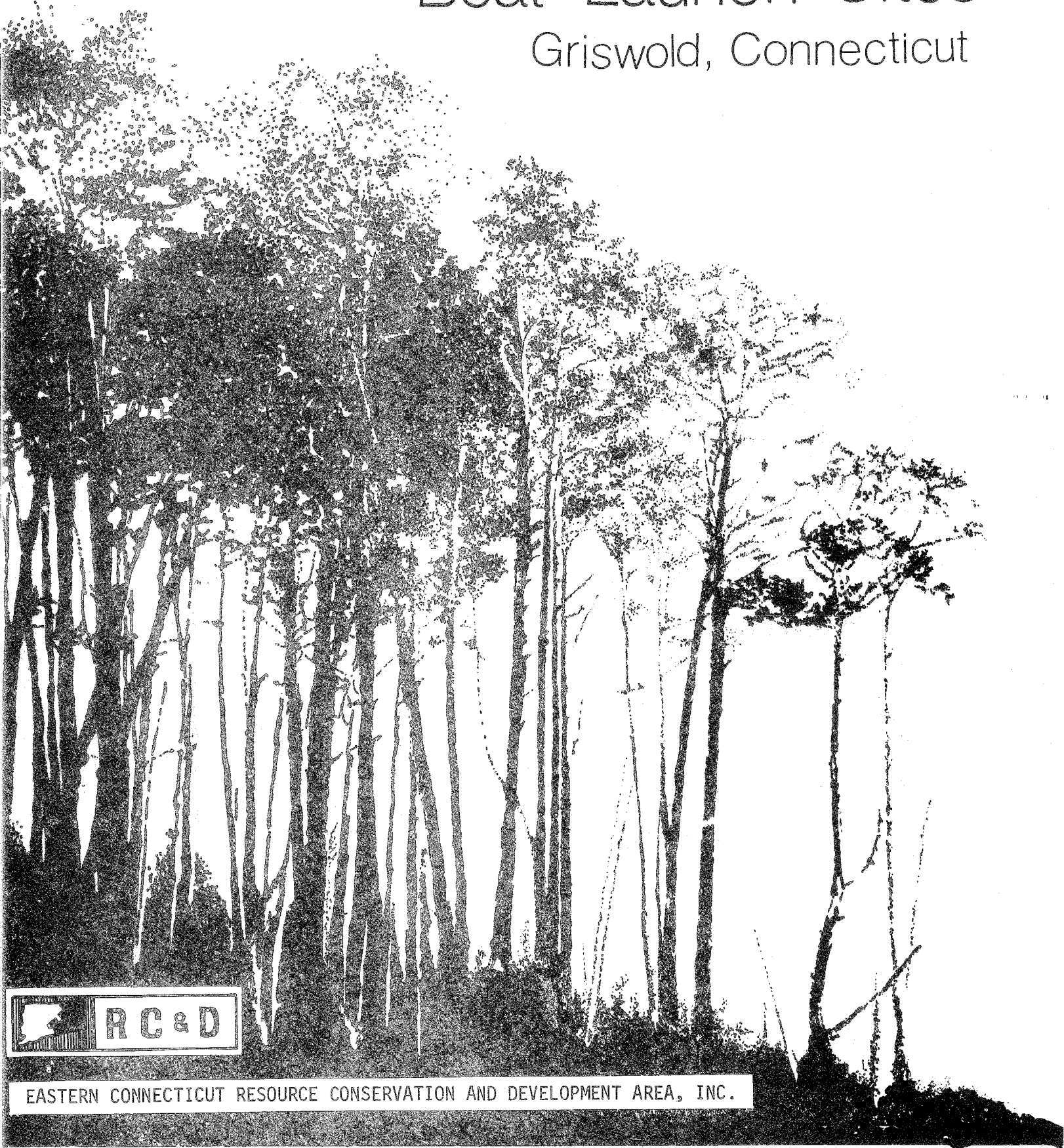


Environmental Review Team Report

Boat Launch Sites

Griswold, Connecticut

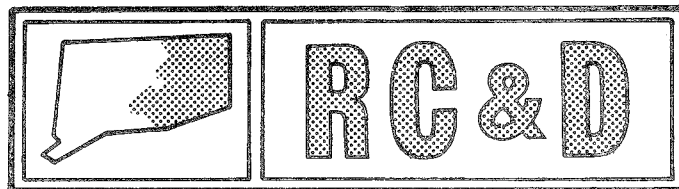


EASTERN CONNECTICUT RESOURCE CONSERVATION AND DEVELOPMENT AREA, INC.

Environmental Review Team
Report

Boat Launch Sites
Griswold, Connecticut

April 1983

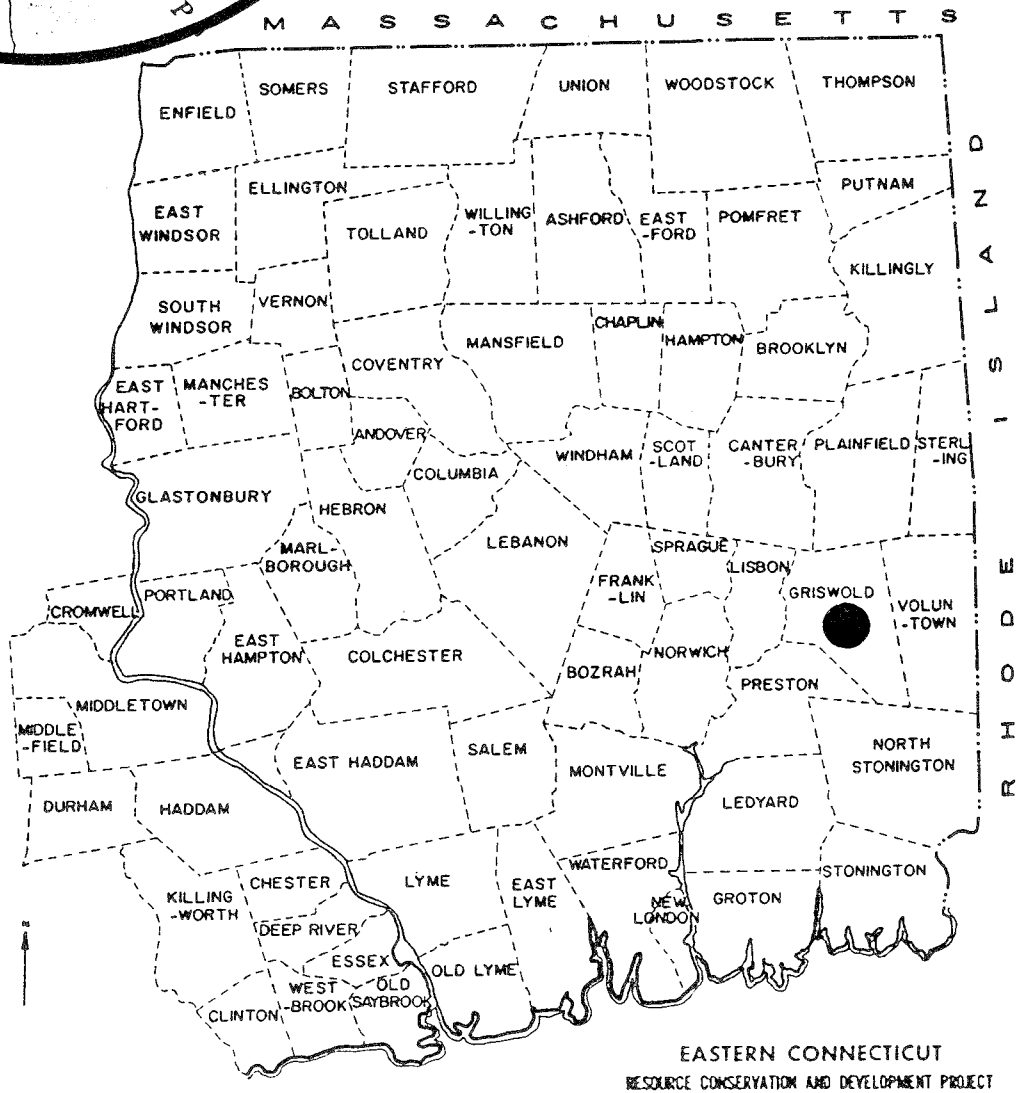
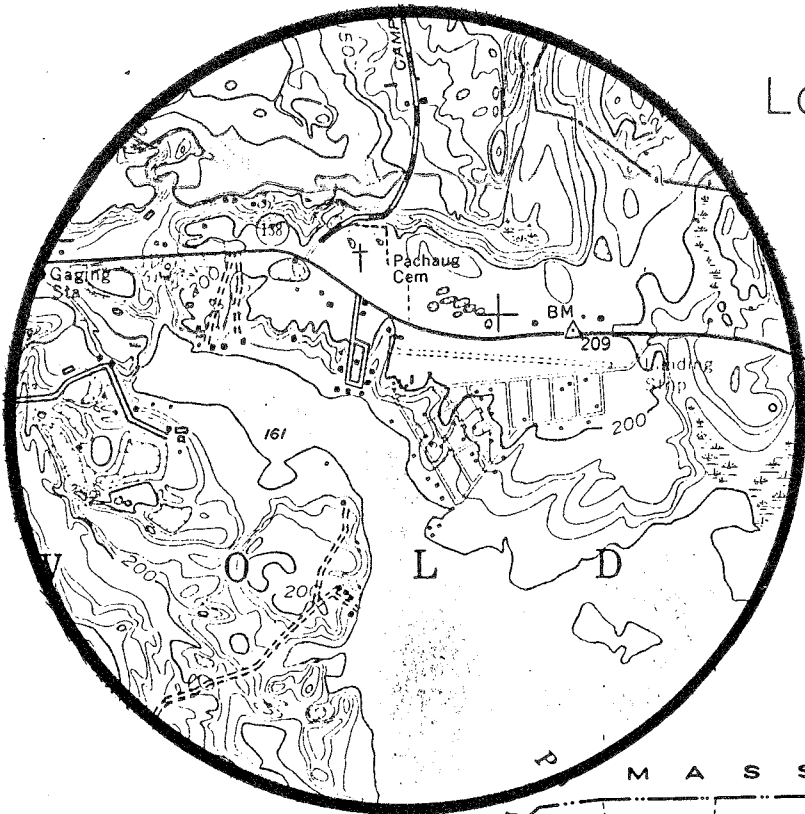


Eastern Connecticut Resource Conservation & Development Area

Environmental Review Team
PO Box 198
Brooklyn, Connecticut 06234

Location of Study Site

BOAT LAUNCH SITES
GRISWOLD, CONNECTICUT



ENVIRONMENTAL REVIEW TEAM REPORT
ON
BOAT LAUNCH SITES
GRISWOLD, CONNECTICUT

This report is an outgrowth of a request from the Department of Environmental Protection to the New London County Soil and Water Conservation District (S&WCD). The S&WCD referred this request to the Eastern Connecticut Resource Conservation and Development (RC&D) Area Executive Committee for their consideration and approval as a project measure. The request was approved and the measure reviewed by the Eastern Connecticut Environmental Review Team (ERT).

The soils of the site were mapped by a soil scientist of the United States Department of Agriculture (USDA), Soil Conservation Service (SCS). Reproductions of the soil survey map as well as a topographic map of the site were distributed to all ERT participants prior to their field review of the site.

The ERT that field checked the site consisted of the following personnel: Liz Cook, Soil Conservationist, Soil Conservation Service (SCS); Bill Warzecha, Geologist, Department of Environmental Protection (DEP); Pete Merrill, Forester, DEP; Chuck Phillips, Fisheries Biologist, DEP; Gerhard Amt, Regional Planner, Southeastern Connecticut Regional Planning Agency; Kevin McBride, Archeologist, University of Connecticut (UConn); and Jeanne Shelburn, ERT Coordinator, Eastern Connecticut RC&D Area.

The Team met and field checked the site on Thursday, February 17, 1983. Reports from each Team member were sent to the ERT Coordinator for review and summarization for the final report.

This report is not meant to compete with private consultants by supplying site designs or detailed solutions to development problems. This report identifies the existing resource base and evaluates its significance to the proposed development and also suggests considerations that should be of concern to the Department of Environmental Protection. The results of this Team action are oriented toward the development of a better environmental quality and the long-term economics of the land use.

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 Area P.O. Box 198, Brooklyn, Connecticut, 06234, 774-1253.

INTRODUCTION

The Eastern Connecticut Environmental Review Team was asked to prepare an environmental assessment for a proposed boat launch site in the Town of Griswold, on Pachaug Pond. The Department of Environmental Protection (DEP) will be constructing this boat launch to provide public access to this waterbody. DEP Parks and Recreation Unit selected two sites on Pachaug Pond for the Team's review. Site I is located on the northernmost section of the pond, near the dam on Route 138. It is approximately 15 to 20 acres in size. Site II is located in the northeast central portion of the pond site and is approximately 125 acres in size.

The boat launch development will include a ramp which extends into the water, a 50 foot wide access road into the site and a parking area large enough to accommodate 100 cars with trailers. No sanitary facilities are currently planned for this site.

This report identifies the natural resource base of both sites reviewed by the Team and evaluates the impact of the proposed development on each site. It is understood that only one of these two sites will be selected for development, so brief comparisons of the sites have been made throughout each section of the report.

ENVIRONMENTAL ASSESSMENT

TOPOGRAPHY

Pachaug Pond is an impoundment on the Pachaug River which covers an area of approximately 830.9 acres.

Site I consists of a + 15 acre parcel located north of the outlet dam at the northeast section of the pond. It is situated between the dam and Route 138 in the Town of Griswold. The parcel rises from the Pachaug River to a relatively flat area throughout the southern portion of the site to a small rounded knoll in the northeast section. Land surface elevations on the parcel rise from 150 feet above mean sea level in the western section of the site to 200 feet above mean sea level at the top of the knoll mentioned above.

Site II, which consists of approximately 125 acres is located directly south of the Pachaug Landing Strip in the northeast section of the pond. This parcel can be divided into three geographic zones. Zone 1 includes the western section of the site which is being considered for the boat launch site and parking area. Land elevation rises in this area from approximately 170 feet above mean sea level to 200 feet above sea level. The middle section of the site, or Zone 2, consists primarily of a + 25 acre wetland area. Zone 3 is a moderately sloped area that rises from 170' above mean sea level on the eastern side of the swamp to 270 feet above mean sea level near Route 201 in the Glasgo section of Griswold. Slopes throughout this zone range between 5 and 10%. It appears that if site II is chosen, the boat launch site and parking area would be restricted to Zone 1. It would seem likely that Zone 2 and 3 would be left in their natural state (See topography map.).

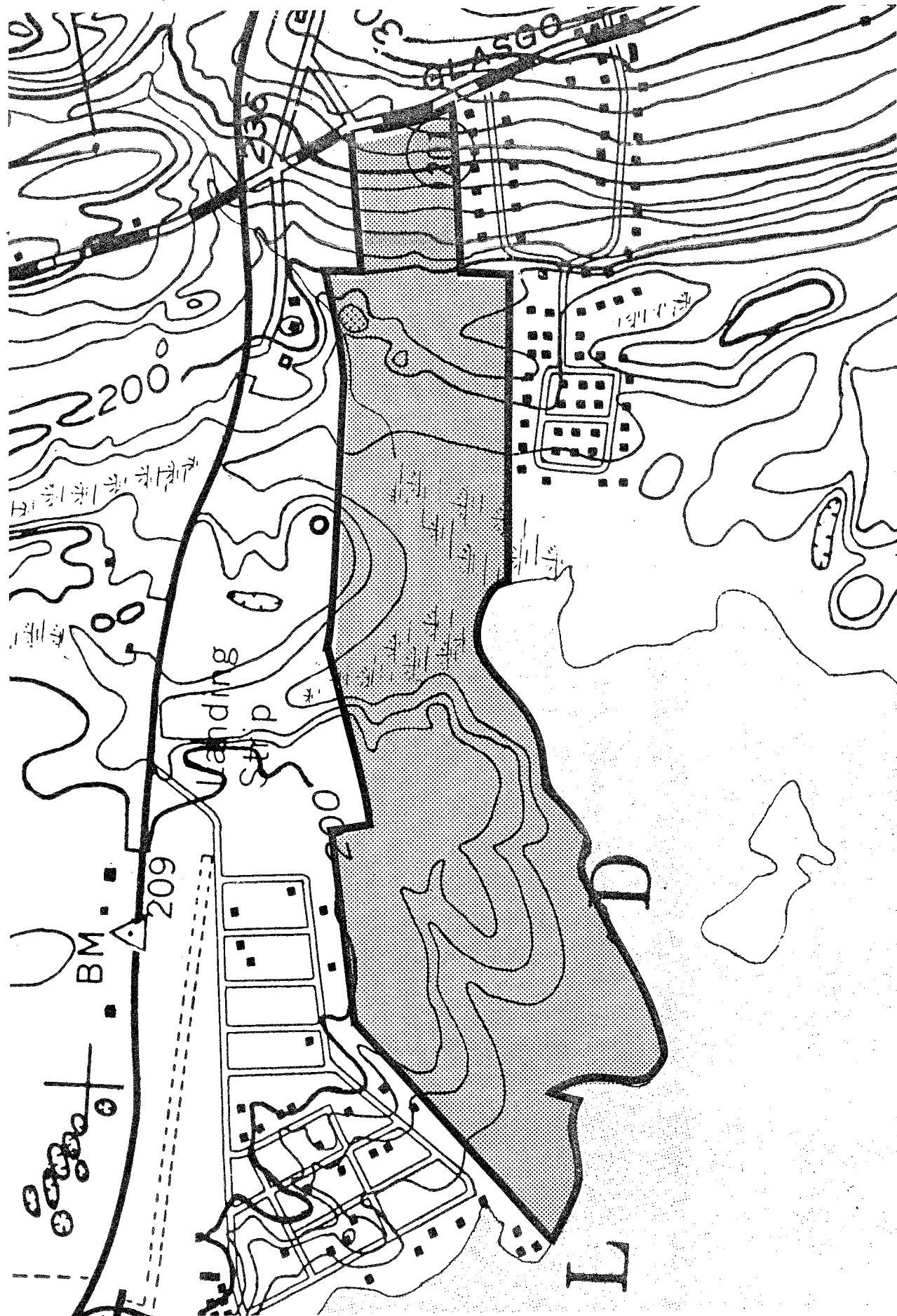
Topography

SITE I



Topography

SITE II



Land elevations were taken from the Jewett City, Connecticut Quadrangle topographic map, 1:24,000, published by the United States Geological Survey (USGS).

GEOLOGY

Both sites are located within the Jewett City topographic quadrangle. The surficial geologic map (GQ 1434) of the quadrangle was prepared by Byron D. Stone (1978) and published by the U.S. Geological Survey.

The surficial geologic material or that unconsolidated material overlying bedrock on Site I is stratified drift. "Stratified drift" is defined as sorted and layered sediments, i.e., sand, gravel and silt, etc., that were deposited by meltwaters from the retreating glacier. Thickness of these deposits are approximately 40' in depth. Based on information from the "Aggregate Survey" of the Jewett City Quadrangle (July 1967-July 1968), the northern and northeastern section of the site is a potential source of 80,000 - 500,000 cubic yards of sand and gravel. Undoubtedly, the sand and gravel deposits could be used as a base or below grade material during construction of the proposed road and parking lot. Also, within the site are deposits of artificial fill which were placed during the construction of the dam.

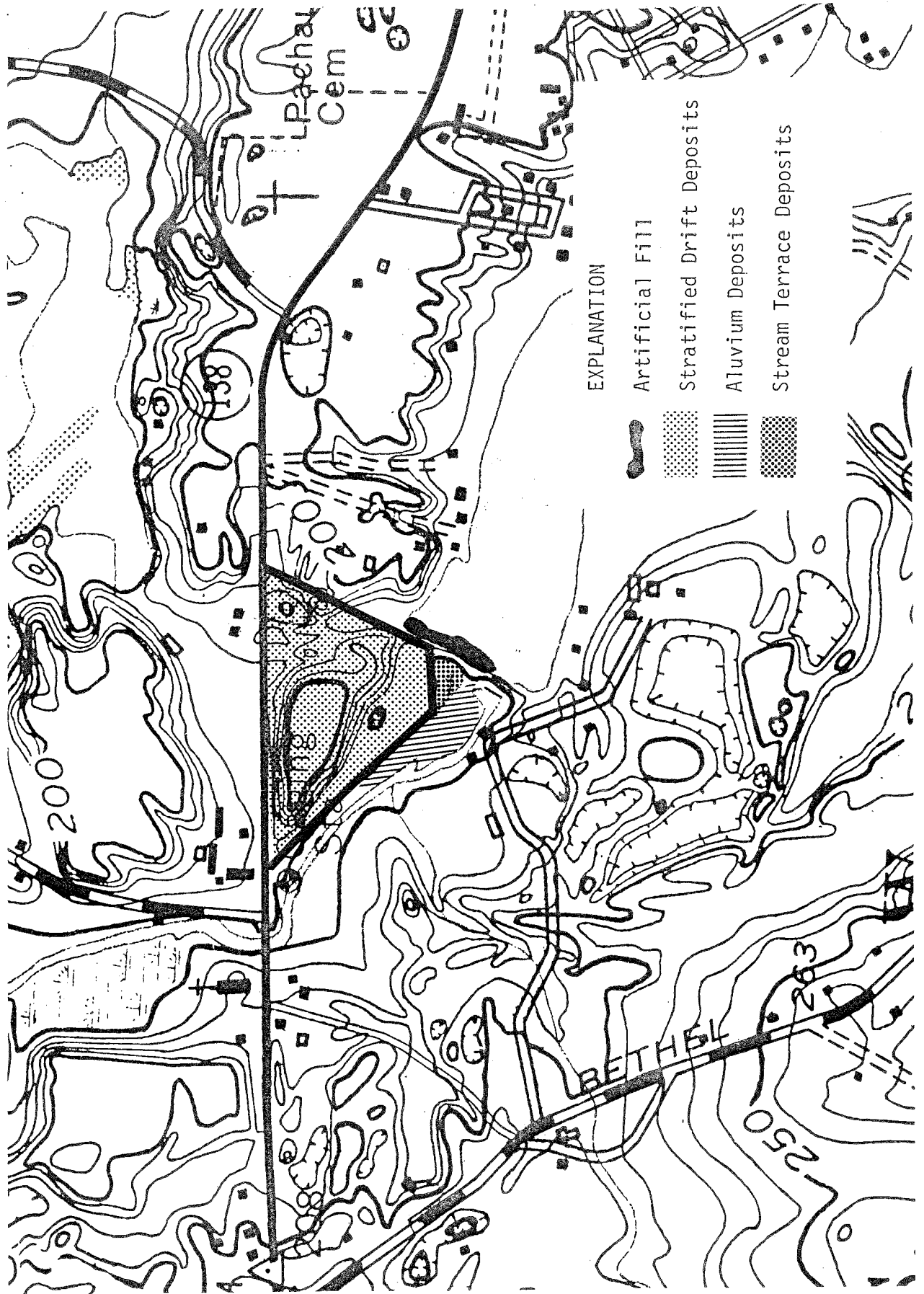
Although not found within the site, the locations of alluvium and stream terrace deposits south of the site have been noted on the Surficial Geology Map. These deposits were laid down, transported or suspended by a river or stream during recent geologic time and consist of sorted sands, pebble-cobble gravels and silt.

The surficial geologic material overlying bedrock on Site II consists primarily of stratified drift deposits with the exception of swamp deposits through Zone 2. The stratified drift deposits are the same as those deposits found in Site I. Thickness of these deposits range in depth from 80' on the western edge of Zone 1 to 40' along the western edge of the wetland to approximately 10' throughout Zone 3. Based on information from the "Aggregate Survey" of the Jewett City Quadrangle (July 1967-July 1968), the central and northeast section of Zone 1 are a potential source of 500,000 cubic yards or more of sand and gravel. (See Surficial Geology Map.). Swamp deposits in the area of Zone 2 include peat and muck and minor amounts of sand, silt and clay. Material underlying the swamp deposits is commonly the surrounding material which in this case would be sand and gravel.

The bedrock geology underlying both sites has not been mapped to date. Based on visual observation of both sites, no outcrops were observed. However, it is indicated on the "Preliminary Bedrock Geological Map of Connecticut" that bedrock underlying both sites is probably gneiss. "Gneisses" are metamorphic rocks (rocks that have been geologically altered by high temperature and pressure) which are commonly feldspar and quartz rich. They are characterized by thin bands of elongate or flaky minerals alternating with bands as layers of more rounded grains. Bedrock should have no impact on either site for the potential development of the boat launch and parking lot site.

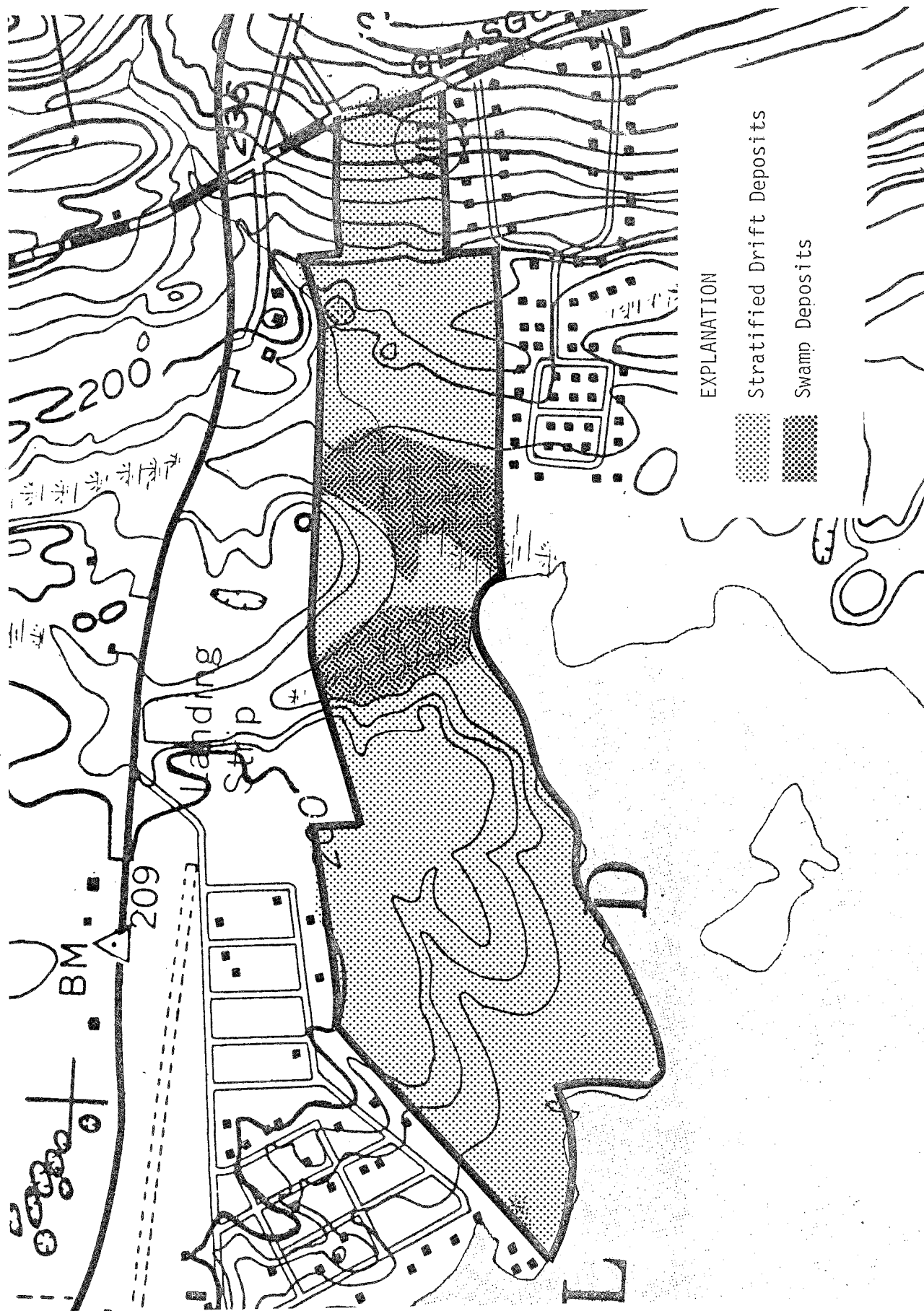
Surficial Geology

SITE I



Surficial Geology

SITE II



EXPLANATION

Stratified Drift Deposits

Swamp Deposits

HYDROLOGY

Site I lies within the watershed of the Pachaug River. Pachaug River flows in a northwesterly direction along the western portion of the site. (See Watershed Drainage Map.)

Development of a boat launch site will lead to increases in runoff. Runoff increases would result primarily from the construction of impervious surfaces such as paved parking areas and access roads. It would seem likely that the proposed development will probably cause only a slight increase in runoff unless the amount of impermeable surfaces are larger.

Based on visual inspection of the property, a small basin area was observed in the western section of the site. It appeared that this basin area could function as a retention basin for runoff created by a parking lot. However, if it is utilized as a retention basin, it is recommended that a buffer zone of vegetation remain between the retention basin and parking lot. This buffer zone of vegetation should protect the water quality of the basin from debris accumulated in the parking lot, such as spilled gasoline and oil as well as litter and leaves. It is also recommended that erosion and sedimentation practices be implemented during construction activities particularly along the Pachaug River.

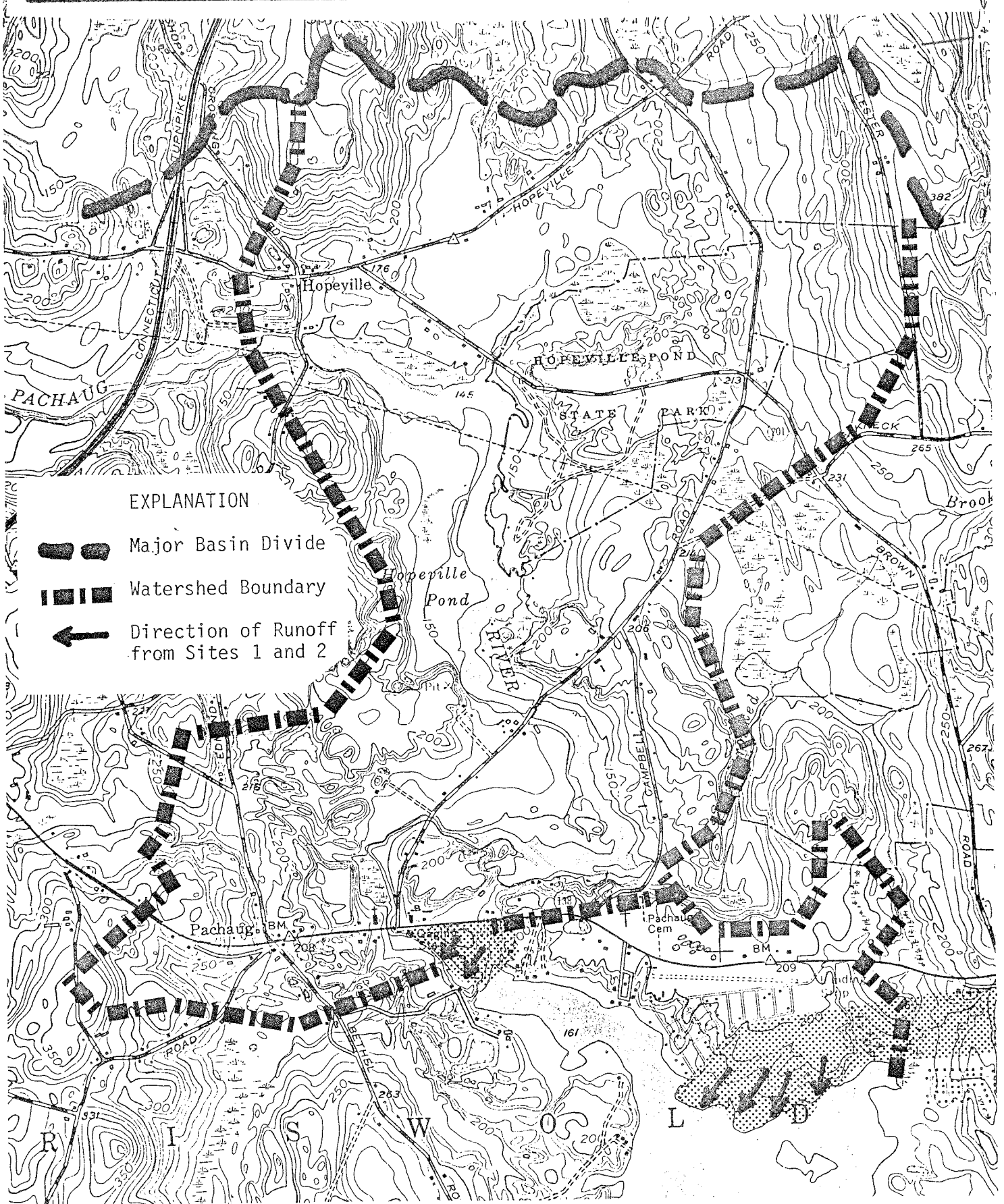
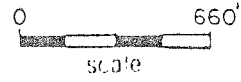
Site II lies within the watershed of Pachaug Pond. Runoff from this area drains directly into Pachaug Pond. Development of this site, like Site I, would lead to an increase in the amount of runoff primarily from the creation of paved surfaces, i.e., parking lot and access roads. Although this area is underlain by stratified drift deposits, it appeared during the field review that the water table is relatively close to the surface. If the soils are saturated with groundwater, they would probably not absorb runoff as well as those soils found on Site I. This could lead to an increase in runoff from the sites. It is recommended that if this site is chosen a buffer zone of vegetation remain between the parking area and the Pachaug Pond for the purpose of protecting the water quality of the pond from parking lot debris, i.e., spilled hydrocarbons, sedimentation, etc. Also, steps for erosion and sedimentation control should be taken during construction activities.

Both sites lie within stratified drift deposits which are an important source of groundwater in the Quinebaug River basin according to the Water Resource Bulletin #8 published by the USGS. Areas underlain by these type of deposits are inferred to be capable of yielding moderate to very large amounts of water (50 - 2000 gallons per minute) to individual wells. It would seem that if there is a need for a water supply at a boat launch site, an adequately yielding well could certainly be obtained without major problems on either site.




SOILS

A detailed soils map of this site and detailed soils descriptions are included in the Appendix to this report, accompanied by a chart which indicates soil limitations for various urban uses. As the soils map is an enlargement from the original 1,320'/inch scale to 660'/inch, the soil boundary lines should not be viewed as absolute boundaries, but as guidelines to the distribution of soil

Drainage Areas



EXPLANATION

-  Major Basin Divide
-  Watershed Boundary
-  Direction of Runoff from Sites 1 and 2

types on the site. The soil limitation chart indicates the probable limitations of each of the soils for on-site sewage disposal, buildings with basements, streets and parking, and landscaping. However, limitations, even though severe, do not preclude the use of the land for development. If economics permit large expenditures for land development and the intended objective is consistent with the objectives of local and regional development, many soils and sites with difficult problems can be used. The soils map, with the publication, New London County Interim Soil Survey Report, can aid in the identification and interpretation of soils and their uses on this site. "Know Your Land: Natural Soil Groups for Connecticut" can also give insight to the development potentials of the soils and their relationship to the surficial geology of the site.

SITE I

Located on the first site are the following soils: Hinckley, Merrimac, and Rumney. The Hinckley and Merrimac soils are suitable for the development of an access road and a parking lot. The Rumney soil is designated as a wetlands soil (according to P.A. 155 "Inland Wetlands and Water Courses Regulations of the Connecticut Department of Environmental Protection"), and permits will be needed before development in this area can take place. Wetland soils should be disturbed as little as possible, both during and after construction; and drainage courses should not be disturbed. Where the access road crosses the wetlands, organic material should be stripped from the surface before construction. Also, any areas of cut and fill should not have slopes that exceed 2:1. Disturbed areas should be seeded down and hay bales or silt fences will be needed to prevent erosion and sediment deposition during construction.

The soils surrounding the Pachaug Pond in the immediate area of the proposed boat launch are mapped as erosion resistant soils. However, more site specific information may be needed to determine the actual impact of wake activity on shore areas.

SITE II

Located on the second site are the following soils: Hinckley, Merrimac, Sudbury, Scarborough, Adrian and Palms Mucks, Walpole, Woodbridge, and Carlisle Muck. The Hinckley, Merrimac, Sudbury, and Woodbridge soils are suitable for the development of an access road and a parking lot. The Scarborough, Walpole soils, Adrian, Palms and Carlisle Mucks are designated as wetland soils (according to P.A. 155 "Inland Wetlands and Water Courses Regulations of the Connecticut Department of Environmental Protection") and permits will be needed before development in this area can take place. Wetland soils should be disturbed as little as possible, both during and after construction; and watercourses should not be disturbed. Where the access road crosses the wetlands, organic material should be stripped from the surface before construction. Also, any areas of cut and fill should not have slopes that exceed 2:1. Disturbed areas should be seeded and hay bales or silt fences will be needed to prevent erosion and sediment deposition during construction.

After reviewing both sites, it is obvious that it would be more desirable to develop Site I than Site II. Site I has a much smaller expanse of wetland soils than Site II. If the second site were to be developed, it would be

necessary to cross a large area of wetland soil and this would present many construction problems.

VEGETATION

SITE I

At the north end of the pond and on the east bank. The site would involve the east end of the earthen dam, and a small cove and stream that drains about ten acres. The proposed parking area is north and down-stream from the dam. The parking area and part of the access road were cut off about ten years ago. These areas now support a lush growth of white and black oaks, aspen (both large toothed aspen and trembling aspen), and black birch.

There will be no serious loss of tree growth if these were removed. Removing stumps should not be difficult as many of the larger stumps are starting to disintegrate. The trees that need to be removed for the access road should be cut and sold for fire wood.

The cut strip for the access road should be made wide enough so that cutting and filling in of the road will not affect them.

SITE II

Off Latham Drive, behind the Lakeside Airport on the northeast side of the pond.

This site is quite level with a slight southeast slope down to the water. Access or development to the east would be limited by a white cedar swamp. The overstory of the site includes red maple, black oak, and black birch. The lower stand includes red and coastal white cedars, gray birch, and blue beech (*Carpinus caroliniana*). Shrubs include blueberry, spice bush, and coastal pepperbush.

This area would require much more extensive clearing than Site I; however, the products are saleable as fuelwood and would pose little problem if there were sufficient lead time.

The only critical area is the outlet of the white cedar swamp. Filling in or near this area might impede the water flow and cause wide scale vegetation die-back in the area.

FISHERIES CONCERNS

SITE I

This location will cause the least amount of disruption to residents. The planned access road is straight and would have good visibility to and from Route 138. It will also be easy to construct due to level terrain and the availability of gravel at the site.

Originally, when this site was surveyed, the plans included one parking lot with two ramps. The first ramp would be into Pachaug Pond and the second would be into Pachaug River below the dam. The second ramp would provide access to the Pachaug River downstream, including all of Hopeville Pond. The Pachaug River is stocked with trout at this point. There are some large, deep pools that would be accessible to boats. Canoeists, bird watchers, trappers, hunters and bass and panfishermen would make good use of the ramp. It would not cause any problems. There should be few problems with drainage at the parking area or along the access road because of the area's natural slopes.

The area close to the dam gate control house should be fenced in order to deter people from approaching the deep water adjacent to the dam.

SITE II

Site drawbacks include road entry past many homes, and depth of water is only 1-3 feet, requiring dredging part of the cove. Less dredging would be required if the ramp were placed directly into the pond near the property's northwest corner. Another drawback may be the lack of sufficient space to develop a parking lot for 100 cars with trailers. Despite its accessibility problem, the site would not be difficult to develop. It would require a large amount of gravel. The area could be screened very easily with hemlocks and northern white cedar. Drainage would not be a problem. Site II has a geographical advantage of being nearer the central portion of the lake.

PLANNING CONCERNS

Pachaug Pond is easily the largest fresh water impoundment in Eastern Connecticut. It is more than two and one-half miles long and for most of its length averages about 2,000 feet in width. Its surface area extends over 830 acres, but its maximum depth is only eighteen feet, and the average depth throughout is about six feet.* The pond is a popular recreation attraction and is used extensively for boating, water skiing, and fishing. Land adjacent to the pond attracts an ever growing number of seasonal and year-round dwellings.

For all its popularity, Pachaug Pond has no facilities for general public access. The limited amount of state-owned land fronting on it contains no improvements for public use. Boats may be rented and/or launched at a commercial launching ramp at the southern end of the pond, accessible from Route 165.

The two sites being considered for a public boat launching facility and parking area are both located at the northern end of the pond. Both appear to have adequate area for the preparation of vehicle parking spaces and a suitable location for the launch ramp. Here the similarities end. The following paragraphs discuss other aspects of the two sites that make them significantly different.

* "A Fishing Survey of the Lakes and Ponds of Connecticut," Connecticut State Board of Fisheries and Game, 1959.

SITE I

This site is adjacent to the dam at the extreme northern end of Pachaug Pond. No part of the facility, including its access road, would be closer than three hundred feet to the nearest residence, and both the site and its access would be largely hidden from view on its landward sides by woods and brush during the summer months. The distance from residential uses virtually eliminates any potential conflicts with pedestrians, particularly children, during the season of use.

Vehicle access to the site would be by way of a new road forming a T-intersection with Route 138 about 1,200 feet east of the Pachaug River. The point of intersection affords excellent visibility along the highway for a distance of at least 1,200 feet in each direction. This site also presents an opportunity for a looped one-way traffic system, whereby vehicles would enter over the new road and exit over the existing access road to the site which parallels the Pachaug River along the western border of the property.

A potentially negative aspect of this site is the need for boats to traverse a comparatively narrow stretch of the water before reaching the wider main part of the pond. It extends for about 3,500 feet southeast from the proposed launch site, and it is about 500 feet in width for most of this distance. Boat traffic congestion and wave damage from speeding boat wakes could be a problem if not adequately controlled.

SITE II

This site lies at the northern end of the wider part of the pond and therefore does not pose the potential boat traffic problems which may occur in connection with Site I.

Access to this site is considerably less than ideal. Vehicles would travel over 4,000 feet of town roads (Latham Drive and Shore Road) after leaving Route 138. These are narrow, unimproved roads, with the limits of front yards and private driveways frequently being non-existent or ill-defined. The access involves a 90-degree turn from Latham Drive onto Shore Road in a particularly busy part of the residential development. Vehicles with trailers negotiating this turn can be expected to produce problems both for other vehicles and for pedestrians. The intersection of Latham Drive with Route 138, on the other hand, is totally free of nearby development, has plenty of maneuvering space, and visibility is reasonably good along the state highway.

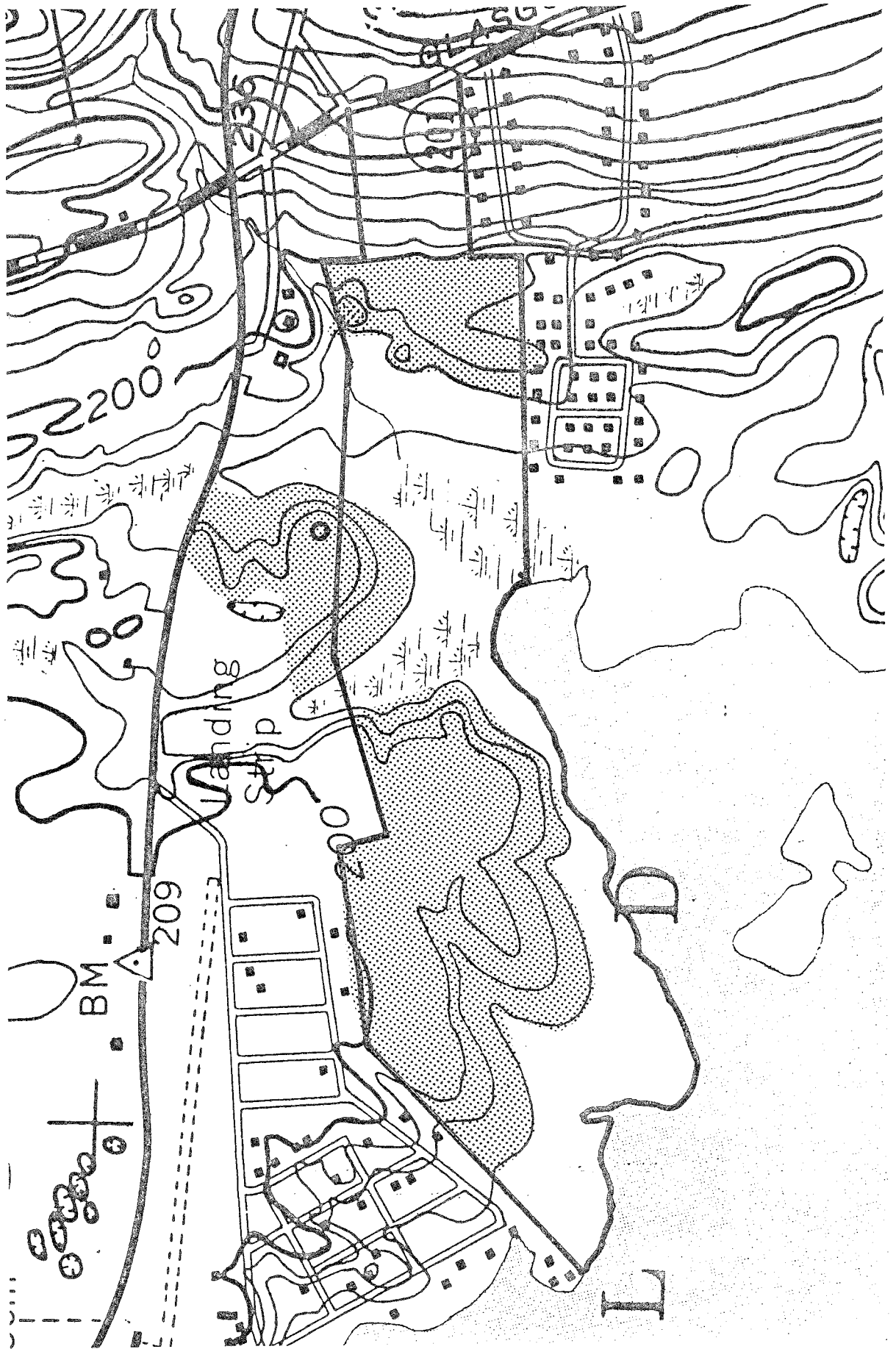
Latham Drive is the sole access to about 75 dwellings, some of which are used on a year-round basis, but all of which are occupied during the summer months. Vehicles approaching the launch site would be a distinct threat to the safety of pedestrians (especially children) during the summer months.

If Site II is selected for development, it is recommended that a new access road be constructed through the state-owned land near the intersection of Latham Drive and Route 138, avoiding the residential development entirely.

ARCHEOLOGICAL CONCERNS

P.A.S.T. has reviewed the proposed DEP public boat launch sites on Pachaug Pond in Griswold. They feel that several areas are highly sensitive with respect to prehistoric aboriginal activity. Several prehistoric sites have been located in the area, the most recent a 5,000 year old site along the Pachaug River just north of the pond. The most sensitive areas are identified on the accompanying illustrations. In order to determine if there are actually any prehistoric remains in the area, a more detailed study in the form of a Phase I reconnaissance survey will be required. This would require a systematic program of subsurface testing in the areas of the proposed activity. Any further questions regarding these areas should be directed to Kevin McBride, Director, Public Archeology Survey Team, Inc., c/o Department of Anthropology, U-176, UCONN, Storrs, CT, 06268, (203) 486-4264.

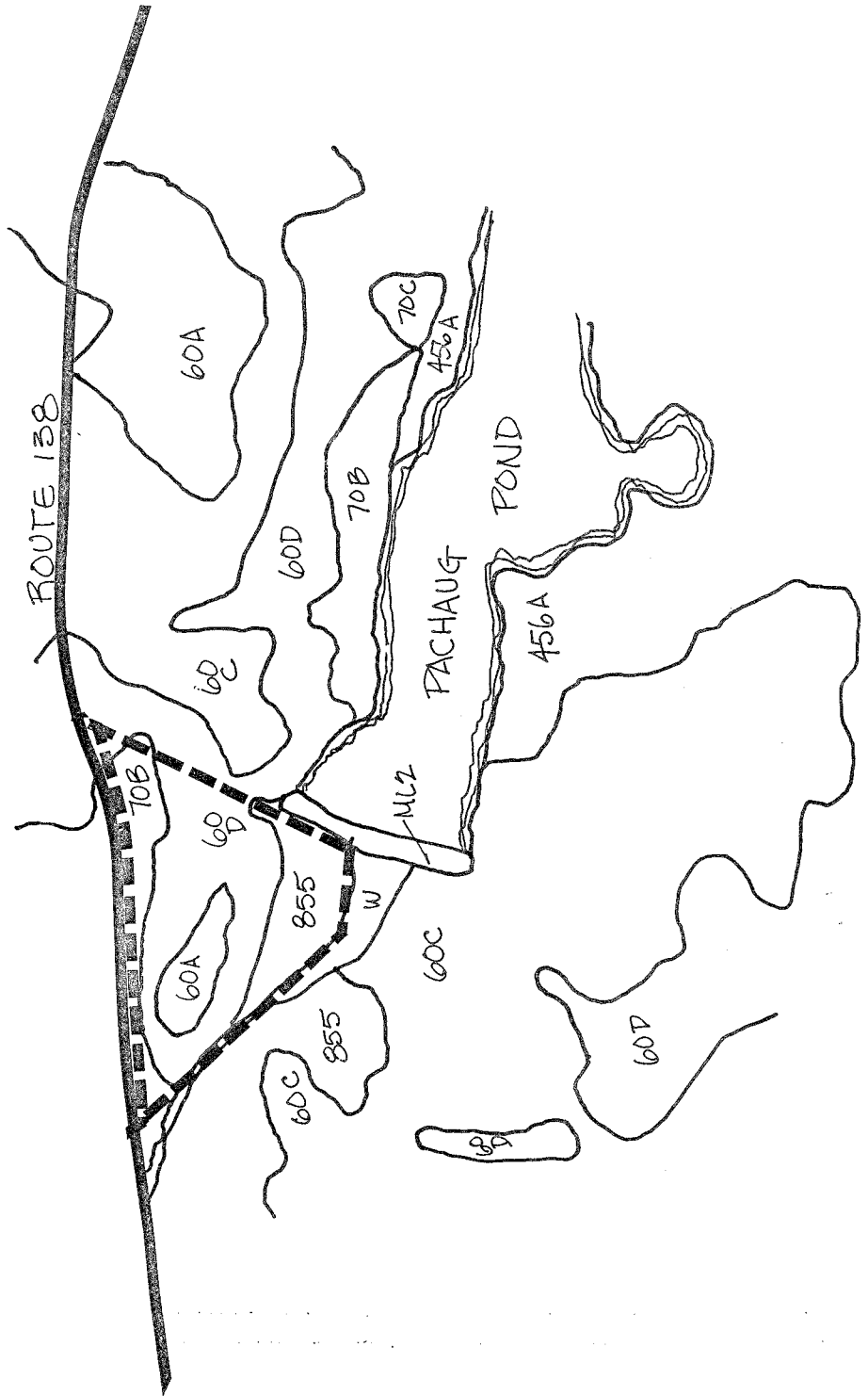
Archeological Sites



Appendix

Soils

SITE I



BOAT LAUNCH SITES
GRISWOLD, CONNECTICUT

SOILS AND THEIR LIMITATIONS FOR CERTAIN LAND USES

Soil Series	Soil Symbol	Principal Limiting Factor	Urban Use Limitations			
			On-site Sewage	Buildings with Basements	Streets and Parking	Landscaping
SITE I						
Hinckley	60A		1	1	1	2
Hinckley	60D	slope	3	3	3	3
Merrimac	70B		1	1	1	1
Rippowam	855	floods	3	3	3	3
SITE II						
Adrian-Palms	91	floods	3	3	3	3
Hinckley	60C	slope	3	2	2	2
Hinckley	60D	slope	3	3	3	3
Merrimac	70A		1	1	1	1
Merrimac	70B		1	1	1	1
Scarboro	75	wetness	3	3	3	3
Sudbury	456A	wetness	3	3	3	3
Walpole	466	wetness	3	3	3	3
Woodbridge	31B	percs slowly	3	3	3	1
Woodbridge	31C	percs slowly	3	3	3	1

Limitations: 1 = slight, 2 = moderate, 3 = severe.

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 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 (774-1253), Environmental Review Team Coordinator, Eastern Connecticut RC&D Area, P.O. Box 198, Brooklyn, Connecticut 06234.