

ENVIRONMENTAL REVIEW TEAM REPORT  
ON  
WESTBROOK MIDDLE SCHOOL SITE  
WESTBROOK, MIDDLESEX COUNTY, CONNECTICUT

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This report is the outgrowth of a request from the Town of Westbrook, with the approval of Roger T. Goodspeed, First Selectman, to the Middlesex County Soil and Water Conservation District. The S&WCD referred this request to the Eastern Connecticut RC&D Project Committee for their consideration and approval as a Project measure. The request was approved and the measure has been reviewed by the Environmental Review Team.

The soils of the site were mapped by a Soil Scientist of the USDA Soil Conservation Service. Reproductions were made of the soil survey, and this information, together with natural soil group descriptions, proportional extent of soils, and a table of limitations for urban development, was forwarded to all members of the Team prior to their review of the site.

The Team that reviewed the school site consisted of the following:

Stanley House, Forester, Department of Environmental Protection  
Ed Golden, Biologist, Department of Environmental Protection  
Ted Willerford, Principal Sanitary Engineer, State of Connecticut  
Ed Minnick, Civil Engineer, Soil Conservation Service  
Stanley Greimann, Planner, Connecticut River Estuary Regional  
Planning Agency  
Barry Cavanna, Soil Conservationist, Soil Conservation Service  
Marc Crouch, Soil Scientist, Soil Conservation Service  
Sid Quarrier, Geologist, Department of Environmental Protection

The Team met and reviewed the entire site on January 18, 1973. Reports from each Team member were sent to the Team Coordinator for review and summarization.

This report is not meant to compete with private consultants by supplying site designs or detailed solutions to development problems. It identifies the existing resource base and evaluates its significance to the proposed development and suggest measures that should be considered during the planning and development of the tract.

The Eastern Connecticut RC&D Committee hopes the Town of Westbrook will find this report of value and assistance in making its decisions on this particular site.

For any additional information, please contact:

Plater T. Campbell, District Conservationist  
Soil Conservation Service  
Extension Center  
Haddam, Connecticut 06438

or

Stanley V. Greimann, Planning Director  
Connecticut River Estuary Regional Planning Agency  
Essex Square  
Essex, Connecticut 06426

The 100+ acre site is located north of McVeagh Road and west of McVeagh Pond. The soils on the property range from well drained terrace soils over sands and gravels adjacent to flood plains and poorly drained areas to upland rocky and shallow to bedrock soils. A detailed report of soils and geology is included as part of the report.

For purposes of discussions, the Team has divided the tract into three segments, based on present land use.

- SEGMENT I - The southernmost portion, being used primarily for the school and related recreation facilities.
- SEGMENT II - The middle portion that is presently being used as the town refuse and disposal area.
- SEGMENT III - The northernmost portion, which is principally woodland left relatively undisturbed.

#### WATER SUPPLY

The existing school is served by the public water supply of the Connecticut Water Company. A well that is downstream from the Town of Westbrook land refuse site is used by the Connecticut Water Company for "summer peaking", usually between May 15 and September 15. Water samples taken on Spring Lot Brook upstream from the well between October 1970 and January 1973 show a great variation in coliform count with some counts over 20,000 per 100 ml. Spring Lot Brook is visibly polluted and contaminated as it flows through the land fill. The presence of a septic tank pumpout pit approximately 1,000 feet upstream, and the proximity of this pit to the stream, presents a potential health hazard to this well.

#### WASTE DISPOSAL

Sewers or sewerage collection systems do not exist in this area. Few problems would exist in installing sewers in Segment I. Segments II and III would have severe limitations for expanding sewers into these areas because of the type of soils and topography.

The present leach fields for the existing school in Segment I are functioning properly and additional leaching areas are available if required.

Segments II and III have severe limitations for on-site sewage disposal. The present land use in Segment II is the limiting

factor, and steep topography and shallow to bedrock soils are the limiting factors in Segment III.

#### FOUNDATION DEVELOPMENT AND GRADED CONDITIONS

Within Segment I there are few soil or geological limitations for building foundations. The remaining undeveloped area in Segment I is limited; however, expansion of the school facilities with additional sewage disposal areas will have to be designed within the remaining area.

Segment II has severe limitations for foundations of buildings. Differential settlement would be hard to control in material of such varying load carrying capacities. After the landfill operation has been terminated and the area regraded and permitted to settle for ten to fifteen years it could be reviewed for possible building sites, with proper borings and testing.

Segment III has moderate to severe limitations for foundations and buildings due to the closeness of bedrock and steepness of slopes.

The adjacent streams will be susceptible to siltation of sediment from any construction in the area. A complete sediment and erosion plan should be developed, outlining time of mulching and seeding of exposed areas during and after construction. Sediment basins and their placement should be specified, as well as the time they will be installed before and during construction.

#### ROADS AND UTILITIES

Existing roads and utilities to the area appear to be adequate. Only slight limitations should be encountered for future roads from expansion, especially in Segment I.

#### HAZARDS

a) Natural: Segment III is the only area left that is still in its natural condition. If this area remains undisturbed no natural hazards should result.

b) Man-induced: Within Segment I there are no significant hazards resulting from the present land use. The present land

use in Segment II, according to all reviewer's reports, has created many hazards. All team members agree that the land fill operation, if it hasn't already done so, is contaminating the ground and/or surface waters leading from the area. Wells have been endangered in the area from dumping on aquifer systems. Coliform levels are at times far above safe levels. Last but not least is the close proximity of Segment II to the school and surrounding recreation areas, which creates an unsafe attraction to many children. Most reviewers stressed the mismanagement of Segment II, and recommended that the landfill operation be discontinued as soon as is feasible.

If the landfill operation is to continue in Segment II, lagoons should be designed by sanitary engineers to handle the waste from septic pumpouts. Fill areas should be redesigned, and precautions taken to prevent leachate from entering the streams and water table. This will be very difficult to do, however, because of the porosity of the sands and gravels in this area.

The reviewers' basic recommendation is still valid in stressing the landfill operation be discontinued and the area filled, reshaped, and converted to a recreation and playfield area for the school and its expansion.

#### AESTHETICS AND PRESERVATION

Segment III especially provides living space for various species of forest wildlife common in that section of Connecticut. The area has 40 to 60-year old mixed hardwoods, with oak being the dominant tree species. Many of the oaks are dying however, from defoliation and a root rot fungus. The other hardwoods including red and swamp maple are in a healthier condition.

Underplanting of white pine and hemlock would help to reforest and maintain the woodland in this segment for "passive" recreation. A proper management plan would provide additional varieties of wildlife species that would be an interest to all outdoor groups.

#### SERVICES TO SUPPORT DEVELOPMENT

This site is well located for the purpose being considered, i.e., expanded school facilities. It is already served by public water supply and the town road network makes it readily accessible from all parts of town. Its central geographic location with respect to

already developed areas near the shore and new growth areas inland would be hard to duplicate.

#### COMPATIBILITY OF SURROUNDING LAND USES

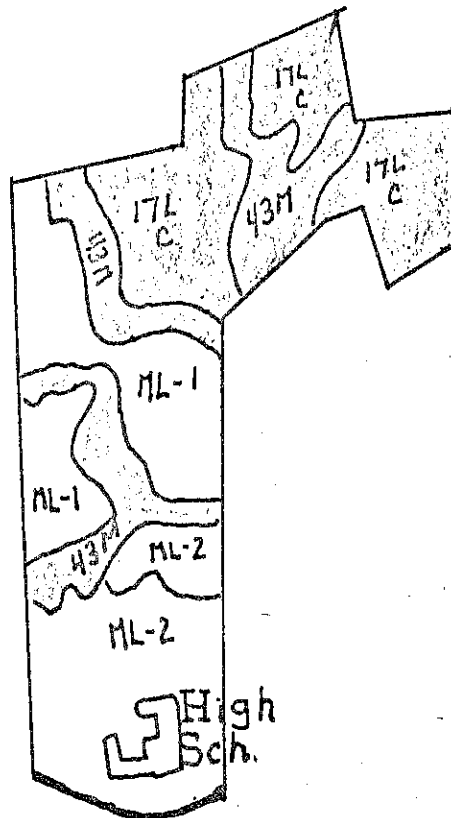
Surrounding land use is residential and institutional. The landfill in Segment II is out of phase with the surrounding area because of the close proximity of the school.

#### ALTERNATE LAND USES FOR THE AREA

The land use for Segment I is established, and has the potential for expansion of school facilities. The land refuse area in Segment II will prevent development of this area for school building purposes for many years because the cost of preparing this area for such use would be prohibitive. It could be converted to supporting playfield and recreation facilities for the proposed school complex, however, without difficulty. Segment III has the potential for an outdoor classroom in land use, forestry and wildlife. The Boy Scout camp in the area is an excellent compatible land use for this area.

UNITED STATES DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

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REVISED SOIL MAP

SCALE: 1" = 1320'

Prepared by:

U.S. Department of Agriculture  
Soil Conservation Service

Advance copy subject to change.





## UPLAND SOILS - OVER COMPACT TILL

### Poorly and very poorly drained soils

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C-3a Non-stony or stony soil with a high seasonal water table

C-3b Non-stony, stony, or very stony soils with a high water table during most of the year

These nearly level soils occur on drumlins---hills smoothed and elongated north to south by the movement of glaciers. They are underlain by compact glacial till and have a hardpan 16 to 36 inches below the soil surface. Permeability above the hardpan is moderate but the pan drastically reduces percolation. The poorly drained soils in group C-3a have a high water table that remains within 6 inches of the soil surface during the wettest part of the year. The high water table often persists until late spring and may recur after prolonged or heavy summer rains.

The very poorly drained soils in group C-3b have water ponded on the surface for significant periods in winter and spring. The water table usually persists within 3 feet of the soil surface throughout the year.

Urban. These soils have severe or very severe limitations for most urban uses. Intensive and costly drainage and land fill measures are required to overcome wetness.

Recreation. These soils have severe or very severe limitations for picnic areas, camp sites, and play areas but have potential for conservation uses and environmental enhancement. Pond sites are found in these areas, but difficulty of construction increases with the degree of stoniness.

Wildlife. These soils of group C-3a are poorly suited for the production of openland wildlife habitat. Dependable growth of desirable food and cover plants is limited by the poor natural drainage. The habitat required by woodland or wetland wildlife species can be developed, improved, or maintained but moderate treatment is required.

The very poorly drained soils in group C-3b are poorly suited for the production of openland and woodland wildlife habitat. Dependable growth of desirable food and cover plants is hindered by their wetness. Habitat for wetland wildlife can be developed, improved, or maintained on the soils, but stoniness imposes difficulties in constructing water impoundments.

Woodland. Productivity for wood crops is fair on the soils in group C-3a and poor on the soils in group C-3b. Wetness poses severe problems in the use of equipment, the survival of tree seedlings, and windthrow of trees. Competition from other plants is a problem.

Cropland. With drainage, the soils cleared of stones in group C-3a are suitable for the production of silage corn and adapted hay and pasture crops. The stoniness and wetness of the soils in group C-3b make them unsuitable for agricultural crops.

1/18/71

## UPLAND SOILS - ROCKY AND SHALLOW TO BEDROCK

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- D-1 Rocky and very rocky soils with slopes less than 15 percent
- D-2 Rocky and very rocky soils with slopes more than 15 percent and extremely rocky soils

The soils of groups D-1 and D-2 occur mostly on the rougher areas of the uplands. They may occupy narrow ridge tops but most often are on steep side slopes. The soils are underlain by hard bedrock and the areas contain barren rock outcrops. In many places, hard rock is less than 20 inches below the soil surface. These areas provide contrast in the landscape and scenic outlooks.

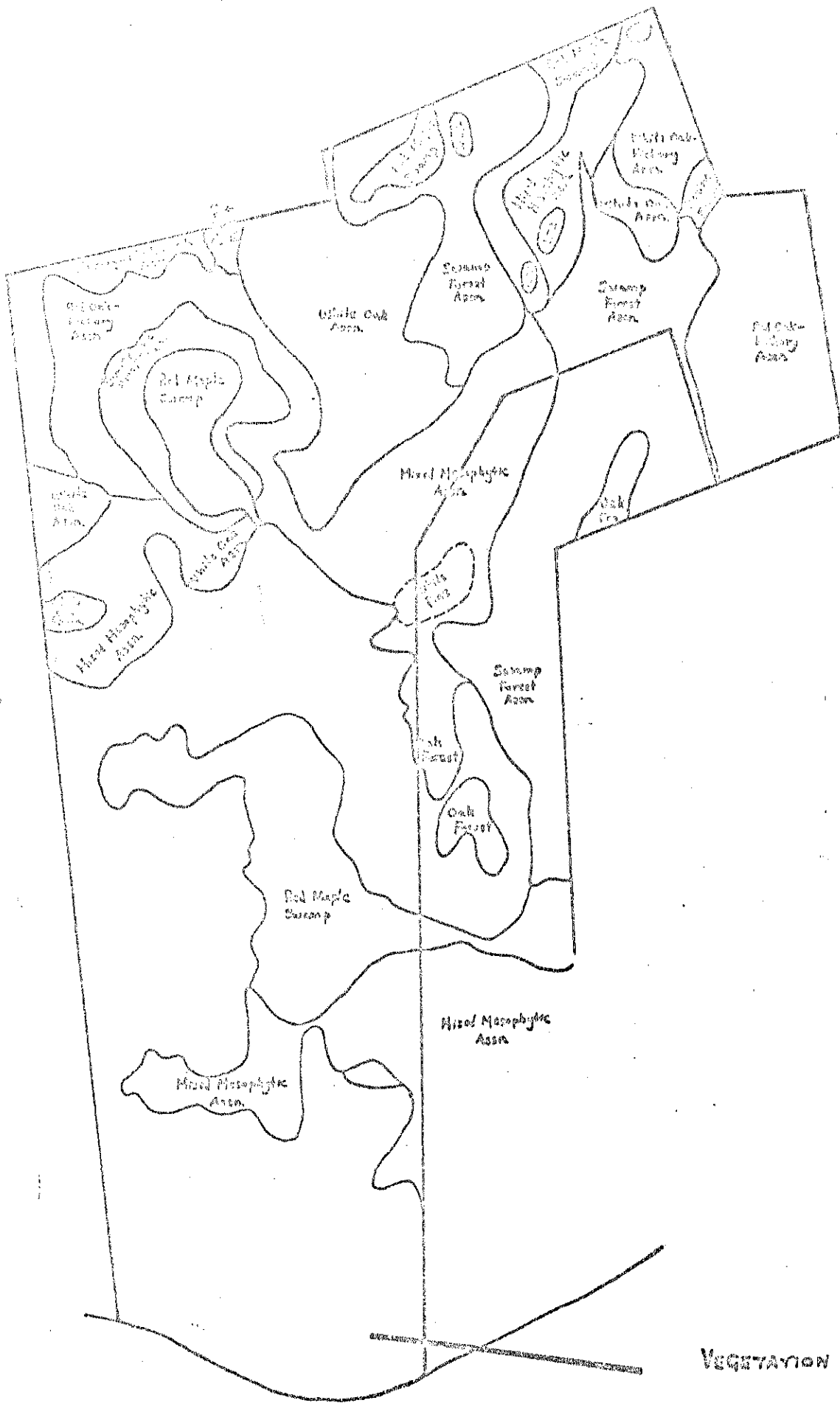
Urban. Rock outcrops and soils shallow to bedrock cause severe problems and high construction costs when developing this land for urban uses. Occasional pockets of deeper soils can be utilized for individual home sites.

Recreation. Picnic areas and camp sites are very difficult to develop and access is usually a severe limitation. However, the terrain provides an attractive setting for these uses.

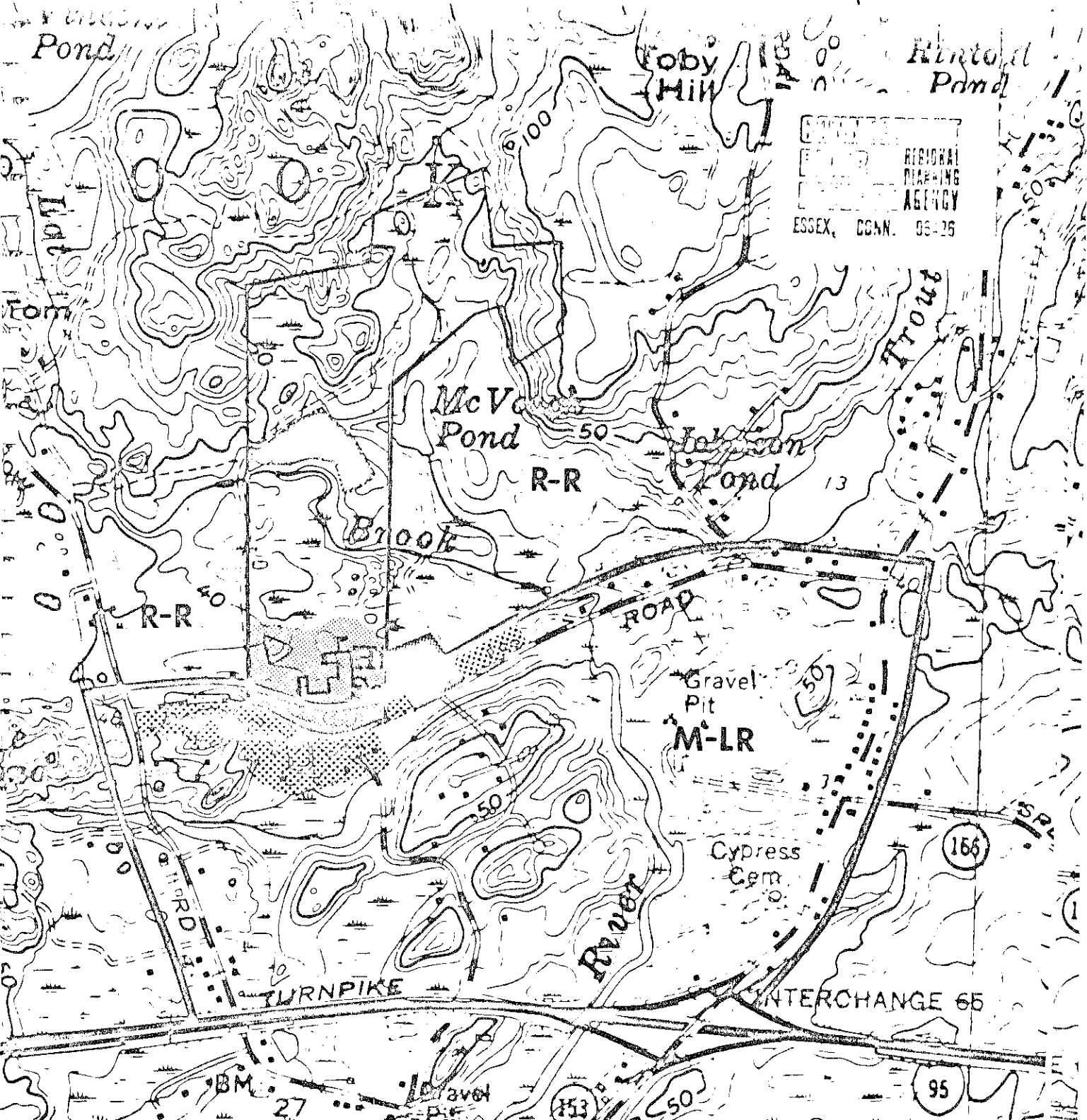
Wildlife. These soils are poorly suited for the production of openland wildlife habitat. The habitat for woodland wildlife species can be established, improved, or maintained but moderate treatment is required. It is impractical to develop wetland wildlife habitat on these soils.

Woodland. The productivity of most of this land is poor for wood crops. Pockets of deeper soil within these areas have fair productivity. Equipment operation is very difficult because of rock outcrops. Seedling survival and windthrow of trees are problems on the shallower areas.

Cropland. These soils are not suited for the production of cultivated crops because of rock outcrops and shallowness. Scattered areas with deeper soils and less numerous rock outcrops can be used for improved hay, pasture, and orchards.



VEGETATION MAP

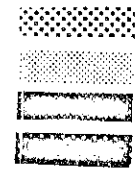


ESSEX COUNTY REGIONAL PLANNING AGENCY  
 ESSEX, COGN. 08-26

WESTBROOK SITE ANALYSIS

LAND USE

- Residential
- Public: High School & Play Fields
- Church
- Landfill Area



ZONING

- R-R Rural Residential 2 acre
- ML-R Medium Low Density Residential 1/2 acre

# SURFICIAL GEOLOGY - WESTBROOK



ROCK AT OR NEAR SURFACE  
 TILL  
 SAND & GRAVEL  
 SAND  
 } STRATIFIED DRIFT



SWAMP  
 ARTIFICIAL FILL