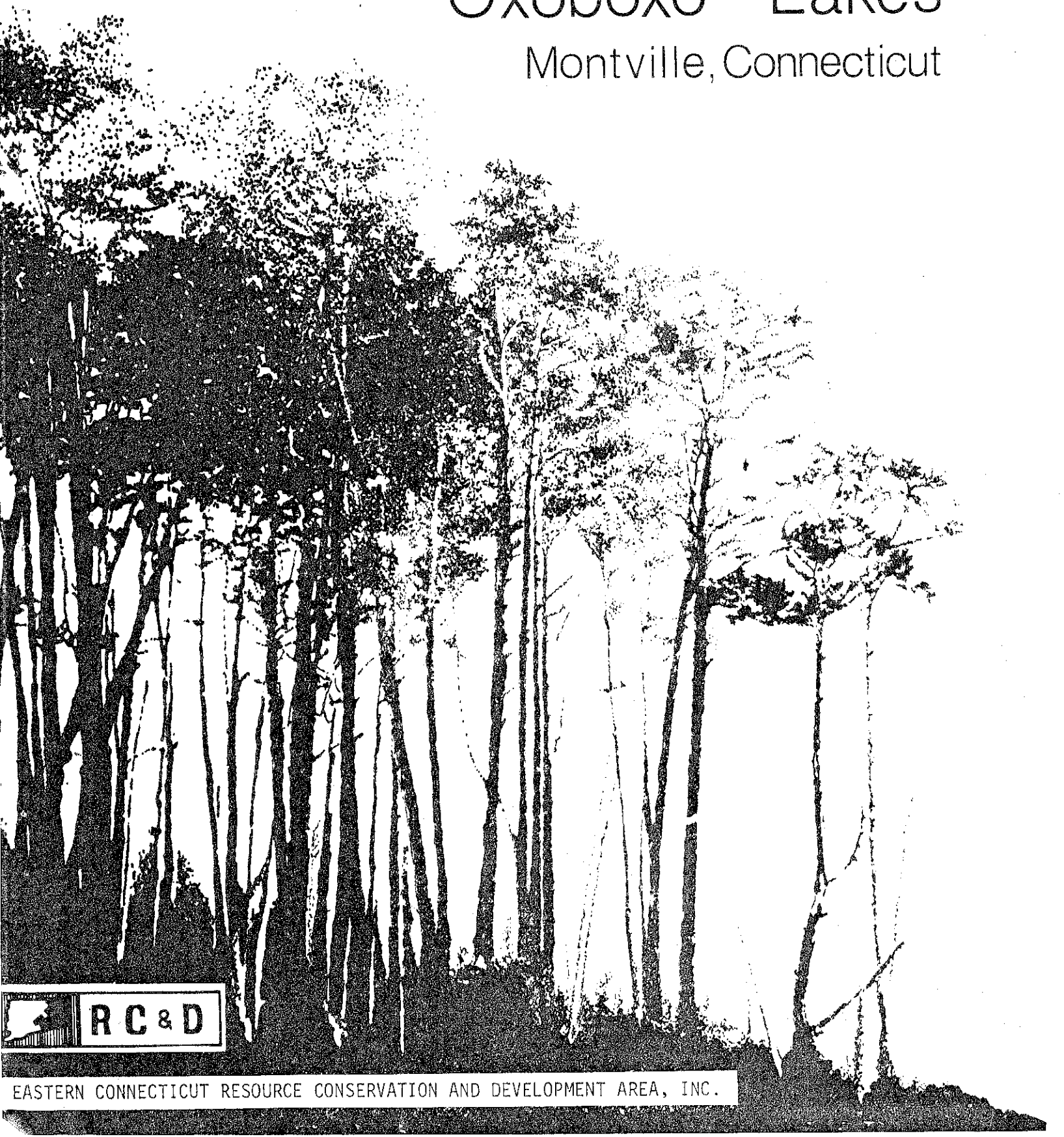
Environmental Review Team Report

Oxoboxo Lakes

Montville, Connecticut



RC&D

EASTERN CONNECTICUT RESOURCE CONSERVATION AND DEVELOPMENT AREA, INC.

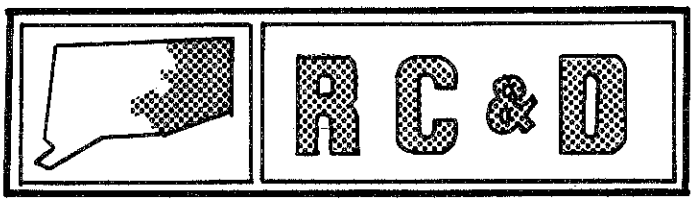
Environmental Review Team Report

on

Oxoboxo Lakes

Montville, Connecticut

July 1980



eastern connecticut resource conservation & development area

environmental review team
139 boswell avenue
norwich, connecticut 06360

ENVIRONMENTAL REVIEW TEAM REPORT
ON
OXOBOXO LAKES
MONTVILLE, CONNECTICUT

This report is an outgrowth of a request from the First Selectman of Montville 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: Gary Domian, District Conservationist, SCS; Mike Zizka, Geologist, Department of Environmental Protection (DEP); Rob Rocks, Forester, DEP; Andy Petracco, Recreation Specialist, DEP; Gerhard Amt, Regional Planner, Southeastern Connecticut Regional Planning Agency; Joan Zaprzalka, Water Quality Planner, SCRPA; and Jeanne Shelburn, ERT Coordinator, Eastern Connecticut RC&D Area.

The Team met and field checked the site on Tuesday, April 1, 1980. Reports from each Team member were sent to the ERT Coordinator for review and summarization for the final report.

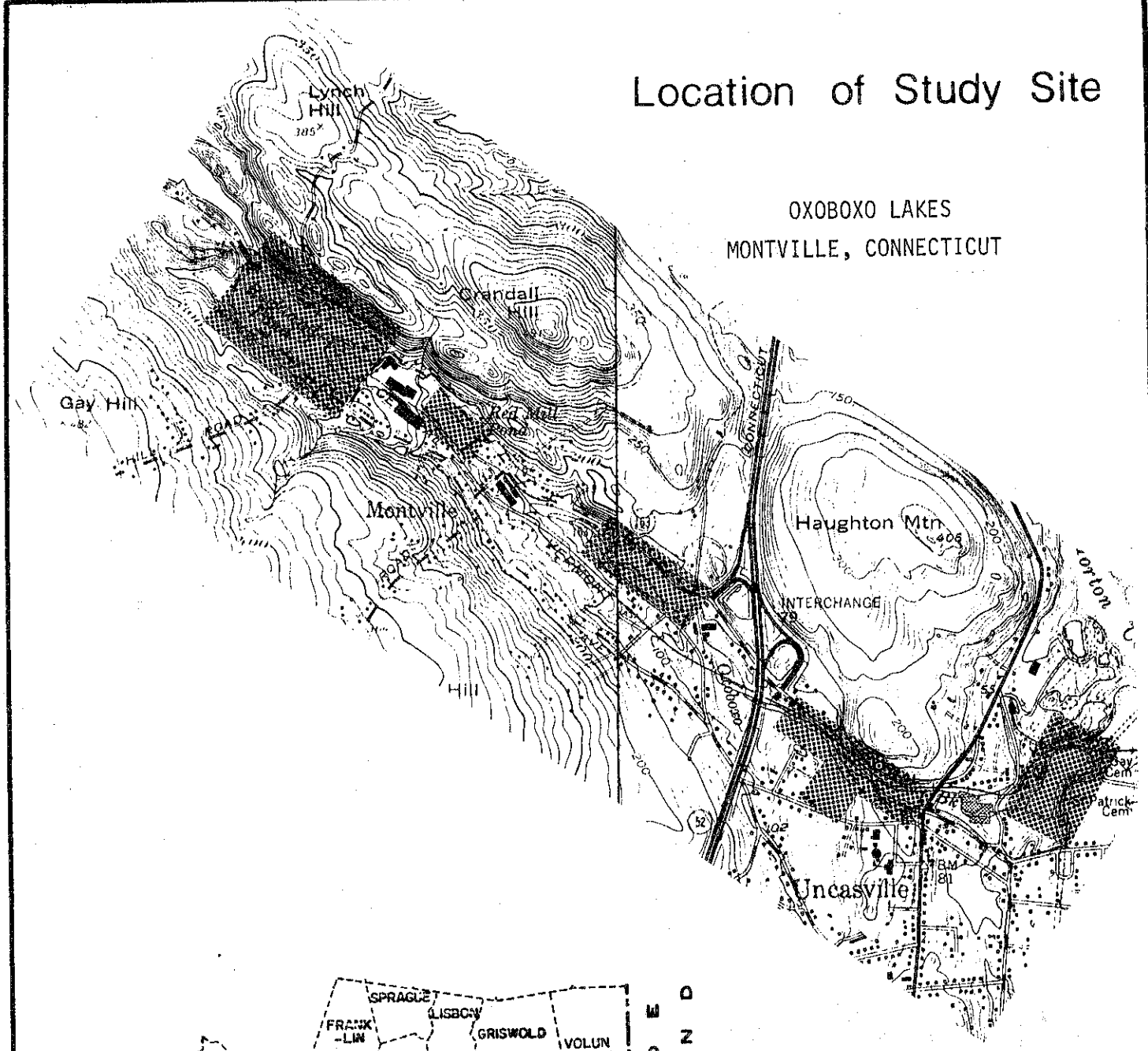
This report is not meant to compete with private consultants by supplying site designs or detailed solutions to development problems. This report identifies the existing resource base and evaluates its significance to the proposed development and also suggests consideration that should be of concern to the developer and the Town of Montville. 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.

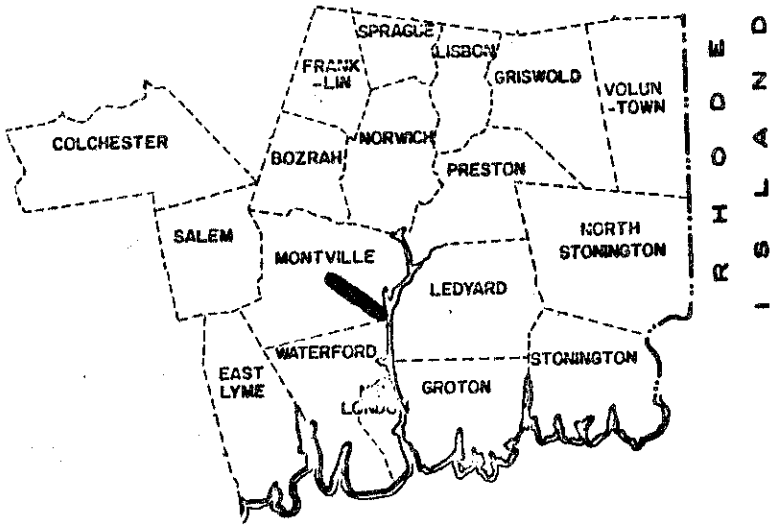
The Eastern Connecticut RC&D Project Committee hopes you will find this report of value and assistance in making your decisions on this particular site.

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

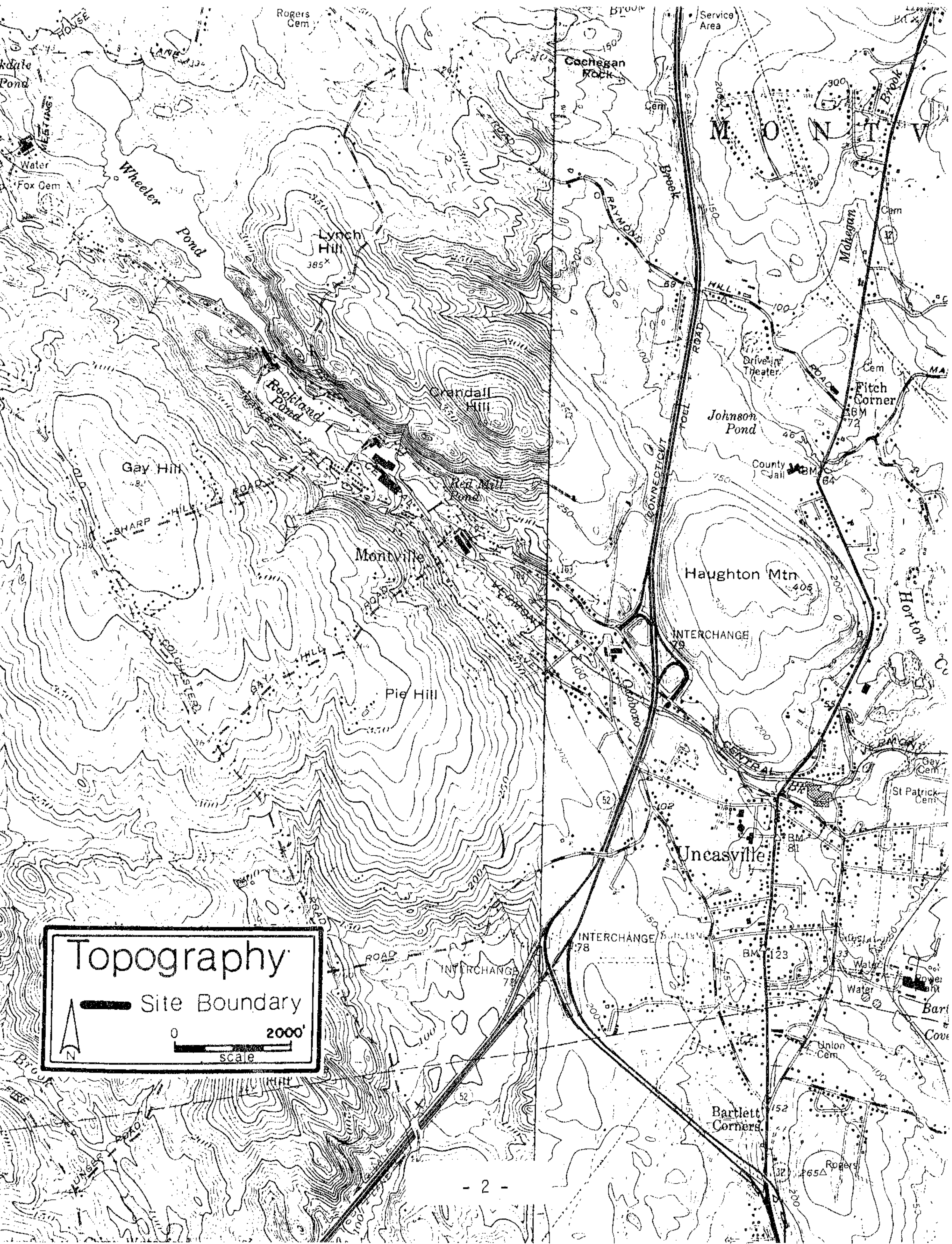
Location of Study Site

OXOBOXO LAKES
MONTVILLE, CONNECTICUT





EASTERN CONNECTICUT
RESOURCE CONSERVATION AND DEVELOPMENT PROJECT


Topography
Site Boundary
0
2000'
scale
N
Rogers Cem
Service Area
Cochegan Rock
Cem
Wheeler Pond
Water
Fox Cem
Lynch Hill
385
Crandall Hill
Rockland Pond
Red Mill Pond
Gay Hill
SHARP HILL ROAD
Montville
Pie Hill
RAYMOND HILL ROAD
CONNECTICUT ROAD
Drive-in Theater
Johnson Pond
Mohegan Brook
Fitch Corner
BM 72
County Jail
BM 64
Haughton Mtn
405
INTERCHANGE 79
CENTRAL VERMONT
Gay Cem
St Patrick Cem
Uncasville
BM 81
INTERCHANGE 78
BM 123
INTERCHANGE 77
Water
Union Cem
Bartlett Corners
Rogers
265
Horton Cove
COLCHESTER
GAY HILL
ROAD
52

INTRODUCTION

In cooperation with the Southeastern Connecticut Regional Planning Agency (SCRPA) and their Connecticut 208 Water Quality Program, the Environmental Review Team was asked to prepare an assessment of the recreational potential of five of the Oxoboxo Lakes in the Town of Montville. The Team has supplied information concerning the natural resource base of the area and a general evaluation of recreation potential, other planning information included in this report has been supplied by the "208" planning staff of the Regional Planning Agency. A consultant, Management of Resources and the Environment, has been hired to develop alternative schemes for eliminating problems due to the sludge deposits. The consultant will also develop an environmental assessment of the impacts of the alternatives and will identify potential funding sources for project implementation. Findings of this study will be presented to local officials and Montville residents by members of the SCRPA staff and the consultants.

The Oxoboxo River is Montville's most important drainage feature. Its watershed encompasses a 7,740 acre area, 6,880 acres of which are in the Town of Montville. The river originates in Salem and flows easterly to its confluence with the Thames River at Horton Cove. Dams were constructed at several locations along the watercourse to provide power and process water for textile and paper mills. There presently exists a chain of nine significant ponds along the river. The ponds included in this study are Rockland Pond, Red Hill Pond, Pequot Pool, Picker Pool and Gair Pond.

The industries which located along the Oxoboxo in turn attracted many worker residences and small businesses to serve them. The river valley became the focus of development in the town, and a road network emerged to provide for the transportation needs of the residential and business community. A spur line of the Central Vermont Railroad was also extended up the valley for a distance of about two and one-quarter miles from the main line, which runs along the Thames River. This line still serves Robertson Paper Box Company, the largest industry in the valley; however, in recent years the railroad has considered abandoning the spur.

As the Existing Land Use Map for Montville indicates, there is a variety of land uses in the area abutting the lower end of the Oxoboxo River. Included are residential, commercial, industrial, and public uses. Many uses are immediately adjacent to the River or the several ponds along its course. This precludes public use of most water frontage, but it also means that there are potentially many nearby users for any water-oriented recreation facilities that might be located in the valley.

Road access to any part of the lower Oxoboxo valley is excellent. State Route 163 runs close along most of the northerly side of the River, and Maple Avenue parallels it to the south. Local streets cross the River at several points.

If abandoned, the rail spur, which extends the length of the study area, could have significant value as a recreation right-of-way. It is important that this property be kept in tact and under public control if it is abandoned by the Railroad.

The Town of Montville has installed a sewer line in Route 163 through the study area in recent years. The second phase of the Town's sewer program, which has been designed and awaits funding for implementation, calls for sewers along

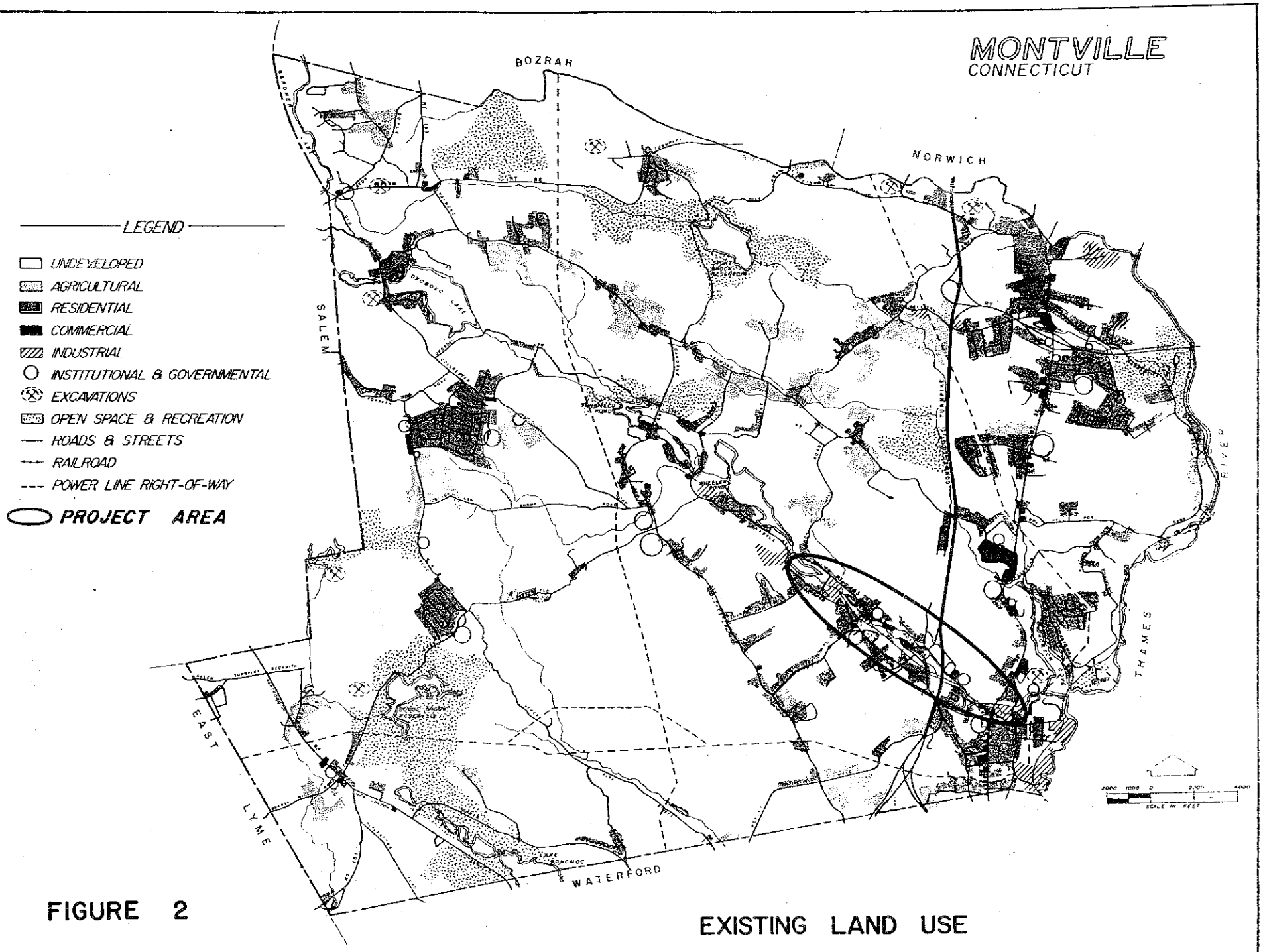


FIGURE 2

EXISTING LAND USE

Maple Avenue. These projects not only improve water quality in the Oxoboxo River but also make it possible to increase the density of development in this section of the town. As the area grows, the need for recreation facilities to serve the population will increase as well. The river and its associated ponds also offer an opportunity to enhance the quality and appearance of adjacent development. Selective clearing of vegetation along the watercourse could make it more visible from nearby areas. In addition, significant visual improvement could be made by simply cleaning up the tremendous amounts of junk that have accumulated behind residences and businesses along the river.

The major obstruction to recreational development along the river is the lack of public ownership of land or water rights. Presently, all of the study ponds and land adjacent to them are privately owned. Access to the water is difficult in most areas due to steeply sloping topography. Parking near any of the lakes is hazardous due to lack of adequate right-of-way width on the roads surrounding the water bodies. Soil types in the study site pose development limitations due to steep slopes, droughtiness, and in some cases, designation as regulated inland wetland soils. Water quality as presently seen in the ponds is not suitable for any of the typical water based recreation activities. These would primarily include swimming, fishing and boating. In the Team's opinion, cost to alleviate many of these obstacles would rapidly become prohibitive and the effect of some of these types of recreation with their associated site degradation may not be desirable to the Town.

ENVIRONMENTAL ASSESSMENT

GEOLOGY

The lakes studied by the Team are located in the Montville and Uncasville topographic quadrangles. The U.S. Geological Survey has published bedrock and surficial geologic maps of those quadrangles (Map GQ-138, Uncasville surficial; Map GQ-148, Montville surficial; Map GQ-576, Uncasville bedrock; and Map GQ-609, Montville bedrock). All four maps were prepared by Richard Goldsmith.

Bedrock in the area of the lakes consists primarily of schists and gneisses. Schists are metamorphic rocks in which platy or flaky minerals have become aligned to form thin layers. Parting generally occurs along these layers in the rock. Gneisses are metamorphic rocks in which platy, flaky, or elongate minerals have become aligned into thin bands that alternate with thin bands of more rounded minerals. The major mineral components of the gneisses and schists are quartz, feldspar, biotite, muscovite, and garnet. Accessory minerals include sillimanite, tourmaline, andesine, diopside, amphibole, and pyrite.

The surficial geologic material in the immediate vicinity of all the lakes (valley of Oxoboxo Brook) is stratified drift. This material, consisting primarily of sand and gravel, was deposited by meltwater streams emerging from a stagnant tongue of glacier ice. Gravel is more common in the upper twenty feet of the deposits but may be found as scattered lenses or layers below that level. Sand is the principal constituent below 20 feet; it often predominates in the upper portions of the deposits, as well. Connecticut Water Resources Bulletin No. 15, published by the U.S. Geological Survey in 1968, indicates that the sand and gravel deposits have a high potential for groundwater supply, with an estimated average daily yield of 3.1 million gallons.

SOILS

A detailed soils map of this site accompanies this section of the report. As the soil 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 types on the site. The soil descriptions indicate 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.

The 5 lakes studied are man-made and lie within a valley that drains southeasterly to the Thames River. Five hills are found adjacent to the valley. They are Lynch Hill, Gay Hill, Crandall Hill, Pie Hill and Haughton Mountain.

The soils immediately adjacent to the lakes are generally glacial outwash and river terrace soils. The northern edge of several of the upper ponds are bordered by soils that are steep and shallow to bedrock.

The nearly level to moderately steep terraces in the valley are occupied by Merrimac sandy loam and Hinckley gravelly sandy loam. Hinckley soils are designated by the mapping unit symbols 60C and 60D. Merrimac soils are designated by mapping unit symbols 70A, 70B and 70C. Hinckley soils are excessively drained and have rapid permeability in the surface layer and subsoil and very rapid permeability in the substratum. Runoff is slow.

The land that is occupied by streets, industrial, commercial and home buildings and parking lots is called Urban Land. Land that has been filled in and regraded in such a way that natural soil horizons are not identifiable is called Udorthents-Urban Land complex, smooth. The mapping unit for Urban Land is DF and for Udorthents is ML2. Drainage and runoff characteristics are too variable to rate and must be assessed on an individual basis.

The moderately steep slopes and longer sloping landforms adjacent to the highest elevations in the landscape are occupied by Charlton-Hollis fine sandy loams, very rocky. These soils are designated by the soil symbols 17LC and 17LD. Both soils are well drained. The Charlton soils formed in deep friable glacial till, and the Hollis soil formed in glacial till less than 20 inches deep over bedrock. Charlton soils have moderate to moderately rapid permeability, the Hollis soils have moderate permeability.

The sloping to moderately steep and steep slopes at higher elevations in the landscape are occupied by Hollis-Charlton-Rock outcrop complex. The soils are designated by the soil symbols 17MC and 17MD. The Hollis and Charlton soils are well drained. The Hollis soil formed in glacial till less than 20 inches deep over bedrock. Charlton soils formed in deep friable glacial till. The Hollis soils have moderate permeability and the Charlton soils have moderate to moderately rapid permeability.

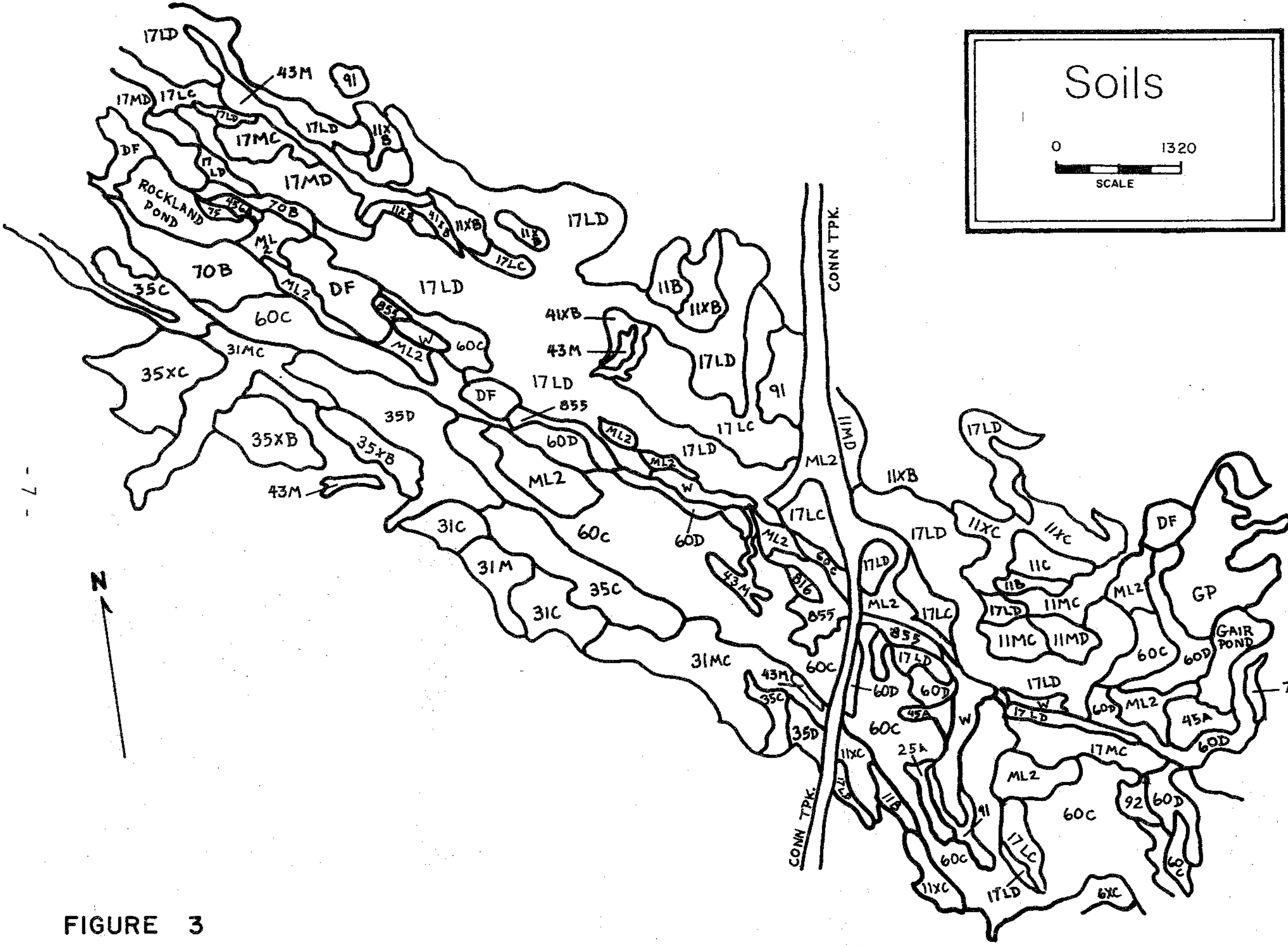

Soils
0
1320
SCALE
N
CONN TPK.
CONN TPK.
ROCKLAND POND
GAIR POND
GP
17LD
17MD
17LC
17MC
43M
91
11XB
DF
70B
ML2
35C
60C
855
W
31MC
35XC
35XB
35D
41XB
11B
60D
31C
31M
17LC
11MD
11XC
11C
11MC
816
35D
25A
45A
17MC
92
70C
6XC

FIGURE 3

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

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

The nearly level terraces or outwash plains are occupied by Tisbury silt loam. The soils are designated by soil mapping unit symbol 45A. Tisbury soils formed in silt-mantled glacial outwash. The soils are moderately well drained and have moderate permeability in the surface layer and subsoil, and rapid or very rapid permeability in the substratum. The seasonal highwater table is 18 to 24 inches. Surface runoff is slow to moderate.

The low lying, nearly level areas along drainageways in the landscape are occupied by Ridgebury, Leicester and Whitman extremely stony fine sandy loams. The soils are designated by the mapping unit symbol 43M. The Ridgebury and Whitman soils formed in compact glacial till; the Leicester soils formed in friable glacial till. The Ridgebury and Leicester soils are poorly drained and the Whitman soil is very poorly drained. The Ridgebury and Whitman soils have moderate to moderately rapid permeability in the surface layer and subsoil and slow or very slow permeability in the substratum (fragipan). The Leicester soils have moderately rapid permeability throughout. The seasonal highwater table for Ridgebury and Leicester soils is at or near the surface 7 to 9 months of the year. The Whitman soil has a highwater table at or near the surface 9 to 10 months of the year. Whitman soils have high runoff potential. Runoff is slow to medium in Ridgebury soils and slow in Leicester soils. This soil is designated as a wetland soil and is regulated under Public Act 155.

Level or nearly level pockets and depressions on glacial outwash plains and terraces are occupied by Scarboro mucky loamy sand. The soils are designated by the soil mapping unit symbol 75. Scarboro soils formed in sandy glacial outwash deposits. The soils are very poorly drained and have rapid or very rapid permeability. The high water table is at or near the surface 9 to 10 months out of the year. Surface runoff is slow. This soil is designated as a wetland soil and is regulated under Public Act 155.

The low lying nearly level areas along drainage ways on stream terraces and outwash plains are occupied by Raypol silt loam. The soils are designated by the soil mapping unit symbol 464. Raypol soils formed in silty deposits less than 40 inches thick, over sand and gravel. The soils are poorly drained and have moderate permeability in the surface layer and subsoil, and rapid or very rapid permeability in the substratum. The highwater table is at or near the surface 7 to 9 months of the year. Runoff is slow. This soil is designated as a wetland soil and is regulated under Public Act 155.

The concave nearly level areas along floodplains are occupied by Rippowam fine sandy loam. The soils are designated by the soil mapping unit symbol 855. (Note: Rippowam fine sandy loam was formerly mapped as Rumney fine sandy loam

with the same mapping unit symbol.) Rippowam soils formed in recent alluvial sediments. The soils are poorly drained and have moderate or moderately rapid permeability in the surface layer and subsoil and rapid or very rapid permeability in the substratum. The high water table is at or near the surface 7 to 9 months of the year. Surface runoff is slow. This soil is designated as a wetland soil and is regulated under Public Act 155.

The nearly level areas along floodplains are occupied by Pootatuck Variant fine sandy loam. The soils are designated by the soil mapping unit symbol 816. (Note: Pootatuck Variant fine sandy loam was formerly mapped as Podunk fine sandy loam with the same mapping unit symbol.) Pootatuck soils formed in recent alluvial sediments. The soils are moderately well drained and have moderate or moderately rapid permeability in the surface layer and subsoil and rapid or very rapid permeability in the substratum. The seasonal high water table is at 18 to 24 inches. Surface runoff is slow. This soil is designated as a wetland soil and is regulated under Public Act 155.

Depressional areas within outwash plains, lake plains, till plains and moraines are occupied by Adrian and Palms mucks. The soils are designated by the mapping unit symbol 91. Both soils formed in mucky organic deposits, 16 to 51 inches thick. The Adrian soils formed over sandy mineral deposits and the Palms soils formed over loamy mineral deposits. The soils are very poorly drained. Adrian soils have a rapid permeability and the Palms soils have a moderately slow permeability. The high water table is at or near the surface 9 to 10 months of the year. Surface runoff for both soils is very slow. This soil is designated as a wetland soil and is regulated under Public Act 155.

The following soils qualify as Prime Farmlands: Merrimac sandy loam (70A, 70B), Ninigret fine sandy loam (25A), Sudbury sandy loam (456A), Tisbury silt loam (45A) and Pootatuck Variant fine sandy loam (816).

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

Prime farmland may now be in crops. pasture, woodland, or other land use, but not urban and built up land or water areas. It must either be used for producing food or fiber or be available for these uses.

There are nine criteria that a soil must meet to be qulaified as Prime Farmland. The criteria deal with moisture supply, soil temperatures, pH, water table, salt content, flooding occurrence, erodibility, permeability, and coarse fragments in the surface layer.

The designation of certain soil mapping units as prime farmland does not constitute a recommendation for a particular land use.

VEGETATION

The Oxoboxo Stream/Pond belt is located partially within the Southeast Hills Ecoregion of the Southern Hills-Central Hardwood zone, and partially within the Eastern Coastal Ecoregion of the Coastal Hardwood zone (Dowhan and Craig 1976).*

Ecoregion as defined in Dowhan and Craig (1976) is "an area characterized by a distinctive pattern of landscapes and regional climate as expressed by the vegetation composition and pattern and the presence or absence of certain indicator species and species groups."

Although the area directly adjacent to this stream/pond belt is well developed with mills and factories, the vegetation in the general area is primarily a Central mixed hardwood forest. The overstory is dominated by red oak, black oak, white oak, shagbark hickory, pignut hickory, red maple and black birch. Sugar maple, white ash, yellow birch and tuliptree are present on the best growing sites, however, these areas are not widespread. Tree of heaven, because of its hardiness, becomes a dominant factor in the overstory near the active factories, and in greatly disturbed areas.

Major components of the understory include a variety of hardwood tree seedlings, flowering dogwood, witchhazel, sassafras, azalea, maple-leaved viburnum and in the wet areas, spicebush and highbush blueberry.

Vine species, such as cat greenbrier, Japanese honeysuckle, fox grape and poison ivy are conspicuous along forest edges where they are easily reached by direct sunlight. Staghorn sumac, smooth sumac and raspberry are also abundant in these areas.

Ground cover in the mixed hardwood forest is variable, however, grasses, club moss, Christmas fern and Canada mayflower are widespread. In the wetter areas, closer to the stream, skunk cabbage, false hellebore, cinnamon fern and sensitive fern are present along with several species of moss.

The open marshes which border the ponds in some places are vegetated with tussock sedge, cattail, swamp loose-strife and button bush.

The aquatic vegetation species which were observed during the field investigation were in their dormant state and include water-milfoil, coontail and water-star grass. Many other species of aquatic plants probably exist in these fertile water bodies, however, due to the time of year of the field investigation they were not observed.

FLOOD CONTROL

Removal of sediments from the Oxoboxo impoundments would increase the flood control benefits as water storage capacity would be increased. Most of the land adjacent to the impoundments and river is designated by the Federal Insurance Ad-

* Dowhan, J.J. and Craig, R.J., 1976, Rare and Endangered Species of Connecticut and Their Habitat, Connecticut Geol. Nat. Hist. Surv., Rpt. Invest. #6.

ministration as being within the 100-year flood plain boundary, indicating a chance of being flooded by a storm of 100-year intensity. Therefore preservation of any remaining open land for recreation, open space or aesthetic reasons would help to minimize flood damages due to severe storms or hurricanes.

PUBLIC ACCESS

At the present time public access to the five impoundments under study is limited due to the predominance of privately owned land surrounding the ponds. In addition it is probable that all the dams are privately controlled. Picker Pool and Gair Pond have the best potential for future public access.

The land adjacent to Rockland Pond (Figure 4) is in privately owned houselots excepting the dammed end of the pond which is owned by the Robertson Paper Box Company. Robertson draws process water from Rockland Pond.

The entire periphery of Red Mill Pond (Figure 5) is owned by one individual. A spur track of the Central Vermont Railway runs close to the pond's southwest bank, the spur extends to Robertson Paper Box Company just north of Red Mill Pond. If this spur were abandoned it could be used as public access to the impoundment.

All land adjacent to Pequot Pool (Figure 6) is privately owned excepting where a small portion abuts Route 163. One privately owned 14.5 acre parcel of land surrounds nearly three sides of Pequot Pool.

Picker Pool (Figure 7) extends from Maple Avenue under Route 163, its dam is just west of Route 32. The pond is crossed by Route 163 and is bordered by Maple Avenue and by a spur of the Central Vermont Railway tracks. If abandoned, the rail spur could be used as a recreation right-of-way. All other land adjacent to the pond is privately owned, two landowners own a significant portion of the waterfront property.

Two large landowners hold most of the land bordering Gair Pond (Figure 8) and the Central Vermont Railway owns a right-of-way on the northern shore of the pond. Access to the pond is currently from the unpaved Depot Road Extension.

EXISTING RECREATIONAL FACILITIES

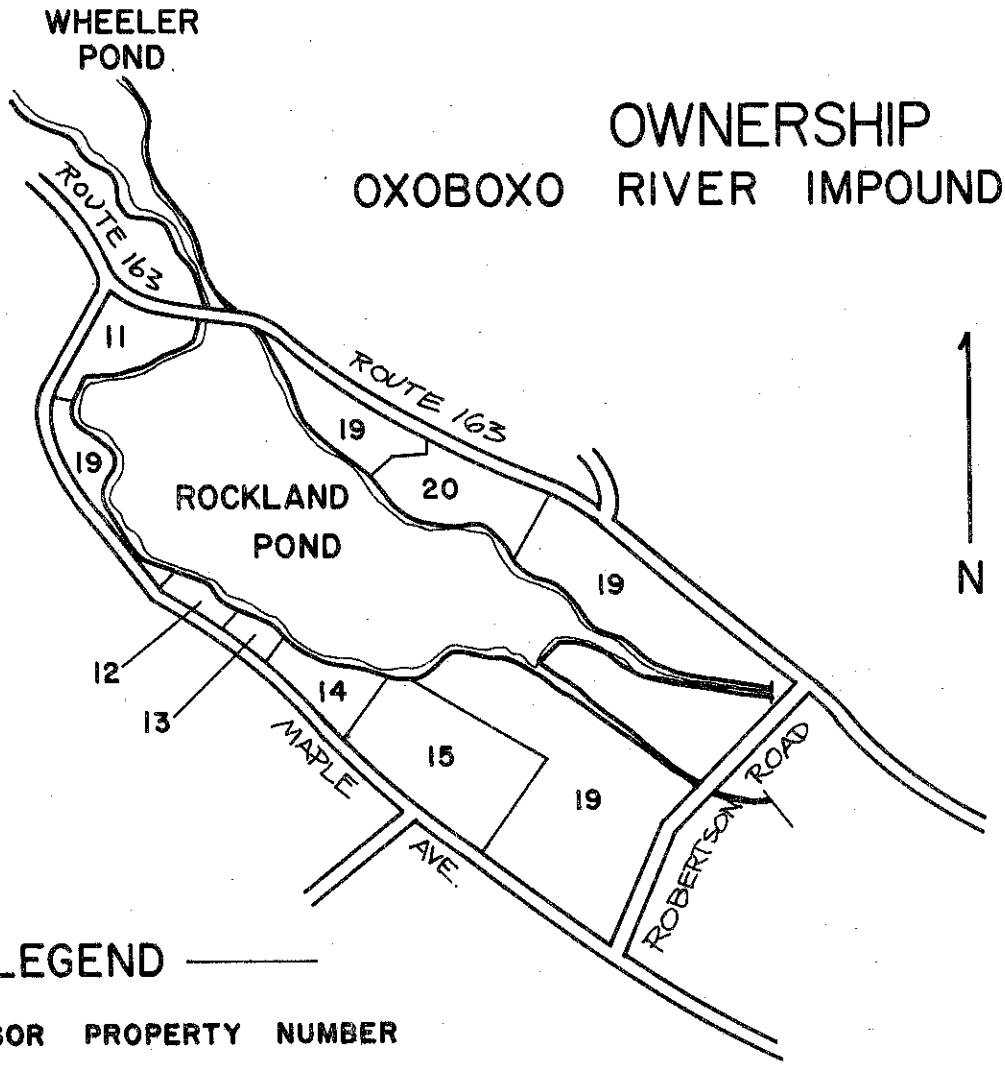
Montville has a number of municipal and state recreation areas and it does employ a full-time recreation director. At present there are three town-owned properties:

Fair Oaks School Conservation Area	30 acres
Town Property (off PTA Lane)	15 acres
Camp Oakdale	104 acres
Total:	149 acres

Camp Oakdale is the only property with significant recreational facilities. The PTA Lane property is completely undeveloped (a historical society building does exist on the property) and there are no current plans for its development. The Fair Oaks School property has paths and nature trails. It may eventually be developed into a nature center.

FIGURE 4

OWNERSHIP
OXOBOXO RIVER IMPOUNDMENTS



LEGEND

57 ASSESSOR PROPERTY NUMBER

PRIVATE OWNERSHIP

PUBLIC OWNERSHIP

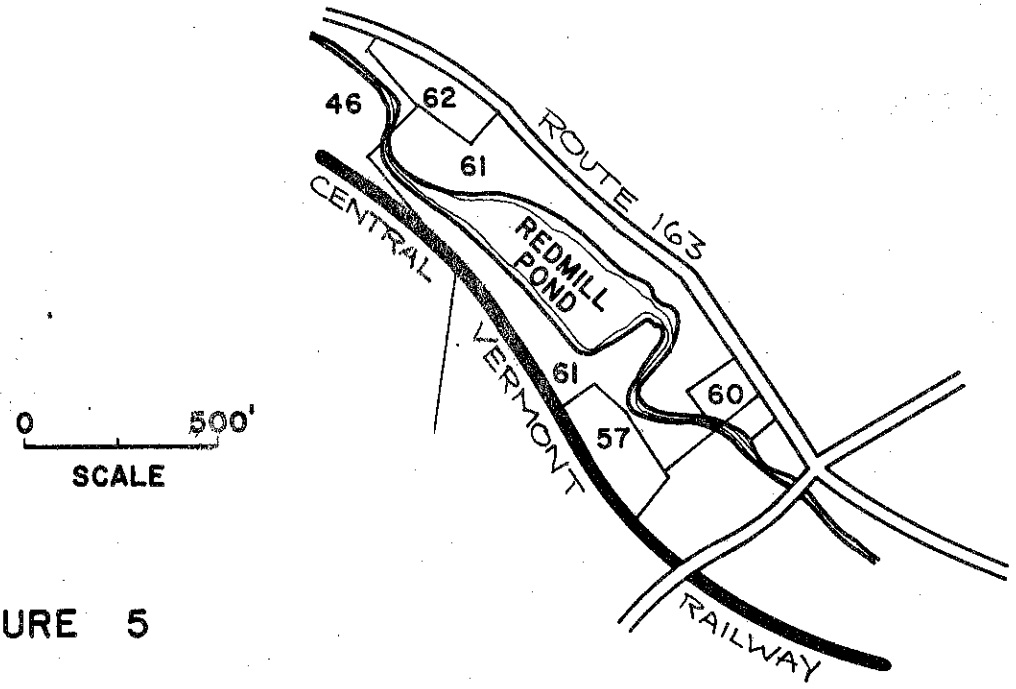


FIGURE 5

OWNERSHIP
OXOBOXO RIVER IMPOUNDMENTS

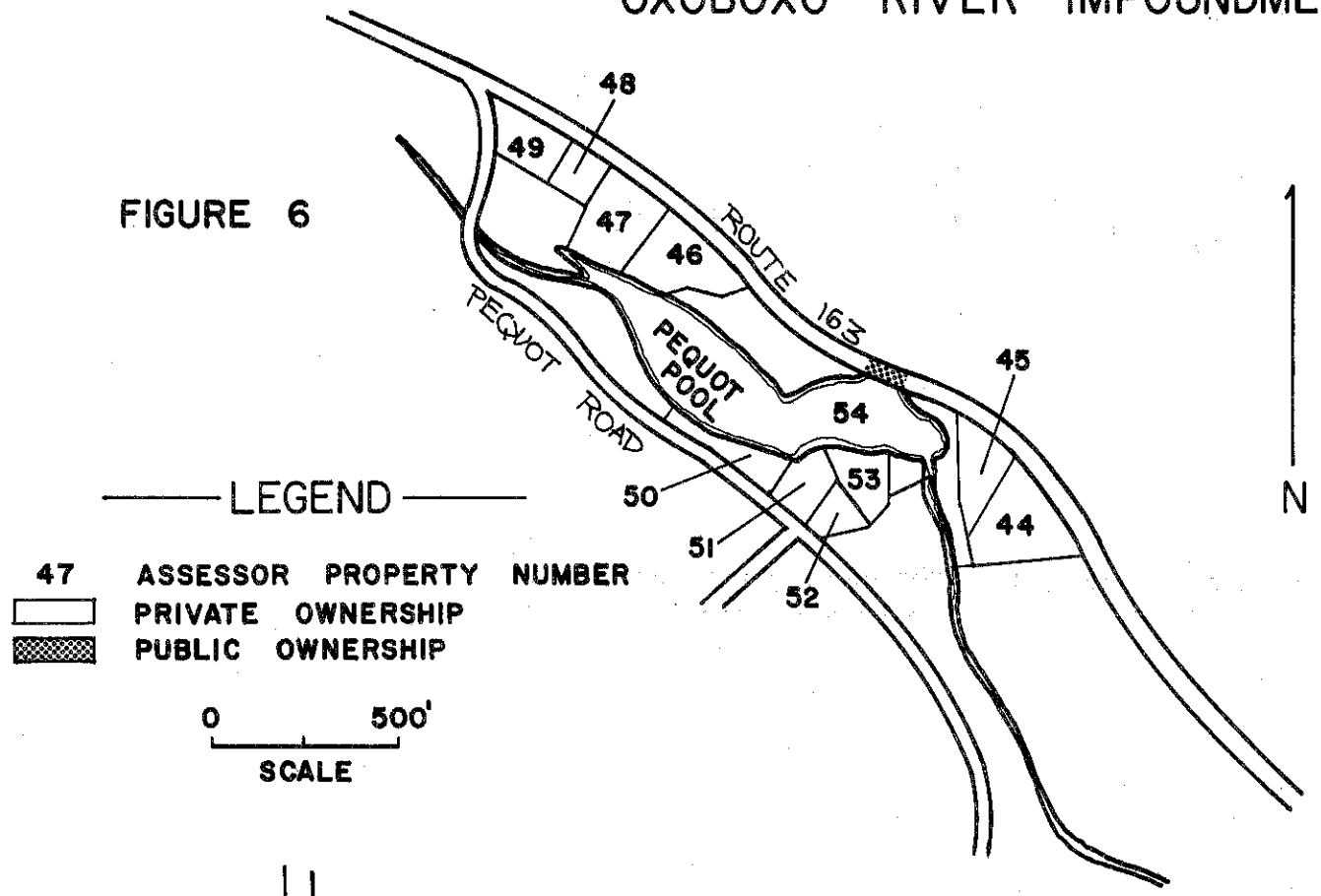


FIGURE 6

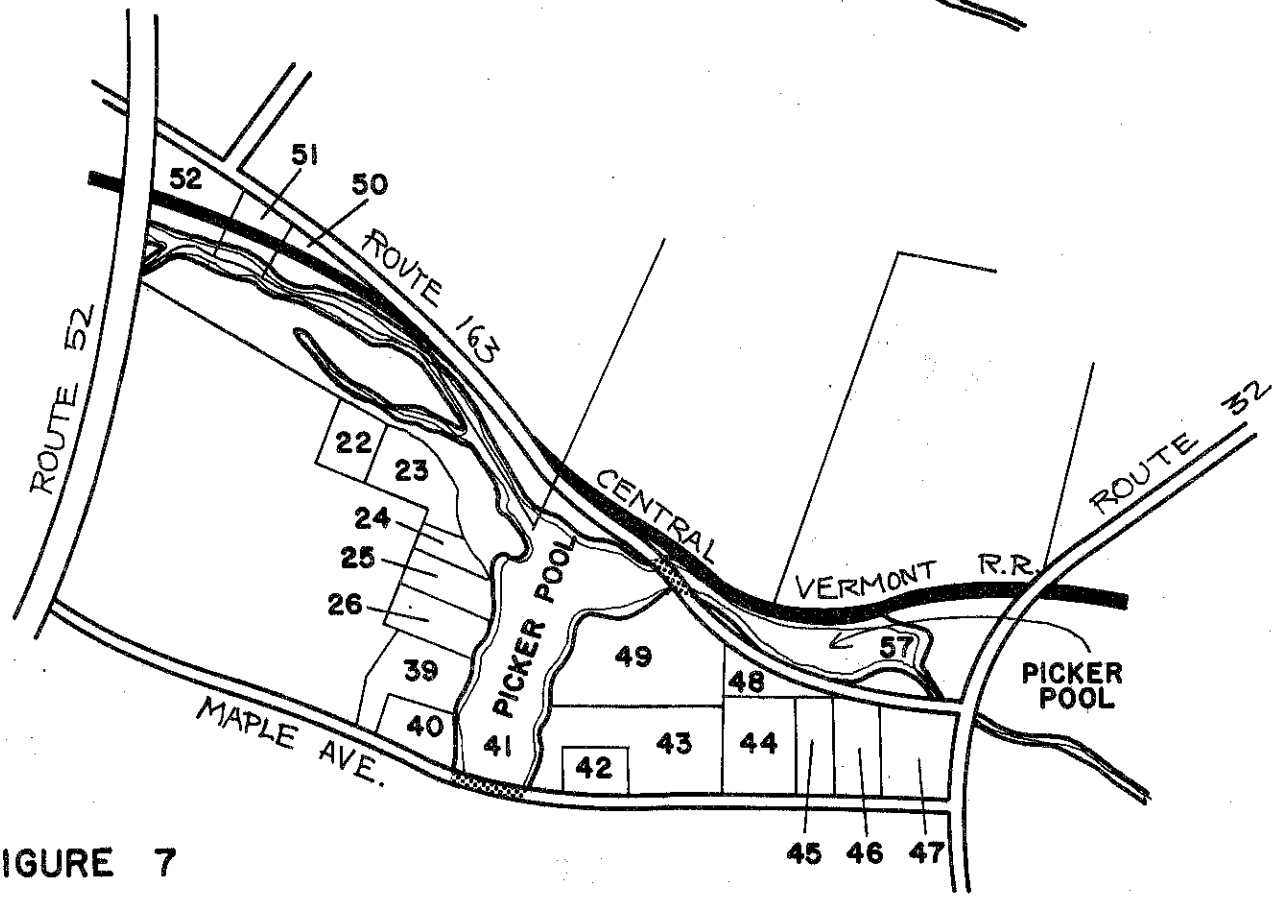
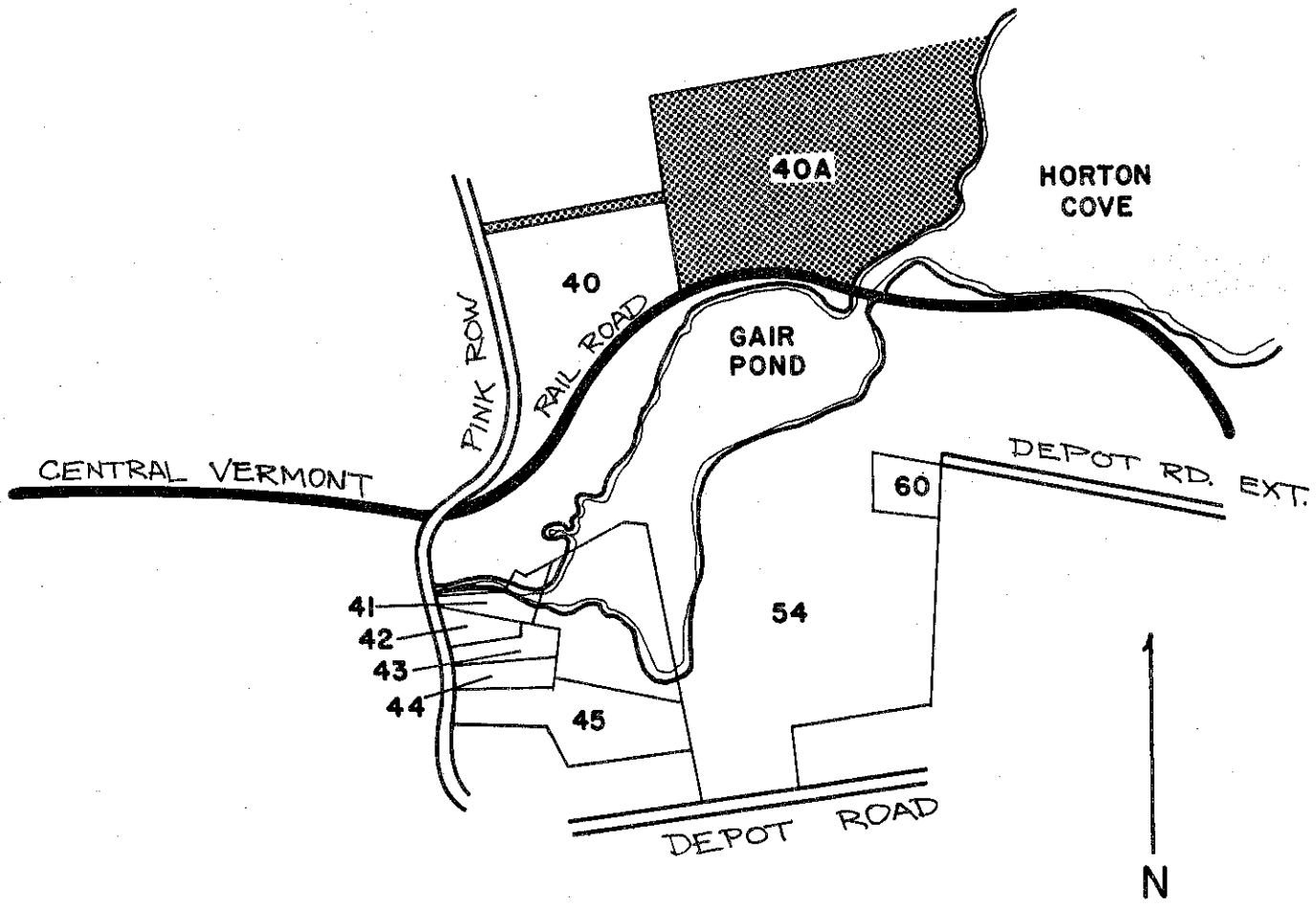


FIGURE 7

OWNERSHIP
OXOBOXO RIVER IMPOUNDMENTS



LEGEND

47 ASSESSOR PROPERTY NUMBER

PRIVATE OWNERSHIP

PUBLIC OWNERSHIP

0 500'

SCALE

FIGURE 8

Camp Oakdale currently provides the community recreational needs of Montville. Facilities at the camp include tennis courts, playing fields, swimming in Oakdale Pond, nature trails, a community center, children's play area, basketball courts and additional open fields. An outdoor swimming pool is to be constructed. The Town also provides a boat launching area providing access to the Thames River.

Several state-owned recreational areas are located in Montville. They include:

Hopemead State Park	20 acres
Gardner Lake	130 acres
Fort Shantok State Park	177 acres
Total:	327 acres

These areas have facilities for picnicking, hiking, and fishing.

Currently, the town feels the need for additional recreational facilities for ice skating, boating and fishing, as well as areas for hiking, bicycling and aesthetic value.* As Montville's population grows there will be an increasing need for additional recreational facilities. The Oxoboxo River impoundment areas could provide some of the town's current and future recreation needs.

Recommended municipal open space standards for suburban towns vary, the State of Connecticut has no set standards currently in use. Montville does meet the recommended municipal criteria of having a community park facility at Camp Oakdale. Future population growth may warrant development of a second community park.

RECREATION POTENTIAL

Most of the ponds, which are man-made by a series of dams are close to Route 163, which approximately parallels the Oxoboxo River. However, access to the water is limited by topography, narrow land corridors, and private ownership which impose restrictions on use and recreational development.

Natural soil types found in the study area limit non-water-based recreational development also. The glacial till soils on the moderately steep to steep slopes have varying depths of soil over bedrock, ranging from shallow (less than 18 inches) to deep (greater than 50 inches). In some steep areas, the bedrock is exposed. These soils have limited use for intensive recreation, but can be used for passive type recreation such as hiking, birdwatching and enjoying whatever aesthetic value there is to the site. The steep, rocky slopes are severely limited to most all uses.

The outwash soils, or terrace soils, have more potential for recreational use. However, there are limitations due to short, steep slopes, and droughtiness if landscaping is being planned. There are further limitations on these soils and on other soils due to private land ownership, developed land, and large amounts of debris found on some land parcels. These soils range from well to excessively well drained; and are nearly level on top of the landforms. These soils can be used as a base for athletic fields, picnic areas, tennis courts, and similar activities. The outwash soils that have a seasonal high water table will be limited for inten-

* Personal Conversation, Recreation Director, April, 1980.

sive use, but can be left in a natural state or vegetated to encourage birds and wildlife into the area.

The wetland soils are better left undisturbed in this area. Urbanization and other land development has consumed some of the wetland already. Wetlands perform a valuable function in water recharge, storm water control and wildlife habitat. These soils are also regulated under Public Act 155.

Water based recreation considerations normally center on swimming, boating, fishing, and ice skating with other secondary aspects such as waterfowl hunting, etc. There are a number of problems which would inhibit recreational development in the study area. These include:

1. Poor water quality for either swimming or fish consumption.

2. Lack of suitable areas for either parking, development of picnic areas, or access to the ponds by boaters.

3. Natural beauty has been partly lost as a result of industrial development along the river.

4. High anticipated costs necessary to improvement of water quality to a point where swimming and fishing for edible fish might be possible.

A further consideration to a proposal for public use of the river would concern the proper maintenance of the dams forming the ponds. Clarification of the legal responsibilities for this maintenance as it relates to public use would be necessary before any recreational development was undertaken.

To make recreational development of the study area a realistic possibility, steps would have to be taken to correct at least some of the deficiencies noted. Pond dredging and sediment stabilization, land acquisition for parking, picnic areas, and boat launches are some items to be considered in estimating the cost of a development proposal.

While recreational development may be possible if certain conditions are met, it appears that under the present circumstances, formalized recreation development of the study area may be impractical and financially unfeasible. Maintenance of facilities, hiking trails, etc., would also become a continual concern for the Town Recreation Department.

METHODS OF LAND ACQUISITION AND DEVELOPMENT

Federal funding for acquisition and development of lands for recreational use is available through the Land and Water Conservation Fund Program. The program is administered by the U.S. Department of the Interior's Heritage Conservation and Recreation Service. The program provides a fifty percent (50%) match to municipalities whose projects are approved by the HCRS.

In Connecticut these funds are administered and expended in accordance with the Connecticut Statewide Comprehensive Outdoor Recreation Plan (SCORP). The

Connecticut Department of Environmental Protection applies to the Department of Interior on behalf of the municipalities.

State assistance may be available under the Connecticut Open Space Grant Program. State grants may be provided to the extent of fifty percent (50%) of the non-Federal share of the cost of acquisition or development.

Acquisition of lands and waters for public outdoor recreation, including new areas or additions to existing parks, forests, wildlife areas, and other areas dedicated to outdoor recreation may be eligible for assistance.

Assistance to municipalities wishing to apply for a grant is available from the State Department of Environmental Protection, Open Space Acquisition Unit.

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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.