

YARMOUTH, MAINE

SAMPLE

COMPREHENSIVE COMMUNITY ENVIRONMENTAL INVENTORY

This booklet does not represent a complete inventory but is designed to illustrate several of the major components of an inventory and examples of the various methods of compiling and presenting data.

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Maine Environmental Education Project
Title III, ESEA
Yarmouth, Maine

I. INTRODUCTION

Introduction to the Inventory -

This manual is a compilation and evaluation of data gathered from an inventory of the natural and man-made features of the community. It brings together in one place, perhaps for the first time, comprehensive information which will help local governmental officials, citizens, and students gain a broad understanding of their environment and its associated problems.

The data obtained in this report is intended to assist the local planning board, conservation commission, and other public and private organizations in community planning and improvement. In addition, it provides basic information upon which schools may develop an environmental education curriculum emphasis. In this respect teachers will find it useful in planning field trips, directing student-initiated environmental investigations and problem-solving activities, and developing teaching units, mini-courses and other curriculum plans. The preparation of this inventory itself provides many valuable opportunities for student contributions. This community inventory then may become the "textbook" for the local environmental education program which citizens, teachers, and students themselves develop.

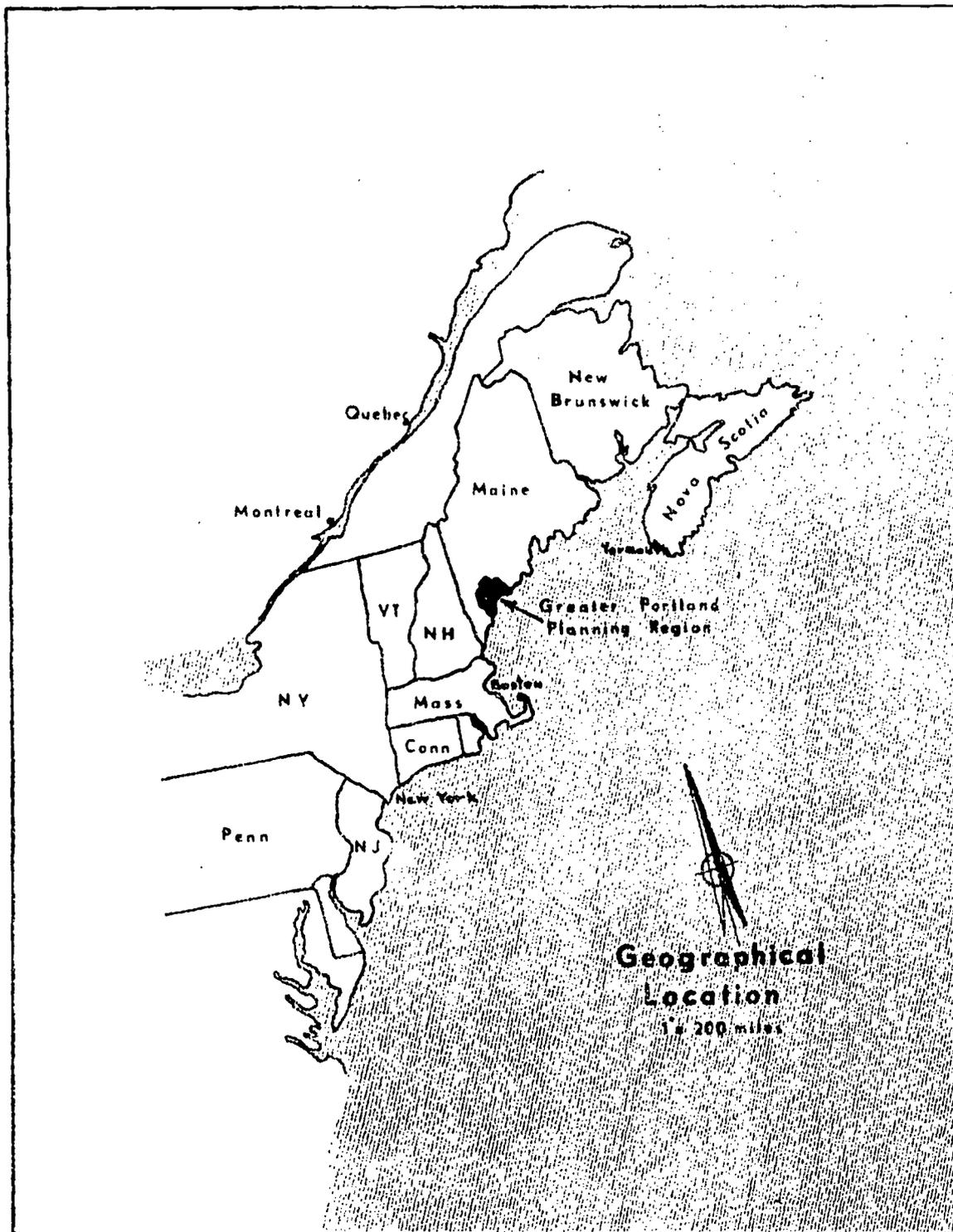
Introduction to the Community -

The town of Yarmouth, a southern Maine coastal community in Cumberland County, is one of the smallest towns in the Greater Portland Planning Region of which it is a part. On the mainland its longest length from its north corner to the end of Princes Point is somewhat more than five miles. The average width is about three and one-half miles. In addition to the mainland areas, there are five islands -- only two of which are inhabited, Cousins and Littlejohn. These are reached by bridges. The other three have been lived on in the past, but have been abandoned for some years.

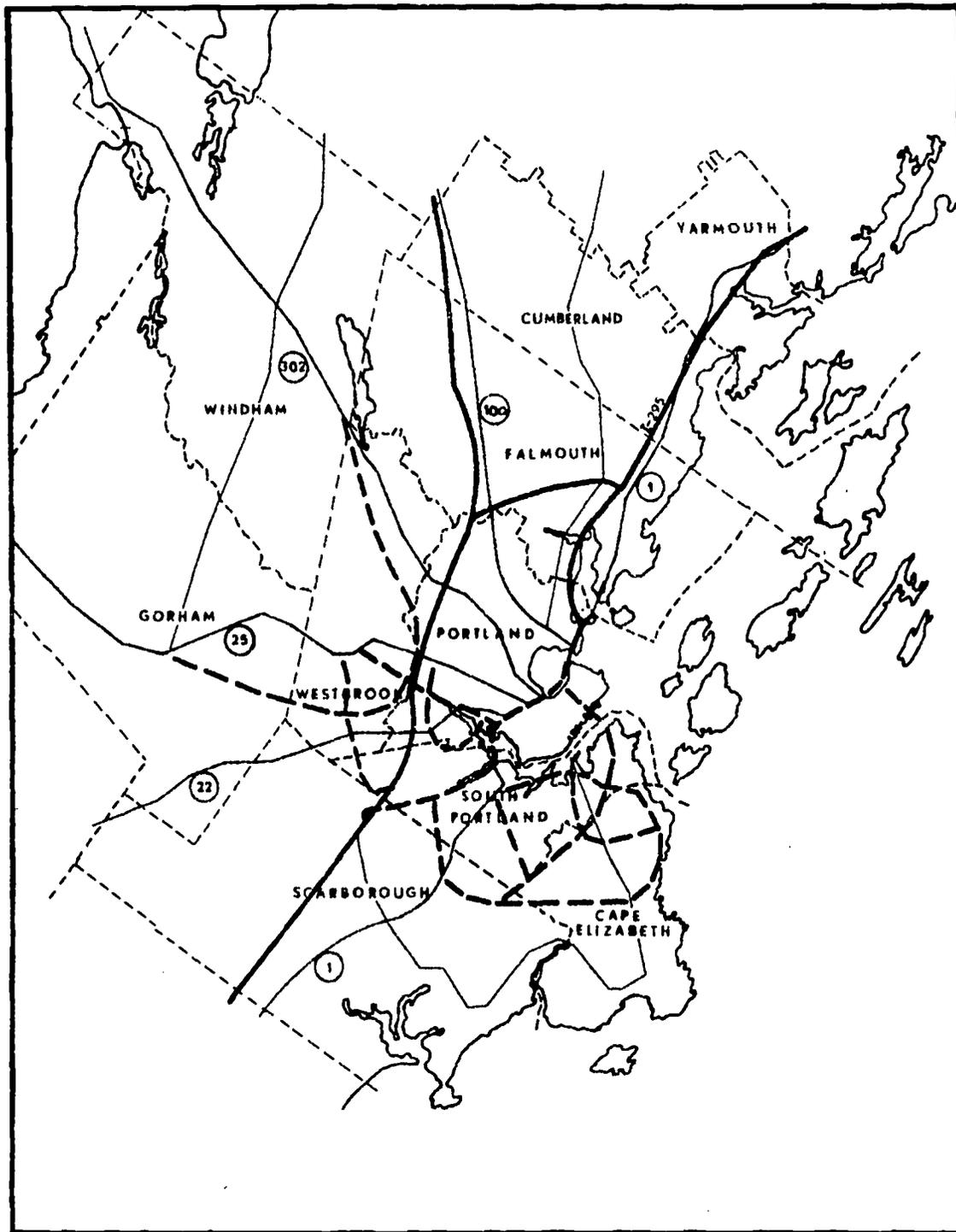
The town has some industry and business, but it is primarily a residential community with many of its approximately forty-five hundred inhabitants working in Portland. A few of its residents still depend on fishing and coastal resources for part of their income. The mouth of the Royal River, a small river flowing through the town, creates a navigable inlet which projects to a point close to the center of the community. A canning factory and boatyard are located at this point, and plans for a new marina are in the offing. The major industry benefiting the town's economy is Central Maine Power Company's steam plant on Cousins Island for the generation of electric power.

Due to the fact that Portland is easily reached -- about twelve miles southwest down the coast by a choice of three good highways -- Yarmouth residents go to the city for their cultural requirements. However, there is a good public library and an historical museum which preserves evidences of Yarmouth's past. The community has modern public educational facilities as well as a private school, North Yarmouth Academy. There are several institutions of higher education in the area -- the University of Maine at Portland-Gorham and Bowdoin College in Brunswick.

Because of its suburban character, economic advantages, and prime residential property in close proximity to the coast, among other reasons, Yarmouth is facing developmental pressure. Although it has had zoning and subdivision ordinances for some years, the town must continually assess the status of its natural resources and development to effectively manage the changes which are occurring and will occur.



From: A POLICY PLAN FOR REGIONAL DEVELOPMENT by The Regional Planning Commission of the Greater Portland Council of Governments



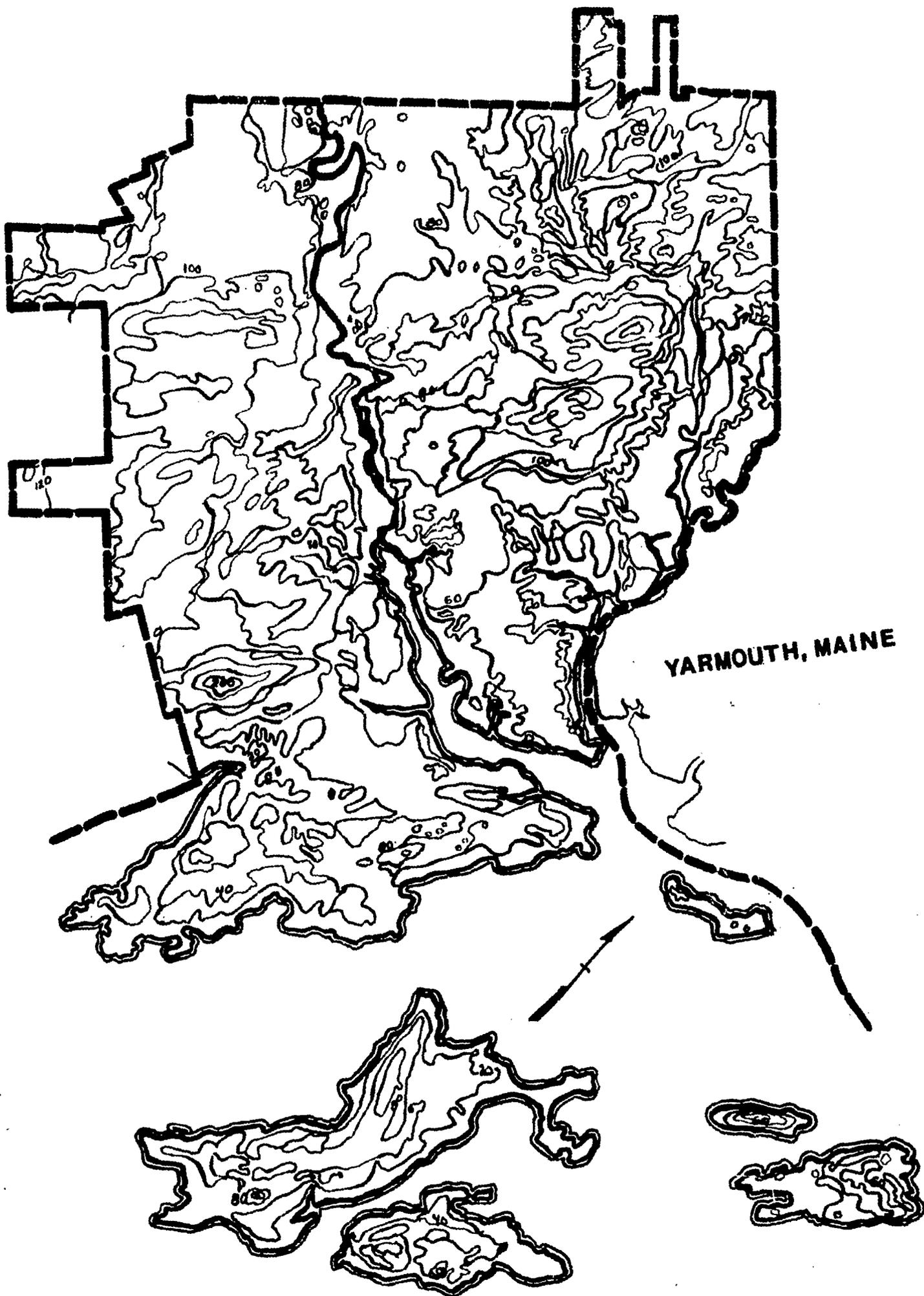
From: A POLICY PLAN FOR REGIONAL DEVELOPMENT by The Regional Planning Commission of the Greater Portland Council of Governments



II. NATURAL ENVIRONMENTAL FEATURES AND CHARACTERISTICS

LAND: Topography

The Yarmouth area is in the outwash coastal-plain region of Maine. The surface features are of low relief formed by wave action from the inland sea which once covered the land. In some areas the land surface conforms to the northeast-southwest folding of the bedrock which occurred back in geologic time. The topography is also influenced somewhat by the Royal River basin's drainage pattern which is irregular and meandering due to the slow-moving nature of the river and its tributaries as well as the erodable sands, clays, and silts.



YARMOUTH, MAINE

TOPOGRAPHY
9

LAND: Geology -

According to the Preliminary Geologic Map of Maine (see Geology Map of Yarmouth), the Yarmouth area is in a sillimanite regional metamorphic zone. Sillimanite is a mineral found in mica schists and gneisses and in contact with metamorphic deposits. It has been described as composed of finely fibrous masses embedded in rock, usually white, sometimes brownish or greenish with a satiny luster.

Stratified rocks in the vicinity of the community are shown on the same map to be calcareous metasedimentary rocks which include the Berwick Formation. In Geology, Paleontology of the Portland Area, the dominant formation of the Portland area is referred to as the Berwick Gneiss. This is a laminated or foliated metamorphic rock found from Dover, New Hampshire, to Casco Bay. It is highly crystalline rock containing much black mica or biotite and in places is heavily loaded with granite. This formation is Upper Silurian in age.

Also found in the community on the mainland are felsic meta-volcanics and tuffaceous metasandstone with subordinate amphibolite, lime-silicate gneiss, biotite-sillimanite gneiss, and a zone of sulfide gneiss and schist of Upper Silurian or Lower Devonian. In addition, also of the same age and found on Yarmouth's islands, are thinly interbedded phyllite or schist and quartzite, two mica gneiss and metamorphosed mafic volcanic tuffs, and flows with subordinate metasedimentary rocks.

The so-called Casco Bay Formation surrounding the Bay contains slates and phyllites and has an aggregate thickness of from fifteen hundred to two thousand feet. In the western area of the town there are biotite and biotite-muscovite granites and quartz monzonite of the New Hampshire Plutonic (Devonian age) Series. Although generally ore minerals are not often found in the area, there is a record of an old gold and silver mine in the nearby town of Falmouth. The rocks and minerals found in the area are in a variety of forms and patterns and many times are difficult to identify. It is possible, however, to generally interpret age relationships from the patterns of the many intrusions which cut across the earlier rocks and each other. The strike of the stratified rocks is northeast by southwest indicating the direction of folding which originally took place millions of years ago. Evidence of the glacier is easily observed in the community. Glacial striations may be noted on many of the outcrops or on rocks uncovered by excavation. These striations run northwest by southeast agreeing with the recorded movement of the ice sheet. Glacial evidence is also to be found by the unsorted moraine and occasional erratics in the area where they have not been covered by the thick marine clay and sand deposits. Sorted deposits of sands and gravels also attest to the presence of the glacier.

Granite hills in the area, too, show glacial effects. Northwest slopes are gradual in pitch formed by the glacier as it met increasing resistance to its movement. The southeast slopes show a characteristic steepness caused by the breaking away of the rock as the glacier settled over the tops of the hills on its way toward the ocean.

Rocks in the area include: (keyed to the geologic map)



Biotite and biotite-muscovite granite and quartz monzonite



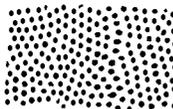
Calcareous metasedimentary rocks



Sulfidic gneiss and schist in predominantly felsic metavolcanics and tuffaceous metasandstone with subordinate amphibolite lime-silicate gneiss, and biotite-sillimanite gneiss



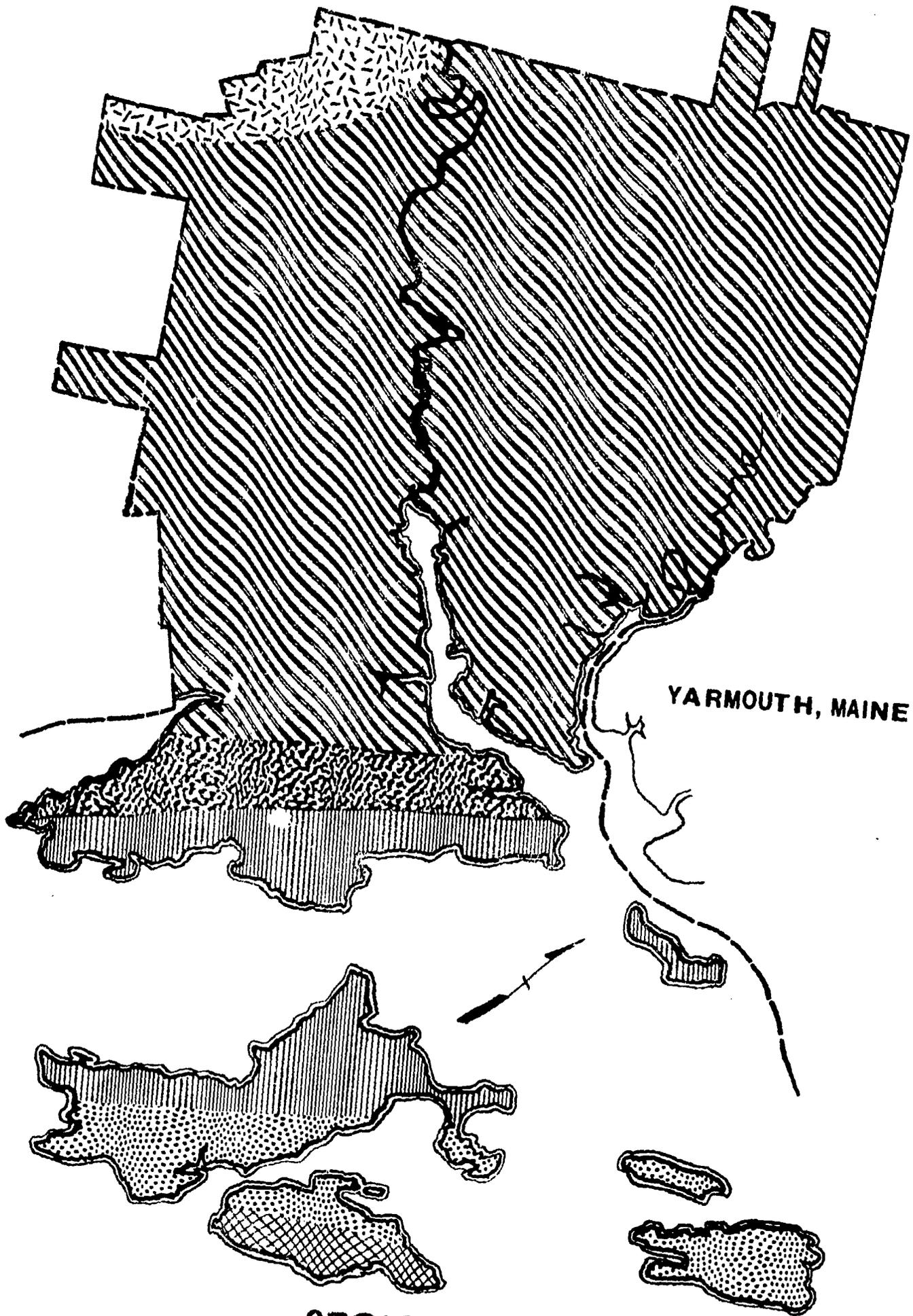
Predominantly felsic metavolcanics and tuffaceous metasandstone with subordinate amphibolite, lime-silicate gneiss, and biotite-sillimanite gneiss



Thinly interbedded phyllite or schist and quartzite with two mica gneiss



Metamorphosed mafic volcanic tuffs and flows with subordinate metasedimentary rocks



YARMOUTH, MAINE

GEOLOGY

LAND: Soils -

In the Yarmouth area, as over most of Maine, the nature of the soil was influenced to a high degree by the glacier and deposits of sand, gravel, silt, and clay. On a broad soil classification map of Maine, the soils in Yarmouth and the rest of southern Maine are designated as "stony-gravelly loams from glacial drift." Most of the soils in western and southern Maine were formed from granite, and these are more acid than the other soils. Due to heavy forestation and large amount of rainfall in Maine, soils accumulated more rapidly than in many other parts of the country with perhaps an inch being created every three hundred to five hundred years. Typical of the outwash plain, Yarmouth's soils are podzols -- mostly gray-brown and sandy-silty loams. The term podzol designates a major soil type developed principally under forest conditions. It is characterized by humus which is strongly acid and which underlies a thin layer of leaves and decayed vegetation.

The following Soils Map of Yarmouth was compiled by the Soil Conservation Service. Each soil area is labeled in one of the following ways: $\frac{64}{C-2}$ or 64 or 64-C-2. The first number (64)

refers to the name of the soil (see Appendix A for Brief Soil Descriptions Cumberland County, Maine). The letter (C) refers to the steepness of slope:

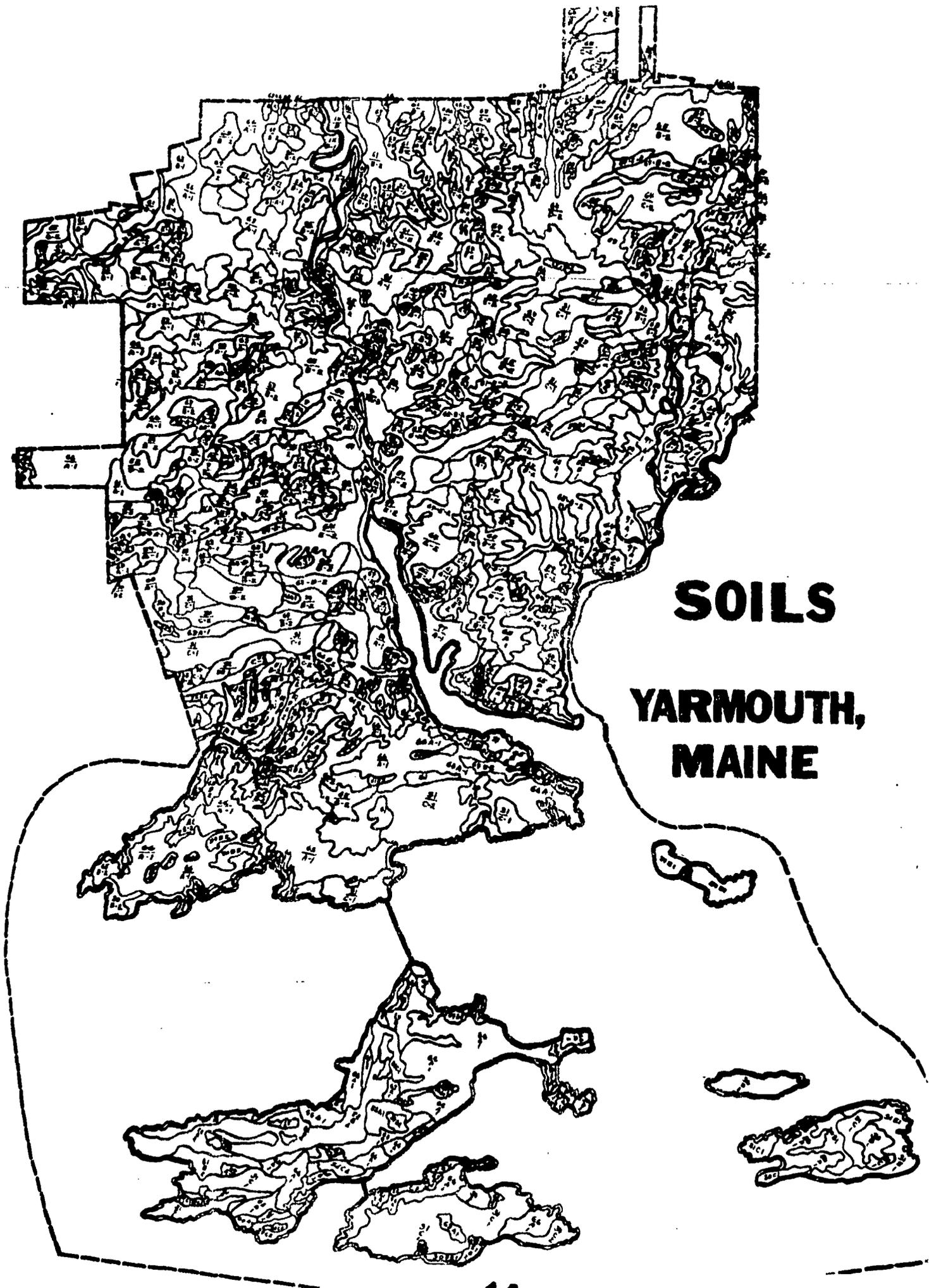
Slopes

A	0- 3%	- Level or nearly level
B	3- 8%	- Gently sloping
C	8-15%	- Moderately sloping
D	15-25%	- Strongly sloping
E	25-35%	- Steep

The last number (2) refers to the amount of erosion which has occurred:

Erosion

1	- Slight erosion
2	- Moderate erosion
3	- Severe erosion



SOILS
YARMOUTH,
MAINE

III. HUMAN ENVIRONMENTAL USE AREAS AND CHARACTERISTICS

HUMAN SETTLEMENT AREAS -

Residential Areas:

Description -

Yarmouth is predominantly a residential community (see the accompanying map - Residential Areas). The housing areas are varied in character and include large, wood frame colonial homes built by sea captains along the older streets in the community, several new housing developments, and a mobile home park. Many of the large historic homes have been converted to apartment dwellings. Several new housing developments include two-family and multi-family units. Around the outskirts of town farm residences exist. As for mobile homes, the community has only a few outside of the mobile home park.

History of Development -

The community was first settled by William Royall in 1635. Early settlements were oriented towards the water being located on the islands and in coastal and river areas. Between the years 1675 and 1715 the town was twice destroyed by Indians.

As the community grew a distinct residential section developed along the coast -- the result of shipbuilding and business activity. The section was bisected by a low region called Brickyard Hollow where the library is now located. Today Route One provides a dividing feature in this same area.

Apart from the coastally oriented residential area was the farming community in the northern part of town. The farming sections have now in many instances reverted to woodland or are succumbing to residential development.

Early homes reflect the resources which were at hand. Most have foundations of granite which was quarried locally. One street still bears the name Granite Street. Wood frame buildings utilizing spruce and pine for framing, pine for clapboards, and cedar shingles are common. Several brick homes were constructed from bricks manufactured in the local brickyards which capitalized on the abundant clay deposits.

Today, one finds a community which is growing residentially. There is an increasing number of single and multiple dwelling units. In addition to the year-round residences

there are many seasonal homes along the coast. In spite of its development, however, the community retains much evidence of its history through the preservation of many fine, old homes.

Current Management and Development Practices -

Presently the development of residential areas is guided by several local ordinances and state regulations. The community has a local zoning ordinance which designates the following areas: single family residence district, one and two family residence district, and farm residence district. Each district is described in terms of permitted buildings and uses, lot sizes, minimum setbacks, parking, and restrictions.

Another "tool" the town has for managing residential development is a subdivision ordinance. This provides for the laying out of streets and the subdivision or re-division of land into streets, lots and blocks. General requirements and minimum standards of design are set forth regarding streets, blocks, lots, utility easements, building relative to natural water courses, land suitability including flood land and topographical suitability, and group-housing developments.

The location of mobile homes and conformance standards are provided for by the Zoning Ordinances and the Trailer Ordinance. Copies of ordinances may be procured at the Town Office.

Development projects of twenty acres and over must also be approved by the Environmental Improvement Commission in Augusta, Maine.

Future Needs and Plans -

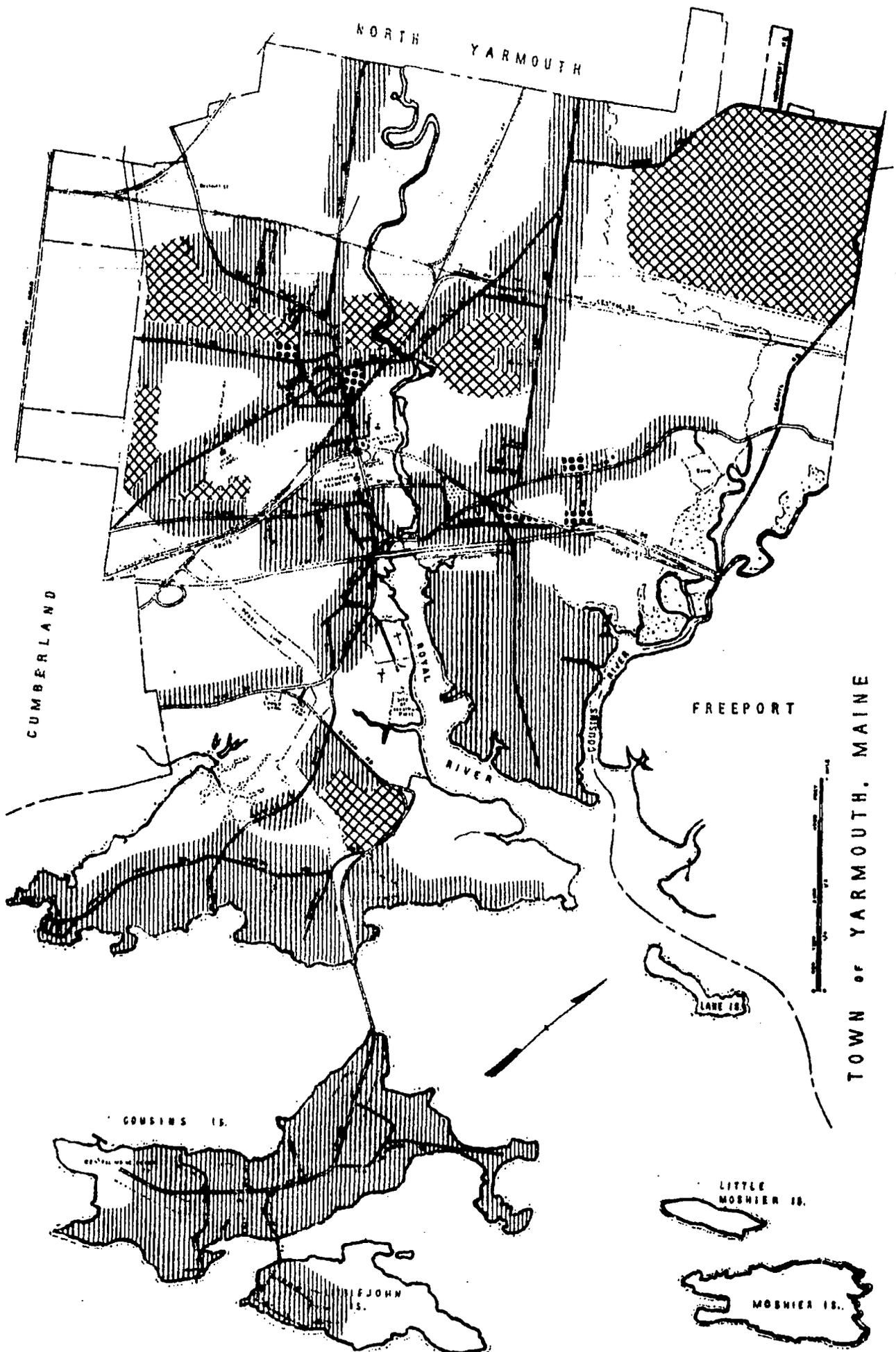
According to the report A Policy Plan for Regional Development by the Regional Planning Commissions of the the Greater Portland Council of Governments, the fastest growth rates between 1960 to 1968 in housing construction in the Portland region occurred in Cape Elizabeth, Cumberland, and Yarmouth. Based on population projections it is anticipated that the present trend toward suburban development will continue. See the following map of Residential Areas to locate possible future areas of residential development in Yarmouth.

The report includes the following recommendations to help establish wholesome, safe, and attractive residential areas:

1. Each community should utilize soil suitability information which is available through the U.S. Soil Conservation Service in determining the

most appropriate location for new residential development. Development with private sewerage disposal should be strictly prohibited on soils which are classified as unacceptable for septic sewerage disposal.

2. It is recommended that every new subdivision which is developed within the planning region should be required to provide sidewalks on at least one side of every new street.
3. It is recommended that each community adopt a realistic and workable set of guidelines for the regulation of mobile homes. The Greater Portland Regional Planning Commission will draft a model ordinance which will be recommended to the communities for adoption.
4. High density residential development should be allowed only where full municipal facilities are provided.
5. It is recommended that each community encourage and, where possible, require the installation of underground electrical and telephone transmission lines in all new subdivisions.
6. As a step toward more imaginative residential development, it is recommended that each community adopt, as part of the zoning ordinance, provisions allowing the development of Planned Unit Developments and cluster housing.
7. In an attempt to reduce land use conflicts along municipal boundaries, it is recommended that all revisions to local comprehensive and land use plans be coordinated at the regional level through the Council of Governments.



RESIDENTIAL AREAS

- single units
- multiple units
- mobile units
- future development

IV. ENVIRONMENTAL INTERPRETATION AND EVALUATION

Evaluation of the Natural Environment -

LAND: Soils

Explanation of Soil Suitability Rating -

The Soil Conservation Service has completed a soil survey of the Town of Yarmouth. From the survey a soils map was made (see map in Section II) and a report was developed describing the detailed characteristics and limitations of each individual soil. Based upon the survey findings, scientists, engineers, and others rated the suitability of each given soil and slope for over thirty different land uses. The ratings reflect the best data available. It is recognized that such data is not complete, and ratings are subject to continuous updating as more information is obtained. Present or past land use and/or present land cover were not considered in determining the suitability of soil for a given use.

Suitability is expressed in terms of good, fair, poor, and very poor or unsuited for the use defined. The definitions of these four suitability groupings are as follows: (Economic limitations are those having to do with physiography and soil characteristics only.)

- Good - Meaning areas of soil that have no or only slight soil, physiographic, or economic limitations for the kind of use or development being considered. This suitability is designated as G. On suitability maps these soil areas are colored GREEN.
- Fair - Meaning areas of soil that have moderate soil, physiographic or economic limitations, but can be used with good management. This suitability is designated as F. On suitability maps these soil areas are colored YELLOW.
- Poor - Meaning areas of soils that have moderately severe soil, physiographic or economic limitations, but can be used with good corrective measures and good management for the kind of use or development being considered. This suitability is designated as P, and is colored RED on suitability maps.

Very Poor or Unsuited Meaning areas of soil that have very severe physiographic or economic limitations that make it extremely expensive or unsound to use the area for the particular kind of use or development being considered. This suitability is designated as V, and is colored BLUE on suitability maps.

Soil Suitability for Septic Sewage Disposal -

The colored map of Yarmouth on the following page shows soil ratings based on suitability for use of a properly installed septic system continuously year round in accordance with requirements of the Maine Sanitation Board.

Points of consideration:

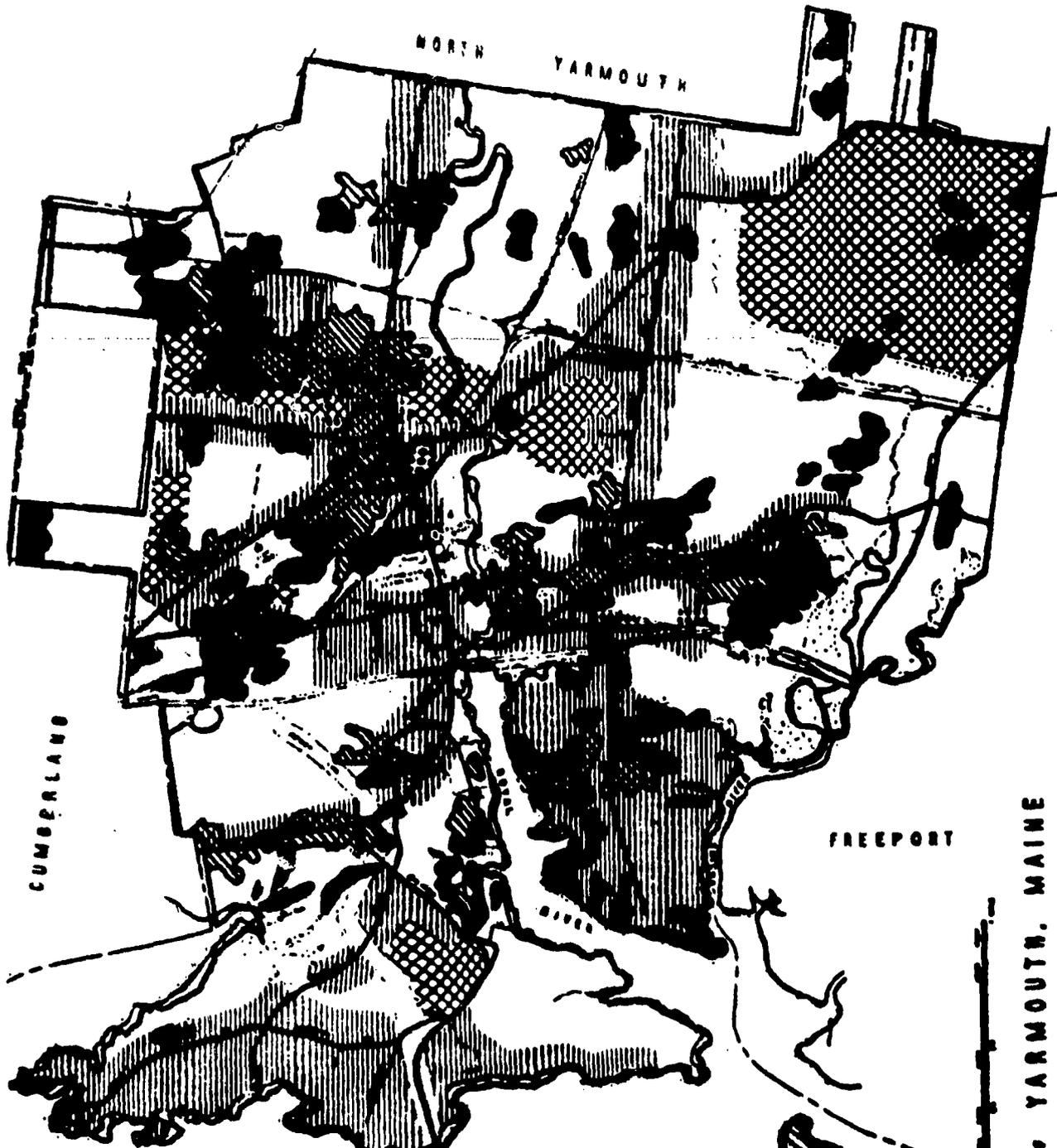
Ground water table, texture, pans, depth, permeability, percolation rate, flooding, slope, effect on ground water, that soils completely handle all free effluent without its return to the surface.

Other guides used:

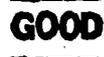
Six feet of depth needed.
Extremely stony or very rocky is automatically Very Poor or Unsuited.
High water table is automatically Very Poor or Unsuited.
Flooding is automatically Very Poor or Unsuited.
D slope is rated Poor for all soils that are otherwise suited because of likelihood of re-surfacing and expense of installation.

Identification of Possible Problem Areas -

On the following page an overlay map of Yarmouth Residential Areas is superimposed over the soil suitability map, House Building with Septic Sewage Disposal. From this can be seen areas where residential development may be incompatible with the soil conditions unless precautionary measures are taken, such as the extension of existing sewer lines to these areas. The map points to the need for further investigation and evaluation of the soils if such development is contemplated.



**SOIL SUITABILITY FOR
HOUSE BUILDING WITH
SEPTIC SEWAGE**

-  DISPOSAL
-  GOOD
-  FAIR
-  POOR
-  VERY POOR

DISPOSAL:

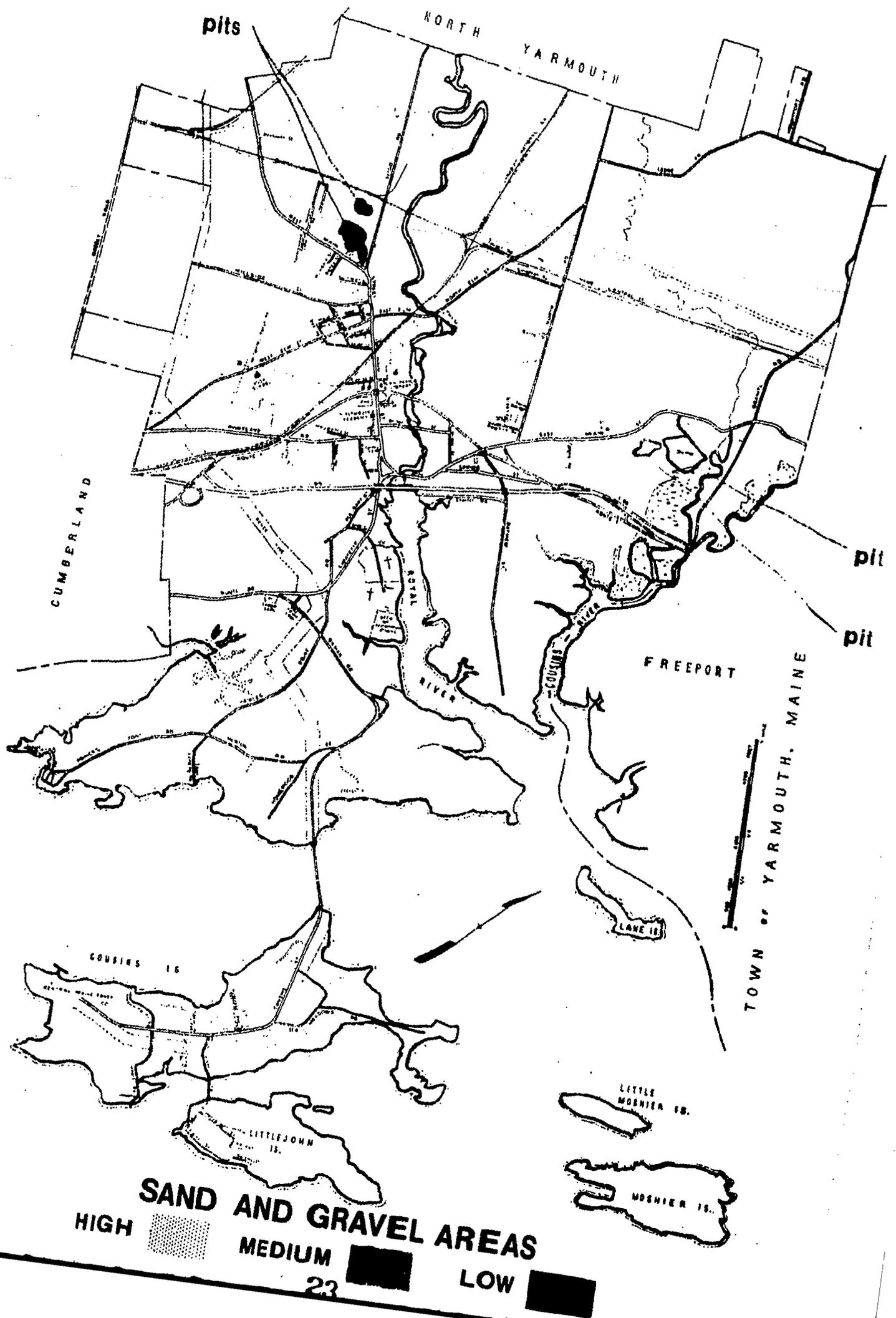
RESIDENTIAL AREAS

- single units 
- multiple units 
- mobile units 
- future development 

Evaluation of the Man-Made Environment -

PRODUCTION AREAS: Sand and Gravel

Three major gravel pit areas exist in the Town (see map on the following page). Of the two near East Main Street, one is being used as an open dump and the other is being privately operated. The third, located near Sligo Road and West Main Street, is abandoned. This one was evaluated and given a rating of low on a scale of high, medium, and low in terms of how well it meets evaluative criteria relating to human needs. For safety and appearance the Zoning Ordinance states, "Upon the abandonment of any such pit or bank, or any part thereof, the land shall be graded to a maximum slope of 50% and all timbers, structures, and the like shall be renewed." Such grading has not occurred and banks generally exceed the maximum slope. The pit area is of little use to the community being used only occasionally for shooting purposes and field trips to study geology. From the standpoint of aesthetics, the pit, because of its location, is mostly hidden from view. For these reasons the subjective rating of low was given. This indicates that an opportunity for improvement exists.



V. RELATED SOCIAL, POLITICAL, AND ECONOMIC ASPECTS

POPULATION CHARACTERISTICS -

Current Population and Trends

POPULATION TRENDS

1940-1980 Yarmouth, Maine

YEAR	U.S. CENSUS POP.	ACTUAL INCREASE	% INCREASE
1940	2214		
1950	2669	455	20.6
1960	3517	848	31.8
1970	5000 ⁽¹⁾	1483	42.2
1980	6055	1055	21.1 ⁽²⁾

(1) From the Yarmouth Town Office
U.S. Census Prediction has been 4635

(2) Assumed ($\frac{1}{2}$ past decade)

Seasonal Population Increases

According to the Threshold to Maine Resource Conservation and Development Project Report, April, 1970, the seasonal population increase in Yarmouth is under 25%.

Population Migration

PORTLAND PLANNING REGION

MIGRATION

1940 to 1950 and 1950 to 1960

Community	Population 1940	Births	Deaths	Population 1950	Migration 1940-50
Yarmouth	2,214	504	302	2,669	+ 253
Community	Population 1950	Births	Deaths	Population 1960	Migration 1950-60
Yarmouth	2,699	783	346	3,517	+ 411

History of Resource Use: Early Cultures

Early Man -

According to the Portland Press Herald Reprint, the Psychozoic Era, the proposed designation for the period marking the ascendancy of man on earth, probably brought to Maine a race of people called the Red Paint People who inhabited the Portland-Yarmouth region. The publication Facts About Maine goes on to relate that these people are so named because each of their ancient graves contains as much as a bushel of brilliant ocher which is usually red. The people are distinguished by the burial of their bodies with the ocher and stone implements. The graves of the Red Paint People, which have often been uncovered since European settlement in Maine, are among the oldest archeological heritages in North America.

Along the Maine coast are over five hundred shell-heaps, and others have been found in southern New England. These are believed to be the remains of many aboriginal "shore dinners" of clams, oysters, and other seafood. The age of these shell-heaps has been estimated to be between one and five thousand years. Arrowheads and other Indian implements in these piles of shells are distinct in type and workmanship from the articles found in the Red Paint graves. This evidence has led to the firm establishment of the belief that the Red Paint People were followed by a later group of men who were probably the Algonquin Indian stock from which our present Indians came.

Indian History -

In Maine in the early 1600's European settlers found Indians of two major divisions of Algonquin stock, the Abenakis and the Etchemins. Of the Abenakis, which lived west of Penobscot River, the Anasagunticook Indians were one of four principal bands. They were the ones who occupied the Androscoggin River Valley which lies very close to Yarmouth and were probably the ones the town's early residents encountered.

The publication Facts of Maine gives the following description of Maine Indians:

Indian bands in Maine normally moved several times each year in response to available food supplies. Each spring they fished the rivers for alewives, shad, and salmon and planted corn, squash, beans and other vegetables in selected spots on the river banks. In June their camp sites were moved to the seashore where they caught porpoise and seal to provide oil and skins, hunted eggs and the young of sea

birds, gathered clams and lobsters, of which part were dried for winter food. The frosts of September called the red men to harvest the crops previously planted on the river banks. With harvesting done, October found them further upstream, prowling the deep forests for game. According to tradition, a two-weeks thanksgiving feast, late in the fall but before Christmas, featuring turkey, cranberries, and Indian pudding, has its modern Thanksgiving Day counterpart. Winter snows marked another period in the big woods hunting moose and trapping smaller game. Before the ice went out of the river, a spring catch of otter and beaver had to be made. When the rivers became ice-free, muskrat trapping called and canoes were again used to fish the rivers, and for the return to the downstream river banks for another spring planting.

Maine Indians were independent; to live they themselves had to fill all their essential needs. Food, clothing and shelter could be gained only by personal effort. These circumstances naturally resulted in developing skill in hunting, stalking, trapping, fishing, canoeing, tanning hides, drying and curing food, and such crafts as sewing and making fish nets, spears, bows and arrows, wampum, carved pipes, pottery, canoes, snowshoes, moccasins, baskets, as well as intricate clothing ornaments of dyed quills threaded on leather thongs.

The Abenaki language, when compared to modern tongues, was a limited and awkward method of talking. This unwritten language was studied by the French Jesuit missionaries, whose writings on the subject are the most complete available.

The Maine Indians were not excessively warlike. Their peaceful and friendly disposition has been obscured by the drama of warring episode. Puritan records credit the Maine Indians with saving the lives of early Massachusetts settlers by gifts of food.

The early settlement of Maine occurred when the Indians had recently been victims of civil war and pestilence. Two years of a furious Indian civil war that began in 1615 nearly annihilated some of the tribes, and war was immediately followed by a plague of disease, which may have been smallpox, and other tribes were nearly destroyed.

Indians played an important part in Yarmouth's early history. With the shores of Yarmouth forming the Basin of Casco Bay and due to physical advantages of location, the importance of its geography with regard to other communities and the existence of the Indian burial ground on Lanes Island,

the Indians in the Yarmouth area resisted the whites with more hostility than many other settlers in the state received. The town's history contains many accounts of trouble between Indians and settlers. Much blood was shed on both sides. In 1675 the so-called "Indian Wars" began in Maine and in Yarmouth the Indians began a War of Extermination forcing the settlers to leave their homes which were pillaged and burned. Three years later the inhabitants made peace and returned to their home sites. Another war in 1688, in which sawmills were burned and many settlers were killed, again forced the survivors to an island for safety where they later moved to Massachusetts. In 1715 the town was once again reclaimed.

Historical Development of the Community -

Most of the information contained in this section came from Profiles of Yarmouth Heritage by the Yarmouth Historical Society.

John Smith in 1614 was one of the first to map the shores of Cumberland and Yarmouth. Master Christopher Leavitt of York sailed into the bay in 1623 and named the portion of the bay bordered by the shores of North Yarmouth and Cumberland as "Cascoe."

North Yarmouth was formed in 1636. By 1688 the Plantation of North Yarmouth numbered 160. Due to the French, Indian, and King Williams Wars the population was reduced to only one hundred by 1722. However, since the year 1760, the population has steadily grown.

In 1820 developing agriculture and industry were producing hay, wood, potatoes, carriages, harnesses, stone monuments, shoes, and so on. To carry this trade, shipbuilding commenced with the first vessel, a brig, being constructed in 1826 according to documentation. By 1849, when the railroads came, Yarmouth's business had expanded greatly and included potteries, tanneries, a flouring mill, a paper mill, and several brickyards. In the next three-quarters of a century, the "shipbuilding days," Yarmouth contributed over three hundred vessels to the United States Merchant Marine fleet.

As a result of the shipbuilding and business activity along the coast and the development of a residential section which demanded a public water supply and fire protection and other services, the differences between the farm section of the northern part of the Town and the more densely populated southern part became greater. Consequently, in 1849 the northern part of Town split with the southern, and the Town of Yarmouth as known today was born.

Through the years change after change was seen in Yarmouth-- many businesses, buildings, and people came and went. In the early 1800's several potteries were operating. A brick factory in the center of Town has since gone. From 1868 to 1923 the paper industry

was a large part of community business. Records show that at one time the Forest Paper Company, manufacturing soda pulp, occupied ten large buildings with yards and sidings covering eight acres.

Throughout the years a variety of religious faiths have been active in Yarmouth each with a varied history of church construction and change in Yarmouth. Today the community contains many fine churches. The school system also has experienced changes. It has progressed from a simple, crossroad, one-room school to a public school system having several modern structures. A private school, North Yarmouth Academy, also operates near the center of town.

As was common in many communities of the past, fire was responsible for changing the character of the town to a great extent. It has destroyed taverns, stores, churches, mills and factories, and many other structures. The first fire company was organized in 1816.

Throughout its history the community has had many organizations. The first meeting of the Casco Lodge of Free Masons was held in 1821. The Village Improvement Society was founded in 1910 for the purpose of making the town one of the "cleanest and most scenic of its size in the State of Maine." Today, both of these organizations are still active along with several others.

Now, one finds a picturesque, small, predominantly residential coastal community, a physically united community. Brickyard Hollow, a pasture where the Merrill Memorial Library now stands and which once divided the town into two villages, has long since been filled. Gone also are evidences of the shipbuilding industries. But far from gone is the pioneer spirit which saw the community through its early trials. Today, one doesn't have to look far to still see the kind of expression of concern upon which the town's tradition was established--new schools, a new sewage treatment plant, plans for a marina and waterfront development, annual summer festivals, and beautification projects. The face of the community has changed but not the spirit.

Private Organizations -

- Men's Club
- Citizen's Scholarship Foundation
- Yarmouth Association of Parents and Teachers
- Firemen
- Firemens' Auxiliary
- Farm and Garden Club
- JC Wives
- Yarmouth JC's
- Casco Lodge #36
- Masonic Cumberland Chapter #35

Lions' Club
Yarmouth Health Council
Ladies Social Circle, Congregational Church
American Legion Post #91
American Legion Auxiliary
Sacred Heart Women's Council
Village Improvement Society
Twice 15
Amvets - Boyd-Googin Chapter
Ladies of St. Anne
Harbour Homemakers Extension
Women's Club
Boy Scouts
Girl Scouts
Sacred Heart Couples Club
Junior Women's League
Yarmouth Band Boosters
Fortnightly Club
N.Y.A. Faculty Wives
Universalist Evening Alliance
Universalist Day Alliance
Missionary Society, Congregational Church
Past Matron's Association of OES
Eastern Star (OES)
Rainbow Girls
Yarmouth Grange
Republican Committee
Democratic Committee
Redmen's
Pocahontas
Baptist Church Groups
 Azars Club
 Ladies Circle
 Missionary Society
 Philathea Class

External Resources and Influences -

Note: the following is taken from the introduction of A Policy Plan for Regional Development by the Regional Planning Commission of the Greater Portland Council of Governments.

The Greater Portland Planning Region is composed of ten communities, the largest of which is Portland, the state's largest city. The area encompasses approximately 350 square miles and with a current estimated population of 163,000 persons, contains 16 percent of the total state population. Located 100 miles northeast of Boston, Massachusetts, Portland is increasingly becoming the northern terminus of the east coast megalopolis.

Since the Region was originally settled in the middle of the seventeenth century, it has had a strong reliance on the sea as a mainstay of the economy. Because of its excellent natural harbor, the region soon developed as a major distribution center for all of northern New England. Distribution remains important today with the region accounting for 46 percent of the state's wholesale sales.

Inasmuch as the settlement of the region can be directly attributed to Portland Harbor it is not surprising that the areas immediately adjacent to the waterfront became the most intensely developed. As the Peninsula area became heavily settled new development was forced to seek areas in locations surrounding the peninsula. Thus the form of the region was established. The densely populated core became encircled with rings of development. Soon a radial highway network was established with the peninsula acting much as the hub upon which all roads descended like the spokes of a wheel. Such a highway network tended to reinforce the dominant position of the peninsula and this role has remained essentially unchanged to this day.

Since 1920 the Greater Portland Region has experienced decennial population increases of approximately four percent with non-residential growth and development following a similar sluggish pattern. In the latter part of the 1950's the slow pace of growth began to change and accelerated growth became a characteristic of the 1960's. The new growth was characterized by unparalleled residential development in the suburban communities while non-residential development dominated activities in the three core cities of Portland, South Portland, and Westbrook.

It was recognized that the increased development pressure would require more than the traditional parochial approach to solving regional development problems and therefore in 1956 the Greater Portland Regional Planning Commission was formed for the purpose of developing, on a metropolitan basis, a unified approach to the establishment of development guidelines.

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APPENDIX A

Brief Soil Descriptions
Cumberland County, Maine

BRIEF SOIL DESCRIPTIONS
CUMBERLAND COUNTY, MAINE

1. See 1X.
- 1X. Ondawa fine sandy loam. A deep, well-drained, brownish fine sandy loam soil occurring on floodplains. Good moisture holding capacity and is subject to flooding.
4. See 4X.
- 4X. Podunk fine sandy loam. Deep, moderately well-drained, brownish, sandy soils on stream bottoms. Subject to flooding.
5. Limerick silt loam. Deep, poorly-drained silty soils developed on flood plains, subject to seasonal flooding. High water table most of the year.
- 5X. Rumney fine sandy loam. Poorly-drained fine sandy loam soils occurring along bottom lands. Surface drainage is slow, with a high water table. Floods annually.
7. Saco silt loam. Frequently flooded, very poorly-drained silty soils on flood plains. Water stands on surface for long periods in the winter and spring. Impracticable or impossible to drain.
- 9M. Peat and Muck. Shallow and deep deposits of organic material occupying low, very poorly-drained positions with a water table at or near the surface most of the year. Peats are undecomposed reeds and sedges, Spagnum moss or woody material. Mucks are the same material decomposed.
- 9ML3. Madeland, sanitary land fill. Areas filled with non-soil materials such as refuse and industrial wastes.
- 9R. Rockland, Hollis and Canaan material. Very shallow, moderate to coarse textured soil material between larger areas of granite and schist rock outcrops. Large granite and schist stones or boulders are numerous.
- 9S. Coastal Beach. Deep sand deposits along the coast, between high tide and a few feet above high tide line.
- 9SB. Sand dune land. Deep, fine sand deposits that are easily blown by the wind where natural cover has been removed.
- 9T. Tidal Marsh. Deep, deposits of sands, silts, or clays, that are flooded at high tide and exposed at low tide. Grasses and shrubs tolerant to salt water are the main vegetative cover.

12. Canaan sandy loam. A shallow to bedrock, rapidly drained coarse textured soil of the uplands developed from granite. Depth to bedrock ranges from 3 to 24 inches with occasional outcrops. This soil has low natural fertility.
13. Canaan very stony sandy loam. A shallow to bedrock, rapidly coarse textured soil of the hilly and mountainous areas. Several large to medium size boulders on the surface and has several granite outcrops.
14. See No. 16.
15. See No. 17.
- 15V. See No. 17V.
16. Hermon sandy loam. Deep, well-drained somewhat droughty soils with coarse fragments developed on granite uplands. This soil has low natural fertility and water holding capacity.
17. Hermon very stony sandy loam. Deep, well-drained somewhat droughty coarse sandy soil containing large granite stones to make land use for crops impracticable. It has low natural fertility.
- 17V. Hermon extremely stony sandy loam. Deep, well-drained somewhat droughty coarse sandy soil containing large stones and boulders. Best suited for woodland.
18. See No. 38.
19. See No. 39.
20. Woodbridge fine sandy loam. Moderately well-drained fine sandy loam soils $1\frac{1}{2}$ to 2 feet deep with a very firm compact subsoil. Water movement in the soil is moderately slow and has slow surface drainage.
21. Woodbridge very stony fine sandy loam. Deep, moderately well-drained stony fine sandy loam soils with firm compact subsoil at 24 inches that slows water movement and root growth. Surface covered with numerous stones.
22. Peru fine sandy loam. Deep, moderately well-drained fine sandy soils with olive colored coarse subsoil. This is an acid soil but has good moisture holding capacity.
23. Peru very stony fine sandy loam. Deep, moderately well-drained fine sandy loam soil having many large stones throughout the soil and on the surface.

24. Whitman fine sandy loam. Very poorly drained fine sandy soil occurring on low very wet upland areas with a thick black mucky surface. It has slow drainage and surface water movement and an extended seasonal high water table.
25. Ridgebury very stony fine sandy loam. Deep, poorly drained fine sandy loam soils $1\frac{1}{2}$ to 2 feet deep with a very firm compact subsoil. Water movement in the soil is slow with a seasonal high water table. Surface covered with stones.
26. Ridgebury fine sandy loam. Deep, poorly-drained fine sandy loam soil with a firm compact subsoil at 24 inches. Water movement is slow with a seasonal high water table.
30. Hollis fine sandy loam. Shallow, 10 to 20 inches deep to bedrock, well-drained fine sandy acid soil containing an occasional rock outcrop. This soil has low water holding capacity and is droughty during dry periods.
- 30X. Lyman fine sandy loam. Shallow, 10 to 20 inches deep to bedrock, well-drained acid soil containing an occasional rock outcrop. This reddish soil has low water holding capacity and natural fertility.
31. Hollis very rocky fine sandy loam. Well-drained, shallow to bedrock soil with up to 25% of the area exposed bedrock with some surface stones.
- 31X. Lyman very rocky fine sandy loam. Well-drained, shallow to bedrock soil with much of the area as exposed bedrock.
34. See No. 38.
35. See No. 39.
38. Paxton fine sandy loam. Deep, well-drained fine sandy loam soil with a firm compact subsoil at 24 inches. It has good moisture holding capacity, but slow movement of water through the subsoil due to the pan.
39. Paxton very stony fine sandy loam. Deep, well-drained very stony fine sandy loam with a firm compact subsoil at 24 inches. Surface stones are numerous.
50. Merrimac sandy loam. Deep, somewhat droughty sandy loam soil, underlain by sand and coarse sands at 24 inches. Low moisture holding capacity and natural fertility.
51. Adams loamy sand. A deep, very rapidly drained droughty acid sandy soil on nearly level and moderately sloping uplands. Very low moisture holding capacity and natural fertility.

52. Hinckley gravelly sandy loam. Deep, well-drained sandy soil underlain by sand and gravel at 12 to 20 inches. Low moisture holding capacity and natural fertility.
53. Deerfield sandy loam. Deep, moderately well-drained coarse sands having a high water table at 18 to 24 inches part of the year.
54. Sauquatuck loamy sand. Poorly-drained loamy sandy soils of the coastal area having an iron cemented hard pan at 18 to 24 inches. Water table is near the surface during the rainy season but below the hardpan during dry weather. It can be droughty during extended dry periods.
- 54X. AuGres loamy sand. Deep, poorly-drained loose acid sands of the coastal area having a thick loose white sand layer beneath the dark surface layer. The water table is near the surface during the rainy season, but is at 30 to 36 inches during the summer dry period.
55. Scarboro fine sandy loam. Sandy, very poorly-drained fine sandy soils with the water table at the surface most of the year.
56. Walpole fine sandy loam. Deep, poorly-drained sandy soils with the water table at the surface part of the year. May be droughty during an extensive dry period.
60. Melrose fine sandy loam. Moderately deep, well-drained sandy soil underlain by clay at 24 inches. It has good water holding capacity.
61. Elmwood fine sandy loam. Moderately deep, moderately well drained sandy soil underlain by clay at 24 inches, which slows the internal drainage. Has a high water table.
62. Whately fine sandy loam. Very poorly-drained sandy soil underlain by clay at 2 to 4 feet. Water table is near the surface most of the year. Water movement through the soil is very slow.
63. Swanton fine sandy loam. Moderately deep, poorly-drained sandy soil underlain by clay at about 24 inches. Water table is near the surface during the wet season.
64. Suffield silt loam. Deep, well-drained silty soil with high water holding capacity. This soil is primarily located on steeper slopes and erodes easily.
65. Buxton silt loam. Deep, moderately-drained silty soil with a firm clay subsoil developed mainly on rolling uplands. It has a high water holding capacity. This soil is very erosive and unstable.

66. Scantic silt loam. Poorly-drained silty surfaced soils having clay subsoils. The soils warm up late in the spring due to the high water table. It has a tough clay subsoil but is unstable due to the large amounts of water in the surface layers.
67. Biddeford silt loam. Deep, very poorly-drained, silty, dark surfaced soil with firm sticky clay subsoil. It has a very high water table most of the year and slow surface drainage. Very unstable.
68. Suffield-Hinckley complex. Deep, well-drained areas of both sandy soils over gravel and silts over clays. These areas are so intermingled that one individual soil type cannot be delineated.
- 68X. Hartland very fine sandy loam. Deep, well-drained sandy and silty soils with good water holding capacity. This soil erodes easily.
69. Belgrade very fine sandy loam. Deep, moderately well-drained silty and sandy soils. These soils have a high water table part of the year and have a high water holding capacity. Slightly erosive.
90. See No. 69.
151. See Nos. 60 and 61.
154. See No. 53.
254. See No. 63.