Environmental Review Team Report

Giddings Park

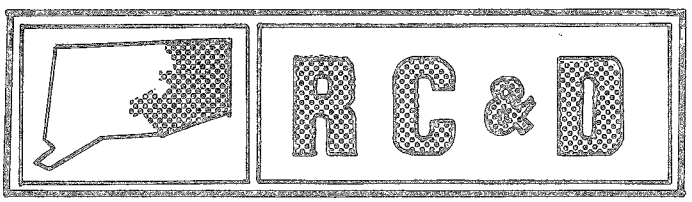
Franklin, Connecticut

R C & D

EASTERN CONNECTICUT RESOURCE CONSERVATION AND DEVELOPMENT AREA, INC.

Environmental Review Team Report on Giddings Park Franklin, Connecticut

October 1980

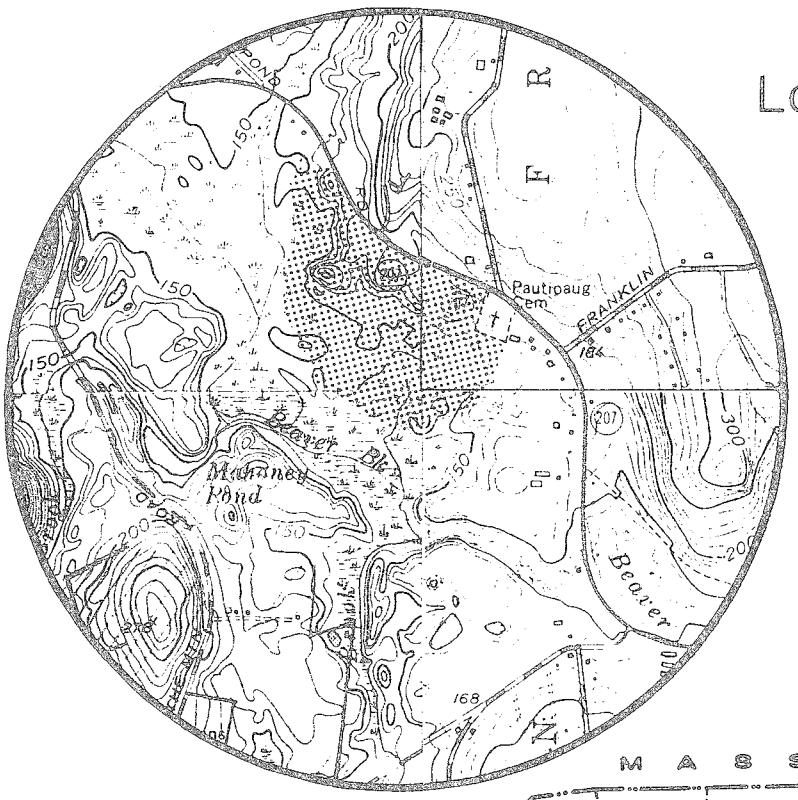


eastern connecticut resource conservation & development area

environmental review team
139 boswell avenue
norwich, connecticut 06360

Location of Study Site

GIDDINGS PARK
FRANKLIN, CONNECTICUT



EASTERN CONNECTICUT
RESOURCE CONSERVATION AND DEVELOPMENT PROJECT

ENVIRONMENTAL REVIEW TEAM REPORT
ON
GIDDINGS PARK
FRANKLIN, CONNECTICUT

This report is the outgrowth of a request from the Town of Franklin to the New London County Soil and Water Conservation District (S&WCD). The Eastern Connecticut Resource Conservation and Development (RC&D) Project Executive Council also approved the request as a project measure which was subsequently reviewed by the Environmental Review Team (ERT).

The soils of the site were mapped by a soil scientist from the United States Department of Agriculture, Soil Conservation Service (SCS). Reproductions of the soil survey map, a table of soils limitations for certain land uses, and a topographic map showing the property boundaries were forwarded to all members of the Team prior to their review of the site.

The Environmental Review Team that field-checked the property consisted of the following personnel: Gary Domian, District Conservationist, SCS; Mike Zizka, Geologist, Connecticut Department of Environmental Protection (DEP); Rob Rocks, Forester, DEP; Andy Petracco, Recreation Specialist, DEP; Tom Seidel, Planner, Southeastern Connecticut Regional Planning Agency; Frank Homiski, Sanitarian, State Department of Health; and Jeanne Shelburn, ERT Coordinator, Eastern Connecticut RC&D Project.

The Team met and reviewed the site on Tuesday, July 29, 1980. Reports from each Team member were sent to the ERT Coordinator for review and summarization for this final report.

This report is not meant to compete with private consultants by supplying site designs or detailed solutions to development problems. As requested by the Town, this report, which identifies the existing resource base of Giddings Park, shall constitute the environmental assessment portion of the Town's open space application for federal Department of the Interior, Heritage Conservation and Recreation (HCRS) funds to assist in the recreational development of Giddings Park.

The Eastern Connecticut RC&D Project Committee hopes you will find this report of value and assistance in making your decisions on this particular site.

If you require any additional information, please contact: Ms. Jeanne Shelburn, Environmental Review Team Coordinator, Eastern Connecticut RC&D Project, 139 Boswell Avenue, Norwich, Connecticut 06360, 889-2324.


Topography
Site Boundary
0
660'
scale
N
250
150
RD
Pond

DESCRIPTION OF THE PROPOSAL

The Town of Franklin is preparing to apply for HCRS (Heritage, Conservation and Recreation Service) development funding to help with expansion of recreation facilities at Giddings Park. The park is located on the southwest side of Route 207. Its total acreage is approximately 90 acres. At the present time the site is developed with two baseball fields, tennis courts, a basketball court, a building housing toilet facilities and a small unpaved parking area. These facilities are located directly adjacent to Route 207. The Town garage is also located adjacent to the property on the eastern side. An unpaved access road leads to the Town garage, open fields and horse rink at Giddings Park, from Route 207.

The Town would like to use undeveloped portions of Giddings Park to provide picnicking, swimming, skating, camping, organized sports fields, hiking trails and possibly some indoor sports facilities for its residents. Other than the school playground and the facilities available on this site the Town of Franklin has no recreation facilities. This project will help to meet the Town's recreation needs. No other open space or recreation planning efforts are affected by this project.

DESCRIPTION OF THE ENVIRONMENT

PAST/PRESENT LAND USES

Present and past use of the site has been active recreation and open space. The proposed camping area was previously used for camping by the Boy Scouts. Surrounding land uses are low density residential, agricultural, and undeveloped. The Town elementary school is located immediately north of the site along Route 207. A State wildlife preserve is located south and west of the site. The site and surrounding area is zoned for residential one acre lots.

EXISTING SOCIO-ECONOMIC CONDITIONS

The population of Franklin was estimated at 1,700 persons in 1979. The Town is expected to reach 1,980 persons in the year 1990. The area is centrally located with respect to the Town's population, to other Town facilities, and to a developing area of the Town.

EXISTING TRANSPORTATION ROUTES

The site is located on State Route 207, a two-lane undivided highway. The site is easily accessible by foot, bicycle and car.

SURFACE/SUBSURFACE GEOLOGIC CONDITIONS

The proposed recreation site is located in an area encompassed by the adjoining corners of the Willimantic, Scotland, Norwich, and Fitchville topographic quadrangles. Most of the property lies within the southeastern corner of the Willimantic quadrangle. Bedrock maps of all four quadrangles have been prepared by the

U.S. Geological Survey. Surficial geologic maps prepared by the Survey are available for the Scotland, Norwich, and Fitchville quadrangles; a surficial geologic map of the Willimantic quadrangle, by S.M. Clebnik, is being readied for publication by the Department of Environmental Protection's Natural Resources Center.

No bedrock outcrops were observed on the property and none are thought to be present. Bedrock underlying the site is interpreted to be largely a part of the Hebron Formation. This formation consists of interlayered fine-grained grayish-green granular calc-silicate rock of varying composition, purplish-brown calcareous biotite schist, and brown noncalcareous biotite schist. A small section of the site is interpreted to be underlain by Scotland Schist, which consists of silvery to rusty-weathering muscovite-biotite-staurolite-garnet schist and minor granular biotite schist. No economic significance is attached to rocks of either the Hebron Formation or the Scotland Schist. The distribution of the two units is shown in an accompanying illustration.

The surificial geology of the site may be divided into two major components: stratified drift and swamp sediments. Stratified drift is composed of sediments deposited by glacial meltwaters. Usually, these deposits are well-sorted by grain size and consist largely of sand and gravel. Erosion of the knoll in the north-central part of the property revealed sand and cobble-sized gravel. Sand is probably predominant in the flatter areas near the swamp. The swamp itself contains a surficial deposit of sand, silt, clay, and partially decomposed organic materials. These materials may have been deposited in part by Beaver Brook or one of its tributaries during flood stages. The swamp sediments are probably less than 15 feet thick; they overlie thick accumulations of fine-grained stratified drift. The overall depth to bedrock may exceed 50 feet in the swamp.

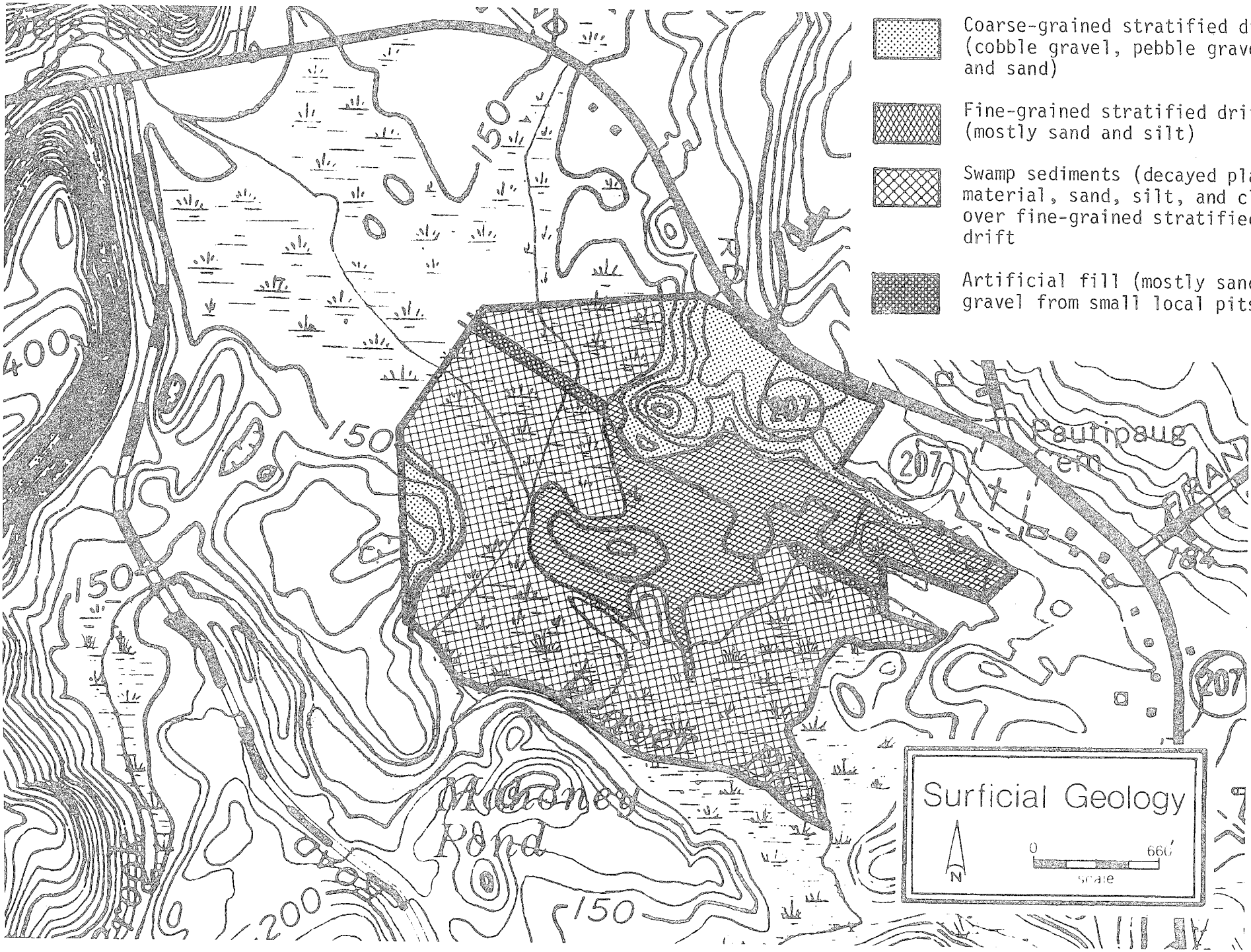
SOILS

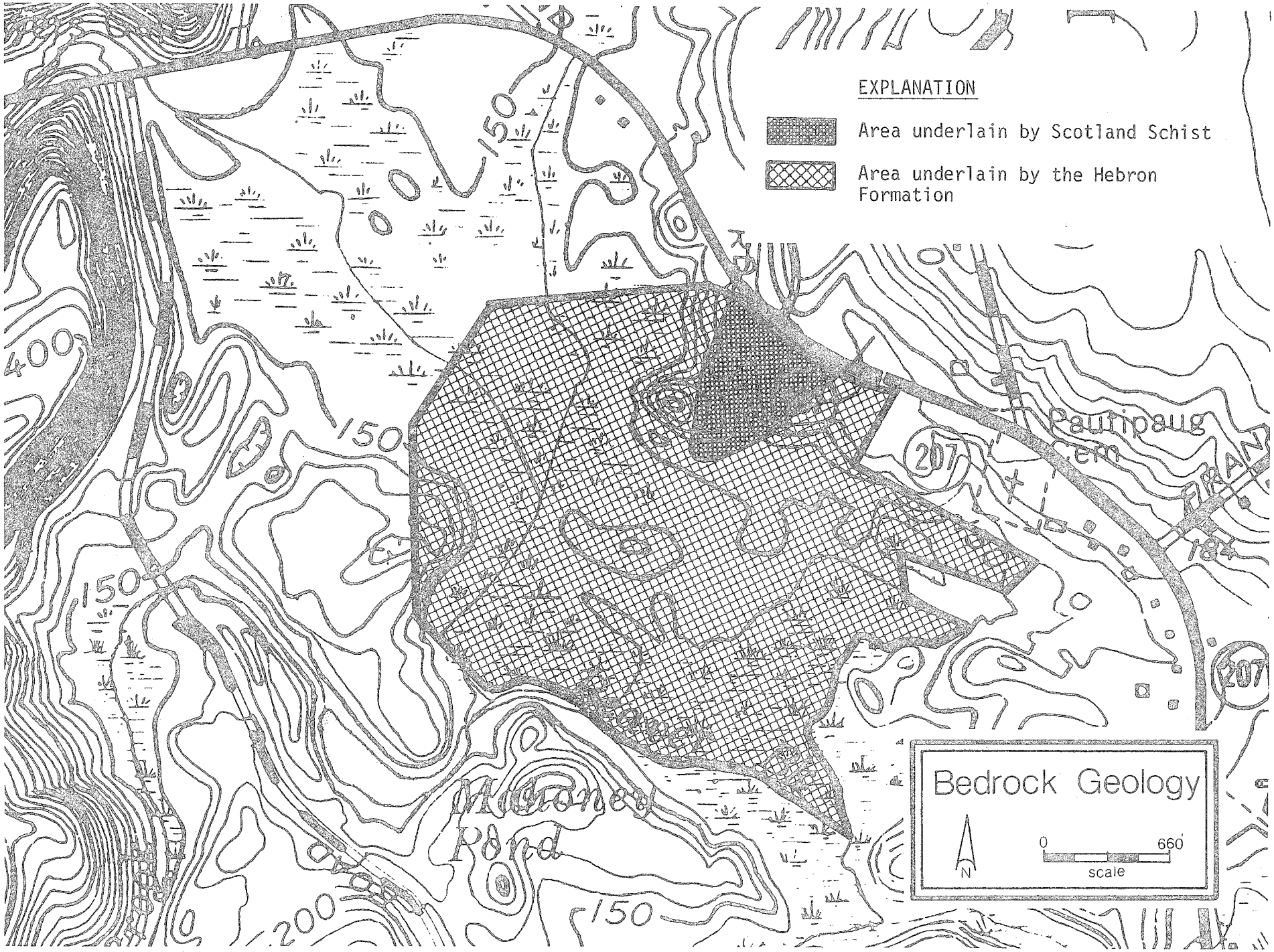
The nearly level to gently sloping terraces or outwash plains on the site are occupied by Ninigret fine sandy loam. The soils are designated by the soil mapping unit symbol 25A. The symbol A denotes a 0-3 percent slope. Ninigret soils formed in water sorted outwash. The soils are moderately well drained and have moderately rapid permeability. The seasonal highwater table is 18 to 24 inches. Surface runoff is slow to moderate.

The gently sloping to sloping terraces, outwash plains kames or eskers are occupied by Hinckley gravelly sandy loam. The soils are designated by the mapping unit symbol 60C. The symbol C denotes a 3-15 percent slope. Hinckley soils formed in water sorted outwash. The soils are excessively drained and have rapid permeability in the surface layer and subsoil, and very rapid permeability in the substratum. Runoff is slow.

The moderately steep to steep terraces, outwash plains, kames or eskers are occupied by Hinckley gravelly sandy loam. The soils are designated by the mapping unit symbol 60D. The symbol D denotes a 15-35 percent slope. Hinckley soils are formed in water sorted outwash. The soils are excessively drained and have rapid permeability in the surface layer and subsoil, and very rapid permeability in the substratum. Runoff is slow.

The gently sloping stream terraces or outwash plains are occupied by Windsor loamy sand. The soils are designated by soil mapping unit 67B. The symbol denotes


EXPLANATION
Coarse-grained stratified drif (cobble gravel, pebble gravel and sand)
Fine-grained stratified drift (mostly sand and silt)
Swamp sediments (decayed plant material, sand, silt, and clay over fine-grained stratified drift
Artificial fill (mostly sand a gravel from small local pits)
Surficial Geology
N
0
660'
Scale
Pauripaug
Pond
207
150
200
400


EXPLANATION
Area underlain by Scotland Schist
Area underlain by the Hebron Formation
Bedrock Geology
N
0
660'
scale
Pautipaug
Mudtone
Pond
150
200
400
207

a 3-8 percent slope. Windsor soils formed in glacial outwash. The soils are excessively drained and have rapid or very rapid permeability. Runoff is slow to medium.

The sloping stream terraces, outwash plains, kames or eskers are occupied by Merrimac sandy loam. The soils are designated by the mapping unit symbol 70C. The symbol C denotes a 8-15 percent slope. Merrimac soils formed in water sorted outwash. The soils are well drained and have moderately rapid or rapid permeability in the surface layer and subsoil, and rapid permeability in the substratum. Runoff is slow to medium.

The gently sloping outwash plains or stream terraces are occupied by Agawam fine sandy loam. The soils are designated by soil mapping unit symbol 96B. The symbol B denotes a 3-8 percent slope. Agawam soils formed in water sorted sands. The soils are well drained and have moderately rapid permeability in the surface layer and subsoil, and have rapid permeability in the substratum. Runoff is medium.

The nearly level terraces or outwash plains are occupied by Sudbury sandy loam. The soils are designated by soil mapping unit symbol 456A. The symbol A denotes a 0-3 percent slope. Sudbury soils formed in water sorted outwash. The soils are moderately well drained and have moderately rapid permeability in the surface layer and subsoil and rapid permeability in the substratum. The seasonal highwater table is 18 to 24 inches. Surface runoff is slow to moderate.

Land areas that have been disturbed, to an extent that the natural layers are no longer recognizable are mapped as Udorthents. These soils are designated with the mapping unit symbol ML2. Interpretations and limitations are too variable to rate because natural soil horizons have been altered.

The concave nearly level areas along floodplains are occupied by Rippowam fine sandy loam. The soils are designated by the soil mapping unit symbol 855. (Note: Rippowam fine sandy loam was formerly mapped as Rumney fine sandy loam with the same mapping unit symbol.) Rippowam soils formed in recent alluvial sediments. The soils usually flood annually, mostly in the spring. The soils are poorly drained and have moderate to moderately rapid permeability in the surface layer and subsoil and rapid or very rapid permeability in the substratum. The high water table is at or near the surface 7 to 9 months of the year. Surface runoff is slow. This soil is designated as a wetland and is regulated under Public Act 155.

The low lying nearly level areas on stream terraces and outwash plains are occupied by Walpole sandy loam. The soils are designated by the soil mapping unit symbol 466. Walpole soils formed in glacial outwash and have a sandy loam topsoil, and a loamy fine sand to gravelly sand substratum. The soils are poorly drained and have moderate permeability in the surface layer and subsoil, and rapid or very rapid permeability in the substratum. Surface runoff is slow. This soil is designated as a wetland soil and is regulated under Public Act 155.

The nearly level areas along floodplains are occupied by Pootatuck Variant fine sandy loam. The soils are designated by the soil mapping unit symbol 816. (Note: Pootatuck Variant fine sandy loam was formerly mapped as Podunk fine sandy loam with the same mapping unit symbol). Pootatuck soils formed in recent alluvial sediments. These soils flood for short periods in the spring. The soils are

moderately well drained and have moderate or moderately rapid permeability in the surface layer and subsoil, and rapid or very rapid permeability in the substratum. The seasonal high water table is at 18 to 24 inches. Surface runoff is slow. This soil is designated as a wetland soil and is regulated under Public Act 155.

The nearly level bogs or other depressional areas within lake plains, outwash plains, till plains and moraines are occupied by Carlisle muck. The soils are designated by the mapping unit symbol 92. Carlisle soils formed in muck deposits greater than 51 inches thick. The soils are very poorly drained and have slow to moderately rapid permeability. The high water table is at or near surface 9 to 10 months of the year. Surface runoff is very slow. This soil is designated as a wetland soil and is regulated under Public Act 155.

The following soils qualify as Prime Farmland soils: Agawam fine sandy loam (96B), Ninigret fine sandy loam (25A), Sudbury sandy loam (456A), and Windsor loamy sand (67B).

Prime farmland, as defined by the U.S. Department of Agriculture, is the land that is best suited to producing food, feed, forage, fiber and oilseed crops. It has the soil quality, growing season, and moisture supply needed to economically produce a sustained high yield of crops when it is treated and managed using acceptable farming methods. Prime farmland produces the highest yields with minimal inputs of energy and economic resources, and farming it results in the least damage to the environment.

The nature trails planned for the park are limited by wetness and by slope. The areas on the property mapped 92, 466, 816, and 855 have moderate to severe limitations for paths or trails due to wetness. An old trolley bed runs through the center of the park property in an east-west direction. This area is routed around steep slopes, the area mapped 60D, and is at a higher elevation than the wetland soils it crosses. A trail along the trolley bed allows hikers to observe the wetlands in the western portion of the property. The area where the trolley bed meets Beaver Brook, would serve as a good rest area, observation area, and turn-around point. Other trails in the park should be routed around steep slopes and located on level, and more well drained soils.

Ballfields have already been established on the area mapped ML2. Other forms of active recreation such as soccer or tennis will have to be located in areas that are well drained or capable of being drained. The areas will also have to be nearly level and stone-free for these types of activities. The limitations of some soils due to wetness and steep slopes hold true for tennis courts and soccer fields. The area adjacent to the ballfields would be an ideal site for additional active recreation fields. The area adjacent to the horse arena would also be conducive to active recreation because of the well drained level soils in that area, and the east of accessibility by the public. Indoor activities will also have to be located in areas that are well drained and level. The same areas that are suitable for active recreation will also be suitable for indoor recreation activities.

The soils on site are suitable for outdoor recreation activities, such as nature trails, and wetland study areas. The active outdoor sports and indoor activities will be limited to well drained and level soils. Picnic areas can be located on the small hill that is above the ballfields. The soils there are well drained, the trees offer adequate shade, and the location offers a pleasant view.

WATER RESOURCES

Surface water is a prominent feature of the parcel. Several stream channels converge in the swamp, which occupies approximately half of the area of the site. The resulting main stream, Beaver Brook, flows out of the property at the southeastern corner. At the point where it leaves the site, Beaver Brook drains an area of approximately 3,260 acres, or about 5.1 square miles.

The Team was asked to evaluate a potential swimming area in the southwestern corner of the site. The swimming area would consist of a dug pond fed by a diversion channel from Beaver Brook. Outlet from the pond to Beaver Brook would be provided by another artificial channel. An examination of the brook at the proposed site suggested that the water was of poor quality and not suitable for swimming. High turbidity was an obvious problem. In addition, the stream seemed too sluggish to provide adequate flow-by purification of the pond during swimming seasons. On the other hand, a statistical analysis of the watershed of the proposed pond suggests that, if half of the flow of Beaver Brook were diverted to the pond, enough flow-by should be available to support 70 swimmers a day even under conditions of extremely low flow (flows that are exceeded 99 percent of the time). If the Town wishes to pursue the possibility of establishing a swimming pond on the site, it should first have the water quality of Beaver Brook at the proposed site analyzed. If the quality is adequate, more accurate flow measurements could be made during low-flow conditions in July or August.

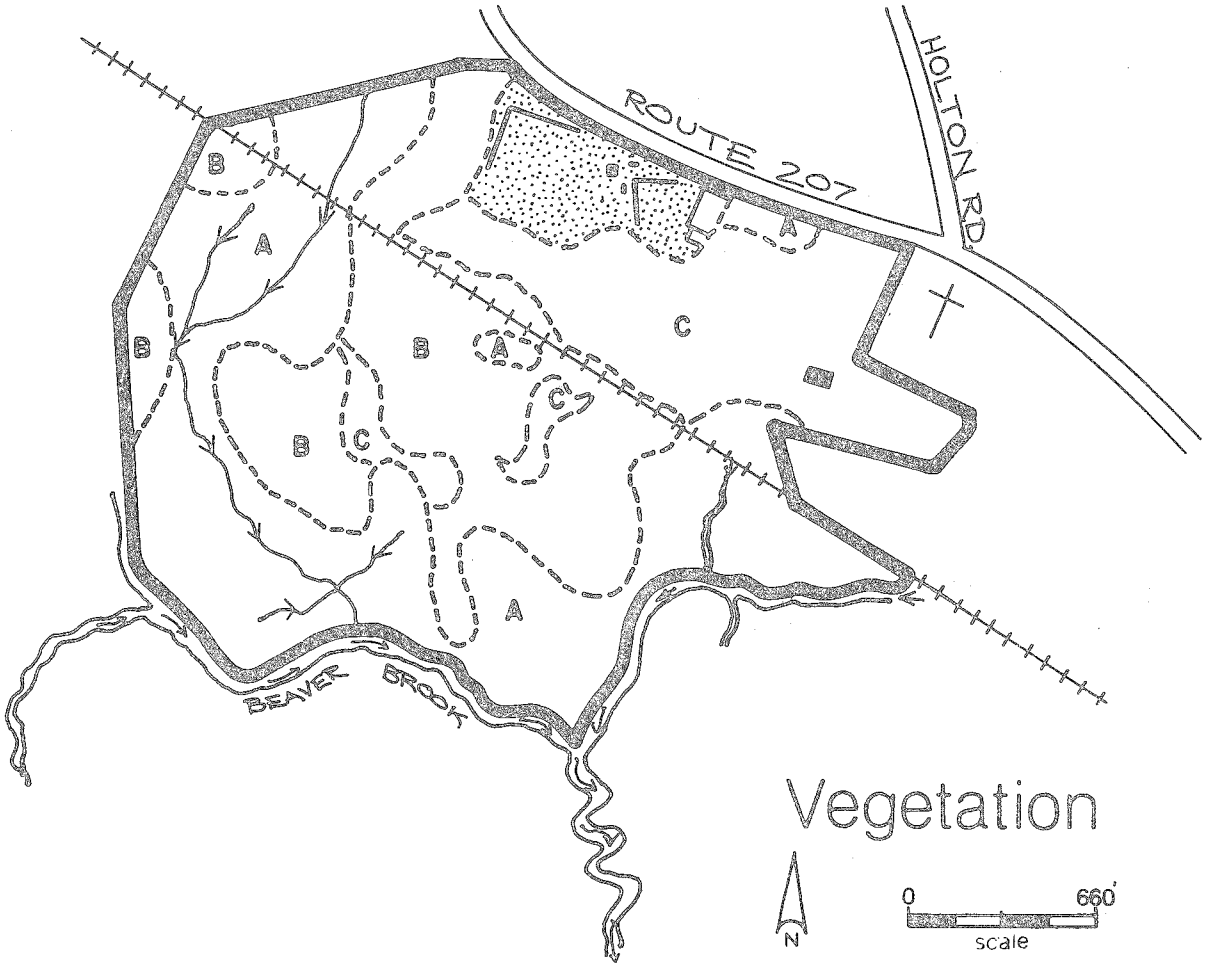
The existence of extensive stratified drift deposits on the site creates the potential for the development of high-yielding groundwater wells. Coarse-grained sediments, such as the cobble gravel of the knoll designated as a picnic area, offer the best potential but the coarse sediments must be present below the water table to have value. Most of the sub-water-table deposits appear to be fine-grained (sands and silts), but gravelly layers may exist at depth. The only way to evaluate the stratified drift with certainty would be to drill a few test wells and establish a pumping program. This is, of course, an expensive solution and the Town probably would be best advised to forego it unless a real need for the water arises.

VEGETATION

Vegetation types typical of this site are described as follows:

Type A (Hardwood Swamp). The majority of this 38± acre wetland is overstocked with poor to medium quality, pole to sawtimber size red maple and occasional white ash. Red oak and yellow birch are present in the transition zone where this stand blends into the mixed hardwood stand. Spice bush, sweet pepperbush and highbush blueberry dominate the understory in this stand. Ground cover vegetation consists of poison ivy, skunk cabbage, cinnamon fern, sensitive fern, club moss, sedges, Jack-in-the-pulpit, wild violets, and wild geranium. False hellebore is present in this stand, but only near the stream beds. The total volume in this stand ranges between 16 and 20 cords per acre.

Type B (Mixed Hardwoods). Pole-size white oak, red oak, black oak, shagbark hickory, red maple, black birch and yellow birch are present in this fully-stocked 26± acre stand. The trees in this stand are just starting to become crowded, and as a result are beginning to decline in health and vigor. Hardwood tree seedlings, blue beech, maple-leaved viburnum, patches of mountain laurel, flowering dogwood, azalea and scattered highbush blueberry form the understory in this stand. Ground



LEGEND

- Road
- Property Boundary
- Vegetation Type Boundary
- Abandoned Trolly Bed
- Stream
- Developed Recreation Area, 7±acres
- Buildings

VEGETATION TYPES*

TYPE A. Hardwood swamp, 38±acres, overstocked, pole to sawtimber-size.

TYPE B. Mixed hardwoods, 26±acres, Fully stocked, pole-size.

TYPE C. Old field, 19±acres, understocked, sapling-size.

* Seedling-size = Trees less than 1 inch in diameter at 4 1/2 feet above the ground (d.b.h.)
Sapling-size = Trees 1 to 5 inches in d.b.h.
Pole-size = Trees 5 to 11 inches in d.b.h.
Sawtimber-size = Trees 11 inches and greater in d.b.h.

cover in this area is made up of poison ivy, Virginia creeper, Canada mayflower, lowbush blueberry, huckleberry, sheeplaurel, dewberry, wild sarsaparilla, bracken fern, Christmas fern, royal fern and club moss. The total volume in this stand ranges between 14 and 18 cords per acre.

Type C (Old Field). 19± acres of old field are present on this property. These areas are partially developed with a small corral and town garage building. The majority of this area is at present understocked with sapling-size eastern red cedar and occasional eastern whitepine, white oak, black oak, red maple and bigtooth aspen. Gray stemmed dogwood, arrowwood, spirea, smooth sumac, winged sumac, bayberry and sweet fern are also present. Ground cover consists of grasses, goldenrod, yarrow, Queen Anne's lace, nightshade, St. John's wort, tall cinquefoil, poison ivy and other wildflower and weed species.

PROBABLE FUTURE ENVIRONMENT

Should development funding not be available, the site will have limited use as an openspace/recreation area and wildlife habitat.

ENVIRONMENTAL IMPACT

EFFECT ON LAND USE

No site listed on the National Register is located in this area. The site is physically separated and buffered from the closest residential uses. The effect on surrounding land uses will be minimal.

EFFECT ON SOCIO-ECONOMIC CONDITIONS

This proposal should have no appreciable effect on socio-economic conditions in the town. Maintenance costs incurred from development of additional facilities at the park can be offset by entrance fees to residents or non-residents who use the facilities.

EFFECT ON TRANSPORTATION ROUTES

With the increasing costs of gasoline and travel, Franklin residents are looking, and will continue to look, for recreational facilities closer to home. The development of this site will promote energy conservation by helping to meet the Town's needs for fishing, picnicking, hiking, camping, ice skating and field sports closer to home. The major access road to the site is Route 207, which is in good condition and is capable of handling any increase in traffic which this project may generate.

EFFECT ON WATER RESOURCES

None of the proposed recreational activities would have a significant adverse effect on water resources. Placement of a septic system on the site would have the

greatest potential for groundwater deterioration, but the risk would be small if proper siting, design, and construction procedures were followed. In addition, the risk would accompany any type of development requiring sanitary facilities, and would probably be greater if residential or industrial uses were allowed on the site.

EFFECT ON VEGETATION

The proposed development of hiking trails, picnic area and a small youth group camping area in the mixed hardwood stand will have only slight impact on the vegetation in the area.

The extent of losses due to original clearing operations will depend largely on the magnitude of the development. Removal of some of the vegetation to open up the camping and picnic areas to increased sunlight and air flow will be necessary. Clearing operations should remove only the lowest quality trees and those which are a direct hazard to area users. The larger, healthier, high vigor trees should be retained for their shade and aesthetic value.

Later some loss of vegetation may come about through soil compaction, mechanical root injury, direct trampling and vandalism along trails and in camping and picnic areas. Such vegetation losses will reduce the aesthetic quality of the area, and potentially cause accelerated erosion in some sections. These disturbances may also accelerate mortality of low vigor, unhealthy trees. Dead and dying trees along trails and within camping and picnic areas may be hazardous to people using these areas.

The development of open fields for organized sports in the flat sections of the old field area will have very little negative impact on vegetation. The impact of partial or complete removal of the shrubby vegetation in this area will be lessened by the proposed re-establishment of sod.

The windthrow potential is high throughout the entire hardwood swamp area. The trees in this stand are not able to become securely anchored as a result of their shallow root systems and the saturated nature of the soil. Clearing in or adjacent to this stand will allow wind to pass through rather than over this area, increasing the already high windthrow hazard.

Permanent changes in the water table depth in the hardwood swamp areas, especially raising the water table by blocking or restricting stream flow, may cause mortality of the trees, shrubs and herbaceous vegetation in this area.

WATER SUPPLY

A safe and adequate water supply will be needed to supply the sanitary facilities and drinking fountains in the picnic areas and pavilion.

The water supply can be developed by the installation of on-site drilled wells. It is necessary that any well be located properly in order to be afforded protection from sewage or other types of pollution.

SOLID WASTES

Recreational areas of high intensity will generate large amounts of refuse. Therefore, an adequate number of conveniently located containers with covers should be provided for the sanitary storage of refuse. This will help in the prevention and control of rodent and insect problems. Refuse should be collected on a regular basis with final disposal at an off-site sanitary landfill.

SEWAGE DISPOSAL

The construction of proper sanitary facilities for the recreational area is a necessary feature, especially in the picnic area.

Soil mapping data and visual observations indicated that the area most suited for the installation of an on-site subsurface disposal system is the open area to the east of the horse rink.

The soil in this area is of the Agawam series which has properties that enable it to accept subsurface disposal systems. However, the final decision should be based on the results of deep observation pits and percolation tests. The systems should be sized properly in accordance with testing results.

Non-water carriage sewage disposal type facilities can be located in remote areas, such as along the hiking trails.

MITIGATING MEASURES/MANAGEMENT PRACTICES

The wood which is removed during clearing operations for development of the proposed trails, picnic areas, and camping areas should be utilized as fuelwood or woodchips. Trees that are to be removed should be marked to lessen the chances of removal of wanted trees, especially in the picnic areas.

Dead and dying trees, which have the potential to become hazardous to users of the facilities, should also be removed and where possible, utilized as fuelwood or wood chips.

Careful planning and wise layout of the proposed trails, camping areas and picnic sites is essential to minimize potential problems. Trails should generally follow natural land contours, avoid steep slopes and wet areas. Where wet area crossings are unavoidable, wooden bridges adequate for emergency vehicle passage should be constructed. The trails, camping areas, and picnic sites should be well defined and clearly marked. This should limit extensive soil compaction, root injury and trampling of herbaceous vegetation outside the trail system and picnic areas.

Soil compaction may be reduced by spreading woodchips several inches deep along heavily used foot trails, camping areas and picnic sites. As woodchips rot they lose their effectiveness and should be replaced. Woodchips are also used as kindling for campfires at picnic sites. Crushed stone or cinders spread over these areas also reduce soil compaction and are more permanent than woodchips, however, they are usually more costly.

Eventual loss of some trees caused by soil compaction, even with the addition of woodchips, crushed stone or cinders, is unavoidable. As these trees die they should be removed to prevent a possible hazard.

It is extremely important that provisions for trail, camping area and picnic area maintenance, trail use (hiking, cross country skiing, emergency vehicle access, etc.), and enforcement of trail use should be established before the trails camping area and picnic areas are actually developed.

The trees in both the hardwood swamp area (Vegetation Type A) and the mixed hardwood stand (Vegetation Type B) are beginning to decline in health and vigor as a result of their crowded condition. A thinning, prior to recreational development, using the "Crop Tree Selection Method" in these stands, would reduce the competition between residual trees for space, sunlight, nutrients and water (in the mixed hardwood stand), resulting in a healthier, more stable forest over time.

For the purposes of this thinning, 100 of the highest quality trees in each acre should be identified (trees spaced about 20'x20' will equal 100 trees per acre), and one, two, or three trees that are in direct competition with each of those identified should be removed. The 100 trees per acre that are selected as crop trees should be healthy, large crowned, and show little or no signs of damage. Trees which are not competing with the 100 selected trees should not be removed, unless they are severely damaged. This thinning, if implemented, will provide between 4 and 6 cords of fuelwood per acre.

Harvesting operations in the hardwood swamp area should be restricted to months where the ground is frozen or months when the ground is dry, to avoid severe erosion of the soil.

A publicly employed service forester or consultant forester should be contacted to assist the town in marking trees to be removed and selecting crop trees, if the thinning is desired.

ADVERSE ENVIRONMENTAL EFFECTS

If intensive uses are not developed in the wetland soils there should be no adverse environmental effects.

IRREVERSIBLE COMMITMENT OF RESOURCES

There will be no irreversible commitment of resources.

ALTERNATIVES TO THE PROPOSED ACTION

The alternative of no action is unrealistic. The Town is experiencing residential development which increases the demand for recreational facilities. Pro-

moting more and better use of a facility close to the population it serves, makes sense in a time of energy shortages.

RECREATION POTENTIAL

The Town of Franklin is seeking HCRS funding for expanded development of their existing Giddings Recreation Park, a 90 acre tract located along Route 207. Access to the site is good. The park presently has two ballfields, an open area with a horse ring, a town garage, and a tennis and basketball court.

The town hopes to establish walking/nature trails, additional ballfield, an ice skating area and possibly a facility for indoor recreational use. Swimming does not appear to be a likely possibility with the quantity and apparent quality of the water available on the property. Since the potential for accommodating swimming via use of the stream appears unfeasible, it may be prudent for the town to investigate alternative means of providing for this activity. A swimming pool may be the only viable alternative, as other nearby water bodies are not available for acquisition.

The portion of the tract adjacent to Route 207 is developed for ballfields. The open field and horse ring located near the middle of the tract marks the southern extreme of the park. The grassy corridors comprising woodland openings immediately south of the open field and horse ring would lend themselves to establishment of picnic areas with adjacent parking.

Use of the trolley line corridor as a component of a walking trail system would necessitate installation of foot bridges at the stream crossings where the bridges are now missing. Bridges should be wide enough to provide mower access for maintenance of the corridor.

Establishment of a semi-natural ice skating area via seasonal flooding of a portion of the swamp may be a possibility. Inland wetland restrictions should be investigated and necessary clearance secured, before carrying out such a proposal, however. Fifty-one percent of the tract is classified as inland/wetland and so regulated. Some tree mortality can be anticipated in those areas to be flooded for extended periods. The remaining wetlands are best kept undisturbed to provide open space and nature study areas and to help maintain water storage capacity. Since a sizable part of the tract is wetland (particularly on the southern and western sides) the bulk of the activities are anticipated to be on the other portions.

A swimming area is proposed in the southwest section of the property. This area is wetland with Beaver Brook flowing through it. There is no pond in this area, therefore extensive excavation will be necessary to create a sizable area for bathing. However, the soil in this area is Carlisle muck which does not lend itself to excavation because the side slopes are unstable and slough readily. Flow rates through the swamp point to doubtfully suitable water quality for swimming. Additionally, fertilizer and manure leachates are likely to be found in the waters of Beaver Brook making algal blooms a distinct possibility in any dug ponds using its water. The swamp further adds tannic acid to the water (as a result of decaying vegetation) imparting an unattractive brownish look to the water.

Even if there was no problem with the excavation of the pond, there is concern that the diversion waters from Beaver Brook would not be substantial to provide adequate dilution and flow through to the pond during dry periods.

A series of water samples to check the bacterial quality of Beaver Brook would be necessary to ensure that the water quality of Beaver Brook meets the minimum requirements for bathing water. The samples would have to be collected at strategic times of the year such as in the spring when farmlands are freshly fertilized, after heavy spring rains to evaluate the runoff from the fields and during the summer months when extended dry periods may occur.

If excavating a pond were possible and flow through and dilution was adequate and the bacterial quality of the brook was acceptable, there still would be the problem with bringing in sand for the pond bottom, running telephone lines to the area and installing toilets for the bathers. The Carlisle muck is prohibitive for the installation of subsurface sewage disposal systems.

Due to these environmental limitations, it would not be advisable to create a pond for swimming in this or any other area on this property. Establishment of a swimming pool on one of the more favorable sections of the property may be an alternative, if the town sees provision of swimming as a necessity.

Consideration should be given to the location of the picnic area for such things as accessibility, ability to develop an adequate water supply, installation of toilet facilities and placement and pick up of refuse.

The location proposed for the picnic area has a major limiting factor of wetness and seasonal flooding. These conditions do not lend themselves well for a picnic area. Development of access roads will be necessary for refuse collection. This may cause problems with seasonal flooding washing roads out.

Installing subsurface sewage systems in this area is not advised because of the high groundwater coupled with seasonal flooding.

Insects will be a problem in this area. The damp protected areas are ideal breeding places for bothersome insects such as mosquitoes, horse flies and deer flies.

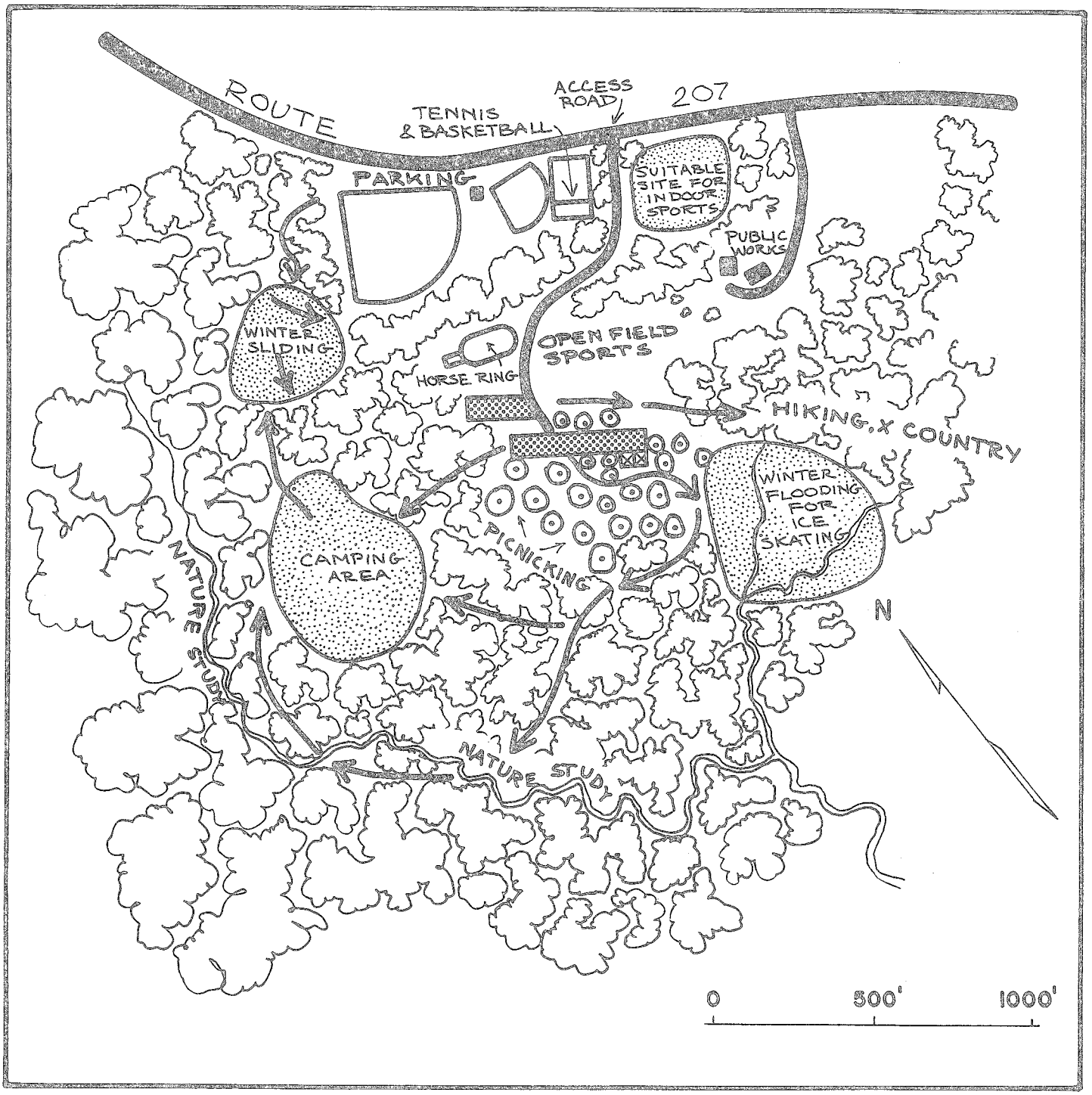
An area more suited for picnicking and the necessary facilities which augment this type of activity would be the open area east of the horse show rink.

Toilet facilities could be provided by either pit-type or chemical type toilets. If swimming facilities do not become a component of this park, a flush toilet building built solely to meet the need for sanitary facilities does not seem necessary. It may be economically feasible, however, to provide flush toilets if a multi-purpose building (possibly providing for the indoor recreational activities mentioned) is erected.

Garbage disposal is anticipated to be via pickup by the town with disposal at an off site location.

Tree losses can be expected in swamp areas flooded for extended periods above their normal levels and where cutting of trees is necessary for road and facility

GIDDINGS PARK
SCHEMATIC DESIGN



LEGEND

- Hiking Trails
- Area Selectively Thinned For Picnicking
- Pit/Chemical Toilets
- Parking

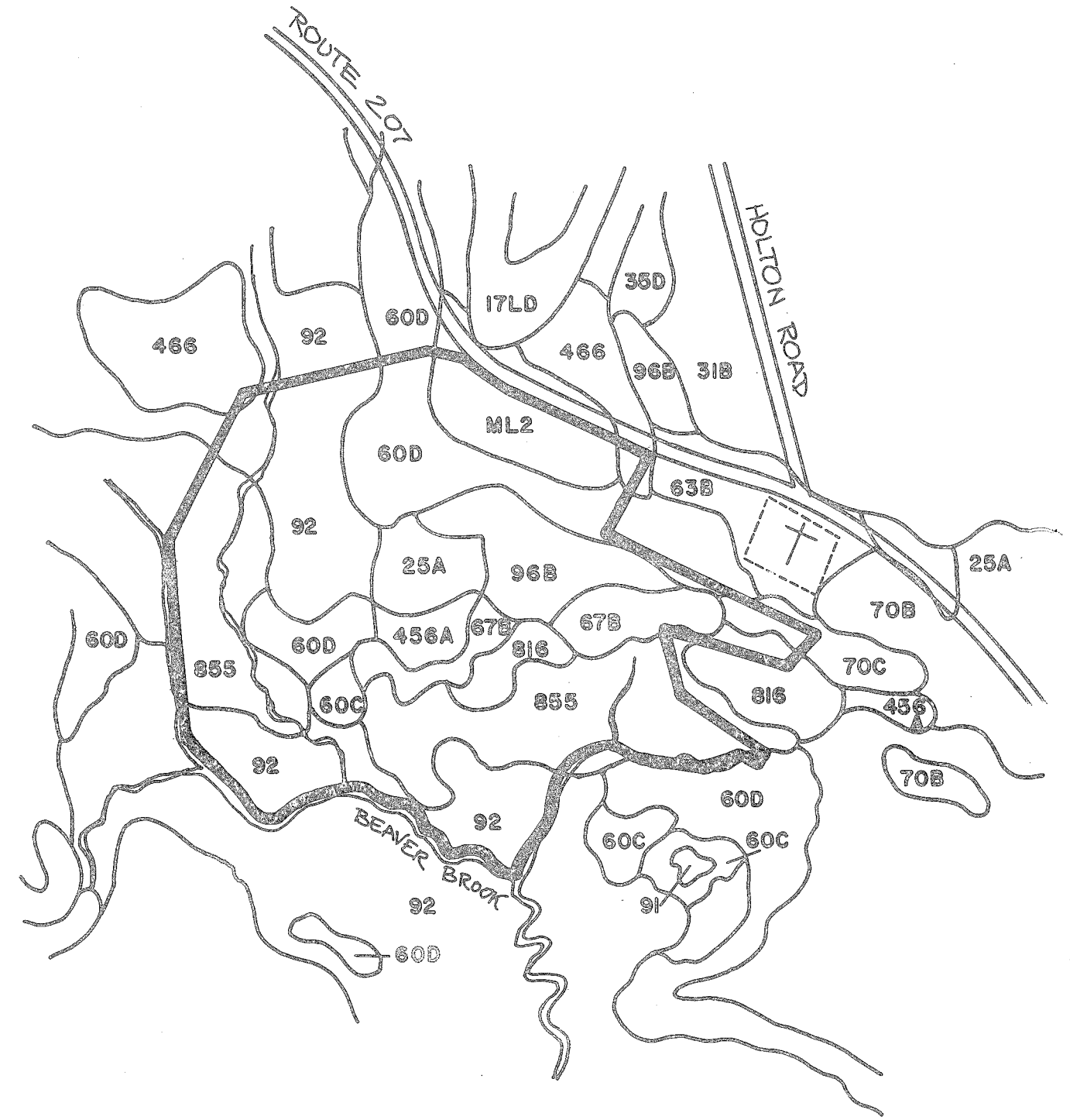
installation. Losses and reduced tree vigor can also be anticipated in heavily used areas (such as picnic groves).

The potential for maximum impact on the area would probably come from any manipulation of the wetlands. Flooding, draining, or filling of the wetlands would alter the character of the wetland to a degree comparable to the alteration undertaken. It is anticipated that the initial impact of alterations to a relatively stable wetland ecosystem would be negative and disruptive.

Use of the dry portions of the site (ridgetops, etc.) for recreational facilities and activities is anticipated to enable the accommodation of all the stated needs except for swimming and skating. Wetland areas can be advantageously employed to provide buffer zones (green belts) which can accommodate limited passive recreation such as a nature/education walking path. The use of corduroy pathway may be necessary in the wetter sections. This would be a desirable feature to incorporate in a development plan since it would enable the contrasting of wetland and upland habitats by nature study classes from the nearby elementary school. The effects of modifying the swamp to enable skating should be fully realized before undertaking any modifications.

A sketch plan of a possible facilities layout is included in this report for the Town's consideration. This schematic plan allows for all feasible activities proposed by the town and also takes environmental limitations and cost factors into consideration. The Town may wish to revise its proposed plan to reflect information about environmental restrictions provided by this study.

Appendix


ROUTE 207
HOLTON ROAD
BEAVER BROOK
466
92
60D
17LD
35D
466
96B
31B
ML2
60D
63B
92
25A
96B
25A
70B
60D
456A
67B
67B
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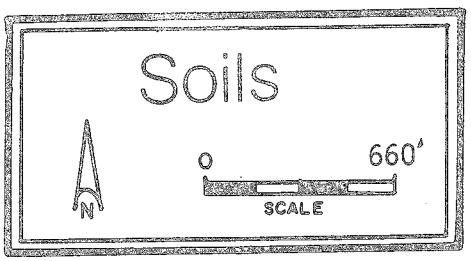
Soils
N
0
660'
SCALE

GIDDINGS PARK
FRANKLIN, CONNECTICUT

PROPORTIONAL EXTENT OF SOILS AND THEIR LIMITATIONS FOR CERTAIN LAND USES

Soil Series	Soil Symbol	Approx. Acres	Percent of Acres	Principal Limiting Factor	Urban Use Limitations*				
					On-Site Sewage	Buildings with Basements	Picnic Areas	Play-Grounds	Paths & Trails
Agawam	96B	7	8%		1	1	1	2	1
** Carlisle	92	17	19%	Wetness	3	3	3	3	3
Hinckley	60C	2	2%	Slope, small stones	2	2	2	3	2
Hinckley	60D	13	15%	Slope	3	3	3	3	2
Merrimac	70C	2	2%	Slope	1	2	1	2	1
Ninigret	25A	4	4%	Wetness	3	3	2	2	2
** Pootatuck	816	4	4%	Floods, wetness	3	3	2	2	2
** Rippowam	855	24	27%	Floods, wetness	3	3	3	3	3
Sudbury	456A	3	3%	Wetness	3	3	2	2	2
** Walpole	466	1	1%	Wetness	3	3	3	3	3
Windsor	67B	7	8%		1	1	2	3	2
Udorthents	ML2	6	7%		Limitations Determined On Site				

Limitations: 1-slight; 2-moderate; 3-severe
** Inland Wetland Soil Regulated Under P.A. 155.

SOIL INTERPRETATIONS FOR URBAN USES

The ratings of the soils for elements of community and recreational development uses consist of three degrees of "limitations:" slight or no limitations; moderate limitations; and severe limitations. In the interpretive scheme various physical properties are weighed before judging their relative severity of limitations.

The user is cautioned that the suitability ratings, degree of limitations and other interpretations are based on the typical soil in each mapping unit. At any given point the actual conditions may differ from the information presented here because of the inclusion of other soils which were impractical to map separately at the scale of mapping used. On-site investigations are suggested where the proposed soil use involves heavy loads, deep excavations, or high cost. Limitations, even though severe, do not always preclude the use of land for development. If economics permit greater expenditures for land development and the intended land use is consistent with the objectives of local or regional development, many soils and sites with difficult problems can be used.

Slight Limitations

Areas rated as slight have relatively few limitations in terms of soil suitability for a particular use. The degree of suitability is such that a minimum of time or cost would be needed to overcome relatively minor soil limitations.

Moderate Limitations

In areas rated moderate, it is relatively more difficult and more costly to correct the natural limitations of the soil for certain uses than for soils rated as having slight limitations.

Severe Limitations

Areas designated as having severe limitations would require more extensive and more costly measures than soils rated with moderate limitations in order to overcome natural soil limitations. The soil may have more than one limiting characteristic causing it to be rated severe.

About the Team

The Eastern Connecticut Environmental Review Team (ERT) is a group of professionals in environmental fields drawn together from a variety of federal, state, and regional agencies. Specialists on the Team include geologists, biologists, foresters, climatologists, soil scientists, landscape architects, archeologists, recreation specialists, engineers and planners. The ERT operates with state funding under the supervision of the Eastern Connecticut Resource Conservation and Development (RC&D) Area.

The Team is available as a public service at no cost to Connecticut towns.

PURPOSE OF THE TEAM

The Environmental Review Team is available to help towns and developers in the review of sites proposed for major land use activities. To date, the ERT has been involved in reviewing a wide range of projects including subdivisions, sanitary landfills, commercial and industrial developments, sand and gravel operations, elderly housing, recreation/open space projects, watershed studies and resource inventories.

Reviews are conducted in the interest of providing information and analysis that will assist towns and developers in environmentally sound decision-making. This is done through identifying the natural resource base of the project site and highlighting opportunities and limitations for the proposed land use.

REQUESTING A REVIEW

Environmental reviews may be requested by the chief elected officials of a municipality or the chairman of town commissions such as planning and zoning, conservation, inland wetlands, parks and recreation or economic development. Requests should be directed to the Chairman of your local Soil and Water Conservation District. This request letter should include a summary of the proposed project, a location map of the project site, written permission from the landowner allowing the Team to enter the property for purposes of review, and a statement identifying the specific areas of concern the Team should address. When this request is approved by the local Soil and Water Conservation District and the Eastern Connecticut RC&D Executive Council, the Team will undertake the review on a priority basis.

For additional information regarding the Environmental Review Team, please contact Jeanne Shelburn (889-2324), Environmental Review Team Coordinator, Eastern Connecticut RC&D Area, 139 Boswell Avenue, Norwich, Connecticut 06360.