide in tax revenues for this latter reason, and apartments and condominiums are not much better.

3.3: Critical Environmental Areas.

A major finding of this study is the designation of Critical Environmental Areas (CEA's). CEA's are areas which require protection from development because of wetlands, open water, extreme

slopes, exosed bedrock, or other unique habitat.

Wetlands are acknowledged as poor places for development. Wetland soils are organic in nature, usually impermeable, and wet by definition. Furthermore, wetlands are unique and essential wildlife habitat, and esthetically necessary to ensure the diversity that makes the Golden Hills so attractive. Wetlands are regulated under the Massachusetts Wetland Protection Act (Chapter 131, Section 40 of the Mass. General Laws), which tells one that the Commonwealth of Massachusetts values wetlands highly enough to assign them legislative protection. The law, as amended in 1986, allows regulation on the basis of wildlife values, but it is not a simple matter for a town Conservation Commission (the implementing agency of the Act) to disallow development completely in a wetland. As such, this report recommends that they be included in the CEA designation.

Steep slopes are also not conducive to construction, and the study area abounds with them. They are susceptible to erosion and rapid runoff when built upon, and as such building in sloping areas may be hazardous and a nuisance to others.

The same is true of exposed bedrock: it is unsuitable for most types of development, and building on exposed ledge may present a hazard to occupants or abutters.

4. RECOMMENDATIONS

The major thrust of the recommendations is to advocate preservation of as much of the undeveloped sections of the Golden Hills as possible, paying particular attention to certain critical parcels which may function as "buffer zones" for existing public open space or as linkages between existing public open properties. In developing the following recommendations, the values derived in the Analysis section of Chapter Three were carefully examined and weighed to determine which approach would best preserve and enhance these values with the least negative impacts.

There were three possibilities:

1. Do nothing, and allow widespread development in the Golden Hills;
2. Purchase or restrict the the entire study area, so as to prevent any new development from occurring; or
3. A compromise approach where certain critical areas would be protected by a combination of legislative action by the town and purchase of development rights or fee simple acquisition of more vulnerable, critical parcels.

The recommendations are divided into roughly two categories: Preservation Strategies, and Management Recommendations. All are directed at specific agencies or groups.

Preservation Strategies:

1. Accept the Critical Environmental Areas identified in this report (see Figure 4.1) and adopt town bylaws requiring the granting of a Special Permit from the Conservation Commission of the appropriate

Preservation Strategies:

1. Take steps to acquire, through fee simple purchase, or development rights acquisition (conservation easements), the priority areas identified in Figure 4.1. A list of parcel numbers and owners is included in the Appendix section of this report.

Agencies: Conservation Commissions, Golden Hills Association, private trusts, others (see below). In many cases, the assistance of local representatives Angelo and Tisei will be extremely valuable in promoting these acquisitions, and it should be sought.

2. Mechanisms for acquisition:

A. Encourage acquisition of land by the Metropolitan District Commission (MDC) as linkages with Breakheart Reservation and the Middlesex Fells Reservation. Initial conversations with MDC personnel indicate that they may be interested. Contact: Mr. Gary van Wart, Reservations and Interpretive Services, Blue Hills Reservation, Milton, MA. phone 727-2744.

B. Seek Land & Water Conservation Funds for acquisition of key parcels. Contact: Mr. Joel Lerner, Massachusetts Division of Conservation Services, 100 Cambridge Street, Boston, MA 02202. phone 727-1552.

C. Discuss acquisition by private trusts. Possible sources include: Trust for Public Land, 3 Joy Street, Boston. Contact: John Feingold. phone 742-1340; Trustees of Reservations, 224 Adams St., Milton. phone 698-2066; Massachusetts Farm and Conservation Land Trust, 224 Adams St., Milton. phone 698-2066; Nature Conservancy, 294 Washington Street, Boston 02108. phone 542-1908 (the Conservancy

specializes in preservation of habitats of rare and endangered species). The formation of a private land trust in town is a possibility, as well. All that is needed are a few wealthy backers who agree to guarantee a loan; they do not even need to put up any cash in most cases. The trust then borrows the cash needed to finance a land purchase from a local bank, with the guarantee from these wealthy backers, buys the land, sells off a lot or two to finance the purchase, and pays off the bank with the proceeds of the sale. In Lincoln, this works because the value of the lots sold off is drastically higher than the cost of the land, because the surrounding land is being preserved as open space in perpetuity. A non-profit corporation must be established under MGL 180, preferably after consultation with an attorney. Tax-exempt status may be obtained by filing IRS Form 1023, declaring the trust a 501(C)3 organization (see IRS Publication #557 for further information). Robert Lemire of the Rural Land Foundation, Lincoln's private land trust, has authored a book entitled Creative Land Development: Bridge to the Future, which discusses land trust formation and strategies for preservation in great detail.

3. Accept the Critical Environmental Areas identified in this report (see Figure 4.1) and adopt town bylaws requiring the granting of a Special Permit from the Conservation Commission of the appropriate town before any development may take place in any CEA.

Agencies: Conservation Commissions, both towns, with support from the Golden Hills Association. This will require a Town Meeting vote. An eloquent speaker should address the Town Meeting, presenting

examples of how building in high slope or wetland areas has cost the town money and trouble in the past. This information should also go into the newspapers in the weeks before the Town Meeting.

4. Seek changes in zoning to reflect the valuable status of land in the Golden Hills. At present, the minimum lot size for single family dwellings is 20,000 square feet or less for both towns in the Golden Hills. This does not reflect conservation needs, and should be changed in all undeveloped sections of the study area to at least 40,000 square feet on the outskirts of existing dense development, and to 130,000 square feet in more remote areas, so as to preserve at least some green space, in the event that development does occur. This will, of course, require a Town Meeting vote, and a great deal of lobbying, publicity through the local media, and voter education campaigning will probably be needed to convince the residents of both towns that the zone change is necessary to preserve the fast disappearing open space in the Golden Hills. Another mechanism which has worked well in other towns is the offering of a density bonus to developers if they agree to set certain lots aside for conservation. In essence, this allows a developer to build at greater than normally allowed density if he will keep some lots as green space.

5. Strengthen existing on-site septic disposal requirements. Under MGL Chapter 111, Section 31, municipal Boards of Health may adopt their own regulations regarding disposal of septic waste. In the case of the Golden Hills, the Boards of Health of both towns should adopt regulations prohibiting disposal in ledgy areas, areas with thin

soils, or within 100 feet of streams or wetland areas. A simple majority vote of the Board and publication of the new regs once in a local newspaper is sufficient to promulgate the regulations.

6. Strengthen existing wetland protection bylaws. Saugus has a bylaw which augments the State statute, but there has been confusion interpreting the law in the past, and its intent is not made clear. The law should be rewritten by the current Conservation Commission to be clearer and with more authority. Wakefield should draft its own bylaw. The Town of Dennis drafted an excellent wetlands bylaw some years ago, and a copy of this will be included in the appendix of this report.

7. Designate existing roads in the study area as "Scenic Roads". Under MGL Chapter 40, Section 15C, a town may designate any road other than a numbered road or state highway as a scenic road upon recommendation or request of the planning board, conservation commission, or historical commission. Such designation prohibits destruction or alteration of stone walls or trees during road repair or reconstruction, except with the written consent of the Planning Board.

8. Allow contract taxation for individuals desiring to keep their land open in the study area. This provision allows landowners to pay lower taxes if they agree not to develop their land for a mutually agreed-upon period. If they develop within the agreed period, they must pay the difference between the reduced rate and the "normal" rate

for any years in which they have benefitted from the reduced rate, plus interest, to the Town. This type of arrangement is normally done on a case-by-case basis, and involves cooperation among landowners, assessors, and the Conservation Commission.

9. Adopt a scenic bylaw for the study area. In Berkshire County, Massachusetts, such a law was adopted recently, which allows review of development by town authorities in cases where the development might have an effect on visual quality of the area. The bylaw was intended to protect an area which depends upon scenic resources for its economic base, because tourism is the major industry in Berkshire County. Legality in the case of the Golden Hills should be reviewed. However, as one of the last remnants of open space in the area, the Golden Hills ranks as a vital resource to the Towns of Saugus and Wakefield, so scenic bylaw introduction may be a possibility.

10. List of properties with high priority for acquisition:

1. Former site of Castle Clare. This site, while offering some of the best views in the study area, abuts the Wakefield Town Forest to the north and another large parcel owned by the Town to the south. It should be high priority for immediate protection. The site is owned by Rivers Development Corporation, and has been partially filled illegally with rubble. The Conservation Commissions of both towns are negotiating with Rivers to remove this fill.

Parcel Number: Wakefield Map 40C; parcels 4 and 6B

Owner: Rivers Development Corp.

20 Brentwood Drive

Reading, MA 01867

2. Between Spring and Griswold Ponds. This is one of the few flat, developable areas on the shores of the three large ponds which has not yet been built upon.

Parcel Number: Saugus 1050; parcels 154-167

3. West of Mapleway Playground. Much of this site is extremely steep and undevelopable, but a portion of it is relatively flat and it is near existing roads. Furthermore, since it abuts the Mapleway Playground and Wakefield Town Forest, it should be preserved as a "buffer" for these properties.

Owners: Boyack, 2 Arundel Ave, Wakefield

Map 42, Parcel 2

David Sullo, 70 Kendrick St., Wakefield

Map 42, Parcel 3

4. East of Spring Pond, just south of Parcel #3. This is a large parcel, and it is subdivided into many small lots. A great deal of this land is developable, although much of it is also ledgy or swampy. It, too, abuts the Wakefield Town Forest and the northern end of Spring Pond.

Parcel Numbers:

Saugus Map 1034, Parcels A125-133;186(in part)

Saugus Map 1050A, Parcels A264-267;257-260;

255-258; 271-290;66-69

Saugus Map 1050C, Parcels A229, 214, 361, 243-250

Wakefield Map 42, Parcels 16,17

5. East of Griswold Pond, King Street, Upland Road. Another large parcel, also divided up into many small lots, this area is

somewhat less hilly or swampy than most of the remainder of the study area, and therefore vulnerable to development. It abuts land owned by Saugus, adjacent to Summit Road, and contains a small pond.

Parcel Numbers:

Saugus Map 1034, Parcels A402,403

Saugus Map 1051, Parcels A1-28,A45-46,74-77

6. East of Traveler/Castle Rock Road. This is another large piece of land, but this time there are only two owners, one of whom is New England Power Co. The land is in between two power transmission lines, near the corner where the lines meet, and it abuts the Saugus conservation land mentioned in #5 above.

Parcel Numbers:

Saugus Map 1034, Parcels A228,A308 and 403

7. West of Old Nahant Road. This parcel abuts the Castle Clare land, and is currently used as a tree farm by Bedford Chandler. The towns should get an agreement with Mr. Chandler that he will keep the land in forestry, perhaps by purchasing, or having Mr. Chandler donate, a conservation restriction. Fee simple purchase is probably not necessary in this case, although a permanent restriction on development would be highly desirable.

Parcel Numbers:

Wakefield Map 40C, Parcels 7CC,9A

Owner: Bedford Chandler, 67 Old Nahant Road,
Wakefield, MA

8. West of Golden Hills Road. This piece is half in Saugus and half in Wakefield. Part of it is reportedly owned by the Town of Wakefield, but that is as yet unconfirmed.

Parcel Numbers:

Saugus Map 1034, Parcel 187 (in part)

Saugus Map 1051, Parcel A575-59

Wakefield Map 34, Parcels 135,136,97-110

9. West of St. James Ave, Granite Street. Another section that has been subdivided into tiny lots, this land is more or less buildable, with paper streets plotted through it. It abuts Parcel #5.

Parcel Numbers:

Saugus Map 1034, Parcel 402 (in part)

Saugus Map 1051, Parcels

95-133,154-181,238-253,287-300,374-378.

Use Recommendations

1. Encourage passive recreation use. Through local media, publicize the undeveloped nature and availability of trails, etc. in the Golden Hills.
2. Set up trail committees in both towns to oversee trail needs, design, and construction, townwide. Trail design must reflect designated uses: large curve radii for cross-country skiing, rougher trails for hiking, heavy-duty for motorized use (if deemed appropriate). Boy Scouts and other civic groups may be called upon to help with improvements. Boardwalks could be built over some wetland areas.
3. Encourage groups (Audubon, Scouts, others) to sponsor trips into the area so residents may gain an appreciation for the Golden Hills.
4. Clean up litter and debris from dumping sites, party spots.
5. "No littering" signs and barrels in these areas.
6. Police patrols in Friday and Saturday nights, at irregular times, to help control littering and vandalism.

CONCLUSION

To conclude, the Golden Hills is a rare and crucial resource to the towns of Saugus and Wakefield. In the current onslaught of residential development the towns are facing, it is absolutely essential to preserve as much of the area as possible for future generations.

This report is not a magic key to all of the area's problems. Rather, it identifies some of the issues, examines the resources and values of the study area, and proposes some strategies to help preserve those values. There is a great deal of work to be done to implement these recommendations; fortunately, both towns are blessed with a number of concerned, hard-working citizens who have made things happen in the past and will continue, it is hoped, to do so in the future. With their energy, and the cooperation of the local townspeople, the Golden Hills can be protected for all to enjoy in perpetuity.