Rye, N.H.

MASTER PLAN

June, 1985

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TOWN OF RYE, N.H.

MASTER PLAN

June, 1985

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111 Centre Street
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TABLE OF CONTENTS

Section	Page
TABLE OF CONTENTS	i
LIST OF TABLES	ii
LIST OF MAP PLATES	iv
INTRODUCTION	v
PART I -- ASSESSMENT REPORTS	
-Historical	I-a-1
-Demographic & Socioeconomics	I-b-1
-Natural Resources	I-c-1
-Land Use	I-d-1
-Housing	I-e-1
-Regional	I-f-1
-Public Utilities & Services	I-g-1
-Transportation	I-h-1
-Community Facilities	I-i-1
-Recreation	I-j-1
PART II -- GENERAL STATEMENT OF GOALS AND OBJECTIVES	II-1
PART III -- PLANS	
-Land Use & Housing	III-a-1
-Growth Management	III-b-1
-Transportation	III-c-1
-Community Facilities & Services	III-d-1
-Recreation & Open Space	III-e-1
PART IV -- IMPLEMENTATION	IV-1
FOOTNOTES	F-1
APPENDICES	
I. Inventory of Historic Resources	A-I-1
II. Existing Development - Soil Type Inconsistencies	A-II-1
III. List of Businesses in Rye	A-III-1
IV. Inventory of Recreation & Open Space	A-IV-1
V. Cluster Subdivision Information	A-V-1
VI. Hollis, NH Subdivision Rating System	A-VI-1

LIST OF TABLES

Number	Description	Page
1	Population Changes, Town of Rye, N.H. 1790 - 1984.	I-b-2
2	Growth Rate Comparisons, 1960 - 1980.	I-b-4
3	Comparison of Age Group Categories, 1970 and 1980, Town of Rye, N.H.	I-b-5
4	Selected Comparisons, 1980 Age Characteristics of Population, Rye and State of New Hampshire.	I-b-5
5	Marital Status: Persons 15 and Over, 1970 - 1980, Town of Rye, N.H.	I-b-7
6	Household Type: All Persons, 1970 and 1980, Town of Rye, N.H.	I-b-7
7	Educational Characteristics, 1970 and 1980, Town of Rye, N.H.	I-b-8
8	Selected Comparisons, 1980 Educational Characteristics of Population, Rye and State of New Hampshire.	I-b-8
9	Residence Five Years Ago, Town of Rye, N.H., 1970 and 1980.	I-b-10
10	Place of Birth, Town of Rye, N.H., 1970 and 1980.	I-b-10
11	Labor Force Composition, Town of Rye, N.H., 1970 and 1980.	I-b-11
12	Labor Force Participation, Town of Rye, N.H., 1970 and 1980.	I-b-11
13	1980 Occupational Characteristics of Labor Force (Employed Persons Over 16), Rye and State of New Hampshire.	I-b-12
14	1980 Industry of Employment (Employed Persons Over 16), Rye and State of New Hampshire.	I-b-13
15	Class of Worker (Employed Persons Over 16), Town of Rye, N.H., 1970 and 1980.	I-b-14
16	1979 Annual Family Income, Town of Rye.	I-b-16
17	Families by Poverty Status, Town of Rye, N.H., 1970 and 1980.	I-b-16

Number	Description	Page
18	1981 OSP Population Projections, Town of Rye.	I-b-17
19	Drainage Basins, Town of Rye, N.H.	I-c-4
20	Summary of 1984 Existing Land Use, Rye, N.H.	I-d-3
21	1984 Distribution of Lot Size, Coastal and Inland Areas, Rye, N.H.	I-d-4
22	1984 Estimated Status of Vacant Land, Rye, N.H.	I-d-6
23	1984 Land Use By Drainage Basin, Rye, N.H.	I-d-9
24	1984 Distribution of Lot Size By Drainage Basin, Rye, N.H.	I-d-10
25	1984 Estimated Development Potential By Drainage Basin, Rye, N.H.	I-d-13
26	Housing Supply Data, Town of Rye, 1970 and 1980.	I-e-2
27	Occupied Units By Number of Persons, Town of Rye, 1970 and 1980.	I-e-2
28	Annual Building Permits (New Homes), Town of Rye, 1970 - 1984.	I-e-4

LIST OF MAP PLATES

(in order of appearance)

Plate No.	Description
13*	Soil Suitability For On-Site Wastewater Disposal
16*	Development Capability
3*	Hydrology (Drainage Basin Delineation)
4*	Floodplains
5*	Wetlands
P-1	Land Use Plan
P-2	Transportation Plan
P-3	Recreation and Open Space Plan

* The copies of these plates used in the master plan report were provided courtesy of G & Underwood Engineers, Inc. of Portsmouth, N.H., which was assigned the materials from the Town of Rye Water Quality Management Plan by Wright Pierce, Engineers and Architects.

INTRODUCTION

The Town of Rye is a semi-rural coastal community of New Hampshire located approximately fifty (50) miles north of Boston, Massachusetts and fifty (50) miles south of Portland, Maine. The City of Portsmouth, NH borders Rye on the north and west, and the towns of Greenland and North Hampton border Rye to the southwest and south, respectively. Rye's areal configuration is that of a rectangle approximately six miles long and two miles wide, with the long side paralleling the Atlantic Ocean. More than one-third of New Hampshire's ocean frontage lies in Rye. Rye is located in Rockingham County which is one of the most rapidly growing areas in the eastern United States. Rye's 1984 population is approximately 5000.

In early 1984 the Rye Selectmen applied to the New Hampshire Office of State Planning for financial assistance for the preparation of a master plan. Growth pressures facing Rye, new state legislation mandating increased planning responsibilities for towns, and recent court decisions emphasizing the importance of sound master planning as a pre-requisite to development regulations all influenced the decision to proceed with the preparation of a new master plan for Rye.

In October, 1984 the Office of State Planning awarded Rye a $10,000 Local Assistance Grant from the federally funded Coastal Zone Management Program. A planning consultant, Michael Donovan, was retained to assist the Rye Planning Board with the preparation of a master plan. From November, 1984 through June, 1985, the Planning Board met numerous times with the consultant to discuss master planning issues and formulate master planning policies, and three public hearings on the master plan were conducted by the Planning Board so that Rye's residents could learn of the Board's efforts and voice their opinions on the plan. This master plan is the result of that process.

ASSESSMENTS

HISTORICAL ASSESSMENT

Rye is a community with a rich heritage which many of its residents value highly. An active historical society has undertaken commendable efforts to identify and preserve Rye's past and to educate the town's residents about its significant history.

Prehistoric Resources

There has been little exploration of Rye's prehistoric resources, but archaeological experts have postulated that there are probably numerous sites from the Woodland Period (2,500-400 BP) in Rye.[1] During that period man's dependence on bivalves for subsistence and the woodlands occupying Rye's many promentaries probably attracted many settlements to Rye's coast, river basins and estuary heads.[2] In spite of the probability that areas of Rye were settled during the Woodlands Period, only two period sites have been recorded by the New Hampshire Archaeological Society. These are at Wentworth Fairway on Witch Creek and at Frost Point.[3] There is also some probability that Rye may have sites from the earlier Archaic Period (8,000-2,500 BP), but no specific sites have been identified.[4]

Historic Resources

Far more is known about Rye's historic period, which began with New Hampshire's initial Caucasian settlement at Odiorne's Point in 1623. Rye's first settler's had their share of conflict with the native indians as evidenced by the 1691 Brackett Massacre; the 1696 murder of John Locke; and the 1696 battle at Breakfast Hill following the Portsmouth Massacre. Rye's

colonial history patterned that of most New England coastal communities, with reliance on farming, fishing and milling as a way of life and with most social activity focusing on churches. During the mid-19th Century the coastal area of Rye evolved into one of the country's finest resorts,[5] and a number of Victorian resort hotels dotted the coast. Following the peak of the resort hotel era in the late 19th Century, Rye's coastal era transitioned into a resort dominated by summer cottages, grand and modest. During the first half of the 20th Century life in Rye followed the historical pattern, being primarily dominated by inland farming and summer coastal activity. However, since World War II the automobile era; regional highway improvements; and the growth of the Boston to Portland segment of "megalopolis" have changed Rye. Its attractive rural and coastal environment, protected somewhat from high density encroachment by its natural features, have made Rye an attractive bedroom community for the upper middle class of the region.

An inventory of Rye's historical resources is contained in Appendix I. The inventory has been gathered from other sources, as noted. Generally, Rye's historic resources can be categorized as follows:

1. Federal and state recognized sites.
2. Garrison sites.
3. Mill sites.
4. Colonial houses.
5. Resort era hotels.

Protective Measures

The Town of Rye has enacted an Historic District Ordinance in order to preserve its historically, architecturally and culturally significant

buildings and structures. The district, at present, covers a small area in the town center between the intersection of Washington and Central Roads and the intersection of Washington and Wallis Roads.[6] Any person wishing to construct, alter, repair, move, demolish or otherwise change the exterior appearance of a structure must obtain a permit from the Historic District Commission. The ordinance establishes several criteria governing the issuance of permits, all of which relate to minimizing the impact of the structural changes on the architectural and historic continuity of the area within the district. Because Rye's other historic structures and sites are spread out along its many roads, expansion of the Historic District to other areas is not warranted. However, other, site-specific approaches can be incorporated in the towns development ordinances to further historic preservation.

The Town of Rye has also acted to preserve the historic rural character of its roads by enacting the provisions of NH RSA 231:158 regarding scenic roads. The Town may not remove a tree or destroy a stonewall along the town's roadways without the written consent of the planning board, and the planning board must hold a public hearing prior to making its decision on each request.

DEMOGRAPHIC AND SOCIOECONOMIC ASSESSMENT

The population of Rye has changed significantly in the past forty years, during which the size of the population has almost quadrupled. However, since 1970 the growth rate has moderated to a level of 1 to 1.5 percent annually. Rye's population is composed of a higher portion of senior citizens than most towns, and Rye's population is better educated than the overall state population. The labor force is dominated by professional, managerial and administrative employees, and manufacturing employment is less significant to Rye's labor force than it is to the state's labor force. Rye's population has a median family income about 15 percent higher than the state median.

Historical Population Growth

Table 1 shows the historical population growth of Rye according to the U.S. Census. As illustrated by Table 1, the population of the town was relatively stable until the post World War II era, and, since then it has quadrupled. As noted in the footnote to Table 1, the consultant believes that the 1983 estimate of the Office of State Planning (OSP) warrants some comment. The OSP uses a "Composite Ratio" methodology for estimating the current population of towns with less than 5,000 population, and this method is less accurate than the building permit method, which is used by OSP for estimating the current populations of towns greater than 5,000 in population.[7] In order to provide a better perspective on growth rate since 1980, the consultant has estimated the Town's 1984 population using the building permit method.

TABLE 1

POPULATION CHANGES
TOWN OF RYE, N.H.
1790 - 1984

Year	Population	Change	Percent Change
1830	1,275	82	6.9
1840	1,320	45	3.5
1850	1,397	77	5.8
1860	1,326	-71	-5.1
1870	1,087	-239	-18.0
1880	1,111	24	2.2
1900	1,100	122	12.5
1910	1.014	-86	-7.8
1920	1,196	182	17.9
1930	1,081	-115	-9.6
1940	1,246	165	15.3
1950	1,982	736	59.1
1960	3,244	1,262	63.6
1970	4,083	839	25.8
1980	4,508	425	10.4
1983*	5,036	-	-
1984**	4,878	-	-

Source:
U.S. Census Data for 1830 - 1980
* OSP Composite Ratio Method Estimate
** Consultant's Building Permit Method Estimate as of 12/31/84

Note:
* The Composite Ratio Method is utilized by OSP for estimating the population of towns of less than 5000 population. It utilizes three 1980 ratios to project the current size of various age groups based on known current data for the denominator of those ratios. The ratios are: (1) 1980 populations aged 6 to 17 to 1980 school enrollments aged 6 to 17; (2) 1980 population aged 18 to 64 to 1980 resident tax billing; and, (3) 1980 population over age 65 to 1980 medicare enrollments. The consultant believes that the building permit method, which OSP uses to estimate current populations for municipalities larger than 5000 population, is a more accurate way to estimate Rye's "between-census" population.

** The consultant used the 133 building permits issued for new homes since 1980; the 1980 U.S. Census vacancy rate; and the 1980 U.S. Census persons per household ratio of 2.6 to estimate 1984 population. To this he also added an estimated five units per year for conversion of seasonal dwellings.

Table 2 compares Rye's recent population growth with other municipalities in the region and with the state and county.[8] The consultant selected the three subgroups in Table 2 because comparisons of Rye's growth with that of Rockingham County are not meaningful since Rockingham County contains large towns such as Salem and Londonderry which are impacted by growth factors not affecting the coastal area of New Hampshire. Subgroup 1 contains the rural towns closest to Rye; Subgroup 2 contains rural towns arguably affected by two regional phenomena which also affect Rye -- the coast and Interstate 95 -- but excludes Hampton and Seabrook, which are of a character dissimilar to Rye; and Subgroup 3 contains all municipalities, including the City of Portsmouth, which are in the coastal/I-95 region. The consultant believes that Subgroup 1 and 2 offer the most valid basis for meaningful comparison. As Table 2 indicates, Rye's population growth rates from 1970-80 and from 1960-80 were roughly half that of the aggregate rates for rural towns in the region with which meaningful comparisons could be made.

Population Characteristics

1. Age. Table 3 describes the age characteristics of Rye's population and the changes from 1970 to 1980. Of note, are three trends: (1) the increasing portion of the population which is age 65 or older (15% of total 1980 population, up from 10% of total 1970 population); (2) the decreasing portion of the population less than age 19 (26% of total 1980 population, down from 36% of total 1970 population); and, (3) the increasing portion of the population in the age 25-34 age group (16% of the total 1980 population, up from 11% of the total 1970 population). These trends generally follow the overall demographic trend of our society, which

TABLE 2

GROWTH RATE COMPARISONS
1960 - 1980

Annual Rate of Growth (%)

Area of Analysis	1970 - 1980		1960 - 1980	
	Including Rye	Excluding Rye	Including Rye	Excluding Rye
Town of Rye	1.0	n.a.	2.0	n.a.
Subgroup 1	1.8	2.3	3.5	4.7
Subgroup 2	1.8	2.1	3.5	4.2
Subgroup 3	1.6	n.a.	1.6	n.a.
Rockingham County	3.7	n.a.	4.6	n.a.
New Hampshire	2.5	n.a.	2.6	n.a.

Notes: (1) Annual rate of growth is the decennial rate divided by 10 and the twenty year rate divided by 20.

(2) Subgroup 1 = Rye, Greenland, North Hampton and Stratham; Subgroup 2 = Subgroup 1 plus Hampton Falls, South Hampton and Kensington; Subgroup 3 = Subgroup 2 plus Portsmouth, Newington, New Castle, Hampton and Seabrook.

(3) Excluding Rye from Subgroup 3 and the county and state would not be a meaningful calculation.

Source: Calculated from U.S. Census data.

TABLE 3

COMPARISON OF AGE GROUP CATEGORIES
1970 & 1980
TOWN OF RYE, N.H.

Age Group	1970 No.	1970 %	1980 No.	1980 %	Change No.	Change %
Under 5	317	8	200	4	-117	-4
5 - 19	1,125	28	998	22	-127	-6
20 - 24	344	8	338	8	-6	0
25 - 34	458	11	701	16	+243	+5
35 - 44	466	11	518	11	+52	0
45 - 54	511	13	528	12	+17	-1
55 - 64	448	11	561	12	+113	+1
65 - 74	233	6	446	10	+213	+4
75 & Over	181	4	218	5	+37	+1
TOTAL	4083	100	4508	100	425	0

Source: U.S. Census 1970 & 1980

TABLE 4

SELECTED COMPARISONS
1980 AGE CHARACTERISTICS OF POPULATION
RYE AND STATE OF NEW HAMPSHIRE

Age Group	Percent of Total 1980 Population Rye	NH
Under 19	26%	32%
25 - 34	16	17
Over 65	15	11
Median Age	35.2	30.1

Source: 1980 U.S. Census

is becoming increasingly older, although, as shown by Table 4, Rye's population tends to have a greater portion of senior citizens than the state as a whole.

For planning purposes, these trends are important to note. The needs of the population shift as its age characteristics shift. As a result of these trends Rye can expect less pressure upon its school facilities than in the past. Perhaps more importantly, it can expect more resistance to public capital investments from the increasingly older population. As a class, persons close to the end of their income producing years and well past their childrearing years generally object to expensive public-investments. Such investments are viewed as increasing the property tax burden for facilities from which senior citizens receive no benefit. Since senior citizens tend to have greater voter participation rates than other age groups, the impact of the shifting age characteristics of the population on the ability of a community to support the community facility needs of its total population becomes even more significant.

2. Marital Status. Tables 5 and 6 present data about the marital and family head-of-household status of Rye's population. These data show that Rye is predominantly a family community, although there appears to be an increasing trend towards more households headed by one adult. This trend, of course, is typical of our society, and not a unique characteristic of Rye.

3. Education. Rye is a well educated community as documented by Table 7. Almost half of its 1980 population had completed some college education and almost one-third had completed four or more years of college. The high educational level of Rye's population is further documented by the comparative data of Table 8.

TABLE 5

MARITAL STATUS: PERSONS 15 AND OVER
1970 & 1980
TOWN OF RYE, N.H.

Population Group	1970 No.	1970 %	1980 No.	1980 %	Change No.	Change %
Males						
Single	403	27	478	27	75	0
Married	996	67	1119	64	123	-3
Separated	11	1	19	1	8	0
Widowed	44	3	40	2	-4	-1
Divorced	30	2	103	6	73	+4
	1484	100	1759	100	275	0
Females						
Single	315	20	441	23	126	+3
Married	1016	64	1121	59	105	-5
Separated	12	1	10	1	-2	0
Widowed	192	12	211	11	19	-1
Divorced	49	3	129	6	80	+3
	1584	100	1912	100	328	0

Source: 1980 U.S. Census

TABLE 6

HOUSEHOLD TYPE: ALL PERSONS
1970 & 1980
TOWN OF RYE, N.H.

Population Group	1970 No.	1970 %	1980 No.	1980 %	Change No.	Change %
In Family Household	3722	91	3872	86	150	-5
Male Householder	93	2	220	5	127	+3
Female Householder	143	4	241	5	98	+1
Non-Relatives	71	2	163	4	92	+2
Group Quarters	54	1	12	-	-42	-1
	4083	100	4508	100	425	0

Source: 1980 U.S. Census

TABLE 7

EDUCATIONAL CHARACTERISTICS
1970 & 1980
TOWN OF RYE, N.H.

Persons Age 25 And Older	1970 No.	1970 %	1980 No.	1980 %	Change No.	Change %
Elementary	187	8	106	4	-81	-4
1-3 years of high school	333	14	280	9	-53	-5
4 years of high school	908	40	1120	38	212	-2
1-3 years of college	452	20	594	20	142	0
4 years or more of college	416	18	860	29	444	+1
Total	2296	100	2960	100	664	0

Source: 1980 U.S. Census

TABLE 8

SELECTED COMPARISONS
1980 EDUCATIONAL CHARACTERISTICS OF POPULATION
RYE AND STATE OF NEW HAMPSHIRE

Category	Percent of Total 1980 Population Rye	NH
Persons completing 4 or more years of high school	87%	72%
Persons completing four or more years of college	29%	18%

Source: 1980 U.S. Census

4. Migration. During the 1970 to 1980 decade Rye had a net in-migration of 15 percent, or a total of 619 persons.[9] This statistic represents only the net in-migration, and, as shown by Table 9, a much higher percentage of Rye's population is composed of recent in-migrants. Tables 9 and 10 show that Rye is not a community dominated by a "native population," and that a sizeable portion of its population has moved to Rye since 1975.

Labor Force Characteristics

1. Composition and Participation. Tables 11 and 12 portray the composition and participation of Rye's 1980 labor force. The general trend in society of increasing participation in the labor force by females is exhibited by Rye's data, and no unusual characteristics are noted.

2. Classification and Industry of Employment. Tables 13, 14 and 15 describe the type of work performed by Rye's labor force. Most of the labor force is employed in the private sector (82%), and almost two-thirds (65%) of the labor force is employed in managerial, professional, technical, sales and administrative occupations. Also, approximately two-thirds of the labor force is employed by manufacturing, trade or professional enterprises. As illustrated by Table 13 the portions of Rye's labor force employed in managerial, professional, technical, sales and administrative occupations is higher than for the state labor force, and the percentage of its labor force employed in typical blue collar occupations is smaller. Correspondingly, as shown by Table 14, a smaller portion of Rye's labor force is employed by manufacturers than the states labor force, and a higher portion employed in retail and wholesale trade.

TABLE 9

RESIDENCE FIVE YEARS AGO
TOWN OF RYE, N.H.
1970 & 1980

Persons Five Years and Older	1970 No.	1970 %	1980 No.	1980 %	Change No.	Change %
Living in same house	1992	55	2350	56	364	1
Living in same county	738	21	771	18	33	-3
Living in different county in N.H.	108	3	317	7	209	+4
Living outside of N.H.	758	21	802	19	44	-2
TOTAL	3596	100	4246	100	650	0

Source: 1980 U.S. Census

TABLE 10

PLACE OF BIRTH
TOWN OF RYE, N.H.
1970 & 1980

	1970 No.	1970 %	1980 No.	1980 %
Born in New Hampshire	1717	46	2145	50
Born outside of New Hampshire	2036	54	2128	50
	3753	100	4273	100

Source: 1980 U.S. Census

TABLE 11

LABOR FORCE COMPOSITION
TOWN OF RYE, N.H.
1970 & 1980

	1970		1980		Change	
	No.	%	No.	%	No.	%
Total Civilian labor force	1586	100	2176	100	590	0
Male participants	1000	63	1208	56	208	-7
Female participants	586	37	968	44	382	+7

Source: 1980 U.S. Census

TABLE 12

LABOR FORCE PARTICIPATION
TOWN OF RYE, N.H.
1970 & 1980

Persons Age 16 and Over	1970		1980		Change	
	No.	%	No.	%	No.	%
Male						
Armed Forces	64	2	30	1	-34	-1
In Civilian labor force	1000	33	1208	34	208	+1
Not in labor force	333	11	474	13	-	+2
Female						
Armed Forces	0		0		0	
In Civilian labor force	686	23	968	27	282	+4
Not in labor force	927	31	866	25	-61	-6
Total persons over 16	3010	100	3546	100	536	0

Source: 1980 U.S. Census

TABLE 13

1980 OCCUPATIONAL CHARACTERISTICS OF LABOR FORCE
(EMPLOYED PERSONS OVER 16)
RYE & STATE OF N.H.

Classification	Percent NH	RYE
Managerial and Professional	23	30
Executive, admin, managerial	10	11
Professional Speciality	13	19
Technical, sales, admin support	29	35
Technicians & support	3	3
Sales occupations	10	18
Admin & Clerical	16	14
Service Occupations	12	10
Private household	1	-
Protective service	1	1
Other	10	9
Farming, forestry, fishing	2	2
Precision production, craft, repair	14	10
Operators, fabricators, laborers	20	13
Machine operators, assemblers, inspectors	12	7
Transportation & material moving	4	2
Handlers, cleaners, laborers, etc.	4	3
TOTAL	100	100

Source: 1980 U.S. Census

TABLE 14

1980 INDUSTRY OF EMPLOYMENT
(EMPLOYED PERSONS OVER 16)
RYE & STATE OF N.H.

Industry	Percent Employed NH	RYE
Agriculture, forestry, fishing	1.4	0.7
Construction	6.0	9.2
Manufacturing	31.9	18.1
Transportation, Communications and Utilities	5.4	5.7
Wholesale and Retail Trade	19.2	28.4
Finance, insurance, real estate	5.4	7.5
Business & repair services	3.2	3.9
Personal & recreation services	3.7	2.5
Professional Services	19.7	17.9
Public Administration	4.1	6.1
TOTAL	100.0	100.0

Source: 1980 U.S. Census

TABLE 15

CLASS OF WORKER
(EMPLOYED PERSONS OVER 16)
TOWN OR RYE, N.H.
1970 & 1980

	1970		1980		Change	
Class	No.	%	No.	%	No.	%
Private wage & Salary	947	61	1490	71	543	+10
Federal government	256	16	183	9	-73	-7
State government	82	5	46	2	-36	-3
Local government	91	6	148	7	57	+1
Self-employed	173	12	238	11	65	-1
TOTAL	1549	100	2105	100	556	0

Source: 1980 U.S. Census

3. Income. Tables 16 and 17 show that the earnings of Rye's labor force are relatively high. The 1980 U.S. Census found Rye's 1979 median annual household income to be $19,671 and its 1979 median annual family income to be $22,378. These income levels were 15.6 and 13.5 percent higher, respectively, than the income levels for the population of the state.

A tabulation of municipal income data published by OSP in 1983 indicates that Rye's 1979 per capita income of $9,175 was 32 percent greater than the states 1979 per capita income of $6,966 and 23 percent greater than the $7,445 of Rockingham County.[10] Only eight of the 234 municipalities in New Hampshire had higher 1979 per capita incomes than Rye. The same OSP tabulations indicated that only six (6.0) percent of Rye's population had 1979 incomes below the poverty thresholds, compared with 8.5 percent for the state's population and 6.6 percent for Rockingham County.

Estimates of Future Population

Projections of future populations of small municipalities has proven to be a very inexact science for community planners. For example, in Rye's 1964 Town Plan the consultant forecast a 1980 population of 5,482, which turned out to be almost 1,000 persons greater (and 21.6 percent higher) than Rye's actual 1980 population. Also, as recently as 1978 the Office of State Planning was projecting a 1980 population of 5,230 for Rye.[11] Thus, attempts to precisely predict future local populations are risky, at best. Such attempts can also be somewhat misleading in rapidly growing regions because they fail to account for an important factor, which is the impact of the growth management policies of a particular town. Methods

TABLE 16

1979 ANNUAL FAMILY INCOME
TOWN OF RYE N.H.

	No.	%
Less than $5,000	30	2
$5,000 - $9,999	139	11
$10,000 - $14,999	146	12
$15,000 - $24,999	449	35
$25,000 - $49,999	390	30
$50,000 and over	126	10
TOTAL	1280	100

Source: 1980 U.S. Census

TABLE 17

FAMILIES BY POVERTY STATUS
TOWN OF RYE, N.H.
1970 & 1980

Status	1970 No.	1970 %	1980 No.	1980 %	Change No.	Change %
Income below poverty level	73	6	43	3	-30	-3
Income 100%-124% of poverty level	54	5	29	2	-25	-3
Income 125% or more of poverty level	1010	89	1208	95	198	+6
TOTAL	1137	100	1280	100	143	0

Source: 1980 U.S. Census

based on historical patterns cannot account for future policies, and, of course, in any long span of future years, the local growth policies may change and change and change again, rather than remain consistent.

As noted above, the N.H. Office of State Planning does prepare future population estimates for the municipalities of New Hampshire. Its most recent projections were issued in April, 1981 prior to release of the 1980 U.S. Census data, and were based on demographic and economic models utilizing national, state and county trends. Those projections estimate the following for Rye:

TABLE 18

1981 OSP POPULATION PROJECTIONS
TOWN OF RYE, N.H.

Year	Estimated Population
1980	4513
1985	4744
1990	4984
2000	5454
2005	5622

The consultant believes these projections to be realistic, if for no other reasons than that they correctly anticipated the 1980 population and that they project a 1985 population within 2.8% of the consultants estimate of the December 1984 population (See Table 1).

NATURAL RESOURCES ASSESSMENT

The natural features of Rye affect master planning in two ways: (1) some of Rye's natural conditions place limitations on development which must be recognized in the planning process; and (2) some of Rye's natural resources are unique coastal resources, the preservation of which warrants heavy weight in the planning process. The presentation which follows assesses Rye's natural resources from both perspective's and draws heavily on information contained in two planning studies prepared for the Town of Rye in recent years:

- Water Quality Management Plan, Town of Rye, N.H. - Phase I Final Report, Wright Pierce Engineers and D.S.I. Environmental Engineers, January, 1982. Hereinafter referred to as WQMP.

- Rye's Coastal Resources ... How Are We Taking Care of Them? Municipal Coastal Inventory and Assessment Report, Southeastern New Hampshire Regional Planning Commission, August 23, 1979.

Natural Conditions Limiting Development

The topography, geology, soils, hydrology and floodplains of a community constrain its development potential. The limitations which each of these place on development in Rye are summarized below.

1. Topography. Rye's land is gently sloping and ranges in elevation from sea level to approximately 150 feet in elevation at Breakfast Hill in the southwest corner of the town. The town is traversed from northeast to southwest by a low ridge, and five smaller ridges run from the diagonal ridge eastward to the ocean. In between the ridges are tidal and fresh-water marshes, thus the roadway development in the town has followed the ridgelines. The predominant slope category in Rye is 3 to 8

percent, and, in general, topography, per se, does not constrain the overall development of the town.

2. Geology and Soils. Sections 3.2.2 and 3.2.3 and Plates 13 and 16 of the WQMP present detailed information about the surficial geology and soils of Rye. The major conditions which limit development are:

1. Tidal marshes (see wetlands section below).

2. Fresh water wetlands consisting of Whitman very stoney loam and muck occupying lowlands and having a seasonal high water table at or near the surface.

3. Shallow-to-bedrock soils of the Hollis-Charlton type, which are primarily found in the northern and southwestern portions of Rye.

4. Sutton very stoney loams having a seasonal high water table one to four feet from the surface, which are found in transition areas between the ridgelines and the low-lands.

The above soil conditions are serious limitations on development in Rye because the town has no public sewers and must rely on on-site septic systems for disposal of sanitary waste. Based on waste disposal considerations, the WQMP placed the soils of Rye into three development capability classifications, exhibited on Plate 16 of that study: (1) soils suitable for development; (2) soils marginally suited for development; and (3) soils not suited for development. The tidal and fresh water wetlands fall into the latter classification, as do the Hollis-Charlton soils located in areas which abut wetlands. Other areas of the Hollis-Charlton type and the Sutton type are classified as marginally suited for development. The soils suitable for development exist in relatively narrow bans along the ridges occupied by Washington Road, Wallis Road, Central Road, Locke Road, Groves Road, Cable Road and South Road. The WQMP also identified seven areas in Rye where existing development densities are

inconsistent with the soil capabilities. These seven areas are described in Appendix II.

The Town of Rye has recognized the limitations of its soils in its Zoning Ordinance, Building Code and Subdivisions Regulations, the Zoning Ordinance establishes a Wetlands Conservation District which essentially prohibits building construction in the freshwater marshes, tidal marshes, streams and ponds and soils defined as poorly or very poorly drained by the 1975 Soil Survey of Rye performed by the federal Soil Conservation Service. The Subdivision Regulations and Building Code require that all septic systems receive the approval of the New Hampshire Water Supply and Pollution Control Commission. In addition special criteria related to the depth to bedrock, seasonal high water table, land slope and soil percolation rate are incorporated into the subdivision and building regulations. The WQMP concluded that more stringent design standards for septic systems were not needed.[12]

3. Hydrology. Rye is part of two major drainage basins, the Piscataqua River Basin and the Coastal Basin. The ridge which traverses Rye diagonally from Little Harbor to Breakfast Hill forms the divide between the two basins. Within these two basins are six smaller drainage basins, as described in Table 19, and as shown on Plate 3. Little information exists about the groundwater basins in Rye, but the WQMP notes that the assumption that they generally coincide with the surface water basins is not wholly inaccurate.

The primary relationship between hydrology and development concerns water quality. During 1979 the WQMP conducted a sampling program at 21 sampling stations in the six basins listed in Table 19. The data indicated that the inland streams and marshes failed to meet the Class B water

quality standards established by the New Hampshire Water Supply and Pollution Control Commission.[13] However, the deficiencies noted appeared to be from natural causes rather than from man made pollution, and the WQMP specifically noted the absence of fresh sources of human pollution. The study characterized the water quality samples from the tidal marshes as "indicating uniformly excellent results."

TABLE 19

DRAINAGE BASINS
TOWN OF RYE, N.H.

Drainage Basin	Stream Length (mi.)	Watershed Area (sq. mi.)
Piscataqua Basin		
Witch Creek	0.8	0.3
Berry's Brook	6.2	5.9
Coastal Basin		
Concord Point	1.9	2.2
Awcomin Marsh	1.2	1.2
Rye Harbor	1.7	1.2
Bailey Brook	2.9	2.6

Source: WQMP, p. 2

The WQMP also analyzed water quality data from the Garland Road well owned by the Rye Water District and the Jenness Beach well owned by the Hampton Water Works Company. Additionally, samples were taken at fifteen private wells. Based on this data the WQMP concluded that groundwater in Rye is not being adversely affected to a significant extent by on-site septic systems. However, one must understand that groundwater resources are an important natural resource for Rye, and the testing of the WQMP was of a limited scope. As noted in Section I-g herein, Rye must recognize the importance of identifying and protecting its groundwater resources.

4. Floodplains. The floodplains of Rye are well mapped. In November, 1984 the Town of Rye received FIRM maps done as part of the

federal Flood Insurance Program.[14] The FIRM maps delineate the 100 year Special Flood Hazard Area of Rye and segment the hazard area into six zones: A, AO, A2, V2, V3 and B. Plate 4 shows the general coverage of the Flood Hazard Area in Rye, as it existed prior to the 1984 map refinements. The 1984 boundaries differ somewhat from Plate 4, and one should not rely on Plate 4 for anything except a very general portrayal of the extent of Ryes Flood Hazard Areas.

Generally the undeveloped land in Rye which is in the 100 year flood plain depicted by the FIRM maps is land which is also classified as wetlands and thereby precluded from development by town ordinance. However, along the coast sizeable portions of the floodplain are developed. The requirements of the Flood Insurance Program, which the Town of Rye participates in, represent a significant constraint on redevelopment in Rye's coastal areas because new or substantially improved residential construction must have the first floor located above the base flood elevation and because new or substantially improved non-residential structures located below the base flood elevation must be floodproofed.[15] Further floodplain development constraints are imposed by the NHWSPCC which will not approve a new on-site septic system located in a fifty-year floodplain.

Unique Coastal Resources

Rye has unique coastal resources which warrant special attention in the master planning process. These resources are its beaches and dunes; rocky shore areas; wetlands; and areas of scenic importance, as well as several miscellaneous unique coastal resources.

1. Beaches and Dunes. Rye has five beach and sand dune areas totaling 87 acres, which are the Wallis Sands, Foss, Jenness, Sawyers and Bass Beaches.[16] The dunes areas have been developed for many years, but the beaches appear to be well protected from development by the town's floodplain and wetland ordinances. The subject of public access to beaches is discussed in the portions of the master plan concerning recreation.

2. Rocky Shore Areas. The state coastal zone management program has identified sixteen (16) areas in Rye that meet the following definition of rocky shores:

> Shore formation of a rock substrate which are sprayed, washed, or submerged by tidal waters, extending seaward to a depth of 60 feet, including but not limited to a headland, rocky ledge, an outcropping, or glacial erratic.[17]

The areas, from north to south are:[18]

- adjacent to and east of Wentworth Road north of Sheafes Point
- Sheafes Point
- adjacent to and on either side of Frost Point (Fort Dearborn)
- Odiorne's Point
- Odiorne's Point south to Wallis Sands State Beach
- Concord Point
- Rye North Beach (Sandy Beach)
- Little Neck (also called Varrells Point)
- Lockes Neck (also called Straw's Point)
- Sawyers Beach (and south to the North Hampton town line)

Rye's rocky shores are not protected by any special local ordinances, although the floodplain ordinance and state ownerships of some rocky shoreline probably provide adequate protection.

3. Wetlands. Tidal and freshwater wetlands comprise approximately 38 percent of Rye's total land area.[19] The WQMP found that:

> The general assessment of the quality of wetlands in the Town of Rye, both in remote areas and those close to habitation, is that they are in very good condition and represent natural (for the most part unaltered) resources whose integrity should be preserved and protected. The major threat to Rye's wetland ecosystems -- freshwater, estuarine and tidal marsh -- and thus to water quality, is land fill operations.[20]

The WQMP determined that there were seven (7) major systems of wetlands in Rye, as depicted on Plate 5:

1. Berry's Brook - Bellyhack Bog
2. Witch Creek
3. Fairhill Swamp
4. Concord Point Drainage Basin
5. Awcomin Marsh
6. Rye Harbor Marsh
7. Bailey Brook

Of these, the WQMP found the Berry's Brook-Bellyhack Bog system to be the most pristine and the Concord Point Drainage Basin to be the most threatened.[21]

Land fill operations pose the greatest threat to Rye's wetlands. However, the Wetlands Conservation Ordinance, adopted in 1977, if properly enforced, should prevent encroachment on wetlands. In brief, the ordinance prohibits structures in areas that are fresh water or tidal marshes, streams and ponds, and soils defined as poorly drained by the 1975 Soil

Conservation Service Survey. Additionally, tidal marshes and Eel Pond are further protected with a fifty foot buffer requirement. Further protection is given to Rye's wetlands by NH RSA Chapter 483-A which requires that anyone planning to excavate, remove, fill, dredge or construct within a wetland obtain a permit from the NH Wetlands Board. Importantly, a community which has mapped its prime wetlands is given special status in the state's permit approval process because the Wetland's Board may not approve permits unless it is able to find on the basis of clear and convincing evidence in the record that the specific statutorily established values inherent in wetland preservation will not be impaired.[22] According to the NH Wetlands Board, Rye has not yet filed a prime wetlands map.

4. Areas of Scenic Importance. The state coastal zone management program has identified seven (7) areas of coastal scenic importance in Rye.[23] These seven areas include the Isles of Shoals, Rye Harbor and all scenic sections of Ocean Boulevard. In the short range these areas appear protected from development which would encroach upon scenic values by local and state wetlands and floodplain regulations and by the fact that the state owns Rye Harbor, Odiorne's Point, the Ocean Boulevard right-of-way and all ledge below the mean high tideline.

5. Other Unusual Areas. The state coastal zone management program has also identified eight (8) areas in Rye the uniqueness or character of which set them apart from the other categories of coastal resources. These areas are:[24]

1. Little Harbor
2. Berry's Brook Estuary (i.e. the Berry's Brook - Bellyhack ecosystem)

3. Fairhill - White Cedar Swamp
4. Odiorne's Point State Park
5. Eel Pond
6. Burke's Pond (and Brown's Mill Pond)
7. Rye Ledge
8. Isles of Shoals

These areas all appear well protected by the state and local regulations previously described herein, with the possible exception of Burkes Pond and Brown's Mill Pond which might be further protected by the 50 foot buffer requirement in the Wetlands Conservation Ordinance.

Summary: Natural Resources Assessment

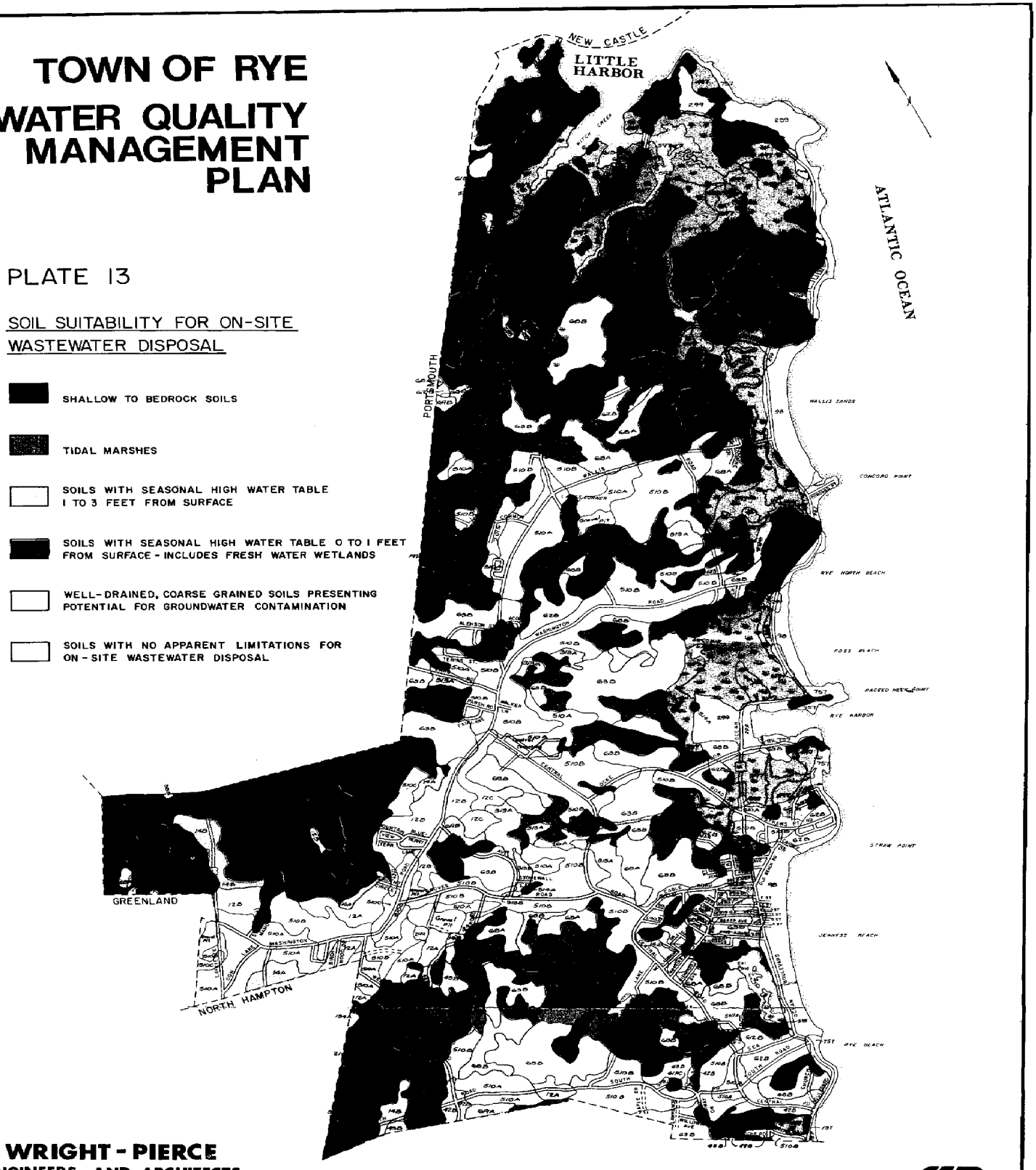
The natural environment significantly constrains development in Rye. The constraints are mostly caused by soil conditions, floodplains and wetlands with much land being constrained by all three conditions. The extent of the constraints is documented by the WQMP which found that 78 percent of Rye's non-publicly owned, undeveloped land was wetlands.[25] In addition to these important environmental constraints, Rye has beaches, rocky shores, scenic areas and other areas of unique ecological character which warrant special attention and protection in the master planning process.

TOWN OF RYE

WATER QUALITY MANAGEMENT PLAN

PLATE 13

SOIL SUITABILITY FOR ON-SITE WASTEWATER DISPOSAL



- SHALLOW TO BEDROCK SOILS
- TIDAL MARSHES
- SOILS WITH SEASONAL HIGH WATER TABLE 1 TO 3 FEET FROM SURFACE
- SOILS WITH SEASONAL HIGH WATER TABLE 0 TO 1 FEET FROM SURFACE - INCLUDES FRESH WATER WETLANDS
- WELL-DRAINED, COARSE GRAINED SOILS PRESENTING POTENTIAL FOR GROUNDWATER CONTAMINATION
- SOILS WITH NO APPARENT LIMITATIONS FOR ON-SITE WASTEWATER DISPOSAL

WRIGHT - PIERCE
ENGINEERS AND ARCHITECTS
PORTSMOUTH, NEW HAMPSHIRE

BASE MAP PREPARED BY N.H. OFFICE OF STATE PLANNING OCTOBER 1979 N.H. COASTAL PROGRAM

1000 500 0 1000 2000 FEET
SCALE 1" = 1000'

TOWN OF RYE
WATER QUALITY MANAGEMENT PLAN

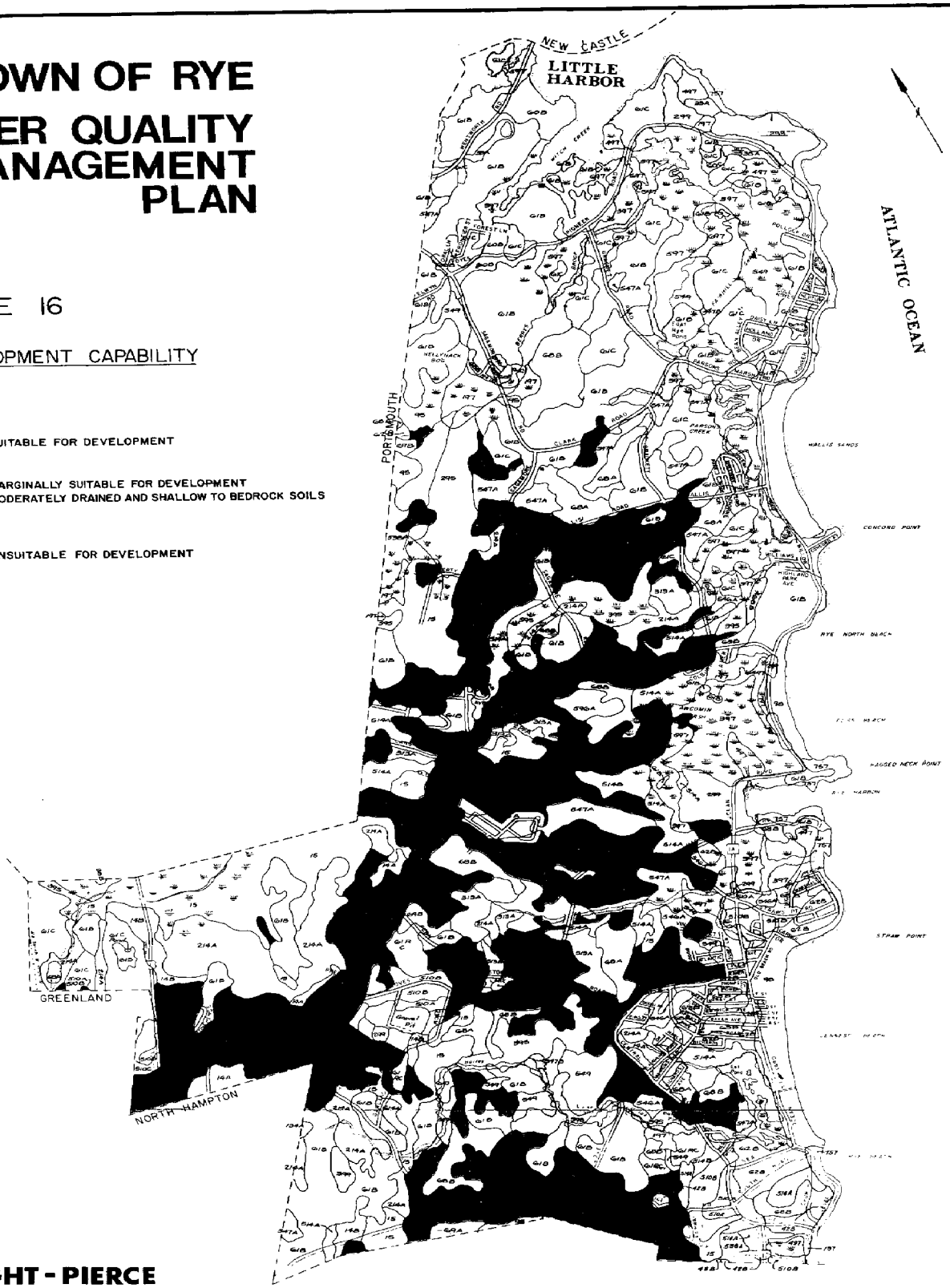
PLATE 16

DEVELOPMENT CAPABILITY

SUITABLE FOR DEVELOPMENT

MARGINALLY SUITABLE FOR DEVELOPMENT
MODERATELY DRAINED AND SHALLOW TO BEDROCK SOILS

UNSUITABLE FOR DEVELOPMENT



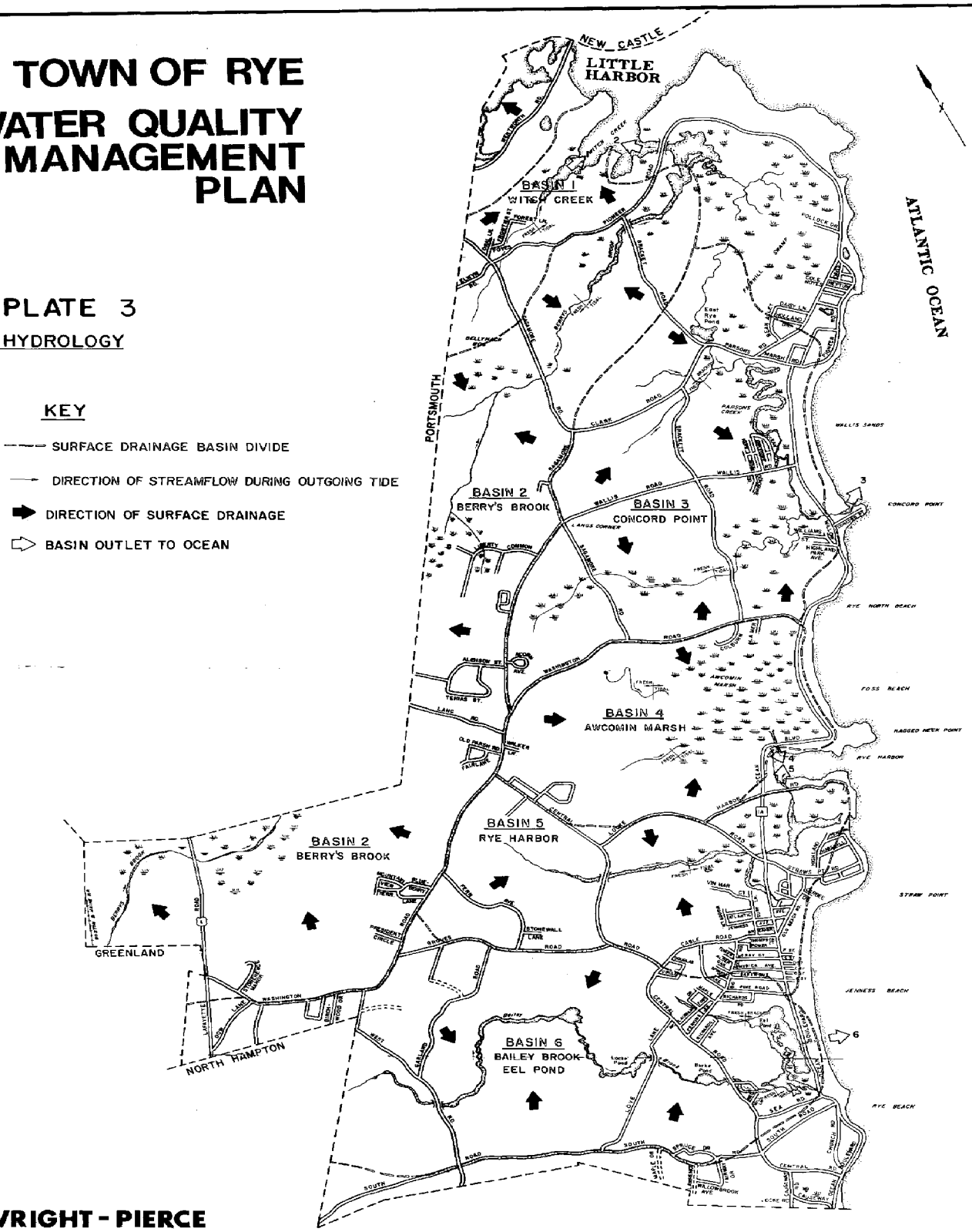
WRIGHT - PIERCE
ENGINEERS AND ARCHITECTS
PORTSMOUTH, NEW HAMPSHIRE

BASE MAP PREPARED BY N.H. OFFICE
OF STATE PLANNING OCTOBER 1979
N.H. COASTAL PROGRAM

1000 500 0 1000 2000 FEET
SCALE 1" = 1000'

TOWN OF RYE
WATER QUALITY MANAGEMENT PLAN

PLATE 3
HYDROLOGY



WRIGHT - PIERCE
ENGINEERS AND ARCHITECTS
PORTSMOUTH, NEW HAMPSHIRE

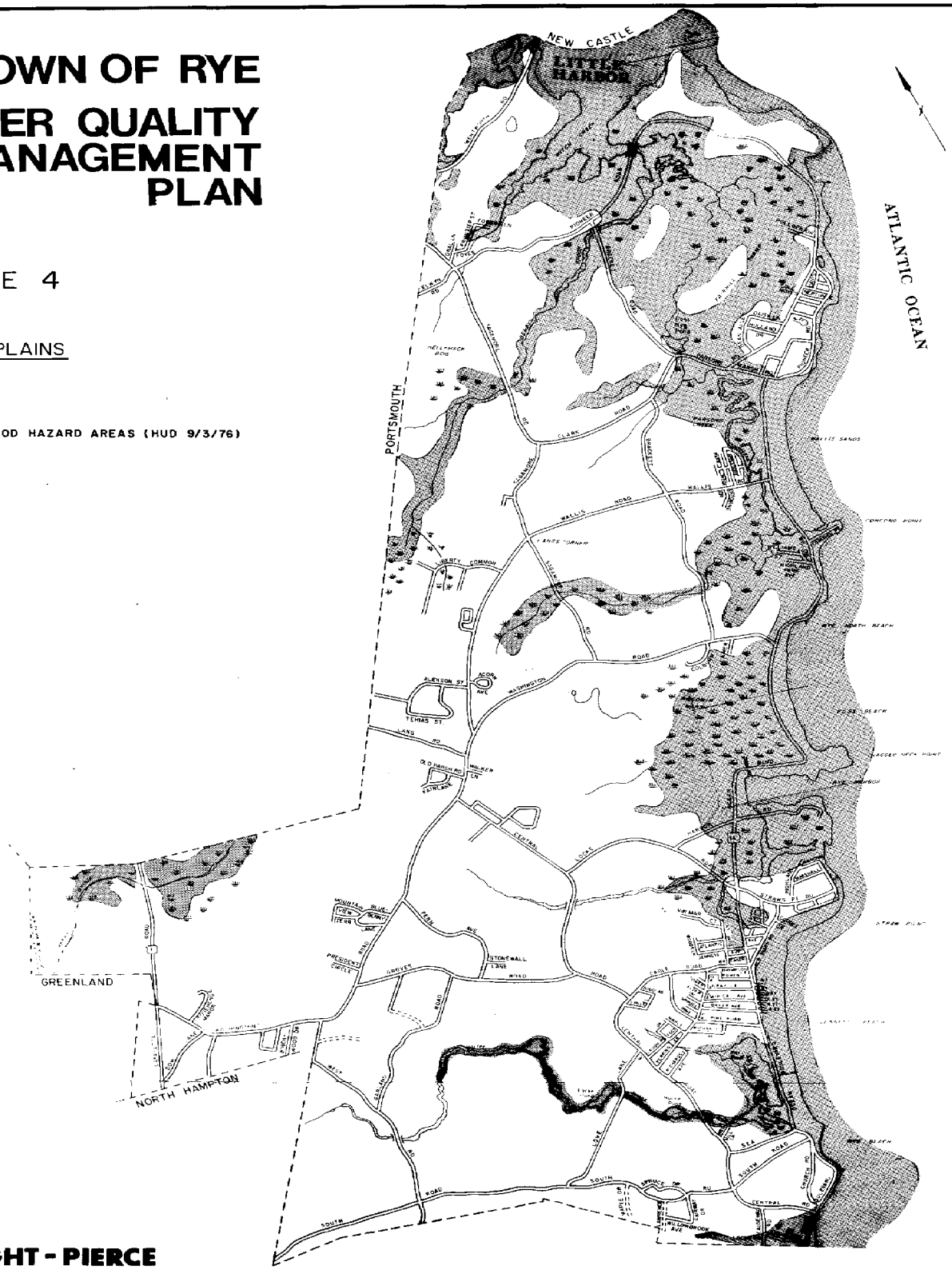
BASE MAP PREPARED BY N.H. OFFICE
OF STATE PLANNING OCTOBER 1979
N.H. COASTAL PROGRAM

TOWN OF RYE
WATER QUALITY MANAGEMENT PLAN

PLATE 4

FLOODPLAINS

FLOOD HAZARD AREAS (HUD 9/3/76)



WRIGHT - PIERCE
ENGINEERS AND ARCHITECTS
PORTSMOUTH, NEW HAMPSHIRE

BASE MAP PREPARED BY N.H. OFFICE
OF STATE PLANNING OCTOBER 1979
N.H. COASTAL PROGRAM

1000 500 0 1000 2000 FEET
SCALE

TOWN OF RYE

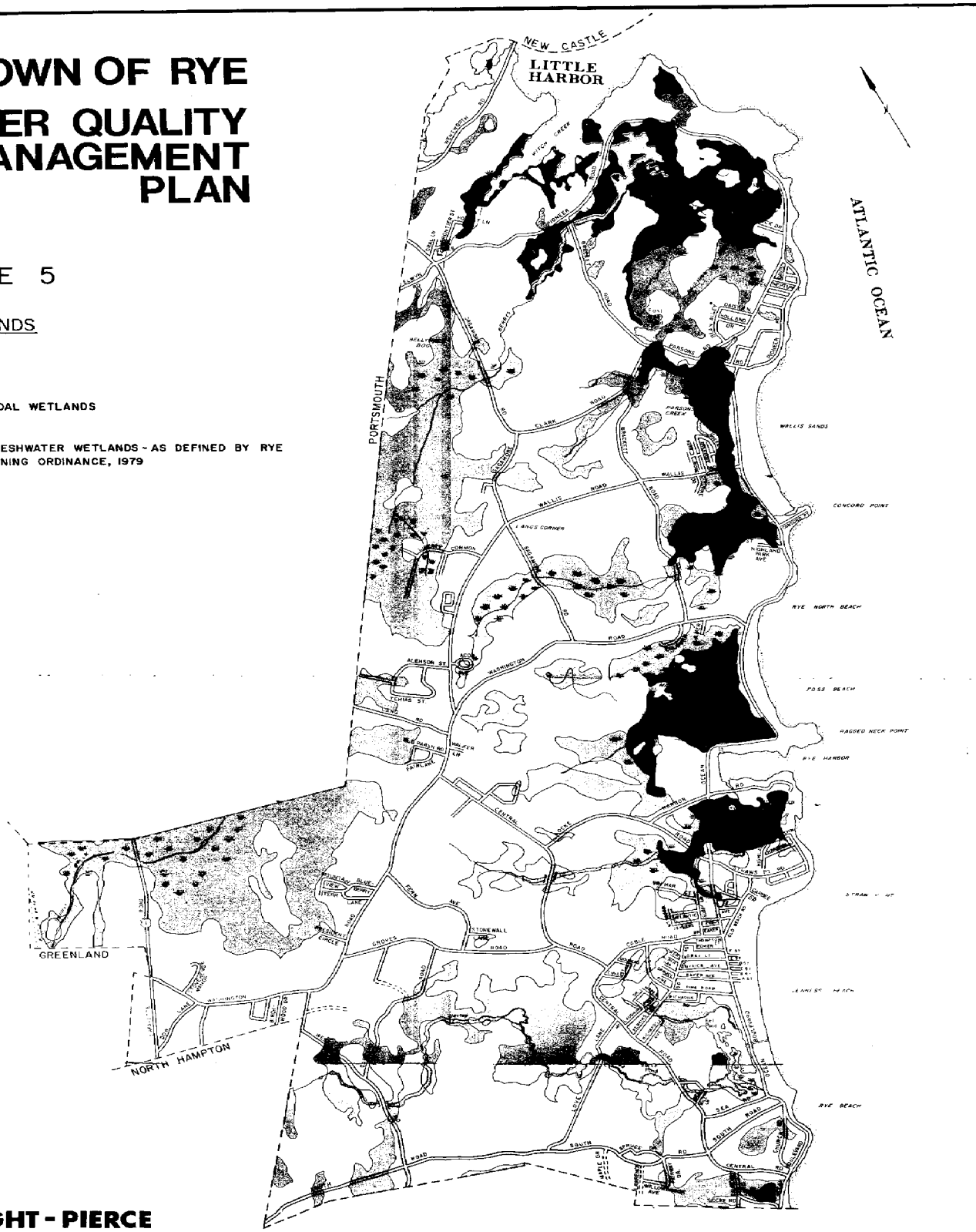
WATER QUALITY MANAGEMENT PLAN

PLATE 5

WETLANDS

TIDAL WETLANDS

FRESHWATER WETLANDS - AS DEFINED BY RYE ZONING ORDINANCE, 1979



WRIGHT - PIERCE
ENGINEERS AND ARCHITECTS
PORTSMOUTH, NEW HAMPSHIRE

BASE MAP PREPARED BY N.H. OFFICE OF STATE PLANNING OCTOBER 1979
N.H. COASTAL PROGRAM

SCALE 1" = 1000'

LAND USE ASSESSMENT

Rye is presently 29 percent developed, with residential land use being the dominant land use. The nature of Rye's residential land use varies tremendously, with the coastal areas having high density concentrations of permanent and seasonal dwellings on small lots and inland areas having a low density pattern of residential development, primarily spread out along Rye's roads. More than half of Rye's open land is wetlands which will not be developed due to state and local restrictions. Difficult soil conditions and access problems will present other land from being developed, and, at most, approximately 1500 acres of presently open land may have some potential for future development. Of Rye's seven drainage basins, the two most southerly basins (Rye Harbor Basin and Bailey Brook Basin) have the greatest potential for development change that would challenge the environment.

Description of Methodology

The consultant conducted a visual survey of all existing land use in Rye during November, 1984. Land use information was recorded on copies of the Town's tax maps and analyzed. Computations of acreages were totaled directly from the tax maps, which show the area of each parcel of land in Rye. In tabulating residential land use the consultant made one procedural judgement which is important to understand. Large tracts of land occupied by only one house were generally considered to have only two acres of "residential land use," and the balance of the tract was considered vacant. Since Rye has approximately 127 homes on tracts larger than four (4) acres in size, this method of analyzing existing land use results in a much lower

total acreage of residential land than indicated by previous studies. However, the current method is a more realistic way to describe Rye's existing land use since most of the land of a large tract having only one house is, in fact, vacant and is either susceptible to development or permanently preserved as open space, depending on the desire of the owner.

In estimating the development potential of vacant land the consultant compared the vacant land shown on each tax map with Plates 4, 5, 13 and 16 of the WQMP, which indicate development restrictions due to soils, flooding and wetlands. Based on these considerations and considerations of parcel size and access, the consultant estimated the potentially developable acreages.[26]

Overall Pattern of Existing Land Use

Table 20 summarizes the existing land use of Rye. Rye's land is predominantly vacant (71.2 percent), and the dominant use of developed land is residential. Transportation consisting primarily of roads and streets comprises 5.0 percent of the land use, and commercial and institutional uses cover 1.8 and 1.3 percent of the land, respectively.

1. Residential. Table 20 indicates that about one-fifth (20.7 percent) of Rye's land is used for residential purposes, and Tables 21 and 24 show the density of residential use. As shown by Table 21, the density varies tremendously between Rye's fully developed coast and its relatively sparsely developed inland area, each of which holds about half of Rye's residential units.[27] As shown by Table 20 the median coastal lot size falls in the 10,000 to 20,000 square foot range and 39 percent of the coastal lots are less than 10,000 square feet in size, whereas in inland

areas the median lot size is between one and two acres and few lots are less than 10,000 square feet.

TABLE 20

SUMMARY OF 1984 EXISTING LAND USE
RYE, N.H.

CATEGORY	ACRES	PERCENT
Residential	1737	20.7
Commercial	149	1.8
Institutional	106	1.3
Transportation	419	5.0
Vacant/Open	5974	71.2
TOTAL	8385	100.0

Source: 1984 Visual Survey and Town of Rye Tax Maps

The spatial pattern of Rye's residential development also varies tremendously between inland and coastal areas. Eighty percent of Rye's inland residential development is spread out along its roads, which have existed since colonial times, and 20 percent exists in 14 small subdivisions, only four of which have more than 12 lots. Additionally 62 mobile homes occupy one crowded park located on Route 1. In contrast, the

coastal area is comprised of five distinct, concentrated settlements (Rye Beach, Jenness Beach, Lockes Neck, Oceanview Terrace and Fairhill Manor) plus two miles of relatively dense shoreline development between Rye Harbor and Wallis Sands State Beach. The density of the coastal area varies from highs of four (4) to six (6) units per acre for Fairhill Manor and Oceanview Terrace, which have almost no undeveloped land to less than one unit per acre for Rye Beach which has ample open space and relatively large lots. As can be seen from Table 21, approximately 43% of Ryes lots are less than 20,000 square feet in size, and the median lot size for the town as a whole falls in the 20,000 to 30,000 square foot range.

TABLE 21

1984 DISTRIBUTION OF LOT SIZE
COASTAL AND INLAND AREAS
RYE, N.H.

Lot Size	Inland		Coastal*		Total	
(Sq. Ft. and Acre)	No.	%	No.	%	No.	%
Less than 10,000	16	1	377	39	393	20
10,000 - 19,999	165	16	307	32	472	23
20,000 - 29,999	140	13	114	12	254	13
30,000 - 1 acre	166	16	60	6	226	11
1 - 2 acre	363	34	67	7	430	21
2 - 4 acre	92	9	30	3	122	6
Greater than 4 acres	113	11	14	1	127	6
TOTAL	1055	100%	969	100%	2024	100%**

*Coastal areas include all of Rye Beach and Jenness Beach precincts; Fairhill Manor; Oceanview estates; Lockes Neck; and all other land along Route 1A south of Odiorne State Park.

**Table adjusted for rounding off entries.

Source: 1984 Visual Survey and Town of Rye Tax Maps

2. Commercial. Very little (only 1.8 percent) of Rye's land is used for commercial purposes. Rye's commercial land can be classified into three groups: (1) the Route 1 commercial corridor; (2) coastal land serving the commercial needs of summer tourists; and, (3) convenience retail establishments spread out along Rye's roads. With the exception of Route 1 frontage, one word can be used to describe Rye's commercial land development -- "scattered." Its convenience establishments are spread along its more heavily traveled roads, such as Washington Road and Central Road, and, while there is some clustering at Foyes Corner, no significant concentrations for commercial use exist. The same scattered pattern of restaurant, motel, cabin and general store commercial land use exist along coastal Route 1A, and there is no commercial strip per se along the coast. Appendix III presents a listing of the types of businesses found in Rye, grouped into the above described categories. It is noted that some of Rye's Route 1 and coastal commercial land uses are of marginal quality and that some represent significant under-utilization of commercial land. Cabin developments might generally be considered an example of this.

3. Industry. Rye has no industry except Rand Lumber Company.

4. Institutional. Only about 149 acres (1.3 percent) of Rye's land is used for institutional purposes. Institutional land use includes municipal facilities, churches, cemeteries, the Rannie Webster Nursing Home and schools.

5. Vacant. Table 22 shows the status of Rye's vacant land, 75 percent of which can be classified as not developable. Most of the land classified as not developable is wetlands protected by state and local legislation. However, in addition to wetlands, publicly owned open space, private golf courses, landlocked parcels, and parcels with difficult soil

TABLE 22

1984 ESTIMATED STATUS OF VACANT LAND
RYE, N.H.

CATEGORY	ACRES	PERCENT
Total Vacant Land[1]	5974	100.0
Wetlands[2]	(3185)	53.3
Public Recreation[2] (Non-wetland)	(436)	7.3
Potentially Developable[3] (As Residential)	(1200)	20.1
Potentially Developable[3] (As Commercial)	(275)	4.6
Other Non-developable[4]	878	14.7

Sources: 1 - 1984 Land Use Survey
2 - 1982 Phase I WQMP
3 - 1984 Tax Map Analysis
4 - Balance of 1 minus 2 and 3's.

and access characteristics were classified as non-developable. About 25 percent, or 1475 acres, of Rye's vacant land is potentially developable.[28] Of this about 275 acres lie along Route 1 or between Route 1 and the Greenland town line, which should be considered an area for non-residential development; and, about 1200 acres are in area potentially suited for residential development. Most of the land categorized as potentially suited for residential development lies in relatively small tracts, mostly twenty (20) acres or less in size. The median size tract is

fourteen (14) acres in size; only nine (9) tracts of over twenty (20) acres were identified; and only two tracts greater than forty (40) acres were identified. It is also important to note that Rye's abundance of vacant road frontage, which served its residential development needs in the past, is almost depleted. The consultant attempted to estimate from the land use survey/tax map analysis the remaining frontage lot capacity at the present zoning requirement of 150 feet of frontage. It was determined that a maximum of about 190 frontages remain available, and it is suspected that marginal soil conditions and ownership desires may prevent more than half of these remaining frontages from developing in the foreseeable future.

Land Use Characteristics of Watersheds

The WQMP divided Rye into six watersheds, portrayed on Plate 3. Because of the importance of the preservation of water quality in Rye, future land use decisions should be made with an understanding of the characteristics of each of these watersheds.

Table 23 summarizes the land use of each watershed and Table 24 describes the residential densities of each. Table 25 attempts to assess the future development stress faced by each watershed by comparing the potentially developable acreage per square mile and the potential increase in overall development percentages for each watershed. Table 25 confirms that the Rye Harbor and Bailey Brook watersheds, which comprise the southeastern portion of Rye, have the greatest potential for future development, and, thus, warrant close master planning attention.

1. Witch Creek Basin.[30] The relatively small Witch Creek watershed abuts the City of Portsmouth. It has seen little new development in the past fifteen years, and it contains Foye's Corner, which is

distinctly commercial in nature, although residential lots are mingled with business lots. The open space remaining in the watershed consists mostly of the wetlands of Witch Creek and a private golf course. However, there are two large tracts of land with long frontages on Pioneer Road which are considered marginally suited for development, in spite of shallow to bedrock soil conditions.

2. Berry's Brook Basin. The Berry's Brook watershed traverses Rye from the southwest corner of town at Breakfast Hill to the northwest corner at Witch Creek. It includes Bellyhack Bog, which is one of Rye's most important natural features, and, generally it encompasses all land along the towns western border. The watershed contains the three largest subdivisions in Rye, and more than half of the towns residential homes that are located in subdivisions. As a result of the relatively recent development of this part of Rye, the lot sizes in the Berry's Brook watershed are generally larger than those of the other watersheds. Approximately 75 to 80 percent of the undeveloped land in the watershed is undevelopable due to wetland restrictions. However, sizeable portions of the watershed lying along the west side of the ridge which Washington Road and Wallis Road follows contain soils suitable for development, and a number of large tracts with suitable soils have access to road frontage. Thus, about 320 acres are estimated as potentially suited for future residential development. In addition, the 74 acre site of a former airport located on Route 1 contains land suited for future commercial or industrial development.

3. Fairhill Swamp Basin. The WQMP considered the Fairhill Swamp Basin to be part of the Berry's Brook Basin; however, because of its distinct characteristics, this study has segregated it. From an overall

TABLE 23

1984 LAND USE BY DRAINAGE BASIN
RYE, N.H.

Drainage Basin	Residential Acres	Commercial Acres	Institutional Acres	Undeveloped Acres	Total Acreage
Witches Creek	90	13	0	332	435
Berry's Brook	325	57	60	1576	2018
Fairhill Swamp	48	3	0	432	483
Concord Point	401	18	0	879	1298
Awcomin Marsh	119	10	22	589	740
Rye Harbor	334	18	1	563	916
Bailey Brook	420	30	23	1205	1678
Subtotal	1737	149	106	5576	7568
Transportation Use		—	—	—	419
Water Surface		—	—	398	398
TOTAL	1737	149	106	5974	8385

Source: 1984 Visual Land Use Survey and Town of Rye Tax Maps

TABLE 24

1984 DISTRIBUTION OF LOT SIZE
BY DRAINAGE BASIN
RYE, N.H.

DRAINAGE BASIN

LOT SIZE (Sq. Ft. & Acreage)	Witch Creek	Berry's Brook	Fairhill Swamp	Concord Point	Awcomin Marsh	Rye Harbor	Bailey Brook	Total
Less than 10,000:								
No.	7	0	74	112	6	130	64	393
%	6%	0	55%	22%	6%	28%	14%	19%
10,000 - 19,999:								
No.	34	48	39	136	15	100	100	472
%	32%	18%	29%	27%	14%	22%	23%	23%
20,000 - 29,999:								
No.	23	29	10	67	14	51	60	254
%	22%	11%	8%	13%	13%	11%	14%	13%
30,000 - 1 acre:								
No.	17	52	10	57	14	45	31	226
%	16%	20%	8%	11%	13%	10%	7%	11%
1-2 Acres:								
No.	14	91	0	88	36	94	107	430
%	13%	34%	0	17%	34%	20%	24%	22%
2-4 Acres:								
No.	8	20	0	20	10	17	47	122
%	7%	8%	0	4%	10%	4%	11%	6%
Greater than 4 Acres:								
No.	4	24	2	32	10	24	31	127
%	4%	9%	-	6%	10%	5%	7%	6%
TOTALS No.	107	264	135	512	105	461	440	2024
%	100%	100%	100%	100%	100%	100%	100%	100%

Source: 1984 Visual Land Use Survey and Town of Rye Tax Maps

perspective, the area is sparsely developed because of the vast acreages of both Fairhill Swamp and Odiorne Point State Park. However, the small part of the watershed that is developed has some of the most intense development in Rye. Fairhill Manor has approximately 135 developed residential parcels, 55 percent of which are on lots less than 10,000 square feet in size. The soils of Fairhill Manor are shallow to bedrock, thus the potential for contamination of the swamp from subsurface septic systems appears high. There is no remaining vacant land in the watershed which could be considered developable, other than a few vacant lots in Fairhill Manor, which probably could not meet present NHWSPCC standards for on-site septage disposal.

4. Concord Point Basin. The Concord Point watershed includes all land that ultimately drains into the "Stink Creek" outlet at Concord Point. This includes the Parson's Creek drainage, Wallis Sands, Concord Point, Oceanview Terrace and Rye North Beach along the coast, all of which are densely developed; and, it also includes inland residential development along Clark Road, Wallis Road, Brackett Road and the north side of Washington Road. The portion of the Concord Point watershed lying between Washington Road and Wallis Road contains large acres of soils considered suitable for development and many tracts in these areas have road frontage or potential road access. Additionally, two large tracts off Brackett Road and Clark Road have road frontage but shallow to bedrock soils considered marginal for development. Overall, approximately 26 percent of the open land in the watershed might be considered potentially developable.

5. Awcomin Marsh Basin.[31] The Awcomin Marsh watershed contains all land that drains into Awcomin Marsh, which ultimately outlets into Rye Harbor. Relatively little coastal development drains into the marsh (only

about 25 properties along the west side of Ocean Boulevard). Most developed land draining into the marsh lies along the south side of Washington Road and the north sides of Central Road and Locke Road. The western half of the watershed contains soils suitable for development, and it is estimated that approximately 100 acres may be potentially developable, including one large tract of about 55 acres.

6. Rye Harbor Basin. The Rye Harbor watershed contains the most diversity of land use of Rye's seven watersheds. On the east it contains most of the densely developed Jenness Beach Precinct; the less dense Lockes Neck area; Rye Harbor; and the marsh south of the harbor. The watershed stretches west to Washington Road and includes relatively new development along Fern Road as well as the new 21 lot Rand Spring Development. Much of the land along the ridges bordering the watershed to the south, west and north contains soils suitable for development, and many tracts appear to be potentially accessible, particularly in the area between Washington Road and Central Road.

7. Bailey Brook Basin. The Bailey Brook Basin comprises most of the south part of Rye, including the Rye Beach Precinct. It is the second largest of Rye's watersheds and the least intensely developed. However, unlike the larger Berry's Brook watershed and the Concord Point watershed (which is of similar size), the Bailey Brook watershed contains relatively little marshland. The development limitations that exist consist primarily of soil limitations, but there are substantial acreages of soils suitable for development or marginally suitable, particularly along South Road. There are also a number of large tracts with good frontage, and, from an overall perspective, this watershed should be considered the most susceptible to significant change through development. One factor limiting

the pace of development in this watershed may be the fact that, outside of the Rye Beach Precinct, public water is not available to most of the rural area.

TABLE 25

1984 ESTIMATED DEVELOPMENT POTENTIAL
BY DRAINAGE BASIN
RYE, N.H.

BASIN	1984 Percent Developed	Potentially Developable Land		Maximum Land Development Potential	
		Acres	Percent of Total Acreage	Percent of Total Acreage	Change from 1984
Witch Creek	24%	47	11%	35%	+11%
Berry's Brook	22%	395	20%	42%	+20%
Fairhill Swamp	11%	0	0%	11%	0
Concord Point	32%	233	18%	50%	+18%
Awcomin Marsh	20%	130	18%	38%	+18%
Rye Harbor	39%	188	20%	59%	+20%
Bailey Brook	28%	482	29%	57%	+29%
TOTAL FOR TOWN	29%	1475	20%	46%	+17%

Source: 1984 Visual Land Use Survey and Town of Rye Tax Maps

Notes:
1. Percent developed is the percentage of total land area in the drainage basin which was developed at the time of the land use survey in 1984.

2. Potentially developable land as a percentage of total acreage is calculated without transportation and water acreages being included in the basis.

3. Maximum development potential shows the land development capability expressed as a percentage of total acreage if all potentially developed acreage is developed in addition to the 1984 developed acreage.

4. Purpose of table is to show that the ratio of undeveloped land to total land area for most of Rye is about the same (18-20%) except for the Bailey Brook Basin which has a higher ratio. Thus, if all of the potentially developable land in Rye is developed, the impact, in terms of growth rate (which is the change from 1984) will be greatest in the Bailey Brook Basin.

HOUSING ASSESSMENT

Rye's year-round housing supply is predominantly single-family, owner-occupied housing of relatively high value. During the 1970-1980 decade Rye's year-round housing supply increased 28 percent while its population per housing unit declined from 3.02 to 2.61. According to the U.S. Census, Rye has about 500 seasonal housing units, and the supply of seasonal units remained stable during the 1970-1980 decade. Except for those bordering the ocean, most of the seasonal houses are of modest size. The most serious problem associated with Rye's housing is the inadequacy of the waste disposal systems of many of the older units.

Rye's Housing Supply

Table 26 presents housing data taken from the 1980 U.S. Census. According to the census data, 79 percent of Rye's 1980 housing supply was year-round and 21 percent (495) was seasonal.[32] The bulk of the year round housing supply is owner occupied (76.3 percent) and single-family (82.9 percent); and, in 1980, 80.6 percent of Rye's population lived in owner-occupied units.

Growth of Housing Supply

It is important to note that during the 1970-1980 decade Rye's housing supply increased 28.3 percent while the overall population of the town increased only 10.4 percent.[33] The difference is, of course, due to the decrease in size of the average household from 3.02 persons to 2.61 persons (as shown by Table 27). It is important that Rye understand this relationship and the fact that population growth rate does not necessarily always equal the growth rate of the housing supply. Had Rye's average

TABLE 26

HOUSING SUPPLY DATA
TOWN OF RYE, N.H.
1970 AND 1980

Type	1970	1980	INCREASE No.	INCREASE %
Total Year-Round Units	1455	1867	412	28.3
Occupied	1333	1723	390	29.3
Vacant	122	144	22	18.0
Seasonal Units	519	495	-24	-4.6
Owner Occupied Units	1000	1315	315	31.5
Renter Occupied Units	333	408	75	22.5
Percent Owner Occupied	75.0%	76.3%	--	--
SF Year-Round Units	-	1548	--	--
Year Round Units in MF	-	263	--	--
Mobile Homes	-	56	--	--

Source: 1980 U.S. Census

TABLE 27

OCCUPIED UNITS BY NUMBER OF PERSONS
TOWN OF RYE, N.H.
1970 AND 1980

	1970		1980		Change	
	No.	%	No.	%	No.	%
1 Person	204	15	363	21	159	+6
2 Persons	459	34	628	36	169	+2
3 Persons	224	17	300	17	76	0
4 Persons	195	15	251	15	56	0
5 Persons	137	10	129	8	-8	-2
6 or more	114	9	52	3	-62	-6
	1333	100	1723	100	390	0
Mean Persons Per Unit (Rye)	3.02	-	2.61	-	-0.41	-
Mean Persons Per Unit (NH)	3.14	-	2.75	-		-

Source: 1980 U.S. Census

household size not declined during the 1970's its population would now be 5600, and the annual population growth rate since 1970 would have been 2.6 percent rather than 1.3 percent.

Predicting the future trend of household size in Rye is a demographic exercise beyond the scope of this study (if, indeed, it is possible at all to make reliable projections). Nevertheless, it is worth noting that Rye's population is relatively old in age, and ultimately the older householders will probably be replaced by younger householders with large families. At some point such turnover should affect the size of the typical Rye household, but it is difficult to forecast when that point will be reached. However, it is probably accurate to forecast that the gap between the rate of growth of the housing supply and the rate of growth of the population of Rye will not continue to be as it was from 1970-1980. Table 28 shows new housing since 1980.

Seasonal Conversions

The conversion of seasonal homes to year-round residences is occurring slowly in Rye. The WQMP estimated, based on water service records, that about five seasonal homes per year are being converted to year-round residences.

Value of Housing

Rye's housing is relatively high in value. According to the 1980 U.S. Census the median value of a house in Rye in 1980 was $73,400, compared with a median value of $48,000 for the entire state.

Septage Problems

Septage problems appear to be the major problem related to Rye's present housing supply. According to the WQMP, 84 percent of Rye's 1979 housing supply was built before 1968 when the NHWSPCC began setting standards for on-site septic systems.[34] Many systems built in earlier days, to inadequate design standards, have failed. In the past decade records of the building inspector show that from 20 to 40 units are replaced each year.

TABLE 28

ANNUAL BUILDING PERMITS
(NEW HOMES)
TOWN OF RYE, N.H.
1980 - 1984

Year	Number
1980	14
1981	36
1982	19
1983	33
1984*	31
	133

*Through December 21, 1984

Sources: Rye Annual Reports 1980 - 1983
Building Inspector 1984

REGIONAL ASSESSMENT

At one time municipalities were able to develop and execute their planning and zoning policies free from outside interference. However, that is no longer the case. Since the mid-1970's state courts throughout the country have increasingly forced municipalities to provide for their fair share of regional needs in their planning and zoning, and New Hampshires' courts have followed the trend. One can debate forever whether this is a correct role for the courts to play in our society; but, for master planning purposes, it is a fact that a town must accept its position in the region and plan accordingly or be told to do so by the courts. The unfortunate ramification of the latter approach is that the court action is usually precipitated by a fairly large development proposal that the town has rejected, thus the adverse court decision generally forces that proposal on the town.[35]

In assessing its regional responsibilities the Town of Rye must be concerned about four roles: (1) its role in regional commerce; (2) its role as a houser of population; (3) its role as a provider of regional recreation; and, (4) its role as a protector of regional natural resources. A responsible approach to master planning must balance all four roles.

Rye As Center of Commerce

Rye is not an employment center or a center of commercial activity within the region, nor should it be. Other municipalities within the region are better situated to serve the commerce needs of the region and are doing so, as evidenced by the commercial growth in Portsmouth, Newington and Hampton. However, a small segment of U.S. Route 1 does

traverse the southwest corner of Rye, and, generally, U.S. Route 1 serves the subregional need for highway oriented commercial land. It would be responsible for Rye to control the land uses along its segment of U.S. Route 1 in a manner compatible within the regional need.

Rye As a Houser of Population

Rye is a bedroom community located in one of the fastest growing regions in New England. The 1981 population projections of the New Hampshire Office of Comprehensive Planning for the 1980 to 2000 period anticipate the following annual growth rates for the three regional subgroups used in Table 2 of the Demographic and Socioeconomic Assessment: (1) Subgroup #1 = 1.9%; Subgroup #2 = 1.8%; Subgroup #3 = 1.3%.[36] In assessing its individual needs, Rye must be aware of these regional growth projections.

However, planning for a responsible growth rate is not enough, because the courts are forcing towns to also plan for a variety of housing types in order to meet a fair share of the regional need for housing all income groups. Most legal controversies which strike down a town's zoning ordinance are precipitated by the exclusion of apartment, or multi-family, type housing. A town such as Rye which is located within a growing Standard Metropolitan Statistical Area (SMSA) and which abuts the core city of the SMSA is unwise to totally exclude new multi-family housing from within its borders, despite the existence of some apartments and multi-family homes.

Rye As a Regional Recreational Resource

Rye's coastline and accompanying scenic resources are used and enjoyed by the regional and state population as well as by the population of other

states. They are part of the valuable northern New England coastal resource, and, as such, they serve the recreation needs of a population for larger than merely that of the Town of Rye. One cannot fairly assess Rye's total relationship to the region without appreciating the impact that its recreational resources, which are shared with thousands from beyond its local boundaries, have on local residents and town government. These impacts include: (1) heavy amounts of seasonal traffic generated to locally maintained streets, which generate noise, delays, glare and air pollution to much of the towns permanent population which, as noted in the Land Use Assessment, live along town roads; (2) crowded beaches and shoreline; and, (3) additional police protection needs; and (4) crowded waterways and water pollution. Thus, in balancing regional responsibilities, one must give special consideration to the unique problems faced by seasonal recreation communities such as Rye.

Rye As a Protector of Regional Resources

The natural resources of Rye, which are described in the Natural Resources Assessment, are resources which benefit the region and state. It is also Rye's responsibility to balance its other regional responsibilities with its responsibility to preserve these valuable resources.

One cannot discuss local responsibilities for coastal preservation without mentioning the role of the State of New Hampshire, which owns most of the public facilities along the coastline (such as Rye Harbor and Wallis Sands State Park); which owns and maintains the right-of-way of Ocean Boulevard (Route 1A); which owns the coastline below mean high tide; and which is statutorily empowered to preserve wetlands. Rye certainly has a responsibility to preserve its coastal resources, but the state has an even greater responsibility to do so, as well as the ultimate authority.

It would be appropriate for the State to begin to assess its responsibilities by preparing a master plan for New Hampshire's coastline.

PUBLIC UTILITIES AND SERVICES ASSESSMENT

Water, sewer and solid waste disposal facilities are essential to a community. Rye is well situated with respect to its water and solid waste disposal facilities. However, at present, Rye has no public sewerage and relies totally on individual on-site disposal systems. The engineering for limited public sewerage in the Rye Beach - Jenness Beach area is underway with construction imminent; but, the town currently has no plans to address the sewerage needs of other areas.

Solid Waste Disposal

The Town of Rye has contracted with the Pease Air Force Base "waste-to-energy" facility through year 2002 for disposal of its solid waste. The town has no public pickup but does operate a transfer station for use of town residents and a small "stump dump" landfill operation at its public works facility site on Groves Road. The "stump dump" is limited to non-household waste such as stumpage and demolition debris, and the estimated remaining useful life is ten years or less. Thus, it appears that Rye's solid waste needs will be adequately provided for in the foreseeable future, although it is not too early to be preparing for replacement of the "stump dump."

Public Water Supply

Most of Rye's population has access to public water provided by three different systems: (1) the Rye Water District services most of the town's geographical area; (2) the Hampton Water Works Company services the Jenness Beach Precinct and the Rye Beach Precinct; and, (3) the City of Portsmouth services the Foyes Corner and Pioneer Road areas. It is estimated that

about ten percent of the town's permanent population utilize private wells for their water supply.[37]

The Rye Water District is a well managed and farsighted small municipal water system. In addition to covering most of the town with 10 inch and 12 inch water mains and approximately 185 hydrants, it has provided two storage facilities totaling 1.15 million gallons; a gravel packed well with a capacity of 900 g.p.m.; and a drilled rock well 500 feet deep with a 475 g.p.m. safe yield.

From a comprehensive planning perspective, there are two important issues related to the water supply: (1) the relationships between public water and development; and, (2) the protection of wells from subsurface pollution. At present the only sizeable area of Rye not having access to public water is the southwestern portion of town including Route 1, West Road, most of South Road, Love Lane, and the lower portion of Garland Road. If the town is to consider the long range upgrading of the Route 1 commercial land uses as a planning goal, it must recognize the importance of providing an adequate water supply in this area. The areas along West Road, South Road and Garland Road are now relatively sparsely developed, yet according to the WQMP's environmental data, some of Rye's most suitable land for development exists in these areas. In developing its master plan the town must recognize the relationship of water system expansion to development potential in this area and attempt to coordinate policies regarding both.

Preserving the water quality of both private and public wells should be an important planning goal. As mentioned in the Natural Resources Assessment, the WQMP conducted water quality tests at the Garland Road well of the Rye Water District; the Jenness Beach well of the Hampton Water

Works; and fifteen (15) private wells. The findings of these tests can be summarized as follows:[38]

1. Moderately high sodium levels were found in the public and private wells. However, the study did not feel that this was particularly related to road salting policies.

2. The public wells had nitrite/nitrate nitrogen levels among the highest in New Hampshire, but the concentrations did not approach the primary safe drinking water standard of 10 mg/l. The concentrations at the Jenness Beach well were attributed to residential development in the recharge area.

3. The private well data indicated that wastewater or leachfield percolate from septic systems is having an elevating influence on nitrate levels in general above what would normally be expected to be background levels, but no samples approached the 10 mg/l standard.

4. Rye is not being adversely affected to a significant extent, in terms of health hazards, by wastewater disposal systems.

Phase II of the WQMP contained several recommendations aimed at potential non-point sources of groundwater contamination. Those related to community facility planning are:[39]

1. Relocation of the town salt and sand storage facilities which currently are located in the recharge area for the Garland Road well.

2. Regrading the old town dump off Grove Road and installation of an impermeable clay cap because the old dump site is also currently located in the recharge area for the Garland Road well.

3. Sealing of the old landfill off Lafayette Road, when use is complete.

4. Groundwater monitoring at the Garland Road wells.

5. Operational improvements to the privately owned septage disposal lagoon off Central Road and groundwater monitoring of it.

As noted in the WQMP, there is little reliable information available about Rye's groundwater patterns. Some very preliminary (100 foot contour) groundwater maps of the Pisquataqua and Coastal Basins prepared by the U.S.G.S. in 1977 for the NH Water Resources Board, indicate that the land in the southern one third of Rye appears to have the best groundwater potential.[40]

Public Sewerage

Rye has no public sewerage, and the question of whether or not it should has been debated for at least twenty years. In 1979 the New Hampshire Water Supply and Pollution Control Commission (NHWSPCC), the federal EPA and the Town of Rye began an innovative water quality management study which was aimed at identifying surface and subsurface water contamination problems and proposing solutions for them. The result of that effort was the WQMP, comprised of two published reports and a supplement. The WQMP recommended public sewerage to correct obvious problems in the Rye Beach and Jenness Beach areas, and the necessary engineering is now underway. An interceptor and force main will be constructed generally along Route 1A from Central Road to Atlantic Ave., and collector sewers will be constructed on Central Road, South Road, Sea Road, and Kemphil Avenue. The collected sewage will be deposited into underground settling chambers located in the vicinity of Central Road and Route 1A and will be chlorinated and discharged into the ocean at a depth of approximately 17 feet. Periodically the tanks will have to be cleaned of accumulated septage. The system is designed to ultimately allow all of the Jenness Beach area south of Kemphil Avenue to be connected to the interceptor by the future construction of collector sewers on each street

in Jenness Beach. Ultimately, this system will handle anticipated average flows of 100,000 g.p.d. and peak flows anticipated at 500,000 g.p.d. The WQMP also recommended construction of a sewer from the Route 1 mobile home park to the Portsmouth city line for connection to the Portsmouth system.

Apparently, the two systems described above will correct Rye's most serious current pollution problems. However, the town's sewerage plans are not comprehensive, and it is unrealistic to expect that future problems will not increase in the other intensely developed areas along Route 1A and warrant similar attention. It is suggested that public sewerage in such areas is the only realistic future alternative to the "laissez-faire" approach, which will only allow the existing problems of on-site system failures and resulting contamination to multiply. These problems were elaborated on in the WQMP, and they are further summarized in Appendix II. They include dense development on shallow to bedrock soils in areas abutting tidal marshes; on-site systems located on barrier beaches having high permeability and low cation exchange capacity; and septic systems built in areas of tidal flooding during spring and/or storm tides.

It is recognized that many of Rye's residents oppose public sewerage because they perceive it will stimulate dense growth that will adversely affect the character of the town. Many who resist public sewerage take solace in what they perceive to be the WQMP's finding that one-acre zoning with on-site systems is the long range solution to Rye's water quality management problems. While these perceptions may be true for Rye's inland area, it must be recognized that Rye's coast <u>is already</u> intensely developed and <u>has</u> inadequate sewerage disposal. It is unlikely that public sewerage would change the density of such areas, but it would certainly correct present and future contamination problems and help protect Rye's future unique natural resources.

TRANSPORTATION ASSESSMENT

Rye has 51 miles of streets, roads and highways which can be classified as either state highways, local arterials, local connectors or residential access streets. Rye's transportation network appears adequate to serve the future growth of the community without major improvements. Rye's local roads are an important part of its rural character, and scenic Ocean Boulevard (Route 1A) is an important part of Rye's coastal character.

Rye's Transportation Network

Most of Rye's main roads were laid out along the ridges surrounding the wetlands during colonial times. They have been improved over time; but, generally they are still narrow and rolling rural roads which serve as both "streets" for the many residences located along them and highways for those passing by. For many, the roads of Rye, in their present condition, are part of a rural character worthy of preservation as evidenced by the town's enactment of the scenic roads provisions of NH RSA 231:158.

The traffic pattern's imposed on Rye's system of roads and highways are created by one common trip characteristic — the necessity of making an east-west trip. Most trips with at least one trip end external to Rye are either coming from or going to Portsmouth (to the northwest) or Route 1 to the west. Such trips include the bulk of seasonal traffic headed to the beaches or merely passing through on Ocean Boulevard as well as the work, shopping and entertainment trips of most permanent residents. For most of Rye's travelers this trip is not easily made because the orientation of Rye's principal traffic artery (i.e. Washington Road to Wallis Road to Sagamore Road) is south to north and because Rye's natural features have

limited the points of access to the west to Foyes Corner, Lang Road and Washington Road at Breakfast Hill. As a result, most trip patterns follow a "Z" pattern of: (1) west to Washington, Wallis or Sagamore Road; then (2) north or south to a Route 1 access point; then (3) west to Route 1. There really is no overall transportation planning solution to this basic deficiency in the functioning of Rye's road network, and the road pattern is one that must be endured.[41] From a planning perspective, however, it is important to understand how the system functions in order to anticipate the problems that will occur through growth.

From a functional perspective Rye's 51 miles of streets, roads and highways can be classified as: (1) state highways; (2) local arterials; (3) connectors; or (4) residential access streets.

1. State Highways

a. Route 1. A 1.2 mile segment of Route 1 crosses the southwestern corner of Rye. Route 1 is a major sub-regional highway serving the Seabrook to Portsmouth Corridor. Average daily traffic volumes were 13,800 in 1983. In December 1984 the New Hampshire Department of Public Works and Highways issued a policy statement indicating a desire to ultimately transform Route 1 into a four-lane divided highway with a 90 foot right away and asked local towns to consider those objectives in their planning.

b. Route 1A. Route 1A (i.e. Ocean Boulevard) parallels Rye's coast for about seven miles before turning inland towards Portsmouth at Odiorne Point. Traffic using Route 1A must mix with traffic from the local west arterial[42] at Foyes corner, which is not designed to handle such mixing safely. The entire length of Route 1A has heavy seasonal traffic. However, due to the circuitous routing around Little Harbor, most permanent

residents who exit Rye at Foyes Corner get there by using the western arterial.

2. Local Arterials. Local arterials are long roads which traverse major sections of a town and, thus, end up carrying the heaviest traffic volumes. Rye has almost 15 miles of local arterials, the longest of which is composed of the segments of Washington Road, Wallis Road and Sagamore Road which parallel the western border of Rye in the south-north direction. This "west arterial" collects most of the traffic generated in Rye and disperses it in the north-south direction to either Route 1 at Breakfast Hill, Lang Road or Portsmouth at Foyes Corner. Central Road, which connects the town center and Rye Beach, is another long arterial running generally north to south. Rye's other local arterials are shorter in length and run east to west, serving both the summer and year-round traffic.

These are:

- South Road
- Lang Road
- Washington Road (east of town center)
- Wallis Road (east of Sagamore)

3. Local Connectors. Connectors are roads which do not serve an arterial function but merely connect other elements of the road network. They often serve as "short-cuts" for through traffic or as collectors for neighborhood level concentrations of population. Rye has about 12 miles of connectors, which are:

- Brackett Road
- Parsons Road
- Long John Road
- Clark Road
- Harbor Road
- Locke Road
- Fern Avenue
- Cable Road
- Groves Road

— Garland Road
— West Road
— Love Lane
— Dow Lane
— Wentworth Road

4. Local Access Streets. Rye has approximately 14 miles of streets which function solely as residential access streets. About one-third of this mileage is in inland subdivisions and, generally, these streets are relatively new, well built and well maintained. It is noted that some of Rye's newer subdivisions have long dead-end streets exceeding the 450 foot maximum of Section IV-C of the Subdivision Regulations. Excessively long dead-end streets present potential public safety problems, thus the Planning Board should carefully review its criteria for waiving the 450 foot requirement. Two-thirds of the local access mileage is in the coastal area, and the quality of these streets varies tremendously. Streets in the more densely developed areas tend to be narrow (some are merely driveway width), and a number of streets are not paved or have significantly deteriorated paving. Many of these latter streets serve mostly seasonal developments, but, as conversions continue, demands for upgrading the streets may increase.

Future Problems

Rye's system of local roads appears to be adequate to handle the future growth likely to occur in the town without any major right-of-way improvements. From strictly a traffic engineering perspective one might argue that a substantial amount of grade and cross-sectional improvements are required on Rye's local arteries in order to safely handle the increased traffic that growth has generated and will continue to generate. However, when such observations are balanced with other goals, particularly

the goal of maintaining Rye's rural character, one must conclude that Rye's Road system as a whole is adequate to meet present and future needs.

The item that should be given attention is intersectional improvements. Improvements at Foye's Corner, which functions poorly as a major intersection should be a high priority. Also, improvements at the intersections of Lang Road and Route 1 and Washington Road and Route 1 are warranted. It must be remembered that the highest traffic volumes in Rye occur on its state highways, and that it is the NHDPWH that has the responsibility for effecting improvements. Local officials and citizens can participate in the NHDPWH planning process in a number of ways (such as attendance at annual "action plan" hearings) in order to advocate Rye's improvement priorities; and, such participation is recommended as a first step towards implementing intersectional improvements.

Another area of concern is the relationship between Rye's roads and its wetlands. Some local observers feel that inadequate culvert structures at locations where roads cross wetlands may be preventing the proper "flushing" of wetlands.[43] Whether or not this is happening and, if it is, the significance of it, is beyond the scope of this master planning effort. However, the question appears to be worthy of some preliminary investigation.

State Plans

The New Hampshire Department of Public Works and Highways maintains a five year "Action Plan" for its improvement projects. The current plan lists three projects for Route 1A in Rye: (1) in 1985, the replacement of the Parson's Creek Bridge; (2) in 1985 the replacement of the Rye Harbor Bridge; and, (3) in 1988 an RRRR project (resurfacing, reconstruction,

rehabilitation and restoration) for Route 1 from Foyes Corner to Seavey Creek.

COMMUNITY FACILITIES ASSESSMENT

It is important that a town recognize the relationships between land development and population growth and the future need for capital improvements to community facilities and increased community services. Currently, there is some crowding and scattering of Rye's fire, police and administrative facilities, and growth will aggravate the problems caused by these conditions. However, school facilities seem of adequate capacity for the next decade, or perhaps longer.

Fire Protection Facilities

The Rye Fire Department consists of six full-time employees and a call department. The full-time employees provide round-the-clock coverage at the fire station, on a shift basis. Major equipment consists of two pumpers and a tanker. The central fire station is shared with the Police Department, and dispatchers are shared, as well. The 1983 Annual Report of the Town of Rye summarized the annual activity of the Fire Department as follows:

Structures	14
Oil burners	2
Downed wires	9
Electrical	5
Chimney	24
Wood/grass	11
Auto accidents	12
Auto fires	4
Investigations	6
Smoke in bldg.	17
Public assists	13
Ambulance assists	6

Medical walk-ins	3
Fuel spills	6
False alarms	2
Outside fires	6
Unauthorized fires	9
Alarm activations	31
Mutual aid	11
	191 Incidents

The major "facility" limitation of the Fire Department is its lack of aerial equipment. Its present capabilities are limited to ground extension ladders which can reach about 35 feet, which is not enough to reach the peaks of Rye's Victorian-style homes. Additionally, increased usage of wood stoves results in a higher frequency of chimney fires, which are easier to suppress with aerial equipment. An additional present problem is the limited space at the shared central station which is discussed below as part of the police facilities assessment.

The concept of a small on-duty suppression force supplemented by a large call force is common in small, bedroom communities having predominately single-family, relatively new housing. The rate of serious fires is relatively low and communities accept the risks of having a small immediate response force in exchange for avoiding the high costs required to maintain a larger immediate response force that is rarely required. There is no reason why Rye's future growth cannot be managed in a manner compatible with this fire service policy, but Rye should understand that, if large amounts of multi-family development occur, the risks change because successful rescue and suppression techniques for multi-family structures require larger initial response forces, and often, different equipment, such as aerial ladders.

It is important to recognize that the municipal fire protection service has two objectives: (1) suppression of fires; and, (2) prevention

of fires, with the latter becoming increasingly important. For a growing community like Rye, prevention activities focusing on the regulation of new construction provide a substantial opportunity to impact reduced future fire losses. Thus it is recommended that the town thoroughly review its codes with this objective in mind. Additionally, if the town develops a growth policy allowing some multi-family developments, the town should review its codes to assure that adequate protection exists for multi-family construction.

Police Protection Facilities

The Rye Police Department has six uniformed officers and a dispatcher/clerk. It operates two cruisers, and shares the central station with the Fire Department. Its resources are augmented by part time matrons, auxiliary officers and seasonal officers. The major facility deficiency is the limited space at the station. There is no space for detention, no garage facilities for police cruisers and limited parking.

The growth related factors affecting police facilities are general population increase, coastal development policies, age composition of the population, income composition of the population and spatial distribution of the population.

Most people understand the high correlation between size of population and size of police force. Generally, recommended ratios of police officers per thousand population vary from 1.0 to 2.0, with small towns of Rye's size adequately meeting their needs at the lower ratios. For smaller towns, forecasting future needs based on such formulas is not a realistic approach to determining need because both the size of the population and the force are small and because other factors have a greater impact on both

actual and perceived service levels than in municipalities with larger populations. Thus, with respect to force size, one's master planning perspective should be limited to observing that growth will require a larger police force at some point in the future, but perhaps not more than one or two officers per decade.

Rye's land use policies could also affect the level of required police service. As noted in the Land Use Assessment, lot frontage on existing roads is nearly depleted, and most of Rye's future homes will be built in residential subdivisions. Thus, the length of cruiser patrols will increase, and, possibly, an additional cruiser will be required at some point in the future. Also, any change in the coastal land use policies away from the "family-oriented" concept could dramatically affect police service requirements during the summer season.

Administrative Facilities

The administrative functions of the Town of Rye, which consist of the Selectman's Office, the Town Clerk, the Tax Collector and the Building Inspector are housed in the picturesque Rye Town Hall located at 10 Central Road. The bulk of the space in the Town Hall is occupied by a courtroom used weekly for local court and an upstairs meeting hall, which is seldom used. The office space in the Town Hall is presently inadequate in both amount and spatial organization. It would appear that there are a number of options that might correct these problems, and it is not the purpose of the master plan to choose among them.

For Rye the growth in the need for future administrative space is not strongly correlated with population growth. Instead, it is more closely correlated with budget growth (which is mostly caused by inflation) and

with the populations increasing expectations of better managed, more sophisticated, more responsive local government. Sentiments in the town in favor of a town manager and/or a town engineer and/or additional building inspection personnel are reflective of these expectations and indicative that the need for administrative space will continue to increase. Thus, the town ought to prepare a plan that solves the existing spatial problems and provides room for growth.

Library Facilities

Rye's Library, located in the town center, appears adequate to meet the present needs of the town. However, access for the handicapped is a current problem which should be addressed. The library program is exceptionally strong for a small town, as one might expect from the high educational attainment of Rye's population and the heritage of the town. Rye's per capita appropriation for library service is relatively high, which undoubtedly reflects the high priority library services have in the community. The demand for library space often is a function of program development as well as population growth. In the longer range, Rye's growth in population coupled with a general demand for increased library services may require re-evaluation of spatial needs.

Public Works Facilities

The Rye Highway Department occupies a 4.4 acre site at the corner of Washington Road and Groves Road, which is also the site of the "stump dump" and solid waste transfer station. The responsibilities of the department primarily consist of snow removal and road and drainage maintenance, and the Highway Agent, who is the department head, in effect, serves as town

engineer. The department also handles various types of small construction projects for other departments and maintains the town beach. It is staffed by seven (7) full time personnel.

The public works services of the town are liable to undergo stress from future growth. The most immediate impact will be the need for sewer maintenance, a function not presently performed by the town. Because of the attention given this matter by other parties, it is not appropriate for either the consultant or the Planning Board to advise on how this new service might best be organized. It will suffice that the master plan points out the new need for sewer maintenance capabilities.

Pressure on road maintenance capabilities will also increase as Rye continues to develop. For example, thirty (30) homes built in new subdivisions could increase the maintenance mileage responsibilities as much as three (3) percent annually. Additionally, as noted in the Transportation Assessment, increased conversion of seasonal houses will lead to increased demands for upgrading some of the substandard coastal streets. It is important to note that the high costs of highway maintenance equipment make these items "big tickets" in any municipal budget; thus, it is important that, new or replacement heavy public works equipment be included in any capital improvements program.

Schools

The Rye School District has an elementary school and a junior high school, and high school students are sent to Portsmouth. The Rye Junior High School occupies a site of 3.8 acres just north of Lang Road. It was built in 1931 and had major additions in 1942 and 1965. The Rye Elementary School was built in 1955 on a ten (10) acre site off Sagamore Road just

north of the Wallis Road intersection. It had a four room addition in 1965. The District owns a thirty (30) acre tract which abuts the elementary school site and which extends westward to the Portsmouth city line.

In November, 1982 the Rye School District Consolidation Committee printed a report of it's review of Rye's school facilities. That report noted that using acceptable standards the Rye Junior High School has a capacity of 250 pupils and a 1982 enrollment of 230. No capacity estimates were presented for the Rye Elementary School, but the report noted elementary enrollments in 1982 were down to 255 pupils compared to 365 pupils in 1972. As part of its study the committee projected future enrollments based on a methodology recommended by the New England School Development Council. These projections, which are presented on pages 10-12 of the committee's report, projected further declines in school enrollments of 15.9% for elementary enrollments by 1987-88; 25.2% in junior high enrollments by 1990-91; and 21.1% in high school enrollments by 1990-91. Based on this report, it would appear that Rye's present school facilities are adequate to meet the present and future needs of the population, unless there is a very rapid increase in population.

The committee was, however, concerned with the increasing maintenance, rehabilitation and replacement costs of the fifty (50) year old junior high school, which also occupies a site of substandard size. For example, it was noted that the junior high school would require new roofs; new windows and frames; new blackboards; and two new boilers in the next decade. Also, the committee noted that in some areas the junior high school was functionally obsolescent. Thus, for these reasons, it recommended that the

District conduct a feasibility study of building a new junior high school on the thirty (30) acre tract adjacent to the elementary school.

RECREATION ASSESSMENT

Rye's greatest recreational assets are its open spaces, rocky shoreline, beaches and tidal marshes.

Public Recreation and Open Space

Appendix IV contains an inventory of the public open space in Rye. It lists 239 acres of town owned land; 161 acres of Conservation Commission land; and 218 acres of state park land at Wallis Sands, Odiorne's Point and Rye Harbor. The town owned land contains two large tracts, Parsons Park and the Town Recreation Area, which total over 150 acres in area. These two parks offer ample space and facilities for organized sports and organized recreational activities as well as for passive recreation. Both parks are near the geographic and population center of the town. They offer facilities and space that are adequate to meet the present and future public outdoor recreation needs of Rye.

Rye's indoor recreational facilities are limited to school and church facilities. The Rye Recreation Commission helps organize various activities that utilize such facilities, and it appears that the residents of the town feel no need for expanded indoor recreation facilities.

Beach and Shore Access

There are eight public points of access to Rye's beaches and shore:[44]

1. Bass Beach
2. Sawyer's Beach
3. Jenness Beach

4. Rye Harbor/Ragged Neck
5. Foss Beach
6. Wallis Sands State Park
7. Rocky shore areas between Wallis Sands and Odiorne Point.
8. Odiorne's Point State Park

The state owns and controls five access points in Rye: (1) Bass Beach with 34 parking spaces; (2) Rye Harbor with 200 parking spaces and 160 boat moorings; (3) Odiorne's Point State Park with 400 parking spaces; (4) Rocky Shore with 260 parking spaces; and (5) Wallis Sands State Park with 450 parking spaces. The town owns Sawyer's Beach, Foss Beach and Jenness Beach and restricts parking along the Sawyer's Beach seawall to only Rye property owners. Additionally, the state maintains a parking area with 76 spaces at Jenness Beach.[45]

Public access to beach areas has been a longstanding concern of town officials. In the past as many as 27 apparent access points have been identified but ownership status and rights of passage for the public have never been resolved.[46] In 1984 the town and the Rockingham Planning Commission conducted a study of the status of the Alphabet Streets plus three other access points in an attempt to provide direction to local officials.[47] The study concluded that prescriptive public easements may exist at many of these points.[48] It noted that the power of eminent domain exists and could be used to acquire public access to the beach, and it recommended that the town follow a negotiation strategy to acquire access rights for the public.

OBJECTIVES

GENERAL STATEMENT OF GOALS AND OBJECTIVES

The following section of the master plan sets forth the general principles, policies and standards upon which the Rye Master Plan is based. The statement is intended to clearly and concisely state the policies which the Rye Planning Board used to frame the detailed proposals of the portions of the master plan which follow.

Assumptions

The assumptions made in formulating the general statement of goals and objectives are described in detail in the assessment portions of this master plan report. The following briefly states the major findings derived from the assessment reports:

1. Rye has a rich history warranting preservation attention.

2. Soil conditions, wetlands and flood hazards significantly constrain the future development of Rye.

3. Rye has unique natural resources which warrant preservation. These natural resources serve the general public thereby benefitting the state and regional population. Rye's responsibility to preserve these resources is is more than a local responsibility.

4. Rye and the NHWSPCC recently completed an extensive Water Quality Management Plan. The plan concluded that Rye's surface water and groundwater are not currently contaminated from on-site septage disposal, and that contamination will not result from continued development at a gross density of one unit per acre. The WQMP plan notes that comprehensive one-acre zoning is not the only way, and perhaps not even the best way, to achieve this density.

5. Rye's recent population growth rate has been reasonable and has not unduly strained the town's service capabilities or significantly damaged the environment.

6. Rye's population contains a higher portion of senior citizens and has a higher median age than the overall state population.

7. In the past Rye has absorbed its fair share of regional population growth, considering its environmental limitations and its responsibility to preserve valuable natural resources.

8. The New Hampshire Office of State Planning projects the population growth of the rural parts of the coastal and I-95 region to be about 1.8 to 1.9 percent annually between now and the year 2000.

9. From 1970 to 1980 Rye's housing supply increased about three times as fast as its population increased. The gap was due to a decline in the overall size of a household in Rye from 3.01 to 2.61 persons per unit.

10. State law reflected in both statutes and court decisions assigns municipalities a responsibility to accomplish master planning with sensitivity to regional responsibilities. Courts will not allow municipalities to unreasonably exclude types of development that prevent persons of low and moderate income from living in a community.

11. Rye's land use is predominantly residential. However, approximately 1.2 miles of U.S. Route 1 traverses the southwest corner of Rye. Route 1 is a subregional commercial/industrial corridor, and Rye's land along it is best suited for such use.

12. The residential land use patterns of Rye's coastal and inland areas are distinctly different. Coastal areas are densely settled and

inland areas are sparsely settled, with most homes located along town roads.

a. Coastal land is fully and relatively intensely developed. Most structures are single family units on small lots, and very few multiple family structures exist. Commercial activity is scattered and not extensive in land coverage.

b. Inland, much land having good road frontage has been used up. Most future development will occur in planned developments on large interior tracts, which generally average 14 to 16 acres in size.

13. Only about one-fourth of Rye's vacant land is potentially developable, and some of this is only marginally suited for development. If all such land were developed at the gross density recommended by the Water Quality Management Plan, about 1200 more dwellings could be built in the town. At an estimated population per dwelling of 2.6 persons, the additional population resulting from the development of all 1200 acres would be 3120 persons.

14. The areas most susceptible to development stress in the future will be the Bailey Brook and Rye Harbor Drainage Basins.

15. Most of Rye, except the rural portions of the Bailey Brook Basin and Route 1 frontage, has adequate public water supply to meet present and future development needs.

16. The present and future sewage disposal needs of the inland areas of Rye (except Route 1) can be met with on-site disposal systems. However, coastal areas have a density of development which, when combined with environmental limitations, warrant public sewerage.

17. Rye's town hall and police and fire facilities do not now have adequate spatial space to efficiently serve the public purpose. Otherwise, the town's community facilities should adequately cope with anticipated future growth rates.

18. Rye's system of roads and streets are adequate to handle present and future growth, although attention to intersectional improvements is warranted.

Goals

The formulation of the Rye Master Plan is guided by the following goals:

1. To maintain the present rural character of the inland areas of Rye.

2. To maintain the present character of Rye's coastal areas.

3. To preserve the presently good water quality of Rye's surface and subsurface water.

4. To preserve and protect Rye's wetlands.

5. To preserve and protect Rye's unique scenic and natural resources.

6. To preserve Rye's heritage.

7. To encourage an orderly spatial pattern of growth.

8. To continue a rate of growth consistent with the town's regional responsibilities, environmental limitations and the capacity of services to absorb growth in an orderly, planned manner.

9. To provide for a diversity of housing consistent with the town's regional responsibilities, economic realities, the preservation of water quality and other environmental limitations.

10. To assure that Rye's community facilities develop in a planned manner compatible with the town's planned growth rate.

11. To otherwise promote the general health, welfare and safety of the residents of Rye.

Planning Objectives

1. Inland Land Use Planning.

   a. Rural character can best be maintained by preserving open space along Rye's roads; by encouraging the development of housing that is architecturally compatible with the rural environment; and by preserving as much open space as possible as Rye's interior lands developed.

   b. With Rye's road frontages almost fully developed, residential land use alternative to subdivisions of one acre lots are necessary to assure that the development of interior tracts of land maximizes the opportunity to preserve both Rye's rural character and its natural environment.

   c. Cluster and planned unit residential development are two such alternatives. The master plan should identify which areas of Rye are best suited for such development and should outline criteria by which such development may occur without adversely affecting an orderly, responsible growth rate. Allowing such development to occur on a well planned and well controlled basis will also help diversify Rye's housing stock.

   d. In keeping with the recommendation of the Water Quality Management Plan, the gross density of new inland development should generally not exceed one new unit per acre.

e. The Bailey Brook Basin should have a land use planning approach that discourages rapid growth until other portions of Rye more suitable for development have filled up.

f. Land immediately accessible to Route 1 should be planned for commercial and light industrial use. Such use is the highest and best use of this area. Further commercial/industrial development there will strengthen Rye's property tax base without a corresponding increase in the cost of municipal services, which will be minimal.

g. Rye's present businesses are adequate to serve the convenience commercial needs of Rye's present and future population. Further commercial development along Rye's roads is not compatible with the town's rural character.

2. Coastal Land Use Planning.

a. Rye's coastal character can best be preserved by land use policies which continue to foster the type of development which attracts families for extended vacation periods.

b. The land use plan should recognize the distinct differences between the densities of Rye's coastal land use and its inland land use.

c. Further spatial expansion of Rye's coastal commerce is not compatible with the goal of preserving the coastal character.

d. Rye's coastal character is not perfect. Some development problems exist, and land use policies which permit the replacement or upgrading of structures of marginal quality or marginal land uses should be encouraged.

e. Land use policies which encourage re-creating open spaces; visual access to scenic features; and beach access should be encouraged.

3. Environmental Protection.

a. The land use plan must fully consider:

- wetlands preservation.
- the preservation of ocean and fresh water quality.
- flood hazards.
- development suitability of soils.

b. As the land use plan is implemented, full consideration should be given to minimizing air and noise pollution and to mosquito control.

c. In the future Rye must identify the location and extent of its groundwater resources. The land use plan implementation must consider the protection of identified groundwater a high priority.

4. Growth Rate.

a. The master plan should establish a growth rate management policy that balances all of Rye's master planning objectives. The policy should include consideration of Rye's environmental constraints; historical population and housing growth rates of the town; historical and projected growth rates of the region; the land development capacity of the town; and regional development needs.

b. The present approach of annually "capping" building permits

at a fixed number per year does not represent the best approach to growth rate management.

c. The growth management policy must recognize that housing unit growth rate does not always equal population growth rate.

5. Housing Diversity. Rye's land use policies should provide for some continued housing diversity. It is better to plan for limited housing diversity that can be controlled in a manner compatible with Rye's master planning goals than to have an unplanned development thrust upon the town as a result of litigation.

6. Historical Preservation. Rye's historical district should be maintained but not expanded beyond its present coverage because other similar concentrations of historically and architecturally significant structures do not exist in Rye. Other planning tools, such as strengthening protective criteria in the subdivision and site plan regulations, should be used to further foster historical preservation.

7. Public Services and Community Facilities.

a. Large scale alignment, grade and cross-sectional improvements to Rye's town roads are not compatible with preserving the rural character of the town.

b. The development of a program of planned public open space acquisition/preservation would help Rye accomplish most of its master planning goals.

c. Large scale capacity improvements to Ocean Boulevard will generate more traffic to Rye's Coast and would, therefore, be

incompatible with its master planing goals.

d. Water and sewer services should be extended to the entire Route 1 area in order to encourage the development of higher quality business use of the entire length of Route 1.

e. The policy of not providing public sewerage to the entire developed coast should be re-evaluated.

PLANS

LAND USE AND HOUSING PLAN

Plate P-1 shows the proposed land use plan for the Town of Rye. The proposed land use plan presents a conceptual guide for the future development of Rye that reasonably balances the competing goals and objectives of this master plan. Thus the land use plan together with the explanatory text which follows represent a policy statement about the future development of Rye.

Environmental Constraints

It is important to understand that there are three environmental constraints which apply to all future development in Rye. These constraints can be considered to be inherent in the land use plan, since they preempt other development considerations.

The three constraints are:

1. Wetlands as preserved by both local ordinance and state regulation (see Plate 5).
2. Floodplains as controlled by both local ordinance and federal flood insurance requirements (see Plate 4).
3. Soil conditions reflected in both local and state restrictions on on-site sewage disposal (see Plates 13 and 16).

Inland Residential Areas

1. Rural Residential Areas. The portion of the Bailey Brook Drainage Basin between Washington Road and the Rye Beach Precinct should be planned for a rural residential density requiring 1 1/2 acres per dwelling unit. The new, lower residential density is in keeping with the present

character of this area, which is essentially rural. Many large tracts of open land exist; approximately 41 percent of the present dwellings occupy parcels greater than two acres in size; and no "off-road" subdivision of land has occurred. Thus, the area is relatively "virgin." Additionally, this area is the only residential area in Rye not serviced by public water, and a lower residential density will help protect the well supplies of the approximately 120 families living in the area and future residents.

As noted by Table 25, the Bailey Brook Drainage Basin has about 40 percent of the potentially developable vacant residential land remaining in Rye. This fact combined with its relatively low amount of present development makes the basin the most susceptible to change of all of Rye's drainage basins. A density of 1 1/2 acres per dwelling in this area will tend to slow its rate of development and, thus, pace change in a manner compatible with the preservation of its rural character.

2. Semi-Rural Residential Areas. The balance of Rye's inland residential land should be planned for semi-rural densities averaging one dwelling unit per acre. This density is in keeping with the recommendations of the Town of Rye Water Quality Management Plan, and it is compatible with the town's present zoning. Additionally, most of Rye's residents equate that density with the preservation of Rye's rural character.

It should be noted that while traditional one-acre lot zoning achieves this density, it does not do so in a manner that maximizes the potential for retaining open space and rural character or for preserving significant natural features. More flexibility is needed if these latter objectives are to be given high priority as Rye's interior land develops.

Cluster subdivisions are an alternate which would offer such flexibility. The cluster concept allows grouping houses closer together on smaller lots in order to preserve the balance of a subdivision tract as open space. The cluster concept relaxes the zoning requirement for minimum lot size but preserves the overall density requirement for the tract of land considered as a whole. The end result is that natural features and open space, which would normally be "developed" into building lots, is preserved in the natural state. Appendix V reproduces some information on cluster subdivision development which is taken from the Handbook of Subdivision Practice published by the NH Office of State Planning in 1972. It is recommended that cluster subdivisions having gross densities of one unit per acre be permitted in Rye's semi-rural residential areas on parcels greater than ten (10) acres in size.

If the cluster concept is implemented in Rye, it should be implemented with special safeguards designed to assure that it achieves its intended objectives. The cluster ordinance must be written to prevent cluster applicants from using land acreages that would not be developable due to wetlands' restrictions in the density basis calculation and to allow the Planning Board to disapprove a cluster application that does not represent a significant achievement towards the preservation of open spaces and/or natural features. It must be remembered that a cluster ordinance will merely provide subdividers of land with an option that they can exercise only after applciation to the Planning Board, public hearing and demonstration that a cluster subdivision will better implement master planning goals than a traditional subdivision of 44,000 square foot lots. However, the traditional subdivision will still remain an option for both the Town and the subdivider.

Coastal Areas

The residential areas of Rye's coast north of the Rye Beach Precinct have a present density in the range of four to six units per acre, and the land use plan recognizes the permanence of this higher developed density. Rye's developed coastline is distinctly different in character from its inland residential areas. The planning goals should be oriented to enhancing the coastal character through the prevention of obsolescence and the encouragement of high quality reuse of the land. The type of one acre zoning which is currently applied to the coastal areas does not further these goals because there is no vacant land to be developed and because the existing densities are much greater than one unit per acre. Continuing to apply such a policy to these areas will only continue to discourage change. Opportunities to recycle land through private assemblage of parcels, razing of marginal quality seasonal structures and redevelopment should be encouraged. If Rye does not allow this type of land recycling to occur, it will be, in the long run, mandating economic obsolescence for many of Rye's coastal structures; and, economic obsolescence will lead to the destruction of the coastal character which most residents of Rye want to preserve.

A good beginning towards accomplishing this land use policy in the coastal area would be to implement zoning policies more compatible with the fact that the coastal area is fully developed. Such an approach needs to be carefully developed. It must be flexible enough to encourage upgrading but rigid enough to avoid degrading the present coastal character A well balanced approach could retain the minimum lot size of the present zoning but permit reduced lot sizes by special exception to be granted only when existing land uses are being recycled, such as a proposal to demolish three

dwellings each on 5000 square foot lots with one dwelling on a 15,000 square foot lot. The special exception criteria must be carefully drafted, in detail, and must be designed to accomplish the objective of upgrading through redevelopment. A "point system" should be considered for the granting of these special exceptions, and objectives such as improved beach access and ocean visibility should be incorporated into the evaluation criteria.

The land use plan for the coastal area also recognizes that the present balance of commercial and residential land use in the coastal area is appropriate. Since the plan envisions maintaining the present intensity of residential development, further commercial development is not necessary and should not be encouraged. However, the planning policies should not discourage the upgrading, transition or replacement of the commercial development that now exists. The implementation concept described above could also be applied to commercial uses along Rye's coast on either a "micro" or a "macro" replacement concept. For example, a new motel might be permitted as a special exception only if it could be demonstrated that it replaces an older motel or cabin development having a similar number of units or that it did not create a total number of units on Ryes coastline greater than that which existed in 1985. Similar approaches could apply to restaurant seating or retail floor area.

Commercial Areas

The land use plan recognizes the commercial value of the land that abuts Rye's 1.2 mile segment of Route 1. Highway-oriented commercial uses should be encouraged along the Route 1 frontage. However, a different planning approach should apply to the "backland" areas off Route 1. In the

longer range, as the rural areas south of Portsmouth continue to grow, an interchange may be built at the intersection of Route I-95 and Washington Road in Greenland. If this happens, the commercial value of Rye's Route 1 land, which would be within two miles of that interchange, will be even further enhanced. Such access to I-95 would give the large, undeveloped tracts of land in the vicinity of Washington Road and Route 1 a commercial value beyond the highway oriented commercial value associated only with Route 1 frontage. The land use plan for the Route 1 area should carefully consider this prospect by treating the Route 1 frontage differently than the "backland." The frontage should be planned for typical highway-oriented types of commercial development, but the "backland' tracts should be reserved for the industrial, office or higher density residential development that would be appropriate if water and sewer utilities are extended to the area and if access to I-95 becomes a reality.

The land use plan proposes an end to the "ad hoc" method of permitting commercial establishments to exist along the towns roads at any location for which the property owner can convince the town meeting and the Zoning Board of Adjustment that a business use is warranted. Such an "ad hoc" policy is not in keeping with the preservation of Rye's rural residential character; and, it also fails to accomplish one of the principal purposes of zoning, which is to permanently protect homeowners located in residential areas from the adverse effects of a contiguous commercial use. The land use plan recognizes that Rye is a bedroom community without a major demand for convenience commercial establishments. It suggests that, in order to minimize the impact of commercial activity on residential land use, new commercial activity be limited to neighborhood commercial establishments located near present concentrations. Foyes Corner is one

such concentration, and the vicinity of the Washington Road - Wallis Road intersection is emerging as another.

One other commercial issue which Rye's master planning policies should address is "home occupations." Technological advances in micro-computers, information processing systems and telecommunications and the overall growth of the service, professional and administrative sectors of the economy all work to increase the feasibility of home occupations. Master planning and zoning policies responsive to the needs of a population having the white collar labor force characteristics of Rye should provide the flexibility for home occupations to exist where they do not generate detrimental traffic, noise, glare and pollution to residential areas.

Historic Preservation

The land use plan maintains the boundaries of the present Historic District.

Housing Diversity

It is recognized that the majority of Rye's residents desire to maintain Rye as a community of single-family homes on large lots. In such a context, the development of a land use plan addressing housing diversity has been pursued reluctantly by the Rye Planning Board. The principal rationale for it is the threat that the legislature and the courts are forcing communities to fairly consider regional needs, such as housing, in their planning and zoning. A community which ignores this reality may find a large development thrust upon it by adverse litigation. Thus, it is better for a town to recognize, guide, plan and control the inevitable then

to have the inevitable thrust upon it. Admittedly, this rationale is hard for most people of Rye to accept. Three questions are frequently asked:

1. Why Rye? The argument is made that Rye has always been a rural community and wants to stay that way. "Why Change? Don't we have a right to be rural?" The answer is no, because Rye is in the path of growth, and legislatures and courts have refused to allow town's like Rye to put up walls around themselves to exclude the perceived undesirable aspects of regional growth. It must be remembered that Rye abuts one of the largest and densest cities in New Hampshire; that half of Rye is in a federally defined Standard Metropolitan Statistical Area; and that the region is one of the fastest growing in the East. If tested, these factors would overcome the "Why Rye?" arguments.

2. What about Rye's environmental limitations? The argument is that Rye's soils, wetlands and lack of public sewerage make higher density development inappropriate. While there is some merit to this argument, it is not valid when used as a rationale against limited amounts of well planned development at densities greater than one-unit per acre, particularly when NHWSPCC standards allow on site sewage disposal for developments of up to 66 bedrooms on sites of five acres which have the right soil conditions. Further, it is noted that Rye's wetlands will be protected under any development scenario, if existing laws and ordinances are properly enforced.

3. Why not take a chance? It is argued that, if Rye changes its land use policies, it will surely have unwanted, new multi-family development; but, if it refuses to change, the feared litigation may never happen. The response to this approach is: "Does Rye want to take the risk

involved?" Rye has approximately 100 undeveloped tracts of land larger than 10 acres, with many 20 acres or more in size. While soil conditions are not ideal, many tracts likely contain enough suitable soils to meet the NHWSPCC standards for on-site disposal that would allow multi-family densities of three to five units per acre. Thus, a developer with such a tract could push a project anywhere from 30 to 200 units on the town, depending on which tract was involved.

Planned Unit Residential Development

If Rye is to fulfill its responsibilities to provide its share of regional housing for low and moderate income households, some new multi-family rental housing must be allowed. The land use plan proposes to accomplish this through the Planned Unit Residential Development concept (PURD) rather than through traditional zoning, which would allow multi-family structures as permitted uses in certain geographical areas of town. The PURD concept can be implemented in a manner compatible with Rye's goals of preserving rural character; maximizing the preservation of open space; and environmental protection, whereas the traditional zoning approach to multi-family housing would not be compatible with these goals.

PURD's are comprehensively planned development projects having a site plan which reflects flexibility in housing types, open spaces and environmental preservation. In essence, the concept is similar to cluster subdivision development except the housing densities are mixed and usually dominated by multi-family type housing. PURD's would be permitted only upon application to the Planning Board and only after a review process measured against rigorous performance standards established in the PURD ordinance. The benefit of the PURD concept is that its flexibility

combined with the project approval process allow a town to control multi-family development in a manner generally compatible with the typical goals of semi-rural communities.

In selecting which area of a town are appropriate for PURD development, the traditional planning factors for locating multi-family development should be considered. These principally include: (1) proximity to high density areas, job centers or transportation facilities leading to job centers; (2) adequacy of public utilities or prospects for future service extensions; (3) availability of sites which would properly accommodate such development; and (4) access provided by arterial-level roads or streets. For Rye, this analysis leads to the conclusion that land having access to Route 1 and land in the Witch Creek Basin would be most appropriate for PURD development.

1. Route 1 Area. As noted in the other parts of the master plan, the land along Route 1 has superior regional transportation facilities available (I-95 and Route 1). Additionally, the extension of public sewerage and water to this area is both feasible and recommended. Thus, this area is the most appropriate area of Rye for higher intensities of future development. While it is arguable that this area should be reserved totally for future business use, the land use plan recommends that well planned PURD development be allowed as well in order to accommodate the town's regional housing responsibilities.

2. Witch Creek Basin. The Witch Creek Basin abuts Portsmouth. It is served by a state highway (Route 1A) and by the City of Portsmouth water system. Significantly, there is relatively little residential development in this drainage basin; and the location of the undeveloped tracts of land make it possible to develop them at higher densities with little impact on

the residences of the area. One negative aspect of this area is the summer traffic congestion on Pioneer Road; thus, the improvements recommended in the transportation plan for Pioneer Road and Foyes Corner are an integral part of the PURD proposal.

The allowance of PURD's in the above two areas would make approximately fifteen (15) percent of the potentially developable acreage located in the Town of Rye eligible for PURD development (see Table 25). From a general land planning perspective, that should adequately fulfill Rye's regional responsibilities. However, in order to ascertain that PURD is implemented strictly to accomplish the purpose for which it is recommended (i.e. housing diversity), it is recommended that no PURD be permitted unless at least half the housing units therein are rental units renting below defined federal guidelines for affordable housing for low and moderate income households. It is also recommended that PURD's be allowed only on minimum tract sizes of twelve (12) acres in order to provide adequate site planning flexibility, and that the implementation of the PURD concept be attempted at gross densities of two dwelling units per acre in areas not having public sewer. Although most PURD's are built at higher densities, two units per acre is compatible with Rye's master planning goals and within the realm of economic feasibility for PURD developments.[49] However, if sites are serviced by public sewers, higher densities should be allowed.

TOWN OF RYE
Land Use Plan

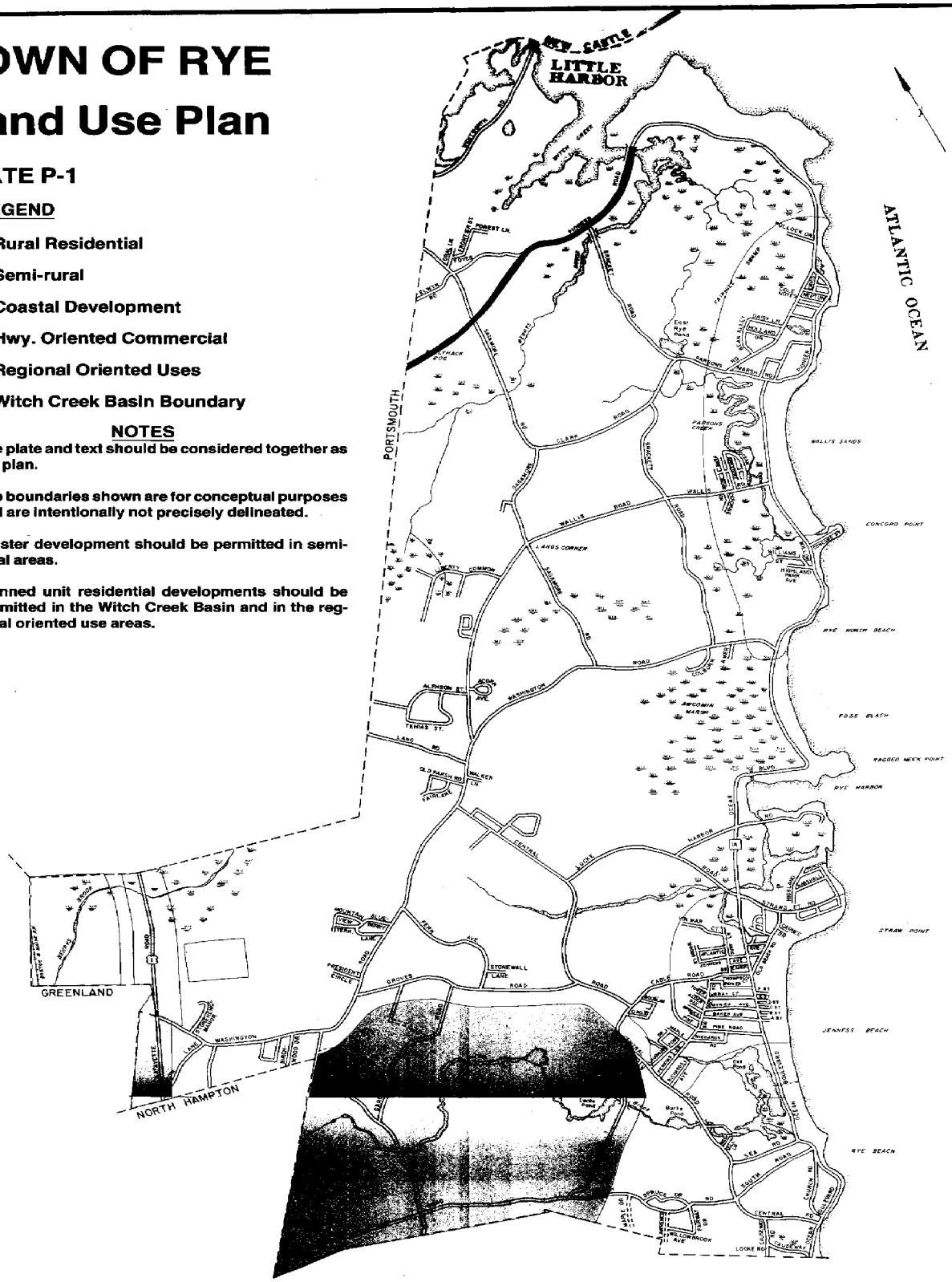
PLATE P-1

LEGEND

- **Rural Residential**
- **Semi-rural**
- **Coastal Development**
- **Hwy. Oriented Commercial**
- **Regional Oriented Uses**
- **Witch Creek Basin Boundary**

NOTES

1. **The plate and text should be considered together as the plan.**
2. **The boundaries shown are for conceptual purposes and are intentionally not precisely delineated.**
3. **Cluster development should be permitted in semi-rural areas.**
4. **Planned unit residential developments should be permitted in the Witch Creek Basin and in the regional oriented use areas.**



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GROWTH MANAGEMENT PLAN

NH RSA 674:22 enables town legislative bodies to regulate and control the timing of development. However, any such regulation may be adopted only after preparation and adoption of both a master plan and a capital improvement program by the planning board. The statute further mandates that such regulation be based upon a "growth management process intended to assess and balance community development needs and consider regional development needs."

New Hampshire's Supreme Court has added additional perspective to the municipal growth management process by requiring, generally, that any growth management process be based on comprehensive planning having a "solid scientific, statistical basis." Beck v. Town of Raymond, 118 N.H. 793,394 A.2d 847 (1978), quoting Patenaude v. Town of Meredith, 118 N.H. 616,621 392 A.2d 582,585 (1978). Unfortunately, the term "solid scientific, statistical basis" was not defined clearly by the court, much to the consternation of planners. A review of the case law using the terms reveals that it probably means that growth management regulation must be statistically supported in the master plan, rational, responsible and not arbitrary.[50]

Ryes Past Building Permit Cap

For the past few years Rye has had a Growth Management Ordinance which capped annual building permits at 40 per year.[51] The ordinance was never tested because the annual demand for building permits has fallen short of 40 in recent years, averaging only 26 annually since 1980 (see Table 28).

It is understood that the 40 unit cap was intended to reflect an annual limitation in growth of two percent (2%).

Recommended Growth Rate Goals

An analysis of the findings presented in the assessment phases of this report leads to the conclusion that a growth rate of about sixteen percent (16%) per decade, averaging about 1.5 percent per year, would be appropriate for Rye. The following sets forth the rationale for this conclusion.

1. Rye's population growth rate during the 1970 to 1980 decade averaged 1.0% annually. During that decade population growth was unconstrained by any type of building permit cap.

2. Generally, town officials feel the historical growth rate of the past decade has been orderly, well paced and manageable in terms of is impact on the town.

3. Projections of the New Hampshire Office of State Planning for the Seacoast Region indicate that the annual population growth rate of rural towns such as Rye will be 1.8 to 1.9 percent, and that of the Seacoast/I-95 region as a whole will be 1.3 percent (see Regional Assessment).

4. Given Rye's unique environmental constraints, including the fact that half of Rye's vacant land is wetlands, a growth rate fifteen to twenty percent lower than that projected for other rural towns in the region seems appropriate public policy (i.e. 1.5% for Rye vs. 1.8% to 1.9% projected for other rural towns).

5. Rye currently has a maximum of approximately 1200 acres of vacant land which might be considered suitable for future residential development. If this land is developed at the densities recommended by the Land Use Plan, Rye will have the capacity to absorb only about 2700 more persons.[52] Thus, at a 1.5 percent annual growth rate, Rye would fill up in approximately 36 years (i.e. 2700 divided by 75 = 36 years). If this pace is adjusted slightly to account for five conversions of seasonal homes per year (which add permanent population without consuming more land), Rye would reach full development capacity in about 40 to 45 years.[53] In the context of long range planning, growth management policies which pace a semi-rural town such as Rye to full development capacity over 40 to 45 years seem reasonable.

Ways to Control Growth Rate

It must be remembered that planning, zoning and utility extension policies form the "first tier" of municipal growth rate controls. Thus

there is a certain level of growth control inherent in the recommended Land Use Plan. For example, the recommendations for the Bailey Brook Basin not only reflect wise land planning but also work to slow down the pace of development of about one-third of Rye's potentially developable vacant land. It is also important to realize that external factors, such as interest rate fluctuations and the regional economy play a large role in determining the annual growth rate (note the number of building permits issued in 1980 and 1982 in Table 28).

In addition to the "first tier" of growth rate controls, two "second tier" types of controls have been used in New Hampshire: (1) building permit quotas; and, (2) development rating systems. Each are briefly explored below.

1. Building Permit Quotas. If a quota system is to be successfully enforced, the established building permit quota must be statistically related to the population growth rate goals of Rye. Rye's new home growth rate and its population growth rate will not be the same due to changes in household size and conversions of seasonal units; thus, any quota system which Rye develops must be based on careful annual reviews of household size trends and rates of conversion. Also, since the objective of a growth rate management system should be an orderly, sustained pace of growth over a long range of future years, Rye should not use a static quota to artificially depress the long term growth rate when annual fluctuations in building demand reduce housing starts in certain years and make up for the reduction by increased demand in subsequent years. In order to be fair, a system of annual quotas must be flexible enough to adapt to these annual fluctuations while still controlling the pace towards the long range population goal.

If Rye chooses to retain some type of quota system, it will have difficulty blending it with the housing diversity goals of the master plan. The economics of multi-family developments of a scale similar in smallness to that which the Land Use Plan allows, will make it difficult for such PURD's to be built if constrained by an annual townwide quota of 30 to 40 building permits. Thus, if Rye retains a quota system, it is recommended that there be two quotas -- an annually established quota on new single-family construction and a multi-year quota for PURD's. Both systems would have to be blended together through careful annual evaluations in order to achieve the decennial goal of a sixteen percent (16%) population growth rate.

2. Development Rating Systems. Some communities are opting for development rating systems as a growth control mechanism instead of quotas. Such systems are based on rating proposed developments according to scores established by ordinance. The scores are intended to reflect the impact of the development on community facilities and services and the environment. Generally such systems have a minimum "threshold" score which each development must meet to receive approval. In 1979, the Town of Hollis pioneered this system in New Hampshire, and Appendix VI presents the Hollis ordinance.

Recommended Approach for Rye

Rye's system of growth rate management should recognize that most future building activity will involve the development of larger tracts of land rather than the subdivision of single lots along existing roads, which dominated the past. The development rating system is a better approach to controlling development of the larger tracts than having only an annual

quota on building permits. However, Rye should not completely abandon the quota concept because it is the only sure method of pacing control towards predetermined population goals.[54] Thus, it is recommended that Rye's approach blend both mechanisms. The primary emphasis should be on a well developed rating system administered under the "loose umbrella" of an annually evaluated quota system meeting the parameters described above.

TRANSPORTATION PLAN

Plate P-2 shows the Transportation Plan for the Town of Rye. The concepts underlying the plan are: (1) no major changes to Rye's system of roads and streets are required in order to meet the present and anticipated future needs of Rye; and, (2) major improvements to Rye's roads would not be compatible with maintaining the rural character or coastal character of Rye. The plan portrays the state highways, local arterials and connectors of the network and highlights the intersections at which improvements should be accomplished.

The plan shows one recommended major improvement -- to Pioneer Road at Foyes Corner and east towards Brackett Road. A major upgrading of this facility, which is part of State Route 1A, will be required prior to the establishment of PURDS in the portion of the Witch Creek Basin adjacent to Pioneer Road.

It is important to note the future being planned for Route 1 by the NHDPWH. A policy statement issued in December, 1984 by the NHDPWH Commissioner indicates that the state plans to ultimately create a four lane divided highway on present location. The policy statement notes that in order to accomplish this "a high blend of cooperation" will be required among the NHDPWH, local officials and developers. It further recommends that towns restrict any permanent improvements within at least twenty (20) feet of the existing Route 1 right-of-way. Rye's Land Use Plan has stated some important new policies for developing the land along Route 1, and it is essential that the implementations of these policies be compatible with the NHDPWH policy regarding Route 1.

Rye's policies regarding the development of residential streets in new subdivisions require some re-evaluation. Generally, planning standards focusing on public safety discourage the construction of dead-end streets over 600 feet in length, and the Rye Subdivision Regulations restrict the length to 450 feet. Cul-de-sacs with radii of 80 to 100 feet are also recommended. Apparently, the Planning Board has waved these requirements in the past for some developers. Additionally, Rye's policy on approving residential streets extended to the townline needs re-evaluation. Streets at the townline end in a "T" rather than a cul-de-sac, and the intention is apparently to extend these streets into neighboring towns. Such layouts of streets require very careful analysis prior to approval because the town has no control over what the adjacent town approves. A connecting street built in another town could prove detrimental to the residents of the Rye portions of the street. It is recommended that new residential streets not be plotted and built to the townline unless there are specific guarantees that the connecting street layout in the adjacent town will not be detrimental to the Rye neighborhoods.[55]

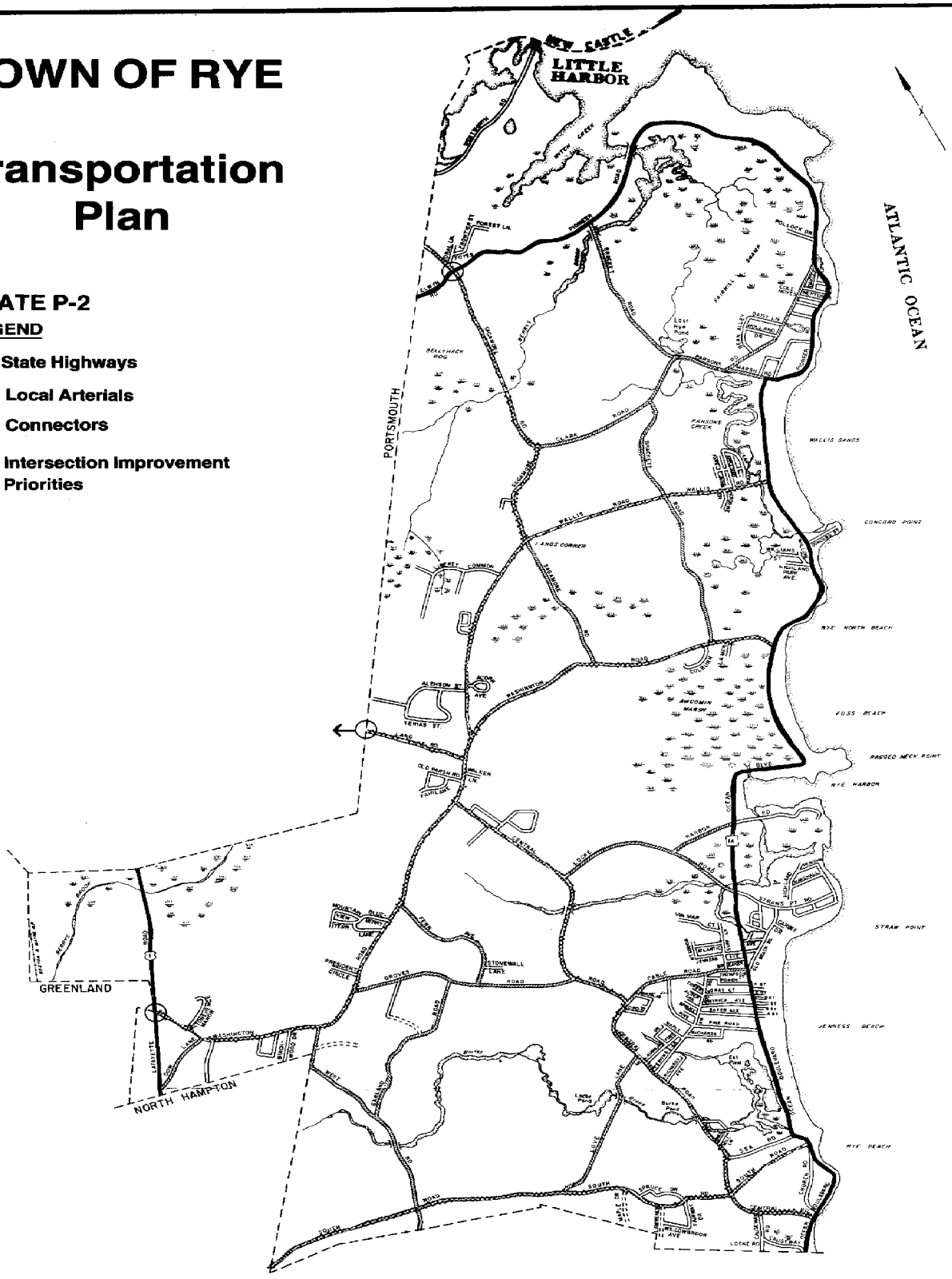
TOWN OF RYE

Transportation Plan

PLATE P-2

LEGEND

- State Highways
- Local Arterials
- Connectors
- Intersection Improvement Priorities



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COMMUNITY FACILITIES AND UTILITIES PLAN

The Community Facilities and Utilities Plan is presented below. The plan is intended to provide guidelines and direction for future decision making. There is no plan plate presented because a plate would not add anything to an understanding of the recommendations made.

Town Buildings

The spatial problems at the central station and town hall require correction. The Selectmen took the initiative to solve this problem by proposing an expansion and remodeling of the town hall to the voters at the March, 1985, town meeting. The proposal, which would have relocated the Police Department to the town hall, was rejected. However, the problems will not go away, and solutions must be found.

Public Water

It is recognized that the Rye Water District and other entities have responsibility for providing public water in Rye and that the planning board and town officials have traditionally exercised little influence over the long range planning of the water system. As noted in the Public Utilities and Services Assessment, most of Rye except the rural portions of the Bailey Brook Basin and Route 1 are adequately served with public water. In order to make the Land Use Plan compatible with public services it is recommended that the Rye Water District be encouraged to:

1. Extend public water service to the Route 1 area or encourage Portsmouth to do so.
2. Not extend public water to the Bailey Brook Basin unless future contamination of private wells warrant it.

Water Quality Management

The WQMP recommended a number of activities, all of which should be accomplished. The major ones include:

1. Groundwater monitoring around town wells.
2. Relocation of the town salt shed.
3. Regrading and establishment of vegetative cover for the abandoned town dump off Groves Road.
4. Sealing of Lafayette Road landfill.
5. Groundwater monitoring and operational improvements at the Philbrick septage lagoon.

Public Sewerage

As noted in the Public Utilities and Services Assessment the absence of a plan for public sewerage for Rye's entire developed coastline is not farsighted. Planning must begin now so that problems resulting from on-site systems located on shallow to bedrock soils in areas abutting tidal marshes; on barrier beaches; and in areas of tidal flooding can be eliminated. Additionally, it is recommended that the planning for sewerage extensions along Route 1 include the entire Route 1 area, and not just the mobile home park.

Schools

The Rye School District 1982 study thoroughly evaluated the town's school facility needs. Among other things, the study highlights the fact that population growth is not the only cause of major capital facility improvements. If obsolesence forces the town to replace its fifty year old junior high school with a new facility adjacent to the Rye Elementary

School, the town should view the old school as an asset and carefully consider adaptive reuse possibilities. Housing for the elderly is one type of adaptive reuse commonly made of abandoned schools, and the site of the Rye Junior High School is well suited to such use. Further, census data indicate the need for such a facility in Rye, and such a facility would further Rye's commitment towards housing diversity.

RECREATION AND OPEN SPACE PLAN

Plate P-3 shows the Recreation and Open Space Plan for Rye, which portrays public beaches; public recreation facilities; large tracts of publicly owned open space; and significant natural features.

Recreation

As noted in the Recreation Assessment, Rye has an adequate amount of outdoor recreation facilities with its public beaches, state parks, school fields, two private golf courses, and the 97 acre town recreation area. In the future, the planning attention should be focused on the improvement of these areas so that they may better serve the public. Examples of the type of concerns which such planning should address are:

1. Beach access
2. Beach erosion
3. Adequacy of comfort facilities along coast
4. Pedestrian walkway plans for entire coast
5. Extension of the Odiorne Park Bike path
6. Future of Rye Harbor
7. Parking

The importance of state participation in such planning cannot be over-emphasized. The state owns the key recreational facilities along the coast; it owns all wet sand; and it owns Ocean Boulevard. Additionally, as noted previously herein, the coast of Rye is a state resource enjoyed by thousands of state residents. Thus, it is recommended that the state and town jointly participate in the development of a recreational plan for Rye's coast.

The importance of a joint, state-local approach to recreational planning for Rye's coast is underscored by the recent proposals for both an Atlantic Salmon fish farm and an expanded marina at the state owned Rye Harbor. Not only is there a possibility that the proposals are not environmentally compatible, but also, the projects have been fostered without much local input,[56] inspite of the fact that either will have significant local impact. It is suggested that joint state-local planning is the appropriate way to decide the future of Rye's coastal recreation facilities.

Open Space

Rye's Conservation Commission has traditionally borne the responsibility for open space preservation. In 1978 it hired a consultant, Phillip E. Reynolds, PhD., who prepared a lengthy Conservation Master Plan for Town of Rye, N.H.. The plan report presents excellent descriptions of the natural resources of Rye. It recommended four priorities, as follows:

> Priority #1: Preservation and protection of the Bellyhack Bog - Berry's Brook watershed.
>
> Priority #2: Preservation and protection of the Cedar Run - Brown's Pond - Burke's Pond ecosystem.
>
> Priority #3: Protection of the Fairhill Marsh rare cedar stands.
>
> Priority #4: Acquisition of the Beach Grove adjacent to the Town Cemetery.

This plan provides an excellent beginning for open space preservation planning, particularly as an information resource. However, the plan did not target many specific parcels for acquisition strategy. It is recommended that the 1978 effort be followed-up with a study particularly targeted to specific tracts, with highest priorities given to the

Bellyhack, Bailey Brook and Fairhill Marsh areas identified in the 1978 plan. Tracts for which fee acquisition, easement acquisition or acquisition of development rights would be appropriate preservation techniques should be identified, and a six year program of acquisition action identified. Rye should not rely on regulation alone to achieve the goals of open space preservation and environmental protection, and the implementation of an acquisition program funded at a meaningful level would be an appropriate supplement to the regulatory approach. Given the high priority of these goals, funding of such a program should be a realistic expectation.

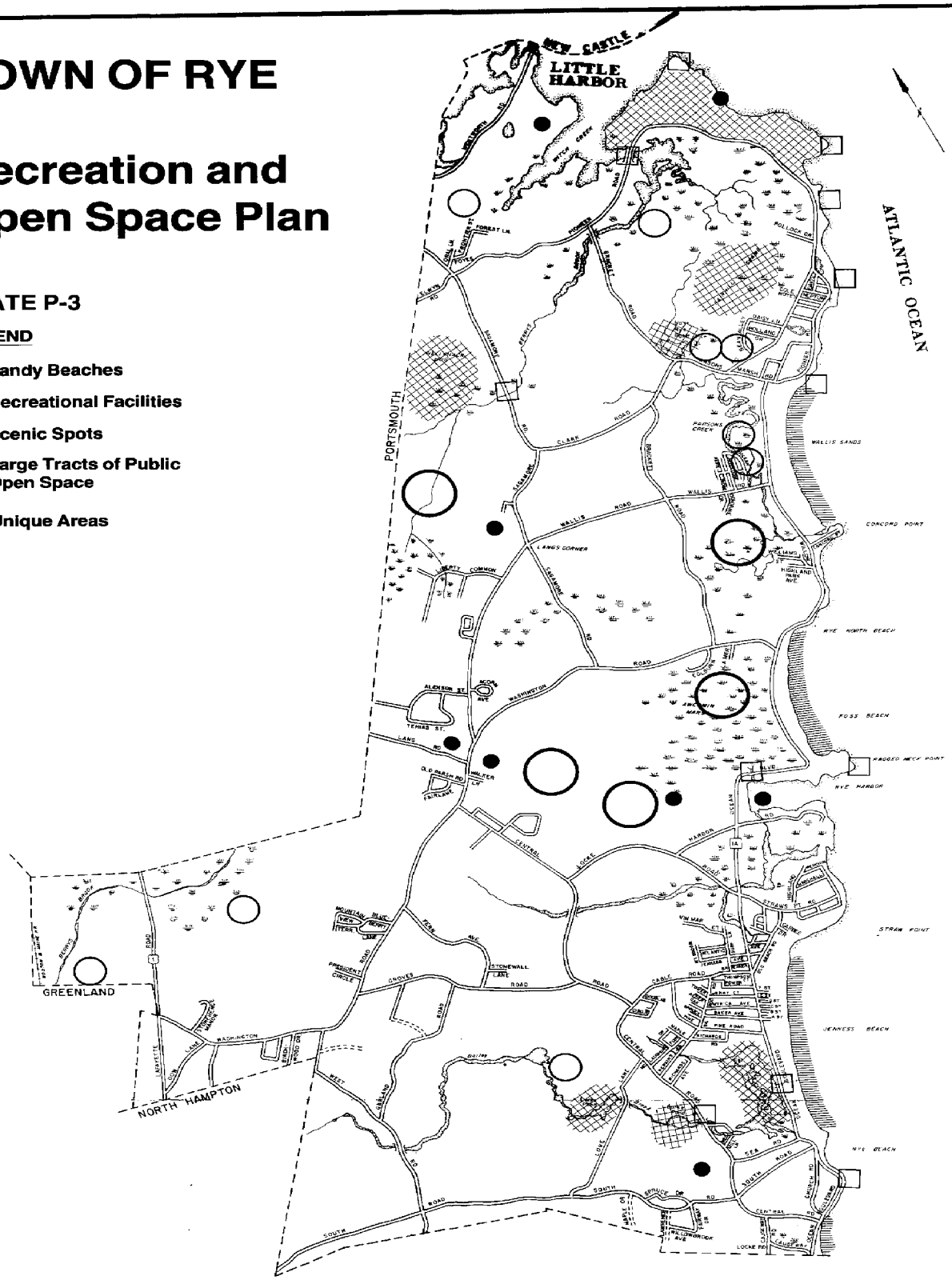
TOWN OF RYE

Recreation and Open Space Plan

PLATE P-3

LEGEND

- Sandy Beaches
- Recreational Facilities
- Scenic Spots
- Large Tracts of Public Open Space
- Unique Areas



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IMPLEMENTATION

IMPLEMENTATION

The preceding sections of this master plan report contains a number of major recommendations about implementing master planning policies. The following section is intended to briefly set forth an agenda of action for the Rye Planning Board and Town of Rye which will lead to the implementation of the master plan.

Adoption of Master Plan

As a first step towards implementation the Rye Planning Board should adopt the master plan in accordance with the procedures of NH RSA 674:4 and 674:6. Ordinances designed to implement the master plan will not be valid until this step is taken.

The adoption of the master plan should be followed by an effort to educate the public about its contents. This educational effort will be of primary importance because only the town meeting can enact the type of zoning controls that will be essential to implementation. As a first step towards public education it is recommended that the Planning Board prepare a summary report that can be mailed to each household.

Preparation of a Capital Improvements Program

If Rye is to implement a growth rate management program, NH statutes require that the Planning Board first adopt a capital improvement program. The preparation of such a program is not terribly difficult for a small town, and, with some professional guidance, the Rye Planning Board should be able to accomplish this in a relatively short timeframe.

Regulatory Revisions

1. Zoning. The implementation of the Land Use Plan will require the drafting and adoption of some major zoning text amendments and a new zoning map. The following new amendments will be required:

- Rural residential district.
- Cluster development provisions.
- Coastal development district.
- PURD provisions.
- Mixed-use regional development district.

In addition to the above major items, the remainder of the zoning ordinance should be reviewed with two purposes in mind: (1) making any changes that will better implement master planning goals; and, (2) correcting any present problems being caused by the zoning requirements. An example of the former type of revision is a redrafting of provisions governing home occupations. Examples of the latter would be thorough review of the contiguous lot rule; non-conforming use, lot and building provisions; and provisions governing seasonal conversions.

The Town of Rye should consider phasing the zoning implementation of its master planning goals. Phasing is particularly appropriate for Rye because:

a. The master plan policies regarding multi-family PURD's are purely a concession to the threat being placed on towns by the courts. Rye may never face such litigation, thus it would be wise for the Town to prepare ordinances implementing the PURD concept but to not enact the ordinances immediately.

b. New Hampshire has no state or regional planning goals allocating fair shares of low and moderate income housing to municipalities. Enacting zoning to implement a "fair share" concept in the absence of such state or regional goals may be premature.

c. The implementation of the coastal concepts proposed in the master plan are logically tied to the extension of sewerage up the coast, which the master plan recommends. It would probably serve no significant purpose to implement major

coastal zoning changes north of Jenness Beach until sewerage occurs.

d. Rye is still a town, with no planning staff. It is unrealistic to expect the part-time Rye Planning Board to be able to promulgate too many major zoning changes in a short period of time.

e. Planning matters in Rye generate much public interest, debate and controversy. In such an environment successful town planning implementation most often occurs through a series of consecutive zoning steps towards the goals, rather than through comprehensive, radical "one-shot" proposals.

If Rye does adopt a phased approach to its zoning implementation, it is suggested that the priorities be organized as follows: (1) First Priority — correction of present deficiencies in zoning ordinance and reorganization of ordinance to improve its "useability"; (2) Second Priority — changes in Route 1 commercial zoning; cluster ordinance; rural residential district; and, (3) Third Priority -- PURD and coastal changes.

It must be noted that the Rye Beach Precinct is enabled by state statute to administer its own zoning and subdivision regulations. The Precinct's zoning regulations allow only single family residences on 60,000 square foot minimum lots, and the Abenaqui Golf Course is zoned recreation. These zoning policies are generally compatible with the proposed master planning goals.

2. Subdivision and Site Plan Review Regulations. Rye's subdivision and site plan review ordinances appear to have been "boilerplated" from model ordinances drafted at least a decade ago. The ordinances have generally functioned well for Rye, but, nevertheless review is warranted. Again, the purposes of review should be to : (1) add

provisions that would better implement the master plan; and, (3) review provisions that may be causing particular problems.

3. Growth Rate Control. The implementation of the type of growth rate control regulatory system recommended in the Growth Management Plan will require careful and deliberate preparation. There is a limit to the workload burden which the Rye Planning Board can bear in the next year, and the zoning implementation work warrants first priority. Accordingly, it is recommended that the Rye growth control system evolve as a two step process. As a safeguard against explosive growth, the present quota of 40 building permits per year should remain in effect, temporarily, through March, 1987. The Planning Board should work on the sophisticated rating system recommended in the Growth Management Plan so that it can be presented at the March, 1987 town meeting as a replacement for the fixed annual quota system.

Implementation of Environmental Objectives

There are several things which Rye can do to further it's objectives of preserving and protecting it's environment and natural features.

1. Greater Recognition of Environmental Objectives in Development Regulations. Rye's subdivision and site plan review regulations do not now adequately provide for an evaluation of the impact of development on Rye's marshes; beaches; rocky shores; wetland ecosystems; scenic areas; or areas of unique character (see Natural Resources Assessment for listings of these areas). It is recommended that both the subdivision and site plan review ordinances be amended to list all of these natural features and to require that applicants for large projects be required to submit an environmental analysis of impact on the listed natural features. The

planning board should be required to make specific findings regarding these environmental impacts prior to approval, rejection or modification of applications.

2. Preparation of Drainage, Erosion and Sedimentation Control Ordinance. Rye's present subdivision regulations do not adequately guide or set standards for drainage, erosion and sedimentation control. Recently, the Town applied for Coastal Zone Management Funds to fund the technical work required to prepare such an ordinance.

3. Intergovernmental Protection of Bellyhack Bog. The Bellyhack Bog - Berry's Brook ecosystem transcends municipal boundaries. Development on the Portsmouth side of the watershed emphasizes the need for an intergovernmental approach to preserving this ecosystem, the major portion of which lies in Rye. It is recommended that the Rye Planning Board initiate such an effort by making contact with the Portsmouth Planning Department to explore interest in a joint preservation approach.

4. Detailed Land Capability Mapping. Rye's planning program has reached the level of evolution where a more detailed data base for decision making is advisable. This master planning effort tried to evaluate the town's overall development capacity on the basis of visual survey and previously mapped environmental data; and, the level of detail, scale, accuracy and completeness of that data made it difficult to use for making more than general conclusions. Rye has sufficient development pressure to warrant refinement of this preliminary information base through detailed capability mapping at a scale of 1" = 100' or 1" = 200'. The mapping program should proceed by drainage basin and should result in one set of maps exhibiting slope, soil conditions, structures, woodlands, natural

features and property lines. Once such a program is complete, Rye should update its master plan with a revised capacity analysis.

The development of such a mapping program will also allow Rye to implement some of the more sophisticated types of planning implementation that communities with significant environmental constraints are utilizing, such as transfer of development rights programs, intensity zoning or impact zoning.

5. Open Space Acquisition and Preservation Program. As recommended in the Recreation and Open Space Plan, Rye should prepare an Open Space Acquisition and Preservation Program that specifically identifies tracts appropriate for fee or easement acquisition or current use preservation. The town should also seriously review its spending priorities with respect to open space preservation, given the astonishingly low level of current annual appropriation.

6. Transfer of Development Rights. NH RSA 674:21(d) enables municipalities to utilize the transfer of development rights (TDR's) as an innovative land use control mechanism. The use of TDR's offers tremendous opportunity for Rye to accomplish many of its master planning goals. However, TDR's are a complex planning mechanism to develop, and New Hampshire law regarding their use is sparse. It is recommended that Rye consider developing such a program, but only after the detailed capability mapping recommended above is completed.

7. Prime Wetlands Map. The Rye Conservation Commission should file a prime wetlands map with the NH Wetlands Board so that Rye's wetlands will receive full statutory protection.

Community Facilities

1. Coastal Recreation Facilities. It is recommended that the Rye Planning Board initiate contacts with the State to determine the feasibility of a joint planning effort regarding the future development of Rye's coastal areas.

2. Golf Courses. Rye's two private golf courses represent significant assets to the community and region. If at all possible, they should be zoned for recreational zoning, but this step should not be taken without the advice of legal counsel, due to the unclear legal status of such zoning.

3. Schools. Schools are probably the single most expensive facility that could be burdened by growth in Rye. While the present facilities appear to be adequate to meet current and immediately foreseeable future growth, this may not always be the case. Thus, it is recommended that the Rye Planning Board begin a pattern of regular communication with the Rye School District so that town planning policies and school needs can be better coordinated in the future.

4. Water System. The Rye Planning Board should also begin to regularly communicate with the Rye Water District. Master planning goals, such as those set forth for the Route 1 area and the Bailey Brook Basin will require the cooperation of the Rye Water District.

5. Sewers. It is recognized that the master plan expands significantly the recommendations of the Water Quality Management Plan with respect to public sewerage in Rye. Nevertheless, the Planning Board should be persistent in advocating the policy of the master plan to extend sewerage to all of Rye's developed coastal area. In taking its stand, the Planning Board should realize that the 1979 questionnaire which was mailed

to 2075 residences as part of the WQMP revealed that, of 1010 returns, only 36% opposed public sewers in Rye while 51% favored them and 13% had no opinion.[57]

Administration and Enforcement

The implementation of Rye's master plan will depend upon the adequate enforcement of Rye's planning ordinances and regulations. Additionally, cooperation among all town officials and boards and commissions is paramount. In the five months in which the consultant has worked with the Town of Rye, he has heard scores of criticisms of administration and enforcement and observed a general reluctance among Rye groups to "pull together" towards common goals. The consultant believes that the master plan is not the place to deal with specific solutions to perceived enforcement and administration problems which are partly misperceived, partly accurately perceived and definitely entangled in town politics. This report will only observe that enforcement, administration and cooperation are essential implementation steps which ought to be the easiest implementation steps for Rye to accomplish, if it wants to.

FOOTNOTES

FOOTNOTES

[1]Town of Rye Water Quality Management Plan, Phase I Report § 3.310.1, (January, 1982) p. 76. (Hereinafter called WQMP.)

[2]Ibid. p. 77.

[3]Ibid. p. 76.

[4]Ibid.

[5]Varrell, Rye on the Rocks, The Strawberry Bank Print Shop, (1962) p. 44. According to Varrell, by 1873 an estimated 1500 people vacationed at Rye Beach and spent an estimated $150,000 annually.

[6]In addition to the town center area, the Historic District also includes the Isles of Shoals islands, the Brackett Road Massacre Site and the Cable House.

[7]This statement may not be true for all small towns, but the consultant believes it is true for towns such as Rye, which are right at the 5,000 split used by OSP to distinguish application of the two methods and which have primarily single-family housing.

[8]For the past few years Rye has had a growth management ordinance in effect which places a "cap" of 40 on the number of building permits for new dwellings issued annually. This ordinance has not affected Rye's growth because the annual number of building permit applications for new dwellings has been fewer than 40 each year. See the Housing Assessment for further discussion of recent building permit data.

[9]In-migration measures population gain by adjusting the total population increase for natural change (i.e. births and deaths). In the 1970-79 decade, Rye recorded 194 more deaths than births, thus its net in-migration was 425 (gross population change) + 194 = 619.

[10]See Office of State Planning, Selected Economic Characteristics of New Hampshire Municipalities, Office of State Planning, September, 1983.

[11]See p. 48 of Town of Rye Water Quality Management Plan, Phase 1.

[12]See WQMP, Phase I Report, § 11.25, p. 180.

[13]Class B waters are suitable for fishing and for water-contact recreation uses and potentially suitable for public water supply after adequate treatment.

[14]The FIRM maps are Flood Insurance Rate Maps dated "Preliminary October 26, 1984" and prepared by Stone and Webster Engineering Corporation for the Federal Emergency Management Agency (FEMA). They may be inspected at the Rye Town Hall.

[15]The Town of Rye has adopted ordinances which meet the federal criteria, but these ordinances should now be reviewed and updated to conform with the new FIRM information. Additionally, the town should consider expanding the floodplain ordinance to explicitly prohibit development in the undeveloped inland floodplain areas (even though this might duplicate the wetlands ordinance prohibitions).

[16]Southeastern N.H. Regional Planning Commission, Municipal Coastal Inventory and Assessment Report, August 23, 1979, p. II-19.

[17]Ibid. II-34.

[18]Ibid. (List has been edited by Rye Planning Board to reflect locally used names.)

[19]WQMP, Phase I, p. 36.

[20]Ibid. 28.

[21]Ibid. § 3.2.7, pp. 26-30 and Plate 5.

[22]See NH RSA 483-A:4.

[23]Southern NH Regional Planning Commission, op. cit, p. II-51.

[24]Ibid. at II-42.

[25]WQMP p. 36.

[26]In making this judgement the consultant considered all wetlands not developable. However, not all tracts with marginal soil conditions were considered undevelopable. In general tracts having access to roads but limited by shallow to bedrock soils were considered to have some potential for development.

[27]Although, of course, approximately two-thirds to three-fourth of the coastal units are seasonal.

[28]It should be noted that this estimate is twice that of the WQMP, p. 36, Phase I Report. The difference is believed to be due to the way in which the consultant split the acreage of the 127 homes on large tracts of land into 2 acres of "residential" and balance "vacant." The WQMP apparently did not do this, and thus, had a lower total acreage of vacant land from which it subtracted only wetlands and publicly owned open space and golf courses to arrive at an estimate of developable acreage.

[29]See p. 38 of Phase I WQMP.

[30]The land along Wentworth Road has been added to this basin for analytical purposes, even though it flows north towards Portsmouth.

[31]Reportedly Awcomin Marsh was also once called Thatch Pond Marsh. The name change is attributed to a cottage once located near the marsh, the owner of which frequently greeted passers by with "awe come on in." The correct spelling once was Awcomonin.

[32]The census count of seasonal units varies from town estimates of 610 in 1979, which was used in the WQMP. The difference may be definetional.

[33]See the Demographic and Socioeconomic Assessment, Table 1.

[34]See p. 52 of WQMP.

[35]However, this might be changing. In the recent, celebrated Atkinson case the plaintiff builder did not get a "builders remedy." Instead the town was ordered to correct its ordinances by May 1, 1985, and the court master retained jurisdiction over the case.

[36]These calculations do not include Rye. They are based on the projected twenty year rate divided by 20.

[37]WQMP p. 84.

[38]WQMP pp. 105-108.

[39]See Section 4 of the Phase II WQMP, pp. 30-37.

[40]The map scale of one inch-two miles makes the determination of specific boundaries from the U.S.G.S. maps not reliable.

[41]Indeed, it is arguable that the defect is not really significant to most of Rye's resident.

[42]For purposes of this report the length of Washington, Wallis and Sagamore Roads paralleling Rye's western boundary and running north to south in orientation is called the west arterial.

[43]One example may be where Sagamore Road crosses Berry's Brook.

[44]List taken from p. II-3 of Town of Rye Municipal Coastal Inventory and Assessment Report, Southeastern NH RPC, August 23, 1979.

[45]Information in this paragraph taken from Ibid. at p. II-5.

[46]Ibid. at II-4.

[47]Under common law and statute (NH RSA 1:16) the state owns the land under the high tideline (or "wet-sand"). Thus, if the public can get to it, it can use the "wet-sand" part of the beach.

[48]Rockingham Planning Commission, Town of Rye Public Shorefront Access Study, August, 1984.

[49]A 1973 study of PURD's by the American Society of Planning Officials (ASPO) found that 37 percent of PURD's were developed on tracts of 5 to 15 acres in size and that 15 percent had densities as low as one to two units per acre. So, Mosena and Bangs, Planned Unit Development Ordinances, Planning Advisory Report No. 291, May, 1973 (ASPO), p. 8.

[50]For example, in Stoney Brook v. Town of Fremont, NH Opinion No. 82-536, 474 A.2d 561 (March 2, 1984) the court struck down a building permit cap that it felt had been "taken out of a hat." The court cited the "solid scientific, statistical basis" language of Patenaude.

[51]The ordinance likely became void on January 1, 1984 when NH RSA 674:22 took effect. The town should seek a legal opinion about this.

[52]This calculation is based on 40 percent of the vacant developable land being in the rural residential area and 60 percent in the semi-rural residential area. Household size is assumed to be stable at 2.6 persons per unit.

[53]If a 1.5 percent annual population goal translate into 75 persons per year, and 10 to 15 of those are added via seasonal conversions, only 60 to 65 persons annually should be added via new housing. Thus, 2700 divided by 60 = 45.0 years, and 2700 divided by 65 = 41.5 years.

[54]Inherent in the rating system approach is a balancing of priorities, only some of which relate to the actual timing of development. It is possible that in a given community the rating system used alone as a growth control tool could result in an amount of approvals that exceeded an orderly growth rate for the town.

[55]This does not mean that a developer has to be completely foreclosed from expanding a subdivision to an adjacent town. What it does mean is that the Planning Board retains future control over whether that is done and how it is done. There are ways to layout subdivisions to accomplish both objectives.

[56]Local input through the permit approval process should not be confused with local input in project development. The absence of local input being criticized here is at the threshold planning level:

"Should there be a fish farm and/or marina here?"

[57]See p. 111 of WQMP Phase I Report.

APPENDICES

APPENDIX I

INVENTORY OF HISTORIC RESOURCES

Federal Register[1]

- Isle of Shoals
- Parsons Homestead
- Elijah Locke House

State Markers[1]

- # 63: Atlantic Cable House and Sunken Forest
- # 78: Odiorne Point

Rye Historic District Ordinance

- Town Center
- Brackett Road Massacre Site
- Atlantic Cable House
- Isle of Shoals

Garrison Locations[2]

- Sandy Beach Garrison: this has been associated with the first settlement of the Sandy Beach area, with the garrison being located in the vicinity of Washington Road and the shore;

- Berry's Garrison: this was located at Sandy Beach and was in existence until 1708 (this may or may not be the same building as the Sandy Beach Garrison);

- Locke's Garrison: this was located at Locke's Neck and was in existence until 1708;

- Garland's Garrison: this was located on Garland Road and was in existence as late as 1720.

Mill Locations[2]

- Jenness's Mill (or Red Mill): this was probably the first mill located within Rye. It was built about 1695 by J. Badson for Francis Jenness on Cedar Swamp Run (Jenness Brook). It was owned as of 1900 by C.A. Jenness although very little of the original structure remained at that time due to extensive rebuilding. This was a sawmill.

- Brown's Mill: this was a grist mill built in the late 18th century and located about 1/2 mile above Jenness' Mill.

- Unidentified Mill: no date is known for this mill which was located about 30 rods (@ 500 feet) below Jenness' Mill.

- Knowle's Mill: no date is known for this mill, built by a Mr. Leavitt, located 1/2 mile upstream from the Brown Mill.

- Goss' Mill: this was a tidal grist mill, built in 1752 in Harvey Locke's pasture between Harbor Road and the road leading to Locke's Neck. A dam was also constructed as part of the works. In 1778 the mill burned and was rebuilt by Nathan Goss. This was then pulled down in 1792, rebuilt and subsequently burned.

- Rye Harbor Mill: a tidal grist mill was built when Rye Harbor was dug; it was torn down about 1880.

- Locke's Neck Mill: this mill was situated west of the stone bridge leading to Locke's Neck "but it disappeared long ago;" it has been identified as a fulling mill.

- Locke's Mill: a windmill owned and operated by the Lockes was located near where Central and Grove Roads intersect; it was taken down and moved to Hampton.

- Seavey's Mill: this was a sawmill built and owned by Amos and James Seavey, located to the west of a branch of Seavey's Creek; built in 1759.

- Odiorne's Mills: both saw and grist mills were located at Little Harbor at the Pine Street Bridge across Seavey's Creek; both burned in 1862.

- Parson's Mill: a grist mill and salt works were owned by Dr. J. Parsons near Pass River Point (Concord Point); these were standing in 1806.

- Berry's Mill: a sawmill was located on Berry's Brook.

- Foss Mill: a sawmill was located to the north of Washington Road, just east of Brackett Road.

Homes

- An excellent listing of more than 200 historic houses (or house sites) is Louise H. Tallman's Historic Index of Rye Homes, which was compiled in 1974 (available at Rye Public Library).

- See also First Stage Cultural Resources Survey, Rockingham Regional Planning Commission, April 1983.

Hotel Era Sites

- Varrell's Rye on the Rocks, The Strawberry Bank Print Shop, (1962) contains excellent descriptions of the hotel era sites of Rye.

Family Cemeteries

- An excellent listing of more than 50 family cemetery sites is Louise H. Tallman's Family Cemeteries of Rye, N.H. (1976 and 1978 update), which is available at the Rye Public Library.

Source Notes:

1. Personal contact with NH Office of Historic Preservation, February 4, 1985.

2. Reprinted from Water Quality Management Plan Town of Rye, N.H. Phase I Report (January, 1982) p. 79, 80.

APPENDIX II

EXISTING DEVELOPMENT - SOIL TYPE INCONSISTENCIES

Note: The following information was reproduced from the Town of Rye Water Quality Management Plan, Phase I Final Report, January, 1982, p. 122, 123.

Updated soils maps, prepared in 1974 for the Town of Rye by the Soil Conservation Service, were interpreted in terms of the suitability for on-site wastewater disposal. The interpretations presented on Plate 13, indicate those areas of Rye having shallow-to-bedrock soils, tidal and freshwater marshes, soils with a seasonal high water table 1 to 4 feet from the surface, well drained soils presenting potential for groundwater contamination and soils with no apparent limitations for on-site wastewater disposal. The most significant problems in terms of inconsistencies between existing development densities and soil types are as follows:

1. Sagamore Road near Clark Road - Soil types indicate shallow-to-bedrock soils in close proximity to the roadway with moderately drained and freshwater marsh soils to the rear of the houses.

2. Fairhill Manor - This densely developed area is entirely on shallow-to-bedrock soils. Lots to the west of Parsons Road slope rapidly down to freshwater wetland soils to the rear.

3. Houses constructed on the barrier beach at Wallis Sands and Jenness Beach - Septic systems in these areas present potential for contamination of near-shore oceanwaters due to high permeability and low cation exchange capacity of the beach sand.

4. Development on the west side of Route 1A - Houses have been constructed on the west side of Route 1A abutting the tidal marsh from Marsh Road to Highland Park Avenue and from Washington Road to Rye Harbor. Septic systems in this area, primarily located in the backyards, are subject to tidal flooding during spring and/or storm tides. In addition, many such systems are located in, or adjacent to, tidal marsh soils having little permeability.

5. The area bounded by Kenphil Avenue, Old Beach Road and Route 1A - Soils in this low-lying area are mapped as beach sand. Due to the close proximity to a tidal marsh, the area is very poorly drained resulting in extensive ponding following each rainfall.

6. Cable Road/Perkins Road Area - This densely developed area, bounded by Cable Road, Perkins Road and Route 1A is located in soil conditions ranging from moderately to poorly drained.

7. Route 1 Business District - The soils in the vicinity of Route 1 between the intersection of Washington Road and the Portsmouth

City Line consist of suitable, shallow-to-bedrock, moderately drained and freshwater marsh soils.

In that the inland roadway system was initially layed out following the low ridges which consist of sandy soils with a deep water table, the remainder of the areas of Rye generally have few problems strictly in terms of soil conditions. Since the major local roadways, Washington Road and Wallis Road, are located on low ridges, the house lots generally slope away from the road. Problems could be anticipated in many locations where, although suitable soils exist in the front lawns, seasonal high water tables may be encountered in the back yard.

APPENDIX III

LIST OF BUSINESSES IN RYE

Businesses on U.S. Route 1

Wings Body Shop
Seacoast Motor Market
Katz Warehouse Carpets
J's Trailer Sales
Lego Live Oak Ice Cream Stand (seasonal)
Seacoast Pools
Westville Homes
Fliteline Oil
The Photo Company
Memories Studio
Linda's Tailor Shop (home business)
Tycoon Screenprint
Big Al's Auto Parts
Southwind Plaza (shopping center and motel)
NH Clinic for Hypnosis
Driver's Seat Automotive Store
Home Center of Rye (includes realtor and school district offices)
Breakfast Hill Baskets
Vin's Radio and TV Sales
Breakfast Hill Professional Building (medical and insurance)
Sleepy Hollow Motel
C G C, Inc.
Hector's Restaurant and Motel
Wayne's Lawn and Garden Equipment Center

Business at Foyes Corner

Tibbetts Hardware and Fuel Oil
Harvey's Yamaha Sales
MacClean Auto Body Shop
Sport Fish (fish market)
Portsmouth - Rye Animal Hospital
Foyes Corner Market
Ship Ahoy Restaurant (seasonal)
Seacoast Screen (silk screening)

Business Located Along "West Arterial"

Rye Center for Early Learning
R.M. Trafton Building Contractor
Saw Sharpening (home business)
Perwinkles Clothing
Remick's - Garage
Appeldore Realty
Atlantic Aquasport
Mobil Service Station
Rye Sheet Metal (garage operation)

Business Located Along "West Arterial" - continued

Rand Lumber Company
U.S. Post Office
Cumberland Farms (neighborhood grocery)
First National Bank of Portsmouth (Rye Branch)
Rye Fox (clothing shop)
Kelly's Store (neighborhood grocery)
Vins Radio & TV Service (home business)
Hitching Post (crafts and gifts)
Nadeau Law Offices

Businesses on Central Road

Laura Lea Beauty Salon (home business)
Zonas Barber Shop
Sunoco Service Station
Evergreen of Rye Floral and Garden Shop
Sunshine & Buttercups Early Childhood Center
Jim Brown Carpenter (home business)

Businesses on Ocean Boulevard

Rye Beach Club
Dunes Motel (seasonal)
Sandpiper Country Store
Carriage House Restaurant
Aloha Shop (seasonal)
Jeanettes Seashore Shop (seasonal)
Philbricks Country Store
Rye Beach Motel and Cottages (seasonal - on Locke Road)
Pilot House Restaurant and Motel
Saunders Restaurant
Rye Harbor State Marina
Joseph McKitterick Attorney (home office)
Rays Restaurant
Drakes Restaurant
Rye on the Rocks Restaurant
Crown Colony Motel and Housekeeping (seasonal)
Harbormaster Restaurant (seasonal)
Atlantic Fourwinds Motor Court (seasonal)
Driftwood Restaurant (seasonal)
Redroof Market (seasonal)
Pirates Cove Restaurant
Surfhaven Pizza
Wallis Sands Place (seasonal cabins)
Ocean Sands Motor Lodge (seasonal cabins)
Buells Ice Cream Shop (seasonal)
Snug Harbor Cabins (seasonal)
Seafarer Motel (seasonal)
Pebble Beach Motel
Surfside Motor Court (seasonal)
Glassworks (stained glass - home business on Triton Drive)

Other

Dufrense Plumbing and Heating (Washington Road just east of town center)

Source: Above list made from a visual survey conducted February 1, 1985.

APPENDIX IV

INVENTORY OF RECREATION AND OPEN SPACE

Note: The following information is based on a 1978 inventory conducted by the Board of Selectmen and is reproduced from Appendix I-D, Table I-D-1 of the Town of Rye Water Quality Management Plan, Phase I Final Report, January, 1982.

I. Town Land

Parcel/Location	Area (acres)
Recreation Area	97
Parsons Park	46
Parsons Park	4.1
Cemetery	29.73
Sawyer's Beach	1160 ft. frontage
Love Lane/Cedar Swamp	8.0
Marsh/Marsh Road	11.71
Appledore Avenue	.1
Breakfast Hill/Lafayette Road	11.3
West Road	14.13
Pioneer Bridge/Seavey Creek	1.06
Brackett Road	15.5

TOWN LAND SUBTOTAL: 238.63 Acres

II. Conservation Commission Land

Parcel/Location	Area (acres)
East Rye Pond	5
Remick-Tucker Marsh	42.53
Drake Marsh	1.44
Palmer Marsh	5.00
Huntervale Avenue	.25
Hartford Marsh	.5
Ivy Q. Brown	.25
Adj. to East Rye Pond	10.0
Off Lafayette Road	11.3
Foss Marsh/Awcomin Marsh	71
R.L. Brown Marsh	5.10
R.L. Brown	8.87

CONSERVATION COMMISSION

SUBTOTAL: 161.24 acres

III. State Parks

Wallis Sands	18
Odiorne's Point	137.5
Rye Harbor	63

STATE SUBTOTAL: 218.5 acres

IV. Privately Owned Recreational Open Space 145.0

PRIVATE SUBTOTAL: 145.0 acres

TOTAL OPEN SPACE: 746 acres

APPENDIX V

CLUSTER DEVELOPMENT INFORMATION

Note: The following information was reproduced from the Handbook of Subdivision Practice, State of New Hampshire Office of State Planning, January, 1972, pp. 77-83.

In many cases, the natural terrain of a site, while varied and attractive, will not lend itself to optimum development under the strict requirements of the community's zoning and subdivision regulations. Often, if some of these requirements were modified, a better and more attractive subdivision could be designed. The most basic requirement of zoning fixes the density of development of an area to a certain number of families per acre, which is usually expressed as a minimum lot area per dwelling unit. Thus, a parcel containing 100 acres in a district where two-acre lots are required (a density of 0.5 dwelling units per acre) would ordinarily be divided into 50 two-acre lots. The strict application of this type of fixed lot-area requirement can sometimes be an unfortunate restriction on good subdivision design, forcing all development to fit a rigid pattern of distribution.

As an alternative to the pattern dictated by the minimum lot-size requirements in conventional zoning requirements, the principle of "cluster" subdivision development advocates grouping dwelling units closer together on a given tract of land and preserving the remainder as open space. Instead of dividing 100 acres into 50 two-acre lots to achieve an overall density of 0.5 dwelling units per acre, cluster zoning might divide the tract into 50 one-acre lots and one 50-acre open space area. By relaxing the zoning requirement to allow building on lots which are below the minimum area, but including the remainder of the tract in the density computations, the arrangement will satisfy the overall density allowed for the zone. The principle is applicable to all types of residential structures and every density of development. A cluster may be a series of high-rise towers in the center of a city grouped around a central courtyard, play, and service area; town houses and apartments may be grouped in a pleasant open environment in place of single family units of the same density built on minute lots. Exhibit t illustrates the cluster principle partially applied to a recreational lakefront setting.

The cluster arrangement avoids several disadvantages inherent in conventional subdivision design, where, following minimum lot-area requirements, all of the available land is divided into buildings lots, and most of the land in each lot is in some way apportioned in advance. In conventional subdivisions, a considerable portion of the lot area is used for the building site, driveways and parking, the well and the sewage disposal system. Much of what remains is divided between the front and side yards according to minimum setback and yard requirements. As a result, very little is left that can be devoted to the preservation of natural features and open space, even if the subdivision is designed with great care. Even in larger lots, where more unused land remains, a large rear yard cannot provide the enjoyment or natural preservation of an unfenced, broad, park-like expanse.

Because much of the land available for subdivision may have subsoil which is poor for private sewage disposal systems, conventional zoning regulations are requiring larger and larger lot sizes to keep development densities in line with the development capacity of the land. Large lot sizes require greater frontage which, in turn, require more road construction and longer utility lines. As a result, lot costs and site improvement costs are far out of proportion to the requirements of a single dwelling unit. Eventually, when the community takes over the roads, it is faced with the same disproportionate maintenance cost per dwelling unit.

Conventional zoning requirements can also adversely affect the environment by encouraging developmental sprawl. Although the aim of large lot zoning is often to prevent the spread of subdivisions that destroy natural beauty and render the landscape unrecognizable, the resulting subdivisions do not always satisfy that aim. Instead, they chew up vast portions of the landscape, changing the environment and wasting much of its original beauty. The community, in order to preserve land and provide recreational areas, might purchase large tracts of open space and construct playground facilities as an alternative, although the capital expenditure requirements of many communities make such a program infeasible, except on a limited basis.

A number of the advantages that arise from using the cluster principle can be seen in the following comparison of a conventional design with a cluster development. Exhibits u(1) and u(2) illustrate two layouts of a residential subdivision proposed for the same tract of land. In the conventional layout we note the complete coverage of the site which permits no conservation or open space. This particular site presented grade problems and the conventional subdivision required substantial "cut" and "fill" for road construction to conform to municipal standards, as well as excessive earthmoving for lot improvement. The cluster layout for the same site allows the preservation of substantial areas for open space, but provides the same number of dwelling units.

The advantages to both the subdivider and the community are apparent in the tabular summary for each layout. In the cluster design, the subdivider builds the maximum number of houses allowed by the conventional zoning requirements with only two-thirds as much road, drainage facilities, and utilities. By placing the dwelling units properly, he can avoid excessive road construction costs and site development costs, and thus reduce his per lot site-improvement costs. Finally, by preserving some green areas and open space, the subdivider "builds in" a definite sales advantage.

The community benefits also. Less road construction means less road maintenance per dwelling unit. The open space provided saves the community the expense of having to buy recreational space elsewhere for the residents of the subdivision, while at the same time preserving some of the natural character of the community. Also, the open space is located for maximum convenience to the residents who will use it.

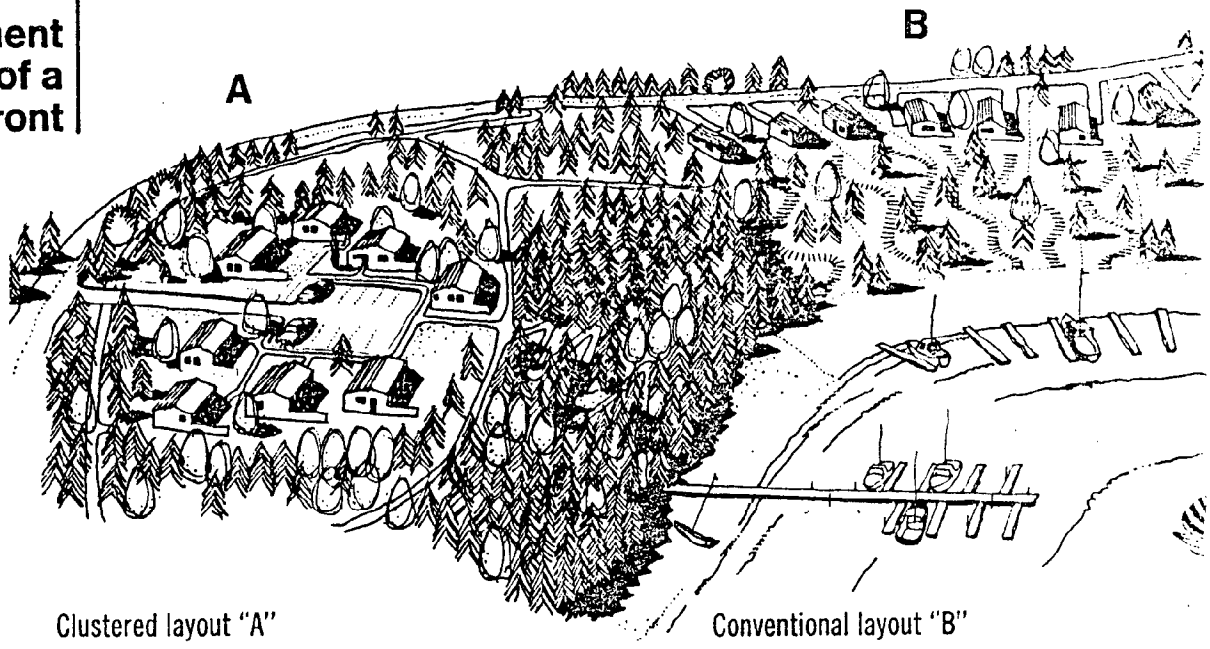
The reduction of lot sizes in cluster layouts can, of course, present problems of sanitation. Cluster design provides a solution concurrent with

the problem. Since the lots are smaller and there is a subsequent saving in road costs, some of this saving could be used to develop water supply and sewage disposal systems and thereby avoid sanitation problems. The proposal is viable, for it has already proved successful in many cluster developments. Both single family and apartment units have been built on the same site, with the remaining open space used for lakes, large play areas, and school sites.

Cluster and planned unit development provisions can be a part of a community's zoning ordinance, which is administered and enforced by the community's legislative body or its agent (see RSA 3163 and 63A), with appeals processed by the local Board of Adjustment. Model cluster zoning provisions are available from the Office of State Planning in Concord, and can also be found in William H. Whyte's Cluster Development (see list of references in this manual). Cluster zoning regulations generally authorize the local planning board to evaluate all cluster development site plans prior to the issuance of a building permit. It would be wise for the planning board to consult professionals in the review of cluster plans, and to encourage the subdivider to do so in the design.

Exhibit t

Development of a lakefront



Clustered layout "A"

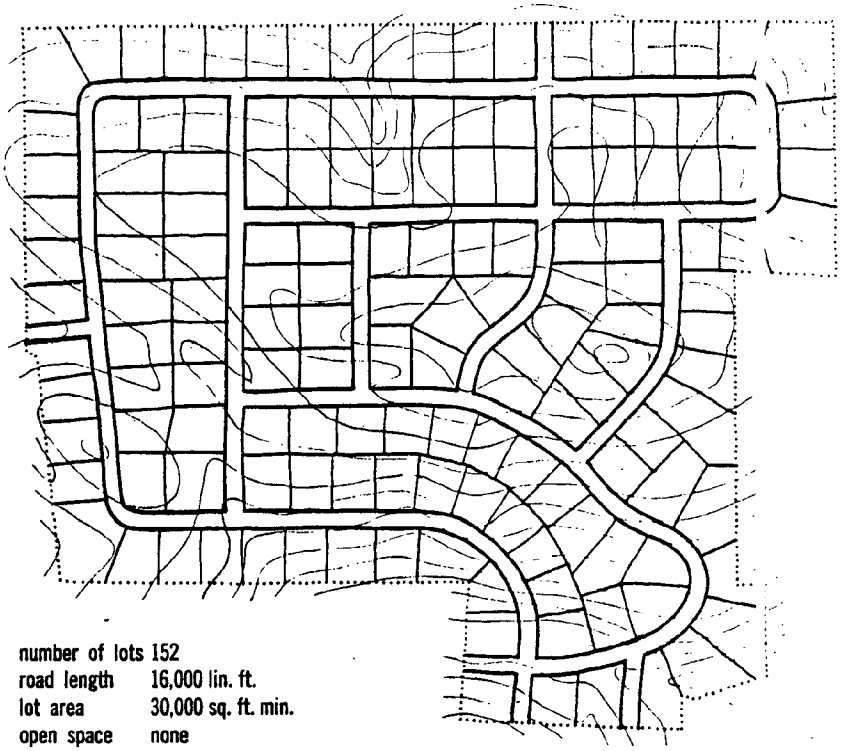
Groups dwellings around central common parking. Common beach area and boating facilities are open to residents while physical features of site are preserved. Also has one controlled access point.

Conventional layout "B"

Allows individual lots with small beach areas and boat facilities available to each resident. This type of development tends to destroy the physical features of the site and restricts residents to limited facilities.
This layout has the disadvantage of many access points.

Exhibit U

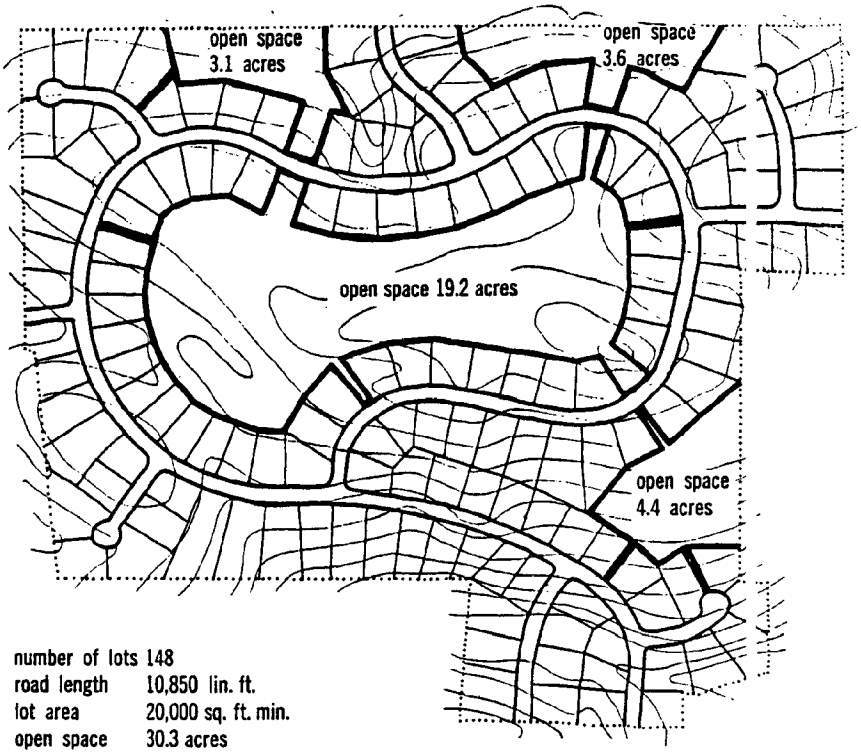
(1) Conventional subdivision development



number of lots 152
road length 16,000 lin. ft.
lot area 30,000 sq. ft. min.
open space none

Exhibit U

(2) Cluster development



number of lots 148
road length 10,850 lin. ft.
lot area 20,000 sq. ft. min.
open space 30.3 acres

APPENDIX VI

HOLLIS, NH SUBDIVISION RATING SYSTEM

NOTE: The following material is taken from: Planning and Development Techniques - Options for Managing Community Growth in New Hampshire, NH Office of State Planning (1979).

HOLLIS SUBDIVISION REGULATIONS

SECTION 3.1

Add a new Section i as follows:

i. Approval of subdivision plats for single and multi-family dwelling units in major subdivisions (more than 2 lots).

The Hollis Master Plan sets forth goals and purposes which focus on maintaining the rural character of the Town while encouraging diversity in the age, social and economic make-up of the populations. These goals can only be accomplished by development which is:

A. Economically sound in terms of keeping to a minimum additional costs to the Town for services such as new schools, new roads, added police and fire protection and similar services.

B. Not detrimental to the character, environment, scenic value and general welfare of the Town.

It is the Hollis Planning Board's responsibility to guide the orderly growth of the Town. Accordingly, the board will evaluate the suitability of new subdivisions, guided by the following criteria, which are based on the goals of the Hollis Master Plan.

CRITERIA

	Max. # Points Allowed
1. Soil limitations for Town Planning according to the Hillsboro County Soil Conservation Service.	10
Slight	10
Moderate	5
Severe	0

		Max. # Points	Allowed
2.	Houselot driveway access:		10
	To local subdivision road	10	
	To minor collector street	5	
	To collector street	0	
	To arterial street	-5	
3.	Layout and Design		10
	* PUD or conventional layout with interior roads, looped connector to other roads	10	
	* PUD or conventional layout with interior road and turn-around	5	
	* Strip development without back lots	2	
	* Strip development with back lots and multiple drives	0	
4.	Location of subdivision by zone:		10
	Residential	10	
	Rural Lands	5	
	Recreational	2	
	Water supply conservation	-5	
5.	Public and private open space included in the development		10
	20% Gross area	10	
	10% Gross area	5	
	5% Gross area	2	
	Minimum to 0	0	
6.	Places land under permanent conservation easements, for active agricultural use.		20
	2 Pt/5 acres for permanent agricultural conservation easements		
7.	Fire and police protection should not require unusual expansion of fire or police protection by size or location of subdivisions.		10
	Less than 1 mile from Town Center	10	
	1 - 2 miles from Town Center	5	
	2 - 3 miles from Town Center	2	
	over 3 miles from Town Center	0	

		Max. # Points Allowed
8.	Town Road Servicing the Development	10
	* Paved road in good condition — 10	
	* Paved road needs improvement to handle increased traffic — 5	
	* Gravelled road up to grade — 0	
	* Gravelled but not up to grade — -5	
	* Unimproved road - not suitable for development — -10	
9.	Hollis Planning Board Discretionary Points to include such considerations as:	15
	* Inclusion of low and moderate income housing units — 5	
	* Upgrades Town facility beyond normal requirements (roads, fire protection, parks) — 5	
	* Develops public open space land for suitable use — 5	
	* Site design harmonious with the natural setting, making best use of vegetation and structures for screening, landscaping with minimal disturbance to natural terrain — 5	
		100 MAX TOTAL

The minimum point total required for subdivision approval shall be 45 points. The Planning Board will use this criteria to determine approval of subdivision plats in accordance with the Master Plan Orderly Growth Objectives.

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