

NATIONAL SEA GRANT DEPOSITOR' PELL LIBRARY BUILDING URI, NARRAGANSETT BAY CAMPUS NARDAGANGET, RI 02882



Working Paper 86-3 Working Paper 86-3 Marine Recreational Fishing, Marine Manufacturers and Marinas in North Carolina: An Economic Characterization Jeffrey C. Johnson and Richard R. Perdue

-e⁻¹-1-1-1-1</sup>

F

Marine Recreational Fishing, Marine Manufacturers and Marinas in North Carolina: An Economic Characterization

• •

Jeffrey C. Johnson Institute for Coastal and Marine Resources East Carolina University

and

.

Richard R. Perdue Department of Recreation Resources Administration North Carolina State University

This work was sponsored by the Office of Sea Grant, NOAA, U.S. Department of Commerce, under Grant No. NA85AA-D-SG022 and the North Carolina Department of Administration. The U.S. Government is authorized to produce and distribute reprints for governmental purposes notwithstanding any copyright that may appear hereon

UNC Sea Grant College Publication UNC-SG-WP-86-3

July, 1986

\$2.00

ACKNOW LEDGEMENTS

Many different people contributed to the successful completion of this project. We would particularly like to thank each of the following individuals for their support, advice, and assistance: Eddie Smith of Grady White Boats; Kay Crocker; Chancellor John Howell of East Carolina University; Max Joiner; Judy Wolfenbarger of the North Carolina Marinas Association; Jim Murray and Rich Novak of the UNC Sea Grant Marine Advisory Service; John Maiola of the Sociology, Anthropology and Economics Department at East Carolina University; students Hih Song Kim, Ruth Kearns, Claudia Williams and Laura Valerius; and Larry Gustke of the University of New Hampshire.

TABLE OF CONTENTS

1 1 1 1 1

EXEC	U'T i	LVE	2	ទប	MM.	A R	Y		•	•	•	•		•	•	•	•	•	•	•			•	•	•	-	•	•	•	•	•	•	•	•	Page iv
INTR	ODL	1CJ	1	D N	٠	•	•	•	•	٠	•	-		•	•	•	•	٠	•	•			•	•	•	•	•	•	•	•	٠	•	•	•	1
TREN	DS	0 F	, 1	101	λ Τ	H	CA	R	01	.11	۸V	B	04	١T	R	(E)	GI	ST	RA	ΤĮ	0 N	ſS		•	•	•	•	•	•		•	•	•		3
METH	000) L(G	Y	•	٠		ŀ	•	•	٠	•	•		•	•			•	•			•		•	•	•				•	•	•		9
	Má Ma	ir i in u	na ta	as acl	• tu	ге	τs	, ;	•	:	•	•			:	:	•	•	•	•	•		•	:	•	•	:	•	:	:	:	•	•	:	9 12
MARI	NAS	;				•						•											•	•	•			•							14
	Ma	iri	п.	a (Cha	ar	a c	t	e r	1:	sti	i c	s		•	٠	•	٠	•	٠	•		•	٠	•	•	•	٠	٠	•	•	•	•	•	14
	Ec	on:	.03 (01	y me níc	211) 2 (ւ Շհ	ar	ia 'a	ca ct	e i	.e. :i:	5 L 5 L	s t i c	: L : S	cs	•	:	•	•	•	•		•	:	:	:	:	:	:	:	:		:	:	17 19
	Es	ti	TD a	at€	28	0	f	τı	m p	ac	t s	5	•		•	•	•	•	•	•	•		•	٠	٠	•	•	•	•	•	•	٠	٠	٠	30
MARI	NE	MA	NI	JFA	1C'	ru	R E	R	S	•	•	•			•	•	٠	•	•	•	•		•	•	٠	•	•	٠	٠	٠	•	•	•	•	35
	Un En	ar pl	a c o y	2 € € 7 m €	er: enl	LS L	cı Ch	.c. (a.)	s ra	o I c t	: n :en	ia ci	ពប ទដ	it i	ac cs	tι		≥r≀ •		•	-		•	•	:	:	•	•	•	•	•	•	•	•	35
	Еc	on	00	nic	: (Ch	a r	a	c t	e t	:1 s	8t	i c	8		•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	40
	£ S	C 1	D) é	ICE	es	0	ť	11	np	ac	E E S	3	•		•	•	•	•	•	•	•	•	•	•	•	٠	٠	•	•	٠	٠	•	•	•	47
APPE	NDI	X	A	•	•	٠	•		•	•	•	•	•		•	٠	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	52
APPE	ND(x	B	٠	•	•			•	•	•	•	•		•	•	•	•		•	•		•	•	•		•			•	•	•	•	•	72

LIST OF TABLES

e 1 - 1 - 1

TAB LE	ι.	Pag Descriptive Characteristics of Surveyed Marinas
TAB LE	2.	Marína Facilities and Services • • • • • • • • • • • • • • • • • • •
TAB LE	3.	FTE Marina Employees by Type • • • • • • • • • • • • • • • • • • •
TAB LE	4.	Mean Boat Storage Fees by Type
TAB LE	5.	Distribution of Marina Revenues
TAB LE	6.	Distribution of Marina Expenses
TAB LE	7.	Assets and Liabilities of Coastal Marinas in North Carolina
TAB LE	8.	Distribution of Marinas by Number of Full Time Equivalent Employees
TABLE	9.	Distribution of Revenues by Marina Size
TAB LE	10.	Distribution of Expenses by Marina Size
TAB LE	11.	Distribution of Marinas by Percentage of Boats Involved Primarily in Recreational Fishings
TAB LE	12.	Impacts of Recreational Fishing
TAB LE	13.	Descriptive Characteristics of Surveyed Manufacturers 37
TAB LE	14.	FTE Boating and Fishing Manufacturing Employees by Type 39
TABLE	15.	Production of Boating and Fishing Manufacturers in North Carolina
TABLE	16.	Boating and Fishing Manufacturing Revenues and Expenses 42
ТАВЦЕ	17.	Assets and Liabilities of Boating and Fishing Manufacturers in North Carolina
TABLE	18.	Distribution of Boating and Fishing Manufacturers by Number of Full Time Equivalent Employees
TABLE.	19.	Distribution of Revenues and Expenses by Boating and Fishing Manufacturer Size
TABLE	20.	Distribution of Boating and Fishing Manufacturers by Percentage of Business Associated with Recreational Fishing
TABLE	21.	Impacts of Recreational Fishing

LIST OF FIGURES

• * * * *

FIGURE	1.	1984 Boat Registration	Page 5
FIGURE	2.	Percentage Growth in Boat Registrations 1970 to 1984	6
FIGURE	3.	Per Capita Boat Registrations 1984	7
FIGURE	4.	Percentage Growth in Per Capita Boat Registrations 1970 to 1984	8

Marine Recreational Fishing, Marine Manufacturers and Marinas in North Carolina: An Economic Characterization

EXECUTIVE SUMMARY

This report provides economic information on marinas and marine manufacturers in North Carolina. The purpose was to provide economic and descriptive information on firms within this industry and to provide estimates of direct economic impacts to the industry and, as they relate more specifically, to recreational fishing.

An estimated 109 coastal marinas operate in North Carolina, accounting for an estimated 377.8 full-time equivalent (FTE) jobs. Total revenues for 1984 were estimated at \$23,427,000, of which \$3,395,000 was estimated to be the result of tourist or nonresident activities.

Of the 377.8 FTE jobs, 195.5 FTE were attributed to recreational fishing. Over half of the total marina revenues, or \$13,750,000, were credited to recreational fishing activities. Of the \$982,000 in total net income to the state from nonresidents, \$909,500 or 92.6 percent was due to recreational fishing.

Marine manufacturers, boat, boat accessory, boat trailer and tackle manufacturers were estimated to have generated \$218,807,000 in revenues in 1984. Revenues generated from out-of-state business were estimated at \$196,376,000. Of the total estimated expenses for these firms in 1984, \$62,182,650 was paid in wages and salaries. Total employment for the industry was estimated at 3,451 FTE jobs.

Of these jobs, 2,338.5 were estimated to be attributed to recreational fishing. Revenues of \$124,478,600 and wages and salaries of \$28,168,740 also were attributed to recreational fishing activities.

INTRODUCTION

. . . .

The economics of recreational fishing in North Carolina is a complex issue. This complexity is largely the result of the state's diverse ecology, one that provides a vast array of alternatives for recreational fishermen. Anglers in North Carolina can fish for freshwater species in the state's numerous rivers and lakes. The Pamlico Sound and other estuarine areas furnish access to a variety of brackish-water species, and the state's offshore waters allow recreational fishermen an even broader spectrum of angling experiences.

Recreational fishing consumers provide opportunities for a wide range of businesses. Purchases of bait, tackle, boats, other equipment and marinas, boat yards, boat repair shops, services from motels, food stores, restaurants, charter boats and boat rental companies create an important economic base for the state's economy. Recreational boat manufacturers, boat equipment manufacturers, tackle manufacturers, boat dealers, marinas and boat yards benefit directly from the expenditures of anglers. Further, these direct benefits generate indirect benefits for other industries within the state, including the purchases of raw materials, equipment, products and services from supporting industries.

There are also induced benefits as a consequence of the expenditures and savings of employees within these manufacturing, service, sales and supporting industries. Thus, the health of recreational fishing in North Carolina has direct and indirect impacts on the state's economy.

Johnson et al. (forthcoming) characterized the social and economic aspects of fishing in the upper sounds of North Carolina. Abbas (1978) characterized the economics of the marine recreational charter boat industry. However, little is known about the economic aspects of the marine recreational manufacturing businesses and coastal marinas and their links to recreational fishing. This report provides baseline information on the economic characteristics of the marine recreational boat manufacturing industry and coastal marina industry in North Carolina. It is important to point out that this is not a report on the economic impacts, per se, of these industries on the state's economy. Rather, we provide information that is amenable to methods for calculating economic impact, such as input-output analysis (see Milon et al., 1983). Impact analysis of this kind is beyond the scope of this report. Nevertheless, the data provided herein can be used to infer the direct, indirect and induced economic effects of the manufacturing and marina sectors of the marine recreational fishing industry on the state's economy.

Similar to Milon and Riddle (1982), we are interested in an economic characterization of the marine manufacturing and coastal marina industries. Furthermore, we examined these industries as they are specifically related to marine recreational fishing.

TRENDS IN NORTH CAROLINA BOAT REGISTRATIONS

In 1984, there were 198,269 boats registered with the N.C. Wildlife Commission. During the conceptualization of this study, we felt that Ъy. examining the trends in the number of these boat registrations we could generalize trends in recreational boating. Unfortunately, this was not Over the last 15 years, the boat registration requirements of the case. the N.C. Wildlife Commission changed yearly basis. Consequently, it. was impossible to determine if the observed trends were a function οf changes in the registration requirements, changes in recreational boating behavior or a combination of both.

In 1984, the number of boat registrations in North Carolina ranged from 80 in Alleghany County to 12,249 in Wake County (see Appendix B). The mean number of boat registrations by county was 1,983, with a median of 1,169. Distributed not only as a function of boating opportunities but also as a function of population and economy, the density of registrations tends to be higher in the more populated areas of the state, particularly in Mecklenburg and Wake counties (Figure 1). Of the 198,269 boat registrations, 45,926 (23.2 percent) were registered of the 22 coastal counties.

Although the registration system has changed substantially, the growth in boat registrations between 1970 and 1984 was examined. Between 1970 and 1984, the number of registrations grew from 74,225 to 198,269, a growth rate of 167 percent. This growth rate ranged from 51 percent in Tyrrell County to 475 percent in Anson County. Boat registrations in the 22 coastal counties grew by 155 percent as compared to 171 percent for the inland counties. When examined by county, it was clear that much of this growth occurred in the southeastern region of North Carolina, (an area heavily affected by the marine boating opportunities of the State (Figure 2).

better picture of recreational boating in North A much Carolina is the per capita boat registration data reflected in Figures 3 provided by These data have been corrected for population growth and provide and 4. better figures for examining trends in boating behavior. Figure 3 clearly shows the importance of recreational boating in the coastal region. The number of boats owned per 100 people in the coastal region is 7.2, substantially greater than the 2.8 value for the inland region. In Dare County, there are 14.1 registered boats per 100 people. Growth in per capita boat registrations, Figure 4, has occurred primarily in the southeastern region of the state, probably reflecting better transportation routes to that area.









METHODOLOGY

The primary mode of data collection for each of the two major samples involved a mail-out/phone interview technique developed by the authors. In general, the procedure involved the mailing of an interview worksheet and cover letter to each firm in the sample. Firm representatives were contacted, and a phone interview scheduled at a time convenient to the representative. The interview worksheet reflected the types of information of interest to the study, and representatives were asked to fill in the information prior to the phone interview. Phone interviews were conducted and the information was recorded on a separate form by an interviewer.

This format had two distinct advantages. First, firms that had changed addresses or phone numbers could be tracked down, and interview packages could be mailed to them. This allowed for a more complete sampling of firms. Second, this procedure allowed firm representatives the option of mailing in the interview worksheet or being interviewed at their convenience.

Marinas

• •

For the purpose of this study, a marina was defined as a coastal facility in which the primary business activity was providing boat storage in the form of boat slips, dry stacks or secured moorings for a daily, monthly or yearly fee. To identify these facilities, a list of 129 boat storage businesses in the coastal region, compiled by the N.C. Division of Health Services' Shellfish Sanitation Program, were attained from the UNC Sea Grant Marine Advisory Service. Of these 129 facilities, 109 (84.5 percent) met the above definition of a marina.

The objectives of the marina survey were to (1) to develop a descriptive profile of the marinas on the North Carolina coast and (2) to examine the economic and employment impacts of recreational fishing and boating on the marina industry in North Carolina. To accomplish these objectives, a telephone interview instrument was developed (Appendix A). The telephone instrument was selected in an effort to improve upon the poor response rates attained by previous mailed surveys to marina owners (Milon & Riddle, 1983; Stoll, Jones & Bergstrom, 1985). The questions addressing the descriptive characteristics of the marinas were developed using the guidelines provided in the Coastal Marinas Assessment Handbook (USEPA, 1985).

Several previous marina and recreational boating economic surveys were used to develop the economic and employment impact questions (Grompton & Ditton, 1975; Ditton, Graefe & Lapotka, 1979; Milon & Riddle, 1983; Milon, Mulkey, Riddle & Wilkowskee, 1983; Milon, Wilkowskee & Brinkman, 1983; Stoll et al., 1985). The survey measured North Carolina resident and nonresident related revenues and expenses.

To assess the impacts associated with recreational boating and fishing, the marina owner/manager was asked how many of the boats stored at the marina were used for commercial fishing, charter or headboat fishing and private recreational use. The owner/manager was further asked what percentage of the private recreational boats were sailboats and what percentage were used primarily for recreational fishing. The impact of recreational boating was measured by multiplying the total impacts by the percentage of boats stored in the marina that were private recreational boats or fishing charter/headboats. Estimates of marine recreational fishing impacts were determined with the use of a conversion factor based on the sum of the percentage of the private recreational boats in the marina that used for sport fishing and the percentage of charter or headboats docked at the marina.

• •

Given that many questions requested specific financial information, a worksheet was developed and sent to each marina two weeks prior to the telephone interview (Appendix A). Included with this worksheet was a cover letter explaining the purpose of the study and indicating the support of the N.C. Marinas Association (Appendix A). Each of the marinas was then contacted and scheduled for a telephone interview. Of the 109 identified marinas, 87 were contacted. The other 22 (20.2 percent) could not be contacted by telephone because they did not have a listed number or we were unable to reach anyone after five calls.

Of the 87 marinas contacted, 61 (70.1 percent) completed at least part of the questionnaire. Many of the respondents declined, however, to provide some or all of the financial information requested. Thus, since a census of the known marinas was conducted, the data do not have any sampling error. However, the potential exists for substantial nonresponse bias.

The data analyses were structured to minimize the impact of this nonresponse bias. After conducting descriptive analyses of the collected data, projections of total impacts were developed using the median data values rather than the more frequently used mean values. Using the information provided by the N.C. Department of Health Services' Division of Shellfish Sanitation, it was possible to examine the survey response rate by marina size (number of slips). The results of these analyses indicated that a significantly higher response rate was attained from the larger marinas. Consequently, using the mean values as the basis of the impact projections would have resulted in overstating the total impacts.

Manufacturers

The overall methodology for the marine manufacturers survey was similar to that used for marinas. Marine manufacturers were defined as manufacturing firms that produced boats, boat accessories, tackle or boat trailers for the pursuit of saltwater recreational activities. Such firms were identified with the use of lists from the National Marine Manufacturers Association and the U.S. Coast Guard. A combined list of 135 manufacturers was compiled. Firms involved exclusively in the production of commercial products were not interviewed.

The objectives of the manufacturers survey were (1) to develop a descriptive profile of marine manufacturers in North Carolina and (2) to examine the economic and employment impact of marine recreational fishing on marine manufacturers in North Carolina. A telephone interview instrument was developed that was similar to the one for marinas (see Appendix

. •

A). Questions on descriptive and economic characteristics were developed from a review of previous research.

Assessment of impacts associated with marine recreational fishing was obtained by asking company representatives (interviewee) to estimate the percent of their product used for recreational purposes and the percent used for marine recreational fishing. Estimates of direct impacts were based on these percentages.

The interview procedure was similar to that for marinas. A cover letter from the president of Grady-White Boats Inc., explaining the importance of this study, was included with the worksheet (Appendix A). The 135 businesses listed were mailed interview packages. Of these, 35.5 percent were out of business or could not be contacted (e.g., number disconnected with no new number) and 16.3 percent did not meet our definition of a marine manufacturer. Interviews were scheduled for the remaining 65 eligible firms.

Of these, 13.6 percent were new companies or did not build any recreational boats for the year in question. Among the 57 remaining firms, 8.8 percent refused to be interviewed or did not respond, 91.2 percent provided data on descriptive or employment characteristics, and 74.7 percent provided at least the minimum economic information. In most cases, complete economic information was obtained for the medium- and large-sized firms. Smaller firms, although cooperative, had difficulty producing detailed economic information.

In contrast to the marina sample, the sample of manufacturers constitutes an almost complete survey of the known firms. Consequently, an assessment of impacts is essentially free of sampling bias. To address any nonresponse bias, we asked firms that did not respond or refused to respond two questions about the type of product produced and the number of fulltime and part-time people employed. The number of FTE positions was used to categorize the firm as either small, medium or large. Impacts were then calculated based on median values within each appropriate category.

MARINAS

Marina Characteristics

Coastal marinas in North Carolina tend to be small. Although Table 1 shows that the average amount of submerged land is 2.1 acres, both the median and mode submerged area is 1 acre; 51.8 percent of the marinas have approximately an acre of submerged land. Upland areas tend to be larger with a mean of 5.5 acres and a median of 3 acres. Nevertheless, 25.9 percent of the marinas have only 1 acre of upland area.

		Descrip	tive Stat	isti	c
Marina Characteristic	range	mean	median		mode
Marina Size					
Acres of upland area	0 - 40	5.5	3	1	(25 9%)
Acres of submerged land	0 - 10	2.1	1	1	(51 89)
Number of boat slips	0 - 179	43.2	งก้	20	(51 + 5 %)
Percent full	33 - 100	88.0	100	100	(67 39)
Number of boat stacks	0 - 400	29.6	100	100	(07+24)
Percent full	30 - 100	84.1	100	100	(11.0%)
Number of moorings	0 - 12	0.6	100	100	(00.74)
Percent full	0 - 100	43.4	28.6	**	(71+34) t
Water Characteristics (feet)					
Water depth in slip area	3 _ 25	4 ε	((
Tidal range	0 - 7	2.9	3	0 3	(28.8%) (22.0%)
Age of Facilities (years)					
Age of the marina	L - 60	20 6	20	20	(13 14)
Years since last expansion*	1 - 23	6 1	20	20	(12.14)
Length of present ownership	1 - 43	11.4	4	l l	(29.4%) (15.2%)
Boats in the Marina					
Commercial fishing boats	0 - 20	2 4	•		155 083
Charter or headboats	0 - 32	2.4	0	0	(33.02)
Private recreational boats	0 - 52	1.0	0	0	(/6./%)
Z sailboats	0 - 443	JJ.2 20 E	25	**	(
% recreational fighing boots	0 = 100	27.3	12	0	(26.3%)
% non-resident owners	0 - 100	27.1	6/	100	(22.0%)
a con resident owners	0 - 100	13.3	2	0	(43.3%)

Descriptive Characteristics of Surveyed Marinas

*24 of the 58 study marinas (41.4%) had never been expanded. **no clear mode

The large sound and estuarine coastal region of North Carolina influences the size and character of marinas. The vast majority of submerged lands associated with marinas are dredged basins (73 percent) as opposed to open water (27 percent). Consequently, water depth in the slip areas tends to be shallow with a median depth of 6 feet. In combination with a median tidal range of 3 feet, this makes the majority of slips in the state unusable for deep draft vessels such as large sailboats.

Such depth constraints are evident in the primary types of boats found in coastal marinas. Sailboats, for example, were not found in 26.3 percent of the marinas surveyed. And 22.0 percent of the operators reported that boats in their marinas were used almost exclusively for recreational fishing. Of the 3,457 boats at the surveyed marinas, 144, or 4.2 percent, were commercial fishing boats; 109, or 3.7 percent, were charter/headboats; and the remaining 3,204, or 92.7 percent, were private boats. The total number of boats found in marinas ranged from 4 to 443 boats, illustrating a high degree of variance in what constituted a marina. The mean number of boats was 59.6 and the median 30.5 boats.

Inwater dockage is the primary method of boat storage with a mean of 43.2 boat slips (median 30 boat slips). The largest facility reported 179 slips. Of the marinas surveyed, 67.2 percent reported their slips at full Boat stacks were less prevalent; 77.6 percent of the surveyed capacity. marinas reported no such facilities. Businesses maintaining dry stacks reported up to 400 storage areas on their premises. The large number of marinas without dry stack storage diluted the mean number of boat stacks (X Of those marinas with dry stacks, 66.7 percent were reported = 29.6). filled to capacity. A less often used means of water storage was moorings. Approximately 91.5 percent of the marines reported no moorings at their facility. Even among marinas with moorings, demand for this form of dockage was low. Mean percent of capacity was 43.4 percent (median 28.6 percent).

The vast majority of marinas along the coast are operated for use by the general public (88 percent). The remaining 12 percent are owned by private clubs (8 percent) or condominium or housing unit developments (4 percent). Ownership of marina facilities is dominated by corporations (42 percent) followed by sole proprietorships (28percent) and partnerships (7 percent). The public ownership of marina facilities constituted 13 percent of the surveyed marinas.

The average age of these facilities was 20.6 years. A median of 20 years of age indicates that many marinas began operation soon after the development and proliferation of low-cost fiberglass recreational boats in the late 1950s and early 1960s.

Table 2 provides information on the types of marina facilities and services. Boat fuel and oil constitute the primary service. It is important to note that 30 percent of the marinas reported charter boats or headboats available for recreational fishermen. This and the fact that 45 percent reported a fishing bait and/or tackle store on the premises indicates the importance of recreational fishing to these marinas. This will become more apparent in the review of economic characteristics.

Facility or Service	Percent of Marinas
Services:	
Boat fuel and oil	73.3
Boat launching ramp	55.9
Boat, engine and/or hull repair	53.3
Fishing charter or headboats	30.0
Boat rentals	21.7
Sewage and water pumpout	18.3
Sightseeing or tour boats	16.7
Facilities:	
Bath and/or shower facilities	71.7
Fishing bait and/or tackle store	45.0
Grocery store	30.0
Campground	13.3
Hotel	10.0
Restaurant	10.0

Marina Facilities and Services

Employment Characteristics

In this section, we examine the employment characteristics of the Table 3 provides a breakdown of FTE marina employees by marinas surveyed. general type. The seasonal nature of recreational boating in North Carolina affects the need for year-round full-time employees. In addition, depending on the types of services provided, marinas tend not to be a labor intensive business. The median number of full-time marina positions was 2.5. Modal values also support this finding; 50 percent of the marinas surveyed had two or less full-time positions. Overall, the number of FTE (52 weeks per year at 40 hours per week) positons ranged from 0.615 to 38.25. The mean number of FTE positions was 4.3. (mode 2.0, median 2.6). Many of the surveyed marinas were small family-operated businesses. Typically the wife operates the business while the husband is employed elsewhere or conducts charter or headboat fishing trips.

Та	b	l e	- 3
----	---	-----	-----

	Fu	ull Time		Part Time*					
Type of Employee	mean	inedtan	mode	mean	median	mode			
Administrative	l .7	2	2	0.97	0	0			
Mechanical	0.6	0	0	0.04	ō	ŏ			
Sales	0.5	0	0	0.55	Ū	ō			
Maintenance	0.4	0	0	0.10	0	0			
All Others	0.4	0	0	0.41	0	0			
Total	3.8	2.5	1-2**	0.70	0.29	0			

FTE Marina Employees by Type

*full time equivalent employees (52 weeks per year at 40 hours per week)

**Of the surveyed marinas, 25% had one full time employee and 25% employed two full time employees.

To learn about growth in employment, contact persons were asked to provide the number of full-time and part-time positions added in the last three years. Of those surveyed, 21 (42.8 percent) had added employees in the last three years. The average number of positions added was 1.04. In total, 51 new positions had been created in the last three years, of which 31, or 60.8 percent, were full-time. Considering the total FTE's for surveyed marinas was 236.6, such growth represents an increase between 20 and 30 percent of the FTE's over the past three years.

Economic Characteristics

2 N 20 N

This section provides a brief discussion of the economic characteristics of the marinas surveyed. These characteristics include such things as storage rates, revenues, expenses, tax payments and assets and liabilities.

Table 4 is a schedule of mean rates for the three types of storage. most frequently reported storage type was boat slips. The Within this type, rates were usually figured as a flat monthly fee that averaged about \$87.70 per month. Overall, flat rates tended to be the most common billing method for each storage type. For dry stacks, the average flat monthly Substantial variance in rates existed between marinas rate was \$57.00. and within marinas. Many marina operators indicated differential fees for local and nonresident boat owners. Fees are negotiated with local residents but firm with nonresidents.

Tab	l e	- 4
-----	-----	-----

Type of	1:	Weekly foot	Rate flat		М. /Е.	onthly oot	Rate fl	at	/ €	Yearly oot	Rato F	e lat
Storage	n	\$	n	\$	n	\$	n	\$	n	\$	n	Ş
Boat Slips	9	2.89	12	33.67	12	2.63	35	87.70	2	22.80	10	533.50
Dry Stacks	0		1	35.00	1	1.00	10	57.00	2	36,00	3	760.00
Moorings	0		2	28,00	0		0		0		0	

Mean Boat Storage Fees by Type

Storage fees accounted for about 47.3 percent of the revenues reported by marinas (median 30 percent). Total revenues for the surveyed marinas ranged from \$3,000 to \$3,000,000, demonstrating again the variance in the types of businesses considered marinas (see Table 5). The second most important source of revenue was obtained from the provision of boat oil, fuel, repairs and equipment. These provisions averaged 30.5 pecent of the revenues (median 17.5 percent). Although one marina operator total reported that 96 percent of his/her revenues were derived from the sale of fishing bait and tackle, the median value was 0.0 percent. Nevertheless, the sale of bait and tackle ranked third overall, contributing an average of 10.7 percent of the total revenues.

Table 5

Distribution of Marina Revenues

Revenue Measure	N	Range	Mean	Median
Total Revenue (1,000s of dollars)	34	3 - 3000	369.18	145.0
Sources of Revenue (percent)				
Storage rentals	32	3 - 100	47.3	30.0
Boat fuel, repairs & equipment	32	0 - 92	30.5	17.5
Fishing bait and tackle	30	0 - 96	10.7	0.0
Boat rentals	30	0 ~ 60	4.5	0.0
Lodging & restaurant	30	0 - 50	2.4	0.0
Revenue from Non-Residents (percent)	44	0 - 99	22.8	7.5

A look at the distribution of revenues among firms reveals that 41.2 percent of the marinas surveyed had total revenues of \$100,000 or less. Marinas with total revenues of \$500,000 or less accounted for 82.4 percent of the marinas surveyed. Marinas with total revenues exceeding \$1,000,000 accounted for 8.8 percent of those surveyed. The total reported revenues for the marinas surveyed were \$12,553,000. Importantly, as with most A 1 1 1 1 1

service industries, substantial variance probably exists between actual and reported revenues. Thus, the reported revenues listed here should be considered the lower bound of actual economic activity.

To determine revenues injected into the state's economy from outside sources, firms were asked to estimate the percent of revenues obtained from nonresident customers. Table 5 presents the mean, median and range for this estimate. The difference between the mean and median figure indicates a high degree of variance in percent of revenues generated from nonresidents. The average amount of revenue generated was 62,090 (N = 32). The median value was 55,500; 18.2 percent of the marinas surveyed reported no revenues. Surveyed marina operators attributed \$2,997,000 of the \$12,553,000 in total revenues to nonresident patronage.

The reported net income after taxes for the surveyed marinas ranged from 0 to \$190,000 (N = 23). The average net income was \$25,900, and the median was \$8,000. These figures indicate low profit margins for the bulk of North Carolina marinas. These figures will be examined more closely when income is analyzed by the size of the firm.

Operating expenses accounted for the primary cost of surveyed marinas (Table 6). This was followed by inventory expenses, wages and salaries. Wages and salaries, as a percent of the total cost of doing business, were relatively low (median 15 percent). This confirms the finding that marina operations are not labor intensive businesses.

Table 6

Expense Measure	N	Range	Mean	Median
Total Expenses (1,000s of dollars)	23	0 - 2100	290.91	180.0
Distribution of Expenses (%)				
Operating expenses	22	0 - 100	42.4	35.0
Inventory expenses	22	0 - 79	31.4	27.0
Wages and salaries	21	0 - 75	21.0	15.0
Distribution of Inventory Expenses()	%)			
Boat fuel and oil	22	$0 \rightarrow 100$	32.1	19.5
Boats, engines, & boat equip.	22	0 - 100	30.8	10.0
Food and groceries	22	0 - 60	6.3	0.0
Fishing bait and tackle	22	0 - 32	6.2	0.0
Payments to Nonresident Firms				
percent of operating expenses	26	0 - 95	18.5	5.0
percent of inventory expenses	10	0 - 90	33.5	20.5
State and Local Tax Payments				
(1,000s of Dollars)	21	0 - 99.5	21.6	10.0

Distribution of Marina Expenses

The distribution of inventory expenses is also shown in Table 6. As would be expected, boat fuel and oil account for the largest percent of the total cost of inventories (X = 32.1 percent), followed closely by boats, engines and boat equipment (X = 30.8 percent). Total costs attributed to food and groceries, and fishing bait and tackle were relatively small (X = 6.3 percent, X = 6.2 percent). Half of the marinas reported no expenditures on such items.

To get an idea of the dollar value of these costs, the percentages were used to calculate dollar expenses. For the marinas surveyed, it is estimated that approximately \$6,691,000 was spent on operating the facilities, buying inventories, paying wages and salaries, and other costs. Of this, it is estimated that \$1,790,050 went to the costs of operation, \$3,637,380 went to pay for inventories and \$921,600 went to wages and salaries.

State and local taxes represented another expense category for marinas. The median percent of total costs attributed to taxes among the marinas surveyed was 10.0 percent. Among these tax payments, 54.1 percent went to payroll taxes, 20.6 percent went for sales taxes, 11.0 percent to property taxes, 5.0 percent to inventory taxes, 5.0 percent to franchise taxes, 0.4 percent to boat registration, and 3.7 percent to other state and federal taxes. The total amount of taxes reported for the marinas surveyed was \$323,000.

Another important aspect of these total costs is the amount of money paid to other businesses within the state. To assess this amount, 42 marina contacts were asked to estimate the percent of expenses paid tο firms outside the state. Table 6 shows that an average 18.5 percent οf operating costs were paid to nonresident firms (median 5.0 percent). The percent of inventory expenses paid to companies outside the state averaged 21.6 percent of the total costs (median 20.5 percent). These numbers indicate that a large percentage of marina expenses are paid to other North Carolina firms. Thus, many of the state's wholesale businesses benefit directly from marina operations. However, approximately \$219,740 was paid to nonresident firms for the costs of operation, and \$622,180 was paid for the purchase of inventories. Although only \$841,920 was paid to nonresident firms from a total of \$6,691,000, these totals represent a substantial leakage of money from the North Carolina economy.

important economic characteristic is the value of assets Another and liabilities. Marinas were asked to provide dollar values on their current assets and fixed asset investments and to estimate the current market values of these fixed assets. Additionally, marinas were asked to provide values of current and long-term liabilities. Table 7 summarizes dollar these values for the marinas surveyed. The average value of current assets including operating cash, inventories and accounts receivable was \$238,600. The value of fixed assets, including land, buildings, equipment and boats was on average \$685,900. Estimates of the current value of these fixed assets were approximately two times that of the median and mean values.

Approximately 35 percent of surveyed marinas were for sale. Thus, the current market value estimates reflected the asking price of these marinas. In many cases, these asking prices appeared to be high, probably with the expectation of negotiating a reasonable sale price. Many of the marinas were owned by absentee owners who were operating the marinas on a shortterm basis. Their primary profit motivation was land investment speculation. This issue made it difficult to get economic data on the marinas.

Table 7

Assets and Liabilities of Coastal Marinas in North Carolina

n	range	mean	median
21	0 - 1250	238.6	150.0
20	62 - 5000	685.9	297.5
28	75 - 10000	1382.3	700.0
rs)			
20	0 - 1270	127.3	34.0
21	0 - 2000	360.6	81.0
	n 21 20 28 rs) 20 21	n range 21 0 - 1250 20 62 - 5000 28 75 - 10000 rs) 20 0 - 1270 21 0 - 2000	n range mean 21 0 - 1250 238.6 20 62 - 5000 685.9 28 75 - 10000 1382.3 rs) 20 0 - 1270 127.3 21 0 - 2000 360.6

Current liabilities, including accounts payable, accrued expenses, notes payable during the coming year, and money slated for mortgage payments and other long-term debts over the next year, ranged from 0 to \$1,270,000. They averaged \$127,000. Long-term liabilities, including mortgages and other notes that cannot be paid during the coming year, ranged from 0 to \$2,000,000, averaging \$360,600.

Tables 8, 9 and 10 elucidate differences in revenues and expenses among marinas of varying size. The number of FTE positions was used to determine marina size. Table 8 provides a breakdown by firm size for this particular sample. It is interesting to note that 47.5 percent of the marinas have two FTE positions or less. Importantly, the data for the smaller marinas may not be as good as that for the medium or larger marinas. Although they were equally willing to participate in the survey, some small marina managers did not know the answers to many of the economic questions. In many cases, these owners are dependent on their accountants for financial management information.

Distribution of Marinas by Number of Full Time Equivalent Employees

Number of FTE Employees	Frequency	Percent	
Small Marinas (0.61 - 2.00 FTE employees)	29	47.5	
Medium Marinas (2.01 - 5.00 FTE employees)	17	27.9	
Large Marinas (5.01 or more FTE employees)	15	24.6	
Total	61	100.0	

Among the smaller marinas, boat storage comprises the single most important source of revenue. In contrast, medium and larger marinas obtain a higher proportion of their income from repairs and from the sale of boat fuel, oil and equipment (Table 9). The sale of fishing bait and tackle seems more important to medium sized marinas than either small or large firms. The revenues attributed to nonresidents seem to be evenly distributed among the three firm types (Table 9).

Table 9

Distribution of Revenues by Marina Size

Revenue	n	X 1	X 2	n	XI	X 2	n	X 1	X 2
Total Revenue (1,000s of dollars)	12	60.7	22.5	10	270.6	213.3	12	759.8	377.0
Sources of Revenue (percent)									
Storage rental	13	37.0	100.0	8	33.4	21.5	11	30.5	22.0
Boat fuel, repairs & Equipment	13	17.7	0.0	8	32.1	37.0	11	44.5	39.0
Fishing bait and tackle	13	1.8	0.0	8	28.9	9.0	9	7.3	0.0
Boat rentals	13	6.2	0.0	8	2.9	0.0	9	0.7	0.0
Lodging & restuarant	13	3.8	0.0	8	1.9	0.0	9	0.7	0.0
Revenue from									
Nonresidents (%)	18	28.3	10.0	11	21.7	5.0	15	17.1	5.0
Xl = mean value X2 = median value									
Income	7	4.6	3.0	6	38.7	11.0	10	33.2	15.0

. .

Table 10 is a breakdown of the distribution of marina expenses by size of firm. Caution should be used in interpreting this table. The disaggregation of the expense data has created rather small values for some of means and medians presented. Substantial differences exist in the expenses of the smaller marinas as compared to the medium and large operations. Although the percent of small marina expenses paid for operations costs were much higher, inventory and wage costs were under par for coastal marinas.

Table 10

				Mari	na Size				
Expense Measure	n	Small Xl	x 2	n	Medium Xi	X2	n	Large Xl	X 2
Total Expenses	9	68.7	33.0	5	299.6	340.0		508.3	200.0
(1,000s of dollars)									
Distribution of Expenses (percent)									
Operating expenses	7	57.9	50.0	5	49.2	42.0	10	28.2	28.5
Inventory expenses	7	7.1	0.0	5	38.4	40.0	10	44.8	57.5
Wages and salartes	6	14.5	8.5	5	13.6	13.0	10	28.6	19.0
Distribution of Inventory Expenses (%)									
Boat fuel and oil Boats, engines, & boat	6	24.7	0.0	4	38.8	40.0	12	33.7	22.0
equipment	6	20.8	0.0	4	36.3	25.0	12	33.9	15.0
Food and groceries	6	0.0	0.0	4	17.5	5.0	12	5.7	0.0
Fishing bait and tackle	6	0.0	0.0	4	11.3	5.0	12	7.6	0.0
Payments to Nonresident Firms									
percent of operating									
expenses	8	7.5	0.0	6	17.5	0.0	12	26.3	10.0
percent of inventory	-								
expenses	1	25.0	25.0	2	0.5	0.5	7	0.3	0.1
State and Local Tax Payments									
	7	6.1	5.0	6	9.5	7.4	8	44.0	42.2

Distribution of Expenses by Marina Size

Estimates of Impacts

This section provides overall estimates of direct economic impacts and an estimated percent of those impacts attributable to recreational fishing. Impacts were estimated with the use of median values for each of the appropriate economic categories. General estimates were obtained by adding the sum of the values for the marinas surveyed for a particular category to the product of the differences between total number of marinas and the number sampled and the categories' median value. Estimates for the impacts attributed to recreational fishing were calculated in a similar fashion.

Table 11 presents the estimated distribution of boats at marinas involved primarily in recreational fishing. Almost half the marinas surveyed reported over 60 percent of their business could be attributed to recreational fishing. The average percent was 51.1 percent. Estimates ranged from 0 to 100 percent. Four of the marinas estimated that 100 percent of their business was due to recreational fishing, and five reported no revenues from sportfishing. Table 12 summarizes these impacts for revenues expenditures and employment.

Table 11

Estimated Distribution of Boats at Marinas Involved in Recreational Fishing

ercent Recreational Fishing Boats		Frequency	Percent	
20	percent	16	28.1	
40	percent	8	14.0	
60	percent	8	14.0	
80	percent	7	12.3	
100	percent	18	32.6	
Tota	a l	57	100.0	
	ent 1 20 40 60 80 100 Tota	ent Recreational Fishing Boats 20 percent 40 percent 60 percent 80 percent 100 percent Total	ent Recreational Fishing Boats Frequency 20 percent 16 40 percent 8 60 percent 8 80 percent 7 100 percent 18 Total 57	

Mean percent 51.1 percent

Range 0 - 100

4 @ 100

5 @ 0

Median

Impacts of Recreational Fishing

Measure of Impact	N	Range	Mean	Mode	Sum**
Measures of Revenue (1,000s of doll	ars)				
Total revenue	57	0.8 - 1955.0	279.6	97.7	8668.6
Revenue from nonresidents	57	0.0 - 990.0	38.1	0.0*	2173.9
Measures of Expenditures (1,000s of	do 11.	ars)			
Total expenses	19	1.5 - 1785.0	271.9	110.4	5165.4
Operating expenses	16	0.1 - 446.3	83.4	35.0	1334.2
Inventory expenses	14	0.2 - 1249.5	217 .9	106.4	3050.1
Expenses Paid to Nonresident Firm	6				
Operating expenses	9	0.7 - 84.4	17.8	8.0	160.6
Inventory expenses	10	0.1 - 193.8	55.4	6.0	554.0
Employment (FTE) 48	0.	1 - 19.1	2.5 1	.2 12	0.1

*33 of the 57 marinas did not report any revenue from nonresident fishermen. For the 24 marinas reporting such revenues, mean = 90.6K and median = 17.8K.

**Total sums for surveyed marinas that answered question.

An overall estimate of economic impacts would involve all forms of business, including commercial and recreational activities. The following are estimated overall impacts as defined earlier:

*	Employment	377.8 FTE
*	Total Revenues	\$23,427,000
*	Nonresident Revenues	\$ 3,395,000
*	Total Expenses	\$22,171,000
*	Expenses to Nonresident Firms (Operating)	\$ 541,000
*	Expenses to Nonresident Firms (Inventory)	\$ 1,872,000
*	Expenses to Nonresident Firms (Total)	\$ 2,413,000
*	Net Income to State from Nonresidents	\$ 982,000

The following are adjusted figures, accounting only for contributions of recreational fishing activities:

		Þ	ercent of total
*	Employment	195.5 FTE	(51.7 percent)
*	Total Revenues	\$13,750,000	(58.7 percent)
*	Nonresident Revenues	\$ 2,563,600	(75.5 percent)
*	Total Expenses	\$15,101,400	(68.1 percent)
*	Expenses to Nonresident Firms (Operating)	\$ 506,100	(93.5 percent)
*	Expenses to Nonresident Firms (Inventory)	\$ 1,148,000	(61.3 percent)
*	Expenses to Nonresident Firms (Total)	\$ 1,654,100	(68.5 percent)
*	Net Income to State from Nonresident Fishing	\$ 909,500	(92.6 percent)

The data suggests that for nonresident expenditures, recreational fishing accounts for the majority of money brought into the state. Of the \$3,395,000 in total nonresident revenues, \$2,563,600 is attributable to recreational fishing. Furthermore, of the \$982,000 in total net income to the state from nonresidents, \$909,500, or 92.6 percent, is from recreational fishing.

MARINE MANUFACTURERS

Characteristics of Manufacturers

1 S. 19

North Carolina marine manufacturers, as defined earlier, are dominated by firms engaged in the production of boats. Approximately 75 percent of the firms surveyed were engaged in the manufacture of boats. A known percentage of use was recreational, including sailboats, multiple-use fiberglass powerboats, as well as recreational fishing boats (Table 13). Boat marine accessories manufacturers account for 11.5 percent of anđ the surveyed firms. The types of products manufactured by these firms ranged from boat upholstery to lead keels for sailboats. A smaller, but extremely important sector of the industry was boat trailer manufacturers. Although they account for only 3.8 percent of the total sample, they represent an important economic force within the overall industry.

Ownership of these companies was primarily in the form of an independent corporation (57.7 percent) or a sole proprietorship (30.8 percent). Partnerships accounted for 7.7 percent of the surveyed firms, and company ownership by a corporate conglomerate, accounted for only 3.8 percent. However, North Carolina is becoming more attractive to larger independent corporations and corporate conglomerates. As a result, more larger manufacturing facilities will be relocated or initiated in the state.

A comparison of the length of company ownership with the age of the manufacturing facility and years since it was last expanded illustrates how much marine manufacturing is growing in North Carolina. The average length of ownership for the firms surveyed was 15.4 years, with a median of 9 years. One company has been controlled by the same owners for 48 years. The age of manufacturing facilities averaged 10.3 years with a median of 9 years. Of the firms surveyed, 41.3 percent had manufacturing facilities less than 5 years old, and 54.2 percent of the companies had expanded their facility within the last five years.

Of those companies expanding or moving here from another state, the primary reasons for choosing North Carolina were related to labor, real estate values, location and tax benefits. One of the more common themes was the state's labor climate. Problems with labor in the Northeast had forced or convinced firms to move operations to or expand existing operations in North Carolina. A few firm representatives said the extra cost of training unskilled labor in North Carolina offset the existing and potential labor problems that might be encountered with skilled workers elsewhere.

North Carolina's central location to both markets and suppliers was another important factor contributing to a firm's decision to relocate. North Carolina's central location on the East Coast makes it an ideal spot to transport manufactured products to dealers and manufacturers in the Midwest, South and Northeast. Conversely, this location is also advantageous for receiving raw materials used in production.

Descriptive Characteristics of Surveyed Manufacturers

Manufacturer Characteristic	Frequency	Percent	
Primary Boating and/or Fishing Activity			
Boat manufacturing	20	75 0	
Boat accessory manufacturing	39 4	/5.0	
Boat trailer manufacturing	0 2	1[.)	
Other	۲ د	3.8	
total	.,	9.6	
	32	99.6	
Company Ownership			
Independent corporation	30	ד ל ב	
Sole proprietor	16	2/•/	
Partnership	10	0.0C	
Corporate conglomerate	· + 2	7.1	
total	۷ ۲۱	3.8	
	.) 1	100+0	
Length of Present Company Ownership			
0 to 5 years	17	36.2	
6 to 10 years	11	23.4	
ll to 15 years	8	17 0	
Over 15 years	11	23 6	
total	47	100 0	
		100.0	
Age of Manufacturing Facility			
0 to 5 years	19	41.3	
6 to 10 years	10	21.7	
ll to 15 years	8	17.4	
Over 15 years	9	19.6	
total	46	100.0	
Years Since Facility Expansion			
Never been expanded	19	39.6	
Expanded within last 5 years	26	54.2	
Expanded between 6 and 10 years ago	2	4.2	
Expanded more that 10 years ago	1	2.1	
total	48	100.1	
vercentage of Boating and Fishing Products us	ed		
for Recreation as Opposed to Commercial uses			
U to 25 percent	7	13.5	
26 to 50 percent	5	9.6	
of to /5 percent	3	5.8	
/b to 99 percent	15	28.8	
100 percent	22	42.3	
total	52	100.0	

Manufacturer Characteristic	Frequency	Percent	
Percentage of Recreational Users that are			
rishermen as opposed to Nonfishermen			
O to 25 percent	16	32.7	
26 to 50 percent	6	12.2	
51 to 75 percent	3	6.1	
76 to 99 percent	12	24 5	
100 percent	1 2	24.5	
total	49	100.0	

Descriptive Characteristics of Surveyed Manufacturers

To assess the amount of business associated with commercial and recreational customers, a series of questions were asked. Of the firms surveyed, 13.5 percent estimated that less then 25 percent of their business was from recreational consumers. At the other extreme, 42.3 percent of the firms stated that 100 percent of their business was associated with recreation. For this sample, the average percent of business associated with recreational use was 77.7 percent with a median of 98 percent.

Firm representatives were also asked to estimate the amount of recreational activity directly attributable to sportfishing. Of these firms, 44.9 percent estimated that less that 50 percent could be related to recreational fishing and 49 percent estimated that recreational fishing accounted for 76 percent or more of their product use. The average percent attributable to recreational fishing was 58.3 percent (median 75 percent). Almost one quarter of the firms estimated that recreational fishing was responsible for their entire business.

Employment Characteristics

. . .

In contrast to marinas, marine manufacturing is more labor intensive. Table 14 presents the mean and median figures for the occupational categories for full-time and part-time positions. The average number of full-time positions was 72. A median of 9 illustrates the high degree of variance in the number of positions found among the firms surveyed. The small number of part-time positions found (\tilde{X} =2.06) indicates that long-term, full-time nature of employment in this industry. Among the types of positions, the "other" category was the most important (\tilde{X} =54.6). This category was primarily occupied by employees involved in the production process.

For the firms surveyed, we estimate the number of FTE positions at 3,386. Of these firms, 31 or 65.3 percent had added new employees in the last three years. The total number of new employees added during this period was 892. Of these hirings, 851 were full-time employees. A good indication of the growth in this industry is the fact that 95.4 percent of

these employees were hired to fill newly created positions.

Table 14

.		Full Time			Part Time	
Type of Employee	mean.	median	mode	mean	median	mode
Administrative	10.2					
Mechanical	2.9	õ	Ó	0.04	0	0
Sales	2.1	0	Ō	0.04	0	0
Maintenance	2.0	0	0	0.01	0	Ŏ
All Others	54.6	5	0	0.30	0	Õ
Total	72.0	9	3	2.06	0.45	* *

FTE Boating and Fishing Manufacturing Employees by Type

*full time equivalent employees (52 weeks per year at 40 hours per week) **no clear mode

Economic Characteristics

A total of 9,792 boats (N=37) were manufactured by the firms surveyed (Table 15). One manufacturer reported the production of 2,600 boats. The average number of boats produced by the firms surveyed was approximately 265, (median 50). The total retail value of these boats was estimated at \$285,648,000 (N=36). The vast majority of boats were distributed through dealers (median 85 percent). Sales directly to consumers were restricted largely to small and medium-sized manufacturers, particularly those involved in custom boat design and construction.

The second most important sector of the boat manufacturing industry is the manufacture and sale of trailers. The trailer manufacturers surveyed represent all the major firms found in the state. The figures presented constitute the total economic picture for this sector of the industry.

The total number of trailers produced in North Carolina in 1984 was 16,240, with a retail value of approximately \$18,101,000. Trailers are primarily distributed through dealers (\overline{X} =66.3 percent, median=99.9 percent). A small portion are sold directly to consumers (\overline{X} =33.3 percent, median=0 percent).

The retail value of boat accessories produced by the firms surveyed was estimated at \$3,844,000 (N=7). As would be expected, accessory manufacturers had more strategies for the distribution of their products. Many of these products are used by boat manufacturers during boat construction. Of the firms surveyed, the average percentage sold to dealers was 35.9 percent, 28.7 percentage sold directly to consumers, 29.7 percent to other manufacturers and 5.5 percent to other retail outlets.

Production of Boating and Fishing Manufacturers in North Carolina

Production Measure Boats				range	mean	median	នុប្រា
Number of Boats Produced	37	0	-	2,600	264.6	50.0	979
Retail Value (1,000s of dollars)	36	0	-	125,000	7934.7	275.0	285,64
Distribution of Sales (%)							
to dealers	36	υ		100	60.3	85.0	
directly to consumers	35	0	_	100	37.4	15.0	
to other retail outlets	35	0	_	99	3.4	0.0	
to other manufacturers	35	0		0	0.0	0.0	
Boat Trailers							
Number of Trailers Produced	3	2		11.000	5413.3	5238 0	16 24
Retail Value (1,000s of dollars)	3	1	-	10,600	6033.7	7500.0	18,10
Distribution of Sales (%)							
to dealers	3	0	_	100	66.3	99.0	
directly to consumers	3	Ō		100	33.3	0.0	
to other retail outlets	3	Ō			0.0	0.0	
to other manufacturers	3	Ő		I	0.3	0.0	
Boat Accessories							
Retail Value (1,000s of dollars)	7	55		1,500	549.1	400.0	3,84
Distribution of Sales (%)							
to dealers	11	0		100	35.9	20.0	
directly to consumers	11	õ	***	100	28.7	1.0	
to other manufacturers	11	õ		100	29.9	19.0	
to other retail outlets	11	Ő	-	50	5.5	0.0	

Table 16 provides a breakdown of boating and fishing manufacturers' revenues and expenses. For the firms surveyed, total revenues reported for 1984 was \$213,107,000 (N=42). Of this, \$191,309,000 estimated to have been generated from nonresident sources (e.g., from customers outside the state). Total revenues averaged \$5,074,000. One firm reported \$100,000,000 in total revenues in 1984. However, the median value of \$442,500 in total revenues indicated a high degree of variability within the sample. A breakdown of revenues, controlling for the size of firm, will be presented in a later section and should provide a more accurate picture of average and median values for revenues and expenses.

Revenue/Expense Measure		range			mean	median	
Revenues (1.000							
Total revenue (1,000s of dollars)	42	Ţ	-	100,000	5074.0	442.5	
Revenue from nonresident sources (%)	43	L	-	100	66.8	80.0	
Expenses Total expenses (1,000s of dollars)	35	t	-	90,000	4896.1	300.0	
Distribution of expenses (%)							
wages and salaries	36	0	_	80	31.6	30.0	
operating expenses	32	l	-	100	51.8	60.0	
State and local taxes (1,000s of dollars)	28	1	-	18,963	1164.6	20.0	
Percentage of operating expenses paid to nonresident firms	38	0	-	92	45.5	50.0	

Boating and Fishing Manufacturing Revenues and Expenses

Total expenses for these firms averaged \$4,896,100 (median \$300,000). The sum of reported expenses for the firms surveyed was \$171,363,000 (N=35). Comparable means and medians for the distribution of expenses indicate the general representation of the mean percentage. Wages and salaries accounted for about 31.6 percent of the total costs, and operating expenses totaled 51.8 percent.

Although there is general agreement between mean and median values for percentages associated with wages and salaries and operating expenses, this is not the case for actual dollar values. The mean expense for wages and salaries was 1,370,500, but the median was 79,800. The total amount paid in salaries and wages for the surveyed firms was 43,856,000 (N=31). Similarly, the average operating expenses of 33,802,400 and a median expense of 162,500 illustrate a high degree of variance in the actual dollar amount of operating costs. The total amount of operating costs for the firms surveyed was 102,666,000 (N=27). Of this, 42,538,700 was paid to nonresident firms. Most firms pay about half of their operating expenses to businesses from outside the state.

These firms paid on average \$1,164,600 in state and local taxes. However, the median value of \$20,000 provides a better indication of the actual taxes paid by firms in North Carolina.

Table 17 provides mean and median figures on the value of assets and liabilities for the firms surveyed. Differences between mean and median values again point to the high degree of variance within the sample. Nevertheless, the figure in Table 17 indicates a healthy industry if the ratio of the value of assets to liabilities is any indication.

Assets and Liabilities of Boating and Fishing Manufacturers in North Carolina

Asset/Liability Measure	n	range	mean	median
Value of Assets (1,000 of Dollars)				<u> </u>
Current assets	36	I - 34000	2209.5	200.0
Fixed asset investment	37	0 - 16000	1256.5	150.0
Current market value of fixed assets	35	0 - 25000	1978.0	250.0
Value of Liabilities (1,000s of Doilars)				
Current liabilities	36	0 - 9000	903.5	68.5
Long-term liabilities	37	0 - 5000	323.7	25.0

To get a better understanding of the mean and median figures, a breakdown of both revenues and expenses by company size was performed. Table 19 shows this breakdown for each of the revenues and expenses discussed in Table 17. The classification of companies was based on the total number of FTE positions. Table 18 shows the frequency distribution of small, medium and large manufacturers. Approximately 46.2 percent of the companies surveyed had between 1 and 5 FTE positions, 25 percent had between 5.01 and 25, and 28.8 percent over 25 FTE positions.

Table 18

Distribution of Boating and Fishing Manufacturers by Number of Full-Time Equivalent Employees

Number of FTE Employees	Frequency	Percent
Small Manufacturers (1 - 5 FTE employees)	24	46.2
Medium Manufacturers (5.01 - 25 FTE employees)	13	25.0
Large Manufacturers (over 25 FTE employees)	15	28.8
Total	52	100.0

The mean and median values in Table 19 provide a better picture of the economic characteristics of the various manufacturers. As would be expected, large manufacturers account for a significantly higher degree of revenues than smaller firms. In addition, these larger firms have a higher degree of dependency on out-of-state businesses ($\overline{X} = 89.05 \chi$). The smaller firms, which generally build small boats specifically designed for the North Carolina marine and estuarine environment, had greater dependency on instate businesses (revenues from nonresidents $\overline{X} = 51.9 \chi$).

Table 19

Distribution of Revenues and Expenses by Boating and Fishing Manufacturer

		Sma	all	Man	ufactur Med	er Size lum	<u>.</u>	Larg	·e
Revenue Measure	n	X 1	X 2	n	X 1	X 2	n	X1	x 2
Revenues Total revenue (1,000s of dollars)	17	177.2	50.0	11	674.5	400.0	14	14476.7	4500.0
Revenue from non- residents (percent)	18	51.9	57.5	11	62.3	70.0	14	89.5	95. 0
Expenses Total expenses (1,000s of dollars)	16	194.9	104.5	10	472.2	324.0	9	18169.1	6800.0
Distribution of Expense	s (%)							
wages and salaries operating expenses	16	28.3	25.5	9	40.1	33.0	11	29.6	30.0
State and local taxes	13	5011	50.0	o	47.0	00.0	9	59.9	61.0
(1000s of dollars)	11	6.9	2.0	10	24.9	26.0	7	4612.0	709.0
Percentage of operating expenses paid to non- resident firms	16	39.1	40.0	10	29.8	17.5	12	67.3	80.0

Xl = mean value X2 = median value . · . · ·

In this disaggregation there is clear evidence of a nonresponse bias. Total expense figures have smaller response rates relative to total revenues. These differences affect the magnitude of expenses relative to revenues. This is particularly true for the larger manufacturers who responded more consistently to all economic questions, therefore affecting mean and median figures.

Estimates of Impacts

Estimates of direct economic impacts were made with the use of median figures for percentages and dollar values. For 1984, 53 firms were used for estimating total direct economic impacts. Of these firms, 28.3 percent were large manufacturers, 24.5 percent were medium-sized and 47.2 percent were small. Total industry revenues and costs were derived through the use of median values for each category of firm presented in Table $1\overline{9}$. These median figures were used for cases involving missing values and aggregate estimates for firms not interviewed. But all major manufacturing firms were interviewed in the state. Underestimates of the number of actual marine manufacturers in the state will be found primarily among mediumsized to small firms, particularly small firms that may only operate part-time. However, even if we missed 50 smaller firms (which is highly unlikely), our estimate of total revenues may only be off by \$2.5 million, or by 1.1 percent, of the total. This fact is important in producing an accurate estimate of economic impacts. Many of the smaller firms interviewed were one- or two-man operations, involving the manufacture of one or two boats per year. Although important, these smaller firms, when considered on an individual basis, have little affect on the total figure.

As in the case of marinas, the following overall estimates of direct economic impacts for 1984 involved all forms of manufacturers interviewed, including these engaged in the production of commercial and recreational products. The following are estimated direct economic impacts for 1984:

*Employment	3451 FTE
*Total Revenues	\$218,807,000
*Nonresident Revenues	\$196,376,000
*Total Expenses	\$207,275,500
*Expenses to Nonresident Firms (Operating)	\$ 72,546,400
*Total Expenses for Wages and Salaries	\$ 62,182,650
*Estimated Payments in State and Local Taxes	\$ 14,023,000

Since 1984, some major boat manufacturers have experienced large increases in production and subsequently in revenues. If these known increases are taken into account (known increases for three large companies) and if the estimate is adjusted for the number of firms producing in 1985 (8 additional small firms), the 1985 estimate for total revenues would be approximately \$245,657,000. If we assume a percentage increase for other firms, this figure could be significantly higher. The estimates of economic impacts attributable to recreational fishing were calculated with the use of the estimated percent of products used for recreational activities and the percent of this that is recreational fishing. Table 20 provides a frequency distribution of the percentage of business associated with recreational fishing.

Table 20

Distribution of Boating and Fishing Manufacturers by Percentage of Business Associated with Recreational Fishing

Percent of Business Associated With Recreational Fishing		lated Frequency	
0 -	20 percent	17	34.7
1 -	40 percent	7	14.3
1 -	60 percent	7	14.3
1 -	80 percent	3	6.1
1 -	100 percent	15	30.6
	Total	49	100.0

Table 21 Impacts of Recreational Fishing

Measure of Impact	N	Range	Mean	Median	Sums
Measures of Revenue (1,000s of a	dolla		· · · · · · · · · · · · · · · · · · ·	<u> </u>	······································
Total revenue	40	0 - 60000	3022.8	61.2	123.935.08
Revenue from nonresidents	38	0 - 57000	2868.9	43.4	109,021.3K
Measures of Expenditures (1,000s	3 of	dollars)			
Total expenses	34	0 - 54000	2999.8	85.5	101.991.98
Operating expenses	27	0 - 37800	2232.4	27.4	60,273,7K
Wages and salaries	31	0 - 16200	873.3	26.6	27,072.9K
Expenses paid to nonresident	firm	18			
Operating expenses	26	0 - 8316	911.7	10.8	23,704.1K
Employment (FTE) 45	0	- 872	45.3 2	• 4	2,308.5

. . .

Table 21 provides information on economic impacts for the firms surveyed. The following are estimates of direct impacts attributed to recreational fishing for the total industry for 1984:

*Employment	2,338.5 FTE	(67.8 percent)
*Total Revenues	\$124,478,600	(56.9 percent)
*Total Expenses	\$114,312,500	(52.2 percent)
*Expenses for Wages and Salaries	\$ 28,168,740	(45.3 percent)

Similar to the estimates for the total industry, these figures above would have also increased for 1985 by a comparable percentage.

REFERENCES.

Abbas, Leon E. (1978), The North Carolina Charter Boat Industry. in H. Clepper (ed.): Marine Recreational Fisheries-3. Sport Fishing Institute, Washington D.C.

Crompton, J. and B. Ditton (1975), A Feasability Management, and Economic Study of Marinas on the Texas Gulf Coast. Texas Sea Grant Report #TAMU-SG-76-201. Texas A&M, College Station.

Ditton, B, A. Graefe and G. Lapotka (1979), Economic Impacts of Recreational Boat Fishing in the Houston-Galveston Area of the Texas Coast. Texas Sea Grant Report. Texas A&M, College Station.

Johnson, J.C., Marcus Hepburn, Peter Fricke, Bill Still, Jim Sabella, Leon Abbas, and Carl Hayes. (forthcoming) Recreational Fishing in the Sounds of North Carolina: A Socioeconomic Analysis. North Carolina Sea Grant Report.

Milon, J. Walter and Pamela H. Riddle (1982), Employment and Sales Characteristics of Florida's Recreational Boating Industry. Florida Sea Grant Report No. 52.

Milon, J. Walter, Gary Wilkowske, George L. Brinkman (1983), Financial Structure and Performance of Florida's Recreational Marinas and Boatyards. Florida Sea Grant Report No. 53.

Milon, J. Walter, David Mulkey, Pamela H. Riddle, Gary H. Wilkowske (1983), Economic Impact of Marine Recreational Boating on the Florida Economy. Florida Sea Grant Report No. 54.

Stoll, J., L. Jones, and J. Bergstrom (1985), Economic Impact of the Recreational Boating Industry in Texas. Sea Grant Report #TAMU-SG-85-604. Texas A&M, College Station.

USEPA (1985), Coastal Marinas Assessment Handbook, USEPA, Region 4, Atlanta, GA. .

APPENDIX A



Department of Recreation Resources Administration

North Carolina State University

School of Forest Resources Box Socy, Baleigh 2-105-Socy

Dear Marina Owner/Manager:

The purpose of this letter is to request your participation in a study which Jeff Johnston of East Carolina University and I are conducting for the North Carolina Sea Grant Program and the North Carolina Sports Fishing Association. The purpose of the study is to examine the economics of recreational fishing and boating in the coastal region of North Carolina. As part of the study, I am examining the economic importance and impact of the marina industry. The information from this component of the study will be used to support, facilitate, and protect the development and operation of North Carolina coastal marinas. This component of the study will also result in the publication of management guidelines which will directly help you in the financial management and operation of your marina. As a small compansation for your participation in this study, I will send you a copy of these management guidelines free of charge.

Your marina has been identified as part of a scientific sample which was carefully selected to represent the North Carolina coastal marina industry. It is very important that you participate in the study so that the information which we collect will be as accurate as possible. Since the purpose of this study is to determine the economic importance and performance of the marina industry, it is necessary to ask you a number of questions concerning the financial aspects of your marina. I realize you consider this information to be very sensitive and private. I assure you that I also consider this information to be very sensitive and private. I will treat any information you provide with complete confidentiality. You have my absolute and legal assurance that the information you provide will not be reported in such a way that it is possible for your compatitors or anyone elsa to detarmine the finances of your marina. I also assure you that my interest is in supporting the marina industry. To protect both you and the marina industry, I have agreed to allow the executive board of the North Carolina Marinas Association to review a confidential draft of the study report prior to its release to Sea Grant and/or the public.

In order to better protect your information, I will be conducting the study by telephone. My research associate, Ms. Lydia Lavelle, will call you to schedule a time during which she can ask you the necessary questions. This interview should not take more than 20 minutes. For your reference, I am enclosing a worksheet which contains all of the questions which Lydia will ask you. <u>You do not need to return this worksheet to ms.</u> I would, however, appreciate it if you would complete this worksheet prior to the telephone Interview, so that the information which you provide will be as accurate as possible. If you have any questions or concerns about the study or the specific questions which I am asking, please contact me or Lydia at the telephone number below. It is my hope to complete the telephone interviews during the week of July 29th through August 2nd. Again, Lydia will be calling to schedule a specific time for your interview.

I sincerely thank you in advance for your participation in this study.

Sincarely Richard R. Perdua

(919) 737-3276

	Marina Telephone Interview Instrument (do not read material in italics to resonadent)
Ma	rine: Phone Number _()_
10	
	Dete:
	Time Ended:
	Time Starled:
Se	ction 1: Merine Description (minutes)
Fire	t, I would like to ask you some questions about the characteristics of your marina.
1	I have five questions about the size of your manine
	1.1 First, how many acres of upland on dry area does the manine have?
	1.2. Grand th
	1.2 Second, How many acres of submerged land does the marina have?
	1.3 Third, How many boat slips does the marine have?
	Are all of your slips currently rented or full?
	If no- How many empty slips do you have?
	1.4 Fourth, How many dry starks does the merine have?
	Are all of your dry stacks currently rented on Guiz many m
	2 700 How many empty any stacks do you have?
	1.5 Fifth, How many moorings does the marina have?
	Are all of your moorings currently rented or full?
	If no- How many empty moorings do you have?
2.	Of the total number of boats at your marina, how many are commercial fishing boats?
3.	How many of them are either charter or headboats for recreational fishing?
4.	How many of them are privately used recreational boats?
	4.1 Of these recreational boats, what percentage is sail boats?
	4.2 What percentage do you think is used primarily for recreational fishing?
	4.3 Of the people who keep private recreational boats at your marina, approximately what percentge is from out of state people who live outside North Carolina for six months or more each year? percent
5.	is the marina located in _ [] an open water area or in a dredged basin.
6 .	What is the tidal range in feet at your manina?
7.	What is the average water depth in the marina slip area?
3.	Is the marina operated for <i>(if more than one, check all that apply)</i> :
	I for use by a private club, such as a country club, a sportsman club, or a boating club, or for use by residents of a condominium or housing development.
₹.	How many years ago was the manina originally developed? years
	Has the marina even been expanded? 🔲 yes 🗍 no

if yes, when was it last expanded?

- 10. Is your marine a
 - isole proprietorship
 If a sole proprietorship or partnership;

 is partnership
 How long have the present owners owned the marina?

 isole proprietorship
 How long have the present owners owned the marina?

 isole proprietorship
 How long have the present owners owned the marina?

 isole proprietorship
 How long have the present owners owned the marina?

 isole proprietorship
 How long have the present owners owned the marina?
- 11. I'm going to read a number of services a marina may have. For each service, would you please tell me whether or not you offer that service at your marina.

Yes	no	
		boat launching namp
		bost fuel and oil
		sewage and water pumpout
		bost, engine, and/or hull repair
		recreational fishing charter or headboats
		sightseeing on tour bosts
		boat rentals

11.1 Are any of these services offered at your marina by someone else?

If yes, Which ones? (go back and check the stated services)

 Now, I'm going to read you a number of additional facilities a marina may have. Again, would you please tell me whether or not you own each type of facility at your marina.

yas -	no	
		grocery store
		fishing bait and/or tackle shop
		hotel
		restaurant
		cempground
		bath and/or shower facilities

Section 2: Marine Finances

Now I'm going to ask you some questions about the finances of your marina. I realize you may consider some of these questions very sensitive and private. I would not be asking them if the information was not very important to our understanding of the economic impact and importance of the marina industry to North Carolina. You have my absolute and legal assurance that this information will not be reported in such a way that it is possible for your competitors or anyone else to determine the financial performance of your marina. This is not an audit requiring exact precision and many hours of work. We wish only to know your best estimates and approximations.

 For each of the following types of employees, I would like to know the number of people you employ at the marina both permanently and either part time or during the summer only. If a person fills more than one type of position, please report that individual only once.

if the individual paparts and set is	<u>Number</u>	<u>Number of Employees</u>				
employees, ask, for each type of employee, on the average, how many 40 hour weeks do these summer or	Permenent	Sumi Pert-ti	mer or ime only 40 hour			
part time employees work during the year.		number	weeks			
administrativeincluding for example, facility or store managers shop managers, and book-keepers		- <u></u>				
sales						
mechanical						
maintenance and cleaning						
all others	<u> </u>					

21 I.I.		
		1.1 Have you increased the number of employees at your marina in the last three years? [] yes [] no
		If yes, How many new positions have you created in the last three years positions
		How many of these were permanent, year-round positions
		Dete Cabaduta
	2.	Next, I would like to know the marina's rate schedule. (do each of the following questions for all three types of storage)
		What is the weekly rate per foot for: wet slips What is the monthly rate per foot for:
		What is the rate per foot for permanent use of: dry stacks
		maorings
	3.	What was the marina's total revenue for last year?
		3.1 What percentage of this revenue was from? slip, mooring, and dry stack rentals <i>percent</i>
		bost fuel, repairs, and equipment sales
		boat rentals
		fishing balt and tackle
		lodging and restaurant facilities
	4.	Approximately what percentage of your total business is from out of state customers? percent
	5.	Now I would like to ask you about your expenses for last year.
		5.1 What were your total expenses for last year (including wages and salaries, operating expenses, the costs of goods sold, and any long term debt retirement costs)?
		5.2 What percentage of your expenses were for wages and salaries, including corporate commissions if applicable?
		5.3 What percentage of your total expenses were for operating costs by operating costs, I mean such expenses as advertising, rentals, maintenance, utilities, operating supplies, insurance, depreciation, and taxes other than income taxes. Do not include the costs of the goods you sold to customers. parcent
		5.4 Of your total operating costs, what percentage was paid to firms from outside of North Canalice?
		percent
		5.5 What percentage of your total expenses was for the costs of the annas you cold at your manine test your 3
		percent
		_
		5.6 Concerning only the costs of the goods you sold at your marina last year, what percentage was for: boat fuel and oil
		fishing bait and/or tackle food and groceries

5.7 Again, concerning only the costs of the goods you sold at your marine lest year, what percentage of each type of good was paid to firms from outside of North Carolina?

ł

	boat fuel and oilpercent boats, boat engines, and/or boat equipment fishing bait and/or tackla food and groceries
б.	What was your net income last year, before income taxes?
7.	What is the approximate value of the current assets of your marina including operating cash, inventory and accounts receivable?
8.	What is the value of your actual investment in the fixed assets at your manina including the land, buildings, equipment, and boats?
	8.1 What in your opinion, is the current market value of your fixed assets?
9.	What is the approximate value of the current liabilities of your marina — including any accounts payable, accrued expenses, any notes payable during the coming year, and the money you will pay on montgage and other long-term debts over the next year?
10.	What is the approximate value of the long-term debt of your marine, including mortgage and other notes which you will not completely pay off during the next year?
11.	How much did your manina pay for each of the following North Canolina state and local taxes last year?
	inventory and personal property taxes
	real property taxes
	payroli taxes
	sales taxes
	corporation franchise taxes and fees
	boat registration fees
8	il other North Carolina state or local taxes
That co	ncludes the questions that I have.
Do you	have any questions or comments that you would like to include in the survey information?

40

The (retur infor	Marina Study Worksheet following is a list of the questions which I will ask when I call to conduct the telephone survey. You do not need to in this worksheet in the mail. I would, however, appreciate it if you would complete this worksheet so that the mation I request during the telephone interview will be as accurate as possible.
Sec	tion 1: Marina Description
١.	Marina Size 1.1 How many acres of upland on dry area does the marina have? (1 acre = 44,000 square feet)
	1.2 How many acres of submerged land does the marina have?
	1.3 How many boat slips does the marina have? Are all of your slips currently rented or full? [] <i>yes</i> [] no <u>If no</u> - How many empty slips do you have?
	1.4 How many dry stacks does the marina have? Are all of your dry stacks currently rented or full? [] <i>yes</i> [] <i>no</i> <u>// no</u> -How many empty dry stacks do you have?
	1.5 How many moorings does the marina have? Are all of your moorings currently rented or full? [] yes [] no <u>If ne</u> + How many empty moorings do you have?
2.	Of the total number of boats at your marina, how many are commercial fishing boats?
3.	How many of them are either charter or headboats for recreational fishing?
4.	How many of them are privately used recreational boats?
	4.1 Of these recreational boats, what percentage are sail boats?
	4.2 What percentage do you feel are used primarily for recreational fishing?
	4.3 Of the people who keep private recreational boats at your marina, approximately what percentage is from out of state — people who live outside North Carolina for six months or more each year? percent
5.	Is the marine located in en open water area in a dredged basin.
б.	What is the Lidel range in feet at your marina?
7.	What is the average water depth in the marina slip area?
ð.	Is the marine operated for <i>(if more than one, check all that apply):</i> general public use for use by a private club, such as a country club, a sportsman club, or a boating club, or for use by residents of a condominium or housing development
9.	How many years ago was the marina originally developed? years
	9.1 Has the marine ever been expended? 🗀 yes 🗔 no
	<u>if yes</u> , when was it last expanded?
10.	IS your marina a
	a partnership If a sole proprietorship or partnership a partnership How long have the present owners owned the marina? years owned by a corporation publicly owned?

. . . .

•

11.	For each of the following services	. please indicate whether or not you	offer that service at your marine
-----	------------------------------------	--------------------------------------	-----------------------------------

¥85	no	, , , , , , , , , , , , , , , , , , , ,
		boat launching namp
		boat fuel and oil
		sewage and water pumpout
		boat, engine, and/or hull repsir
		recreational fishing charter or headboats
		sightseeing on tour boats
		bost rentals
11.1 Are a	iny of	these services offered at your marina by someone else? 🔲 yes 🗌 no
il yes	; Wh	ich ones

12. For each of the following facilities, please indicate whether or not you own each type of facility at your marina.

yes –	no	
		grocery store
		fishing bait end/or tackle shoo
		hotel
		restaurant
		Cempground
		bath and/or shower facilities

Section 2: Mecine Finances

I'm going to ask you some questions about the finances of your marina. I realize you may consider some of these questions very sensitive and private. I would not be asking them if the information was not very important to our understanding of the economic impact and importance of the marina industry to North Carolina. You have my absolute and legal assurance that this information will not be reported in such a way that it is possible for your competitors or anyone else to determine the finanacial performance of your marina. This is not an audit requiring exact precision and many hours of work. We wish only to know your best estimates and approximations.

 For each of the following types of employees, I would like to know the number of people you employ at the marina both permanently and either part time or during the summer only. If a person fills more than one type of position, please report that individual only once. If you have any part-time or summer only employees, please indicate for each type of employee, how many 40 hour work weeks these individuals worked during the last year.

	<u>Number</u> Permenent	<u>of Employ</u> Sumi Pert-til	t <u>es</u> ner or me only
administrative —including for example, facility or store managers shop managers, and book-keepers	<u> </u>	number	40 hour weeks
sales		·	<u> </u>
maintenance and cleaning			
ell others	<u> </u>		·

- 1.1 Have you increased the number of employees at your marine in the last three years? 🛄 yes - 🛄] 10
--	------

If yes, How many new positions have you created in the last three years _____ positions

How many of these were permanent, year-round positions

				<u>– Rele, Sche</u> i	dule
2.	What is the manine's nate schedule.		weekly	monthly	permenent
		wet slips		<u></u>	
		dry stacks	<u> </u>		
		mooring	s		
3.	What was the marina's total revenue for last year?				
	3.1 What percentage of this revenue was from? slip, mooring, and dry stack rentals	per	cent		
	boat fuel, repairs, and equipment sales				
	boat rentals				
	fishing bait and tackle				
	lodging and restaurant facilities				
4.	Approximately what percentage of your total busine	ss is from out	of state cust	.omers?	percent
5.	The following questions are about your expenses for	last year.			
	5 1 What were your total expenses for last year (Includion wates	s and salaria	s operation as	oenses. the co

- 5.1 What were your total expenses for last year (including wages and salaries, operating expenses, the costs of goods sold, and any long term debt retirement costs)?
- 5.2 What percentage of your expenses was for wages and salaries, including corporate commissions if applicable?

_____ percent

- 5.3 What percentage of your total expenses was for operating costs -- by operating costs, I mean such expenses as advertising, rentals, maintenance, utilities, operating supplies, insurance, depreciation, and taxes other than income taxes. Do not include the costs of the goods you sold to customers. ______ percent
- 5.4 Of your total operating costs, what percentage was paid to firms from outside of North Carolina?

____ percent

. · · . · ·

5.5 What percentage of your total expenses was for the costs of the goods you sold at your manina last year?

_____ percent

5.6 Concerning only the costs of the goods you sold at your marina last year, what percentage was for: -

boat fuel and oil	percent	•
boats, boat engines, and/or boat equipment		: ;
fishing bait and/on tackle		
food and proceries		

5.7 Again, concerning only the costs of the goods you sold at your marina last year, what percentage of each type of good was paid to firms from outside of North Carolina?

boat fuel and oil	percent
boats, boat engines, and/or boat equipment	
fishing balt and/on tackle	<u> </u>
food and groceries	

- 6. What was your net income last year, before income taxes?
- 7. What is the approximate value of the current assets of your manina including operating cash, inventory and accounts receivable?
- 8. What is the value of your actual investment in the fixed assets at your marina including the land, buildings, equipment, and boats?

8.1 What in your opinion, is the current market value of your fixed assets? ______

- 9. What is the approximate value of the current liabilities of your marina including any accounts payable, accrued expenses, any notes payable during the coming year, and the money you will pay on mortgage and other long-term debts over the next year?
- 10. What is the approximate value of the long-term debt of your marina, including mortgage and other notes which you will not completely pay off during the next year?
- 11. How much did your marine pay for each of the following North Ceroline local and state taxes last year?

inventory and personal property taxes

real property taxes

payroll taxes _____

sales taxes _____

corporation franchise taxes and fees

boat registration fees _____

ell other North Carolina or local taxes _____

EAST CAROLINA UNIVERSITY

GREENVILLE, NORTH CAROLINA 27834 4353

INSTITUTE FOR COASTAL AND MARINE RESOURCES

(919) 757-6779

Dean Manufacturien:

The purpose of this letter is to request your participation in a study which Rick Perdue at North Carolina State University and I are conducting for the North Carolina Sea Grant Program and the North Carolina Sports Fishing Association. The purpose of the study is to examine the economics of recreational fishing and boating in the coastal region of North Carolina. As part of the study, I am examining the economic importance and impact of the boat and fishing tackle manufacturing industry. The information from this component of the study will be used to support, facilitate, and protect the development and operation of boat and fishing tackle manufacturing in North Carolina. This component of the study will also result in the publication of management guidelines which will directly help you in the financial management and operation of your business. As a small compensation for your participation in this study, I will send you a copy of these management guidelines free of charge.

Your manufacturing facility has been identified as part of a scientific sample which was carefully selected to represent the boat and fishing tackle manufacturing industry in North Carolina. It is very important that you participate in the study so that the information which we collect will be as accurate as possible. Since the purpose of this study is to determine the economic importance and performance of the industry, it is necessary to ask you a number of questions concerning the financial aspects of your business. I realize you consider this information to be very sensitive and private. I assure you that I also consider this information to be very sensitive and private. I will treat any information you provide with complete confidentiality. You have my absolute and legal assurance that the information you provide will not be reported in such a way that it is possible for your compatitors or anyone else to determine the finances of your business. I also assure you that my interest is in supporting the boat and fishing tackle manufacturing industry. To protect both you and the industry, I have agreed to allow selected representatives of the National Marine Manufacturing Association to review a confidential draft of the study report prior to its release to Sea Grant and/or the public.

In order to better protect your information, I will be conducting the study by telephone. My research associates will call you to schedule a time during which she can ask you the necessary questions. This interview should not take more than 20 minutes. For your reference, I am enclosing a worksheet which contains all of the questions which we will ask you. You do not need to return this worksheet to me. I would, however, appreciate it if you would complete this worksheet prior to the talephone interview, so that the information which you provide will be as accurate as possible. If you have any questions or concerns about the study or the specific questions which I am asking, please contact me at the telephone number below. It is my hope to complete the talephone interviews during the next two weeks. Again, either I or one of my research associates will be calling to schedule a specific time for your interview.

I sincerely thank you in advance for your participation in this study.

(919) 757-6220



July 24, 1985

Dear Fellow N.C. Marine Manufacturer:

I strongly urge you to lend your full cooperation to the enclosed study. Only with your cooperation can this study be complete and therefore meaningful. The results of this study will be both directly and indirectly beneficial to you and to the entire marine industry in N.C. Only recently I had the occasion to represent the marine industry in trying to get a bill favorably passed by our state legislature. My job would have been made a great deal easier if I had had meaningful data available to me concerning the economic impact of our industry both in the area of sportfishing and in general.

The information you submit to the Sea Grant researchers will be kept in the strictest confidence and will only be printed in <u>summary</u> form. Copies of the final report will be available for scrutiny prior to release and ultimately will be made available to all who participate.

The National Marine Manufacturers Association has already provided the researchers with a great deal of broad information, which coupled with the specific information you provide will be most meaningful and helpful. Thank you in advance for your assistance with this very beneficial study.

Sincerely,

GRADY-WHITE BOATS

Eddie Smith, Jr. President

ECS:jnk

Enclosure

Manufacturers Telephone Interview Instrument

(do not read material in italics to respondent)

Company:		- 	Phone Number	.()
Location:			Dete:	
			Time Ended:	<u></u>
			Time Sterled:	
			Longth of Interview:	(minutes)
Section .	<u>1: Company</u>	Description		

First, I would like to ask you some questions about the characteristics of your company.

is the primary boating and/or fishing related activity of the company;
 boat manufacturing
 boat trailer manufacturing
 boat accessory manufacturing i Bishing tackle manufacturing, or
 ii something else?

please specify

2. Does the company produce products other than those which are boating and/or fishing related? [] yes [] no

(If no, do not read the <u>boating and/or fishing related</u> component of the following questions)

- Is the company owned by a:
 - 📑 sole proprietor

۱,

- a partnership, or
- a corporation

If corporation, is this corporation

an independent corporation, or part of a corporate conglomenate?

If a sole proprietorship. a partnership or an independent corporation.

How long have the present owners owned the company? _____ years

4. How many years ago was the boating and/or fishing related component of the company started?

----- Years

4.1 How many years has the company been producing <u>boating</u> <u>and/or</u> <u>fishing</u> <u>related</u> products in North Carolina?

If the boating / fishing activities of the company have existed longer then its tenure In North Caroline;

How long has the company owned boating and/or fishing related facilities in North Carolina?

_____ Years

_____ years

Was the initial boating and/or fishing related development in North Carolina

an expansion of the company's operation, or

a move to North Carolina from another state.

If a move to North Carolina : What were the company's reasons for moving to North Carolina?

4.2 How many years ago was this <u>boating</u> and/or <u>fishing</u> related manufacturing facility originally developed?

Has this facility ever been expanded? 📋 yes 🔲 no

if yes, when was it last expanded?

4.3 Does the company own any *boating and/or fishing related* manufacturing facilities other than those at *(the Interview site)*? yes no

<u>// ves</u>, where? ___

(if in North Ceroline, esk for the specific town)

(if the company does not own any boating or fishing related facilities in states other then North Carolina, It is not necessary to read the <u>in North Carolina</u> component of the following questions)

5. Of the boating and/or fishing related products produced <u>in North Carolina</u> by this company, what percentage do you feel is used primarily by recreational users as opposed to commercial users?

____ percent

5.1 Of these recreational users, what percentage do you feet is recreational fishermen as compared to non-fishermen?

_____ percent

Section 2: Company Finances

Now I'm going to ask you some questions about the finances of your company. I realize you may consider some of these questions very sensitive and private. I would not be asking them if the information was not very important to our understanding of the economic impact and importance of the boating and fishing manufacturing industry to North Carolina. You have my absolute and legal assurance that this information will not be reported in such a way that it is possible for your competitors or anyone else to determine the financial performance of your company. This is not an audit requiring exact precision and many hours of work. We wish only to know your best estimates and approximations.

1. For each of the following types of employees, i would like to know the number of people you employ <u>for boating</u> <u>and/or fishing related manufacturing in North Carolina</u> both permanently and either part time or during the summer only. If a person fills more than one type of position, please report that individual only once.

if the individual reports any part-time or summer only employees, ask for each type of employee, How many 40 hour weeks do these summer or part time employees work during the year.	<u>_Number</u> Permenent	r. of empl Sumn Pert-L	<u>of employees</u> Summer or <u>Part-time only</u> 40 hour	
administrativeincluding for example, facility or store managers, shop managers, and book-keepers		number	wooks	
5ales				
mechanical			<u> </u>	
meintenance and cleaning				
		 		

1.1 Have you increased the number of *boating and fishing manufacturing related* employees at your company *to North Carolina* in the last three years? *yes no*

IL yes. How many new positions have you created in the last three years _____ positions

2. The following questions are about the products which you manufactured in North Carolina, last year?

. · · ·

3.

4.

5.

2.1 Did you r <i>LL_yes</i> ,	nanufacture any boats <u>in North Carolina</u> last year? [] yes [] no How many boats did you produce in North Caroline, and call last upon
	What was the retail value of these hours?
	Collers
	Of these boats, what percentage was saliboats? percent
	What percentage of these boat sales was to
	dealers percent
	to other manufacturiers
	directly to consumers
	to other retail outlets
2.2 Did you m	anufacture any boat trailers in Nocle Caroling last wares to
<u>IL yas,</u> 1	How many boat trailers did you produce in North Carolina and sell last year? boats
1	what was the retail value of these boat trailers? dollars
(Of these boat trailers, what percentage was specifically for sailboats? percent
V	What percentage of these boat trailer sales was to
	destars concert
	to other manufacturers
	directly to consumers
	to other retail outlets
2.3 Uid you ma <i>IL <u>xaş</u>,</i> Wha	nufacture any boat accessories <u>in North Carolina</u> lest year? yes in no It was the retail value of these boat accessories? dollars
OF	hese boat accessories, what percentage was specifically for sailboats? percent
Wha	It percentage of your boat accessories sales was to
	to other manufacturers
	directly to consumers
	Lo other retail outlets
2.4 Did you mar L <i>j.ces</i> , What	was the retail value of this fishing tackle?
What	percentage of your fishing tackle sales was to
	to other manufacturers
	directly to consumers
	to other retail outlets
What was the cor <i>Cacoling</i> , fast ye	mpany's total revenues <u>for boating and/or fishing related products produced in North</u> ear?
Approximately w	hat percentage of this business was from out of state customers? percent
Now I would like (last year.	to ask you about your boating and/or. fishing related expenses in North Carolina for

5.1 What were your total boating and/or fishing related expenses in North Carolina for last year (including wages and salaries, corporate commissions, operating expenses, the costs of raw materials and goods sold, and any long term debt retirement)?

5.2 What percentage of these expenses was for wages and salaries, including corporate commissions if applicable?

____ percent

5.3 What percentage of these expenses was for operating costs — by operating costs. I mean such expenses as advertising, rentais, maintenance, utilities, operating supplies, insurance, depreciation, naw materials and taxes other than income taxes.

5.4 Of your total operating costs, what percentage was paid to firms from outside of North Carolina?

____ percent

____ percent

- 6. What was the company's boating and/or fishing related net income last year, before income taxes?
- What is the approximate value of the current <u>boating</u> <u>and/or fishing</u> <u>related</u> assets of your company including operating cash, inventory and accounts receivable?

What in your opinion, is the current market value of these fixed assets?

- 9. What is the approximate value of the <u>boating</u>, <u>and/or</u>, <u>fishing</u>, <u>related</u> current liabilities of your company including any accounts payable, accrued expenses, any notes payable during the coming year, and the money you will pay on mortgage and other long-term debts over the next year?
- 10. What is the approximate value of the <u>boating</u> and <u>fishing</u> <u>related</u> long-term debt of your company, including mortgage and other notes which you will not completely pay off during the next year?
- 11. How much did <u>the bosting and fishing related component of</u> your company pay for each of the following North Carolina local and state taxes last year?



That concludes the questions that I have.

Do you have any questions or comments that you would like to include in the survey information?

Would you like to receive a summary of the study's findings?] yes] no

I sincerely thank you for participating in this survey. If I can be of any help to you, please let me know. Again, Thank you.

Fishing and Boating Manufacturers Study Worksheet

The following is a list of the questions which I will ask when I call to conduct the telephone interview. You do not need to return this worksheet in the mail. I would, however, appreciate it if you would complete this worksheet so that the information i request during the telephone interview will be as accurate as possible.

Section 1: Company Description

- 1. What is the primary boating and/on fishing related activity of the company?
 - bost manufacturing
 - boat trailer manufecturing
 - boat accessory manufacturing
 - fishing tackle manufacturing
 - 🗋 other _____

please specify

- 2. Does the company produce products other than those which are boating and/or fishing related? 门 yes 🔄 no
- 3. Is the company owned by a:
 - 🔲 sole proprietor
 - 🔲 a partnership, or
 - Corporation?

IL corporation , is this corporation

an independent corporation, or
 part of a corporate conglomerate?

If a sole proprietorship. a partnership or an independent corporation. How long have the present owners owned the company? _____ years

4. How many years ago was the boating and/on fishing related component of the company started?

____ years

4.1 How many years has the company been producing boating and/or fishing related products in North Carolina?

____ years

If the boating / fishing activities of the company have existed longer than its tenure in North Caroline:

How long has the company owned boating and/or fishing related facilities in North Carolina?

Was the Initial bosting and/or fishing related development in North Carolina

an expansion of the company's operation, or

🔲 a move to North Carolina from another stata.

If a move to North Carolina : What were the company's reasons for moving to North Carolina?

4.2 How many years ago was this boating and/or fishing related manufacturing facility originally developed?

____ yours

Has this facility even been expanded? 🔲 yes 🥅 no

IL yes, when was it last expanded? ____

4.3 Does the company own any boating and/on fishing related manufacturing facilities other than those at this site?
yes no

LL XAS, where?	
----------------	--

5. Of the boating and/or fishing related products produced in North Carolina by this company, what percentage do you feel is used primarily by recreational users as opposed to commercial users?

____ percent

5.1 Of these recreational users, what percentage do you feel is recreational fishermen as compared to non-fishermen?

_____ percent

Section 2: Company Finances

Now I'm going to ask you some questions about the finances of your company. I realize you may consider some of these questions very sensitive and private. I would not be asking them if the information was not very important to our understanding of the economic impact and importance of the boating and fishing manufacturing industry to North Carolina. You have my absolute and legal assurance that this information will not be reported in such a way that it is possible for your competitors or anyone else to determine the financeial performance of your company. This is not an audit requiring exact precision and many hours of work. We wish only to know your best estimates and approximations.

 For each of the following types of employees, i would like to know the number of people you employ for boating and/or fishing related manufacturing in North Carolina both permanently and either part time or during the summer only. If a person fills more than one type of position, please report that individual only once. If you have any part-time or summer only employees, please indicate, for each type of employee, how many 40 hour work weeks these individuals worked during last year.

	<u>Number</u> Permanent	r or Re <u>only</u> AD hour	
administrative —including for example, facility or store managers, shop managers, and book-keepers		number	weeks
5ales			
mechanical	·		
maintenance and cleaning			
all others			
1.1 Have you increased the number of boating and fishing manufacturing rela company in North Carolina in the last three years? yes no	ited employee:	i et your	
If yes. How many new positions have you created in the last three y	ears	_ positions	
How many of these were permanent, year-round positions			

2. The following questions are about the products which you manufactured in North Carolina last year?

3.

- 2.1 Did you manufacture any boats in North Carolina last year? 🔲 yes 🥅 no IL vas. How many boats did you produce in North Carolina and sell jast year? _____ boats What was the retail value of these boats? _____ dollars Of these boats, what percentage was seliboats? _____ percent What percentage of these boat seles was to dealers _____ percent to other manufacturiers _____ directly to consumers _____ to other retail outlets 2.2 Did you manufacture any boat trailers in North Carolina last year? 🔲 yes 🛄 no If yes. How many boat trailers did you produce in North Carolina and sell last year? _____ boats What was the retail value of these boat trailers? _____ dollars Of these boat trailers, what percentage was specifically for sailboats? _____ percent What percentage of these boat trailer sales was to dealers _____ percent to other menufacturiers directly to consumers to other retail outlets 2.3 Did you manufacture any boat accessories in North Carolina last year? 🛄 yes 📑 no If yes, What was the retail value of these boat accessories? ______ dollars Of these boat accessories, what percentage was specifically for saliboats? _____ percent What percentage of your boat accessories sales was to dealers _____ percent to other manufacturiers directly to consumers _____ to other retail outlets _____ 2.4 Did you manufacture any fishing tackle in North Carolina last year? 🗂 yes 🔲 no If yes, what was the retail value of this fishing tackle? ______ dollars What percentage of your fishing tackle sales was to dealers _____ percent to other manufacturers _____ directly to consumers _ to other retail outlets ____ What was the company's total revenues for boating and/or fishing related products produced in North Carolina last year?
- Approximately what percentage of this business was from out of state customers? _____ percent.
- 5. Now I would like to ask you about your boating and/or fishing related expenses in North Carolina for last year.

5.1 What were your total boating and/or fishing related expenses in North Carolina for last year (including wages and salaries, corporate commissions, operating expenses, the costs of raw materials and goods sold, and any long term debt retirement)?

5.2 What percentage of these expenses was for wages and salaries, including corporate commissions if applicable?

____ percent

5.3 What percentage of these expenses was for operating costs — edvertising, rentals, maintenance, utilities, operating supplies, insurance, depreciation, new materials and taxes other than income taxes

. .

_____ percent

5.4 Of your total operating costs, what percentage was paid to firms from outside of North Carolina?

_____ percent

- 6. What was the company's boating and/or fishing related net income test year, before income taxes?
- 7. What is the approximate value of the current boating and/or fishing related assets of your company including operating cash, inventory and accounts receivable?

What in your opinion, is the current market value of these fixed assets?

- 9. What is the approximate value of the boating and/or fishing related current liabilities of your company -including any accounts payable, accrued expenses, any notes payable during the coming year, and the money you will pay on montgage and other long-term debts over the next year?
- 10. What is the approximate value of the boating and fishing related long-term debt of your company, including mortgage and other notes which you will not completely pay off during the next year?
- 11. How much did the boating and fishing related component of your company pay for each of the following North Carolina local and state taxes last year?

inventory and personal property taxes

real property taxes _____

peyroll taxes

sales taxes

corporation franchise taxes and fees _____

bost registration fees _____

all other North Carolina or local taxes

APPENDIX B

APPENDIX B

COUNTY	FIPS	80ATREG 1984	BRGROW X70-84	POPGROW X70-84	/САРТА BR 84	%G ROWTH B/C70-84	'84 Pop
Beaufort	13	3417	1.24	. 19	080	0.0.0	10 010
Bertie	15	1175	+ 5 5	.04	.055	•00)	44,818
Brunswick	19	4113	3.71	.79	.000	+400	21,357
Camden	29	372	.96	07	.095	1.020	43,429
Carteret	31	5884	1.27	. 49	175	+030	5,835
Chowan	41	955	.53	- 20	074	• 2 2 3	47,120
Craven	49	4772	1.47	.23	062	• 27 2	12,935
Currituck	53	1667	1.69	. 85	120	• VI 4 	/6,807
Dare	55	2300	2.38	1 34	• 1 2 7	•437 / F F	12,8//
Gates	73	524	1.06	.08	• 1 4 1	•422	16,372
Hertford	91	1035	- 70	- 03	•037	.907	9,184
Hyde	95	558	- 80	.05	•045	•/4/	23,808
Newhanover	129	7763	1.80	•00	•094	•091	5,931
Onslow	133	5052	2.00	• • • •	.070	1.111	110,139
Pamlico	137	1122	1.52	• 1 7	+042	1.570	120,149
Pasquotank	139	1399	.98	•15	•103	1.198	10,859
Pender	144	1641	3 77	•00	+048	-830	28,993
Perquimn	143	783	1 66	• 3 1	.069	2.645	23,753
Tyrrell	177	332	51	•15	+079	1.239	9,935
Washington	187	1062	• 71	•09	•080	.382	4,157
Ū.			• • • •	•02	.0/4	•883	14,367
TOTCOAST		45926	1.55	.26	.072	1.034	640,825
Alamance	1	2434	1.18	05	0.9.4		
Alexander	3	805	1.10	•05	•024	1.079	
Alleghany	5	80	2 2	- 30	.030	.836	
Anson	7	592	4.75	• 4 1	•008	1.03/	
Ashe	9	153	2.73	• 1 1	•023	4.1/8	
Avery	11	163	2 20	19	.007	2.137	
Bladen	17	1141	4.59	• 16	•011	1.703	
Buncomb	21	3539	1 27	• 1 0	+037	3.821	
Burke	23	2091	1 51	• 14	-021	.992	
Cabarrus	25	2842	85	+ 2 4	.028	1.028	
Caldwell	27	1910	•05 1 4 5	• 2 3	-031	.510	
Caswell	33	314	1 43	• 2 1	-028	1.028	
Catawba	35	4569	1.45	•14 00	•014	1.129	
Chatham	37	776	4 17	• 2 2	•041	./5/	
Cherokee	39	823	2 03	• 10	.022	3.3/2	
Clay	43	301	3 63	• 2 2	.041	1.4/3	
Cleveland	45	2170	1 83	• 30	+043	2.395	
Columbus	47	3259	4 35	+10	•026	1.433	
Cumberland	51	5115		• 10	•003	3.845	
Davidson	57	3781	1.13	• 20	+020	1.688	
Davie	59	775	2.54	* 4 4	• U32	•/44	
Duplin	61	1109	3 00	•40	•UZ8	1.437	
Durham	63	4388	1 46	+ 1 U	.027	2+653	
		4.200	4 4 4 0	• 4 1	•UZ7	1.038	

APPENDIX B (Cont'd)

COUNTY	FIPS	BOATREG	BPGROW	POPGROW	/CAPTA	ZGROWTH
		1 7 0 4	%/0-84	<i>%</i> /0-84	BK 84	B/C70-84
Edgecomb	6.5	1281	.59	•10	.022	. 443
Forsyth	67	5507	1.63	.18	.022	1.224
Franklin	69	544	1.94	.18	.017	1.485
Gaston	71	4422	ι.10	•13	.026	.859
Graham	75	529	1.74	.09	.074	1.525
Granville	77	838	1.70	• 1 1	.023	1.444
Greene	79	575	2.30	.10	.035	2.001
Guilford	81	7857	1.58	.12	.024	1.292
Halifax	83	2122	•66	.02	.038	- 620
Harnett	85	1384	3.76	.25	.022	2.802
Haywood	87	1683	1.68	.13	.036	1.358
Henderson	89	1565	2.49	.52	-024	1.297
Hoke	93	272	2.68	.37	.012	1.685
Iredell	97	3366	1.07	.20	.039	. 7 2 1
Jackson	99	603	3.05	.26	.022	2.214
Johnston	101	2645	4.19	.22	.035	3.268
Jones	103	519	2.31	.01	.053	2.281
Lee	105	1148	3.48	.29	.029	2.481
Lenoir	107	2642	1.61	.10	.044	1.376
Lincoln	109	1856	1.49	.36	.042	.832
McDowell	111	1009	2.28	.18	.028	1.772
Macon	113	520	3.91	. 4 4	.023	2.402
Madison	I 1 5	200	2.57	.07	.012	2.331
Martin	117	1263	.64	.08	.047	.515
Mecklenburg	119	11376	.85	.22	.026	.517
Mitchell	121	153	2.26	.06	-011	2.071
Montgomery	123	773	1.59	.23	.033	1.103
Moore	125	1162	2.81	.38	.021	1.752
Nash	127	3219	1.88	.19	.046	1.423
Northampton	131	886	1.57	04	.040	1.671
Orange	135	1377	2.63	• 41	.017	1.560
Person	145	614	.70	.16	.020	.462
Pitt	147	3965	2.03	. 29	.042	2.367
Polk	149	276	2.25	• 21	.019	1.675
Randolph	151	2457	1.74	.26	.026	1,175
Richmond	153	1349	3.65	.14	.030	3.067
Robeson	155	3000	4.33	.24	.028	3.285
Rockingham	157	1789	2.86	.18	.021	2.277
Rowan	159	2954	.96	.13	.019	.740
Rutherfr	1 61	1219	2.20	.19	.022	1.692
Sampson	163	1119	3.68	.12	.022	3.180
Scotland	165	576	3.11	.26	.017	2.278
Stanly	167	2060	.98	.16	.041	.707
Stokes	169	559	3.82	.47	.016	2.270
Surry	171	1014	2.53	.18	.017	1.995
Swain	173	435	2.72	.21	.041	2.075
Trslvan	175	761	2.54	.26	.031	1.800

APPENDIX B (Cont'd)

COUNTY	FIPS	BOATREG	BPGROW	POPGROW	/САРТА	ŽGROWTH
		1984	%70-84	%70-84	BR 84	B/C70-84
Union	179	1634	3.11	.40	.021	1.943
Vance	181	934	.93	. 15	.025	.670
Wake	183	12249	3.48	.48	.036	2.030
Warren	185	283	.90	.07	.017	.769
Watuga	189	263	2.21	. 46	.008	1,203
Wayne	191	2741	2.23	-15	.028	1.800
Wilkes	193	945	1.93	.22	.016	1.404
Wilson	195	1935	1.60	- 12	.030	1.316
Yadkin	197	630	3.14	.19	-022	2.481
Yancy	199	156	2.32	• 2 2	.010	1.723
TOTINLAN		152343	1.71	• 2 1	.028	1.242
TOT NC		198269	1.67	.21	.032	1.202

а**н** 1.