

Environmental Review Team Report

Recreation Area Coventry, Connecticut



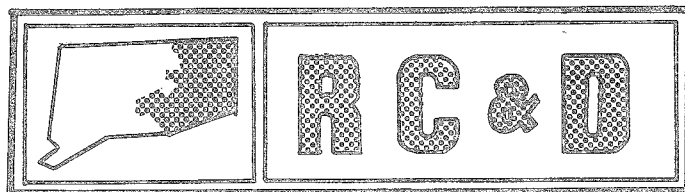
EASTERN CONNECTICUT RESOURCE CONSERVATION AND DEVELOPMENT AREA, INC.

Environmental Review Team
Report

on

Recreation Area
Coventry, Connecticut

February 1981

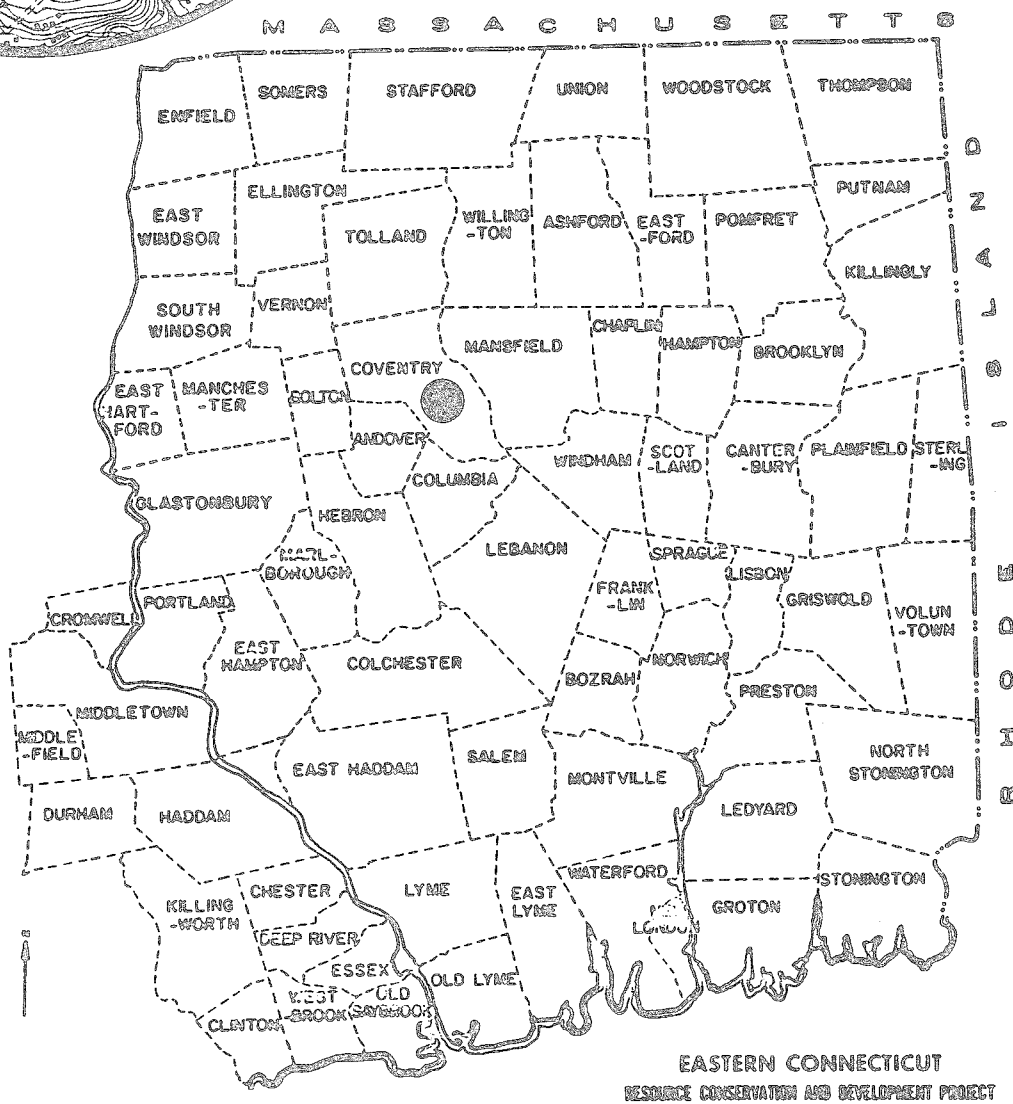
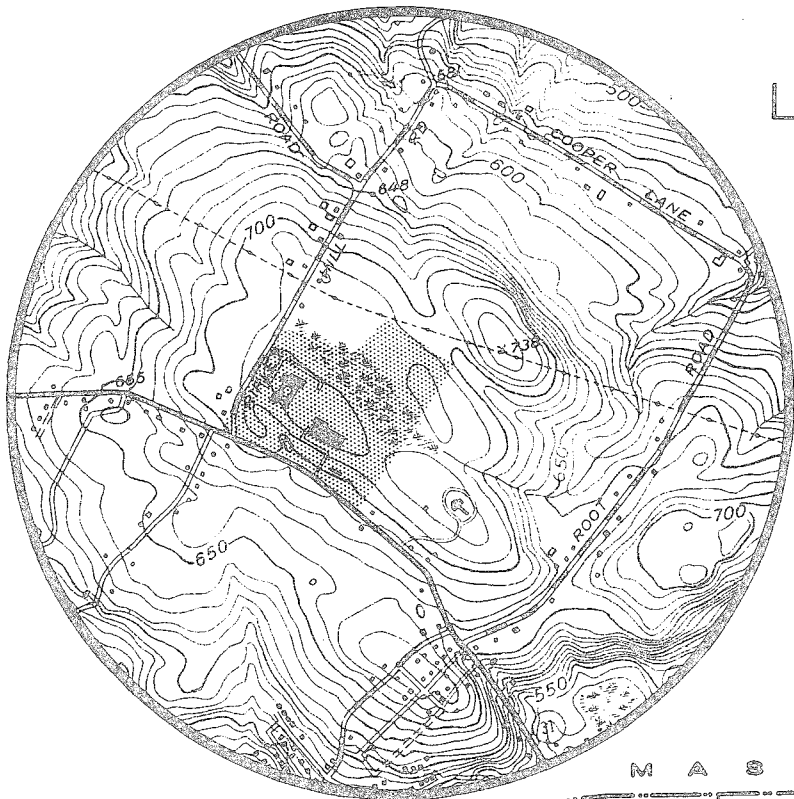


eastern connecticut resource conservation & development area

environmental review team
139 boswell avenue
norwich, connecticut 06360

Location of Study Site

RECREATION AREA
COVENTRY, CONNECTICUT



ENVIRONMENTAL REVIEW TEAM REPORT
ON
RECREATION AREA
COVENTRY, CONNECTICUT

This report is the outgrowth of a request from the Town of Coventry to the Tolland 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: Joe Neafsey, District Conservationist, SCS; Mike Zizka, Geologist, Connecticut Department of Environmental Protection (DEP); Rob Rocks, Forester, DEP; Andy Petracco, Recreation Specialist, DEP; Les Barber, Planner, Windham Regional Planning Agency; and Jeanne Shelburn, ERT Coordinator, Eastern Connecticut RC&D Project.

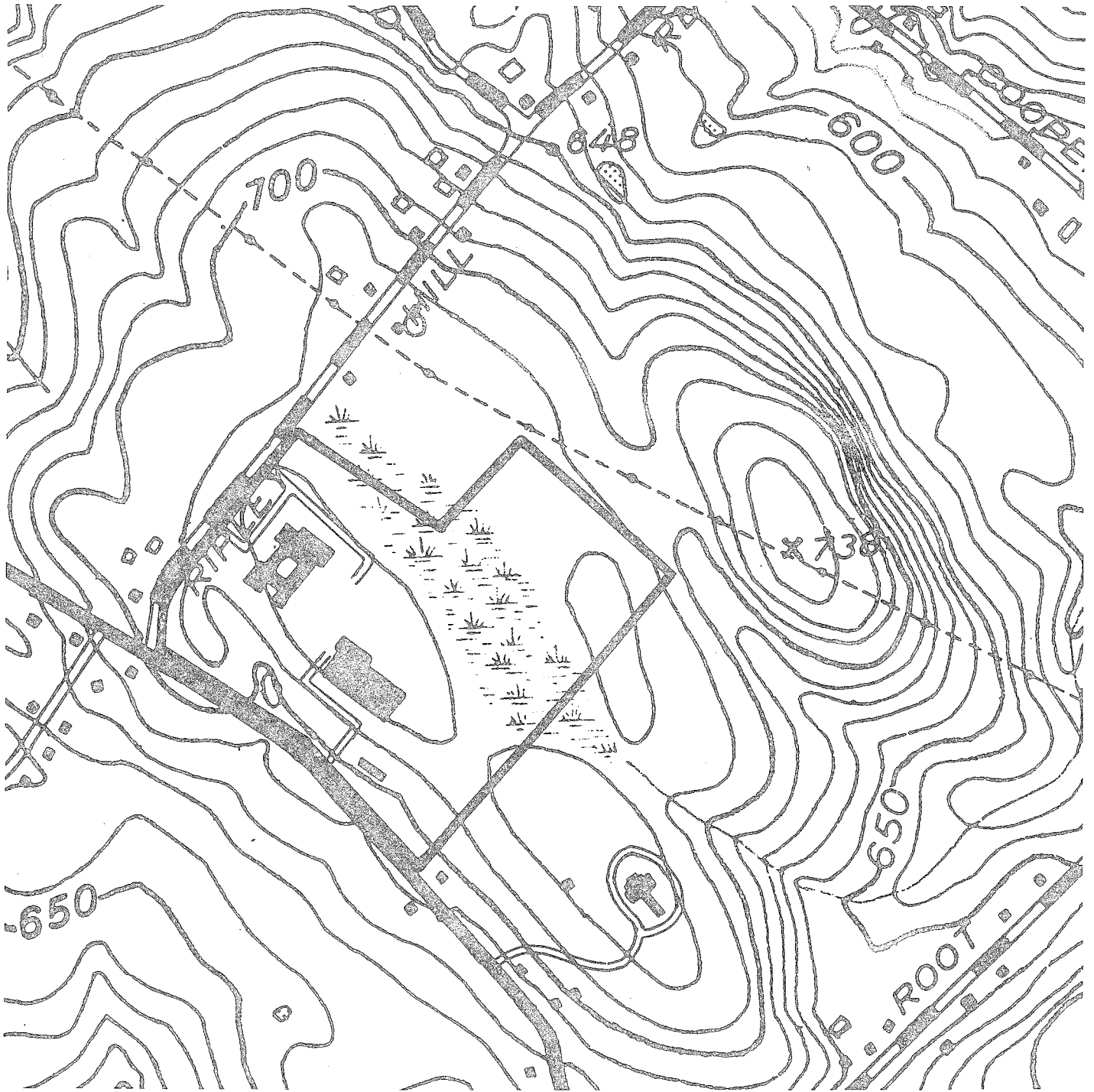
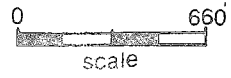
The Team met and reviewed the site on thursday, December 4, 1980. Reports from each Team member were sent to the ERT Coordinator for review and summarization for this final report.

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 proposed recreation area, shall constitute the environmental assessment portion of the Town's open space application for federal Department of the Interior, Heritage Conservation and Recreation (HCRS) funds to assist in the recreational development of this area.

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



DESCRIPTION OF THE PROPOSAL

The Town of Coventry is seeking development funding from the Heritage Conservation and Recreation Service to improve a site which is presently used for informal playing fields. The site is an open, mowed field, located behind the Coventry High School on Rte. 31, which is stoney and poorly drained in portions. Installation of appropriate drainage and enhancement of the topsoil to make a suitable turf-growing medium will be necessary to grow the vigorous turf needed to withstand the heavy use anticipated. Designation and delineation of specific areas for particular activities will be done subsequent to site preparation. The activities to be accommodated are: soccer, field hockey, baseball, and softball, tennis, racquetball, football, ice skating, shuffleboard, horseshoes, and bocce.

This is the only Town owned site available for use as formal active playing fields. It is centrally located in the town and associated facilities (rest rooms, locker rooms) will be provided by the adjacent school buildings. A path is being planned to connect nearby elderly housing to this recreation area and provide recreational activities for the elderly.

DESCRIPTION OF THE ENVIRONMENT

PRESENT/PAST LAND USE

The site is presently used as "free-form" open playing fields for adjacent schools. Former use of the area is unknown, but could reasonably be assumed to have been farmland.

EXISTING SOCIO-ECONOMIC CONDITIONS

The preliminary 1980 population is 8,890, a 9.2% increase over the 8,140 of 1970. State projections for the year 2000 indicate a population of 10,710. Forty-six percent of the population in 1970 is centered in the urban area that surrounds Coventry Lake. The proposed facilities lie to the north and east of the Lake, conveniently accessible to this center of population. In the next decade or more population growth will likely be greater to the north and west in the areas served by Route 44A. Depending on the construction of I-84 and the specific locations of interchanges on that highway, population expansion in southern Coventry may assume a larger percentage of town growth in later decades. The facilities will nevertheless be located at the geographical center of the Town and should, over the long term, be well located to serve the entire town despite decade by decade shifts in population growth patterns.

Planning and Zoning Commission policy is designed to encourage higher density residential development in South Coventry Village in an area about a mile to the south of the recreation site.

In economic terms Coventry is a fairly typical suburban community with generally low rates of poverty (4.2% of all persons in 1970) and a high ranking (on a national scale) for median family income and extremely high income for unrelated individuals.

The community patterns reflect this suburban character. Seventy percent of the work force in Coventry commutes to employment out of the Windham Region (principally to the Hartford Metropolitan area). An additional 17 percent commutes to jobs outside of Coventry but within the Region (often to the University of Connecticut.) Only 13 percent of the employed persons actually work within the Town of Coventry.

As might be expected economic activity is limited to commercial operations serving the residential population and a very small manufacturing component found in the South Coventry area.

While the Town as a whole is suburban and relatively high income in character, significant concentrations of low and moderate income persons and housing deficiencies are to be found in the urban area which surrounds Coventry Lake and which is in close proximity to the recreation site under discussion.

EXISTING TRANSPORTATION ROUTES

The site has convenient access to Route 31, a state highway, via less than 1000 feet of local road which also provides access to Coventry High School. Route 31 serves the southern and northeastern portions of the Town and connects with Route 44A which provides the central transportation corridor for the northern half of the Town. While Route 31 has conspicuously poor alignment problems in many locations it is a perfectly adequate access for the recreational facilities proposed.

SURFACE/SUBSURFACE GEOLOGIC CONDITIONS

The surface geology of the site is composed largely of till and artificial fill. Till is a glacial sediment composed of rock particles and fragments ranging in size from clay to boulders. The unconsolidated rock debris was accumulated by an ice sheet as it passed southward through New England, bulldozing the preexisting soil and bedrock surface. Most of the material was redeposited from underneath the ice as it continued to move forward, but some probably settled slowly out of the ice as it melted during a phase of glacial recession. The upper part of the till (generally the top 3-5 feet but occasionally as much as 10 feet or more) is normally sandy, stony, and relatively loose. As depth, the till commonly becomes siltier, less stony, and very tightly compact. Water movement is very slow in the compact till, so that high water-table conditions may occur during wet seasons. The central portion of the site originally was a shallow basin. Standing water in the basin led to the development of a swamp with the concurrent deposition and accumulation of organic materials. As the soils map in the appendix of this report shows, most of the basin has been artificially filled to allow development of the playing fields.

Bedrock was not seen on the property. The rock underlying the site is inferred to be part of the Hebron Formation. The major rock types in the formation are gneisses and schists composed primarily of quartz, feldspar, biotite, and hornblende. Less prominent mineral components include muscovite, garnet, magnetite, sphene, and tourmaline. No commercially valuable mineral concentrations are believed to be present in the rocks.

SOILS

Soils typical of this site include the Charlton series, the Leicester, Ridgebuty and Whitman complex; the Paxton series, the Sutton series, Peat and Mucks, and artificial fill or "made land". The major portions of this site are occupied by "made land".

The Charlton series consists of deep, well drained soils on uplands. They formed in glacial till derived mainly from schist and gneiss. Typically these soils have a dark brown fine sandy loam surface layer 6 inches thick. The subsoil from 6 to 26 inches is yellowish-brown and light olive brown fine sandy loam. The substratum from 26 to 60 inches is grayish brown gravelly fine sandy loam. Slopes range from 0 to 45 percent.

The Paxton series consists of deep, well-drained soils that occupy drumlins or rounded hills of uplands. They formed in compact glacial till. Typically these soils have a very stony or extremely stony very dark grayish-brown fine sandy loam surface layer about 8 inches thick. The subsoil extending to 22 inches is yellowish-brown fine sandy loam in the upper part and light olive brown fine sandy loam in the lower part. The underlying pan layer to a depth of 41 inches is grayish-brown, platy, very firm fine sandy loam. Slopes range from 0 to 35 percent.

The Sutton series consists of deep, moderately well drained soils on uplands. They formed in glacial till. Typically these soils have a very dark grayish brown fine sandy loam surface layer 6 inches thick. The subsoil layers from 6 to 28 inches are dark brown and yellowish brown fine sandy loam with mottles below 12 inches. The mottled substratum from 28 to 36 inches is brown fine sandy loam and from 36 to 60 inches is light olive brown gravelly sandy loam. Slopes range from 0 to 25 percent.

WATER RESOURCES

The wetland area on the site that was filled for the playing fields was the headwater region of an unnamed tributary of Willimantic River. An artificially widened channel drains the surface runoff from the fields, carrying it eastward from the edge of the fill to the natural upstream portion of the tributary. An artificial pond has also been placed in the former swamp near the eastern edge of the fill. The pond is shallow and is fed largely by ground water. Neither the pond nor the stream represents a valuable surface water resource in itself.

The geology of the property does not give it a realistic potential for serving as the site of a high-yielding ground water well. The most productive aquifer on the site is bedrock, which is tapped by the well serving the high school. Although bedrock normally can supply yields of 3 gallons per minute, which are suitable for domestic purposes or, with sufficient storage, for facilities such as a school, it is a rare bedrock well that can yield more than 20 gallons per minute. The ground water resources on the site may therefore best be described as average for Connecticut.

VEGETATION

The areas which are proposed for the development of athletic fields and parking areas are at present vegetated with grass and a few scattered healthy oak trees near the buildings.

WILDLIFE

The site is probably used by transient species such as dogs, cats and seasonal songbirds. Species not disturbed by human intrusion, i.e. skunks, raccoons and opossum may inhabit neighboring woodland.

PROBABLE FUTURE ENVIRONMENT

If development funding is not available, the fields will continue to be used for informal sports activities. This is the only town owned area available for active field sports and will not be used to full capacity if funding for improvement is not available.

ENVIRONMENTAL IMPACT

EFFECT ON LAND USE

Development of formal playing fields on this site will have no detrimental effect on present land use on site or in the surrounding area.

EFFECT ON SOCIO-ECONOMIC CONDITIONS

The project as proposed will have no appreciable effect on socio-economic conditions within the town.

EFFECT ON TRANSPORTATION ROUTES

Roads in the vicinity of the site are capable of handling any additional traffic generated by development of this site.

EFFECT ON WATER RESOURCES

The impact of the proposed recreational development on water resources as they presently exist will be negligible. The wetland filling and stream channel alteration that preceded the proposal may have had a significant impact on local hydrology by increasing runoff flows from the site, etc., but those conditions will exist regardless of whether the present projects are undertaken. It may be recommended that fertilizer be used in moderation on the playing fields; overapplication of nutrients may result in enrichment of the surface waters leaving the site through the stream course. In all, however, the recreational uses should create no serious risks for

the existing water resources.

EFFECT ON VEGETATION

The impact on vegetation caused by the proposed development will be slight. No trees will be removed or disturbed for the development of this proposal. Most areas which are presently vegetated with sod will be promptly revegetated with sod after grading and grooming takes place.

Approximately two acres which are presently vegetated with sod will be paved to provide parking space, tennis courts, racquet ball courts and shuffleboard courts.

MITIGATING MEASURES

All areas will be revegetated promptly with sod except for approximately two acres which will be paved.

IRREVERSIBLE COMMITMENTS OF RESOURCES

Removal of approximately two acres of sod cover for construction of the proposed parking area, tennis courts, racquet ball courts and shuffleboard courts.

RECREATION POTENTIAL

Coventry High School students will be the primary benefactors of the facilities installed, but these facilities will be available for use by the elderly residing nearby and other community residents. The project area is currently being used informally for playing fields. This type of use would undoubtedly continue if the project were not carried out, though use would continue to be restricted to times of the year when there is adequate sod and when wet conditions do not prevail as is the present pattern.

If a modest picnic area with charcoal grills is installed, garbage and charcoal ash would be generated. Ash and garbage cans must be provided and provision made for periodic cleanup of the area. Cleanup of the area could logically be the responsibility of the high school maintenance crew when the school is open. The town recreation or public works department may also become involved with cleanup and maintenance. Off-site disposal of generated wastes is planned.

Access to the site is good since the school is located on a state route. No particular conflicts are foreseen as relates to congestion, traffic volume, or hazards. Non-school related peak use is anticipated to be in the summer months when school is not in session and when parking would be plentiful.

The fields will undoubtedly be maintained in a manner customary to other school and town park fields. Mowing and periodic liming and fertilization to maintain healthy, vigorous turf are anticipated.

The pond presently located on the site is to be enlarged and given a rectangular configuration so that its potential for use as a skating pond and hockey rink will be enhanced. Enlarged water storage capacity may enable a tie-in to the field drainage system and possibly provide a modest reservoir for lawn irrigation in drier months. The Soil Conservation Service can make appropriate projections on the practicality of such uses based on the proposed pond size and volume of water.

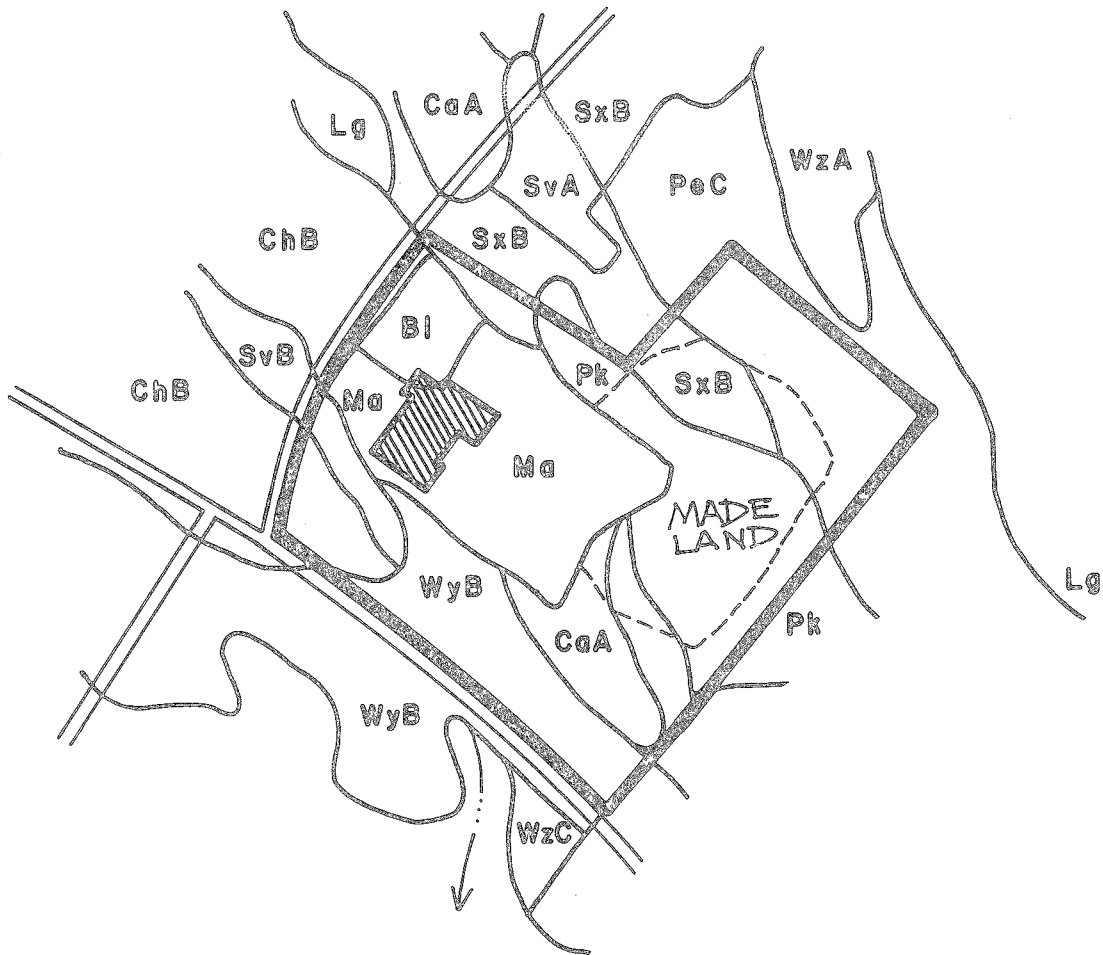
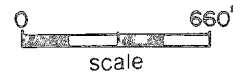
A connector path tying the senior citizen housing to the project area will enhance the resident's opportunity for convenient use of the recreational facilities. Walking trails in the woodland behind the senior citizen housing area would benefit the elderly and the students. Such a trail network would offer opportunities for walking, jogging, bird watching and other nature study which readily ties into biology class study.

An area for the combined activities of ice skating, shuffleboard, horseshoes, and bocce (at appropriate seasons) is proposed. An area providing these facilities would also be appropriate for locating a modest picnic area containing a few picnic tables and grills.

In conjunction with plans for use by the elderly, installation of higher than "normal" benches or seats would enhance usability by arthritics or persons suffering from other similar infirmities. These facilities could be established along the path and in the small picnic/spectator area.

Appendix

Soils



COVENTRY HIGH SCHOOL HCRS GRANT

SOILS CHART

Map Symbol and Soil Series	Septic Tank Absorption Fields	Lawns, Landscaping & Golf Fairways	Camp Areas	Picnic Areas	Playgrounds	Paths and Trails
B1 - Borrow & Fill Land, Loamy Materials	On-Site Determination Needed	-	-	-	-	-
CaA - Charlton fsl 0-3% slopes	Slight	Slight	Slight	Slight	0-2% Moderate Small Stones 2-6% Moderate Slope	Slight
ChB - Charlton Stony fsl 3-8%	Slight	Moderate Large Stones	Moderate Large Stones	Moderate Large Stones, Slope	Severe Large Stones	Slight
Lg - Leicester-Ridgebury-Whitman Very Stony Complex	Severe High Water Table Temporary Ponding	-	-	-	-	-
Ma - Made Land	On-Site Determination Needed	-	-	-	-	-
PeC - Paxton vst fsl 3-15% Slopes	Severe Percs Slowly	0-8% Moderate Large Stones 8-15% Moderate Slope, Large Stones	0-8% Moderate Percs Slowly, Large Stones 8-15% Moderate Slope, Large Stones	0-8% Moderate Percs Slowly 8-15% Moderate Slope, Large Stones	0-6% Severe Large Stones 6% Severe Slope, Large Stones	Slight
Pk - Peat & Muck	Severe High Water Table	-	-	-	-	-
SvB - Sutton fsl 3-8% Slopes	Severe Wetness	Slight	Slight	Slight	2-6% Moderate 6+% Severe	Slight

Map Symbol
and
Soil Series

Septic Tank
Absorption
Fields

Lawns, Land-
scaping & Golf
Fairways

Camp
Areas

Picnic
Areas

Playgrounds

Fields
and
Pastures

SxB - vst fsl
3-15% Slopes

Severe
Wetness

0-8% Moderate
Large Stones
8-15% Moderate
Slope, Large
Stones

0-8% Moderate
Large Stones
8-15% Moderate
Slope, Large
Stones

0-8% Slight
8-15% Moderate
Slope

0-2% Moderate
Large Stones
2-6% Moderate
Slope, Large
Stones
6+% Severe
Slope

Moderate
Large Stones

WxA - Woodbridge
fsl 0-3% slopes

Severe
Percs Slowly
Wetness

Moderate
Wetness

Moderate
Wetness

Moderate
Wetness

Moderate
Wetness

Moderate
Wetness

WyB - Woodbridge
st fsl
3-8% Slopes

Severe
Percs Slowly
Wetness

Moderate
Wetness
Large Stones

Moderate
Wetness
Large Stones

Moderate
Wetness
Large Stones

0-6% Severe
Large Stones
6+% Severe
Slope, Large
Stones

Moderate
Wetness

WzC - Woodbridge
vst fsl 3-15%
Slopes

Severe
Percs Slowly
Wetness

0-8% Moderate
Large Stones
Wetness
8-15% Moderate
Slope, Large
Stones, Wetness

0-15% Severe
Large Stones

0-15% Severe
Large Stones

0-6% Severe
Large Stones
6+% Severe
Slope, Large
Stones

Moderate
Wetness

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.