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STATISTICAL PROFILE OF THE COASTAL ZONE

U.S. DEPARTMENT OF COMMERCE NOAA
COASTAL SERVICES CENTER
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CHARLESTON, SC 29405-2413

PREPARED FOR THE
COASTAL ZONE INFORMATION CENTER
OFFICE OF COASTAL ZONE MANAGEMENT
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

BY
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AUGUST 14, 1979

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PREFACE

This statistical profile is the result of a project to provide a consolidated collection of available facts illustrating the importance and vulnerability of the coastal zone. It meets a frequently expressed need for quick access to coastal data.

The profile was prepared by two CZIC Summer Interns, Linda Beck and Karin Bishop. My sincere thanks to them, and to Katherine Jameson of CZIC for her invaluable assistance and guidance. Together, they have produced a document of continuing value to OCZM and to many external users.

Vicki A. Allin
Program Information Officer
Office of Coastal Zone Management

TABLE OF CONTENTS

INTRODUCTION

GEOGRAPHY
- Introduction
- Shoreline Mileage (NOAA/OCZM)
- Shore Ownership/Mileage (US Army Corps of Engineers)
- Shore Uses

POPULATION
- Introduction
- Population & Economic Characteristics of Coastal States
- Population & Economic Characteristics of US Coastal Counties, Districts & Municipalities
- Population & Land Characteristics in US Territories
- Population of the US & Components of Change: 1790-1970
- Population Density per Square Mile 1940-70,1970-74 (National, Regional & State levels)
- Percent Distribution by Selected Areas of Population 1940-70 & 1970-74 (National, Regional & State levels)
- Population & Components of Change 1940-70 & 1970-74 (National, Regional & State levels)
- Net Migration 1940-70 & 1970-74 (National, Regional & State levels)

ECONOMIC ACTIVITY
- Introduction
- Marine Employment by Industry: 1975 & 1980
- Percentage of Total US Industrial Employment in the Coastal Zone
- Commercial Fishing Industry Statistics: 1960-77
- 1975 Summary of Fish & Shellfish Landings
- 1975 US Landings by Waters, Fishermen, Plants & Employment
- 1975 US Landings by Lakes, Plants, Employment & Fishermen
- Aquaculture Development for the US-1973 Totals & 1990 Potential
- US Port Development Expenditures
- Direct & Indirect Personal Income Generated by the US Port Industry by the 10 Leading Supplying Industries - 1970
- Direct & Indirect Employment Impact of the US Port Industry in 10 Leading Supplying Industries -1970
- Direct & Indirect Business Income Generated by the US Port Industry by the 10 Leading Supplying Industries - 1970
- Tonnage of Commercial Cargo Carried in US Oceanborne Foreign Trade
- Ranking of Waterborne Imports by Consuming Industry in the US - 1970
- Value of Commercial Cargo Carried in US Oceanborne Foreign Trade

TABLE OF CONTENTS (Cont'd)

HAZARDS
- EROSION
  - Introduction
  - Historical Shore Changes
  - Cropland Soil Erosion Due to Water, 1975
- HURRICANES
  - Estimated Population at Risk - Hurricane/Storm Surge
  - Number of Hurricanes (Direct Hits) Affecting United States & Individual States 1900-1978 According to Saffir/Simpson Hurricane Scale
  - Probability That a Hurricane Will Occur in Any One Year in a 50-Mile Segment of the US Coastline
  - Percentage Probability of a Hurricane or Great Hurricane
  - Number of Hurricanes of Various Categories to Strike the US Each Decade.
  - Deaths & Damages from Hurricanes in the US
  - Loss of Life and Property Damage in the US Due To Hurricanes, Floods, Tornadoes and Earthquakes 1925-65
  - Deadliest Hurricanes, US 1900-1978
  - Costliest Hurricanes, US 1900-1978
  - Allocations from the President's Disaster Fund 1961-1970

WETLANDS
- Introduction
- Natural Wetlands in the US 1968
- Loss of Important Fish and Wildlife Estuarine Habitat
- Use of Filled Wetlands, Maine to Delaware 1955-1964
- Growth and Condition of Land in Drainage Enterprises for Specified Years

BARRIER ISLANDS
- Introduction
- Location of Barrier Islands by Region
- Barrier Island Groups
- All Atlantic & Gulf Coast Barrier Islands
- New York Bight Barrier Islands
- New England Barrier Islands
- Mid-Atlantic Barrier Islands
- Florida Atlantic Barrier Islands
- Eastern Gulf Coast Barrier Islands
- Louisiana Barrier Islands
- Texas Barrier Islands
- Sea Islands
- Significant Barrier Islands/Barrier Beaches
- National Wildlife Refuges (NWR) on Barrier Islands
- Land Ownership Within Authorized Boundaries of NPS Barrier Island Units
- Total Visits to NPS-Administered Barrier Island in Five-Year Intervals

TABLE OF CONTENTS (Cont'd)

BARRIER ISLANDS (Cont'd)
American Islands: Comparison of Recreation Potential of Island Acreage Within 25 Miles of Urban Areas by Development Status
Development Status of American Islands
Ownership of Island Acreage Available for Recreation
American Islands: Acreage by Ownership & State

REFERENCES

INTRODUCTION

> People in general have no notion of the sort and amount of evidence often needed to prove the simplist matter of fact.
>
> Peter Mere Latham

"Facts" about the coastal zone abound. Unfortunately, many of the figures quoted seem to appear from nowhere and cannot be traced to a reliable source. The purpose of this profile is to provide evidence supporting frequently cited, often common-sense coastal zone "facts". For example: 30 of the 50 states have some shoreline, so logically there will be more people living in coastal than non-coastal areas. Less obvious are the higher population densities and growth rates of coastal areas.

A major problem was identifying the actual area to be studied. There are almost as many definitions of the "coastal zone" as there are states and territories involved with CZM. For the purpose of this project, the coastal zone is considered to be the first tier of coastal counties. This definition was chosen as a clearly identifiable region for which data could be presented. In addition, the Bureau of Census, which collects useful economic as well as population data, works at the county level.*

Another problem is that much available information is incomplete, non-comparable, or dated. As this profile is intended for use mainly at the Federal CZM level, generalized data collected at the nation level was chosen over more detailed studies available for only a few states or regions.

*Much of this information can be extracted in useful form only on special contract with Census. Such a contract might be considered as a future project.

Unfortunately, some of the national level studies, such as the U.S. Army Corps of Engineers National Shoreline Survey compiled in 1971, are rather old and have not been updated. Figures from the Census Bureau are based on 1970 data. In each case, the most current information available has been used.

Two intuitive "facts" supporting CZM are the inherent instability of shoreline areas and the concentration of development in this same fragile zone. A general introduction to the U.S. coast --what it is, where it is, who owns it and what it is used for-- is provided under Geography. Natural threats accompanying coastal resources --erosion and hurricane/storm surge-- are described under the Hazards section. Wetlands and Barrier Islands are particularly sensitive areas.

There are several sources for the increasing stress of the coastal zone. Population growth and migration trends continue to concentrate the nation's people on the ocean and lake shores. Economic activity in the coastal zone is increasing. Port and fishing industry statistics reflect an overall increase in commercial development, drawing on both land and water resources.

What is included here does not provide an up-to-the-minute, detailed photograph of the coastal zone. Rather, it is a compilation of general, readily available statistics, information to support the need for CZM.

August 14, 1979

COASTAL ZONE

GEOGRAPHY

Thirty-five coastal states and territories give the US 85,030 miles* of ocean and lake shoreline. Of this, the Federal government owns 45,522 miles (53.5%). State and local governments hold another 10,200 miles (12%) for public use, while private interests control 26,800 miles (31.5%). Ownership of the remaining 2,705 miles (3.2%) is undetermined.

A general breakdown of shore uses shows that the majority --81.6% (69,395 miles)-- of the total US coastline is undeveloped. Recreation is the prevalent use of the remaining land, with 3,466 miles (4.1%) available to the public and another 5,805 (6.8%) developed for private use. The remaining 6,364 miles (7.5%) have been developed for non-recreational purposes.

NOTE-

Alaska alone accounts for 56% of the total US coastline and may distort statistics for other areas of the US coastal zone. Excluding Alaska, the Federal Government owns 4,019 (10.6%); public, non-Federally owned land amounts to 4,705 (12.5%) and 26,299 miles (69.9%) are privately owned. Ownership of 2,704 miles (7.2%) is uncertain.

Shore use statistics are also altered by excluding Alaska: 3,465 miles (9.1%) are available for public recreation. Private recreation accounts for 5,805 miles (16%). Non-recreational development takes up 6,064 miles (16.2%) of coast, and 22,394 miles (59.4%) are undeveloped.

*All figures are taken from the US Army Corps of Engineers National Shoreline Study, 1971. OCZM uses a different set of figures, compiled by NOAA, for the section 305 allocation formula. NOAA figures are included in a seperate table. All ownership, land use, and erosion calculations are based on the more detailed Corps' study.

SHORELINE MILEAGE

(NOAA/OCZM SECTION 305 BASIC ALLOCATION)

NORTH ATLANTIC	
MAINE	3,478 miles
NEW HAMPSHIRE	131
MASSACHUSETTS	1,519
RHODE ISLAND	384
CONNECTICUT	618
NEW YORK	2,625
NEW JERSEY	1,792
MID-ATLANTIC REGION	
DELAWARE	381
MARYLAND	3,190
VIRGINIA	3,315
NORTH CAROLINA	3,375
SOUTH CAROLINA	2,876
GEORGIA	2,344
GULF REGION	
FLORIDA	8,426
ALABAMA	607
MISSISSIPPI	359
LOUSIANA	7,721
TEXAS	3,359

SHORELINE MILEAGE (NOAA/OCZM)

PACIFIC REGION	
CALIFORNIA	3,427
OREGON	1,410
WASHINGTON	3,026
HAWAII	1,052
ALASKA	33,904
GREAT LAKES REGION	
ILLINOIS	63
INDIANA	45
MICHIGAN	3,224
NEW YORK	2,625
OHIO	312
PENNSYLVANIA	140
WISCONSIN	820
PUERTO RICO	700
GUAM	110
VIRGIN ISLANDS	175
US TOTAL	96,548
US (INCLUDING PUERTO RICO, VIRGIN ISLANDS, AND GUAM)	97,533

SHORE OWNERSHIP
SUMMARY

	TOTAL	FEDERAL	PUBLIC NON-FEDERAL	PRIVATE	UNCERTAIN
US-EXCLUDING ALASKA, VI, PUERTO RICO	36,900	3,900 (11.0)	4,600 (12)	25,800 (70.0)	2,600 (07.0
US-INCLUDING ALASKA VI, PUERTO RICO	85,030	45,522 (53.5)	10,206 (12.0)	26,800 (31.5)	2,705 (03.2
Puerto Rico	596	88 (14.8)	102 (17.3)	358 (60.1)	46.(07.8
Virgin Islands	234	31 (13.2)	3 (01.4)	141 (60.4)	58 (25.0

SHORE OWNERSHIP

(US Army Corps of Engineers,
National Shoreline Study, 1971)

	TOTAL	FEDERAL	PUBLIC NON-FEDERAL	PRIVATE	UNCERTAIN
ATLANTIC REGION					
MAINE	2,500	20 (00.8)*	60 (02.4)	2,420 (96.8)	
NEW HAMPSHIRE	40	2 (05.0)	10 (25.0)	28 (70.0)	
MASSACHUSETTS	1,200	90 (07.5)	175 (14.6)	935 (78.0)	
RHODE ISLAND	340	10 (03.0)	50 (14.7)	280 (82.3)	
CONNECTICUT	270	5 (01.8)	50 (18.5)	215 (80.0)	
NEW YORK	638	34 (05.3)	202 (31.6)	402 (63.2)	
NEW JERSEY	469	67 (14.3)	130 (27.7)	272 (58.0)	
PENNSYLVANIA	48.3		12 (24.0)	37 (76.0)	
	5,505.3	228 (04.1)	689 (12.5)	4,589 (85.3)	
MID-ATLANTIC					
DELAWARE	226	12 (05.3)	46 (20.3)	168 (74.3)	
MARYLAND	1,939	225 (11.6)	35 (01.8)	1,679 (86.5)	
VIRGINIA	993	109 (11.0)	115 (11.5)	769 (86.5)	
NORTH CAROLINA	3,661	573 (15.6)	59 (01.6)	1,038 (21.4)	1,991 (54.4)
SOUTH CAROLINA	3,063	435 (14.2)	1,452 (47.4)	832 (27.1)	334 (11.2)
GEORGIA	204	29 (14.2)	23 (11.1)	153 (74.7)	
	10,086	1,383 (13.7)	1,730 (17,1)	4,639 (44.5)	2,325 (23.0)

*Numbers in parenthesis indicate percentage of state land, rounded to the nearest tenth.

SHORE OWNERSHIP (cont'd)

	TOTAL	FEDERAL	PUBLIC NON-FEDERAL	PRIVATE	UNCERTAIN
GULF REGION					
FLORIDA	6,266	689 (11.0)	276 (04.4)	5,203 (83.0)	96 (01.5
ALABAMA	352	2 (00.6)	12 (03.6)	337 (95.7)	
MISSISSIPPI	247	33 (13.4)	42 (17.2)	171 (69.3)	
LOUSIANA	1,476	160 (10.9)	286 (19.4)	1,040 (69.8)	
TEXAS	2,498	388 (15.5)	55 (02.2)	2,055 (82.3)	
	10,839	1,272 (11.7)	671 (06.2)	8,806 (81.2)	96 (00.9
PACIFIC REGION					
CALIFORNIA	1,810	380 (21.0)	350 (19.3)	1,080 (60.0)	
OREGON	500	16 (82.7)	158 (31.6)	238 (47.6)	21 (04.3
WASHINGTON	2,337	155 (06.6)	107 (04.6)	2,075 (88.8)	
HAWAII	934	107 (11.4)	267 (28.5)	561 (60.0)	
ALASKA	47,300	41,350 (87.4)	5,500 (11.6)	400 (0.85)	
	52,881	42,008 (79.4)	6,382 (12.1)	4,354 (08.2)	21 (0.04
GREAT LAKES REGION					
ILLINOIS	65	3 (04.8)	36 (55.0)	26 (40.1)	
INDIANA	45	9 (20.7)	9 (20.7)	27 (41.5)	
MICHIGAN	2.070	38 (01.8)	226 (10.9)	1,806 (87.2)	
NEW YORK	360		45 (12.4)	315 (87.6)	
OHIO	265	6 (02.3)	42 (16.0)	216 (81.7)	
WISCONSIN	619	57 (09.2)	111 (18.0)	451 (73.0)	
	3,432	113 (03.3)	469 (13.7)	2,841 (82.8)	

SHORE USE SUMMARY

	PUBLIC RECREATION	PRIVATE RECREATION	NON-RECREATION	UNDEVELOPED
US - EXCLUDING ALASKA, VI, PUERTO RICO	3,400 (09.0)	5,800 (16.0)	5,900 (16,0)	21,800 (59.0)
US -INCLUDING ALASKA, VI, PUERTO RICO	3,466 (04.1)	5,805 (06.8)	6,364 (07.5)	69,395 (81.6)
PUERTO RICO	61 (10.3)	2 (00.4)	140 (23.5)	392 (65.9)
VIRGIN ISLANDS	4 (01.9)	3 (01.2)	24 (10.4)	202 (86.4)

SHORE USES
(US Army Corps of Engineers,
National Shoreline Study, 1971)

STATE	PUBLIC RECREATION	PRIVATE RECREATION	NON RECREATION	UNDEVELOPED
MAINE	13.(00.5)*	967'(38.7)	260 (10.2)	1,260 (50.4)
NEW HAMPSHIRE	8 (20.0)	30 (75.0)	2 (05.0)	0
MASSACHUSETTS	235 (19.6)	800 (66.7)	85 (07.0)	80 (06.6)
RHODE ISLAND	50 (14.7)	270 (79.4)	20 (05.9)	0
CONNECTICUT	30 (11.1)	225 (83.3)	15 (05.5)	0
NEW YORK	210 (33.0)	70 (11.0)	250 (39.1)	108 (16.9)
NEW JERSEY	290 (61.8)	35 (07.5)	12 (02.5)	132 (28.1)
	836 (15.2)	2,397 (43.4)	644 (11.7)	1,580 (28.7)
MID-ATLANTIC REGION				
DELAWARE	33 (14.6)	34 (15.0)	3 (01.3)	156 (69.0)
MARYLAND	105 (05.4)	111 (05.7)	1,623 (83.7)	100 (05.2)
VIRGINIA	50 (05.0)	56 (05.6)	155 (15.6)	732 (73.7)
NORTH CAROLINA	98 (02.8)	321 (08.7)	239 (06.5)	3,003 (82.0)
SOUTH CAROLINA	84 (02.7)	50 (01.6)	580 (18.9)	2,348 (76.7)
GEORGIA	16 (07.9)	5 (02.6)		182 (89.4)
	386 (03.8)	577 (05.7)	2,500 (25.8)	6,520 (64.6)
GULF REGION				
FLORIDA	386 (06.2)	763 (12.2)	1,445 (23.1)	3,372 (58.6)
ALABAMA	32 (08.9)	210 (59.6)	5 (01.4)	105 (29.9)

*Numbers in parenthesis indicate percent of state land, rounded to the nearest tenth.

SHORE USES (cont'd)

STATE	PUBLIC RECREATION	PRIVATE RECREATION	NON RECREATION	UNDEVELOPED
MISSISSIPPI	31 (12.6)	106 (43.0)	9 (03.8)	100 (40.7)
LOUSIANA	8 (00.5)	11 (00.7)	15 (01.7)	1 445 (98.0)
TEXAS	386 (18.1)	160 (07.5)	107 (05.0)	1,845 (86.8)
	843 (17.8)	1,250 (11.5)	1,581 (14.6)	6,867 (63.4)
PACIFIC REGION				
CALIFORNIA	440 (24.3)	190 (10.5)	230 (12.7)	950 (52.2)
OREGON	205 (41.0)	81 (16.2)	110 (22.0)	103 (20.7)
WASHINGTON	147 (06.0)	40 (01.7)	77 (03.4)	2,075 (88.8)
HAWAII	94 (10.1)	4 (00.5)	203 (21.8)	633 (67.6)
ALASKA	10 (0.02)	0	330 (00.7)	46,960 (99.7)
	896 (01.7)	315 (00.6)	950 (01.6)	50,721 (95.9)

GREAT LAKES REGION - data are non-comperable

	RECREATION	RESIDENTIAL	INDUSTRIAL	PUBLIC BUILDINGS	AGRICULTURE	UNDEVELOPE
ILLINOIS	31 (47.5)	15 (23.0)	10 (15.4)	8 (12.3)	0.6 (0.9)	0
INDIANA	17 (37.8)	5 (11.1)	21 (48.4)	.6 (01.3)	0.1 (0.2)	
MICHIGAN	131 (06.3)	653 (31.5)	54 (02.6)	13.6 (0.65)	1218 (58.8)	0
NEW YORK		152 (42.2)	30 (08.3)	6.6 (18.3)	134 (37.2)	
OHIO	49 (18.5)	116 (43.9)	24 (09.0)	16 (06.1)	60 (22.6)	
PENNSYLVANIA	12 (24.8)	21 (43.5)	4 (07.4)		12 (24.1)	
WISCONSIN	59 (09.5)	174 (28.1)	33 (05.3)	11 (01.8)	342 (55.2)	
	299 (08.7)	1,136 (33.1)	176 (05.1)	558 (01.6)	1,767 (51.4)	

POPULATION

As of 1978, over 40% of the nation's population lived in state-designated coastal counties. A radically different figure emerges when another definition of "coastal zone" is used. According to the Bureau of the Census, the coastal region includes all counties which lie completely or partially within fifty miles of the shore. Under this definition, 107 million people live in the coastal region; over 50% of the nation's population is concentrated in 8.2% of the land area.

Further evidence of the preference for coastal areas is found in the comparison of average population density: 304.8 per square mile for shoreline counties, 67.8 per square mile for the US as a whole. Population trends reinforce this impression. Growth rates for coastal and inland areas differ sharply, as between 1960 and 1970, when the population of the nation showed an average annual increase of 13.3%: 15.5% for coastal counties, 9.3% for interior areas.

Until quite recently, migration patterns have supported this growth trend. From 1940-1970, there was a continual population drain from interior areas, while coastal states consistantly attracted immigrants. Between 1970 and 1974, the Pacific and Gulf Coasts continued to grow at a rate well above the natinnal average, but population of both the Great Lakes and Atlantic regions, while still showing an overall increase, grew at a rate below that of the nation as a whole.

For an indepth discussion, see Anthony Fedler, The US Coastal Population: Analysis of State, Regional, and National Growth Trends, a master's thesis submitted to Texas A & M University.

POPULATION & ECONOMIC CHARACTERISTICS OF COASTAL STATES

Coastal States	Population			Value added by manufacturing ($-millions)	Change 1963-67 (± %)	Farmland (1000 acres)	Change 1964-69 (± %)	Local government revenue ($-millions)	Per capital outlay
	Per Unit	Per Sq. mile	Change % 1960-70						
Alabama	3444165	68	5.4	3525.5	51.6	13654	-10.3	676.6	158
Alaska	300382	1	33.7	130.4	53.4	1064	-18.1	72.5	275
California	19957715	128	27.1	23393.6	36.1	35722	-3.5	8457.7	368
Connecticut	3031709	624	19.6	6389.8	42.1	541	-24.9	760.6	215
Delaware	548101	277	22.8	958.4	45.6	674	-6.0	141.5	199
Florida	6789412	126	37.1	3682.7	56.6	14032	-9.0	1607.1	225
Georgia	4589575	79	16.4	4683.6	43.9	15806	-11.6	997.1	184
Hawaii	768561	120	21.7	326.2	24.9	2058	-12.8	138.3	123
Illinois	11109935	199	10.2	20016.5	36.7	29913	-0.1	2942.5	224
Indiana	5193669	144	11.4	10308.0	33.4	17573	-2.0	1313.2	217
Louisiana	3640490	81	11.9	2790.3	45.7	9789	-6.0	779.4	184
Maine	993663	32	2.5	1069.5	36.1	1760	-32.1	180.9	163
Maryland	3922399	397	26.5	3781.3	25.3	2803	-11.9	1111.5	249
Massachusetts	5689170	727	10.5	8715.0	36.1	701	-22.3	1795.2	286
Michigan	8875083	156	13.5	17241.6	31.7	11901	-12.5	2648.9	264
Minnesota	3804971	48	11.4	4080.2	45.4	28845	-6.4	1227.7	286
Mississippi	2216912	46	1.8	1635.3	60.8	16040	-9.6	448.5	155

POPULATION & ECONOMIC CHARACTERISTICS OF COASTAL STATES (cont'd)

Coastal States	Population Per Unit	Population Per Sq. mile	Population Change % 1960-70	Value added by manufacturing ($-millions)	Change 1963-67 (± %)	Farmland (1000 acres)	Change 1964-69 (± %)	Local government revenue ($-millions)	Per capital outlay
New Hampshire	737681	82	21.5	931.9	46.5	613	-32.2	147.1	178
New Jersey	7168164	953	18.2	12738.2	27.9	1036	-10.4	2688.0	267
New York	18236051	381	8.7	25246.7	29.2	10148	-17.3	8866.4	409
North Carolina	5082059	104	11.6	6606.5	44.7	12734	-11.5	984.5	169
Ohio	10651848	260	9.8	20435.4	31.8	17111	-2.9	2680.5	215
Oregon	2091385	22	18.3	2060.5	30.8	18018	-12.1	607.7	254
Pennsylvania	11793907	262	4.2	19276.8	37.3	8901	-17.6	2698.5	194
Rhode Island	948845	905	10.5	1350.9	40.9	69	-33.8	196.2	186
South Carolina	2590516	86	8.7	3030.3	43.5	6992	-13.7	392.8	134
Texas	11195431	43	16.9	10922.4	53.4	142567	0.6	2383.1	185
Virginia	4648494	117	17.3	4067.7	33.5	10650	-11.3	910.2	173
Washington	3409169	51	19.6	3764.2	30.5	17559	-7.8	955.4	254
Wisconsin	4417731	81	11.8	7014.1	30.8	18109	-11.1	1390.2	276
TOTALS COASTAL STATES	167878093			230173.5		467383	-25.6	52848.7	222
OTHERS	35334784			29810		595963		5386.7	
UNITED STATES	203212877	57	13.3	261983.0	36.4	1063346	-4.2	58235.4	235

Table 4–2. Population and economic characteristics of U.S. coastal counties, districts, and municipalities

Coastal State and locality	Population			Value added by manufacturing	Change 1963–67	Farmland	Change 1964–69	Local government revenue	Per capita outlay	Per capita income change 1969–74
	Per unit	Per sq. mi.	Change 1960–70							
			±%	*million dollars*	±%	*1,000 acres*	±%	*million dollars*	*dollars*	%
Alabama										
Baldwin	59,382	38	21.0	23.3	89.4	309	−4.1	7.2	116	57.7
Mobile	317,308	256	1.0	279.9	32.7	169	−23.5	69.1	163	58.8
Coastal area	376,690			303.2						58.2
Alaska										
Aleutian Islands	8,057	1	34.0	12.8	.0	1,161	−13.1	.0	0	81.0
Anchorage	124,542	136	.0	15.7	.0	299	−42.7	34.3	376	64.3
Angoon	463	0	.0	1.7	.0	0	.0	.0	0	143.8
Barrow	2,703	0	24.8	.0	.0	0	.0	.0	0	82.8
Bethel	7,579	0	40.3	.0	.0	0	.0	.0	0	109.7
Bristol Bay borough	1,045	2	.0	5.2	.0	0	.0	.5	0	82.2
Bristol Bay division	3,587	0	.0	1.5	.0	0	.0	.0	256	84.2
Cordova-McCarthy	1,774	0	5.6	3.4	.0	0	.0	.0	0	55.3
Haines	1,540	1	.0	.0	.0	0	.0	.0	0	38.6
Juneau	13,520	11	.0	1.2	.0	1	.0	5.7	484	68.5
Kenai-Cook inlet	14,250	1	133.7	6.6	.0	24	−68.0	.0	0	53.6
Ketchikan	10,041	7	.0	28.1	.0	0	.0	4.7	450	68.6
Kobuk	4,434	0	24.6	.0	.0	0	.0	.0	0	88.2
Kodiak	9,409	2	.0	9.3	.0	0	.0	2.4	278	71.0
Matanuska-Susitna	6,552	0	.0	.1	.0	0	.0	2.3	425	60.0
Nome	5,749	0	−5.6	.0	.0	0	.0	.0	0	86.0
Outer Ketchikan	1,755	0	.0	.0	.0	0	.0	.0	0	97.0
Prince Of Wales	2,027	1	18.8	.7	.0	0	.0	.0	0	109.8
Seward	2,021	1	−21.0	.4	.0	0	.0	.0	0	76.1
Sitka	6,424	3	.0	22.5	.0	0	.0	1.5	201	68.1
Skagway-Yakutat	2,021	0	.0	4.6	.0	0	.0	.0	0	67.0
Upper Yukon	1,666	0	4.0	.0	.0	0	.0	.0	0	55.8
Valdez-Chitina-Whittier	3,116	0	8.9	.0	.0	0	.0	.0	0	106.4
Wade Hampton	3,917	0	25.2	.0	.0	0	.0	.0	0	76.3
Wrangell-Petersburg	4,913	1	.0	13.0	.0	0	.0	.0	0	72.4
Coastal area	243,105			117.5						78.9
California										
Alameda	1,073,184	1,464	18.2	1,291.3	26.5	291	−6.1	472.6	381	44.3
Contra Costa	558,389	756	35.9	602.1	10.7	315	4.0	252.7	431	48.0
Del Norte	14,580	14	−18.0	22.2	7.2	35	−4.0	8.7	484	47.6
Humboldt	99,692	28	−5.0	117.0	.9	790	.4	48.1	425	46.5
Los Angeles	7,036,463	1,730	16.6	2,088.2	34.6	558	−4.7	2,980.1	356	36.7
Marin	206,038	398	40.8	57.1	136.0	175	1.2	81.0	361	49.1

Table 4–2. Population and economic characteristics of U.S. coastal counties, districts, and municipalities (continued)

Coastal State and locality	Population			Value added by manufacturing	Change 1963–67	Farmland	Change 1964–69	Local government revenue	Per capita outlay	Per capita income change 1969–74
	Per unit	Per sq. mi.	Change 1960–70							
			±%	*million dollars*	±%	*1,000 acres*	±%	*million dollars*	*dollars*	%
Mendocino	51,101	15	.1	52.1	18.4	946	−11.4	20.5	369	42.6
Monterey	250,071	74	24.8	130.5	83.8	1,472	−1.2	90.1	327	49.4
Napa	79,140	101	20.1	55.4	158.9	220	−16.4	27.3	324	40.9
Orange	1,420,386	1,817	101.8	1,963.8	63.9	184	−24.3	460.0	302	42.5
Sacramento	631,498	650	26.1	487.1	5.3	517	−9.0	277.4	371	44.9
San Diego	1,357,782	319	31.4	803.8	21.5	616	−11.5	465.5	320	43.1
San Francisco	715,674	15,904	−3.3	732.3	19.8	0	.0	464.5	423	41.5
San Joaquin	290,208	205	15.8	323.4	45.2	876	−9.1	148.6	454	49.5
San Luis Obispo	105,690	33	30.4	10.5	19.3	1,553	1.8	41.6	387	45.3
San Mateo	556,234	1,245	25.3	477.2	29.8	85	1.5	232.0	389	45.4
Santa Barbara	264,324	97	56.4	108.6	72.4	952	2.7	95.4	312	41.7
Santa Clara	1,064,714	821	66.1	1,907.5	57.6	480	4.8	426.4	388	45.8
Santa Cruz	123,790	281	47.0	76.8	22.7	61	−41.1	50.9	359	45.9
Solano	169,941	209	37.8	46.3	81.6	358	−6.0	62.8	309	48.2
Sonoma	204,885	128	39.0	79.7	50.9	667	−3.9	81.4	349	46.3
Ventura	376,430	203	90.1	160.5	106.0	433	−1.0	134.9	338	42.4
Coastal area	16,650,214			11,594.4						44.8
Connecticut										
Fairfield	792,814	1,266	21.3	1,885.9	47.3	23	−33.1	214.8	233	38.1
Middlesex	114,816	309	29.4	225.5	55.6	24	−42.3	23.4	198	38.4
New Haven	744,948	1,233	12.8	1,527.6	36.3	46	−20.6	183.3	212	37.9
New London	230,348	346	24.2	358.6	12.7	95	−21.5	47.6	179	43.2
Coastal area	1,882,926			3,297.6						39.4
Delaware										
Kent	81,892	138	24.7	163.4	246.9	220	−5.3	16.6	149	49.3
New Castle	385,856	881	25.5	619.7	28.2	113	−6.4	108.6	216	47.2
Sussex	80,353	85	9.8	175.2	37.2	341	−6.3	16.2	169	50.8
Coastal area	548,101			958.3						49.1
Florida										
Bay	75,283	101	12.1	37.0	17.8	22	−34.7	18.2	232	58.1
Brevard	230,006	228	106.4	310.7	813.8	228	19.5	60.2	232	36.7
Broward	620,069	509	85.7	196.2	152.2	61	−30.2	105.6	220	56.2
Charlotte	27,559	39	118.8	1.3	116.7	218	−20.2	3.5	144	57.7
Citrus	19,196	34	107.1	.7	−30.0	109	−7.6	3.9	222	49.1
Clay	32,059	54	64.1	10.1	90.6	156	−18.5	5.1	178	59.0
Collier	38,040	19	141.5	2.1	250.0	310	5.5	8.6	278	51.9
Dade	1,267,792	621	35.6	589.4	62.3	79	−32.3	341.7	247	57.0
De Soto	13,060	20	11.8	5.0	47.1	271	−8.2	2.5	149	54.2

Dixie	5,480	8	22.3	2.6	44.4	165	−19.3	1.6	264	58.7
Duval	528,865	690	16.1	331.2	37.5	74	−15.5	107.0	214	61.8
Escambia	205,334	309	18.1	.0	.0	108	−14.5	44.8	199	58.2
Flagler	4,454	9	−2.5	.0	.0	92	−37.8	2.4	284	71.8
Franklin	7,065	13	7.4	.6	−25.0	0	.0	1.6	184	63.5
Gulf	10,096	18	1.6	.0	.0	14	81.8	3.4	274	57.2
Hernando	17,004	35	51.8	1.5	200.0	84	−12.6	11.0	303	50.5
Hillsborough	490,265	472	23.2	367.9	41.6	375	−51.3	117.9	213	60.5
Indian River	35,992	71	42.2	25.5	200.0	189	−18.5	10.3	282	66.0
Jefferson	8,778	15	−8.0	1.0	42.9	162	−4.3	2.1	208	61.0
Lee	105,216	134	92.9	11.7	82.8	142	−12.1	23.3	207	47.8
Levy	12,756	12	23.1	3.3	175.0	310	4.1	2.6	175	50.6
Manatee	97,115	131	40.4	42.9	86.5	320	18.3	24.7	301	61.5
Martin	28,035	50	65.6	3.9	129.4	212	22.7	6.0	206	64.9
Monroe	52,586	51	9.7	4.9	96.0	0	.0	9.7	155	66.1
Nassau	20,626	32	20.0	41.5	23.1	65	−16.6	5.2	257	63.9
Okaloosa	88,187	93	44.2	19.1	516.1	76	−11.1	16.9	158	57.4
Palm Beach	348,753	173	53.0	236.3	69.8	527	17.6	107.9	263	60.3
Pasco	75,955	102	106.5	22.4	23.1	338	−6.0	7.2	126	61.8
Pinellas	522,329	1,971	39.4	191.5	33.2	21	−55.9	121.3	227	57.6
Putnam	36,290	47	13.1	.0	.0	278	−23.8	10.5	248	55.1
St. Johns	30,727	51	3.3	16.9	45.7	66	−32.8	7.2	190	52.1
St. Lucie	50,836	87	29.4	13.3	26.7	325	−4.1	12.4	290	62.1
Santa Rosa	37,741	37	27.7	.0	.0	108	8.6	7.2	194	55.8
Sarasota	120,413	205	56.6	28.1	8.5	149	−11.8	30.3	259	52.5
Taylor	13,641	13	3.6	28.3	38.0	106	−44.5	4.4	261	53.2
Volusia	169,487	160	35.2	70.2	22.9	223	−27.7	56.5	265	55.9
Wakulla	6,308	10	20.0	.7	−36.4	14	−34.2	1.5	193	55.8
Walton	16,987	15	3.3	2.6	73.3	147	19.5	3.5	203	58.3
Coastal area	5,469,485			2,906.4						57.4
Georgia										
Bryan	6,539	15	5.0	.7	−22.2	31	−11.5	1.3	178	62.7
Camden	11,334	17	13.6	.0	.0	47	−15.5	2.2	180	63.6
Chatham	187,767	422	−.3	247.1	15.6	25	−47.0	47.6	209	58.0
Glynn	50,373	123	20.4	90.5	−11.7	20	−56.3	13.0	230	59.0
Liberty	17,569	34	21.3	1.7	240.0	21	−69.9	2.2	140	59.7
McIntosh	7,371	17	15.8	4.5	1,025.0	7	−82.3	1.4	189	57.5
Coastal area	280,953			344.5						60.0
Hawaii										
Hawaii	63,468	16	3.5	34.4	−5.5	1,203	−12.7	15.3	183	53.6
Honolulu	629,176	1,058	26.0	252.2	40.8	147	−4.0	102.1	104	
Kauai	29,761	48	5.6	20.6	10.2	273	−3.8	7.6	234	59.5
Maui	46,156	39	7.7	19.0	−29.6	435	−18.1	13.3	224	58.2
Coastal area	768,561			326.2						57.1
Illinois										
Cook	5,488,328	5,759	7.1	1,640.0	29.3	93	−7.9	1,604.5	250	41.2
Lake	382,638	837	30.3	566.5	31.3	111	−6.0	89.4	211	44.3
Coastal area	5,870,966			2,206.9						42.7

Table 4–2. Population and economic characteristics of U.S. coastal counties, districts, and municipalities (continued)

Coastal State and locality	Population: Per unit	Population: Per sq. mi.	Population: Change 1960–70	Value added by manufacturing	Change 1963–67	Farmland	Change 1964–69	Local government revenue	Per capita outlay	Per capita income change 1969–74
			± %	*million dollars*	± %	*1,000 acres*	± %	*million dollars*	*dollars*	%
Indiana										
Lake	546,253	1,065	6.4	1,698.4	6.5	168	−4.4	176.9	262	50.3
La Porte	105,342	174	10.8	224.6	53.9	293	5.8	24.9	196	46.1
Porter	87,114	205	44.5	108.2	101.9	175	−8.2	19.4	217	48.9
Coastal area	738,709			2,031.2						48.4
Louisiana										
Acadia	52,109	79	4.4	14.9	98.7	336	−3.9	9.7	169	60.2
Ascension	37,086	123	32.8	17.9	−52.0	64	−30.7	6.4	152	55.5
Assumption	19,654	55	9.2	8.6	−49.1	85	−3.5	3.3	139	70.7
Calcasieu	145,415	132	.0	183.8	22.4	403	−23.7	36.7	215	53.1
Cameron	8,194	6	18.6	3.8	.0	287	1.0	2.7	304	49.9
East Baton Rouge	285,167	621	24.0	455.3	24.6	134	−12.4	65.9	188	48.3
Iberia	57,397	97	11.1	20.2	29.5	131	−2.2	11.3	191	56.1
Iberville	30,746	49	2.7	.0	.0	122	−.8	7.5	188	58.6
Jefferson	337,568	917	62.0	243.7	68.5	9	−11.8	62.0	196	48.9
Jefferson Davis	29,554	45	−.9	5.5	266.7	366	2.7	7.7	230	58.9
Lafourche	68,941	60	24.5	21.4	.9	205	−9.1	15.1	192	56.2
Livingston	36,511	56	35.4	3.5	133.3	45	−35.5	6.5	175	53.7
Orleans	593,471	3,013	−5.4	464.2	26.6	0	.0	153.5	193	48.9
Plaquemines	25,225	24	11.9	20.5	33.1	32	−44.7	9.8	181	58.2
St. Bernard	51,185	100	59.0	137.1	42.8	7	−53.1	9.8	173	53.2
St. Charles	29,550	101	39.3	116.5	.0	34	−36.2	6.4	203	60.2
St. James	19,733	78	7.4	35.5	47.9	57	−8.2	4.4	218	67.9
St. John the Baptist	23,813	105	29.1	39.4	.0	23	−40.5	3.6	128	65.4
St. Martin	32,453	44	11.7	4.4	33.3	100	−8.2	4.8	130	64.9
St. Mary	60,752	97	24.4	52.6	70.8	121	−1.7	14.4	206	53.4
St. Tammany	63,585	72	64.5	15.2	39.4	80	−11.2	12.9	190	49.6
Tangipahoa	65,875	82	10.8	16.4	19.7	160	−19.0	11.7	163	51.7
Terrebonne	76,049	56	25.1	30.6	94.9	100	−18.9	15.4	190	54.8
Vermilion	43,071	36	10.9	12.8	103.2	393	1.6	10.2	202	63.0
West Baton Rouge	16,864	83	14.0	2.8	40.0	55	16.4	4.5	223	60.1
Coastal area	2,209,968			1,926.6						56.8
Maine										
Cumberland	192,528	219	5.3	219.6	45.9	67	−41.9	40.9	183	42.6
Hancock	34,590	23	7.1	25.1	52.1	47	−48.9	5.6	163	44.5
Knox	29,013	79	1.5	22.6	32.2	40	−52.3	5.0	163	48.2
Lincoln	20,537	45	11.0	9.0	40.6	32	−41.9	3.7	176	46.5
Sagadahoc	23,452	91	2.9	43.5	18.9	18	−52.7	4.0	132	39.4

Waldo	23,328	32	3.1	13.5	.0	99	−38.7	4.6	188	47.4
Washington	29,859	12	−9.3	23.7	12.3	83	−48.4	4.0	119	43.0
York	111,576	111	12.2	94.3	57.4	81	−39.4	19.0	155	42.3
Coastal area	464,883			451.3						44.2
Maryland										
Anne Arundel	297,539	705	44.2	225.9	18.6	63	−17.2	68.9	202	52.9
Baltimore	621,077	1,037	26.0	930.3	16.2	118	−11.6	159.9	210	49.0
Calvert	20,682	95	30.7	1.3	−23.5	62	−16.9	4.4	211	69.3
Carolino	19,781	62	1.6	14.1	8.5	133	−8.3	5.4	244	45.3
Cecil	53,291	147	10.1	40.8	38.3	114	−10.8	9.8	165	48.7
Charles	47,678	104	46.4	4.4	29.4	107	−16.0	9.1	213	61.0
Dorchester	29,405	50	−.9	39.4	63.5	140	−7.0	7.2	209	54.6
Harford	115,378	255	50.4	56.7	47.3	133	−12.1	21.8	179	50.7
Kent	16,146	57	4.3	6.9	7.8	148	1.8	3.3	210	49.1
Prince Georges	660,567	1,363	85.0	140.1	42.8	92	−19.1	144.8	211	50.8
Queen Annes	18,422	49	11.2	4.0	14.3	171	−4.0	5.0	247	56.6
St. Marys	47,388	127	21.8	2.0	5.3	95	−18.5	12.2	253	61.0
Somerset	18,924	56	−3.6	10.1	55.4	70	−11.3	4.0	178	51.8
Talbot	23,682	91	9.8	13.3	23.1	125	.0	5.0	172	50.4
Wicomico	54,236	142	10.6	66.8	38.3	113	−3.4	12.9	200	48.4
Worcester	24,442	51	3.0	30.0	39.5	128	−8.3	4.6	147	54.4
Baltimore City	905,759	11,613	−3.5	1,521.0	16.7	0	.0	371.9	324	
Coastal area	2,974,397			3,107.1						71.1
Massachusetts										
Barnstable	96,656	246	37.5	12.5	115.5	5	−49.7	34.9	383	42.5
Bristol	444,301	802	11.5	747.9	34.4	46	−20.1	115.2	244	39.9
Dukes	6,117	59	4.9	.0	.0	9	63.1	2.9	426	43.7
Essex	637,887	1,291	12.1	1,056.3	24.3	39	−19.7	186.6	267	41.8
Nantucket	3,774	82	6.0	.0	.0	0	.0	1.8	383	43.8
Norfolk	605,051	1,535	18.5	687.4	48.9	18	−22.7	181.1	268	39.2
Plymouth	333,314	510	34.2	201.2	34.4	79	−24.7	87.7	257	39.4
Suffolk	735,190	13,128	−7.1	1,241.0	26.2	0	−69.5	375.5	438	35.0
Coastal area	2,862,790			3,946.3						40.6
Michigan										
Alcona	7,113	10	12.0	1.5	.0	56	−24.8	1.7	207	40.4
Alger	8,568	9	−7.4	.0	.0	25	−22.1	2.6	257	46.5
Allegan	66,575	81	15.3	67.3	70.4	276	−4.1	15.2	199	45.9
Alpena	30,708	54	7.5	62.2	33.8	93	−22.0	11.6	321	45.1
Antrim	12,612	26	21.6	11.9	33.7	70	−28.1	3.6	289	38.3
Arenac	11,149	30	13.1	4.1	105.0	91	−9.2	2.9	258	48.8
Baraga	7,789	9	8.9	7.8	39.3	25	−27.8	2.9	323	45.3
Bay	117,339	263	9.6	189.7	54.1	185	−5.7	31.0	224	44.9
Benzie	8,593	27	9.7	6.8	112.5	39	−17.1	2.7	304	37.5
Berrien	163,875	283	9.4	363.9	36.7	216	−9.3	44.8	256	42.3
Charlevoix	16,541	40	23.2	23.3	70.1	51	−28.8	4.3	255	43.6
Cheboygan	16,573	23	13.9	9.6	159.5	55	−25.8	4.1	229	34.3
Chippewa	32,412	20	−.7	2.0	−66.7	96	−25.2	10.9	273	49.1
Delta	35,924	31	4.7	37.4	61.2	102	−13.3	8.7	241	47.9

Table 4–2. Population and economic characteristics of U.S. coastal counties, districts, and municipalities (continued)

Coastal State and locality	Population			Value added by manufacturing	Change 1963–67	Farmland	Change 1964–69	Local government revenue	Per capita outlay	Per capita income change 1969–74
	Per unit	Per sq. mi.	Change 1960–70							
			±%	*million dollars*	±%	*1,000 acres*	±%	*million dollars*	*dollars*	%
Gogebic	20,676	19	−15.2	7.3	78.0	12	−34.9	7.2	312	46.9
Grand Traverse	39,175	85	17.0	31.8	55.9	84	−10.6	9.9	232	40.4
Houghton	34,652	34	−2.8	8.9	−3.3	46	−39.4	7.7	201	45.9
Huron	34,083	42	.2	24.0	63.3	426	−5.0	8.7	209	53.4
Iosco	24,905	46	50.9	6.7	19.6	74	−.7	6.0	221	46.1
Keweenaw	2,343	4	−6.3	.1	−83.3	0	.0	.6	219	58.8
Leelanau	10,872	32	16.6	2.0	66.7	78	−25.4	2.2	170	46.7
Lenawee	81,609	109	5.4	196.6	74.0	404	−3.1	21.5	237	39.7
Luce	6,789	7	−13.3	2.1	110.0	12	−31.9	2.4	255	40.1
Mackinac	9,660	10	−11.0	.4	−69.2	28	−4.0	3.0	267	43.7
Macomb	625,309	1,303	54.1	1,131.9	61.9	97	−28.6	159.6	239	42.2
Manistee	20,094	37	7.1	41.9	15.4	68	−13.8	5.1	223	42.0
Marquette	64,686	35	15.2	15.5	25.0	27	−34.7	16.8	213	49.4
Mason	22,612	46	3.1	31.9	13.5	96	−18.9	5.1	195	41.9
Menominee	24,587	24	−.4	26.2	26.6	162	−22.1	6.4	248	48.9
Monroe	118,479	214	17.9	121.0	24.0	254	−3.8	24.1	193	44.1
Muskegon	157,426	314	5.0	384.9	27.2	72	−20.5	46.7	249	42.3
Oceana	17,984	34	8.7	5.0	92.3	131	−13.4	4.5	188	40.7
Ontonagon	10,548	8	−.3	.0	.0	49	−19.0	3.4	267	47.8
Ottawa	128,181	228	29.8	227.2	41.1	177	−11.8	28.4	221	41.9
Presque Isle	12,836	20	−2.1	1.9	171.4	96	−26.6	3.3	230	49.5
St. Clair	120,175	164	12.1	165.1	42.2	218	−22.0	32,0	235	38.8
Sanilac	34,889	37	8.9	40.1	31.9	461	−11.1	9.0	226	42.5
Schoolcraft	8,226	7	−8.1	4.1	41.4	15	−18.0	3.0	307	48.8
Tuscola	48,603	60	12.2	31.4	48.1	359	−8.1	11.1	189	46.2
Van Buren	56,173	93	16.1	70.0	49.3	225	−6.7	16.1	246	42.8
Wayne	2,666,751	4,414	.2	5,908.8	20.1	50	−24.3	974.4	306	42.5
Coastal area	4,956,427			9,283.7						44.4
Minnesota										
Cook	3,423	3	1.4	1.0	11.1	0	.0	1.9	544	55.7
Lake	13,351	6	−2.6	2.0	42.9	7	−42.2	5.4	334	64.5
St. Louis	220,693	36	−4.7	114.0	3.4	181	−36.5	88.2	330	54.5
Coastal area	237,467			117.0						58.2
Mississippi										
Hancock	17,387	36	23.8	.0	.0	40	−36.6	2.8	104	52.9
Harrison	134,582	230	12.6	42.7	50.9	40	−16.5	26.0	154	43.9
Jackson	87,975	120	58.5	169.9	69.2	36	−35.5	17.5	184	54.7
Coastal area	239,944			212.6						53.8

New Hampshire										
Rockingham	138,951	201	40.3	68.0	63.9	57	−39.9	25.6	180	43.6
Strafford	70,431	187	17.8	117.8	27.8	39	−32.1	13.9	181	41.2
Coastal area	209,382			185.8						42.4
New Jersey										
Atlantic	175,043	308	8.8	150.1	53.2	31	−19.4	60.6	294	44.1
Bergen	898,012	3,834	15.0	1,469.4	26.4	6	2.9	237.9	242	42.9
Burlington	323,132	395	43.9	269.4	31.6	142	−13.8	68.1	195	45.8
Camden	456,291	2,065	16.4	590.5	20.1	12	−15.9	143.5	262	43.4
Cape May	59,554	223	22.7	13.9	16.8	16	−10.6	22.3	337	48.6
Cumberland	121,374	243	13.6	254.1	42.8	95	2.9	31.0	216	42.3
Essex	929,986	7,173	1.0	1,762.9	28.4	1	−7.7	365.3	357	40.1
Gloucester	172,681	525	28.1	192.3	5.0	74	−7.4	39.8	215	45.3
Hudson	609,266	12,933	−.5	1,584.9	14.4	0	66.7	190.9	277	41.2
Middlesex	583,813	1,871	34.6	1,472.5	37.1	33	−14.1	153.7	260	46.9
Monmouth	459,379	970	38.1	259.5	27.0	78	−12.0	123.7	262	43.9
Ocean	208,470	325	92.6	49.2	29.8	10	−50.2	52.8	275	43.2
Salem	60,346	165	2.8	185.5	−2.3	105	−5.0	18.1	255	47.8
Union	543,116	5,273	7.7	1,762.0	38.1	1	−18.2	156.1	257	42.6
Coastal area	5,600,463			10,016.4						44.1
New York										
Bronx	1,471,690	35,895	3.3	570.7	20.5	0	.0	.0	0	42.4
Cayuga	77,439	111	4.7	79.0	48.5	278	−9.9	31.6	411	40.4
Chautauqua	147,305	136	1.3	230.3	28.8	322	−18.3	56.8	329	39.6
Dutchess	222,295	273	26.3	281.8	83.0	162	−21.1	67.9	279	37.5
Erie	1,113,491	1,052	4.6	1,896.5	25.1	222	−17.4	406.1	326	40.2
Jefferson	88,508	68	.8	77.7	37.5	408	−15.9	39.8	365	35.5
Kings	2,602,012	37,172	−1.0	2,190.7	3.0	0	.0	.0	0	40.5
Monroe	711,917	1,055	21.4	2,709.0	66.2	156	−21.1	271.2	361	39.0
Nassau	1,428,075	4,944	9.9	1,639.8	44.8	2	−56.2	664.8	417	38.5
New York	1,539,233	66,923	−9.4	5,666.8	20.7	0	.0	4,866.8	479	21.0
Niagara	235,720	443	−2.7	756.9	37.0	172	−5.2	99.1	365	38.4
Orange	221,657	266	20.6	168.3	24.5	157	−22.2	74.4	308	39.0
Orleans	37,305	94	9.2	47.3	73.3	166	.3	13.1	321	39.7
Putnam	56,696	245	78.7	13.7	45.7	14	−36.8	18.5	363	38.1
Queens	1,986,473	18,400	9.8	1,680.7	18.6	0	−85.6	.0	0	32.5
Richmond	295,443	5,094	33.1	136.7	4.8	0	.0	.0	0	44.3
Rockland	229,903	1,306	68.1	371.9	44.6	4	−10.7	77.7	356	40.8
St. Lawrence	111,991	41	1.0	143.7	16.5	543	−18.2	44.9	351	40.0
Suffolk	1,124,950	1,213	69.0	589.9	37.3	62	−17.2	412.5	377	40.1
Wayne	79,404	131	16.8	89.4	23.8	229	−4.8	31.0	324	43.0
Westchester	894,104	2,019	10.6	956.3	26.6	15	−18.5	393.8	387	34.7
Coastal area	14,675,611			20,207.7						58.1
North Carolina										
Beaufort	35,980	44	−.1	28.6	130.6	196	−10.8	8.5	204	61.2
Bertie	20,528	29	−15.7	8.1	88.4	194	1.3	4.7	175	81.3
Brunswick	24,223	28	19.5	5.4	−15.6	87	−13.1	3.5	170	63.4
Camden	5,453	23	−2.6	.1	.0	56	3.9	.9	151	72.4
Carteret	31,603	59	15.2	8.7	50.0	31	−24.5	6.1	133	54.5

Table 4–2. Population and economic characteristics of U.S. coastal counties, districts, and municipalities (continued)

Coastal State and locality	Population			Value added by manufacturing	1963–67 Change	Farmland	Change 1964–69	Local government revenue	Per capita outlay	Per capita income change 1969–74
	Per unit	Per sq. mi.	Change 1960–70							
			± %	*million dollars*	± %	*1,000 acres*	± %	*million dollars*	*dollars*	%
Chowan	10,764	62	−8.2	13.1	351.7	59	3.3	2.3	150	60.1
Craven	62,554	89	6.4	17.8	24.5	113	−10.7	10.8	157	63.6
Currituck	6,976	28	5.7	.1	−66.7	53	−24.4	1.1	141	55.9
Dare	6,995	18	17.9	.0	.0	0	.0	1.5	189	54.3
Gates	8,524	25	−7.9	1.6	128.6	86	−4.0	1.7	147	76.2
Hertford	23,529	67	3.6	13.0	49.4	105	8.4	4.0	159	66.4
Hyde	5,571	9	−3.4	.6	50.0	79	3.8	.9	149	73.3
New Hanover	82,996	449	15.7	80.3	117.6	18	13.6	20.2	217	58.4
Onslow	103,126	135	19.6	3.3	135.7	97	−13.1	9.7	76	66.6
Pamlico	9,467	28	−3.9	.8	.0	45	−19.9	1.3	134	67.9
Pasquotank	26,824	118	4.7	7.8	−46.6	68	−8.0	6.4	211	65.5
Pender	18,149	21	−1.9	2.5	56.3	112	−14.5	3.1	172	70.6
Perquimans	8,351	34	−9.0	1.8	157.1	81	−10.4	1.7	179	78.3
Tyrrell	3,806	10	−15.8	.0	.0	34	−16.1	1.0	229	71.5
Washington	14,038	41	4.1	.0	.0	91	29.8	2.6	164	69.1
Coastal area	509,457			193.6						66.5
Ohio										
Ashtabula	98,237	140	5.8	174.5	55.1	192	−10.5	22.1	201	41.4
Cuyahoga	1,721,300	3,774	4.4	3,911.7	24.8	10	−38.7	509.6	246	41.1
Erie	75,909	288	11.6	160.7	29.7	107	−2.1	17.5	194	42.8
Lake	197,200	854	32.6	273.0	65.3	21	−39.3	52.2	237	41.8
Lorain	256,843	519	18.1	533.8	−1.4	162	−12.3	60.2	199	45.5
Lucas	484,370	1,410	5.8	942.0	32.0	99	−5.5	136.6	244	42.8
Ottawa	37,099	142	5.0	44.2	−17.2	130	1.8	8.1	190	47.2
Sandusky	60,983	149	8.0	136.8	49.5	241	3.2	13.4	190	47.1
Wood	89,722	145	23.6	137.8	38.2	371	9.9	17.0	197	47.2
Coastal area	3,021,663			6,314.5						44.1
Oregon										
Clatsop	28,473	35	4.0	36.1	38.3	24	−39.9	10.0	337	46.0
Columbia	28,790	45	28.6	32.5	1.9	74	−21.6	8.9	240	55.7
Coos	56,515	35	2.8	79.8	15.3	197	−20.8	17.7	266	45.6
Curry	13,006	8	−7.0	22.2	−.4	91	−17.4	5.7	342	50.3
Douglas	71,743	14	4.8	103.5	24.2	464	−12.1	26.6	273	47.9
Lane	213,358	47	32.2	208.2	13.4	271	−35.0	61.9	244	46.3
Lincoln	25,755	26	4.5	17.7	−26.9	47	−30.7	9.6	266	54.4
Tillamook	17,922	16	−4.9	19.8	46.7	51	−23.4	6.0	315	50.3
Coastal area	455,562			519.8						49.5

Pennsylvania										
Delaware	600,035	3,270	8.8	1,018.0	90.0	11	−32.1	108.0	166	41.8
Erie	263,654	324	5.2	575.1	38.9	218	−16.7	55.3	184	49.0
Philadelphia	1,948,609	15,116	−2.6	3,269.9	17.7	3	−12.0	590.9	248	43.5
Coastal area	2,812,298			4,863.0						44.7
Rhode Island										
Bristol	45,937	1,837	23.7	66.0	47.0	3	−17.4	9.9	205	48.8
Kent	142,382	823	26.4	147.5	48.1	6	−52.0	25.3	180	47.5
Newport	94,559	819	15.1	39.3	189.0	12	−35.8	17.5	174	53.4
Providence	580,261	1,398	2.2	1,020.2	32.4	25	−30.4	128.2	188	43.5
Washington	85,706	267	45.1	78.0	160.0	23	−31.2	15.3	179	51.7
Coastal area	948,845			1,351.0						48.9
South Carolina										
Beaufort	51,136	88	15.7	2.5	78.6	83	−14.7	5.9	110	80.3
Berkeley	56,199	51	47.1	8.3	9.2	100	−33.3	6.7	125	60.5
Charleston	247,650	264	14.5	138.9	41.2	71	−26.5	38.7	125	55.3
Colleton	27,622	26	−.7	12.2	60.5	259	−16.5	4.8	148	59.4
Georgetown	33,500	41	−3.7	53.9	11.8	68	−46.5	5.1	139	65.6
Horry	69,992	61	2.6	13.6	28.3	271	−16.1	9.4	116	64.8
Jasper	11,885	18	−2.9	2.3	21.1	102	−30.5	1.8	137	64.4
Williamsburg	34,243	37	−16.3	25.5	64.5	291	−8.5	5.5	129	67.2
Coastal area	532,227			257.2						64.6
Texas										
Aransas	8,902	32	27.1	.0	.0	51	−1.4	1.8	184	58.1
Brazoria	108,312	76	42.1	474.9	71.4	599	−14.2	27.9	245	59.5
Calhoun	17,831	34	7.5	.0	.0	208	27.9	6.9	279	65.9
Cameron	140,368	157	−7.1	61.6	65.6	452	6.1	31.1	173	51.5
Chambers	12,187	20	17.4	.0	.0	359	3.4	4.3	297	58.3
Galveston	169,812	426	21.0	497.7	45.5	130	7.4	47.6	248	51.1
Harris	1,741,912	1,011	40.1	2,324.1	46.1	551	−2.0	367.1	193	54.3
Jackson	12,975	15	−7.6	.0	.0	506	−3.2	3.3	199	63.0
Jefferson	244,817	259	.3	988.7	83.5	350	−14.3	68.4	218	57.6
Kenedy	752	0	−23.3	.0	.0	545	2.2	.2	153	59.3
Kleberg	33,166	39	10.4	1.9	280.0	935	1.4	6.6	177	52.2
Matagorda	27,913	24	8.4	20.7	256.9	600	−6.6	9.2	254	61.3
Nueces	237,544	282	7.2	.0	.0	486	−25.1	66.8	236	50.0
Orange	71,226	198	17.9	177.7	7.8	75	−27.2	37.2	237	55.4
Refugio	9,494	12	−13.5	.1	.0	393	−30.8	4.0	288	51.1
San Patricio	47,288	69	5.0	.0	.0	435	−19.9	9.9	181	56.8
Victoria	53,766	60	15.7	52.7	.0	474	−19.6	14.3	225	61.5
Wharton	36,729	34	−3.7	8.1	68.8	701	−.7	11.0	252	64.3
Willacy	15,570	26	−22.5	.3	−40.0	377	−.4	3.7	168	48.1
Coastal area	2,990,564			4,608.5						56.8

Table 4–2. Population and economic characteristics of U.S. coastal counties, districts, and municipalities (continued)

Coastal State and locality	Population: Per unit	Population: Per sq. mi.	Population: Change 1960–70	Value added by manufacturing	1963–67 Change	Farmland	Change 1964–69	Local government revenue	Per capita outlay	Per capita income change 1969–74
			± %	*million dollars*	± %	*1,000 acres*	± %	*million dollars*	*dollars*	%
Virginia										
Accomack	29,004	61	−5.3	5.8	18.4	105	−8.0	5.1	129	67.4
Caroline	13,925	26	9.4	3.5	45.8	85	−13.9	2.1	132	65.4
Charles City	6,158	34	12.1	.2	−33.3	25	−33.3	1.0	159	70.4
Chesterfield	76,855	174	8.2	155.9	46.7	32	−44.0	16.0	134	53.8
Essex	7,099	28	6.1	7.7	140.6	72	−9.8	1.0	145	63.0
Gloucester	14,059	62	18.0	2.9	45.0	35	−21.7	1.9	120	56.4
Hanover	37,479	81	36.0	7.6	26.7	142	−2.1	3.9	93	58.6
Henrico	154,364	674	31.6	31.3	49.8	40	−18.8	25.4	155	59.2
Isle of Wight	18,285	58	6.5	63.3	45.2	102	−1.8	3.0	135	63.0
James City	17,853	117	54.7	.0	.0	21	−19.8	2.0	105	56.6
King and Queen	5,491	17	−6.8	1.3	.0	55	−21.1	.8	100	69.4
King George	8,039	46	11.0	.0	.0	40	−8.6	.9	107	52.1
King William	7,497	27	−.9	.0	.0	61	−23.6	1.1	107	59.1
Lancaster	9,126	67	−.5	2.8	−30.0	26	14.4	1.1	118	63.4
Mathews	7,168	81	.7	.3	200.0	11	7.2	.9	114	50.7
Middlesex	6,295	48	−.4	1.5	50.0	26	−11.0	1.1	138	74.5
New Kent	5,300	25	17.7	1.1	.0	30	−10.6	.7	129	76.3
Northampton	14,442	66	−14.9	7.3	17.7	51	−20.1	2.6	136	68.2
Northumberland	9,239	49	−9.3	4.9	75.0	50	−5.2	1.2	113	72.8
Prince George	29,092	105	43.5	.0	.0	66	−11.7	2.8	88	74.9
Richmond	5,841	34	2.0	3.8	.0	47	−29.5	1.1	146	65.6
Spotsylvania	16,424	40	18.9	.0	.0	72	−24.7	2.3	124	57.0
Stafford	24,587	91	45.7	.7	−22.2	36	−22.7	2.8	109	61.2
Surry	5,882	21	−5.4	.0	.0	72	2.1	.7	106	75.5
Westmoreland	12,142	53	10.0	2.3	53.3	65	−11.8	2.1	157	73.3
York	33,203	257	53.8	.0	.0	11	8.3	5.5	149	59.6
Chesapeake City	89,580	263	21.6	28.4	9.2	69	−11.4	21.1	216	
Colonial Heights City	15,097	1,887	57.5	2.3	27.8	0	.0	2.4	145	
Hopewell City	23,471	2,608	31.2	105.5	7.4	0	.0	6.6	260	
Newport News City	138,177	2,003	21.6	219.8	18.4	0	.0	28.6	170	
Norfolk City	307,951	5,810	1.0	158.5	7.1	0	.0	93.4	275	
Petersburg City	36,103	4,513	−1.8	146.4	52.3	0	.0	12.3	267	
Portsmouth City	110,963	3,826	−3.3	40.8	67.9	0	.0	24.6	210	
Richmond Ctiy	249,621	4,157	13.4	3.8	.0	0	.0	69.3	276	
Virginia Beach City	172,106	665	102.0	3.8	216.7	52	−16.7	24.7	158	
Coastal area	1,717,918			836.4						64.1
Washington										
Clallam	34,770	20	15.8	44.4	2.8	36	−43.7	12.4	320	46.1
Grays Harbor	59,553	31	9.3	109.9	32.6	59	−31.5	16.9	257	46.5

Island	27,011	127	37.5	.8	14.3	19	−45.7	4.7	178	46.1
Jefferson	10,661	6	10.6	.0	.0	15	−29.5	3.4	319	43.0
King	1,156,633	545	24.0	1,932.4	44.0	61	−25.8	345.5	271	40.8
Kitsap	101,732	259	20.9	11.2	53.4	24	−51.9	22.1	207	42.4
Mason	20,918	22	28.7	.0	.0	27	−26.4	4.7	245	48.8
Pacific	15,796	17	7.6	11.3	16.5	39	−21.3	4.7	301	50.2
Pierce	411,027	245	27.8	282.6	43.5	73	−44.7	105.7	247	46.0
San Juan	3,856	22	34.3	.3	−25.0	26	−32.0	1.0	283	41.6
Skagit	52,381	30	2.0	101.9	41.3	117	−14.3	18.5	291	47.7
Snohomish	265,236	126	54.0	106.1	−23.4	95	−26.1	59.6	229	42.9
Thurston	76,894	108	39.7	56.0	34.3	81	−37.3	17.1	232	43.6
Wahkiakum	3,592	14	4.8	.0	.0	21	−24.2	.9	249	53.3
Whatcom	81,950	39	16.5	107.5	68.8	142	−19.9	19.3	217	48.5
Coastal area	2,390,626			2,914.1						45.8
Wisconsin										
Ashland	16,743	16	−3.6	16.1	69.5	80	−27.3	5.2	291	48.7
Bayfield	11,683	8	−1.9	11.7	160.0	105	−34.0	4.4	320	45.0
Brown	158,244	302	26.5	282.4	51.7	256	−8.8	39.4	234	49.8
Burnett	9,276	11	.7	4.1	70.8	109	−26.1	3.1	303	47.0
Door	20,106	41	−2.8	15.6	108.0	178	−18.6	6.8	272	46.5
Douglas	44,657	34	−.8	23.6	7.3	79	−29.7	15.6	314	48.4
Iron	6,533	9	−16.6	2.6	136.4	18	−33.4	2.7	399	42.7
Kenosha	117,917	434	17.2	209.8	−42.3	109	−4.8	34.0	255	57.3
Kewaunee	18,961	57	3.7	20.1	54.6	192	−4.7	6.0	270	49.9
Manitowoc	82,294	139	9.4	147.0	35.1	304	−3.6	23.4	260	47.8
Marinette	35,810	26	3.3	72.0	41.7	189	−20.3	12.4	315	47.9
Menominee	2,607	7	.0	2.4	.0	0	.0	1.5	480	73.3
Milwaukee	1,054,063	4,448	1.8	2,464.6	21.4	17	−32.3	422.0	312	47.8
Oconto	25,553	26	2.8	22.0	6.3	272	−12.3	6.3	209	47.7
Ozaukee	54,421	231	41.7	106.6	70.0	105	−2.9	14.3	258	51.0
Racine	170,838	507	20.5	425.0	50.9	140	−5.8	47.1	255	51.6
Sheboygan	96,660	191	11.8	203.3	42.0	239	−10.3	27.7	251	43.3
Coastal area	1,926,366			4,028.9						49.7

POPULATION & LAND CHARACTERISTICS IN U.S. TERRITORIES

Territory	Population 1970	Percent Population Change 1960-70	Per Capita Income 1969	Gross Area Land & Water	Estimated 1990 Population
Puerto Rico	2717033	15.4	$ 981	3,435	3763000
Guam	84996	26.8	$2008	212	184000
Virgin Islands	62468	94.6	$2377	133	146433
American Samoa	27159	35.4	$ 596	76	40000

Adapted from 1970 U.S. Census of Population.

POPULATION OF THE UNITED STATES AND COMPONENTS OF CHANGE: 1790 TO 1970.

YEAR	POPULATION		
	NUMBER	CHANGE	RATE %
1790	3,929,214	-	-
1800	5,308,483	1,379,269	35.1
1810	7,239,881	1,931,398	36.4
1820	9,638,453	2,398,572	33.1
1830	12,866,020	3,227,567	33.5
1840	17,069,453	4,203,433	32.7
1850	23,191,876	6,122,423	35.9
1860	31,433,321	8,251,445	35.6
1870	38,558,371	7,115,050	22.6
1880	50,155,783	11,597,412	30.1
1890	62,947,714	12,791,931	25.5
1900	75,994,575	13,046,861	20.7
1910	91,972,266	15,977,691	21.0
1920	105,710,620	13,738,354	14.9
1930	122,775,046	17,064,426	16.1
1940	131,669,275	8,894,229	7.2
1950	150,697,361	19,028,086	14.5
1960	179,323,175	28,625,814	19.0
1970	203,304,158	23,980,983	13.3

Source: U.S Bureau of the Census. "Historical Statistics of the United States: Colonial Times to 1970." U.S. Government Printing Office, Washington, D.C. 1972.

U.S. AREA 1970-1974 *

TABLE 6: POPULATION OF THE UNITED STATES AND SELECTED AREAS AND COMPONENTS OF CHANGE: 1970 TO 1974.

U.S. AREA	POPULATION 1970	1974	CHANGE	RATE%
UNITED STATES	203,004,000	211,044,000	8,040,000	4.0
INTERIOR U.S. STATES	34,771,000	36,461,000	1,690,000	4.9
U.S. COASTAL STATES	168,232,000	174,113,000	5,881,000	3.5
U.S. 50-MILE ZONE	107,903,000	111,429,000	3,526,000	3.3
U.S. SHORELINE CO.	76,009,000	77,891,000	1,882,000	2.5

TABLE 7: PERCENT DISTRIBUTION BY SELECTED AREAS OF THE POPULATION OF THE UNITED STATES: 1970 AND 1974.

U.S. AREA	1970	1974
INTERIOR U.S. STATES	17.1	17.2
U.S. COASTAL STATES	82.9	82.8
U.S. 50-MILE ZONE	53.2	52.9
U.S. SHORELINE COUNTIES	37.9	37.3

TABLE 8: POPULATION DENSITY PER SQUARE MILE OF [illegible] SELECTED U.S. AREAS: 1970 AND 1974.

U.S. AREA	AREA SQ.MI.	POPULATION 1970	RATE	1974	RATE
UNITED STATES	3,028,710	203,004,000	67.8	211,044,000	69.7
INTERIOR U.S. STATES	1,526,918	34,771,000	22.8	36,461,000	23.9
U.S. COASTAL STATES	1,501,792	168,232,000	112.0	174,113,000	116.0
U.S. 50-MILE ZONE	470,615	107,903,000	229.3	111,429,000	236.8
U.S. SHORELINE CO.	249,382	76,009,000	304.8	77,891,000	312.3

TABLE 9: NET MIGRATION FOR SELECTED U.S. AREAS: 1970 TO 1974.

U.S. AREA	NET MIGRATION 1970 to 1974	RATE%
INTERIOR U.S. STATES	327,000	-0.5
U.S. COASTAL STATES	-775,000	-0.7
U.S. 50-MILE ZONE	-713,000	-1.5
U.S. SHORELINE CO.	-1,110,000	-0.9

* NOTE: Alaskan population excluded.

U.S. AREA 1940-1970 *

TABLE 2: POPULATION DENSITY PER SQUARE MILE OF TOTAL AREA FOR SELECTED U.S. AREAS: 1940 TO 1970.

U.S. AREA	AREA SQ. MI.	POPULATION 1940	RATE	1950	RATE	1960	RATE	1970	RATE
UNITED STATES	3,028,710	131,669,275	43.5	150,697,361	49.8	179,097,008	59.1	203,003,776	67.8
INTERIOR U.S. STATES	1,526,918	26,618,332	17.4	28,288,137	18.5	31,807,453	20.8	34,771,495	22.8
U.S. COASTAL STATES	1,501,792	105,050,943	69.9	122,409,224	81.5	147,289,555	98.1	168,232,281	112.0
U.S. 50-MILE ZONE	470,615	60,113,087	127.7	72,967,164	155.0	92,069,672	195.6	107,902,923	229.3
U.S. SHORELINE CO.	249,382	43,191,803	173.2	52,523,717	210.6	65,831,828	264.0	76,008,516	304.8

TABLE 3: PERCENT DISTRIBUTION BY SELECTED AREAS OF THE POPULATION OF THE UNITED STATES: 1940 TO 1970.

U.S. AREA	1940	1950	1960	1970
INTERIOR U.S. STATES	20.2	18.8	17.8	17.1
U.S. COASTAL STATES	79.8	81.2	82.2	82.9
U.S. 50-MILE ZONE	45.7	48.4	51.4	53.2
U.S. SHORELINE CO.	33.3	35.4	37.2	37.8

TABLE 4: POPULATION OF THE UNITED STATES AND SELECTED AREAS AND COMPONENTS OF CHANGE: 1940 TO 1970.

U.S. AREA	POPULATION 1940	1950	CHANGE	RATE%	1960	CHANGE	RATE%	1970	CHANGE	RATE%
UNITED STATES	131,669,275	150,697,361	19,028,086	14.5	179,097,008	28,399,647	18.8	203,003,776	23,906,768	13.3
INTERIOR U.S. STATES	26,618,332	28,288,137	1,669,805	6.3	31,807,453	3,519,316	12.4	34,771,495	2,964,042	9.3
U.S. COASTAL STATES	105,050,943	122,409,224	17,358,281	16.5	147,289,555	24,880,331	20.3	168,232,281	20,942,726	14.2
U.S. 50-MILE ZONE	60,113,087	72,967,164	12,854,077	21.4	92,069,672	19,102,508	26.2	107,902,923	15,833,251	17.2
U.S. SHORELINE CO.	43,191,803	52,523,717	9,331,914	21.6	65,831,828	13,308,111	25.3	76,008,516	10,176,688	15.5

TABLE 5: NET MIGRATION FOR SELECTED UNITED STATES AREAS: 1940 TO 1970.

U.S. AREA	NET MIGRATION 1940 - 1950	RATE%	1950 - 1960	RATE%	1960 - 1970	RATE%
INTERIOR U.S. STATES	-2,169,767	-8.2	-1,823,306	-6.4	-1,295,518	-4.1
U.S. COASTAL STATES	2,152,074	2.0	1,780,467	1.5	1,218,085	0.8
U.S. 50-MILE ZONE	4,177,018	6.9	5,366,385	7.2	3,523,518	3.8
U.S. SHORELINE CO.	3,153,043	7.1	3,228,627	6.1	1,400,243	2.1

* NOTE: Alaskan population excluded.

ATLANTIC REGION 1940-1970 *

TABLE 10: POPULATION OF SELECTED ATLANTIC COASTAL AREAS AND COMPONENTS OF CHANGE: 1940 TO 1970.

ATLANTIC REGION	POPULATION									
	1940	1950	CHANGE	RATE%	1960	CHANGE	RATE%	1970	CHANGE	RATE%
ATLANTIC STATES	51,538,723	58,277,022	6,738,299	13.1	68,397,249	10,120,277	17.4	77,523,473	9,162,224	13.3
50-MILE ZONE	29,030,425	33,573,530	4,543,105	15.6	40,529,577	6,956,047	20.7	46,878,352	6,348,775	15.7
SHORELINE CO.	20,520,254	23,527,258	3,007,004	14.7	28,234,855	4,707,627	20.0	32,184,514	3,949,629	14.0

TABLE 11: POPULATION DENSITY PER SQUARE MILE OF TOTAL AREA FOR SELECTED ATLANTIC COASTAL AREAS: 1940 TO 1970.

ATLANTIC REGION	AREA	POPULATION							
	SQ.MI.	1940	RATE	1950	RATE	1960	RATE	1970	RATE
ATLANTIC STATES	414,330	51,538,723	124.4	58,277,022	140.7	68,397,249	165.1	77,453,473	186.9
50-MILE ZONE	119,726	29,030,425	242.5	33,573,530	280.4	40,529,577	338.5	46,879,262	391.6
SHORELINE CO.	62,263	20,520,254	329.6	23,527,258	377.9	28,234,885	453.5	32,184,514	516.9

TABLE 12: NET MIGRATION FOR SELECTED ATLANTIC COASTAL AREAS: 1940 TO 1970.

ATLANTIC REGION	NET MIGRATION					
	1940-1950	RATE%	1950-1960	RATE%	1960-1970	RATE%
ATLANTIC STATES	-709,791	-1.4	-949,857	-1.6	-20,519	-0.03
50-MILE ZONE	347,814	1.2	578,539	1.7	928,735	2.3
SHORELINE CO.	51,013	0.2	236,308	1.0	177,022	

*NewYork is included in both the Atlantic and Great Lake regions.

ATLANTIC REGION 1970-74*

TABLE 13: POPULATION OF SELECTED ATLANTIC COASTAL AREAS AND COMPONENTS OF CHANGE: 1970 TO 1974.

ATLANTIC REGION	POPULATION			
	1970	1974	CHANGE	RATE%
ATLANTIC STATES	77,453,000	80,379,000	2,926,000	3.8
50-MILE ZONE	46,879,000	48,289,000	1,410,000	3.0
SHORELINE CO.	32,185,000	32,972,000	787,000	2.4

TABLE 14: POPULATION DENSITY PER SQUARE MILE OF TOTAL AREA FOR SELECTED ATLANTIC COASTAL AREAS: 1970 AND 1974.

ATLANTIC REGION	AREA	POPULATION			
	SQ.MI.	1970	RATE	1974	RATE
ATLANTIC STATES	414,330	77,453,000	186.9	80,379,000	194.0
50-MILE ZONE	119,726	46,879,000	391.5	48,289,000	403.3
SHORELINE CO.	62,263	32,185,000	516.9	32,972,000	529.6

TABLE 15: NET MIGRATION FOR SELECTED ATLANTIC COASTAL AREAS: 1970 TO 1974.

ATLANTIC REGION	NET MIGRATION	
	1970-1974	RATE%
ATLANTIC STATES	-124,000	-0.2
50-MILE ZONE	-450,000	-1.0
SHORELINE CO.	-502,000	-1.6

* New York is included in both the Atlantic and Great Lake regions.

TABLE 16: POPULATION OF SELECTED GULF COASTAL AREAS AND COMPONENTS OF CHANGE: 1940 TO 1970.

GULF REGION	POPULATION									
	1940	1950	CHANGE	RATE%	1960	CHANGE	RATE%	1970	CHANGE	RATE%
GULF STATES	15,692,875	18,406,672	2,713,797	17.3	23,233,140	4,826,468	26.2	27,288,556	4,055,416	17.5
50-MILE ZONE	4,245,783	5,652,415	1,406,632	33.1	7,843,259	2,190,844	38.8	9,515,494	1,672,235	21.3
SHORELINE CO.	2,621,757	3,700,478	1,078,721	41.1	5,423,939	1,723,461	46.6	6,761,755	1,377,816	24.7

TABLE 17: POPULATION DENSITY PER SQUARE MILE OF TOTAL AREA FOR SELECTED GULF COASTAL AREAS: 1940 TO 1970.

GULF REGION	AREA	POPULATION							
	SQ.MI.	1940	RATE	1950	RATE	1960	RATE	1970	RATE
GULF STATES	473,746	15,692,875	33.1	18,406,672	38.9	23,233,140	49.0	27,288,556	57.6
50-MILE ZONE	93,798	4,245,783	45.3	5,652,415	60.3	7,843,259	83.6	9,515,494	101.4
SHORELINE CO.	44,177	2,621,757	59.3	3,700,478	83.8	5,423,939	122.8	6,761,755	153.1

TABLE 18: NET MIGRATION FOR SELECTED GULF COASTAL AREAS: 1940 TO 1970.

GULF REGION	NET MIGRATION					
	1940-1950	RATE%	1950-1960	RATE%	1960-1970	RATE%
GULF STATES	445,960	2.8	413,201	1.8	948,446	4.1
50-MILE ZONE	600,120	14.0	1,117,132	19.8	633,359	8.1
SHORELINE CO.	699,841	26.7	1,020,533	27.6	612,537	11.3

GULF COAST 1970-1974

TABLE 19: POPULATION OF SELECTED GULF COASTAL AREAS AND COMPONENTS OF CHANGE: 1970 TO 1974.

GULF REGION	1970	1974	CHANGE	RATE%
GULF STATES	27,289,000	29,549,000	2,260,000	8.3
50-MILE ZONE	9,515,000	10,736,000	1,221,000	12.8
SHORELINE CO.	6,762,000	7,390,000	628,000	9.3

TABLE 20: POPULATION DENSITY PER SQUARE MILE OF TOTAL AREA FOR SELECTED GULF COASTAL AREAS: 1970 TO 1974.

	AREA	POPULATION			
GULF REGION	SQ.MI.	1970	RATE	1974	RATE
GULF STATES	473,746	27,289,000	57.6	29,549,000	62.4
50-MILE ZONE	93,798	9,515,000	101.4	10,736,000	114.5
SHORELINE CO.	44,177	6,762,000	153.1	7,390,000	167.3

TABLE 21: NET MIGRATION FOR SELECTED GULF COASTAL AREAS: 1970 TO 1974.

	NET MIGRATION	
GULF REGION	1970-1974	RATE%
GULF STATES	1,184,000	4.3
50-MILE ZONE	841,000	8.8
SHORELINE CO.	361,000	5.3

GREAT LAKES 1940-70 *

TABLE 22: POPULATION OF SELECTED GREAT LAKES COASTAL AREAS AND COMPONENTS OF CHANGE: 1940 TO 1970.

GREAT LAKES REGION	POPULATION									
	1940	1950	CHANGE	RATE%	1960	CHANGE	RATE%	1970	CHANGE	RATE%
GREAT LAKES STATES	52,796,965	58,710,075	5,913,110	11.2	67,740,508	9,030,433	15.4	74,088,323	6,347,815	9.4
50-MILE ZONE	18,870,396	21,751,186	2,880,790	15.3	26,307,516	4,556,330	20.9	29,275,821	2,968,305	11.3
SHORELINE CO.	13,232,509	15,113,280	1,880,771	14.2	17,688,348	2,575,068	17.0	18,889,049	1,200,681	6.8

TABLE 23: POPULATION DENSITY PER SQUARE MILE OF TOTAL AREA FOR SELECTED GREAT LAKES COASTAL AREAS: 1940 TO 1970.

GREAT LAKES REGION	AREA	POPULATION							
	SQ.MI.	1940	RATE	1950	RATE	1960	RATE	1970	RATE
GREAT LAKES STATES	436,869	52,796,965	120.9	58,710,075	134.4	67,740,508	155.1	74,088,323	169.6
50-MILE ZONE	132,900	18,870,396	142.0	21,751,186	163,7	26,307,516	197.9	29,275,821	220.3
SHORELINE CO.	67,702	13,232,509	195.5	15,113,280	223.2	17,688,348	261.3	18,889,049	279.0

TABLE 24: NET MIGRATION FOR SELECTED GREAT LAKES COASTAL AREAS: 1940 TO 1970.

GREAT LAKES REGION	NET MIGRATION					
	1940-1950	RATE%	1950-1960	RATE%	1960-1970	RATE%
GREAT LAKES STATES	-1,716,799	-3.3	-2,121,900	-3.6	-2,711,111	-4.0
50-MILE ZONE	153,756	0.8	424,561	2.0	-549,801	-2.1
SHORELINE CO.	-31,507	-0.2	-295,797	-2.0	-1,164,778	-6.6

* New York is included in both Great Lakes and the Atlantic Regions.

GREAT LAKES REGION 1970-74 *

TABLE 25: POPULATION OF SELECTED GREAT LAKES COASTAL AREAS AND COMPONENTS OF CHANGE: 1970 TO 1974.

GREAT LAKES REGION	POPULATION			
	1970	1974	CHANGE	RATE%
GREAT LAKES STATES	74,088,000	74,725,000	637,000	0.9
50-MILE ZONE	29,276,000	29,195,000	-81,000	-0.3
SHORELINE CO.	18,889,000	18,722,000	-167,000	-0.9

TABLE 26: POPULATION DENSITY PER SQUARE MILE OF TOTAL AREA FOR SELECTED GREAT LAKES COASTAL AREAS: 1970 AND 1974.

GREAT LAKES REGION	AREA	POPULATION			
	SQ.MI.	1970	RATE	1974	RATE
GREAT LAKES STATES	436,869	74,088,000	169.6	74,752,000	171.0
50-MILE ZONE	132,900	29,276,000	220.3	29,195,000	219.7
SHORELINE CO.	67,702	18,889,000	279.0	18,722,000	276.5

TABLE 27: NET MIGRATION FOR SELECTED GREAT LAKES COASTAL AREAS: 1970 TO 1974.

GREAT LAKES REGION	NET MIGRATION	
	1970-1974	RATE%
GREAT LAKES STATES	-2,267,000	-3.1
50-MILE ZONE	-1,247,000	-4.3
SHORELINE CO.	-918,000	-4.9

*Includes New York as does the Atlantic Region.

PACIFIC REGION 1940-1970 *

TABLE 28: POPULATION OF SELECTED PACIFIC COASTAL AREAS AND COMPONENTS OF CHANGE: 1940 TO 1970.

PACIFIC REGION	POPULATION									
	1940	1950	CHANGE	RATE%	1960	CHANGE	RATE%	1970	CHANGE	RATE%
PACIFIC STATES	9,346,592	14,986,321	5,639,729	60.3	20,971,888	5,985,567	39.9	26,222,248	5,250,360	25.0
50-MILE ZONE	7,966,483	11,990,033	4,023,550	50.5	17,389,320	5,399,287	45.0	22,232,346	4,843,026	27.9
SHORELINE CO.	6,817,733	10,182,701	3,364,968	49.4	14,485,016	4,302,315	42.3	18,173,198	3,688,182	25.5

TABLE 29: POPULATION DENSITY PER SQUARE MILE OF TOTAL AREA FOR SELECTED PACIFIC COASTAL AREAS: 1940 TO 1970.

PACIFIC REGION	AREA	POPULATION							
	SQ.MI.	1940	RATE	1950	RATE	1960	RATE	1970	RATE
PACIFIC STATES	330,316	9,346,592	28.3	14,986,321	45.4	20,971,888	63.5	26,222,248	79.4
50-MILE ZONE	124,226	7,966,483	64.1	11,990,033	96.5	17,389,320	140.0	22,232,346	179.0
SHORELINE CO.	75,240	6,817,733	90.6	10,182,701	135.3	14,485,016	192.5	18,173,198	241.5

TABLE 30: NET MIGRATION FOR SELECTED PACIFIC COASTAL AREAS: 1940 TO 1970.

PACIFIC REGION	NET MIGRATION					
	1940-1950	RATE%	1950-1960	RATE%	1960-1970	RATE%
PACIFIC STATES	4,285,282	45.8	3,155,310	21.1	2,438,401	11.6
50-MILE ZONE	2,871,806	36.0	3,135,945	26.2	2,526,147	14.5
SHORELINE CO.	2,382,702	34.9	2,388,312	23.5	1,756,598	12.1

* NOTE: Alaskan population excluded.

PACIFIC REGION 1970-74 *

TABLE 31: POPULATION OF SELECTED PACIFIC COASTAL AREAS AND COMPONENTS OF CHANGE: 1970 TO 1974.

PACIFIC REGION	POPULATION			
	1970	1974	CHANGE	RATE%
PACIFIC STATES	26,222,000	27,496,000	1,274,000	4.9
50-MILE ZONE	22,232,000	23,209,000	977,000	4.4
SHORELINE CO.	18,173,000	18,807,000	634,000	3.5

NOTE: Alaskan population excluded.

TABLE 32: POPULATION DENSITY PER SQUARE MILE OF TOTAL AREA FOR SELECTED PACIFIC COASTAL AREAS: 1970 AND 1974.

PACIFIC REGION	AREA	POPULATION			
	SQ.MI.	1970	RATE	1974	RATE
PACIFIC STATES	330,316	26,222,000	79.4	27,496,000	83.2
50-MILE ZONE	124,226	22,232,000	179.0	23,209,000	186.8
SHORELINE CO.	75,240	18,173,000	241.5	18,807,000	250.0

NOTE: Alaskan population excluded.

ABLE 33: NET MIGRATION FOR SELECTED PACIFIC COASTAL AREAS: 1970 TO 1974.

PACIFIC REGION	NET MIGRATION	
	1970-1974	RATE%
PACIFIC STATES	246,000	0.9
50-MILE ZONE	98,000	0.4
SHORELINE CO.	-84,000	-0.5

* NOTE: Alaskan population excluded.

TABLE 34: POPULATION OF SELECTED ATLANTIC COASTAL STATES AND THEIR COASTAL AREAS, AND COMPONENTS OF CHANGE: 1940 TO 1970.

ATLANTIC REGION STATES	POPULATION									
	1940	1950	CHANGE	RATE%	1960	CHANGE	RATE%	1970	CHANGE	RATE%
MAINE	847,262	913,774	66,412	7.9	969,265	55,491	6.1	992,048	22,783	2.4
50-MILE ZONE	676,182	738,650	62,468	9.2	786,004	47,354	6.4	820,258	34,254	4.4
SHORELINE COUNTIES	382,506	418,756	36,250	9.5	439,851	21,095	5.0	464,882	25,031	5.7
NEW HAMPSHIRE	491,524	533,242	41,718	8.5	606,921	73,679	13.8	737,681	130,760	21.5
50-MILE ZONE	347,210	384,135	36,925	10.6	449,514	65,379	17.0	565,135	115,621	25.7
SHORELINE COUNTIES	58,142	70,059	11,917	20.5	99,029	28,970	41.4	138,951	39,922	40.3
MASSACHUSETTS	4,316,721	4,690,514	373,793	8.7	5,148,578	458,065	9.8	5,689,170	540,592	10.5
50-MILE ZONE	3,740,462	4,049,235	308,773	8.3	4,419,266	370,031	9.1	4,897,528	479,262	10.8
SHORELINE COUNTIES	3,252,956	3,502,834	248,878	7.6	3,836,038	333,204	9.5	4,259,559	423,521	11.0
RHODE ISLAND	713,346	791,896	78,550	11.0	859,488	67,592	8.5	946,725	87,237	10.1
CONNECTICUT	1,709,242	2,007,280	298,038	17.4	2,535,234	527,954	26.3	3,031,709	496,475	19.6
NEW YORK	13,479,142	14,830,192	1,351,050	10.0	16,782,304	1,952,112	13.2	18,236,967	1,454,663	8.7
50-MILE ZONE	8,983,906	9,865,266	881,360	9.8	11,066,070	1,220,804	12.4	12,072,535	986,465	8.9
SHORELINE COUNTIES	8,632,445	9,466,656	834,211	9.7	10,557,816	1,091,160	11.5	11,341,984	784,168	7.4
NEW JERSEY	4,160,165	4,835,329	675,164	16.2	6,066,782	1,231,453	25.5	7,168,164	1,101,382	18.2
SHORELINE COUNTIES	2,911,833	3,345,118	433,285	14.9	4,070,282	725,164	21.7	4,648,355	578,073	14.2
PENNSYLVANIA	9,900,180	10,498,012	597,832	6.0	11,319,366	821,354	7.8	11,793,909	474,543	4.2
50-MILE ZONE	3,194,638	3,624,418	429,780	13.5	4,160,121	535,703	14.8	4,515,948	355,827	8.6
DELAWARE	266,505	318,085	51,580	19.3	446,292	128,207	40.3	548,104	101,812	22.8
MARYLAND	1,821,244	2,343,001	521,757	28.6	3,100,689	757,697	32.3	3,922,399	821,710	26.5
50-MILE ZONE	1,639,430	2,153,293	513,863	31.3	2,904,878	751,585	34.9	3,713,046	808,168	27.8
SHORELINE COUNTIES	1,338,938	1,646,163	307,225	22.9	2,026,227	380,114	23.1	2,294,046	267,819	13.2
DISTRICT OF COLUMBIA	663,091	802,178	139,087	21.0	763,596	-38,582	-4.8	756,510	-7,086	-0.9
VIRGINIA	2,677,773	3,318,680	640,907	23.9	3,966,949	648,269	19.5	4,468,494	681,545	17.2
50-MILE ZONE	1,045,852	1,483,305	437,453	41.8	2,116,186	632,881	42.7	2,853,331	737,145	34.8
SHORELINE COUNTIES	435,015	621,376	186,361	42.8	875,826	254,450	40.9	1,123,015	247,189	28.2
NORTH CAROLINA	3,571,623	4,061,929	490,306	13.7	4,556,155	494,226	12.2	5,082,059	525,904	11.5
50-MILE ZONE	898,438	1,002,560	104,122	11.6	1,099,581	97,021	9.7	1,117,544	17,963	1.6
SHORELINE COUNTIES	308,471	376,452	67,981	22.0	441,604	66,152	17.6	477,403	35,799	8.1
SOUTH CAROLINA	1,899,804	2,117,027	217,223	11.4	2,382,594	265,567	12.5	2,590,516	207,918	8.7
50-MILE ZONE	477,984	561,946	83,962	17.6	652,416	90,470	16.1	709,978	57,562	8.8
SHORELINE COUNTIES	258,274	322,668	64,394	24.9	403,666	80,998	25.1	441,784	38,118	9.4
GEORGIA	3,123,723	3,444,578	319,855	10.2	3,943,116	498,538	14.5	4,589,575	646,459	16.4
50-MILE ZONE	237,109	275,565	38,456	16.2	335,044	59,479	21.6	349,835	14,791	4.4
SHORELINE COUNTIES	165,975	208,266	42,291	25.5	267,305	59,039	28.3	281,108	13,803	5.2
FLORIDA	1,897,414	2,771,305	873,891	46.1	4,951,560	2,180,255	78.7	6,789,443	1,837,883	37.1
50-MILE ZONE	902,229	1,425,390	523,161	58.0	2,795,465	1,370,075	96.1	3,961,695	1,166,230	41.7
SHORELINE COUNTIES	728,484	1,176,650	448,166	61.5	2,322,587	1,145,937	97.4	3,335,672	1,013,085	43.6

TABLE 35: NET MIGRATION FOR SELECTED ATLANTIC COASTAL STATES AND THEIR COASTAL AREAS: 1940 TO 1970.

ATLANTIC REGION STATES	NET MIGRATION					
	1940 to 1950	RATE%	1950 to 1960	RATE%	1960 to 1970	RATE%
MAINE	-55,508	-6.6	-117,837	-12.9	-106,358	-11.0
50-MILE ZONE	-35,509	-5.3	-93,037	-12.6	-70,529	-9.0
SHORELINE COUNTIES	-18,939	-5.0	-58,607	-14.0	-33,750	-7.7
NEW HAMPSHIRE	-29,253	-6.0	-27,705	-5.2	49,324	8.1
50-MILE ZONE	-13,372	-3.9	-7,666	-2.0	55,411	12.3
SHORELINE COUNTIES	3,517	6.0	15,696	22.4	26,665	26.9
MASSACHUSETTS	-248,272	-5.8	-431,321	-9.2	-147,924	-2.9
50-MILE ZONE	-230,091	-6.2	-400,696	-9.9	-113,712	-2.6
SHORELINE COUNTIES	-222,942	-6.9	-332,615	-9.5	-91,033	-2.4
RHODE ISLAND	-24,620	-3.5	-83,114	-10.5	-28,132	-3.3
CONNECTICUT	50,399	2.9	146,620	7.3	157,866	6.2
SHORELINE COUNTIES	22,205	2.0	85,891	6.8	81,014	5.1
NEW YORK	-600,011	-4.5	-859,499	-5.8	-784,254	-4.7
50-MILE ZONE	-417,877	-4.6	-650,673	-6.6	-495,891	-4.5
SHORELINE COUNTIES	-410,162	-4.8	-709,583	-7.5	-630,629	-6.0
NEW JERSEY	72,745	1.7	314,509	6.5	292,838	4.8
SHORELINE COUNTIES	13,062	0.4	90,465	2.7	33,657	0.8
PENNSYLVANIA	-836,704	-8.5	-1,176,315	-11.2	-1,038,337	-9.2
50-MILE ZONE	-30,394	-1.0	-152,066	-4.2	-198,567	-4.8
DELAWARE	12,922	4.8	67,766	21.3	42,072	9.4
MARYLAND	257,681	14.1	311,722	13.3	407,024	13.1
50-MILE ZONE	276,221	16.8	342,468	15.9	419,084	14.4
SHORELINE COUNTIES	113,121	8.4	67,565	4.1	-3,507	-0.2
DISTRICT OF COLUMBIA	43,423	6.5	-190,883	-23.8	-108,989	-14.3
VIRGINIA	253,012	9.4	16,739	0.5	151,811	3.8
50-MILE ZONE	286,026	27.3	351,609	23.7	453,433	21.4
SHORELINE COUNTIES	123,321	28.3	136,109	21.9	129,858	14.8
NORTH CAROLINA	-26,837	-0.8	-276,032	-6.8	-85,341	-1.9
50-MILE ZONE	-25,618	-2.9	-93,194	-9.3	-129,447	-11.8
SHORELINE COUNTIES	23,285	7.5	5,254	-1.4	-23,286	-5.3
SOUTH CAROLINA	-57,971	-3.1	-137,514	-6.5	-111,341	-4.7
50-MILE ZONE	15,059	3.1	-16,272	-2.9	-29,836	-4.6
SHORELINE COUNTIES	26,986	10.4	19,697	6.1	-16,038	-4.0
GEORGIA	-132,802	-4.3	-154,854	-4.5	119,354	3.0
50-MILE ZONE	4,146	1.7	7,177	2.6	-30,064	30.2
SHORELINE COUNTIES	18,338	11.0	19,378	9.3	-21,847	-8.2
FLORIDA	600,505	31.6	1,654,591	59.7	1,174,852	23.7
50-MILE ZONE	392,908	43.5	1,099,038	77.1	791,869	28.3
SHORELINE COUNTIES	342,742	47.0	922,545	78.4	702,046	30.2

TABLE 36: POPULATION DENSITY PER SQUARE MILE OF TOTAL AREA OF SELECTED ATLANTIC STATES AND THEIR COASTAL AREAS: 1940 TO 1970.

ATLANTIC REGION STATES	AREA SQ.MI.	POPULATION 1940	RATE	1950	RATE	1960	RATE	1970	RATE
MAINE	33,215	847,262	25.5	913,774	27.7	969,265	29.2	992,048	29.9
50-MILE ZONE	14,606	676,182	46.3	738,650	50.6	786,004	53.8	820,258	56.2
SHORELINE COUNTIES	7,788	382,506	49.1	418,756	53.8	439,851	56.5	464,882	59.7
NEW HAMPSHIRE	9,304	491,524	52.8	553,242	59.5	606,921	65.2	737,681	79.8
50-MILE ZONE	4,228	347,210	82.1	384,135	90.9	449,514	106.3	565,135	133.7
SHORELINE COUNTIES	691	58,142	84.1	70,059	101.4	99,029	143.3	138,951	201.1
MASSACHUSETTS	8,257	4,316,721	522.8	4,690,514	565.6	5,148,578	623.5	5,689,170	689.0
50-MILE ZONE	5,033	3,740,462	743.2	4,049,235	804.5	4,419,266	878.1	4,897,528	973.1
SHORELINE COUNTIES	3,520	3,253,956	924.4	3,502,834	995.1	3,836,038	1,089.8	4,259,559	1,210.1
RHODE ISLAND	1,214	713,346	587.6	791,896	652.3	859,488	708.0	946,725	279.8
CONNECTICUT	5,009	1,709,242	341.2	2,007,280	400.7	2,535,234	506.1	3,031,709	605.3
SHORELINE COUNTIES	2,271	1,083,914	477.3	1,252,279	555.8	1,588,514	699.5	1,882,926	829.1
NEW YORK	49,576	13,479,142	271.9	14,830,192	299.5	16,782,304	338.5	18,236,967	367.9
50-MILE ZONE	4,018	8,983,906	2,235.9	9,865,266	2,455.3	11,086,070	2,759.1	12,072,535	3,004.6
SHORELINE COUNTIES	1,961	8,632,445	4,402.1	9,466,656	4,827.5	10,557,816	5,383.9	11,341,984	5,783.8
NEW JERSEY	7,836	4,160,165	530.9	4,835,329	617.1	6,066,782	774.2	7,168,164	914.8
SHORELINE COUNTIES	3,645	2,911,833	798.9	3,345,118	917.7	4,070,282	1,116.7	4,648,355	1,275.3
PENNSYLVANIA	45,333	9,900,180	218.4	10,498,012	231.6	11,319,366	249.7	11,793,909	260.2
50-MILE ZONE	4,565	3,194,638	699.8	3,624,418	794.0	4,160,121	911.3	4,515,948	989.3
DELAWARE	2,047	266,505	129.6	318,085	154.6	446,292	217.0	548,104	266.5
MARYLAND	10,577	1,821,244	172.2	2,343,001	221.5	3,100,689	293.2	3,922,399	370.8
50-MILE ZONE	8,343	1,639,430	196.5	2,153,293	258.1	2,904.878	348.2	3,713,046	445.0
SHORELINE COUNTIES	5,670	1,338,938	236.1	1,646,163	290.3	2,026,227	357.4	2,294,046	404.6
DISTRICT OF COLUMBIA	67	663,091	9,896.9	802,178	11,972.8	763,596	11,397.0	756,510	11,291.2
VIRGINIA	40,817	2,677,773	65.6	3,318,680	81.3	3,966,949	97.2	4,648,494	113.9
50-MILE ZONE	13,271	1,045,852	78.8	1,483,305	111.8	2,116,186	159.5	2,853,331	215.0
SHORELINE COUNTIES	5,357	435,015	81.2	621,376	116.0	875,826	163.5	1,123,015	209.6
NORTH CAROLINA	52,586	3,571,623	67.9	4,061,929	77.2	4,556,155	86.6	5,082,059	96.6
50-MILE ZONE	18,008	898,438	49.9	1,002,560	55.7	1,099,581	61.1	1,117,544	62.1
SHORELINE COUNTIES	8,741	308,471	35.3	376,452	42.0	441,604	50.5	477,403	54.6
SOUTH CAROLINA	31,055	1,899,804	61.2	2,117,027	68.2	2,382,594	76.7	2,590,516	83.4
50-MILE ZONE	10,071	477,984	44.5	561,946	55.8	652,416	64.8	709,978	70.5
SHORELINE COUNTIES	5,185	258,274	49.8	322,668	62.2	403,666	77.9	441,784	85.2
GEORGIA	58,867	3,123,723	53.1	3,444,578	58.5	3,943,116	67.8	4,589,575	78.0
50-MILE ZONE	6,656	237,109	35.6	275,565	41.4	335,044	50.3	349,835	52.6
SHORELINE COUNTIES	2,893	165,975	57.4	208,266	72.0	267,305	92.4	281,108	97.2
FLORIDA	58,560	1,897,414	32.4	2,771,305	47.3	4,951,560	84.6	6,789,443	115.9
50-MILE ZONE	18,026	902,229	50.1	1,425,390	79.1	2,795,465	155.1	3,961,695	219.8
SHORELINE COUNTIES	11,512	728,484	63.3	1,176,650	102.2	2,322,587	201.8	3,335,672	289.8

TABLE 37: POPULATION OF SELECTED ATLANTIC COASTAL STATES AND THEIR COASTAL AREAS, AND COMPONENTS OF CHANGE: 1970 TO 1974.

ATLANTIC REGION STATES	POPULATION			
	1970	1974	CHANGE	RATE%
MAINE	992,000	1,047,000	55,000	5.5
50-MILE ZONE	820,000	868,000	48,000	5.9
SHORELINE COUNTIES	465,000	496,000	31,000	6.7
NEW HAMPSHIRE	738,000	808,000	70,000	9.5
50-MILE ZONE	565,000	625,000	60,000	10.6
SHORELINE COUNTIES	139,000	160,000	21,000	15.
MASSACHUSETTS	5,689,000	5,800,000	111,000	2.0
50-MILE ZONE	4,898,000	5,033,000	135,000	2.8
SHORELINE COUNTIES	4,260,000	4,349,000	89,000	2.1
RHODE ISLAND	947,000	937,000	-10,000	-1.1
CONNECTICUT	3,032,000	3,088,000	56,000	1.9
SHORELINE COUNTIES	1,883,000	1,914,000	31,000	1.6
NEW YORK	18,237,000	18,111,000	-126,000	-0.7
50-MILE ZONE	12,073,000	11,809,000	-264,000	-2.2
SHORELINE COUNTIES	11,342,000	11,069,000	-273,000	-2.4
NEW JERSEY	7,168,000	7,330,000	162,000	2.3
50-MILE ZONE	4,648,000	4,696,000	48,000	1.0
PENNSYLVANIA	11,794,000	11,835,000	41,000	0.3
50-MILE ZONE	4,516,000	4,483,000	-33,000	-0.7
DELAWARE	548,000	573,000	25,000	4.6
MARYLAND	3,922,000	4,094,000	172,000	4.4
50-MILE ZONE	3,713,000	3,881,000	168,000	4.5
SHORELINE COUNTIES	2,294,000	2,394,000	100,000	4.4
DISTRICT OF COLUMBIA	757,000	729,000	-28,000	-3.7
VIRGINIA	4,648,000	4,908,000	260,000	5.6
50-MILE ZONE	2,853,000	3,117,000	264,000	9.3
SHORELINE COUNTIES	1,123,000	1,217,000	94,000	8.4
NORTH CAROLINA	5,082,000	5,363,000	281,000	5.5
50-MILE ZONE	1,118,000	1,160,000	42,000	3.8
SHORELINE COUNTIES	477,000	503,000	26,000	5.5
SOUTH CAROLINA	2,591,000	2,784,000	193,000	7.4
50-MILE ZONE	710,000	767,000	57,000	8.0
SHORELINE COUNTIES	422,000	475,000	33,000	7.5
GEORGIA	4,590,000	4,882,000	292,000	6.4
50-MILE ZONE	350,000	345,000	-5,000	-1.4
SHORELINE COUNTIES	281,000	271,000	-10,000	-3.6
FLORIDA	6,789,000	8,090,000	1,301,000	19.2
50-MILE ZONE	3,962,000	4,718,000	756,000	19.1
SHORELINE COUNTIES	3,336,000	3,918,000	582,000	17.4

TABLE 38: NET MIGRATION FOR SELECTED ATLANTIC COASTAL STATES AND THEIR COASTAL AREAS: 1970 TO 1974.

ATLANTIC REGION STATES	NET MIGRATION 1970 TO 1974	NET MIGRATION RATE%
MAINE	15,000	1.5
50-MILE ZONE	16,000	1.9
SHORELINE COUNTIES	13,000	2.7
NEW HAMPSHIRE	40,000	5.5
50-MILE ZONE	37,000	6.6
SHORELINE COUNTIES	15,000	11.1
MASSACHUSETTS	-112,000	-2.0
50-MILE ZONE	-57,000	-1.2
SHORELINE COUNTIES	-80,000	-1.9
RHODE ISLAND	-48,000	-5.1
CONNECTICUT	-63,000	-2.1
SHORELINE COUNTIES	-45,000	-2.4
NEW YORK	-852,000	-4.7
50-MILE ZONE	-745,000	-6.2
SHORELINE COUNTIES	-729,000	-6.4
NEW JERSEY	-120,000	-1.7
SHORELINE COUNTIES	-138,000	-3.4
PENNSYLVANIA	-433,000	-3.7
50-MILE ZONE	-211,000	-4.8
DELAWARE	3,000	0.6
MARYLAND	17,000	0.4
50-MILE ZONE	20,000	0.5
SHORELINE COUNTIES	10,000	0.4
DISTRICT OF COLUMBIA	-57,000	-7.6
VIRGINIA	73,000	1.6
50-MILE ZONE	152,000	5.3
SHORELINE COUNTIES	50,000	4.4
NORTH CAROLINA	78,000	1.5
50-MILE ZONE	-2,000	-2.0
SHORELINE COUNTIES	7,000	1.5
SOUTH CAROLINA	89,000	3.4
50-MILE ZONE	29,000	4.1
SHORELINE COUNTIES	16,000	3.5
GEORGIA	111,000	2.4
50-MILE ZONE	-19,000	-5.4
SHORELINE COUNTIES	-21,000	-7.8
FLORIDA	1,034,000	15.2
50-MILE ZONE	599,000	15.1
SHORELINE COUNTIES	448,000	13.4

TABLE 39: POPULATION DENSITY PER SQUARE MILE OF TOTAL AREA OF SELECTED ATLANTIC STATES AND THEIR COASTAL AREAS: 1970 TO 1974.

ATLANTIC REGION STATES	AREA	POPULATION			
	SQ. MI.	1970	RATE	1974	RATE
MAINE	33,215	992,000	29.9	1,047,000	31.5
50-MILE ZONE	14,606	820,000	56.2	868,000	59.4
SHORELINE COUNTIES	7,788	465,000	59.7	496,000	63.7
NEW HAMPSHIRE	9,304	738,000	79.8	808,000	86.8
50-MILE ZONE	4,228	565,000	133.7	625,000	147.8
SHORELINE COUNTIES	691	139,000	201.1	160,000	231.5
MASSACHUSETTS	8,257	5,689,000	689.0	5,800,000	702.4
50-MILE ZONE	5,033	4,898,000	973.1	5,033,000	1,000.0
SHORELINE COUNTIES	3,520	4,260,000	1,210.1	4,349,000	1,235.5
RHODE ISLAND	1,214	947,000	779.8	937,000	771.8
CONNECTICUT	5,009	3,032,000	605.3	3,088,000	616.5
SHORELINE COUNTIES	2,271	1,883,000	829.1	1,914,000	842.8
NEW YORK	49,576	18,237,000	367.9	18,111,000	365.3
50-MILE ZONE	4,018	12,073,000	3,004.6	11,809,000	2,939.0
SHORELINE COUNTIES	1,961	11,342,000	5,783.8	11,069,000	5,644.6
NEW JERSEY	7,836	7,168,000	914.8	7,330,000	935.4
SHORELINE COUNTIES	3,645	4,648,000	1,275.3	4,696,000	1,288.3
PENNSYLVANIA	45,333	11,794,000	260.2	11,835,000	261.1
50-MILE ZONE	4,565	4,516,000	989.3	4,483,000	982.0
DELAWARE	2,057	548,000	266.5	573,000	278.6
MARYLAND	10,577	3,922,000	370.8	4,094,000	387.1
50-MILE ZONE	3,343	3,713,000	445.0	3,881,000	465.2
SHORELINE COUNTIES	5,670	2,294,000	404.6	2,394,000	422.2
DISTRICT OF COLUMBIA	67	757,000	11,291.2	729,000	10,880.6
VIRGINIA	40,817	4,468,000	113.9	4,908,000	120.2
50-MILE ZONE	13,271	2,853,000	215.0	3,117,000	234.9
SHORELINE COUNTIES	5,357	1,123,000	209.6	1,217,000	227.2
NORTH CAROLINA	52,586	5,082,000	96.6	5,363,000	102.0
50-MILE ZONE	18,008	1,118,000	62.1	1,160,000	64.4
SHORELINE COUNTIES	8,741	477,000	54.6	503,000	57.5
SOUTH CAROLINA	31,055	2,591,000	83.4	2,784,000	89.6
50-MILE ZONE	10,072	710,000	70.5	767,000	76.2
SHORELINE COUNTIES	5,185	442,000	85.2	475,000	91.6
GEORGIA	58,867	4,590,000	78.0	4,882,000	82.9
50-MILE ZONE	6,656	350,000	52.6	345,000	51.8
SHORELINE COUNTIES	2,893	281,000	97.2	271,000	93.7
FLORIDA	58,560	6,789,000	115.9	8,090,000	138.1
50-MILE ZONE	18,026	3,962,000	219.8	4,718,000	261.7
SHORELINE COUNTIES	11,512	3,336,000	289.8	3,918,000	340.3

TABLE 40: POPULATION OF SELECTED GULF COASTAL STATES AND THEIR COASTAL AREAS, AND COMPONENTS OF CHANGE: 1940 TO 1970.

GULF REGION STATES	POPULATION									
	1940	1950	CHANGE	RATE%	1960	CHANGE	RATE%	1970	CHANGE	RATE%
FLORIDA	1,897,414	2,771,305	873,891	46.1	4,951,560	2,180,255	78.7	6,789,443	1,837,883	37.1
50-MILE ZONE	961,579	1,309,803	348,224	36.2	2,122,264	812,461	62.0	2,786,593	664,329	31.3
SHORELINE COUNTIES	579,686	840,271	260,585	45.0	1,513,161	672,890	80.1	2,052,432	539,271	35.6
ALABAMA	2,832,961	3,061,743	228,782	8.1	3,266,740	204,997	6.7	3,444,165	177,425	5.4
50-MILE ZONE	263,574	359,530	95,956	36.4	447,903	88,373	24.6	461,819	13,916	3.1
SHORELINE COUNTIES	174,298	272,102	97,804	56.1	363,389	363,389	33.5	376,690	13,301	3.7
MISSISSIPPI	2,183,796	1,178,914	-4,882	-0.2	2,178,141	-773	-0.1	2,216,912	38,771	1.8
50-MILE ZONE	170,417	226,660	56,243	33.0	299,405	72,745	32.1	372,764	73,359	24.5
SHORELINE COUNTIES	82,728	127,365	44,637	54.0	189,050	61,685	48.4	248,944	59,894	31.7
LOUISIANA	2,363,880	2,683,516	391,636	13.5	3,257,022	573,506	21.4	3,641,306	384,284	11.8
50-MILE ZONE	1,363,177	1,657,404	294,227	21.6	2,130,837	473,433	28.6	2,448,969	318,132	14.9
SHORELINE COUNTIES	715,467	864,201	148,734	20.8	1,101,773	237,572	27.5	1,261,455	159,682	14.5
TEXAS	6,414,823	7,711,194	1,296,371	20.2	9,579,677	1,868,483	24.2	11,196,730	1,617,053	16.9
50-MILE ZONE	1,487,036	2,099,018	611,982	41.2	2,842,850	743,832	35.4	3,445,349	602,499	21.2
SHORELINE COUNTIES	1,069,578	1,596,539	526,961	49.3	2,256,566	660,027	41.3	2,822,234	565,668	25.1

TABLE 41: NET MIGRATION FOR SELECTED GULF COASTAL STATES AND THEIR COASTAL AREAS: 1940 TO 1970.

GULF REGION STATES	NET MIGRATION					
	1940 to 1970	RATE%	1950 to 1960	RATE%	1960 to 1970	RATE%
FLORIDA	600,505	31.6	1,654,591	59.7	1,174,852	23.7
50-MILE ZONE	209,130	21.7	563,273	43.0	380,456	17.9
SHORELINE COUNTIES	177,086	30.5	513,443	61.1	336,329	22.2
ALABAMA	-179,933	-6.4	-376,460	-12.3	-260,460	-8.0
50-MILE ZONE	51,925	21.9	20,149	5.6	-40,014	-10.3
SHORELINE COUNTIES	72,593	41.6	39,467	14.5	-35,151	-9.7
MISSISSIPPI	-319,957	-14.7	-416,077	-19.1	-252,078	-11.6
50-MILE ZONE	31,610	18.5	29,702	13.1	33,314	11.1
SHORELINE COUNTIES	32,718	39.5	37,451	29.4	34,647	18.3
LOUISIANA	-22,490	-1.0	64,523	2.4	-51,236	-1.6
50-MILE ZONE	97,448	7.1	159,184	9.6	32,536	1.5
SHORELINE COUNTIES	45,422	6.3	73,495	8.5	12.416	1.1
TEXAS	368,763	5.7	401,321	5.2	337,866	3.5
50-MILE ZONE	397,761	26.7	344,331	16.4	222,507	7.8
SHORELINE COUNTIES	372,733	34.8	356,098	22.3	264,625	11.7

TABLE 42: POPULATION DENSITY PER SQUARE MILE OF TOTAL AREA OF SELECTED GULF COASTAL STATES AND THEIR COASTAL AREAS: 1940 TO 1970.

GULF REGION STATES	AREA SQ. MI.	POPULATION							
		1940	RATE	1950	RATE	1960	RATE	1970	RATE
FLORIDA	58,560	1,897,414	32.4	2,771,305	47.3	4,951,560	84.6	6,789,443	115.9
50-MILE ZONE	33,641	961,579	28.6	1,309,803	38.9	2,122,264	63.1	2,786,593	82.8
SHORELINE COUNTIES	18,517	579,686	31.3	840,271	45.4	1,513,161	81.7	2,052,432	110.8
ALABAMA	51,609	2,832,961	54.9	3,061,743	59.3	3,266,740	63.3	3,444,165	66.7
50-MILE ZONE	5,830	263,574	45.2	359,530	61.7	447,903	76.8	461,819	79.2
SHORELINE COUNTIES	2,818	174,298	61.9	272,102	96.6	363,389	129.0	376,690	133.7
MISSISSIPPI	47,716	2,183,796	45,8	2,178,914	45.7	2,178,141	45.6	2,216,912	46.5
50-MILE ZONE	5,409	170,417	31.5	226,660	41.9	299,405	55.4	372,764	68.9
SHORELINE COUNTIES	1,803	82,728	76.4	127,365	117.6	189,050	174.6	248,944	138.1
LOUISIANA	48,523	2,363,880	48.7	2,683,516	55.3	3,257,022	67.1	3,641,306	75.0
50-MILE ZONE	19,033	1,363,177	71.6	1,657,404	87.1	2,130,837	112.0	2,448,969	128.7
SHORELINE COUNTIES	7,859	715,467	91.0	864,201	110.0	1,101,773	140.2	1,261,455	160.5
TEXAS	267,338	6,414,824	24.0	7,711,194	28.8	9,579,677	35.8	11,196,730	41.9
50-MILE ZONE	29,885	1,487,036	49.8	2,099,018	70.2	2,842,850	95.1	3,445,349	115.3
SHORELINE COUNTIES	13,180	1,069,578	81.2	1,596,539	121.1	2,256,566	171.2	2,822,234	214.1

TABLE 43: POPULATION OF SELECTED GULF COASTAL STATES AND THEIR COASTAL AREAS, AND COMPONENTS OF CHANGE: 1970 TO 1974.

GULF REGION STATES	POPULATION			
	1970	1974	CHANGE	RATE%
FLORIDA	6,789,000	8,090,000	1,301,000	19.2
50-MILE ZONE	2,787,000	3,291,000	504,000	18.1
SHORELINE COUNTIES	2,052,000	2,461,000	409,000	20.0
ALABAMA	3,444,000	3,577,000	133,000	3.9
50-MILE ZONE	462,000	485,000	23,000	5.0
SHORELINE COUNTIES	377,000	389,000	12,000	3.2
MISSISSIPPI	2,217,000	2,324,000	107,000	4.8
50-MILE ZONE	373,000	389,000	16,000	4.3
SHORELINE COUNTIES	249,000	269,000	20,000	8.0
LOUISIANA	3,641,000	3,764,000	123,000	3.4
50-MILE ZONE	2,449,000	2,563,000	114,000	4.7
SHORELINE COUNTIES	1,261,000	1,309,000	48,000	3.8
TEXAS	11,197,000	11,794,000	597,000	5.3
50-MILE ZONE	3.445,000	4,008,000	563,000	16.3
SHORELINE COUNTIES	2,822,000	2.962,000	140,000	5.0

TABLE 44: NET MIGRATION FOR SELECTED GULF COASTAL STATES AND THEIR COASTAL AREAS: 1970 TO 1974.

GULF REGION STATES	NET MIGRATION 1970 to 1974	RATE%
FLORIDA	1,034,000	15.2
50-MILE ZONE	394,000	14.1
SHORELINE COUNTIES	329,000	16.0
ALABAMA	-3,000	-0.1
50-MILE ZONE	5,000	1.0
SHORELINE COUNTIES	-3,000	-0.8
MISSISSIPPI	18,000	0.8
50-MILE ZONE	1,000	0.3
SHORELINE COUNTIES	10,000	4.0
LOUISIANA	-21,000	-0.6
50-MILE ZONE	18,000	0.7
SHORELINE COUNTES	-2,000	-0.2
TEXAS	149,000	1.3
50-MILE ZONE	425,000	12.3
SHORELINE COUNTIES	29,000	1.0

TABLE 45: POPULATION DENSITY PER SQUARE MILE OF TOTAL AREA OF SELECTED GULF COASTAL STATES AND THEIR COASTAL AREAS: 1970 TO 1974.

GULF REGION STATES	AREA SQ. MI.	POPULATION 1970	RATE	1974	RATE
FLORIDA	58,560	6,789,000	115.9	8,090,000	138.1
50-MILE ZONE	33,641	2,787,000	82.8	3,291,000	97.8
SHORELINE COUNTIES	18,517	2,052,000	110.8	2,461,000	132.9
ALABAMA	51,609	3,444,000	66.7	3,577,000	69.3
50-MILE ZONE	5,830	462,000	79.2	485,000	83.2
SHORELINE COUNTIES	2,818	377,000	133.7	389,000	138.0
MISSISSIPPI	47,716	2,217,000	46.5	2,324,000	48.7
50-MILE ZONE	5,409	373,000	68.9	389,000	71.9
SHORELINE COUNTIES	1,803	249,000	138.1	269,000	149.2
LOUISIANA	48,523	3,641,000	75.0	3,765,000	77.6
50-MILE ZONE	19,033	2,449,000	128.7	2,563,000	134.7
SHORELINE COUNTIES	7,859	1,261,000	160.5	1,309,000	166.6
TEXAS	267,338	11,197,000	41.9	11,794,000	44.1
50-MILE ZONE	29,885	3,445,000	115.3	4,008,000	134.1
SHORELINE COUNTIES	13,180	2,822,000	214.1	2,962,000	224.7

TABLE 46: POPULATION OF SELECTED GREAT LAKES COASTAL STATES AND THEIR COASTAL AREAS, AND COMPONENTS OF CHANGE: 1940 TO 1970.

GREAT LAKES STATES	POPULATION									
	1940	1950	CHANGE	RATE%	1960	CHANGE	RATE%	1970	CHANGE	RATE%
NEW YORK	13,479,142	14,830,192	1,351,050	10.0	16,782,304	1,952,112	13.2	18,236,967	1,454,663	8.7
50-MILE ZONE	2,856,592	3,166,304	309,712	10.8	3,714,472	548,168	17.3	4,019,010	304,538	8.2
SHORELINE COUNTIES	1,912,687	2,130,940	218,253	11.4	2,500,002	369,062	17.3	2,703,976	203,974	8.2
PENNSYLVANIA	9,900,180	10,498,012	597,832	6.0	11,319,366	821,354	7.8	11,793,909	474,543	4.2
50-MILE ZONE	460,318	518,316	57,998	12.6	567,033	48,354	9.4	582,205	15,172	2.7
SHORELINE COUNTIES	180,889	219,388	38,499	21.3	250,682	31,294	14.3	263,654	12,972	5.2
OHIO	6,907,612	7,946,627	1,039,015	15.0	9,706,397	1,759,770	22.1	10,652,017	945,620	9.7
50-MILE ZONE	3,138,187	3,672,533	534,346	17.0	4,579,074	906,541	24.7	5,015,613	436,539	9.5
SHORELINE COUNTIES	1,901,241	7,210,957	309,716	16.3	2,723,901	512,944	23.2	2,931,940	208,039	7.6
MICHIGAN	5,256,106	6,371,766	1,115,660	21.2	7,823,194	1,451,428	22.8	8,875,083	1,051,884	13.4
50-MILE ZONE	4,817,941	5,767,566	949,625	19.7	7,023,809	1,256,243	21.8	8,050,750	1,026,941	14.6
SHORELINE COUNTIES	3,120,600	3,666,305	545,705	17.5	4,097,582	431,227	11.8	4,249,371	151,789	3.7
INDIANA	3,426,797	3,934,224	507,427	14.8	4,662,498	728,274	18.5	5,193,669	531,171	11.4
50-MILE ZONE	649,568	859,945	210,377*	32.4	1,107,597	247,652	28.8	1,209,117	101,520	9.2
SHORELINE COUNTIES	384,691	485,096	100,405	26.1	668,658	183,562	37.8	738,708	70,050	10.5
ILLINOIS	7,897,241	8,712,176	814,935	10.3	10,081,158	1,368,982	15.7	11,113,976	1,032,818	10.2
50-MILE ZONE	4,709,691	5,340,551	630,860	13.4	6,434,879	1,094,328	20.5	7,226,180	791,301	12.3
SHORELINE COUNTIES	4,184,434	4,687,883	503,449	12.0	5,433,375	745,492	15.9	5,875,004	441,629	8.1
WISCONSIN	3,137,587	3,434,575	296,988	9.5	3,951,777	517,202	15.1	4,417,731	465,954	11.8
50-MILE ZONE	1,930,506	2,166,421	235,915	12.2	2,587,049	420,628	19.4	2,890,586	303,537	11.7
SHORELINE COUNTIES	1,331,064	1,495,968	164,904	12.4	1,765,481	269,513	18.0	1,888,929	123,448	7.0
MINNESOTA	2,792,300	2,982,483	190,183	6.8	3,413,814	431,331	14.5	3,804,971	391,157	11.5
50-MILE ZONE	262,593	259,550	-3,043	-1.2	293,603	34,053	13.1	282,360	-11,243	-3.8
SHORELINE COUNTIES	216,903	216,743	-160	-0.1	248,667	31,924	14.7	237,467	-11,200	-4.5

TABLE 47: NET MIGRATION FOR SELECTED GREAT LAKES COASTAL AREAS AND THEIR COASTAL AREAS: 1940 TO 1970.

GREAT LAKES STATES	NET MIGRATION					
	1940 to 1970	RATE%	1950 to 1960	RATE%	1960 to 1970	RATE%
NEW YORK	-600,011	- 4.5	-859,499	- 5.8	-784,254	- 4.7
50-MILE ZONE	-104,306	- 3.7	-53,688	- 1.7	-192,153	- 5.2
SHORELINE COUNTIES	-58,364	- 3.1	-36,132	- 1.7	-129,328	- 5.2
PENNSYLVANIA	-836,704	- 8.5	-1,175,315	-11.2	-1,038,337	- 9.2
50-MILE ZONE	-8,522	- 1.9	-49,736	- 9.6	-60,520	-10.7
SHORELINE COUNTIES	12,388	6.8	-10,302	- 4.7	-20,488	- 8.2
OHIO	37,895	0.5	246,695	3.1	-356,526	- 3.7
50-MILE ZONE	79,980	2.5	209,496	5.7	-177,352	- 3.9
SHORELINE COUNTIES	35,146	1.8	92,957	4.2	-157,254	- 5.8
MICHIGAN	354,714	6.7	242,407	3.8	2,112	0.1
50-MILE ZONE	252,874	5.2	161,746	2.8	86,182	1.2
SHORELINE COUNTIES	95,135	3.0	-263,813	- 7.2	-396,359	- 9.7
INDIANA	11,946	0.3	-19,498	- 0.5	-91,991	- 2.0
50-MILE ZONE	116,588	17.9	84,312	9.8	-46,220	- 4.2
SHORELINE COUNTIES	44,811	11.6	91,219	18.8	-19,211	- 2.9
ILLINOIS	-327,846	- 4.2	-287,118	- 3.3	-319,875	- 3.2
50-MILE ZONE	-42,894	- 1.1	80,343	1.5	-69,046	- 1.1
SHORELINE COUNTIES	-102,577	- 2.5	-145,118	- 3.1	-286,502	- 5.3
WISCONSIN	-155,354	- 5.0	-133,797	- 3.9	-62,165	- 1.6
50-MILE ZONE	-43,463	- 2.3	8,761	0.4	-43,284	- 1.7
SHORELINE COUNTIES	-27,305	- 2.1	-14,894	- 1.0	-112,516	- 6.4
MINNESOTA	-213,650	- 7.7	-134,081	- 4.5	-63,944	- 1.9
50-MILE ZONE	-41,099	-15.7	-15,302	- 5.9	-50,421	-17.2
SHORELINE COUNTIES	-31,565	-14.6	-9,310	- 4.3	-44,445	-17.9

TABLE 48: POPULATION DENSITY PER SQUARE MILE OF TOTAL AREA OF SELECTED GREAT LAKES COASTAL STATES AND THEIR COASTAL AREAS: 1940 TO 1970.

GREAT LAKES STATES	AREA SQ. MI.	POPULATION 1940	RATE	1950	RATE	1960	RATE	1970	RATE
NEW YORK	49,576	13,479,142	217.9	14,830,192	299.1	16,782,304	338.5	18,236,967	367.9
50-MILE ZONE	21,170	2,856,592	134.9	3,166,304	149.6	3,714,472	175.5	4,019,010	189.8
SHORELINE COUNTIES	10,072	1,912,687	189.9	2,130,940	211.6	2,500,002	248.7	2,703,976	268.5
PENNSYLVANIA	55,333	9,900,180	178.9	10,498,012	189.7	11,319,366	204.6	11,793,909	213.1
50-MILE ZONE	3,572	460,318	128.9	518,316	145.1	567,033	158.7	582,202	163.0
SHORELINE COUNTIES	813	180,889	222.5	219,388	269.8	250,682	308.3	263,654	324.3
OHIO	41,222	6,907,612	167.6	7,946,627	192.8	9,706,397	235.5	10,652,017	258.4
50-MILE ZONE	11,397	3,138,187	275.4	3,672,533	322.2	4,579,074	401.8	5,015,613	440.1
SHORELINE COUNTIES	3,156	1,901,241	602.4	2,210,957	700.6	2,723,901	863.1	2,931,940	929.0
MICHIGAN	48,216	5,256,106	90.3	6,317,766	108.5	7,823,194	134.4	8,875,083	152.5
50-MILE ZONE	50,894	4,817,941	94.7	5,767,566	113.3	7,023,809	138.0	8,050,750	158.2
SHORELINE COUNTIES	30,640	3,120,600	101.8	3,666,305	119.7	4,097,582	133.7	4,249,371	138.7
INDIANA	36,291	3,426,797	94.4	3,934,224	108.4	4,662,498	128.5	5,195,667	143.1
50-MILE ZONE	4,640	649,568	140.0	859,945	185.3	1,107,597	238.7	1,209,117	260.6
SHORELINE COUNTIES	1,545	384,691	249.0	485,096	314.0	668,658	432.8	738,708	478.1
ILLINOIS	56,400	7,897,241	140.0	8,712,176	154.5	10,081,158	178.7	11,113,976	197.1
50-MILE ZONE	6,050	4,709,691	778.5	5,340,551	882.7	6,434,879	1,063.6	7,226,180	1,194.4
SHORELINE COUNTIES	1,411	4,184,434	296.4	4,687,883	3,322.4	5,433,375	3,850.7	5,875,004	4,163.4
WISCONSIN	56,154	3,137,587	55.9	3,434,575	61.2	3,951,777	70.4	4,417,731	78.7
50-MILE ZONE	22,658	1,903,506	85.2	2,166,421	95.6	2,587,049	114.2	2,890,586	127.6
SHORELINE COUNTIES	10,565	1,331,064	126.0	1,495,968	141.6	1,765,481	167.1	1,888,929	178.8
MINNESOTA	84,068	2,792,300	33.2	2,982,483	35.5	3,413,814	40.6	3,804,971	45.3
50-MILE ZONE	11,776	262,593	22.3	259,550	22.0	293,603	24.9	282,360	24.0
SHORELINE COUNTIES	9,500	216,903	22.8	216,743	22.8	248,667	26.2	237,467	25.0

TABLE 49: POPULATION OF SELECTED GREAT LAKES COASTAL STATES AND THEIR COASTAL AREAS, AND COMPONENTS OF CHANGE: 1970 TO 1974.

	POPULATION			
GREAT LAKES STATES	1970	1974	CHANGE	RATE%
NEW YORK	18,237,000	18,111,000	-126,000	-0.7
50-MILE ZONE	4,019,000	3,913,000	-106,000	-2.6
SHORELINE COUNTIES	2,704,000	2,698,000	-6,000	-0.2
PENNSYLVANIA	11,794,000	11,835,000	41,000	0.3
50-MILE ZONE	582,000	598,000	16,000	2.7
SHORELINE COUNTIES	264,000	274,000	10,000	3.8
OHIO	10,652,000	10,737,000	85,000	0.8
50-MILE ZONE	5,016,000	4,980,000	-36,000	-0.7
SHORELINE COUNTIES	2,932,000	2,848,000	-84,000	-2.9
MICHGIAN	8,875,000	9,098,000	223,000	2.5
50-MILE ZONE	8,051,000	8,010,000	-41,000	-0.5
SHORELINE COUNTIES	4,249,000	4,237,000	-12,000	-0.3
INDIANA	5,194,000	5,330,000	136,000	2.6
50-MILE ZONE	1,209,000	1,235,000	26,000	2.2
SHORELINE COUNTIES	739,000	750,000	11,000	1.5
ILLINOIS	11,114,000	11,131,000	17,000	0.2
50-MILE ZONE	7,226,000	7,221,000	-5,000	-0.1
SHORELINE COUNTIES	5,875,000	5,767,000	-108,000	-1.8
WISCONSIN	4,418,000	4,566,000	148,000	3.4
50-MILE ZONE	2,891,000	2,958,000	67,000	2.3
SHORELINE COUNTIES	1,889,000	1,928,000	39,000	2.1
MINNESOTA	3,805,000	3,917,000	112,000	3.0
50-MILE ZONE	282,000	280,000	-2,000	-0.7
SHORELINE COUNTIES	237,000	220,000	-17,000	-2.9

TABLE 50: NET MIGRATION FOR SELECTED GREAT LAKES COASTAL STATES AND THEIR COASTAL AREAS: 1970 TO 1974.

GREAT LAKES STATES	NET MIGRATION 1970 to 1974	RATE%
NEW YORK	-852,000	-4.7
50-MILE ZONE	-264,000	-6.6
SHORELINE COUNTIES	-113,000	-4.2
PENNSYLVANIA	-421,000	-3.6
50-MILE ZONE	-7,000	-1.3
SHORELINE COUNTIES	-1,000	-0.2
OHIO	-338,000	-3.2
50-MILE ZONE	-234,000	-4.7
SHORELINE COUNTIES	-202,000	-6.9
MICHIGAN	-140,000	-1.6
50-MILE ZONE	-360,000	-4.5
SHORELINE COUNTIES	-182,000	-4.3
INDIANA	-71,000	-1.4
50-MILE ZONE	-21,000	-1.8
SHORELINE COUNTIES	-18,000	-2.5
ILLINOIS	-419,000	-3.8
50-MILE ZONE	-294,000	-4.1
SHORELINE COUNTIES	-339,000	-5.8
WISCONSIN	-25,000	-0.6
50-MILE ZONE	-48,000	-1.7
SHORELINE COUNTIES	-35,000	-1.9
MINNESOTA	-37,000	-1.0
50-MILE ZONE	-13,000	-4.7
SHORELINE COUNTIES	-26,000	-11.2

TABLE 51: POPULATION DENSITY PER SQUARE MILE OF TOTAL AREA OF SELECTED GREAT LAKES COASTAL STATES AND THEIR COASTAL AREAS: 1970 TO 1974.

GREAT LAKES STATES	AREA SQ. MI.	POPULATION 1970	RATE	1974	RATE
NEW YORK	49,576	18,237,000	367.0	18,111,000	365.3
50-MILE ZONE	21,170	4,019,000	189.8	3,913,000	184.8
SHORELINE COUNTIES	10,072	2,704,000	268.5	2,698,000	267.9
PENNSYLVANIA	55,333	11,794,000	213.1	11,835,000	213.9
50-MILE ZONE	3,572	582,000	163.0	598,000	167.4
SHORELINE COUNTIES	813	264,000	324.3	274,000	337.0
OHIO	41,222	10,652,000	258.4	10,737,000	260.5
50-MILE ZONE	11,397	5,016,000	440.1	4,980,000	437.0
SHORELINE COUNTIES	3,156	2,932,000	929.0	2,848,000	902.4
MICHIGAN	58,216	8,875,000	152.4	9,098,000	156.3
50-MILE ZONE	50,894	8,051,000	148.2	8,010,000	157.4
SHORELINE COUNTIES	30,640	4,249,000	138.7	4,237,000	138.3
INDIANA	36,291	5,194,000	143.1	5,330,000	146.9
50-MILE ZONE	4,640	1,209,000	260.6	1,235,000	266.2
SHORELINE COUNTIES	1,545	739,000	478.1	750,000	485.4
ILLINOIS	56,400	11,114,000	197.1	11,131,000	197.4
50-MILE ZONE	6,050	7,226,000	1,194.4	7,221,000	1,193.6
SHORELINE COUNTIES	1,411	5,875,000	4,163.7	5,767,000	4,087.2
WISCONSIN	56,154	4,418,000	78.7	4,566,000	81.3
50-MILE ZONE	22,658	2,891,000	127.6	2,958,000	130.5
SHORELINE COUNTIES	10,565	1,889,000	178.8	1,928,000	182.5
MINNESOTA	84,068	3,805,000	45.3	3,917,000	46.6
50-MILE ZONE	11,776	282,000	24.0	280,000	23.8
SHORELINE COUNTIES	9,500	237,000	25.0	220,000	23.2

TABLE 52: POPULATION OF SELECTED PACIFIC COASTAL STATES AND THEIR COASTAL AREAS, AND COMPONENTS OF CHANGE: 1940 TO 1970.

PACIFIC REGION STATES	POPULATION									
	1940	1950	CHANGE	RATE%	1960	CHANGE	RATE%	1970	CHANGE	RATE%
ALASKA	72,524	128,643	56,119	77.4	226,167	97,524	75.8	300,382	74,215	32.8
SHORELINE COUNTIES	NA	NA	NA	NA	NA	NA	NA	238,627	NA	NA
CALIFORNIA	6,907,387	10,586,223	3,678,836	53.3	15,717,204	5,130,981	48.5	19,953,134	4,953,134	27.0
50-MILE ZONE	6,006,738	9,313,867	3,307,129	55.1	14,142,496	4,828,629	51.8	18,120,668	3,978,172	28.1
SHORELINE COUNITES	5,135,094	7,894,949	2,759,855	53.7	11,677,734	3,782,785	47.9	15,659,441	2,981,707	25.5
HAWAII	423,330	499,794	76,464	18.1	632,772	132,978	26.6	768,560	135,788	21.5
OREGON	1,089,684	1,621,341	431,657	39.6	1,768,698	247,357	16.3	2,091,385	322,687	18.2
50-MILE ZONE	324,520	501,476	176,956	54.5	577,954	76,478	15.3	778,573	200,619	34.7
SHORELINE COUNTIES	183,100	299,328	116,228	63.5	335,255	35,927	12.0	426,780	91,525	27.3
WASHINGTON	1,736,191	2,378,963	642,772	37.0	2,853,214	474,251	19.9	3,409,169	555,955	19.5
50-MILE ZONE	1,211,895	1,674,897	463,002	38.2	2,036,148	361,251	21.6	2,564,545	528,397	26.0
SHORELINE COUNITES	1,076,209	1,488,631	412,422	38.3	1,839,255	350,624	23.6	2,318,417	479,162	26.1

NA - DATA NOT AVAILABLE.

TABLE 53: NET MIGRATION FOR SELECTED PACIFIC COASTAL STATES AND THEIR COASTAL AREAS: 1940 TO 1970.

PACIFIC REGION STATES	NET MIGRATION					
	1940 to 1950	RATE%	1950 to 1960	RATE%	1960 to 1970	RATE%
ALASKA	45,653	62.9	73,075	56.8	43,937	19.4
SHORELINE COUNTIES	NA	NA	NA	NA	NA	NA
CALIFORNIA	2,683,423	38.8	3,123,402	29.5	2,141,768	13.6
50-MILE ZONE	2,441,655	40.6	3,055,358	32.8	2,082,751	14.7
SHORELINE COUNTIES	2,015,453	39.2	2,281,988	28.9	1,416,147	12.1
HAWAII	15,453	3.6	38,006	7.6	51,425	8.1
OREGON	274,040	25.1	-41,009	-2.7	85,373	4.8
50-MILE ZONE	129,966	40.0	-18,533	-3.7	123,260	21.3
SHORELINE COUNTIES	89,808	49.0	-20,940	-7.0	46,691	13.9
WASHINGTON	391,497	22.5	21,515	0.9	174,814	6.1
50-MILE ZONE	287,808	23.7	43,621	2.6	257,102	12.6
SHORELINE COUNTIES	256,661	23.8	68,543	4.6	234,080	12.7

NA - DATA NOT AVAILABLE

TABLE 54: POPULATION DENSITY PER SQUARE MILE OF TOTAL AREA OF SELECTED PACIFIC COASTAL STATES AND THEIR COASTAL AREAS: 1940 TO 1970.

PACIFIC REGION STATES	AREA SQ. MI.	POPULATION 1940	RATE	1950	RATE	1960	RATE	1970	RATE
ALASKA	586,412	72,524	0.1	128,643	0.2	226,167	0.4	300,382	0.5
SHORELINE COUNTIES	318,003	NA	NA	NA	NA	NA	NA	238,627	0.8
CALIFORNIA	168,693	6,907,387	43.5	10,586,223	66.7	15,717,204	99.0	19,953,134	125.7
50-MILE ZONE	73,835	6,006,738	81.4	9,313,867	126.1	14,142,496	191.5	18,120,668	245.4
SHORELINE COUNTIES	34,461	5,135,094	149.0	7,894,949	229.1	11,677,734	388.9	14,659,441	425.4
HAWAII	6,450	423,330	65.6	499,794	69.7	632,722	98.1	768,560	119.2
OREGON	96,981	1,089,648	11.2	1,521,341	15.7	1.768,698	18.2	2,091,385	21.6
50-MILE ZONE	20,858	324,520	15.6	501,476	24.0	577,954	27.7	778,573	37.3
SHORELINE COUNTIES	15,762	183,100	11.6	299,328	19.0	335,255	21.7	426,780	27.1
WASHINGTON	68,192	1,736,191	25.5	2,378,963	34.9	2,853,214	41.8	3,409,169	50.0
50-MILE ZONE	23,083	1,211,895	52.5	1,674,897	72.6	2,036,148	88.2	2,564,545	111.1
SHORELINE COUNTIES	18,602	1,076,209	57.9	1,488,631	80.0	1,839,255	98.9	2,318,517	125.6

Table 55: POPULATION OF SELECTED PACIFIC COASTAL STATES AND THEIR COASTAL AREAS, AND COMPONENTS OF CHANGE: 1970 TO 1974.

	POPULATION			
PACIFIC REGION STATES	1970	1974	CHANGE	RATE%
ALASKA	300,000	337,000	37,000	12.3
SHORELINE COUNTIES	239,000	277,000	38,000	15.9
CALIFORNIA	19,953,000	20,907,000	954,000	4.8
50-MILE ZONE	18,121,000	18,925,000	804,000	4.4
SHORELINE COUNTIES	14,659,000	15,174,000	515,000	3.5
HAWAII	769,000	847,000	78,000	10.1
OREGON	2,091,000	2,266,000	175,000	8.4
50-MILE ZONE	779,000	846,000	67,000	8.6
SHORELINE COUNTIES	427,000	467,000	40,000	9.4
WASHINGTON	3,409,000	3,476,000	67,000	2.0
50-MILE ZONE	2,565,000	2,591,000	26,000	1.0
SHORELINE COUNTIES	2,318,000	2,319,000	1,000	0.0

TABLE 56: NET MIGRATION FOR SELECTED PACIFIC COASTAL STATES AND THEIR COASTAL AREAS: 1970 TO 1974.

PACIFIC REGION STATES	NET MIGRATION 1970 to 1974	RATE %
ALASKA	25,000	8.3
SHORELINE COUNTIES	29,000	11.9
CALIFORNIA	165,000	0.8
50-MILE ZONE	77,000	0.4
SHORELINE COUNTIES	-69,000	-0.5
HAWAII	47,000	6.1
OREGON	93,000	4.4
50-MILE ZONE	36,000	4.6
SHORELINE COUNTIES	23,000	5.4
WASHINGTON	-67,000	-2.0
50-MILE ZONE	-76,000	-3.0
SHORELINE COUNTIES	-92,000	-4.0

TABLE 57: POPULATION DENSITY PER SQUARE MILE OF TOTAL AREA FOR SELECTED PACIFIC COASTAL STATES AND THEIR COASTAL AREAS: 1970 TO 1974.

PACIFIC REGION STATES	AREA SQ. MI.	POPULATION 1970	RATE	1974	RATE
ALASKA	586,412	300,000	0.5	337,000	0.6
SHORELINE COUNTIES	318,003	239,000	0.8	277,000	0.9
CALIFORNIA	158,693	19,953,000	125.7	20,907,000	131.7
50-MILE ZONE	73,835	18,121,000	245.4	18,925,000	256.3
SHORELINE COUNTIES	34,461	14,659,000	425.4	15,174,000	440.3
HAWAII	6,450	769,000	119.2	847,000	131.3
OREGON	96,981	2,091,000	21.6	2,266,000	23.4
50-MILE ZONE	20,858	779,000	37.3	846,000	40.6
SHORELINE COUNTIES	15,762	427,000	27.1	467,000	29.6
WASHINGTON	68,192	3,409,000	50.0	3,476,000	51.0
50-MILE ZONE	23,083	2,565,000	111.1	2,591,000	112.2
SHORELINE COUNITES	18,602	2,318,000	124.6	2,319,000	124.7

ECONOMIC ACTIVITY

The economy of coastal areas is, except for a slight emphasis on ocean related uses, a microcosm of the nation's economy. Since 1950, over 40% of the nation's industrial employment has been located in the coastal zones,[1] between 1975 and 1980 projected growth of all industry located in the coastal zone is 14.1%.[2]

The development of industries peculiar to the coast is expected to be even more rapid. Operational industries, including ports and harbors, are expected to expand by 18.3%;[2] by 1985 an additional 1.75 billion dollars will be invested in their development.[3] By 1980 it is anticipated that 9.8% more employees will be needed to take advantage of marine resources.[2] Aquaculture facilities, which already account for 10% of the world's fish and shellfish catch, are expected to be increasingly important, with the possibility of increasing production of certain species by 684% by 1990.[4]

For more information on ports, the U.S. DOC - Maritime Administration has recently published a pamphlet called Economic Impact of the U.S. Port Industry: An Input-Output Analysis of Waterborne Transportation; see also Under New Management: Port Growth and Emerging Coastal Management Programs by Marc Hershman. A bibliography on ports and related studies is available through CZIC. Data on the Fishing industry can be found in the NMFS Statistical Digests.

A more detailed analysis of coastal industry may be found in the County Business Patterns publication put out by the U.S. Bureau of the Census. Information on establishments, payroll and employment is presented for the

1/ Coastal Zone is defined as those counties contiguous to the oceans, Great Lakes or their estuarine arms.
U.S. Ocean Policy in the 1970s: Status and Issues. U.S. Department of Commerce. Washington, D.C., October 1978, p. IV-5.
2/ Ibid., pp. VIII-3,4.
3/ American Seaport, June 1979, Volume 41, No. 6., pp6-7.
4/ U.S. DOC, op cit., p. IV-5.

Economic Activity (Cont.)

catagories defined by the Standard Industrial Classification (SIC) Manual for all states and counties in the United States. Economic divisions included are agricultural services, mining, construction, manufacturing, transportation, public utilities, wholesale and retail trade, finance, insurance, real estate and miscellaneous services.

Marine Employment by Industry - 1975 & 1980 *

INDUSTRY	1975	1980	Rate of Growth
RECREATION (Aquaria, Museums, Marinas, Fishing)	585,000	642,000	9.7%
SCIENCE (Advisory, Education Regulatory, R&D)	174,000	200,000	14.9%
RESOURCES (Aquaculture, Fishing Mining, Petroleum)	284,000	315,000	9.8%
TECHNOLOGY (Seafood Processing, Construction, Engineering)	665,000	777,000	16.8%
OPERATIONS (Merchant Marine, Inland, Offshore, Port & Harbors)	359,000	425,000	18.3%
TOTAL	2,067,000	2,359,000	14.1%

*From: Edward F. Mackin and Roger D. Anderson. Marine Manpower: An Initial Assessment. Marine Technology Society Journal 10(4):26-37, May 1976. In U.S. Ocean Policy in the 1970's: Status and Issues, pp. VIII-3,4.

Percentage of Total U.S. Industrial Employment in the Coastal Zone[1,2]

Coastal Regions	Percentage of Land Use	Percentage of U.S. Industrial Employment			
		1940	1950	1960	1970
NEW ENGLAND	0.50	4.0	3.8	3.7	3.6
MID-ATLANTIC	0.85	15.4	15.3	15.2	14.3
SOUTH ATLANTIC	0.94	1.2	1.4	1.9	2.2
EASTERN GULF COAST	0.77	0.6	0.8	1.0	1.1
WESTERN GULF COAST	0.88	1.5	1.7	1.9	2.1
SOUTHERN CALIFORNIA	0.57	2.7	3.5	4.9	5.3
SAN FRANCISCO AREA	0.37	1.7	2.2	2.6	2.8
NORTHERN CALIFORNIA—OREGON WASHINGTON	0.80 0.63	0.2 0.8	0.3 1.0	0.3 1.0	0.3 1.1
GREAT LAKES	2.2	10.1	10.1	10.3	9.8
TOTAL COASTAL ZONE	8.6	39.0	40.8	42.9	42.6

1. Coastal Zone is defined as the set of counties contiguous to the oceans or the Great Lakes or their estuarine arms. Alaska and Hawaii are not included.

2. From: U.S. Congress, Senate, Committee on Commerce. The Oceans and National Economic Development. 93d Congress, 1st session, Committee Print. Washington, D.C., Government Printing Office, 1973, p. 168. In U.S. Ocean Policy in the 1970's: Status and Issues, p. IV-5.

* Commercial fishing industry statistics, 1960–77 [1]

	World commercial catch	Commercial landings and imports	
		U.S. per capita utilization (edible and nonedible)	U.S. per capita consumption (edible only)
	billion pounds	*pounds*	*pounds*
1960	83.2	45.5	10.3
1965	115.5	54.2	10.8
1966	125.2	63.4	10.9
1967	133.4	70.4	10.6
1968	141.1	86.6	11.0
1969	139.1	58.4	11.2
1970	152.8	56.0	11.8
1971	153.7	57.0	11.5
1972	144.6	66.3	12.5
1973	145.7	49.3	12.9
1974	153.9	46.6	12.1
1975	153.7	47.4	12.1
1976	162.0	53.7	13.0
1977	—	48.8	12.8

*From: U.S. Department of Commerce, NOAA. Fisheries of the United States, 1960,1965,1966,1967,1968,1969,1970,1971, 1972,1973,1974,1975,1976,1977.

In U.S. Ocean Policy in the 1970s: Status and Issues, p.III-2.

1975 SUMMARY OF FISH AND SHELLFISH LANDINGS *

REGION	POUNDS(millions)	DOLLARS(millions)
NORTH ATLANTIC (Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey)	679	202
MID-ATLANTIC (Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia)	792	103
GULF REGION (Florida, Alabama, Mississippi, Louisiana, Texas)	1711	290
PACIFIC REGION (California, Oregon, Washington, Hawaii, Alaska)	1560	358
GREAT LAKES (Illinois, Indiana, Minnesota, Wisconsin, Pennsylvania, Ohio Michigan, New York)	62	9
TOTAL	4804	962

*From: U.S. DOC-NOAA-National Marine Fisheries Service. Statistical Digest No. 69 Fishery Statistics of the United States 1975.

*1975 - U.S. LANDINGS BY WATERS, FISHERMEN, PLANTS & EMPLOYMENT, BY STATES

State	Marine Waters & Coastal Rivers (1000s lbs)	(1000s $)	Fishermen	Processing and Wholesale Plant	Employment Average Season	Year
ALABAMA	31,564	21,016	2,020	105[1]	1,865	1,338
ALASKA	444,144	129,713	16,013	221	9,947	6,000
CALIFORNIA	874,978	134,737	16,681	148	1,825	8.317
CONNECTICUT	3,629	2,584	1,019	10	69	58
DELAWARE	7,055	1,717	554	12	459	410
FLORIDA	172,779	75,043	11,302	386	5,526	4,792
GEORGIA	17,750	11,947	1,763	56[2]	2,531[2]	2,080[2]
HAWAII	9,209	6,313	2,197	8[2]	9,878[2]	8.077[2]
LOUISIANA	1,114,898	86,028	12,876	246	4,606	3,396
MAINE	138,352	48,499	18,193	246[3]	4.563[3]	3,210[3]
MARYLAND	64,317	22,898	16,233	181[3]	5,523[3]	4,632[3]
MISSISSIPPI	305,758	14,347	2,928	66	1,779	1.270
NEW HAMPSHIRE	3,146	1,277	·,504	11	559	394
NEW JERSEY	143,582	19,812	3,081	101	2,366	2,024
NEW YORK	37,422	28,263	12,642	252	2,874	2,599
NORTH CAROLINA	238,301	20,000	4,740	254	2,710	1,841
OREGON	86,229	26,015	4.504	84[4]	2,418[4]	1,551[4]
PENNSYLVANIA	-	-	47	37[4]	2,874[4]	2,599[4]
RHODE ISLAND	79,483	18.899	3,192	31	375	317
SOUTH CAROLINA	20,079	13,117	1,771	90	1,203	802
TEXAS	85,980	92,659	6,845	220	4,017[5]	2,765[5]
VIRGINIA	444,829	33,076	8,086	186	6.048	4,513
WASHINGTON	146,021	61,581	10,844	134	3,476	2,367

1-Arkansa is included with Alabama
2-There was no survey of Hawaii in 1975
3-District of Columbia is included with Maryland
4-Pennsylvania in the Great Lakes is included with New York
5-Tennessee is included with Texas

*From: U.S. DOC - NOAA -National Marine Fisheries Service. Fishery Statistics of the United States 1975, Statistical Digest No. 69, p. 16.

*1975 - U.S. LANDINGS BY LAKES, PLANTS, EMPLOYMENT & FISHERMEN, BY STATES

State	Lakes[1]		Processing and Wholesale			Fishermen
				Employment Average		
	(1000s lbs)	(1000s$)	Plant	Season	Year	
ILLINOIS	140	160	57	772	728	311
INDIANA	198	89	11	91	84	55
MICHIGAN	12,009	3,758	46	508	428	290
MINNESOTA	2,245	369	18	181	129	805
NEW YORK[2]	598	233	252[1]	2,874[1]	2,599[1]	185
OHIO	7,305	1,624	28	589	501	195
PENNSYLVANIA	313	164	37[1]	1,459[1]	1,320[1]	47
WISCONSIN	38,781	2,858	47	619	573	1,238

1-Pennsylvania is included with New York
2-Processing & Wholesale, as well as Fishermen statistics for NY are for the entire state.

*From: U.S.DOC - NOAA - National Marine Fisheries Service. Fishery Statistics of the United States 1975. Statistical Digest No. 69, p.16.

*** Aquaculture development for the United States—1973 totals and 1990 potential**

	1973	1990
	—million pounds—	
Salmon	61	245
Oysters	20	200
Catfish	48	120
Trout (freshwater)	30	70
Shrimp	.5	63
Crawfish	10	30
Clams	2.6	25
Mussels	—	25
Lobster	—	10
Trout (seawater)	—	10
Abalone	—	5
Scallops	—	5
Pompano	—	3
Other	5.5	400
Total	177	1,211

*From: U.S.Department of Commerce. U.S. Ocean Policy in the 1970s: Status and Issues, p. III-35.

UNITED STATES PORT DEVELOPMENT EXPENDITURES
(add 000)

Region	Total Expenditures for Capital Improvements 1946-77	Projected Expenditures for Capital Improvements 1978-85	Totals
NORTH ATLANTIC	$1,522,844	$ 122,025	$1,644,869
SOUTH ATLANTIC (incl. Puerto Rico)	397,246	200,700	597,946
GULF	771,749	225,897	997,646
SOUTH PACIFIC (incl. Hawaii)	704,521	506,390	1,210,911
NORTH PACIFIC (incl. Alaska)	454,111	211,730	665,841
GREAT LAKES	435,476	487,083	922,559
TOTALS	$4,285,947	$1,753,825	$6,039,772

Table I

UNITED STATES PORT DEVELOPMENT EXPENDITURES — 1966-77
(add 000)

REGION	GENERAL CARGO FACILITIES			SPECIALIZED GENERAL CARGO FACILITIES			BULK FACILITIES		
	New Const.	Mod/Rehab	Total	New Const.	Mod/Rehab	Total	New Const.	Mod/Rehab	Total
NORTH ATLANTIC	$ 92,233	55,753	147,986	$367,686	47,597	415,283	$116,344	5,036	121,380
SOUTH ATLANTIC (incl. Puerto Rico)	82,378	58,512	140,890	45,565	18,222	63,787	44,568	2,000	46,568
GULF	63,052	41,590	104,642	93,357	16,942	110,299	145,496	26,385	171,981
SOUTH PACIFIC (incl. Hawaii)	26,583	31,902	58,485	177,579	31,566	209,145	30,609	21,429	52,038
NORTH PACIFIC (incl. Alaska)	47,628	19,884	67,512	126,567	9,863	136,430	105,302	20,287	125,589
GREAT LAKES	11,002	13,742	24,744	—	3,580	3,580	81,585	74,839	156,424
TOTALS	$322,876	221,383	544,259	$810,754	127,770	938,524	$524,004	149,976	673,980

Table II

From: American Seaport, June 1979, Volume 41, No. 6. Pp6-7.

Direct and Indirect Personal Income

Generated by the U.S. Port Industry

by the 10 Leading Supplying Industries - 1970*

($ Millions)

Supplying Industry	Amount
Other transportation	$359
Business services	303
Finance & insurance	269
Maintenance & repair construction	252
Wholesale & retail trade	172
Printing & publishing	107
Federal government enterprises	99
Communications	94
Primary iron & steel manufacturing	85
State & local government enterprises	81

*From: U.S. Department of Commerce - Maritime Administration. Economic Impact of the U.S. Port Industry: An Input-Output Analysis of Waterborne Transportation, p. 37

* Direct & Indirect Employment Impact of the U.S.

Port Industry in 10 Leading Supplying Industries - 1970

Supplying Industry	Employment
Other transportation	45,300
Business services	40,600
Wholesale & retail	31,800
Finance & insurance	30,700
Maintenance & repair construction	17,200
State and local government enterprises	13,400
Printing and publishing	12,100
Federal government enterprises	12,100
Shipbuilding	12,000
Communications	11,100

*From: U.S. Department of Commerce - Maritime Administration. Economic Impact of the U.S. Port Industry: An Input-Output Analysis of Waterborne Transportation, p. 40.

Direct and Indirect Business Income Generated by the U.S. Port Industry by the 10 Leading Supplying Industries - 1970 *

($ Millions)

Supplying Industry	Amount
Real estate & rental	$433
Business services	239
Other transportation	154
State & local government enterprises	124
Communications	102
Crude petroleum	101
Electric, gas and water	76
Wholesale & retail	63
Automobile repair & services	60
Maintenance & repair services	40

*From: U.S. Department of Commerc - Maritime Administration. Economic Impact of the U.S.Port Industry: An Input-Output Analysis of Waterborne Transportation, p. 39.

*TONNAGE OF COMMERCIAL CARGO CARRIED IN U.S. OCEANBORNE FOREIGN TRADE
(In Thousands of Long Tons)

	Total Exports and Imports			Exports			Imports		
Year	Total	U.S. Flag	U.S. (percent)	Total Exports	U.S. Flag	U.S. (percent)	Total Imports	U.S. Flag	U.S. (percent)
1969	427,479	19,785	4.6	159,160	10,888	6.8	268,319	8,897	3.3
1970	473,246	25,230	5.3	193,557	12,366	6.4	279,689	12,864	4.6
1971	457,434	24,376	5.3	163,456	10,812	6.6	293,978	13,564	4.6
1972	513,566	23,764	4.6	185,103	11,110	6.0	327,463	12,654	3.9
1973	631,572	39,903	6.3	226,003	14,488	6.4	405,569	25,415	6.3
1974*	628,726	41,006	6.5	220,390	13,342	6.1	408,336	27,664	6.8
				Liner Service					
1969	41,912	9,709	23.1	23,546	5,479	23.3	18,366	4,230	23.0
1970	50,387	11,817	23.5	29,234	6,905	23.6	21,153	4,912	23.2
1971	44,209	10,129	22.9	22,730	5,328	23.4	21,479	4,801	22.3
1972	44,641	9,798	21.9	22,855	5,340	23.4	21,786	4,458	20.5
1973	51,244	13,216	25.8	28,278	7,822	27.7	22,966	5,394	23.5
1974*	52,970	15,589	29.4	29,540	8,835	29.9	23,430	6,754	28.8
				Non-Liner Service					
1969	212,036	4,589	2.2	120,693	3,927	3.3	91,343	662	0.7
1970	240,723	5,364	2.2	146,625	3,664	2.5	94,098	1,700	1.8
1971	220,741	4,792	2.1	126,027	3,905	3.0	94,714	887	0.9
1972	242,564	3,795	1.6	146,267	2,909	2.0	96,297	886	0.9
1973	281,910	4,535	1.6	178,249	3,084	1.7	103,661	1,451	1.4
1974*	281,518	4,909	1.7	171,088	2,158	1.3	110,430	2,751	2.5
				Tanker Service					
1969	173,531	5,487	3.2	14,921	1,482	9.9	158,610	4,055	2.5
1970	182,136	8,049	4.4	17,698	1,797	10.2	164,438	6,252	3.8
1971	192,484	9,455	4.9	14,699	1,579	10.7	177,785	7,876	4.4
1972	226,361	10,171	4.5	16,981	2,861	16.8	209,380	7,310	3.5
1973	298,418	22,152	7.4	19,476	3,582	18.4	278,942	18,570	6.7
1974*	294,238	20,508	7.0	19,762	2,349	11.9	274,476	18,159	6.6

*Preliminary

SOURCE: Office of Subsidy Administration, Division of Trade Studies and Statistics, U.S. Maritime Administration

*From: National Research Council, Panel on Future Port Requirements, Maritime Transportation Research Board, Commission on Socio-Technical Systems. Port Development in the U.S., Table 1.

Ranking of Waterborne Imports by Consuming Industry in the United States - 1976*

($ Millions)

Industry	Value
Food & kindred products	$ 3,111
Primary nonferrous metals	1,097
New construction	1,017
Petroleum refining	1,013
Primary iron & steel	1,003
Radio, television & comm. equipment	729
Motor vehicles	675
Livestock	479
Rubber & misc. plastics products	451
Lumber & wood products	379
Chemicals	375
Paper & allied products	320
Heating & plumbing products	272
Wholesale & retail	255
Other agricultural products	245
Office, computing & accounting machines	234
Electric & gas	220
Misc. manufacturing	219
Business services	182

*From: U.S. Department of Comemerce - Maritime Administration. Economic Impact of the U.S. Port Industry: An Input-Out-put Analysis of Waterborn Transportation, p. 56.

* VALUE OF COMMERCIAL CARGO CARRIED IN U.S. OCEANBORNE FOREIGN TRADE
(In Millions of Dollars Value)

	Total Exports and Imports			Exports			Imports		
Year	Total	U.S. Flag	U.S. (percent)	Total Exports	U.S. Flag	U.S. (percent)	Total Imports	U.S. Flag	U.S. (percent)
1969	41,877	8,067	19.3	19,972	4,277	21.4	21,905	3,790	17.3
1970	49,682	10,273	20.7	24,488	5,148	21.0	25,194	5,130	20.4
1971	50,425	9,886	19.6	22,653	4,485	19.7	27,772	5,401	19.4
1972	60,529	11,119	18.4	25,592	4,794	18.7	34,937	6,325	18.1
1973	84,006	15,900	18.9	39,922	7,171	18.0	44,084	8,729	19.8
1974*	124,237	22,058	17.8	55,947	10,154	18.1	68,290	11,904	17.4
				Liner Service					
1969	27,216	7,448	27.4	13,496	3,813	28.3	13,720	3,635	26.5
1970	33,519	9,652	28.8	16,446	4,740	28.8	17,073	4,192	28.8
1971	32,399	9,203	28.4	14,858	4,061	27.3	17,541	5,142	29.3
1972	37,383	10,348	27.7	16,008	4,291	26.8	21,375	6,057	28.3
1973	49,640	14,425	29.1	22,220	6,458	29.1	27,420	7,967	29.1
1974*	63,687	19,474	30.6	30,910	9,317	30.1	32,777	10,157	31.0
				Non-Liner Service					
1969	11,068	433	3.9	5,483	365	6.7	5,585	68	1.2
1970	12,162	401	3.3	6,805	302	4.4	5,357	99	1.8
1971	13,167	412	3.1	6,597	328	4.9	6,570	84	1.2
1972	17,397	417	2.4	8,268	310	3.7	9,129	107	1.2
1973	25,216	638	2.5	15,773	465	2.9	9,443	173	2.4
1974*	34,571	804	2.3	21,321	545	2.6	13,250	259	2.0
				Tanker Service					
1969	3,593	186	5.2	993	99	10.0	2,600	87	3.3
1970	4,001	225	5.6	1,237	106	8.6	2,764	119	4.3
1971	4,859	271	5.5	1,198	96	8.0	3,661	175	4.7
1972	5,749	354.	6.2	1,316	193	14.7	4,433	161	3.6
1973	9,150	837	9.1	1,929	248	12.9	7,221	589	8.2
1974*	25,979	1,780	6.9	3,716	292	7.9	22,263	1,488	6.7

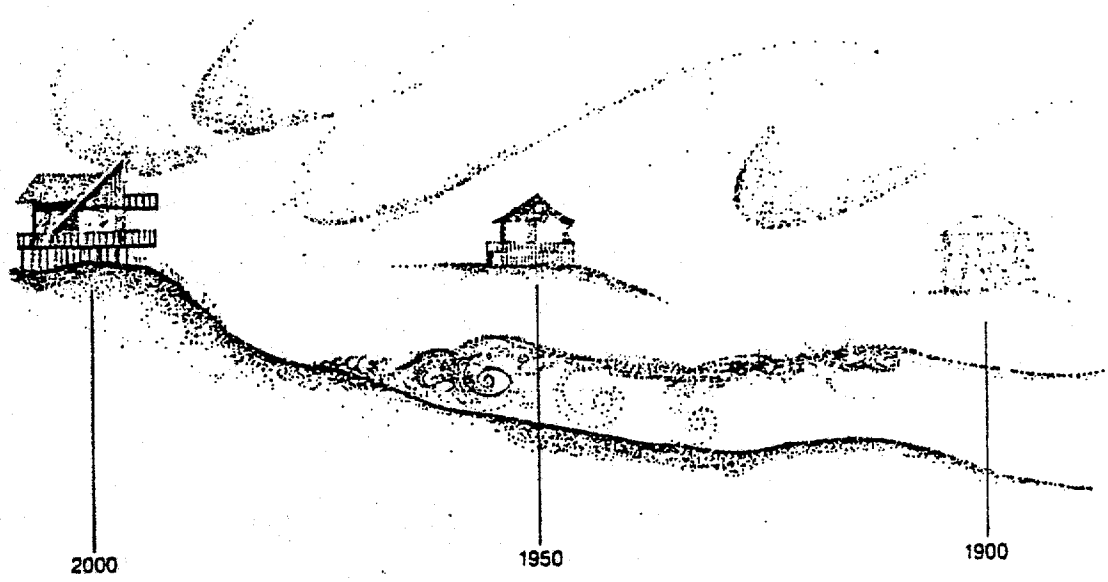
*Preliminary

* SOURCE: Office of Subsidy Administration, Division of Trade Studies and Statistics, U.S. Maritime Administration

... a foolish man, which built his house upon the sand.

And the rain descended and the floods came, and the winds blew, and beat upon that house, and it fell, and great was the fall of it.

Matthew 7:26-27


2000
1950
1900

COASTAL ZONE HAZARDS

EROSION

Erosion is an important factor contributing to the inherent instability of the coastal zone. According to the US Army Corps of Engineers, 3% of the US coastline (2,560 miles) is subject to critical erosion. Non-critical erosion affects 19.9% (16,920 miles) of all coastal areas. The remaining 69.7% (59,286 miles) is made up of stable, non-eroding areas such as non-beach shorefront or land that is accreting sediment.

Erosion damage is linked to shoreline type. The North and Mid-Atlantic regions, those having the highest percentage rates (11.4% and 10.6% respectively) of critical erosion, are largely sand beach; the Pacific region shoreline is mostly cliff or rocky beach, only 0.5% of which is subject to critical erosion.

Figures in this section will not equal figures for the entire coastline, as data for some areas are unavailable.

HISTORICAL SHORE CHANGES

(US Army Corps of Engineers,
National Shoreline Study, 1971)

	CRITICAL EROSION	NON-CRITICAL EROSION	NON_ERODING
MAINE	20 (00.8)*	2,475 (99.0)	5 (00.2)
NEW HAMPSHIRE	2 (05.0)	36 (90.0)	2 (05.0)
MASSACHUSETTS	135 (11.2)	1,030 (85.8)	35 (03.0)
RHODE ISLAND	25 (09.2)	310 (91.2)	5 (01.5)
CONNECTICUT	25 (09.2)	240 (88.9)	5 (08.1)
NEW YORK	299 (46.9)	339 (53.1)	0
NEW JERSEY	122 (26.0)	110 (23.4)	237 (50.5)
	628 (11.4)	4,540 (82.5)	289 (05.2)
MID-ATLANTIC			
DELAWARE	28 (12.3)	31 (13.7)	167 (74.0)
MARYLAND	180 (09.3)	1,500 (77.9)	259 (13.3)
VIRGINIA	258 (26.0)	300 (30.2)	435 (43.8)
NORTH CAROLINA	539 (14.7)	723 (19.7)	2,399 (65.5)
SOUTH CAROLINA	57 (01.9)	191 (00.3)	2,814 (91.9)
GEORGIA	7 (03.6)	37 (18.2)	160 (78.2)
	1,069 (10.6)		
	1,069 (10.6)	2,782 (27.6)	6,234 (61.8)
GULF REGION			
FLORIDA	292 (04.7)	690 (11.0)	5,284 (84.3)
ALABAMA	33 (09.3)	113 (32.3)	205 (58.4)

* Numbers in parenthesis indicate percentage of state land, rounded to the nearest tenth.

HISTORICAL SHORE CHANGES (cont'd)

	CRITICAL EROSION	NON CRITICAL EROSION	NON-ERODING
MISSISSIPPI	36.9 (14.9)	68.6 (27.8)	141.5 (57.3)
LOUSIANA	.8 (0.05)	736.2 (49.9)	29 (01.9)
TEXAS	36.0 (09.6)	65.0 (17.4)	272.0 (73.0)
	399.07 (03.7)	1,673.0 (15.4)	5,932 (54.7)
PACIFIC REGION			
CALIFORNIA	80 (04.4)	1,470 (81.2)	260 (14.4)
OREGON	64 (12.8)	101 (20.3)	334 (66.9)
WASHINGTON	7 (00.3)	91 (03.9)	2,238 (95.8)
ALASKA	100 (00.2)	5,000 (10.5)	42,200 (89.2)
HAWAII	DATA UNAVAILABLE		
	251 (00.5)	6,662 (12.6)	45,032 (85.15)
GREAT LAKES REGION			
ILLINOIS	10 (16.1)		
INDIANA	13 (29.0)	10 (21.3)	22 (38.5)
MICHIGAN	104 (05.0)	684 (33.0)	1,282 (62.0)
NEW YORK	17 (04.7)	180 (50.0)	107 (30.0)
OHIO	24 (09.2)	97 (36.5)	144 (54.2)
PENNSYLVANIA	6 (12.1)	42 (87.8)	
WISCONSIN	39 (06.3)	250 (40.3)	244 (39.4)
	213 (06.2)	1,263 (36.8)	1,799 (52.4)

7-6 Cropland Soil Erosion Due to Water, 1975

Region (1)	Cropland (2) (thousand acres)	Annual Soil Losses (3)			
		Existing Average Soil Losses (tons/acre)	Existing Soil Losses With Present Farming Systems (million tons)	Potential Soil Losses Without Conservation Treatment (million tons)	Maximum Soil Losses Based on SCP Standards (4) (million tons)
New England	1,042	7	7	8	5
Mid-Atlantic	8,556	14	120	156	43
South Atlantic-Gulf	18,827	18	345	496	94
Great Lakes	21,385	5	107	114	107
Ohio	25,904	9	222	293	130
Tennessee	2,814	19	57	69	14
Upper Mississippi	53,873	10	515	604	269
Lower Mississippi	17,626	23	388	492	86
Souris-Red Rainy	17,444	2	39	51	39
Missouri Basin	80,420	7	577	908	402
Arkansas-White-Red	35,152	6	211	332	176
Texas-Gulf	21,708	7	158	211	109
Rio Grande	2,195	2	5	8	5
Upper Colorado	862	2	2	2	2
Lower Colorado	1,268	2	2	2	2
Great Basin	1,687	2	4	5	4
Pacific Northwest	15,064	2	36	43	36
California	9,344	1	5	6	5
Total and Average	335,171	9	2,800	3,800	1,528

(1) Water Resource Council regions.

(2) Includes cropland harvested and crop failure. Estimated by the Soil Conservation Service using the Conservation Needs Inventory of 1967 and the Potential Cropland Study of 1975.

(3) Rates and total tons were computed in a model using nationally consistent procedures. The values may differ from some local estimates.

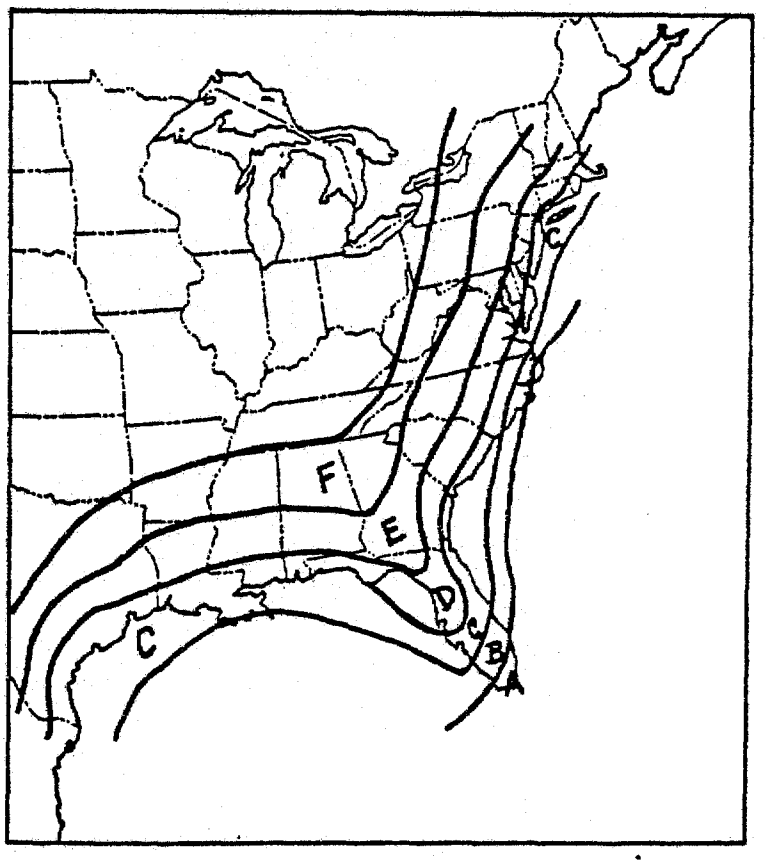
(4) SCP refers to "sustained crop production" standards as determined by the Soil Conservation Service. This level ranges from 1 to 5 tons per acre per year, depending on the soil.

Source: U.S. Department of Agriculture, Soil Conservation Service, Cropland Erosion, 1977, Tables 3 and 8, pp. 17 and 23.

HURRICANE

winds --74 mph or higher-- are a constant threat along the entire Eastern seaboard and Gulf Coast of the US, potentially affecting nearly 100 million people* (50% of the US population). Probability of a hurricane striking the coast from Maine to Texas in any given year ranges from 4% in the North Atlantic region to 8.6% for the Gulf States. (Percentages vary widely for and within individual states.) Between 1900 and 1978, there were 129 hurricanes which, by 1969, had caused 14,075 deaths and over $8 billion ($8,650,000,000) in damages. Recent hurricane damages have been small, but there has not been a "great" hurricane (winds of over 110 mph) since Camille struck in 1969. Intensive development in coastal areas increases the likelihood of catastrophic losses in future storms.

*Figures are from Brinkmann and Witterand, Hurricane Hazard in the United States: A Research Assessment. 1975.



ESTIMATED POPULATION AT RISK - HURRICANE/STORM SURGE

HAZARD ZONE		POPULATION AT RISK
A	125 mph or more	14,550,000
B	100 to 124 mph	37,239,000
C	75 to 99 mph	23,770,000
D	50 to 74 mph	20,490,000

Almost 100 million people are exposed to the hurricane wind hazard, or almost half of the total US population. The greatest concentration of population vulnerable to such winds is along the Atlantic coast, where four times as many people reside in zone A as along the Gulf coast.

FROM: Brinkmann, Witterand, Hurricane Hazard in the United States: A Research Assessment. pp. 12-13.

PERCENTIAGE PROBABILITY THAT A HURRICANE (winds of 73 mph+) or
A GREAT HURRICANE (winds of 125mph +) WILL OCCUR IN ANY ONE YEAR
IN A 50 MILE SEGMENT OF THE US COASTLINE. EAST COAST

STATE	ALL HURRICANES	GREAT HURRICANES
TEXAS -1	8	2
-2	7	5
-3	7	4
-4	9	4
-5	14	4
-6	12	4
-7	8	4
LOUSINANA		
8	6	1
-9	6	
-10	9	
-11	13	2
-12	9	4
ALABAMA		
-13	6	1
-14	13	
FLORIDA		
-15	14	
-16	7	
-17	6	
-18	7	
-19	6	
-20	8	
-21	6	1
-22	4	2
-23	5	1
-24	9	2
-25	13	4
-26	13	2
-27	12	5
-28	16	7
-29	15	7
-30	8	5
-31	5	
-32	2	
-33	1	
GEORGIA		
-34	1	
-35	2	1
-36	7	1
SOUTH CAROLINA		
-37	8	
-38	5	

EAST COAST

PERCENTAGE PROBABILITY OF HURRICANE OR GREAT HURRICANE

STATE	ALL HURRICANES	GREAT HURRICANES
NORTH CAROLINA		
-39	6	2
-40	6	2
-41	5	
-42	11	2
-43	8	4
VIRGINIA		
-44	2	1
-45	2	
MARYLAND		
-46	2	
-47	1	
DELAWARE		
-48	-	
NEW JERSEY		
-49	1	
-50	6	
NEW YORK		
-51	6	1
CONNECTICUT		
-52	7	1
MASSACHUSETTS		
-53	6	
NEW HAMPSHIRE		
-54		
MAINE		
-55		
-56	4	
-57	6	
-58	5	

Average probability by region

NORTH ATLNATIC REGION	4	0.14
MIDATLANTIC REGION	4.27	0.86
GULF REGION	8.6	2.15

NUMBER OF HURRICANES (DIRECT HITS) AFFECTING UNITED STATES AND INDIVIDUAL STATES 1900-1978 ACCORDING TO SAFFIR/SIMPSON HURRICANE SCALE.
[Updated from Hebert and Taylor (1975).]

Area	Category Number					All	Major Hurricanes
	1	2	3	4	5		(≥ 3)
United States (Texas to Maine)	47	29	38	13	2	129	53
Texas	9	9	7	6	0	31	13
(North)	4	3	2	4	0	13	6
(Central)	2	2	1	1	0	6	2
(South)	3	4	4	1	0	12	5
Louisiana	4	6	6	3	1	20	10
Mississippi	1	1	2	0	1	5	3
Alabama	3	1	3	0	0	7	3
Florida	18	11	15	5	1	50	21
(Northwest)	9	3	5	0	0	20	5
(Northeast)	1	5	0	0	0	6	0
(Southwest)	5	3	5	2	1	16	8
(Southeast)	4	8	7	3	0	22	10
Georgia	1	3	0	0	0	4	0
South Carolina	4	3	2	1*	0	10	3
North Carolina	9	3	6	1*	0	19	7
Virginia	1	1	1*	0	0	3	1*
Maryland	0	1*	0	0	0	1*	0
Delaware	0	0	0	0	0	0	0
New Jersey	1	0	0	0	0	0	0
New York	3	0	4*	0	0	7	4*
Connecticut	2	1*	3*	0	0	6	3*
Rhode Island	0	1*	3*	0	0	4*	3*
Massachusetts	2	1*	2*	0	0	5	2*
New Hampshire	1*	0	0	0	0	1*	0
Maine	4	0	0	0	0	4	0

*Indicates all hurricanes in this category were moving faster than 30 mph.

Note: State totals will not equal United States totals and Texas and Florida sectional totals will not equal state totals.

FROM: Herbert, Paul J., and Glenn Taylor, "Everything You Always Wanted to Know About Hurricanes - Part II" Weatherwise, June, 1979.

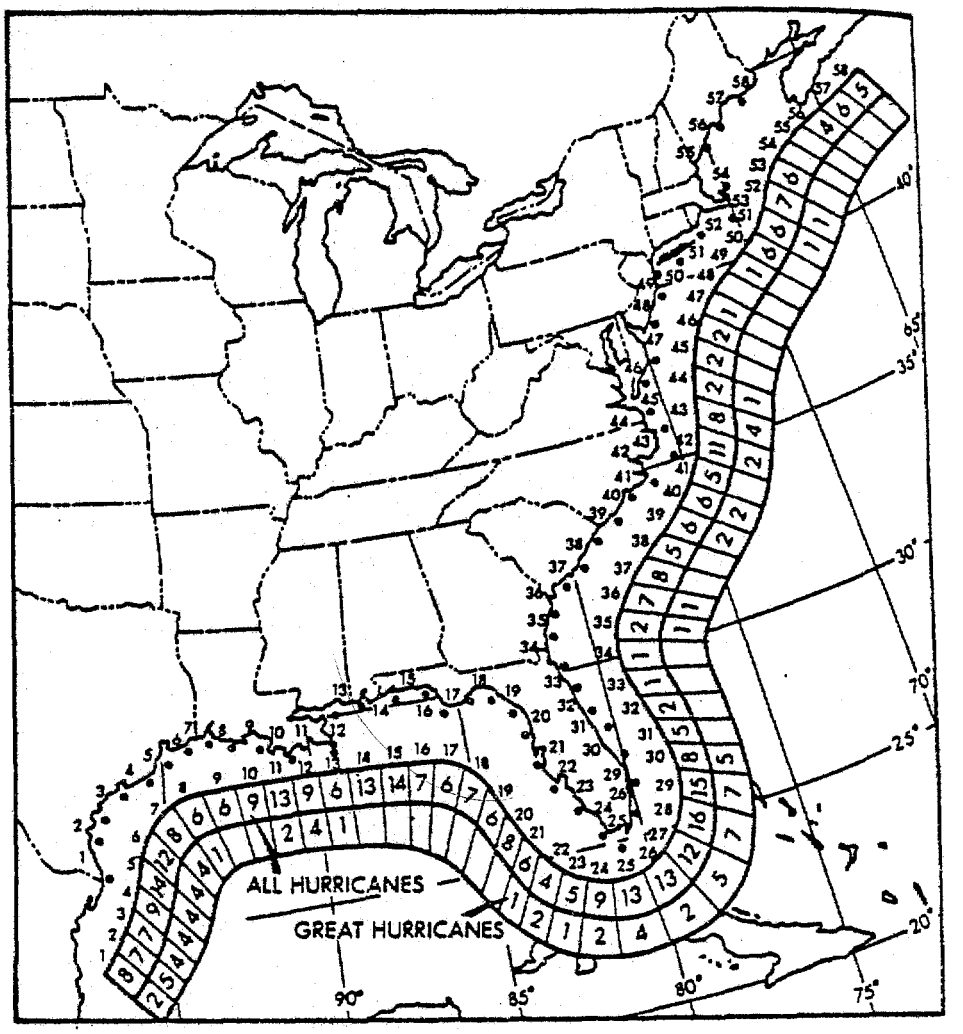


FIGURE I-2

PROBABILITY (PERCENTAGE) THAT A HURRICANE (WINDS EXCEEDING 73 mph, 33 ms-1) OR GREAT HURRICANE (WINDS IN EXCESS OF 125 mph, 56 ms-1) WILL OCCUR IN ANY ONE YEAR IN A 50-MILE (80 km) SEGMENT OF THE UNITED STATES COASTLINE (after Simpson and Lawrence, 1971)

FROM: Brinkmann, p.6.

Table 5

NUMBER OF HURRICANES OF VARIOUS CATEGORIES TO STRIKE THE UNITED STATES EACH DECADE. UPDATED FROM HEBERT AND TAYLOR (1975)

	CATEGORY					ALL	MAJOR
DECADE	1	2	3	4	5	1,2,3,4,5	3,4,5
1900-1909	4	4	4	2		14	6
1910-1919	8	3	5	3		19	8
1920-1929	7	2	3	2		14	5
1930-1939	4	5	6	1	1	17	8
1940-1949	7	8	7	1		23	8
1950-1959	8	1	7	2		18	9
1960-1969	4	5	3	2	1	15	6
1970-1978	5	1	3			9	3
1900-1978	47	29	38	13	2	129	53

Note: Only the highest category to affect the United States has been used.

Saffir/Simpson Hurricane Scale Ranges

	winds (MPH)	surge (feet)	damage
1	74 - 95	4 -5	minimal
2	96 - 110	6 - 8	moderate
3	111 - 130	9 - 12	extensive
4	131 - 155	13 - 18	extreem
5	155 and up	18 plus	catastrophic

FROM: Herbert, Paul J., and Taylor, Glenn, "Everything You Always Wanted to Know About Hurricanes," Weatherwise, April, 1979. pp.61-67.

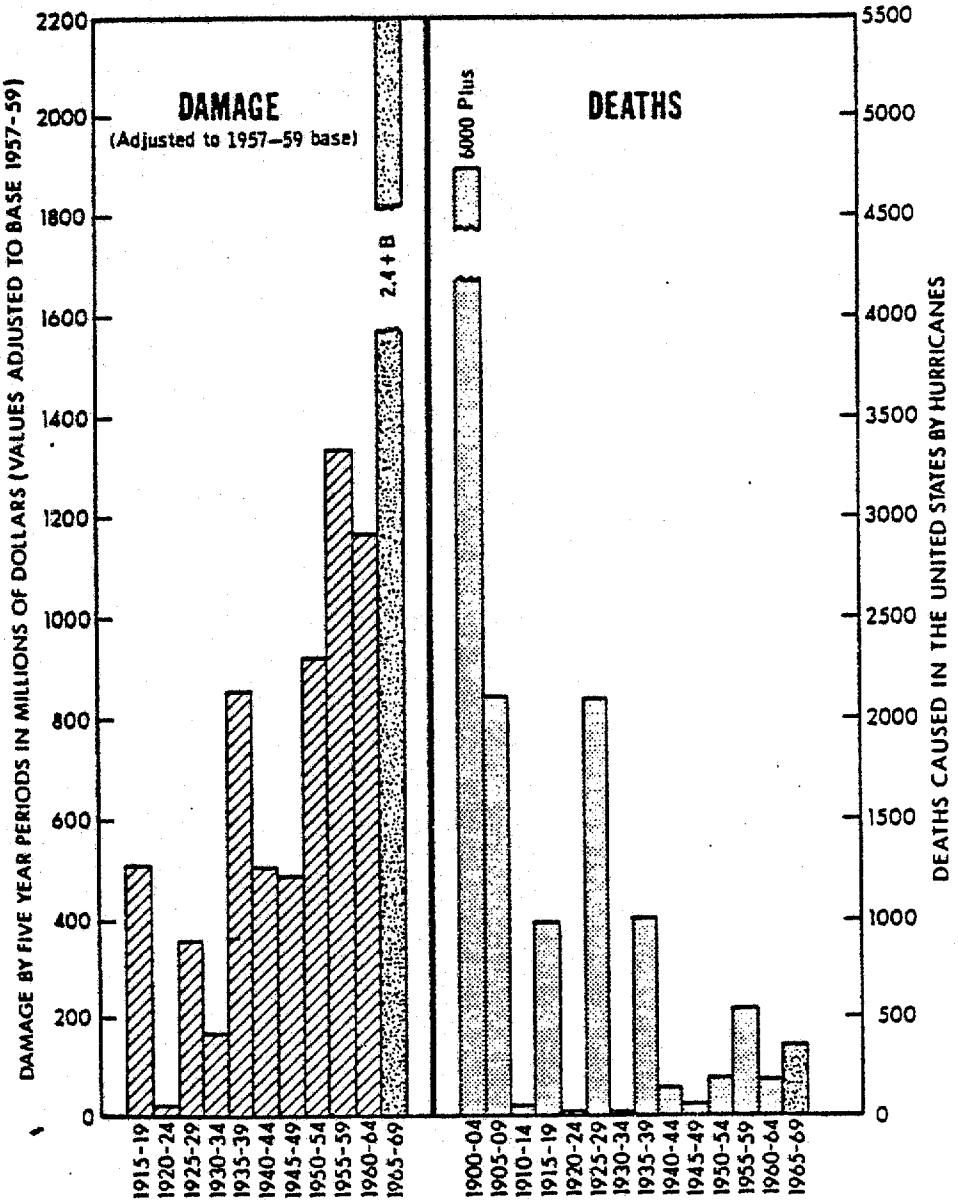


FIGURE III-1 DEATHS AND DAMAGES FROM HURRICANES IN THE UNITED STATES
(National Oceanic and Atmospheric Administration, 1972)

FROM: Brinkmann, Wattrand, Hurricane Hazard in the United States: A Research Assessment. Boulder, Colorado: Institute of Behavioral Science, University of Colorado, 1975. p. 23.

DEADLIEST HURRICANES, UNITED STATES 1900-1978
(25 or more deaths)

	Hurricane	Year	Category	Deaths
1.	Texas (Galveston)	1900	4	6000
2.	Florida (Lake Okeechobee)	1928	4	1836
3.	Florida (Keys/S. Texas)	1919	4	600-900[1]
4.	New England	1938	3[2]	600
5.	Florida (Keys)	1935	5	408
6.	AUDREY (Louisiana/Texas)	1957	4	390
7.	Northeast U.S.	1944	3[2]	390[3]
8.	Louisiana (Grand Isle)	1909	4	350
9.	Louisiana (New Orleans)	1915	4	275
10.	Texas (Galveston)	1915	4	275
11.	CAMILLE (Mississippi/La.)	1969	5	256
12.	Florida (Miami)	1926	4	243
13.	DIANE (Northeast U.S.)	1955	1	184
14.	Florida (Southeast)	1906	2	164
15.	Miss./Ala./Pensacola	1906	3	134
16.	AGNES (Fla./Northeast U.S.)	1972	1	122
17.	HAZEL (North & South Carolina)	1954	4[2]	95
18.	BETSY (Florida/Louisiana)	1965	3	75
19.	CAROL (Northeast U.S.)	1954	3[2]	60
20.	Southeast Florida/La.-Miss.	1947	4	51
21.	DONNA (Fla./Eastern U.S.)	1960	4	50
22.	Georgia/North & South Carolina	1940	2	50
23.	CARLA (Texas)	1961	4	46
24.	Texas (Velasco)	1909	3	41
25.	Texas (Freeport)	1932	4	40
26.	South Texas	1933	3	40
27.	HILDA (Louisiana)	1964	3	38
28.	Louisiana (Southwest)	1918	3	34
29.	Florida (Southwest)	1910	3	30
30.	CONNIE (North Carolina)	1955	3	25
31.	Louisiana (Central)	1926	3	25

[1] Over 500 of these lost on ships at sea.
[2] Moving more than 30 miles per hour.
[3] Some 344 of these lost on ships at sea.

FROM: Herbert and Taylor, 1979. p. 63.

Table 3

COSTLIEST HURRICANES, UNITED STATES 1900-1978
(More than $50,000,000 damage)

Hurricane	Year	Category	Damage (U.S.)
1. AGNES (Fla./Northeast U.S.)	1972	1	$2,100,000,000
2. CAMILLE (Mississippi/La.)	1969	5	1,420,700,000
3. BETSY (Florida/Louisiana)	1965	3	1,420,500,000
4. DIANE (Northeast U.S.)	1955	1	831,700,000
5. ELOISE (Northwest Florida)	1975	3	550,000,000[1]
6. CAROL (Northeast U.S.)	1954	3[2]	461,000,000
7. CELIA (South Texas)	1970	3	453,000,000
8. CARLA (Texas)	1961	4	408,000,000
9. DONNA (Fla./Eastern U.S.)	1960	4	387,000,000
10. New England	1938	3[2]	306,000,000
11. HAZEL (North & South Carolina)	1954	4[2]	281,000,000
12. DORA (Northeast Florida)	1964	2	250,000,000
13. BEULAH (South Texas)	1967	3	200,000,000
14. AUDREY (Louisiana/Texas)	1957	4	150,000,000
15. CARMEN (Louisiana)	1974	3	150,000,000
16. CLEO (Southeast Florida)	1964	2	128,500,000
17. HILDA (Louisiana)	1964	3	125,000,000
18. Florida (Miami & Pensacola)	1926	4	112,000,000
19. Southeast Florida/La.-Miss.	1947	4	110,000,000
20. Northeast U.S.	1944	3[2]	100,000,000+
21. BELLE (Northeast U.S.)	1976	1	100,000,000
22. IONE (North Carolina)	1955	3	88,000,000
23. Southwest & Northeast Florida	1944	3	63,000,000
24. Southeast Florida	1945	3	60,000,000
25. Southeast Florida	1949	3	52,000,000+

[1] Includes $60,000,000 in Puerto Rico.
[2] Moving more than 30 miles per hour.

FROM: Herbert and Taylor, 1979. pp. 63.

LOSS OF LIFE AND PROPERTY DAMAGE IN THE UNITED STATES DUE TO HURRICANES, FLOODS, TORNADOES, AND EARTHQUAKES, 1925-1965

	Property Loss in Million $ Due to						Loss of Life Due to				
Years	Hurri-canes	Floods	Tornadoes	Earth-quakes	Total	Total in 1964 Prices*	Hurri-canes	Floods	Tornadoes	Earth-quakes	Total
1925-29	133	495	95	8	731	1550	2114	579	1944	13	4650
1930-34	51	76	44	40	211	563	80	146	1018	117	1361
1935-39	314	966	39	4	1333	3327	1026	783	921	4	2734
1940-44	222	481	60	7	770	1537	149	315	835	9	1308
1945-49	298	133	126	34	1291	1953	67	304	953	8	1332
1950-54	802	1680	331	65	2778	3619	217	293	885	15	1410
1955-59	539	1695	209	16	2459	2842	660	498	523	34	1715
1960-64	1576	1151	207	405	3339	3409	175	242	230	115	762
1965	1420	788	500	13	2721	2667	75	119	299	3	496

Data Source: Weather Bureau data for hurricanes, floods, and tornadoes; for earthquakes, Coast and Geodetic Survey, U. S. Department of Commerce "Earthquake Investigation in the United States," special publication No. 282, 1964.

*GNP implicit price deflator used to obtain these estimaes; from 1928 to 1929 a linked wholesale price index was used.

(Dacy and Kunreuther, 1969)

FROM: Brinkmann, p. 22.

Table 2 - Allocations from the President's Disaster Fund, 1961-1970.

-30 of the 49 states and territories listed as having recieved aid from the disaster fund have coastal areas.

-631.1 million (82 %) of the total 796.55 million dollars distributed went to those coastal areas, compared to 138.45 million (18%) for non-coastal areas.

-the average funding recieved was 21.03 million for coastal areas, and 7.29 million for non-coastal areas.

Table 2.—Allocations from the President's Disaster Fund, by Calendar Year and State, 1961-1970.

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	Totals
Alabama	0.68	--	--	--	--	--	--	--	1.22	0.40	2.30
Alaska	--	--	--	57.60	--	--	7.60	--	0.15	--	65.35
Arizona	--	--	--	--	--	2.12	--	--	--	2.10	4.22
Arkansas	0.80	--	0.15	0.25	--	--	--	0.65	0.35	--	2.20
California	0.83	4.48	2.63	38.85	2.90	1.00	7.00	--	116.90	23.21	197.80
Colorado	--	--	--	--	19.70	--	--	--	4.10	0.75	24.55
Connecticut	--	--	--	--	--	--	--	--	--	--	--
Delaware	--	4.50	--	--	--	--	--	--	--	--	4.50
Dist. of Columbia	--	--	--	--	--	--	--	--	--	--	--
Florida	--	1.71	--	10.50	2.50	--	--	0.75	--	0.85	16.31
Georgia	0.40	--	0.08	2.15	--	0.45	--	--	--	--	3.08
Hawaii	--	--	0.25	--	--	--	--	0.30	--	--	0.55
Idaho	0.26	1.25	0.25	1.20	--	--	1.12	--	--	--	4.08
Illinois	1.75	--	--	--	3.50	--	1.00	0.30	3.78	--	10.33
Indiana	0.95	--	--	0.74	1.75	--	--	0.22	--	--	3.66
Iowa	0.50	0.46	--	--	5.50	--	--	1.37	3.34	--	11.17
Kansas	--	--	--	--	2.00	3.70	1.25	--	0.90	--	7.85
Kentucky	--	0.80	3.25	0.85	--	--	0.40	0.38	0.21	1.15	7.04
Louisiana	--	0.02	--	2.65	39.75	--	--	--	16.00	--	58.42
Maine	--	--	--	--	--	--	--	--	--	3.90	3.90
Maryland	--	2.03	--	--	--	--	--	--	--	--	2.03
Massachusetts	--	--	--	--	--	--	--	--	--	--	--
Michigan	--	--	--	--	1.45	--	--	--	--	--	1.45
Minnesota	--	--	--	--	12.15	1.63	--	0.76	5.90	4.72	25.16
Mississippi	1.50	2.81	--	--	1.82	--	--	--	74.15	--	80.28
Missouri	0.50	--	--	0.65	1.96	--	--	--	--	--	3.11
Montana	--	--	--	8.00	--	--	--	--	--	--	8.00
Nebraska	--	0.74	0.40	0.78	--	0.85	1.25	--	--	--	4.02
Nevada	--	0.33	0.70	--	1.08	--	--	--	0.15	--	2.26
New Hampshire	--	--	--	--	--	--	--	--	--	--	--
New Jersey	--	17.10	--	--	1.13	--	--	2.05	--	--	20.28
New Mexico	--	--	--	--	2.40	--	--	--	--	--	2.40
New York	--	3.50	0.75	--	--	--	0.62	--	0.52	0.83	6.22
North Carolina	--	1.23	--	0.33	--	--	--	0.40	--	--	1.96
North Dakota	--	--	--	--	0.50	1.58	--	--	3.79	1.80	7.67
Ohio	--	--	--	0.90	0.45	--	--	1.27	6.10	--	8.72
Oklahoma	--	--	--	--	--	--	--	0.18	--	0.55	0.73
Oregon	--	1.70	0.21	14.00	--	--	--	--	--	--	15.91
Pennsylvania	--	--	--	--	0.13	--	--	--	1.25	--	1.38
Rhode Island	--	--	--	--	--	--	--	--	--	--	--
South Carolina	--	--	--	--	--	--	--	--	--	--	--
South Dakota	--	0.73	--	--	0.66	--	--	--	1.05	--	2.44
Tennessee	--	--	0.75	--	--	--	--	--	0.65	--	1.40
Texas	8.00	--	0.50	--	0.33	0.60	10.10	0.55	--	43.66	63.74
Utah	--	--	--	--	--	--	--	--	--	--	--
Vermont	--	--	0.13	0.11	--	--	--	--	0.40	--	0.64
Virginia	--	3.50	0.22	--	--	--	--	--	10.15	--	13.87
Washington	--	0.75	0.59	3.90	2.00	--	--	--	--	--	7.24
West Virginia	1.75	0.40	1.70	0.10	--	--	1.25	--	0.60	--	5.80
Wisconsin	--	--	--	--	1.00	--	--	--	0.93	--	1.93
Wyoming	--	--	0.30	--	--	--	--	--	--	--	0.30
American Samoa	--	--	--	--	--	2.41	--	--	--	--	2.41
Guam	--	16.90	0.72	--	--	--	--	--	--	--	17.62
Puerto Rico	--	--	--	0.74	--	--	--	--	--	17.72	18.46
Trust Territories	--	--	2.36	0.40	--	--	2.15	8.50	--	--	13.41
Virgin Islands	--	--	--	0.08	--	--	--	--	--	1.32	1.40
Totals	17.92	64.94	15.94	144.78	104.66	14.34	33.74	17.68	252.59	102.96	769.55

FROM: Office of Emergency Preparedness, Report to the Congress: Emergency Preparedness, Washington, DC: January, 1972.

WETLANDS

Critical to the ecological and economic health of the coastal zone, wetlands are among the most vulnerable of coastal resources. 26,618,200 acres* of coastal wetlands --estuaries, salt and freshwater marshes, cyprus swamps-- nurture organisms which form the foundations for food webs including coastal and inland waters. Disruptions of wetlands processes will impact far beyond the immediate site of the disturbance. Developers have become increasingly interested in these areas, formerly considered too unstable to sustain development pressure, for both commercial and residential expansion. Between 1955 and 1964 45,000 acres of the wetlands between Maine and Delaware were filled. According to Estuarine Areas: Report of the Committee on Merchant Marine and Fisheries(1967), there are 7,988,100 (30% of all wetland acreage) of important fish and wildlife habitat in US wetlands. Although figures of wetland losses are uncertain, an estimated 568,800 acres (7.1%) of habitat have been lost.

Note: The National Fish and Wildlife Service (DoI) is working on a two-part inventory of the US wetlands, including a statistical survey and map series. Some of the maps are already available; the statistical survey should be ready by 1981.

NATURAL WETLANDS IN THE UNITED STATES, 1968

(in thousands of acres)

		percent total
*COLUMBIA-NORTH PACIFIC	3,744	5.3
*CALIFORNIA	1,888	2.7
GREAT BASIN	1,873	2.6
*LOWER COLORADO	36	0.05
UPPER COLORADO	34	0.04
RIO GRANDE	383	0.54
MISSOURI	6,783	9.56
ARKANSAS-WHITE-RED	4,610	6.49
TEXAS GULF	2,745	3.87
UPPER MISSISSIPPI	3,112	4.39
*LOWER MISSISSIPPI	8,927	12.16
*GREAT LAKES	1,607	2.26
OHIO	647	0.91
TENNESSEE	207	0.29
*SOUTH ATLANTIC GULF	29,936	42.21
*NORTH ATLANTIC	3,395	4.79
SOURIS-RED-RAINY	997	1.40
TOTAL	70,924	

* indicates wetland areas in coastal regions.

FROM: Water Information Center, Inc., Water Atlas, 1973. plate 74, from US Water Resources Council, 1968

USE OF FILLED WETLANDS, MAINE TO DELAWARE, 1955-1964

Use	Percent	Acres
Total	100	45,000
Dredged Spoil	34	15,300
Housing	27	12,150
Recreation	15	6,750
Transportation	10	4,500
Industrial	7	3,150
Dumps	6	2,700
Other	1	450

Sources: Clark, John, Fish and Man: Conflict in the Atlantic Estuary, Special Publication #5, American Littoral Society, 1967; and Environmental Protection Agency, The Economic and Social Importance of Estuaries, 1971.

In Council on Environmental Quality, Environmental Statistics, 1978. p.40.

LOSS OF IMPORTANT FISH AND WILDLIFE ESTUARINE HABITAT[1]

STATE	TOTAL AREA	HABITAT AREA	HABITAT AREA LOST	PERCENT LOSS
ALABAMA	530,000	132,800	2,000	1.5
ALASKA	11,022,800	573,800	1,100	.2
CALIFORNIA	552,100	381,900	255,800	67.0
CONNECTICUT	31,600	20,300	2,100	10.3
DELAWARE	395,500	152,400	8,500	5.6
FLORIDA	1,051,200	796,200	59,700	7.5
GEORGIA	170,800	125,000	800	.6
LOUSIANA	3,545,100	2,076,900	65,400	3.1
MAINE	39,400	15,300	1,000	6.5
MARYLAND	1,406,100	376,300	1,000	.3
MASSACHUSETTS	207,000	31,000	2,000	6.5
MICHIGAN	151,700	151,700	3,500	2.3
MISSISSIPPI	251,200	76,300	1,700	2.2
NEW HAMPSHIRE	12,400	10,000	1,000	10.0
NEW JERSEY	778,400	411,300	53,900	13.1
NEW YORK	376,600	132,500	19,800	15.0
NEW YORK (Great Lakes)	48,900	48,900	600	1.2
NORTH CAROLINA	2,206,600	793,700	8,000	1.0
OHIO	37,200	37,200	100	.3
OREGON	57,600	20,200	700	3.5
PENNSYLVANIA	5,000	5,000	100	2.0
RHODE ISLAND	94,700	14,700	900	6.1

SOUTH CAROLINA	427,900	269,400	4,300	1.6
TEXAS	1,340,000	828,100	68,100	8.2
VIRGINIA	1,670,000	428,100	2,4000	.6
WASHINGTON	193,800	95,500	4,300	4.5
WISCONSIN	10,600	10,600	0	0
TOTAL	26,618,200	7,988,100	568,800	7.1

1 Department of the Interior, cited in US Congress, 90th, 1st session, House of REpresentatives report No. 989. Estuarine Areas: Report of the Committee on Meechant Marine and Fisheries, November 28, 1967, accompanying HR 25.

Table 3.—Growth and condition of land in drainage enterprises for specified years

[In acres. Data from publications by Miller, 1950; U. S. Bureau of the Census, 1950; and Wooten, 1953. See under List of References]

Kind of land	1920	1930	1940	1950
All drainage States:				
Land in enterprises	65, 495, 000	84, 408, 000	86, 967, 000	102, 673, 000
Improved land [1]	44, 288, 000	63, 514, 000	67, 514, 000	82, 138. 000
Land available for settlement	3, 120, 800	4, 204, 100	4, 569, 000	[2]
Thirty drainage-district States:				
Land in enterprises	22, 281, 300	36, 688, 000	39, 872, 000	46, 546, 000
Good drainage (no loss of cultivated crops)	[2]	26, 444, 000	30, 270, 000	24, 970, 000
Fair drainage (frequent loss of cultivated crops)	[2]	5, 903, 000	3, 430, 000	9, 176, 000
Poor drainage (unfit for cultivation)	[2]	4, 341, 000	6, 172, 000	12, 400, 000
Land improved or reclaimed by drainage	[2]	29, 587, 000	29, 362, 000	41, 759, 000
Land protected against overflow	[2]	3, 786, 000	6, 150, 000	3, 516, 000
Land improved by removal of alkali or seepage	[2]	3, 315, 000	4, 360, 000	1, 271, 000

[1] Improved lands are regularly tilled or mowed, cleared for pasture, or used for farm sites, ditches, or roads. Much of this land was essentially dry before drainage.

[2] Not available.

FROM: US Department of the Interior, Fish and Wildlife Service.
Wetlands of the United States, circular 39.:
Washington, DC: USGPO, 1971
p.8.

BARRIER ISLANDS

are among the most valuable and fragile coastal resources, protecting mainland development along the Atlantic and Gulf Coasts. According to the Report of the Barrier Islands Workshop (US DoI-HCRS), 153 islands and island groups (1,018,990 hectares) are strung out along the Eastern seaboard of the US. Due to their location and relative isolation, barrier islands are popular sites for recreation and development. Federal and state governments hold 47 islands (31.3% of the total acreage) in the public trust as parks and wildlife preserves, effectively protecting those areas from further development. State governments also own two undeveloped islands. Five islands are used by the Federal government for military facilities. Private interests control 90 islands (83.7%), 60 of which have already been developed to some extent; the others may be developed at some future time. Four other islands are under quasi-public ownership, held in protective trust by the Nature Conservancy.

Land use and land-cover statistics compiled by the US Geological Survey show 92,546 hectares (14%) of Atlantic and Gulf Coast barrier islands as urban or built-up land, a 55,957 hectare (153%) increase between 1945 and 1975. In that period, 19,026 hectares of Florida's barrier islands were developed, an increase of 208%. The Eastern Gulf Coast had a 302% (11,429 hectare) increase in built-up island acreage, and an additional 10,498 hectares were developed on Mid-Atlantic barrier islands (a 99% increase). Urban barrier island acreage in the New England region increased by 47% (2,705 hectares). Agricultural land, range-land, forest land, wetlands and barren land acreage decreased by 66% for all Atlantic and Gulf Coast Barrier islands.

LOCATION OF BARRIER ISLANDS BY REGION

	acreage	percentage of total
NORTH ATLANTIC	159,670	15.28
MID-ATLANTIC	416,420	39.85
GULF COAST	442,900	43.39

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STATUS AND USE OF BARRIER ISLANDS

Status	no. of islands	approximate acreage	percent of total
National Wildlife Refuge or Seashore	23	202,320	19.36
State-park/preserve	24	124,970	11.96
-undeveloped	2	1,100	0.10
-dumpsite	1	2,400	0.23
Quasi-Public (Nature Conservancy)	4	24,200	2.32
Private-developed	60	311,550	29.82
-undeveloped	30	144,550	13.84
Federal property (military)	5	73,200	7.00
Urbanized	4	31,400	3.00
Other		130,100	12.45

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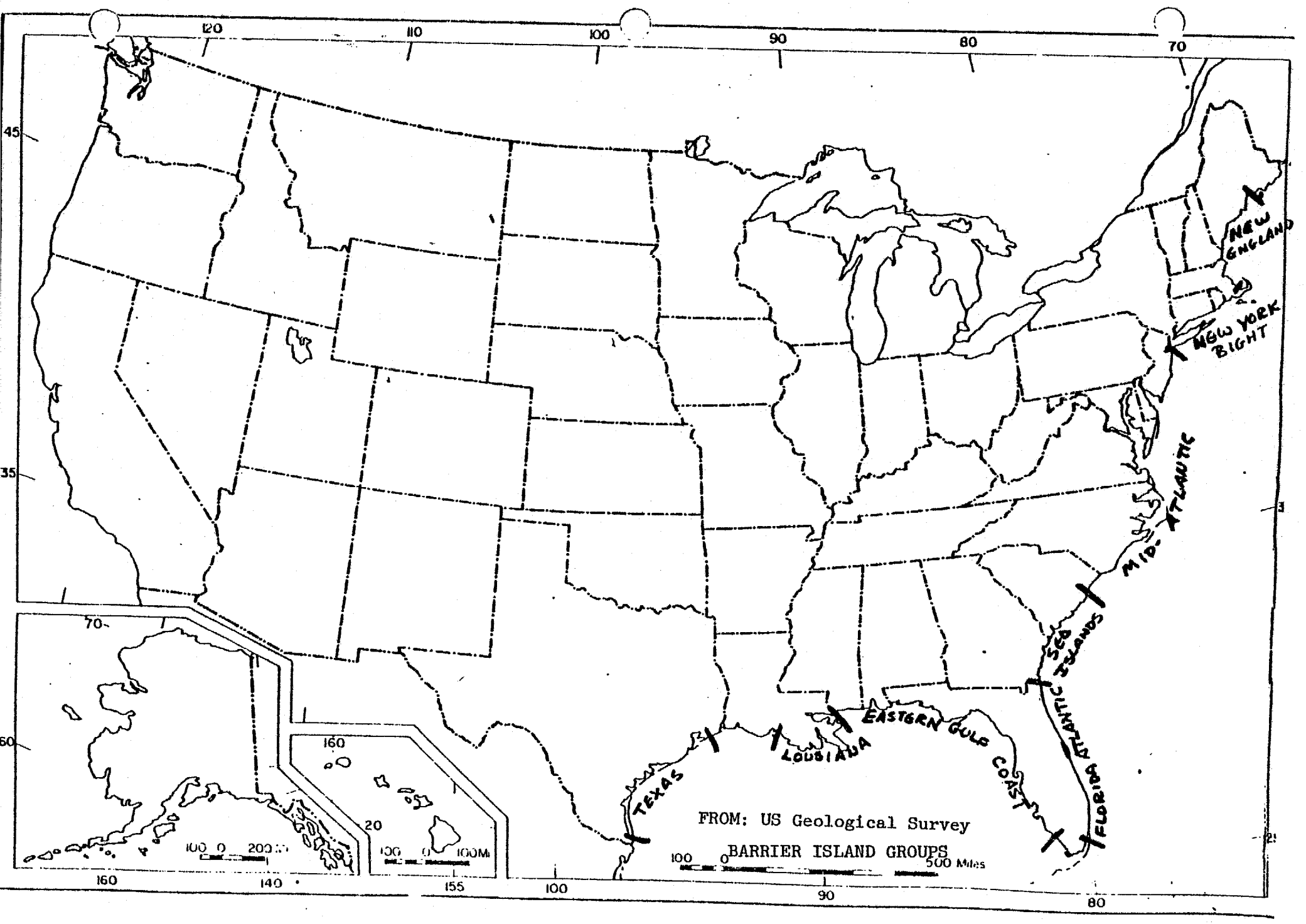
derived from: US Department of the Interior, Heritage Conservation and Recreation Service, Report of the Barrier Islands Work Group, PP.1-11.



FROM: US Geological Survey

BARRIER ISLAND GROUPS

ALL ATLANTIC AND GULF COAST BARRIER ISLANDS*

1975 Land Use and Land Cover

Land use and land cover type	Area (hectares and percent)
Urban or Built-up Land	92,546 , 14.0
Agricultural Land	4,112 , 1.0
Rangeland	39,989 , 6.0
Forest Land	61,831 , 9.0
Water	40,976 , 6.0
Wetland	339,297 , 50.0
Barren Land	92,540 , 14.0
Total	671,291 , 100.0

* 282 islands

FROM: US Department of the Interior, Geological Survey.

ALL ATLANTIC AND GULF COAST BARRIER ISLANDS*

Land Use and Land Cover Changes

Land use and land cover type	Area change between 1945 and 1975 (hectares and percent)
Urban or Built-up Land	+ 55,957 , + 153.0
Agricultural Land	- 1,856 , - 31.0
Rangeland	- 893 , - 2.0
Forest Land	- 6,562 , - 10.0
Wetland	- 32,240 , - 9.0
Barren Land	- 11,208 , - 14.0

* 282 islands

FROM: US Department of the Interior, Geological Survey.

NEW YORK BIGHT BARRIER ISLANDS*

Land Use and Land Cover Changes

Land use and land cover type	Area change between 1945 and 1975 (hectares and percent)
Urban or Built-up Land	+ 2,705 , + 39.0
Agricultural Land	+ 15 , + 7.0
Rangeland	- 115 , - 4.0
Forest Land	- 363 , - 29.0
Wetland	- 99 , - 2.0
Barren Land	+ 175 , + 2.0

* 40 islands

FROM: US Department of the INterior, Geological Survey.

NEW ENGLAND BARRIER ISLANDS*

Land Use and Land Cover Changes

Land use and land cover type	Area change between 1945 and 1975 (hectares and percent)
Urban or Built-up Land	+ 814 , + 47.0
Rangeland	- 42 , - 100.0
Forest Land	+ 21 , + 7.0
Wetland	- 472 , - 21.0
Barren Land	+ 123 , + 10.0

* 21 islands

FROM: US Department of ;the Interior, Geological Survey.

MID-ATLANTIC BARRIER ISLANDS*

Land Use and Land Cover Changes

Land use and land cover type	Area change between 1945 and 1975 (hectares and percent)
Urban or Built-up Land	+10,498 , + 99.0
Agricultural Land	+ 100 , + 130.0
Forest Land	- 975 , - 11.0
Wetland	- 8,469 , - 12.0
Barren Land	+ 1,602 , + 6.0

* 53 islands

FROM: US Department of the Interior, Geological Survey.

FLORIDA ATLANTIC BARRIER ISLANDS*

Land Use and Land Cover Changes

Land use and land cover type	Area change between 1945 and 1975 (hectares and percent)
Urban or Built-up Land	+ 19,026 , + 208.0
Agricultural Land	- 314 , - 25.0
Forest Land	- 7,468 , - 41.0
Wetland	- 5,801 , - 27.0
Barren Land	- 4,203 , - 49.0

* 22 islands

FROM: US Department of the Interior, Geological Survey.

EASTERN GULF COAST BARRIER ISLANDS*

Land Use and Land Cover Changes

Land use and land cover type	Area change between 1945 and 1975 (hectares and percent)
Urban or Built-up Land	+ 11,429 , + 302.0
Rangeland	+ 1,045 , + 436.0
Forest Land	+ 3,148 , + 27.0
Wetland	- 11,813 , - 12.0
Barren Land	- 2,168 , - 13.0

* 68 islands

FROM: US Department of the Interior, Geological Survay.

LOUISIANA BARRIER ISLANDS*

Land Use and Land Cover Changes

Land use and land cover type	Area change between 1945 and 1975 (hectares and percent)
Urban or Built-up Land	+ 2,062 , + 309.0
Wetland	- 978 , - 9.0
Barren Land	- 596 , - 18.0

* 18 islands

FROM: US Department of the Interior, Geological Survey.

TEXAS BARRIER ISLANDS*

Land Use and Land Cover Changes

Land use and land cover type	Area change between 1945 and 1975 (hectares and percent)
Urban or Built-up Land	+ 4,106 , + 110.0
Rangeland	- 1,547 , - 4.0
Forest Land	+ 136 , + 41.0
Wetland	- 687 , - 1.0
Barren Land	- 7,658 , - 23.0

* 16 islands

FROM: US Department of the Interior, Geological Survey.

SEA ISLANDS*

Land Use and Land Cover Changes

Land use and land cover type	Area change between 1945 and 1975 (hectares and percent)
Urban or Built-up Land	+ 5,310 , + 201.0
Agricultural Land	- 1,728 , - 39.0
Rangeland	- 139 , - 8.0
Forest Land	- 1,062 , - 4.0
Wetland	- 3,922 , - 5.0
Barren Land	+ 1,476 , + 30.0

* 44 islands

FROM: US Department of the INterior, Geological Survey.

Fig. 13

National Wildlife Refuges (NWR) on Barrier Islands

State	Refuge	Acreage
Maine	Rachel Carson National Wildlife Refuge	2,020
Massachusetts	Parker River National Wildlife Refuge	4,650
	Monomoy National Wildlife Refuge	2,698
Rhode Island	Ninigret National Wildlife Refuge	28
New York	Morton National Wildlife Refuge	187
New Jersey	Brigatine National Wildlife Refuge	20,236
Virginia	Fishermans Island National Wildlife Refuge	1,000
	Back Bay National Wildlife Refuge	4,589
	Chincoteague National Wildlife Refuge	9,439
North Carolina	Pea Island National Wildlife Refuge	5,915
South Carolina	Cape Romain National Wildlife Refuge	34,229
	Tybee National Wildlife Refuge	100
Georgia	Wassaw National Wildlife Refuge	10,065
	Blackbeard Island National Wildlife Refuge	5,618
	Wolf Island National Wildlife Refuge	5,126

Fig. 13 (cont'd)

National Wildlife Refuges (NWR) on Barrier Island

State	Refuge	Acreage
Florida	Merritt Island National Wildlife Refuge	139,305
	Pelican Island National Wildlife Refuge	4,358
	Hobe Sound National Wildlife Refuge	1,228
	J. N. "Ding" Darling National Wildlife Refuge	4,786
	Pine Island National Wildlife Refuge	31
	Passage Key National Wildlife Refuge	36
	Egmont Key National Wildlife Refuge	328
	Chassahowitzka National Wildlife Refuge	30,143
	Cedar Keys National Wildlife Refuge	379
	St. Marks National Wildlife Refuge	64,082
	St. Vincent National Wildlife Refuge	12,490
Louisiana	Breton National Wildlife Refuge	9,047
Texas	San Bernard National Wildlife Refuge	19,382
	Arkansas National Wildlife Refuge	90,069
	TOTAL	481,564

Land Ownership Within Authorized Boundaries of NPS Barrier Island Units
(as of December 31, 1976)

Administrative Unit	Total Authorized Acreage	Federal acreage		Non-Federal Acreage	
		In-fee	Less than fee	Other Public	Private
Cape Cod National Seashore	44,600	25,366	378	14,153	4,703
Fire Island National Seashore	19,357	2,794	3,152	12,378	1,033
Gateway National Recreation Area	26,172	20,389	1	5,378	403
Assateague Island National Seashore	39,631	16,078	18	21,849	1,686
Wright Brothers National Memorial*	431	431	0	0	0
Cape Hatteras National Seashore	30,326	30,326	0	0	1
Cape Lookout National Seashore	28,400	17,053	7,170	1,986	2,190
Cumberland Island National Seashore	36,877	15,630	2	13,820	7,425
Canaveral National Seashore	57,627	41,025	0	15,369	1,234
Everglades National Park**	160,868	160,868	0	0	0
Gulf Islands National Seashore	139,175	97,712	0	35,652	5,812
Padre Island National Seashore	133,919	132,203	0	79	1,637
TOTAL	717,383	559,875	10,721	120,664	26,123
% of Total	---	78%	1%	17%	4%

* Occupies a small part of Bodie Island just north of Cape Hatteras National Seashore.

**Mangrove Islands and labyrinth of waterways on Gulf Coast only.

Figure 12

TOTAL VISITS TO NPS-ADMINISTERED BARRIER ISLAND
IN FIVE-YEAR INTERVALS

1956 to 1976 (in thousands)*

Area	1956	1961	1966	1971	1976
Assateague Island National Seashore	--	--	--	1,662.9	1,866.2
Canaveral National Seashore	--	--	--	--	715.4
Cape Cod National Seashore	--	--	2,803.3	4,188.3	5,018.7
Cape Hatteras National Seashore	301.7	547.3	1,133.0	1,696.9	1,817.2
Cape Lookout National Seashore**	--	--	--	--	26.9
Cumberland Island National Seashore	--	--	--	--	17.8
Fire Island National Seashore	--	--	--	445.4	702.2
Gateway National Recreation Area	--	--	--	--	9,631.4
Gulf Island National Seashore	--	--	--	--	2,375.3
Padre Island National Seashore	--	--	152.4	904.4	986.1
TOTAL	301.7	547.3	4,115.7	8,897.9	23,140.2

*Total visits includes all entries onto lands or water administered by the NPS (excludes NPS personnel).

**Cape Lookout National Seashore did not begin reporting until June of 1976.

APPENDIX II

American Islands: Comparison of recreation potential of island acreage within 25 miles of urban areas of 50,000 persons and over, by development status and State [1]

State	Total island acreage by percent developed [2]				Acreage with recreation potential by percent developed [3]			
	Total	None-25		26-100	Total	None-25		26-100	
Total [4]	2,498,345	2,027,200		471,145	1,329,850	1,010,520		319,330	
Total excluding Alaska	2,498,092	2,026,947	(1)	471,145 (2)	1,329,850	(3) 1,010,520	(4)	319,330	(5)
Alabama	54,489	40,380	74.1	14,109 25.9	27,490	50.4 25,390	92.4	2,100	7.6
Alaska	253	253	100.0	—	—	—		—	
Arizona	180	180		—	—	—		—	
Arkansas	28,611	14,303		14,308	—	—		—	
California	363,438	352,276	96.9	11,162 3.1	348,784	96.0 348,761	99.9	23	0.01
Colorado	280	280		—	—	—		—	
Connecticut	1,768	1,042	58.9	726 41.1	1,584	89.6 1,241	78.3	343	21.6
Delaware	5,373	4,582	85.3	791 14.7	4,129	76.8 3,338	80.4	791	19.1
Florida	224,938	219,328	97.5	5,610 2.5	111,040	49.3 111,040	100	—	
Georgia	214,183	213,943	99.9	240 0.1	104,316	48.7 104,316	100	—	
Hawaii	1,115	159	14.3	956 85.7	611	54.8 —		611	100
Idaho	—	—		—	—	—		—	
Illinois	36,972	30,982	83.8	5,990 16.2	8,308	22.5 8,038	96.7	270	3.2
Indiana	3,886	3,867	99.5	19 .5	3,434	88.4 3,434	100	—	
Iowa	14,436	14,436		—	5,639	5,639		—	
Kansas	1,826	1,826		—	—	—		—	
Kentucky	5,491	5,491		—	2,056	2,056		—	
Louisiana	141,255	141,255	100	—	—	—		—	
Maine	50,597	31,551	62.3	19,046 37.6	38,450	76.0 22,806	59.3	15,644	40.7
Maryland	7,163	7,163	100	—	6,638	100 6,638		—	
Massachusetts	32,860	19,402	59.0	13,458 40.9	26,274	79.9 13,503	51.4	12,771	48.6
Michigan	93,454	27,195	29.1	66,259 70.9	32,970	35.3 1,914	5.8	31,056	94.2
Minnesota	8,772	7,307	83.3	1,465 16.7	4,119	46.9 4,119	100	—	
Mississippi	43,435	42,185	97.1	1,250 2.9	9,770	22.3 8,520	87.2	1,250	12.8
Missouri	19,951	19,951		—	6,822	6,822		—	
Montana	765	765		—	—	—		—	
Nebraska	4,600	4,600		—	4,500	4,500		—	

(1), (2), and (3) are percentages of total state acreage
(4), and (5) are percentages of acreage with recreation potential

FROM: US Department of the Interior, Bureau of Outdoor Recreation.,pp 64-65.

areas

American Islands: Comparison of recreation potential of island acreage within 25 miles of urban areas of 50,000 persons and over, by development status and State [1]

State	Total island acreage by percent developed [2]				Acreage with recreation potential by percent developed [3]					
	Total	None-25		26-100	Total	None-25		26-100		
Total [4]	2,498,345	2,027,200		471,145	1,329,850	1,010,520		319,330		
Total excluding Alaska	2,498,092	2,026,947	(1)	471,145 (2)	1,329,850	(3) 1,010,520	(4)	319,330		(5)
Nevada	1,020	1,020		—	—	—		—		
New Hampshire	748	700	93.6	48	6.4	660	88.2	612	92.7	48	7.3
New Jersey	36,407	12,440	34.2	23,967	65.8	11,389	31.3	11,207	98.4	182	1.6
New Mexico	200	200		—	—	—		—		
New York	90,458	61,966	68.5	28,492	31.5	40,123	44.3	19,676	49.0	20,447	51.0
North Carolina	8,391	8,391	100	—	—	—		—		
North Dakota	—	—		—	—	—		—		
Ohio	8,255	2,000	24.2	6,255	75.8	6,290	76.2	314	5.0	5,976	95.0
Oklahoma	1,366	1,366		—	—	—		—		
Oregon	33,431	32,296	96.6	1,135	3.4	31,068	93.0	29,128	93.7	1,940	6.24
Pennsylvania	7,379	5,723	77.5	1,656	22.4	3,278	44.4	3,278	100.0	—	
Rhode Island	17,294	17,087	98.8	207	1.2	17,090	98.8	16,995	99.4	95	.5
South Carolina	218,739	215,089	98.3	3,650	1.7	23,272	10.6	9,972	42.8	13,300	57.1
South Dakota	—	—		—	—	—		—		—	
Tennessee	18,869	9,670		9,199		10,359		1,359		9,000	
Texas	243,094	190,094	78.2	53,000	21.8	48,300	19.9	20,800	43.5	27,500	11.3
Utah	46,780	46,780		—		41,425		41,425		—	
Vermont	—	—		—		—		—		—	
Virginia	7,291	7,291	100	—		200	2.7	200	100.0	—	
Washington	347,129	160,037	46.1	187,092	53.9	311,537	90.0	135,649	43.5	175,888	56.4
West Virginia	2,105	1,675		430		—		—		—	
Wisconsin	14,062	13,269		793		4,528		4,433		95	
Wyoming	—	—	94.3	—	5.6	—	32.2	—	98.0	—	2.1
Puerto Rico	34,502	34,502	100	—		33,022	100	33,022	100	—	
Virgin Islands	—	—		—		—		—		—	
District of Columbia	739	619		120		375		375		—	

SUMMARY

SIGNIFICANT BARRIER ISLANDS/BARRIER BEACHES

			Beachfront (Miles)	Area (Approx. Acreage)	Status
	Massachusetts		16.9	4000	
1.	Plum Island	(BI)	8.4	3200	National Wildlife Refuge; private development in north
2.	Monomoy Island	(BI)	8.5	800	National Wildlife Refuge
	Rhode Island		7.3	970	
3.	Point Judith Pond Barrier	(BB)	1	200	State conservation and recreation; small private portion developed
4.	Matunuck Barrier	(BB)	0.6	160	State conservation and recreation; small private areas, one developed
5.	Ninigret Pond Barrier (East Beach)	(BB)	3.2	360	State conservation; private beaches
6.	Winnapaug Pond Barrier	(BB)	2.5	250	State and private recreational beaches
	New York		72.0	146,000	
7.	Westhampton Barrier Beach Island	(BI)	15	3000	Moderate-density private development local and private beaches
8.	Fire Island	(BI)	30	6100	National Seashore; state and local parks; moderate private developmen
9.	Jones Beach Island	(BI)	18	4500	State park; local parks
10.	Long Beach Island	(BI)	9	3700	Private; moderate to heavy residential development
	New Jersey		82.9	8700	
11.	Sandy Hook	(BB)	9	900	U.S. military reservation; heavy private development in south

			Beachfront (Miles)	Area (Approx. Acreage)	Status
	New Jersey (cont.)				
12.	Point Pleasant Beach	(BB)	23.5	3000	Private and developed; one large state park
13.	Long Beach	(BB)	21	1900	Private recreational; urbanized
14.	Atlantic City	(BI)	8.1	600	Completely urbanized
15.	Seven Mile Beach	(BB)	7.7	500	Private recreational; urbanized
16.	Cape Henlopen	(BB)	13.6	1800	Two urbanized areas; large state park
	Delaware/Maryland				
17.	Fenwick Island	(BI)	12.8	3900	Delaware portion in state park (1000 acres); Maryland portion is Ocean City; urbanized
	Maryland/Virginia				
18.	Assateague Island	(BI)	35	18,400	Maryland portion in state park and National Seashore (8400 acres); Virginia portion in National Wildlife Refuge
	Virginia		62.5	37,100	
19.	Wallops Island	(BI)	6	5500	NASA launch complex; also educational uses
20.	Assawoman Island	(BI)	3.5	1500	Private and undeveloped
21.	Metomkin Island	(BI)	7	1400	Private and undeveloped
22.	Cedar Island	(BI)	7	2100	Private and undeveloped
23.	Parramore Island	(BI)	8.5	6000	Owned by Nature Conservancy

			Beachfront (Miles)	Area (Approx. Acreage)	Status
	Virginia (cont.)				
25.	Cobb Island	(BI)	6	3000	Owned by Nature Conservancy
26.	Wreck Island	(BI)	4	1000	State preserve
27.	Ship Shoal, Myrtle, and Smith Islands	(BI)	11 (total)	4500 (total)	Three small islands; owned by Nature Conservancy
28.	Fisherman's Island	(BI)	2.5	1400	Part in National Wildlife Refuge; part private and undeveloped
	Virginia/ North Carolina				
29.	Currituck Banks	(BB)	No. info.	No. info.	Private and under development
	North Carolina		261.9	102,300	
30.	Hatteras Island	(BI)	51	17,000	National Seashore; eight small developed villages
31.	Ocracoke Island	(BI)	15.5	4600	In National Seashore
32.	Core Banks and Portsmouth Island	(BI)	58	20,000	State preserve
33.	Shackleford Banks	(BI)	9	2800	Private and undeveloped
34.	Bogue Banks	(BI)	25	6400	Private; two-thirds developed
35.	Hammock Island	(BI)	3.5	2000	State park
36.	Onslow Beach Island	(BI)	11	2500	Marine Corps base
37.	Topsail Island	(BI)	21.5	8700	Private; developed or being

			Beachfront (Miles)	Area (Approx. Acreage)	Status
	North Carolina (cont.)				
38.	Lee Island	(BI)	1.75	500	Private and undevelopable
39.	"No-Name" Island	(BI)	2.5	1000	Private and undevelopable
40.	Figure Eight Island	(BI)	3	1400	Private and developed; development continuing
41.	Wrightsville Beach and Shell Island	(BI)	4.5	1700	Private and developed; further development planned
42.	Masonboro Island	(BI)	8.25	1700	Private and undeveloped; to be acquired by state
43.	Carolina Beach Island	(BI)	11	7000	Half private and developed; half in state park and U.S. military reservation
44.	Smith Island	(BI)	7.5	13,000	Private; in development process
45.	Oak Island	(BI)	13	6000	Completely developed
46.	Holder Beach Island	(BI)	7.6	2000	Completely developed
47.	Hales Beach Island	(BI)	6	2000	Completely developed
48.	Sunset Beach Island	(BI)	2.3	2000	Completely developed
	South Carolina		128.8	123,020	
49.	Waites Island	(BI)	2.5	500	Private and undeveloped
50.	Pawley's Island	(BI)	3.3	450	Private and developed
51.	North Island	(BI)	8	4000	Private wildlife refuge

			Beachfront (Miles)	Area (Approx. Acreage)	Status
	South Carolina (cont.)				
52.	South Island	(BI)	8	3000	Private wildlife refuge
53.	Cedar Island	(BI)	3	4300	State preserve
54.	Murphy Island	(BI)	6	8000	State preserve
55.	Cape Island	(BI)	4	1300	In National Wildlife Refuge
56.	Bull Island	(BI)	5	5800	In National Wildlife Refuge
57.	Raccoon Key	(BI)	4.8	170	In National Wildlife Refuge
58.	Lighthouse Island	(BI)	2	950	In National Wildlife Refuge
59.	Capers Island	(BI)	3.3	2300	State preserve
60.	Dewees Island	(BI)	2.9	1500	Private and undeveloped
61.	Isle of Palms	(BI)	4	3000	Private and developed
62.	Sullivan's Island	(BI)	4.3	1400	Completely developed
63.	Morris Island	(BI)	4	2400	State and private spoil disposal site
64.	Folly Island	(BI)	6	1400	Developed
65.	Kiawah Island	(BI)	10	7500	Private and being developed
66.	Seabrook Island	(BI)	2.25	5600	Private and being developed
67.	Botany Bay Island	(BI)	1	500	Private and being developed
68.	Edisto Island	(BI)	9	13,600	Half state park; half developed
		(BI)	1.6	2250	(Private and undeveloped

			Beachfront (Miles)	Area (Approx. Acreage)	Status
	South Carolina (cont.)				
70.	Otter Island	(BI)	1.8	900	Private and undeveloped
71.	Hunting Island	(BI)	4	3500	State park
72.	Fripp Island	(BI)	4	3000	Private and being developed
73.	Pritchards Island	(BI)	3.5	3500	Private and being developed
74.	Little Capers Island	(BI)	No. info.	No. info.	Private and being developed
75.	St. Philips Island	(BI)	1.6	6200	Private and bwing developed
76.	Hilton Head Island	(BI)	12	27,800	Private and developed; further development planned
77.	Daufuskie Island	(BI)	4	4600	Private and undeveloped; development planned
78.	Turtle Island	(BI)	3	3600	State preserve
	Georgia		95.3	154,000	
79.	Tybee Island	(BI)	3.4	1800	Private and partially developed
80.	Little Tybee Island	(BI)	5.6	6800	Private and undeveloped
81.	Wassaw Island	(BI)	6	10,000	National Wildlife Refuge
82.	Ossabaw Island	(BI)	9.5	21,000	Private and undeveloped
83.	St. Catherines Island	(BI)	11	14,400	Undeveloped; owned by private foundation; used for scientific research
84.	Blackbeard Island	(BI)	9	5600	National Wildlife Refuge

			Beachfront (Miles)	Area (Approx. Acreage)	Status
	Georgia (cont.)				
85.	Sapelo Island	(BI)	5.6	18,000	State wildlife refuge
86.	Wolf Island	(BI)	3.5	5,100	National Wildlife Refuge
87.	Little St. Simons Island	(BI)	6.3	8,800	Private and undeveloped
88.	St. Simons Island	(BI)	3	27,600	Private and partially developed
89.	Sea Island	(BI)	4.5	2,000	Private and developed
90.	Jekyll Island	(BI)	8	5,700	State park; completely developed for recreation
91.	Little Cumberland Island	(BI)	2.4	4,000	In National Seashore; partially developed
92.	Cumberland Island	(BI)	17.5	23,200	In National Seashore; some private areas developed
	Florida		414.7	159,000	
93.	Amelia Island	(BI)	13	12,000	State and private; parts heavily developed
94.	Talbot Island	(BI)	7	8,900	State park; also private undeveloped area
95.	Anastasia Island	(BI)	12.3	12,000	Private and heavily developed, with large state park
96.	Hutchinson Island	(BI)	22	6,000	Private and developed
97.	Jupiter Island	(BI)	13.8	3,000	Private; one-third developed

			Beachfront (Miles)	Area (Approx. Acreage)	Status
	Florida (cont.)				
98.	Seven developed islands: Palm Beach to Miami Beach	(BI)	80.5 (total)	28,000 (total)	All seven islands urbanized
99.	Key Biscayne	(BI)	4.5	2000	Private and developed; large country area
100.	Marco Island	(BI)	5.7	6000	Private; most areas developed; further development planned
101.	Estero Island	(BI)	6.8	2300	Private and developed
102.	Sanibel Island	(BI)	10.6	11,000	Private, with several developed areas; large federal and smaller local and private preserves
103.	Captiva Island	(BI)	4.8	1000	Private, and partially developed
104.	North Captiva Island	(BI)	3.9	900	Private, with little development
105.	La Costa Island	(BI)	6.8	2500	Private and developed; federal and state areas; no access
106.	Gasparilla Island	(BI)	6.6	1800	Private, heavily developed in two areas
107.	Bocilla Island	(BI)	6.6	1200	Private, with little development
108.	Manasota Key	(BI)	9.7	1700	Private and developed
109.	Casey Key	(BI)	6.9	800	Private and developed
110	Sarasota Key	(BI)	7.2	2500	Private and heavily developed
111.	Lido Key	(BI)	2.4	500	Private and heavily developed

	Florida (cont.)		Beachfront (Miles)		Area (Approx. Acreage)		Status
113.	Anna Maria Key	(BI)	7.4		2000		Private, with heavy residential development
114.	Mullet Key	(BI)	5.5		1000		County park
115.	Cabbage Key	(BI)	2.7		300		Half county park; half private, with little development
116.	Long Key	(BI)	5.3		1000		Urbanized
117.	Treasure Island	(BI)	3.3		400		Private and developed
118.	Sand Key	(BI)	13.5		1700		Private and developed
119.	Caladesi Island	(BI)	3.8	(total)	1100	(total)	Two state islands; undeveloped
120.	Anclote Keys	(BI)	0.5		1000		State recreational area and federal preserve
121.	Day Island	(BI)	6.6		3000		Private, with light to moderate development
122.	St. George Island	(BI)	30		12,500		Private, with small residential development
123.	St. Vincent Island	(BI)	8.2		13,600		In National Wildlife Refuge
124.	St. Joseph Spit	(BB)	9.8		4000		State park
125.	Crooked Island	(BI)	9.9		25,300		In Air Force Base
126.	Shell Island	(BI)	4.6		1500		State park
127.	Santa Rosa Island	(BI)	48		9200		In federal and state protection areas
128	Perdido Key	(BI)	14.5		2600		Part in National Seashore; part

			Beachfront (Miles)		Area (Approx. Acreage)		Status
	Alabama						
129.	Dauphin Island	(BI)	14		3500		Private; one-third developed
	Mississippi		31.5		13,000		
130.	Petit Bois Island	(BI)	7		1300		Undeveloped (apparently in preserve)
131.	Horn Island	(BI)	13.5		4300		National Wildlife Refuge
132.	Ship Island	(BI)	7.2	(total)	1400	(total)	Two undeveloped islands (apparently in preserve)
133.	Cat Island	(BI)	3.8		2500		Private and undeveloped
	Louisiana		173.8		11,900		
134.	Chandeleur Island	(BI)	29.7	(total)	2200	(total)	National Wildlife Refuge
135.	Grand Grosier Island	(BI)	5		600		In National Wildlife Refuge
136.	Breton Island	(BI)	5.6	(total)	600	(total)	Two islands; in National Wildlife Refuge
137.	Pelican Island	(BI)	4.5		300		Undeveloped (apparently private); several pipelines
138.	Bay Cheinere Ronquille	(BI)	3.9		500		Undeveloped (apparently private)
139.	Grand Terre Islands	(BI)	6.2	(total)	800	(total)	Two undeveloped islands (apparently private)
140.	Grand Isle	(BI)	4		2300		Private, parts urbanized
141.	East Timbalier Island	(BI)	6.4		600		State preserve; some oil facilities
142.	Timbalier Island	(BI)	5.2		2000		Undeveloped (apparently private); several oil facilities

			Beachfront (Miles)	Area (Approx. Acreage)	Status
	Texas		365.2	259,000	
144.	Bolivar Peninsula	(BB)	60.5	39,000	Private, with little development. Some spoil lands; many pipelines.
145.	Galveston Island	(BI)	29	27,000	Urbanized in northeast; remainder has little development
146.	Folletts Island	(BB)	14.6	2000	Undeveloped (apparently private)
147.	Cedar Lakes Barrier Beach	(BB)	18.8	4000	Mostly undeveloped; one urbanized area
148.	Matagorda Peninsula	(BB)	48.7	22,000	Undeveloped (apparently private)
149.	Matagorda Island	(BI)	37.5	39,000	Air Force Base and Gunnery Range; range to be converted for recreation
150.	St. Joseph Island	(BI)	20	28,000	Undeveloped (apparently private)
151.	Mustang Island	(BI)	19.5	25,000	Urbanized at north end; state park in south
152.	Padre Island	(BB)	109	70,000	Most in National Seashore; north and south tips developed
153.	Brazos Island	(BB)	7.6	3000	Most private and undeveloped; large state park

FROM: US Department of the Interior, Heritage Conservation and REcreation SErvice.
Report of the Barrier Islands Work Group,
December, 1979

DEVELOPMENT STATUS OF AMERICAN ISLANDS

	Acreage	Percent of Total
No Development	3,100,000	41.3
1-25% development	3,300,000	44.0
26-50% development	550,000	7.3
51-75% development	220,000	3.0
76-100% development	330,000	4.4
Total	7,500,000	100.0

OWNERSHIP OF ISLAND ACREAGE AVAILABLE FOR RECREATION

(ISLANDS OF 10+ ACRES)

FEDERAL	740,000	49.7
STATE	490,000	32.9
PUBLIC	40,000	2.7
QUASI-PUBLIC, PRIVATE	220,000	14.8
TOTAL	1,490,000	

FROM: US Department of the Interior, Bureau of Outdoor Recreation, Islands of America, Washington, DC, pp. 13-14.

AMERICAN ISLANDS: ACREAGE BY OWNERSHIP AND STATE

STATE	TOTAL ACRES	FEDERAL	STATE	OTHER PUBLIC	QUASI-PUBLIC	PRIVATE
ALABAMA	65,851	4,513 (6,8)	8,940 (13,6)	184 (.28)	-	52,214 (79.2)
ALASKA	21,113,951	20,176,566 (95.6)	881,303 (04.2)	14,560 (.07)	-	41,522 (.28)
CALIFORNIA	619,854	80,612 (13,0)	14,309 (2.3)	2,111 (.34)	-	522,822 (84.3)
CONNECTICUT	4,133	-	1,189 (29.0)	104 (2.5)	-	2,840 (68.7)
DELAWARE	19,278	9,853 (51.1)		1,373 (7.1)	-	2,840 (41.8)
FLORIDA	793,042	251,078 (31.7)	54,550 (6.9)	842 (.11)	-	486,572 (61.3)
GEORGIA	350,901	28,103 (8.0)	15,140 (4.3)	60 (.02)	100 (.03)	307,498 (87.7)
HAWAII	168,504	31,236 (18.5)	868 (.05)	3 (.002)	-	136,397 (81.0)
ILLINOIS	38,175	9,743 (25.5)	15,620 (40.9)	47 (.12)	-	12,765 (33.4)
INDIANA	5,487	-	110 (2.0)	-	-	5,377 (98.0)
LOUSIANA	1,213,186	4,965 (.41)	107,260 (8.8)	1,800 (.15)	-	1,099,161 (90.6)
MAINE	39,177	31,270 (79.8)	7,450 (19.0)	307 (.78)	40 (.10)	110 (.28)
MARYLAND	104,246	30,674 (29.4)	10,851 (10.4)	80 (.08)	157 (.15)	62,484 (50.3)
MASSACHUSETTS	75,040	4,468 (6.0)	9,336 (12.4)	3,384 (4.5)	75 (.1)	57,777 (77.0)
MICHIGAN	428,174	136,841 (31.9)	120,638 (28.1)	1,426 (.35)	888 (.21)	168,381 (39.3)

MINNESOTA	56,401	21,064 (37.3)	5,895 (10.4)	808 (1.4)	1,217 (2.1)	27,417 (48.6)
MISSISSIPPI	115,247	3,545 (3.1)	280 (.24)	-	1,150 (.99)	110,272 (95.7)
NEW HAMPSHIRE	2,992	78 (2.6)	178 (5.9)	725 (24.2)	382 (12.8)	1,628 (54.4)
NEW JERSEY	76,830	4,239 (5.5)	7,534 (9.8)	1,666 (2.2)	568 (.74)	62,823 (81.8)
NEW YORK	12,709	3,427 (27.0)	5,761 (45.3)	1,278 (10.0)	-	2,243 (17.6)
NORTH CAROLINA	189,489	24,743 (13.0)	400 (.21)	25 (.01)	-	164,321 (86.7)
OHIO	8,805	197 (2.24)	665 (7.5)	290 (3.3)	188 (2.1)	7,465 (84.8)
OREGON	24,486	7,003 (28.6)	14,184 (58.0)	30 (.12)	-	3,269 (13.3)
PENNSYLVANIA	11,700	-	1,403 (12.0)	421 (3.6)	-	9,876 (84.4)
RHODE ISLAND	17,738	1,375 (7.75)	120 (.67)	195 (1.0)	460 (2.6)	15,588 (87.9)
SOUTH CAROLINA	533,782	40,987 (7.67)	4,430 (.83)	20 (.004)	-	488,345 (91.5)
TEXAS	324,556	145,622 (44.9)	14,246 (4.4)	5,076 (1.6)	280 (.09)	159,332 (49.1)
VIRGINIA	95,241	14,970 (15.7)	12,381 (13.0)	395 (.41)	-	67,495 (70.9)
WISCONSIN	263,827	14,460 (5.5)	32,463 (12.3)	11,204 (4.25)	3,244 (1.2)	202,456 (76.7)
WASHINGTON	482,621	21,154 (21.5)	21,230 (4.4)	2,213 (.46)	528 (.11)	437,496 (90.6)
PUERTO RICO	57,625	32,095 (55.7)	14,129 (24.5)	3,873 (6.7)	-	7,528 (13.1)
VIRGIN ISLANDS	3,045	699 (23)	913 (30.0)	-	-	1,433 (47.1)

From US Department of the Interior, bureau of Outdoor Recreation, Islands of America, pp.66-67.

REFERENCES

References marked with a star are works actually cited in the profile. Unmarked citations are additional references.

At the end of this section are sources for energy and ocean use information too bulky to be included in the profile.

GENERAL REFERENCES

*Council of Environmental Quality Environmental Statistics, 1978 .

*US DoC, Bureau of Census. County and City Data Book: A Statistical Abstract and Supplement. 1072-1977.

*US DoC, National Oceanic and Atmospheric Administration. US Ocean Policy in the 1970's: Status and Issues. 1978.

These works contain various information relevant to Coastal Zone Management.

GEOGRAPHY

* NOAA/OCZM. Shoreline Mileage for Basic 305 Allocation.

* US Army Corps of Engineers., National Shoreline Study, 1971.

POPULATION

*US DoC, Bureau of the Census. City and County Data Book 1972: A Statistical Abstract Supplement. Washington, D.C., 1973.

*US DoC. US Ocean Policy in the 1970's: Status and Issues, October 1978.

ECONOMIC ACTIVITY

GENERAL

US DoC, Bureau of the Census. County Business Patterns: Employment and Payrolls, Number and Size of Establishments by Detailed Industry.

PORT INDUSTRY

*US DoC, Maritime Administration, Economic Impact of the US Port Industry: An Input-Output Anaysis of Waterborne Transportation, 1979.

*National Academy of Sciences, National Research Council, Port Development in the US, Washington, D.C., 1976.

*American Seaport, Volume 41, No. 6, June 1979.

Hershman, Marc. Under New Management: Port Growth and Emerging Coastal Management Programs, University of Washington Press, Seattle, Washington, 1978.

CZIC Bibliography on Ports.

FISHING INDUSTRY

*US DoC, NOAA, National Marine Fisheries Service. Fishery Statistics of the US, 1975. Statistical Digest No. 69.

US DoC, NOAA, National Marine Fisheries Service. 1970 Salt Water Angling Survey, Current Fishery Statistics No. 6200, April 1973.

HURRICANE/STORM SURGE

*Brinkmann and Witterand. Hurricane Hazard in the United States: A Reserach Assessment. 1975.

*Executive Office of the President, Office of Energency Preparedness. Report to Congress: Energency Preparedness. 1971.

*Herbert, Paul and Glenn Taylor. "Everything You Always Wanted to Know About Hurricanes" parts I and II. Weatherwise, June, 1979.

see also

National Oceanic and Atmospheric Administration, National Climatic Center.
Flood Losses (annual publication)
North Atlantic Tropical Storms (annual publication)
Storm Data (monthly publication)
SPLASH : Special Program to List Amplitudes of Surges from Hurricanes.
NOAA Technical Memorandum NWS TDL-46. April, 1972.

WETLANDS

*Council on Environmental Quality. Environmental Statistics, 1978.

*US DoI, Estuarine Areas: Report of the Committee on Merchant Marine and Fisheries. November, 1978.

*US DoI, Fish and Wildlife Service. Wetlands of the United States, circular no. 39. 1971.

*Water Information Center, Inc., Water Atlas, 1973.

BARRIER ISLANDS

*US DoI, Bureau of Outdoor Recreation. Islands of America.

*US DoI, Geological Survey.

*US DoI, Heritage Recreation and Conservation Service, Report of the Barrier Islands Workshop.

OCS

For information on ocean and OCS uses, see Vicki Allin re:COMPAS.

(outline of available data attached.)

LISTING OF COMPAS VARIABLES

I. VARIABLES COMMON TO ALL COMPAS DATA BASES:

Area
State
WMO Coordinates
Cross Reference No.

II. VARIABLES SPECIFIC TO EACH COMPAS DATA BASE:

File No.	File Name	Variables
1	OCS Platforms	Lease operator name Platform ID No. (assigned by USGS) USGS Area Jurisdiction (Federal/State) Miles to shore Water depth (feet) Year installed Year removed Date of first production No. of satellites No. of slots drilled Status -- Exploratory -- Production -- Workover -- Idle -- Abandoned Type of production -- Gas -- Oil -- Water -- Condensate Means of product transfer -- Pipeline -- Tanker Offshore storage & treatment? (Y or N)
2	Sand and Gravel Mining Sites	Operator name COE District Miles to shore Purpose -- Beachfront restoration -- Construction Size of tract to be mined (MI^2) Type of material -- Sand -- Gravel -- Sand and gravel -- Shells Volume of material (1000 cu. yds.)

File No.	File Name	Variables
2	Sand and Gravel Mining Sites (continued)	Status -- Permit application -- Operational -- Operation suspended -- Operation completed Permit expiration date
3	Deepwater Ports	Name Status -- License application -- License award -- Construction -- Operational Owners Miles to shore Adjacent coastal states Jurisdiction (Federal/State) Safety zone radius (feet) Water depth in safety zone (feet) Capacity -- No. of ships simultaneously serviced -- Throughput (MBbls/day) -- Holding tank capacity (MBbls) Current/projected average use (No. of ships/day)
4	LNG Terminals	Name Applicant or operator Status -- License application -- Construction -- Operation Storage capacity (MMcf & MBbls) Liquefaction capacity (MBbls) Regasification capacity (MMcf) Type of plant -- Import -- Export Shipments/year Size of facility (acreage)
5	Floating Nuclear Powerplants	Name Operator Miles to shore Status -- License application for const. -- License award for construction -- License application for instal -- License award for installation -- License application for operat -- License award for operation

File No.	File Name	Variables
5	Floating Nuclear Powerplants (Continued)	Power output (Megawatts) Water Depth (feet) Cooling system -- Open -- Closed Projected increase in ambient water temperature (^{o}F)
6	Marine Point Source Outfalls	Source -- Sewage treatment plant -- Industrial (conventional) -- Industrial (toxic) Volume of effluent (MGals/day) Distance from shore (feet) County or city Water depth (feet)
7	Ocean Dump Sites	Name Material dumped -- Incineration -- Sewage -- Dredge spoil -- Construction debris -- Chemicals -- Solid Waste -- Old Wrecks Miles to shore Water depth (feet)
8	Brine Disposal Sites	Name Storage capacity (MBbls) Volume of brine (avg. MBbls/day) Status -- Proposed -- Approved -- Construction -- Operation Outfall distance from shore
9	Marine Sanctuaries	Name Originator(s) Status -- Recommended/nominated -- Active candidate -- Designated Date of designation Purpose Size (MI^2) Jurisdiction (Federal/State) Miles to shore

File No.	File Name	Variables
10	Estuarine Sanctuaries	Name Status -- Recommended -- Active candidate -- Designated Initial grant date (FY) County Size (acres) Purpose
11	APCs and APRs	Name Status -- in approved program -- in proposed program Sublocation (county, city, or major geological feature) Size Reason for selection
12	Critical Marine Habitats	Name Status -- proposed -- designated Sublocation Marine species Reason for selection

ENERGY

Information on energy facilities in the coastal zone is available through

-the Coastal Energy Information System. CEIS lists all existing or proposed energy facilities likely to impact on the coastal zone. Includes location (county and state), plant size, production capacity, and employment. System is updated each fiscal year. SEE Dan Hoydysh, CEIP

-ORCA. Systems Analysis Mapping of the Eastern United States Coast. Includes Operating Nuclear Reactors (location, capacity, company, water source) and Fossil Fuel Electric Generation Plants (location, company, capacity, consumption of coal, oil and gas, water source). SEE Eric Christensen.