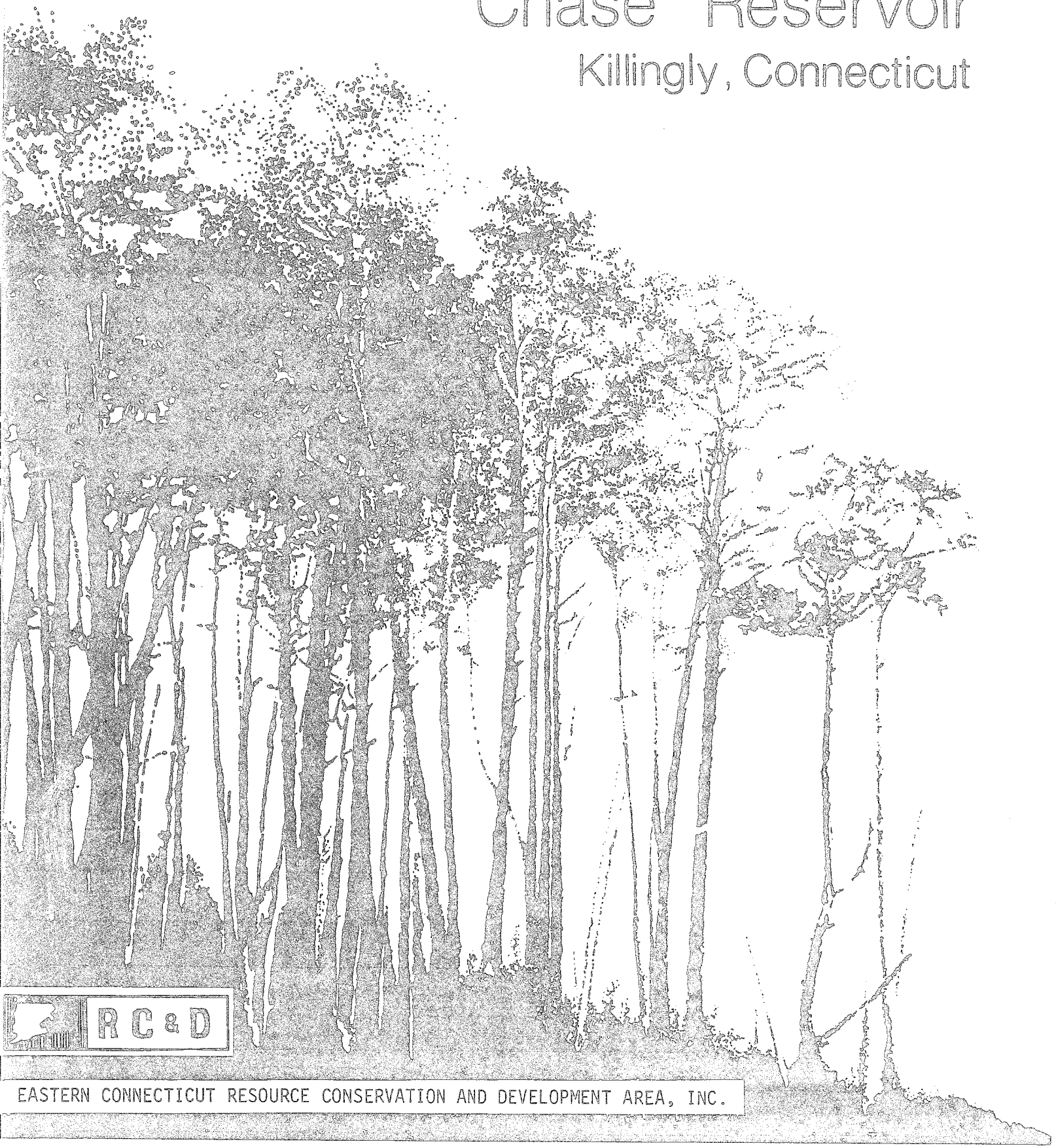
Environmental Review Team Report

Chase Reservoir

Killingly, Connecticut



R C & D

EASTERN CONNECTICUT RESOURCE CONSERVATION AND DEVELOPMENT AREA, INC.

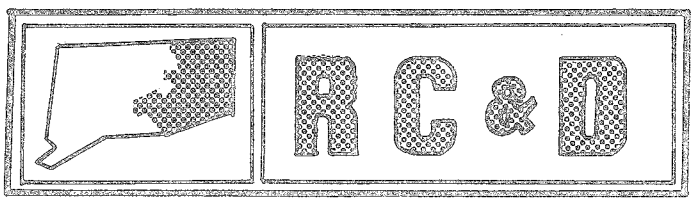
Environmental Review Team Report

on

Chase Reservoir

Killingly, Connecticut

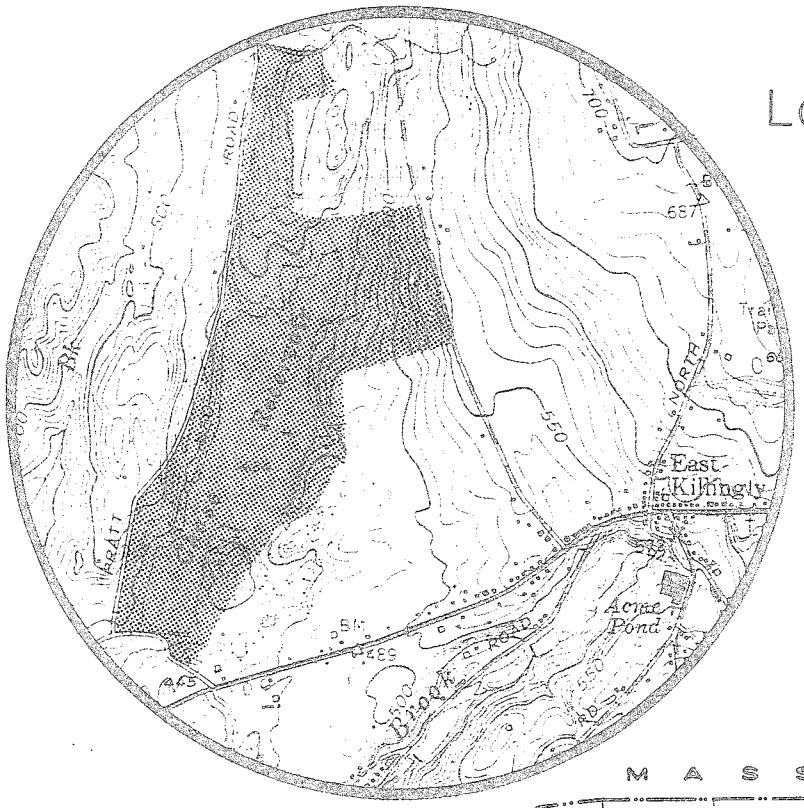
April 1981



eastern connecticut resource conservation & development area

environmental review team
139 boswell avenue
norwich, connecticut 06360

Location of Study Site



CHASE RESERVOIR
KILLINGLY, CONNECTICUT

EASTERN CONNECTICUT
RESOURCE CONSERVATION AND DEVELOPMENT PROJECT

ENVIRONMENTAL REVIEW TEAM REPORT
ON
CHASE RESERVOIR
KILLINGLY, CONNECTICUT

This report is the outgrowth of a request from the Town of Killingly to the Windham 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.

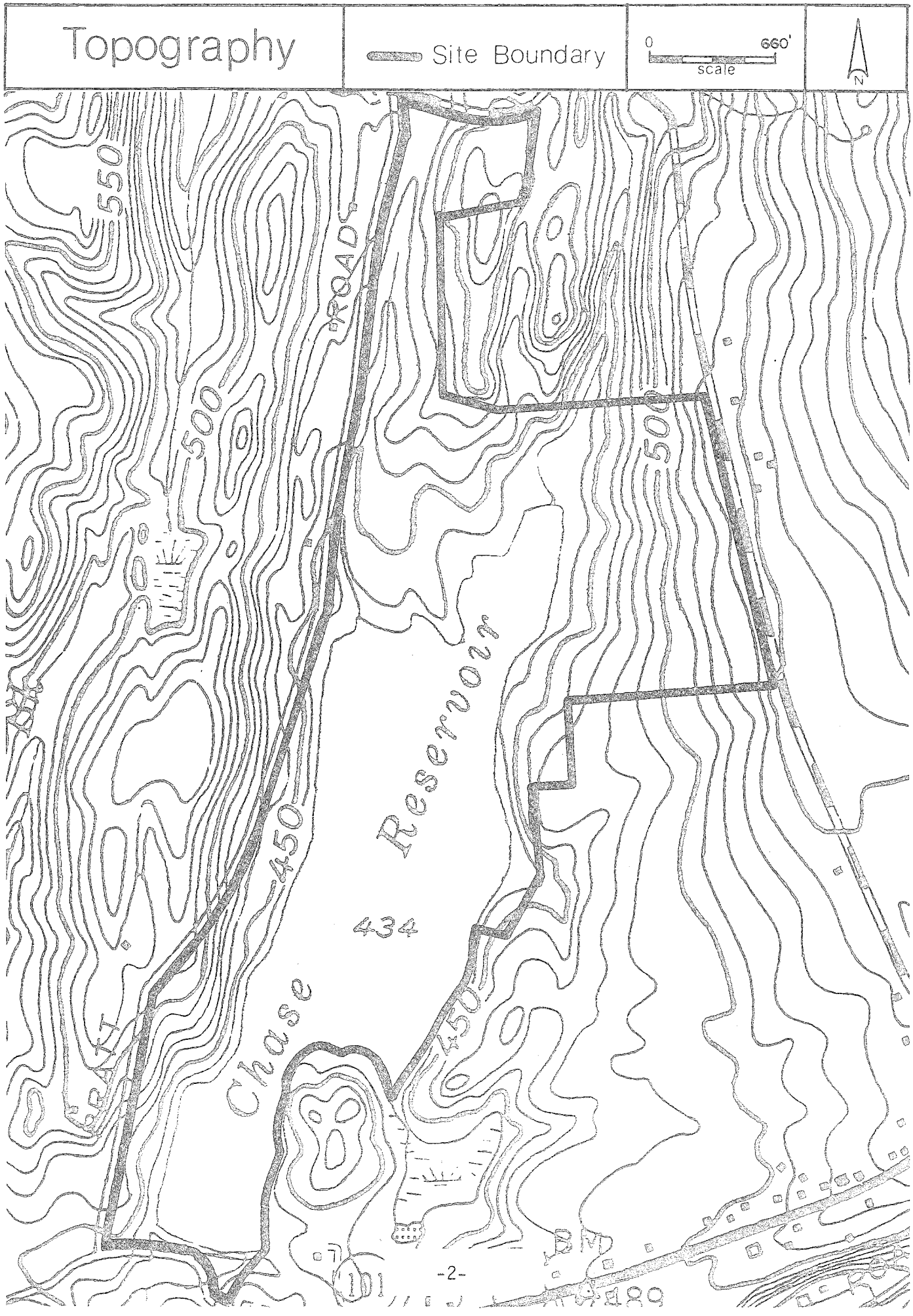
The Environmental Review Team that field-checked the property consisted of the following personnel: Howard Denslow, District Conservationist, SCS; Mike Zizka, Geologist, Connecticut Department of Environmental Protection (DEP); Rob Rocks, Forester, DEP; Andy Petracco, Recreation Specialist, DEP; John Cimochowski and Marcia Banach, Planners, Northeastern 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 Thursday, December 11, 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 the Chase reservoir, shall constitute the environmental assessment portion of the Town's open space application for federal Department of the Interior, Heritage Conservation and Recreation Service (HCRS) funds to assist in the acquisition of the Chase Reservoir.

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
550
500
450
ROAD
Chase Reservoir
434
450
500
550
BND

DESCRIPTION OF THE PROPOSAL

The Eastern Connecticut Environmental Review Team was asked to prepare an environmental assessment for the Crystal Water Company property in Killingly. The site is approximately 175± acres in size, is located on Pratt Road and encompasses the Chase Reservoir. The town hopes to purchase this site with Heritage Conservation and Recreation Service (HCRS) acquisition funding, if available. The recreation needs of the town include a swimming facility with a bath house and rest rooms, non-motor boating activities, small scale camping (tents), picnic pavillions, tennis courts, jogging trails and a wildlife sanctuary. The acquisition of property would fulfill one of the recommendations contained in the Town Plan of Development: "Killingly should acquire frontage on one of the lakes in the Town to develop a municipal beach." The Plan also recommends that the Town acquire thirty acres for passive recreation by the year 1990.

The more densely populated west side of Killingly is served by a number of town recreation areas located in that end of town. The sparsely populated community of East Killingly has no nearby developed recreation facility. In addition to providing the community a closeby recreation area, the town would be provided a swimming facility it does not now have. It is anticipated that because of its proximity, a good portion of its users would be from Rhode Island.

DESCRIPTION OF THE ENVIRONMENT

PAST/PRESENT LAND USES

The Chase Reservoir is currently used as a surface water supply for the Borough of Danielson; the land use of the surrounding property under consideration is woodlands. The surface area of the reservoir is approximately 73 acres, and the reservoir has a watershed area of approximately 888 acres. Although the land use of the watershed is almost completely forest, part of the rather densely populated village of East Killingly lies within the watershed boundary. The distance from the village to the reservoir is greater than one-half mile, which should allow effective filtration of possible urban pollutants before they reach the reservoir.

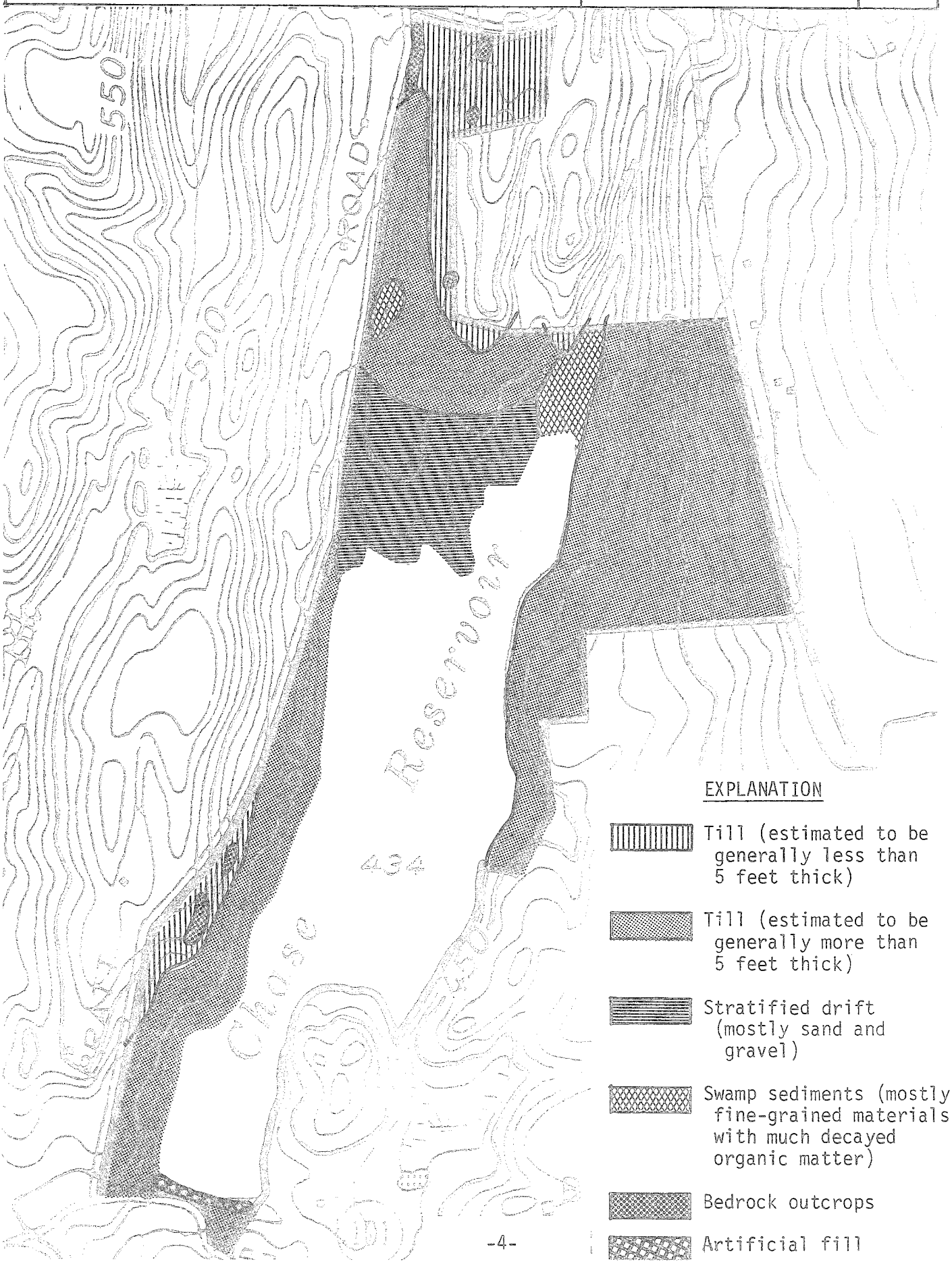
SOCIO-ECONOMIC CONDITIONS

The present population of Killingly is 14,529 (U.S. Census 1980 Preliminary Count). This includes 4500 persons in the very densely developed Borough of Danielson, which is approximately three miles from the reservoir.

EXISTING TRANSPORTATION ROUTES

Existing transportation routes to the reservoir consist of primary access by unimproved town roads, with access to the unimproved roads by state highway or local improved roads. If the Chase Reservoir is acquired by the town and used as a park/beach, improved access would be required.

Surficial Geology



The parcel has road frontage on three town roads: Ballouville Road (700'± and 2000'±), Pettingill Road (800'±) and Pratt Road (6500'±). Frontage on Ballouville Road is in two separate sections.

The portion of the property under consideration for a beach and parking area is near the northerly end of the total parcel and is adjacent to Pratt Road. This area is located approximately 2000 feet south of the intersection of Pratt and Ballouville Roads and about 4000 feet north of Route 101. Pratt Road is presently a gravel surface road with a width of 12 to 14 feet.

SURFACE/SUBSURFACE GEOLOGIC CONDITIONS

Bedrock cropping out on and underlying the site is largely schist with some interbedded quartzite. Schist is a term given to metamorphic rocks (rocks which have been distinctly altered by high pressures and/or temperatures) in which most of the minerals have been aligned to give the rock a slabby, platy, or flaky appearance. Quartzites are metamorphic rocks that are composed primarily of the mineral quartz. The schists on the site are made up largely of quartz, feldspar, biotite, and muscovite; minor mineral components include epidote, calcite, actinolite, tremolite, hornblende, pyrite, graphite, and garnet. Only a few scattered bedrock outcrops occur on the property; these are located along the western border and at the northern end. No valuable mineral concentrations are known to exist in the bedrock in this area.

The surficial geology of the site consists of those unconsolidated earth materials that overlie solid rock. Most of the surficial materials were deposited directly from a pre-existing sheet of glacier ice; such deposits are known as till. Till contains clay, silt, sand, gravel, and boulders mixed in varying proportions. Commonly a sandy, stony, relatively loose till overlies a siltier, less stony, tightly compact till ("hardpan"). Most of the till on this property is probably of the sandier variety. A small patch of surficial materials at the northwestern corner of the reservoir appears to be stratified drift. Stratified drift consists of sediments that were sorted and deposited by glacial meltwaters. Sand and gravel are the predominant components and the sediment may be well-layered (unlike till, which rarely shows a depositional structure). There may be a small amount of stratified drift along the eastern shore of the reservoir, but it was not possible to confirm this in the field. At any rate, the stratified drift lacks any substantial economic value due to its small volume.

SOILS

Lying within the 888 acre watershed of Chase Reservoir, the land proposed for acquisition immediately around the reservoir has been kept in a partially or fully wooded state. Fifteen acres of partially open land which probably was once pasture, lies at the northwest corner of the lake. The soils here are a mix of Ninigret fine sandy loam (45A) and Hinckley gravelly sandy loam (60A,C). They are well drained terrace soils particularly suited for agricultural use and easily excavated and graded. This partial open area slopes gently to the lake except along the sides of the peninsula extended into the lake. The mapping unit symbol 60C (soils map) shows this location. Erosion of the area, washing soil into the lake when constructing a beach area, would only be a problem if there was substantial vegetative and ground disturbance on steeper grades down to the water's edge.

Two major feeder streams enter the lake at its northern end. One parallels Pratt Road. It originates in a swampy area, apparently within the acquisition property, and flows through the partially open fields entering the lake on the west side. Care would have to be taken when excavating near or crossing this stream to preserve its stable condition. The other stream flows from uphill runoff and a swampy wooded area, entering the lake on the northeast side. Again, care would have to be taken if crossing this stream was necessary.

Land on the east and west side of the lake slope steeply. The primary limitations for use are the slope and rockiness. The existance of a sizeable area of wetland soil (43M) on the hillside, down from Ballouville Road, is the source of much wetness and several intermittent streams coming down the hill. The property is totally wooded and wet up to Ballouville Road. Any use of this hillside would have to allow for surface and subsurface wetness.

Soil series typical of the site are described as follows:

3XB Canton and Charlton very stony fine sandy loams, 3 to 8 percent slopes. These gently sloping, well drained soils are on ridges, hills, and side slopes of glacial till uplands. Areas are mostly long and narrow or oval and range from 5 to 50 acres. Slopes are mostly smooth and convex and are 200 to 400 feet long. Stones cover 1 to 8 percent of the surface. About 45 percent of the mapped acreage of this unit is Canton soils, 40 percent is Charlton soils, and 15 percent is other soils. Areas of this unit consist of Canton soils or Charlton soils, or both. The soils were mapped together because they have no significant differences in use and management. The water table is commonly deeper than 6 feet. The available water capacity is moderate. The permeability of the Canton soils is moderately rapid in the surface layer and subsoil and rapid in the substratum. The permeability of the Charlton soils is moderate or moderately rapid. Runoff is medium. The soils of this unit are well suited to commerical woodland production, but the Canton soils do not have as high a productivity as the Charlton soils. These soils are well suited to woodland wildlife habitat, but are poorly suited to openland wildlife habitat because stoniness hinders the use of equipment. These soils are too dry for wetland wildlife habitat. The soils of this unit are poorly suited to most recreational uses because of stoniness.

3MC Canton and Charlton extremely stony fine sandy loams, 3 to 15 percent slopes. These gently sloping to sloping, well drained soils are on ridges, hills, and side slopes of glacial till uplands. Areas are oval or irregular in shape and range from 5 to 100 acres. Slopes are mostly smooth and convex and are 100 to 600 feet long. Stones cover 8 to 25 percent of the surface. About 45 percent of the mapped acreage of this unit is Canton soils, 40 percent is Charlton soils, and 15 percent is other soils. Areas of this unit consist of Canton soils or Charlton soils or both. These soils were mapped together because they have no significant differences in use and management. The water table is the same as 3XB except runoff is medium to rapid. The soil limitations for commercial woodland production and recreational uses are the same as 3XB.

3MD Canton and Charlton extremely stony fine sandy loams, 15 to 35 percent slopes. These moderately steep to steep, well drained soils are on ridges, hills, and side slopes of glacial till uplands. Areas are mostly long and narrow and range from 5 to 30 acres. Slopes are smooth and convex and are mostly less than 200 feet long. Stones cover 8 to 25 percent of the surface. About 45 percent of the mapped acreage of this unit is Canton soils, 40 percent is Charlton soils, and 15 percent is other soils. Areas consist of Canton soils or Charlton soils or both. These soils were mapped together because they have no significant

differences in use and management. The water table is the same as 3XB except runoff is rapid. These soils are fairly well suited to commercial woodland production, but the Canton soils do not have as high a productivity as the Charlton soils. The steep slopes and stoniness hinder the use of some harvesting equipment. The soils of this unit are well suited to woodland wildlife habitat, but they are poorly suited to openland wildlife habitat because stoniness makes the use of equipment impractical. These soils are too dry for wetland wildlife habitat. The soils of this unit are poorly suited to recreation because of the steep slopes and stoniness.

17LC Charlton-Hollis fine sandy loams, very rocky, 3 to 15 percent slopes. This complex consists of gently sloping to sloping, somewhat excessively drained and well drained soils on hills and ridges of glacial till uplands. Areas of this complex are mostly irregular in shape and range from 5 to 200 acres. Slopes are mostly complex and 100 to 200 feet long. The areas have rough surfaces with bedrock outcrops and a few narrow intermittent drainageways and small wet depressions. Stones cover 1 to 8 percent of the surface. This complex is about 55 percent Charlton soils, 20 percent Hollis soils, and 25 percent other soils and rock outcrops. Rock outcrops make up to 10 percent of this unit. The soils are in such a complex pattern that they could not be separated at the scale mapped. The water table is commonly below a depth of 6 feet in the Charlton soils. The available water capacity is moderate. Permeability is moderate or moderately rapid. Runoff is medium to rapid. The Hollis soils have a low available water capacity. Permeability is moderate or moderately rapid above the bedrock. Runoff is medium to rapid. This complex is fairly suited to commercial woodland production. Charlton soils have better productivity than the Hollis soils. Hollis soils are droughty and have a high seedling mortality. Tree windthrow is common because of the shallow rooting depth above the bedrock. The Charlton soils are well suited to woodland wildlife habitat, but the Hollis soils are poorly suited because they are droughty. These soils are poorly suited to openland wildlife habitat because stoniness hinders the use of equipment. They are too dry for wetland wildlife habitat. The complex is poorly suited to most recreation uses because of stoniness and the shallow depth to bedrock.

17LD Charlton-Hollis fine sandy loams, very rocky, 15 to 35 percent slopes. This complex consists of moderately steep to steep, somewhat excessively drained and well drained soils on hills and ridges of glacial till uplands. Areas of this unit are mostly long and narrow or oval and range from 5 to 100 acres. Slopes are mostly convex and 100 to 500 feet long. Stones and boulders cover 1 to 8 percent of the surface. This complex is about 55 percent Charlton soils, 20 percent Hollis soils, and 25 percent other soils and rock outcrops. Rock outcrops make up to 10 percent of this unit. These soils are in such a complex pattern that they could not be separated at the scale mapped. The water table for Charlton and Hollis is the same as 17LC except runoff is rapid. The limitations for commercial woodland production are the same as for 17LC except steep slopes, stoniness, and rock outcrops limit the use of harvesting equipment. The soils of this unit are poorly suited to most recreational uses because of stoniness, steep slopes, and the shallow depth to bedrock.

31XB Woodbridge very stony fine sandy loam, 3 to 8 percent slopes. This gently sloping, moderately well drained soil is on the top and sideslopes of drumlins and hills of glacial till uplands. Areas are mostly long and narrow or irregular

in shape and range from 3 to 25 acres. Stones cover 1 to 8 percent of the surface. This soil has a seasonal water table at a depth of about 20 inches from fall to spring. The available water capacity is moderate. This soil has moderate permeability in the surface layer and subsoil and slow to very slow permeability in the substratum. Runoff is medium. The soil is well suited to commercial woodland production, but the stones hinder the use of some harvesting equipment. This soil is well suited to woodland wildlife habitat, but it is poorly suited to openland wildlife habitat because stoniness hinders the use of equipment. This soil is too dry for wetland wildlife habitat. This soil is fairly suited to most recreational uses. It is limited mainly by stoniness and wetness.

31MC Woodbridge extremely stony fine sandy loam, 3 to 15 percent slopes. This gently sloping to sloping, moderately well drained soil is on the tops of large drumlins and hills of glacial till uplands. Areas are mostly oval or irregular in shape and range from 3 to 60 acres. Stones cover 8 to 25 percent of the surface. The water table is the same as 31XB except runoff is rapid. This soil is well suited to commercial woodland production, but stones hinder the use of some harvesting equipment. This soil is fairly suited to woodland wildlife habitat, but it is poorly suited to openland wildlife habitat because stones restrict the use of equipment. This soil is too dry for wetland wildlife habitat. This soil is poorly suited to most recreational uses because of the stoniness.

41MC Sutton extremely stony fine sandy loam, 3 to 8 percent slopes. This gently sloping, moderately well drained soil is at the base of slopes of hills and in slight depressions of glacial till uplands. Areas are mostly oval or irregular in shape and range from 5 to 35 acres. Stones cover 8 to 25 percent of the surface. Slopes are smooth and concave. This soil has a seasonal high water table at a depth of about 20 inches from fall to spring. It has a moderate available water capacity. This soil has moderate or moderately rapid permeability. Runoff is medium. This soil is well suited to commercial woodland production, but stoniness hinders the use of some harvesting equipment. This soil is fairly well suited to woodland wildlife habitat, and is poorly suited to openland wildlife habitat because stoniness hinders the use of equipment. This soil is too dry for wetland wildlife habitat. This soil is poorly suited to most recreational uses because of stoniness.

#45A Ninigret fine sandy loam. This nearly level to gently sloping, moderately well drained soil is in slight depressions of stream terraces and outwash plains. Slopes range from 0 to 5 percent. Areas of this soil are irregular in shape and mostly range from 5 to 30 acres. This soil has a seasonal water table at a depth of about 20 inches from fall to spring. The available water capacity is moderate. This soil has moderately rapid permeability in the surface layer and subsoil and rapid permeability in the substratum. Runoff is slow to medium. This soil is well suited to commercial woodland production and to woodland and openland wildlife habitat. It is too dry for wetland wildlife habitat. This soil is fairly well suited to most recreational uses. Wetness is the major limitation.

#60A Hinckley gravelly sandy loam, 0 to 3 percent slopes. This nearly level, excessively drained soil is on terraces of stream valleys and on outwash plains. Areas of this soil are mostly oval or irregular in shape and range from 5 to 30 acres. The water table is commonly below a depth of 6 feet. The available water capacity is low. This soil has rapid permeability in the surface layer and subsoil

and very rapid permeability in the substratum. Runoff is slow. This soil is poorly suited to commercial woodland production. It has low productivity. Seedling mortality is high because of droughtiness. This soil is poorly suited to woodland and openland wildlife habitat because of droughtiness. It is too dry for wetland wildlife habitat. This soil is poorly suited to most recreational uses because of the gravelly surface.

##60C Hinckley gravelly sandy loam, 3 to 15 percent slopes. This gently sloping to sloping, excessively drained soil is on terraces of stream valleys and on glacial outwash plains. Areas of this soil are oval or irregular in shape and range from 5 to 200 acres. Slopes are convex or undulating and are mostly less than 200 feet long. The water table is generally similar to 60A except runoff is rapid. This soil is fairly well suited to commercial woodland production. It has low permeability. Seedling mortality is high because of droughtiness. This soil is poorly suited to woodland and openland wildlife habitat because it is droughty. It is too dry for wetland wildlife habitat.

WETLAND SOIL

*43M Ridgebury, Leicester and Whitman extremely stony fine sandy loams. This unit consists of nearly level, poorly drained and very poorly drained soils in depressions and drainageways of glacial till uplands. Areas are mostly long and narrow or irregular in shape and range from 5 to 150 acres. Slopes range from 0 to 5 percent and are mostly 100 to 300 feet long. Stones cover 8 to 25 percent of the surface. About 40 percent of the mapped acreage of this unit is Ridgebury soils, 35 percent is Leicester soils, 15 percent is Whitman soils, and 10 percent is other soils. Some areas of this unit consist of one of these soils and some areas consist of two or three. The soils of this unit were mapped together because they have no significant differences in use and management. Ridgebury soils have a seasonal water table at a depth of about 10 inches from fall through spring. It has a moderate available water capacity. This soil has moderate to moderately rapid permeability in the surface layer and subsoil and slow to very slow permeability in the substratum. Runoff is slow. Leicester soils have a seasonal water table at a depth of about 10 inches from fall through spring. It has a moderate available water capacity. This soil has moderate or moderately rapid permeability. Runoff is slow. Whitman soils have a water table at or near the surface from fall through spring. It has a moderate available water capacity. This soil has moderate or moderately rapid permeability in the surface layer and upper part of the substratum, and slow to very slow permeability in the lower part of the substratum. Runoff is slow. This unit is fairly suited to commercial woodland production. Stoniness and wetness hinder the use of harvesting equipment. Seedling mortality is high and windthrow is common because of the wetness. Ridgebury and Leicester soils are fairly suited to woodland wildlife habitat, but Whitman soils are poorly suited. These soils are poorly suited to openland wildlife habitat because stoniness hinders the use of equipment. These soils are well suited to wetland wildlife habitat where slopes are less than 1 percent. The soils of this unit are poorly suited to recreation because of stoniness and wetness.

*91 Adrian and Palms mucks. This unit consists of nearly level, very poorly drained organic soils in depressions and along streams of outwash plains and glacial till uplands. Areas are mostly oval or long and narrow and range from 5 to 40 acres. Slopes range from 0 to 2 percent, but are mostly less than 1 percent. About 45 percent of the mapped acreage of this unit is Adrian soils,

35 percent is Palms soils, and 20 percent is other soils. Areas of this unit consist of either Adrian soils, Palms soils, or both. The soils of this unit were mapped together in this survey area because they react similarly to most uses and management. These soils are wet most of the year and are ponded for several weeks from fall through spring and after heavy summer rains. They have a high available water capacity. Adrian soils have moderately rapid permeability in the organic layers and rapid permeability in the substratum. Palms soils have moderately rapid permeability in the organic layers and moderate or moderately slow permeability in the substratum. Runoff is very slow or the soils are ponded. This unit is poorly suited to commercial woodland production. Wetness severely limits the use of equipment. Seedling mortality is high. These soils have a severe windthrow hazard; the trees are shallow rooted because of the high water table. The soils in this map unit are poorly suited to producing woodland wildlife habitat and openland wildlife habitat. They are well suited to wetland wildlife habitat. The soils of this unit cannot feasibly be used for most recreational uses because of wetness and the poor stability of the organic layers.

*754 Scarboro fine sandy loam. This nearly level, very poorly drained soil is in depressions of outwash plains and terraces. Areas are mostly irregular in shape and range from 3 to 25 acres. Slopes range from 0 to 2 percent. This soil has a seasonal water table at or near the surface from fall until late spring. It has a low available water capacity. This soil has rapid permeability in the surface layer and very rapid permeability in the subsoil and substratum. Runoff is slow or the soil is ponded. This soil is poorly suited to commercial woodland production. Wetness restricts the use of equipment and causes high seedling mortality. This soil is poorly suited to woodland and openland wildlife habitat, but is well suited to wetland wildlife habitat. This soil is poorly suited to recreation.

*825 Rippowam fine sandy loam. This nearly level, poorly drained soil is on the lowest floodplain areas along major streams and their tributaries. Areas are mostly long and narrow and range from 5 to 100 acres. This soil has a seasonal water table at a depth of about 10 inches from autumn through spring. It is subject to frequent flooding, mainly from autumn to spring. This soil has a moderate available water capacity. It has moderate or moderately rapid permeability in the surface layer and subsoil and rapid or very rapid permeability in the substratum. Runoff is slow. This soil is fairly suited to commercial woodland production, but wetness causes high seedling mortality and restricts the use of some harvesting equipment during wet seasons of the year. This soil is fairly suited to woodland and openland wildlife habitat. It is limited mainly by wetness. This soil is well suited to wetland wildlife habitat.

WATER RESOURCES

Chase Reservoir is supplied with water from a drainage area of approximately 880 acres, or about 1.16 square miles. The area of the reservoir itself is approximately 72 acres. The reservoir has an average depth between five and six feet, a maximum depth of nine feet, and a volume of approximately 110 million gallons, according to representatives of the Crystal Water Company. The reservoir formerly was used as part of a surface drinking-water supply by Crystal, but problems with color have caused the company to seek alternate sources, primarily

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\# Prime Farmland
\## Additional Farmland of Statewide Importance
* Designated wetland soild by P.A. 155

groundwater. The company claims that the color problems are sporadic and that they result from occasionally heavy runoff from storms and from accumulations of organic material, such as leaves. The undeveloped nature of the watershed and the shallowness of the pond support this claim, in the opinion of the Team geohydrologist.

The town has expressed an interest in using the reservoir for swimming, among other things. According to a formula used by the Department of Health Services, the volume of the reservoir is large enough to support a maximum of about 610 swimmers per day, assuming that the initial water quality is acceptable. Inflow from the two feeder streams entering the reservoir from the north may allow more swimmers to use the reservoir, but in dry periods, the inflow may be negligible. The major problem with swimming would be the shallow depth of the lake. As seen from the shoreline in places where the lake is most accessible (northern and eastern shores), the water depths appear to be generally less than four feet. Dredging may provide a limited solution, but there would be concomitant risks of increased turbidity in the short run.

VEGETATION

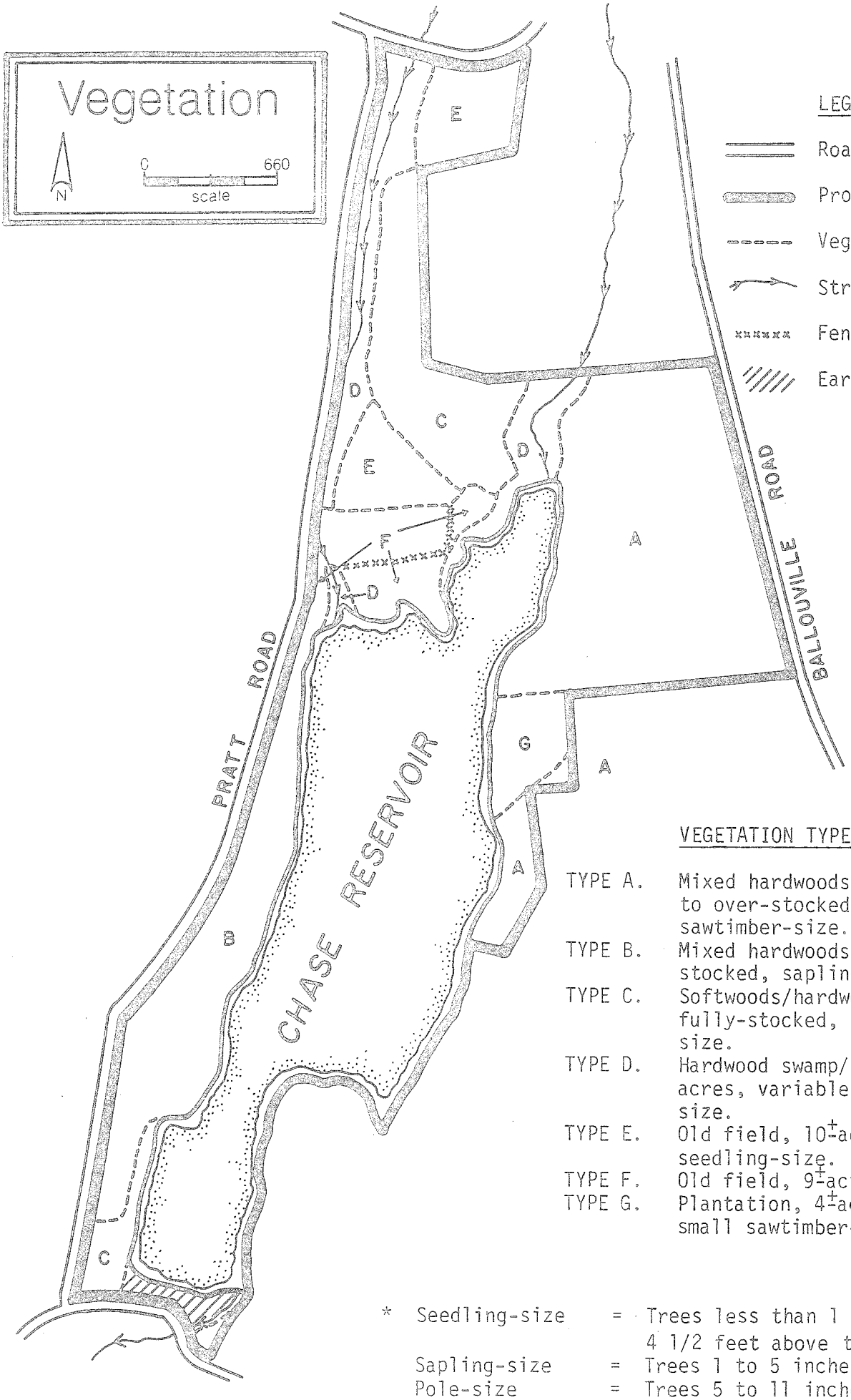
The property proposed for acquisition is approximately 100 acres in size, excluding Chase Reservoir. The parcel may be divided into five vegetation types. These include two mixed hardwood stands which total 57± acres, a softwood/hardwood stand, 14± acres; hardwood swamp/streambelt, 14± acres; two old field areas totaling 19± acres and a pine plantation, 4± acres (see vegetation type map).

Type A. (Mixed Hardwoods) This 38± acre fully to over-stocked stand is made up of medium quality pole to small sawtimber size white ash, red maple, sugar maple, red oak, shagbark hickory and occasional eastern white pine. Many of these trees are beginning to decline in health and vigor as a result of their crowded condition. The total volume in this stand ranges between seventeen and twenty-one cords per acre. The understory in this stand is dominated by blue beech maple-leaf viburnum, hop hornbeam, flowering dogwood and in wet areas, spice bush. Ground cover consists of Christmas fern, sensitive fern, club moss, poison ivy, and eastern white pine seedlings.

Type B. (Mixed Hardwoods) Sapling-size white oak, black oak and red maple are present in this 19± acre fully-stocked stand. Eastern white pine seedlings are abundant along with huckleberry, sheep laurel, club moss, bracken fern, striped pipsissewa and rattlesnake plantain.

Type C. (Softwoods/Hardwoods) Sapling to pole-size eastern white pine, white oak, black oak, shagbark hickory and red maple are present in this 14± acre fully-stocked stand. Occasional poor quality sawtimber-size white pine are scattered throughout this stand. Blue beech, eastern red cedar, maple-leaf viburnum and highbush blueberry form the understory in this area. Ground cover consists of white pine seedlings, bayberry, barberry, green brier, huckleberry, Christmas fern and club moss.

Type D. (Hardwood Swamp/Streambelt) This 14± acre area is variably stocked with poor quality sapling and occasional pole and sawtimber-size red maple. A dense understory of highbush blueberry, spice bush and poison sumac is present.



VEGETATION TYPE DESCRIPTIONS*

TYPE A.	Mixed hardwoods, 38±acres, fully to over-stocked, pole to small sawtimber-size.
TYPE B.	Mixed hardwoods, 19±acres, fully-stocked, sapling-size.
TYPE C.	Softwoods/hardwoods, 14±acres, fully-stocked, sapling to pole-size.
TYPE D.	Hardwood swamp/streambelt, 14± acres, variable-stocking, sapling-size.
TYPE E.	Old field, 10±acres, under-stocked, seedling-size.
TYPE F.	Old field, 9±acres, shrub species.
TYPE G.	Plantation, 4±acres, fully-stocked, small sawtimber-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.

Tussock sedge, skunk cabbage, false hellebore, sphagnum moss, cinnamon fern and sensitive fern form the ground cover in this area.

Type E. (Old Field) This 10± acre old field area is understocked with seedling and sapling-size white oak, black oak, gray birch, black cherry, red maple, eastern red cedar, eastern white pine, larch, old field juniper and occasional apple trees. Bayberry, barberry, maleberry and graystemmed dogwood are also present along with grasses, goldenrod, meadowsweet, several species of mosses and lichens.

Type F. (Old Field) This 9± acre old field area is not as far along in succession as is the old field (Type E). Grasses and goldenrod dominate with hardwood tree seedlings including red oak, bigtooth aspen, shadbush, black cherry, red maple which are just starting to become established. Other species which are present include eastern white pine seedlings, white spruce seedlings, eastern red cedar seedlings, bayberry, maleberry, arrowwood, witherod, nannyberry, meadow sweet, black-eyed Susan, poison ivy and assorted wildflower and weed species.

Type G. (Plantation) Small sawtimber-size eastern white pine and red pine are present in this fully-stocked 4± acre plantation. The majority of these trees are of high quality, however, many have live crowns which are insufficient to produce continued rapid growth. As a result, these trees are highly susceptible to insect, disease and weather damage. Not enough sunlight reaches the forest floor to support understory or ground cover vegetation in this stand.

WILDLIFE

Concerning wildlife, the reservoir and the surrounding area provide excellent habitat for waterfowl and mammals. Ducks and geese have been observed. Signs of deer have been seen. The partially open fields are vegetated with tall grasses, blueberry bushes, graystemmed dogwood, sumac, white cedar, pine, young planted spruce and fir, aspen, oak, cherry, and maple trees, etc. This diversity in flora presents excellent habitat and edge effect. Squirrels, rabbits, raccoon, and other small mammals undoubtedly use this area. Small songbirds nest in the shrubs near the water's edge. Hawks use the area, searching for field mice and rabbits. Other than occasional auto traffic on Pratt Road and a family's use of the home across from the open fields, there is no disturbance to wildlife.

PROBABLE FUTURE ENVIRONMENT

The probable future environment of the site if the project is not initiated will be one of residential development. The present owner of the site, Crystal Water Company, has indicated their intention to offer the site for sale to the general public if the town or state do not exercise their option to buy. The waterfront site contains several soil types with slight or moderate limitations for residential development; thus this site would be very attractive to residential developers. Lakeside intensive residential development has historically contributed to water quality deterioration in the lakes.

ENVIRONMENTAL ASSESSMENT

EFFECT ON LAND USE

The effect on land uses in the area of Chase Reservoir if the town converts the site to a recreation area will be minimal. As the site is intended mainly for passive recreation uses, it can be left in a very natural state as much as possible. Land uses in the surrounding vicinity should not be affected and should remain wooded with sparse residential development.

EFFECT ON SOCIO-ECONOMIC CONDITIONS

There should be no noticeable effects on socio-economic conditions, with the exception of a possible increase in local taxes, depending upon funding sources.

EFFECT ON TRANSPORTATION ROUTES

The acquisition of Chase Reservoir and subsequent use as a recreation site will affect the transportation routes to the site, with particular emphasis on the unimproved roads which provide primary access at the present time. As the population of Killingly is in excess of 14,000, the potential for a large volume usage of the site during the summer is high. Improvements to the unimproved road as noted will be needed to provide adequate access.

If the Town of Killingly were to use this area for a beach and associated parking area, a minimum eighteen feet wide, all-weather road (i.e., bituminous concrete or oiled gravel) should be constructed to provide access to it. During the site inspection in March 1981, it was noted that Pratt Road has numerous streamlets running along it, due to groundwater seeps, and is also subject to ledge out-crops. These two factors generally indicate higher than normal road improvement costs. If Pratt Road is to be used for access, it makes more economic sense to do so from the north, i.e., from Ballouville Road.

The only other immediately obvious alternative would be to construct a new road to the beach area which would head directly west from that portion of Ballouville Road that the property fronts on. This approach would necessitate construction through a presently heavily wooded area and an inland wetland and would involve bridging a feeder stream. The length of road would approach 1800 feet.

While reconstruction of Pratt Road from the north would also be 1800 feet in length, it would not entail any of the hurdles mentioned above. Use of Pratt Road would entail access from Route 101 via Ballouville Road. However, this section of Ballouville Road is in above average condition with regard to horizontal and vertical alignment and width. There is an "S" turn near its intersection with Pratt Road, but it does not pose serious safety problems.

In conclusion, it is felt that if this parcel is developed for recreational purposes, an improved roadway should be provided for public access. In all liklihood, the most economical access route would be north from Route 101 on Ballouville Road and then south for approximately 1800 feet on an upgraded section of Pratt Road.

EFFECT ON WATER RESOURCES

The proposed recreational uses of the site will have no substantial effect on the geological resources in the area. The major potential effect of the acquisition of the parcel on water resources would be positive: protection of part of the reservoir's watershed from intensive development. In this context, the town should seriously consider whether and how the Crystal Water Company's retention of water rights over the reservoir may affect the town's recreational plans. Certainly the town should be interested in preserving Chase Reservoir, whether it be for swimming, fishing, water supply, or simply aesthetics. If the town is primarily interested in swimming, then this acquisition may not be worth the expenditure, since the water company could later decide to order a halt to swimming. Possibly, contractual arrangements could be made to prevent such a contingency, but if the reservoir were again needed for water supply by the company and the swimming or other water-related recreational activities were found to be negatively affecting the water quality, it would be difficult to argue reasonably to maintain those activities. Moreover, to the extent that the company has a financial interest in protecting the reservoir, it is unlikely that it would permit intensive development in the watershed. This means that the town's acquisition of the watershed land might have no practical beneficial consequences in terms of water quality. The town could end up in a situation of having no tax income from the land, but having no water access either.

If the town's interest in swimming is secondary, then it should assess the parcel proposed to be acquired without reference to the reservoir: in other words, the lands should be considered as though there were not a reservoir adjacent to them. If the land is viewed as having little innate value for recreation, the town may be better off to look elsewhere.

The point to be made is that if the town is searching for recreational lands with water-related activities as a major factor in the search, then the purchase of waterfront property without an accompanying guarantee of water access does not seem to be a prudent alternative. This is especially true where the company maintaining the water rights has a financial interest in preserving the water quality, so that the risk of intensive development in the watershed is slight.

EFFECT ON VEGETATION

The proposed utilization of the forested portions of this property for recreational activities such as jogging, picnicking and perhaps camping should have little negative impact on surrounding vegetation. Development of a swimming area should have little impact on vegetation unless the forested shores of Chase Reservoir are disturbed.

Designation of this tract as a wildlife sanctuary will cause little impact on vegetation, unless the composition of the vegetation is manipulated in such a way as to improve habitat conditions for wildlife.

The extent of vegetation losses due to original clearing operations will depend largely on the magnitude of the development. Removal of all woody vegetation from the proposed parking areas will be necessary. Removal of some of the vegetation to open up picnic areas, camping areas and beach areas to increase sunlight and air flow should be considered. 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 where possible for their high shade and aesthetic value.

After development of this property, some further loss of vegetation should be expected. These losses may be attributed to mechanical root injury, soil compaction, direct trampling and vandalism along the trails, picnic area, camp area and beach area. These disturbances may also accelerate mortality of low vigor unhealthy trees. Dead and dying trees along trails and within heavy use areas may become a hazard to area users. Such trees should be removed to reduce the risk of injury.

EFFECT ON WILDLIFE

Use of the area by some wildlife may be reduced. Deer might not use it any longer. However, most wildlife is nocturnal, and the area will be used seasonally. Wildlife would tend to "move over" to areas around the lake not being used by man.

EFFECT ON AIR QUALITY/NOISE LEVELS

There would be no effect on air quality should the proposed project be implemented. Ambient noise levels would be affected during peak usage periods; however, the surrounding area is sparsely populated and the increase in noise level should have a minor impact.

PROPOSED MANAGEMENT PRACTICES

The trees in Vegetation Type A (Mixed Hardwoods) are beginning to decline in health and vigor. Given this crowded condition, trees are more susceptible to damage caused by insects, disease and adverse weather conditions. A fuelwood thinning in this stand, following the "crop tree selection method" would reduce the competition between residual trees for space, sunlight nutrients and water, resulting in a healthier more stable stand over time.

Under the "crop tree selection method" 100 of the highest quality trees in each acre should be identified (trees spaced about 20 feet by 20 feet 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 five and six cords of fuelwood per acre. A

commercial sawtimber harvest is not feasible within this stand at this time, without reducing stocking to undesirable levels. It would be advisable to have this stand re-evaluated in approximately ten years for future management needs. Thinnings in the eastern three-quarters of this stand should be limited to either the summer months, when the ground is dry, or the winter months when the ground is frozen. Operating in this stand at any other time may cause severe rutting in the areas where a hardpan layer is present in the soils.

The trees in Vegetation Type B (Mixed Hardwoods) would also benefit by receiving a thinning. The same method as described above could be used, however, at this time, no marketable product will be produced, thus the thinning would be at a cost to the town. Regardless, this stand should also be re-evaluated in approximately ten years.

A light thinning in Vegetation Type G (Pine Plantation) would be desirable. This is especially true if this area is to be used as a picnic or camp area. Removal of one-fourth of the total number of trees would reduce competition and allow the residual trees to grow more vigorously and become more stable. This thinning should be focused on the removal of trees with the smallest live crowns and also red pine which are susceptible to red pine scale. Treatment of freshly cut stumps with borate crystals will help to prevent the spread of Fomes root rot. Re-evaluation of this stand in approximately five to seven years, to determine the need of another thinning, would be desirable. The first thinning should take place prior to any development in this stand. Trees removed could be marketed as log cabin poles.

A public service forester or consultant forester should be contacted to help select the crop trees for the thinnings in the mixed hardwood stands if they are agreed upon. They could also mark the trees to be removed in the Pine Plantation. Revenue from these thinnings will more than cover consultant costs.

MITIGATING MEASURES

Preliminary planning and the proper placement of the proposed jogging trail, picnic sites and camping areas are essential to minimize potential problems.

Jogging trails should be developed following for the most part natural land contours. They should also avoid wet areas, such as the hardwood swamp and streambelt areas(Vegetation Type D), except where gravel trails are already present.

Picnic and camp areas should be located on well drained soils with a slight slope for improved drainage.

The jogging trails, picnic and camp sites should all be well defined and clearly marked. This will help to limit extensive soil compaction, root injury and trampling of herbaceous vegetation outside these areas.

It is extremely important that provisions for trail, picnic, camping and beach area maintenance be established prior to development of this parcel. If provisions for future maintenance are not made, these areas, with increased use, will rapidly deteriorate in quality.

As part of a recreational development plan, there should definitely be a drainage and erosion control plan to minimize disturbance to the environment. Such a plan would include a scheduling of construction events compatible with the drier seasons. The Windham County Soil and Water Conservation District could assist the Town in preparation of such a plan.

Steeply sloping areas around the lake could be used for trails, picnicking, open camping areas, etc. A minimum of disturbance with land grading is important.

ADVERSE EFFECTS

If dredging of the reservoir is needed to facilitate swimming, temporary increases of turbidity in the reservoir may be expected. No long-term damage is likely if proper dredging techniques are used.

IRREVERSIBLE COMMITMENTS OF RESOURCES

No irreversible or irretrievable commitment of geological or hydrological resources is anticipated under the proposed plan of acquisition and development.

ALTERNATIVES TO THE PROPOSED ACTION

If the town does not buy the parcel, the land will probably remain undeveloped, at least until the Crystal Water Company decides that it definitely has no use for the reservoir and decides to sell its watershed holdings. Development for residential uses may be expected if the company does sell the land. Such development could adversely affect the water quality of the reservoir.

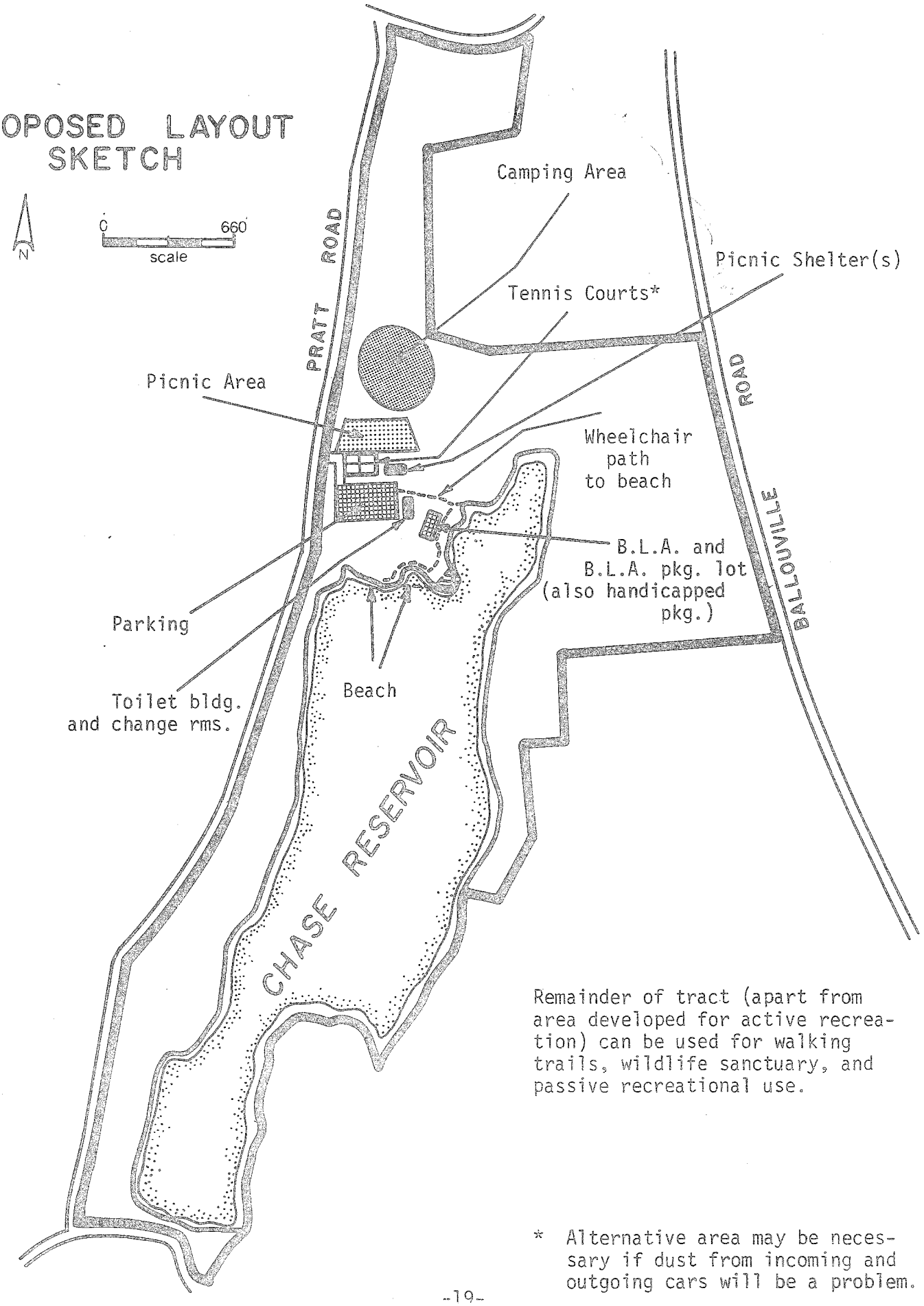
The town should consider purchasing lands adjacent to a water body, the rights to which can be assured.

RECREATION POTENTIAL

The town of Killingly is seeking H.C.R.S. funding to purchase some or all of the Crystal Water Company lands at Chase Reservoir. If the reservoir can provide the water-based recreational activities being sought on the tract, the property would greatly expand the town's recreation facility base. Killingly presently has no swimming area. Any restrictions which would preclude swimming and associated water-based recreational use would probably also preclude the town's considering purchase. There are two potential constraints which might serve to preclude the reservoir's use for swimming. These are the dilution rate of the lake which is determined by the rate of water turnover and which in part determines the swimmer carrying capacity of the lake, and the effect swimming would have on downstream water quality which is intended for use as drinking water.

The activities intended for the property are: swimming, boating, tent camping, picnicking, tennis and trail uses such as jogging. Designation of a

PROPOSED LAYOUT SKETCH



Remainder of tract (apart from area developed for active recreation) can be used for walking trails, wildlife sanctuary, and passive recreational use.

* Alternative area may be necessary if dust from incoming and outgoing cars will be a problem.

wildlife area is also planned.

The portion of the tract offering the greatest potential for active recreation facility development is the open field lying on the north end of Chase Reservoir and adjacent to Pratt Road. This area may possibly accommodate swimming (contingent upon clarification of any restrictions), picnicking, tennis courts, and a boat launch area. Additionally, a parking area, bathhouse/rest room building and picnic pavilion(s) could be situated here (see sketch). Selection of a location for the rest room/bathhouse structure, based on suitability of soils, may help determine the most appropriate layout of facilities in proximity to the toilet building.

Measurements of water dilution rates at various points on the shore surrounding the open field will help in determining where the beach should be located (for maximum use potential). Locations normally preferred are those having a south-facing aspect for maximum sun exposure and a relatively uniform slope with adequate depth near the shore. The existing depth would be unacceptable for proper beach standards because the area of sufficient depth for swimming use would be too far from shore to be practical. The unalterred slope of the lake bottom would only offer a wading area. Excavation of the lake bottom would be necessary to provide the depth necessary for a swimming area at the proposed location. As an alternative to or possibly in conjunction with lake bottom modification, altering the shoreline, by eliminating part of the peninsula jutting into the pond, could provide a straighter beach and may slightly improve the depth and water exchange rate in this locale. This would favorably impact on the number of users which the swimming area could accommodate (as relates to water quality decline). The flow through (turnover) rate of this lake appears to be low so anything that could be done to remove flow impedence should be advantageous. If a cut and fill operation moves the beach toward deeper water (by shoreline filling), the necessity for lake bottom excavation may be reduced or possibly even eliminated.

Since the area of concentrated activity would be in or near the open field, the use of the adjacent Pratt Road for access seems desirable and would minimize road construction and pathway upgrading which would be necessary if Ballouville Road or Route 101 were used as the entranceway. The long range plans for Pratt Road (a gravel road) should be taken into account in planning the layout of this property. If it is possible to project that Pratt Road must eventually be upgraded and made more passable because of additional residences or other development along it, it would be prudent to consider this in combination with park development.

The Route 101 or Ballouville Road entrances as secondary alternatives would expand the options for drive to facilities on the east side of the reservoir. It should be noted that the southeast shore of the reservoir is privately owned. Active recreation facility development on this side of the lake may increase the potential for trespass problems. In any event, sign posting and patrol may have to be relied upon to prevent trespass by hikers and boaters. The private property, being wooded and fronting on the reservoir, would be tempting to would be picnickers, fishermen, and campers. Passive use of the east side of the reservoir appears to be appropriate and would help establish clear zones of use. Passive or extensive recreation activities could be provided here and intensive development for active recreation pursuits carried out in the area northwest of the reservoir (in and near the open field).

The lake bottom, in the area of primary swimming potential, appears to be made up of gravel with no large stones. If shoreline cut and fill is employed and excess material remains, it could possibly be used as fill for a parking area or in road construction if the quality and quantity are adequate. If the lake can be lowered, a bulldozer could be used to accomplish the shoreline cut and fill operation. If lowering is not possible, a drag line may have to be employed at greater expense.

Tent camping is an activity being considered for this tract. Much of the site offers the potential for this use. In considering the wildlife area proposal and the desirability of separating this from higher density use areas, it may be preferable to locate camping in the wooded area north of the open field. Careful selection of a service access road to and the location of individual campsites would be necessary to avoid use of the restrictive (limited use) soils in this area. While the option of providing more primitive backpack camping areas on the tract exists, any camping area meant to handle larger groups such as scouts, 4-H, etc., should be relatively close to adequate parking and toilet facilities. This also expedites service and emergency vehicle access for both area cleanup and evacuation of any sick or injured person if necessary.

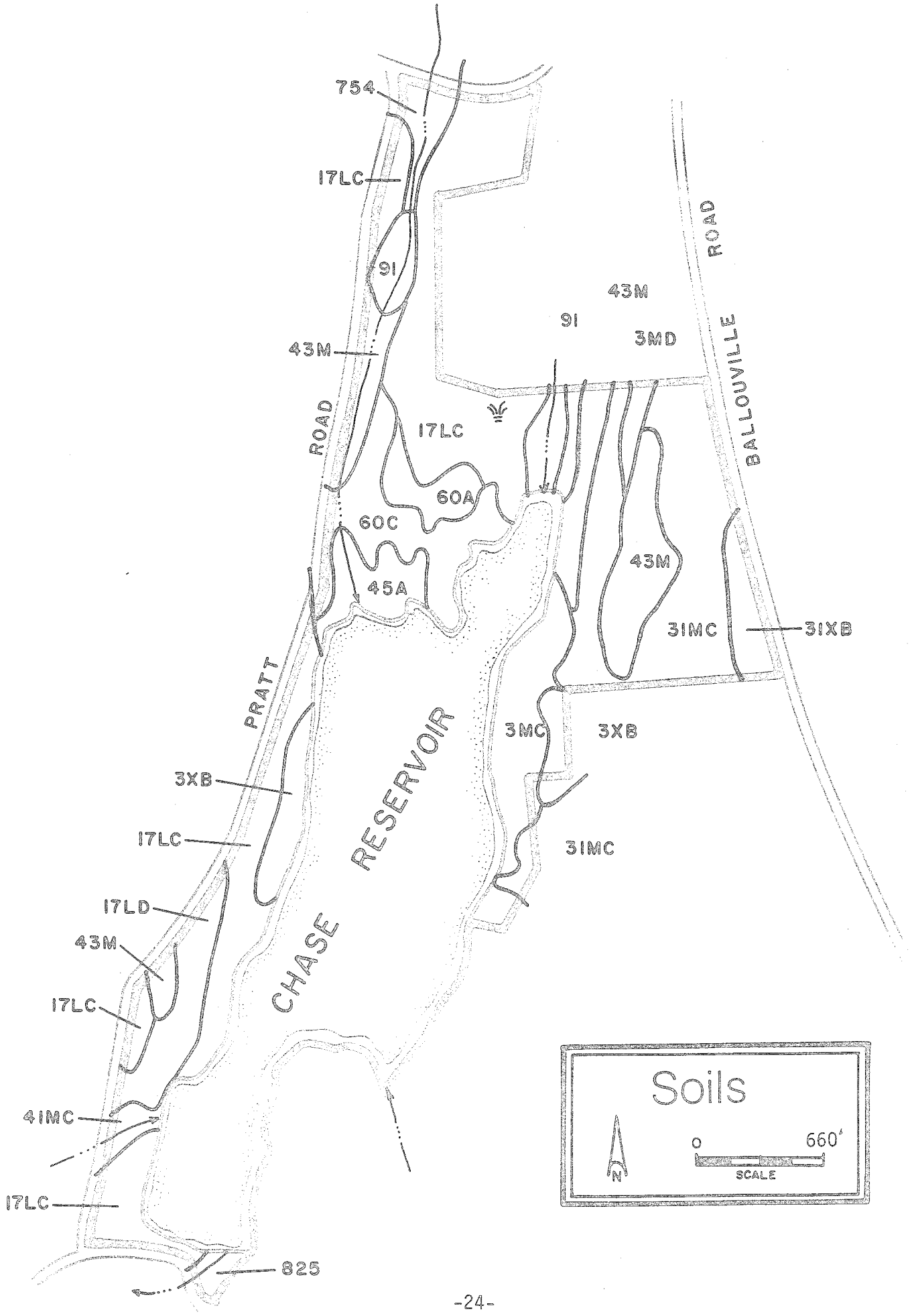
Well or wells would have to be developed to provide adequate amounts of water for drinking purposes and usage in the toilet building. The water quality would have to meet the standards for a potable water as stated in the Connecticut Public Health Code. The well(s) would have to be properly located as to provide protection from sources of pollution. This would include maintaining proper separating distances.

The block of land east of the lake, if used for passive or solitary recreational activities such as hiking, jogging, bird watching, and nature study, would be the logical portion of the tract to designate as a wildlife area. If no public vehicular access is provided, the recreation experience provided these users should be more pleasurable. Joggers and bird watchers would rather not encounter cars while engaging in their activities. The quality of wildlife habitat may also be alterred or diminished by expanded human intrusion. The intrusion factor would be kept low by vehicle exclusion and non-development for active recreation. It may be desirable, however, to upgrade the existing paths located here, to minimally provide for use by service and emergency vehicles.

Boating and fishing are the other water-related activities the reservoir could provide. Location of a boat launch area (B.L.A.) should be where minimal conflict will be posed to the swimming area and where installation is expedited by the sites' natural features (sufficient launch depth, minimal length of access road to construct, etc.). Maintenance of sufficient separation of the B.L.A. from the swimming area will help reduce the conflict potential. Shoreline fishing zones should also be located away from the swimming area. The fact that fossil fuel motors will not be used on the lake does make for more compatibility between swimming and boating use of the lake. This will also lessen the chance for water quality degradation by motor boat use.

Winter use of the tract for ice skating, snowshoing, cross-country skiing (relatively small area for this), ice fishing, and winter camping appears feasible.

Appendix


754
17LC
91
43M
ROAD
17LC
60A
60C
45A
PRATT
CHASE
RESERVOIR
3XB
17LC
17LD
43M
17LC
41MC
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825
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BALLOUVILLE
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3XB
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Soils
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660'
SCALE

Chase Reservoir

East Killingly, Conn.

Principle Limitations and Ratings of Soils For

Soil Symbol and Series	Picnic Area	Play-grounds	Path and Trails	Shallow Excavations	Drainage
3XB Canton	Moderate, large stones	Severe, large stones	Slight	Severe, cutbanks cave	Deep to water
Charlton	Moderate, large stones	Severe, large stones	Slight	Slight	Deep to water
3MC Canton	Severe, large stones	Severe,slope, large stones	Slight	Severe, cutbanks cave	Deep to water
Charlton	Severe, large stones	Severe,slope, large stones	Slight	Moderate,slope	Deep to water
3MD Canton	Severe,slope, large stones	Severe,slope, large stones	Moderate, slope	Severe, slope, cutbanks cave	Deep to water
Charlton	Severe,slope, large stones	Severe,slope, large stones	Moderate, slope	Severe, slope	Deep to water
17LC Charlton	Moderate,slope, large stones	Severe,slope, large stones	Slight	Moderate, slope	Deep to water
Hollis	Severe,depth to rock	Severe,slope, depth to rock, large stones	Slight	Severe, depth to bed-rock	Deep to water
17LD Charlton	Severe,slope	Severe,slope, large stones	Moderate, slope	Severe, slope	Deep to water
Hollis	Severe,slope, depth to rock	Severe,slope, depth to rock large stones	Moderate, slope	Severe, slope, depth to rock	Deep to water

Chase Reservoir

East Killingly, Conn.

Principle Limitations and Ratings of Soils For

Soil Symbol and Series	Picnic Area	Play-ground	Paths and Trails	Shallow Excavations	Drainage
31XB Woodbridge	Moderate, wetness, large stones, percs. slowly	Severe, large stones	Moderate, wetness	Severe, wetness	Percs. slowly, slope, frost action
31MC Woodbridge	Severe, large stones	Severe, slope, large stones	Moderate, wetness	Severe, wetness	Percs. slowly, slope, frost action
41MC Sutton	Severe, large stones	Severe, large stones	Moderate, wetness	Severe, wetness, large stones	Slope
# 45A Ninigret	Moderate, wetness	Moderate, wetness	Moderate, wetness	Severe, wetness, cutbanks cave	Cutbanks cave
# 60A Hinckley	Severe, small stones	Severe, small stones	Slight	Severe, cutbanks cave	Deep to water
##60C Hinckley	Severe, small stones	Severe, slope, small stones	Slight	Severe, cutbanks cave	Deep to water
WETLAND SOILS					
*43M Ridgebury	Severe, large stones, wetness, percs. slowly	Severe, wetness, large stones, percs. slowly	Severe, wetness	Severe, wetness	Percs. slowly, frost action
Leicester	Severe, large stones, wetness	Severe, wetness, large stones	Severe, wetness	Severe, wetness	Frost Action

Chase Reservoir

East Killingly, Conn.

Principle Limitations and Ratings of Soils For

Soil Symbol and Series	Picnic Area	Play-grounds	Paths and Trails	Shallow Excavations	Drainage
Whitman	Severe, large stones, ponding	Severe, ponding, large stones	Severe, ponding	Severe, ponding	Percs. slowly, frost action
*91 Adrian	Severe, ponding, excess humus	Severe, ponding, excess humus	Severe, ponding, excess humus	Severe, ponding, cutbanks cave, excess humus	Ponding, frost action, subsides
Palms	Severe, ponding, excess humus	Severe, ponding, excess humus	Severe, ponding, excess humus	Severe, ponding, excess humus	Ponding, flooding, subsides
*754 Scarboro	Severe, ponding	Severe, ponding	Severe, ponding	Severe, cutbanks cave, excess humus, ponding	Cutbanks cave, frost action
*825 Rippowam	Severe, wetness	Severe, wetness, flooding	Severe, wetness	Severe, wetness, cutbanks cave	Flooding, cutbanks cave, frost action

Prime Farmland
Additional Farmland of Statewide Importance
* Designated wetland soil by 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.