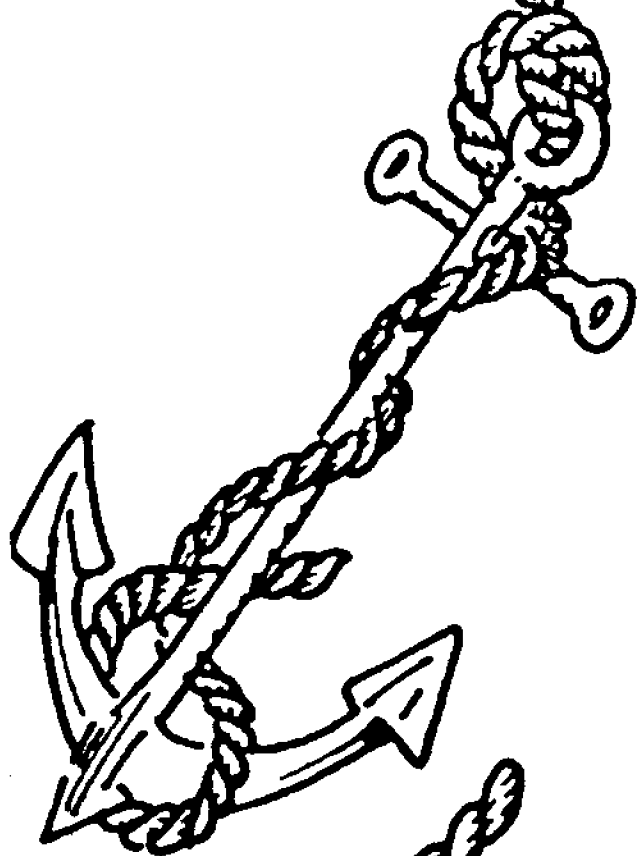


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# 1978 STATEWIDE BOATING SURVEY

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OREGON STATE MARINE BOARD  
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# PLEASURE BOATING IN OREGON - 1978

A Report to the  
OREGON STATE MARINE BOARD

Brad Morris, DIRECTOR

FEBRUARY 1979

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The work upon which this report is based was supported by the Oregon State Marine Board Staff in Salem, Oregon.



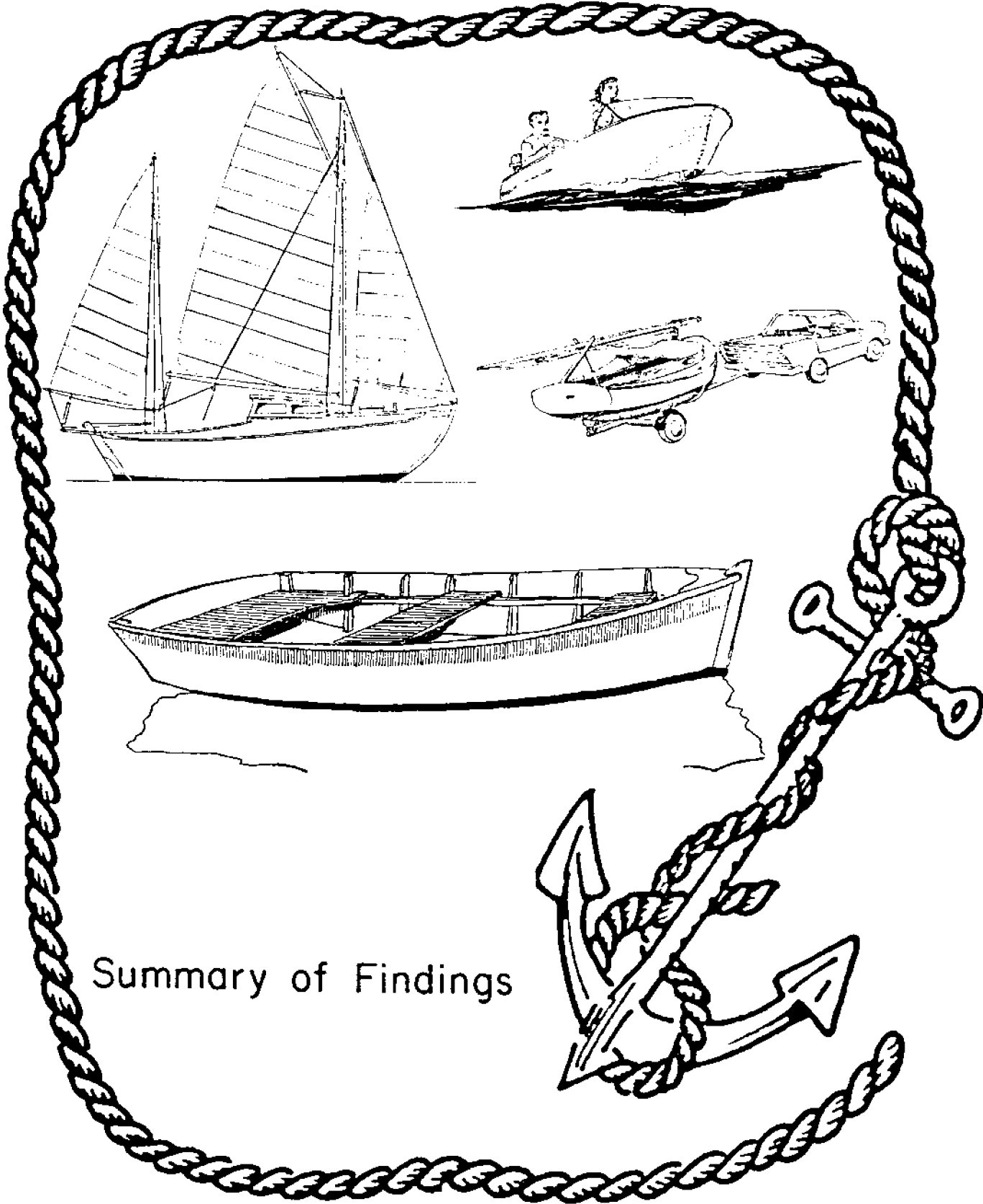
This report was prepared in cooperation with the Oregon State University Sea Grant College Program which is supported cooperatively by the National Oceanic and Atmospheric Administration, U.S. Department of Commerce, by the State of Oregon, and by participating local governments and private industry.

## ACKNOWLEDGEMENTS

The entire staff of the Oregon State Marine Board had much to do with the success of this survey. They prodded, co-operated and 'lent-an-ear' when it was most needed. This was especially true of Paul Donheffner, whose assistance was invaluable in producing a timely and comprehensive report.

Grateful appreciation is also extended to William E. Gilbert for his exceptional cartographic renderings of the graphic material included in this document.

In addition, special thanks are given to Julie Arana and Maxine Hilfiker for their skill, speed and accuracy during the coding and prepublication phases of the project.



Summary of Findings

## SUMMARY OF FINDINGS

THIS SURVEY WAS CONDUCTED IN COMPLIANCE WITH OREGON REVISED STATUTE 488.833. THE PURPOSE WAS TO DETERMINE THE TYPE, LOCATION AND VOLUME OF BOATING ACTIVITY WITHIN OREGON DURING THE 1977 - 1978 BOATING SEASON. AN APPROXIMATE TEN PERCENT SAMPLE OF ALL BOATS REGISTERED WITH THE OREGON STATE MARINE BOARD WAS COMPLETED IN THE FALL OF 1978. THIS REPORT PRESENTS THE FINDINGS OF THAT SURVEY BASED ON THE RESPONSES RECEIVED AND OTHER SUPPORTING MATERIAL. THE FOLLOWING IS A SUMMARY OF THE INFORMATION REPORTED HEREIN.

Over 66 percent of all registered boats and, in excess of, 69 percent of the State's population are concentrated in eight western counties. On the basis of boats per thousand population, only the two with the lower numbers of boats remain in the top eight.

Approximately 60 percent of Oregon's registered watercraft are less than 16 feet in length and 76 percent are powered by outboard motors. Over 55 percent have hulls that are built out of plastics and slightly under 42 percent have a primary motor of less than 25 horsepower.

The average age for pleasure boat owners, within the State, is 53 and over 34 percent are retired.

Bodies of water in Multnomah County continue to attract the most people and boats. However, the next five most popular counties all border on the Pacific Ocean. The average use for all registered pleasure boats is 22.9 days per year. Projected data indicates a total of 2.7 million days of boat use generating 8.3 million people days of activity each year.

Boating use varies seasonally, with 63 percent of all boating days occurring during the months of May, June, July and August. During the same months, 65 percent of people days occur.

Base data indicates that almost 12 percent of Oregon's pleasure boats are moored or kept in wet storage. Nearly 21 percent were not used, and, over 67 percent were transported during the boating year. Of those transported, each was launched an average of 15 times during the year.

Fishing remains the number one activity among pleasure boaters and accounted for more than 69 percent of boat days and over 63 percent of people days throughout 1977-1978.

Courtesy motorboat examinations were conducted for approximately ten percent of the State's pleasure boats. In the area of determining the actual numbers, or percent, of boats that were stopped and checked by Law Enforcement personnel, unresolved conflicts remain.

Most respondents to the survey found facilities at their favorite body of water to be adequate for their needs and reported no problems. Of those that did complain, 41 percent cited a lack of courtesy by other boaters and 32 percent said more ramps and parking lots were needed.

Attempts were also made to estimate the non-registered and out-of-state boater use within Oregon by statistical projections.

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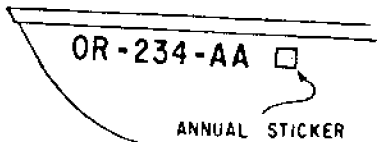
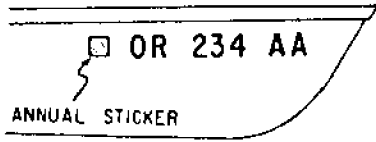


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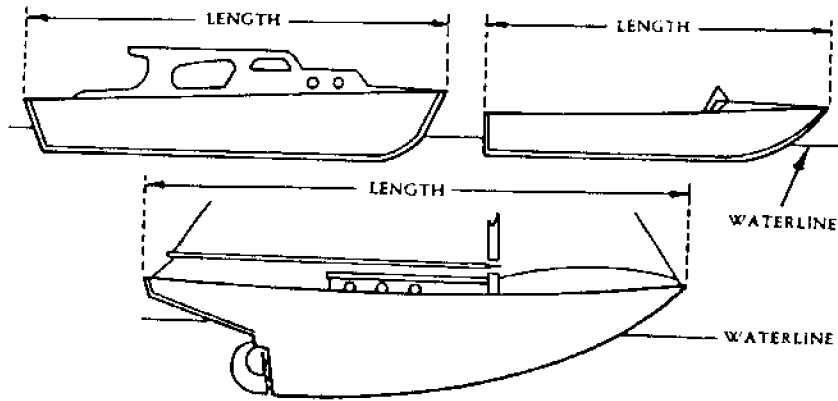
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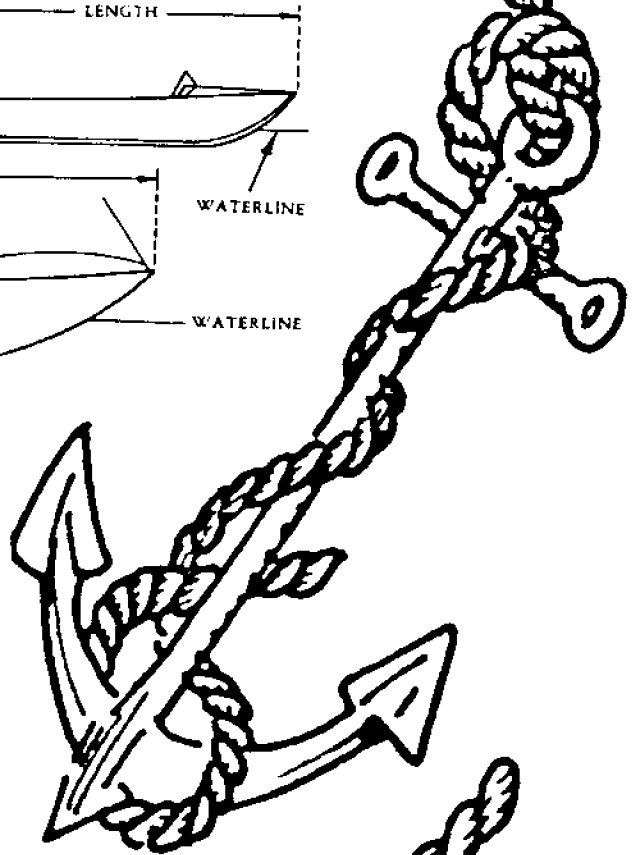
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Introduction



## INTRODUCTION

### Background

This report is the latest in a series of triennial surveys conducted under the auspices of the Oregon State Marine Board, (OSMB). The surveys are directed toward answering the basic questions of the who, where, when, why and how of Oregon's boating activities. Results of each survey are utilized by the Board, and its staff, to determine the efficiency of past programs, future problem areas, and the most effective allocation of funds to develop, improve and maintain the State's boating facilities and its boating safety programs.<sup>1</sup> All materials are retained by OSMB for three years and are available upon request to the Board. Reports from each survey are published and made available to the citizenry of the State.

### Purpose

The primary purpose of this report is to fulfill the legislated mandate for a timely, accurate, and usable survey of the activities of the pleasure boaters of Oregon.<sup>2</sup> Essentially, the questions asked in this survey are similar to those asked in the 1975 survey and therefore allow for general comparisons between the two. By such comparisons, it should be possible to detect any significant trends in the characteristics and activities of Oregon's pleasure boaters and their craft.

<sup>1</sup> Funds are distributed to counties on the basis of where the boats are used and NOT on the basis of where they are registered. However, any county may submit a proposal to OSMB requesting funds for projects to develop boating programs or improve boating facilities.

<sup>2</sup> Oregon Revised Statutes state that the OSMB:  
*Shall at least once every three years conduct a survey of owners and others to determine, by county, the kinds of boating activity on the various waters of the state during different periods of the year. Boating activity in a county shall be determined by taking into consideration the number and kinds of boats engaging in different boating activities in the county and the number of days during the last fiscal year that such activities were carried on in the county. (ORS 488.833)*

Criteria for the registration of boats has changed since 1960, as a result, all comparisons, conclusions and interpretations of change in this report will use the time frame of 1975 to and through 1978.<sup>3</sup>

A difference between the 1975 and 1978 surveys is the inclusion of "people days" as well as boat days in determining total usage of a specific body of water.<sup>4</sup> In a new area of interest, "how many boaters moored or stored their boats where they were used," base line data was gathered. In well established areas, officially recorded information was used rather than asking the boat owner to provide facts that OSMB already possessed, e.g., boat length and hull material.

#### Sampling and Boat Owner Response

The OSMB selected a sampling system for this survey that totaled ten percent of the boats registered in Oregon through 1 August 1978. Counties were divided into three categories according to the number of boats registered within each county. The groupings were as follows: 1,000 or less boats; 1,000 to 5,000 boats; 5,000 or more boats. Percentages were computed for each county to provide as precise a survey as possible. Basically, the larger the population of boats within a county, the lower the percent of

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<sup>3</sup> In 1960 and 1963, registered boats included only those with motors of 8 h.p. or more. From 1967 to 1971, they included boats with motors of 3.5 h.p. or more and sailboats 12 feet and over. For this report, as in 1975, a registered boat refers to a vessel which has been issued a certificate of number by OSMB. All motorized pleasure boats and sailboats 12 feet or over are required to obtain a certificate of number.

<sup>4</sup> A "people day" is the equivalent of an "activity occasion" which is defined as one person being in a boat involved in a boating activity for any portion of a 24 hour period. A boat day is the equivalent of one boat being involved in a boating activity for any portion of a 24 hour period, regardless of the number of people in or using the boat during that time.

owners within that county that were sent questionnaires. An expanded discussion of survey procedures may be found in Appendix A.

In all, 11,995 questionnaires were mailed out and 4,359 were returned and processed for analyzation. This amounted to an overall response rate of 36 percent which is 3.7 percent of the 118,465 pleasure boats registered with OSMB at the time of the survey.<sup>5</sup> Table 1 contains specific response data from the 36 counties. The response rate was approximately 26 percent lower than that attained in the 1975 survey but compares favorably with other surveys, of a similar nature, that were conducted contemporaneously with the 1978 survey. This lowered rate of response may be attributed, at least in part, to the changes in the sampling system from that used in 1975. As was done in the last survey, a follow-up, combination reminder/thank you, post card was mailed two weeks after the initial mailing of questionnaires. Unlike the 1975 survey, the response rates are very consistent for all 36 counties. Only one had a response rate lower than 30. Also, only two of the returned questionnaires were unable to be identified as to their respondents county of registration.

Returned questionnaires were coded, reduced to optical scanning sheets and converted to magnetic tape in preparation for statistical analysis and tabulation. The data was then manipulated and cross referenced by a modified statistical computer program to produce a best estimate of Oregon's total boating population, their activities and characteristics.

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<sup>5</sup> For survey purposes the 118,465 boat total was used, but for comparison of population data the registration total of 124,069 boats, as of 31 December 1978, was used.

TABLE 1  
 QUESTIONNAIRES RETURNED BY COUNTY OF REGISTRATION  
 1978 BOATING SURVEY

COUNTY	NO. BOATS REGISTERED	NO. QUEST. SENT	NO. QUEST. RETURNED	PERCENT RETURNS	PERCENT OF ALL RETURN.	PERCENT OF REG. BOATS IN COUNTY
Baker	747	187	81	43	01.86	10.84
Benton	2,382	298	118	40	02.70	05.00
Clackamas	10,791	863	316	37	07.25	02.93
Clatsop	1,945	250	108	43	02.48	05.55
Columbia	2,173	272	103	38	02.36	04.74
Coos	5,286	500	174	35	04.00	03.30
Crook	664	166	56	34	01.28	08.43
Curry	1,410	250	96	38	02.20	06.81
Deschutes	4,016	502	183	36	04.20	04.56
Douglas	5,590	500	166	33	03.81	02.97
Gilliam	81	50	15	30	00.34	18.52
Grant	296	74	31	42	00.71	10.47
Harney	295	74	16	22	00.37	05.42
Hood River	606	152	67	44	01.54	11.05
Jackson	6,670	534	181	34	04.15	02.71
Jefferson	544	136	49	36	01.12	09.01
Josephine	2,600	325	96	30	02.20	03.70
Klamath	4,080	510	169	33	03.88	04.14
Lake	250	63	24	38	00.55	09.60
Lane	13,711	1,000	389	39	08.92	02.84
Lincoln	2,443	305	111	36	02.55	04.54
Linn	4,426	553	170	31	03.90	03.84
Malheur	1,266	250	85	34	01.95	06.71
Marion	7,549	604	241	40	05.53	03.21
Morrow	232	58	21	36	00.48	09.05
Multnomah	21,520	1,300	486	37	11.15	02.26
Polk	1,572	250	79	32	01.81	05.03
Sherman	76	50	16	32	00.37	21.05
Tillamook	1,636	250	93	37	02.13	05.69
Umatilla	1,795	250	100	40	02.29	05.57
Union	841	210	94	45	02.16	11.18
Wallowa	283	71	33	46	00.76	11.17
Wasco	894	224	101	45	02.32	11.30
Washington	7,794	624	191	31	04.38	02.45
Wheeler	40	40	18	45	00.41	45.00
Yamhill	1,981	250	80	32	01.84	04.04
Not identified	0	0	2	0	00.05	00.00
<b>TOTALS</b>	<b>118,465</b>	<b>11,995</b>	<b>4,359</b>	<b>36</b>	<b>100.00</b>	<b>36.80</b>

A cover letter from the Director of OSMB, printed as part of the questionnaire, was worded in such a manner as to encourage boat owners to respond to the questions and add constructive comments.<sup>6</sup> Twenty-one questions were asked of each boat owner. This number of questions was a compromise between the desire to gather as much useful data as possible and the likelihood of the respondent losing interest and therefore failing to fill out or return the questionnaire. The first fifteen questions dealt with the specific registered watercraft and how or where it was used. The remaining questions concerned other watercraft owned or used by the respondent, various boating courses or training attended and selected socio-economic characteristics of the boat owner.

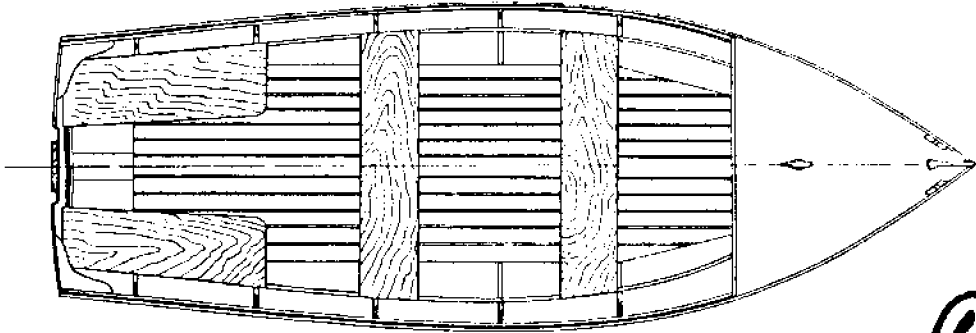
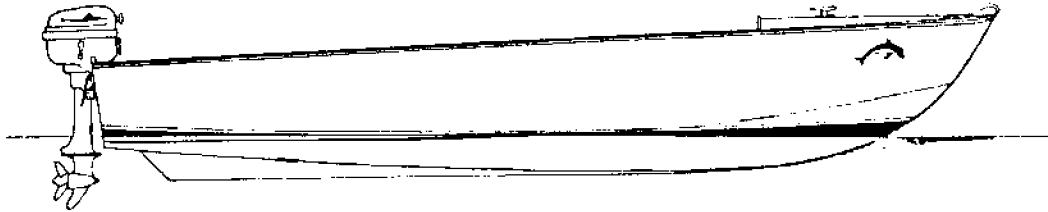
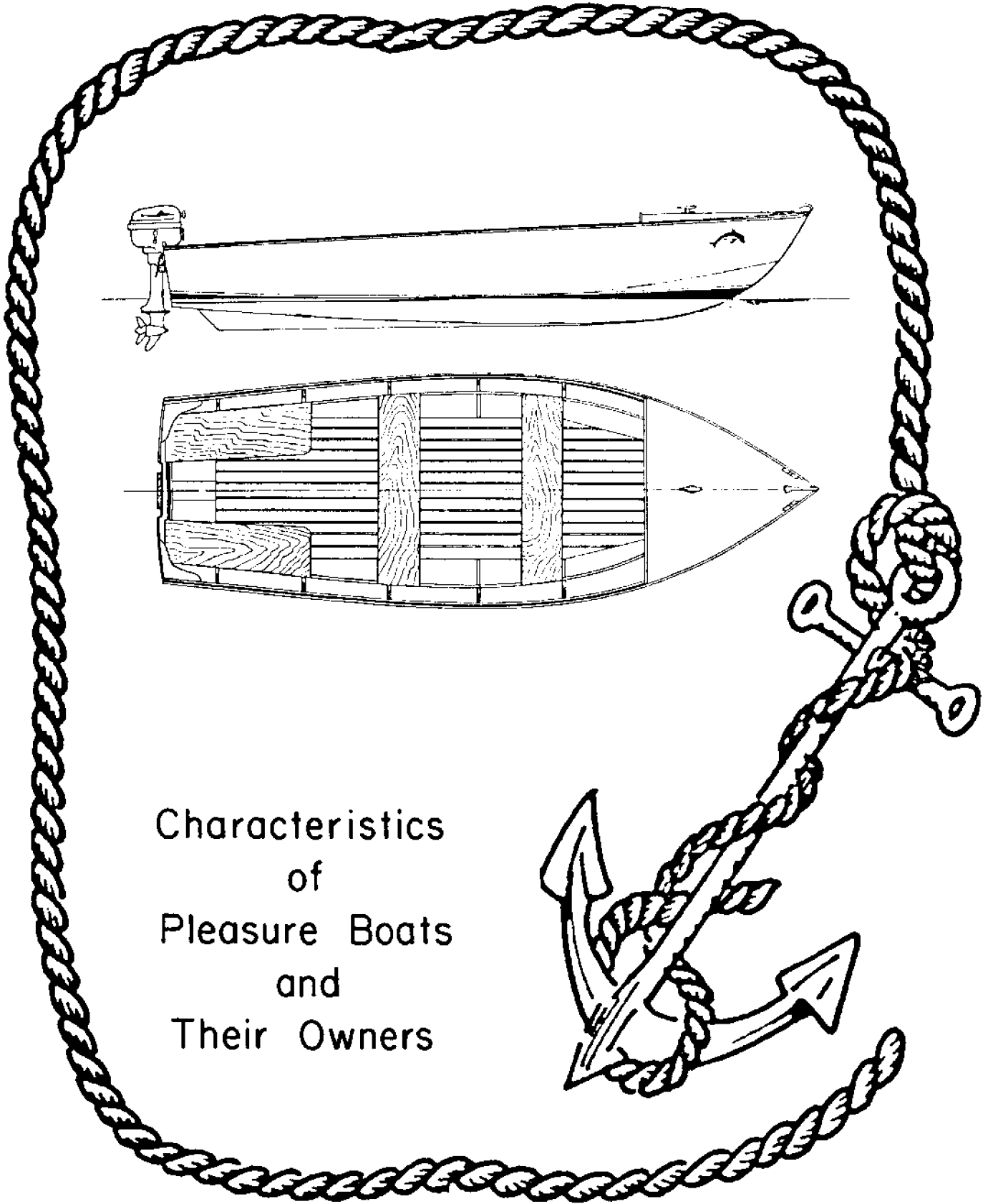
Boat owner responses to most questions in this survey were much more consistent, when similar information was requested, than for those in the 1975 survey. Specifically, in the questions concerning boating days per month (question two), and days of boating on a given body of water (question eight), the numbers given correlate exceptionally well. In many instances there is evidence that boating days per month were added up by the respondent and used for total days of boating on the body(s) of water and vice versa.

Readers of this report should be aware that certain figures and tables reflect raw survey data and percentages, the remainder are statistical projections of that data and reflect figures for the entire pleasure boating population of the State. Each figure and table is so identified, as are those that reflect officially recorded information.

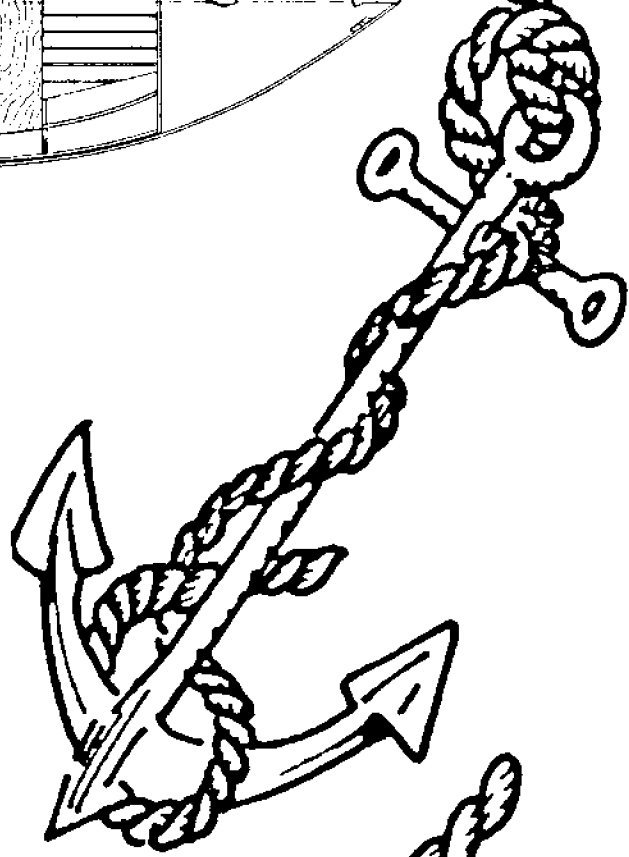
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<sup>6</sup> Selected respondent comments are categorized and included in this report as Appendix C.





Characteristics  
of  
Pleasure Boats  
and  
Their Owners

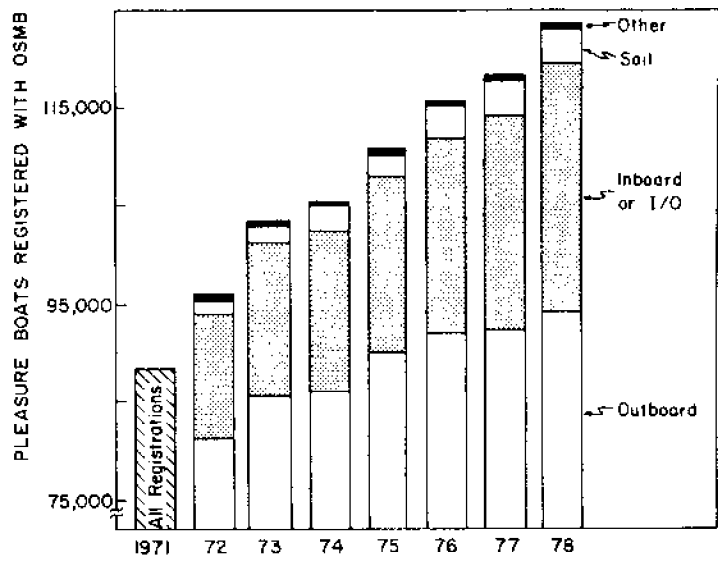


## CHARACTERISTICS OF PLEASURE BOATS AND THEIR OWNERS

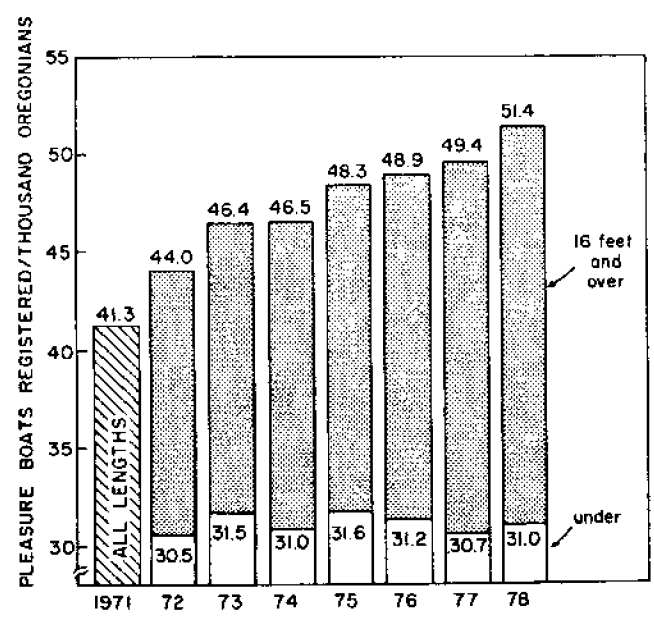
### Trends

During the 1970's total pleasure boat registration in Oregon has increased by 40 percent, (Figure 1A). The annual rate of increase however, has steadily diminished, even though the total number continues to rise. The period of least growth was the 1973-1974 boating year. Registration rolls increased only 2.1 percent compared with 7.4 a year earlier and 5.4 percent the year after. A general assumption attributes this alteration in the growth pattern to the shortage of gasoline and other economic problems following the foreign oil embargos of 1973. The per capita registration rate for the 1970's has also grown steadily from 41.3 to 51.4 boats per thousand population, an average increase of 3.0 percent annually,(Figure 1B). At the same time the State's population has been increasing by only 1.8 percent per year.

From Figure 1 it can be seen that the popularity of pleasure boats of over 16 feet in length is steadily increasing. Additionally, both Sailboats and Inboard/Inboard-Outboard watercraft are steadily becoming larger portions of the total number of pleasure boats in the State. Currently, some commercial sources are privately reporting 100 percent annual increases in sales of non-motorized watercraft such as kayaks, canoes and rafts. However, there is little confirmable data available on previous numbers of non-registered watercraft owned by Oregonians. Appendix D lists current survey projections on both registered and non-registered watercraft that are owned or used by Oregon boaters.



TOTAL REGISTRATIONS FROM 1971 TO 1978 WERE:  
 1971 - 88,429    1973 - 103,182    1975 - 111,045    1977 - 118,465  
 1972 - 96,064    1974 - 105,342    1976 - 115,880    1978 - 124,069



IN 1971, REGISTERED BOATS ONLY INCLUDED BOATS WITH MOTORS OF 3.5 HORSEPOWER OR MORE AND SAILBOATS 12 FEET AND OVER.  
 FROM 1972 THROUGH 1978, REGISTERED BOATS INCLUDED ALL MOTORIZED PLEASURE BOATS AND SAILBOATS 12 FEET AND OVER.

Figure 1. Growth of pleasure boat registration in Oregon, 1971-1978.

### County of Registration

The boating population of Oregon follows the pattern of the over-all population, with the majority of pleasure boat owners living in counties that are west of the Cascade Mountains. There were eight counties with more than 5,000 registered boats. In descending order they were: Multnomah with 21,819; Lane with 14,402; Clackamas with 11,393; Washington 8,239; Marion 8,065; Jackson 7,399; Douglas 5,839; and Coos with 5,371.<sup>1</sup> These eight counties accounted for 66.5 percent of all pleasure boats registered in Oregon and 69.35 of the State's population.

On a per capita basis other counties take the lead in Oregon's boating population. This is primarily due to the county's proximity to, or containment of, highly desirable bodies of water that are used for a variety of boating activities. The ten counties having more than 50 registered boats per thousand population are: Curry with 102.4; Deschutes with 97.7; Coos at 88.2; Tillamook at 87.2; Lincoln 86.8; Klamath 76.7; Douglas 68.3; Columbia 67.9; Jackson 61.6 and Clatsop with 61.5.<sup>1</sup> A comparison of pleasure boat registrations and pleasure boats per thousand population, for the State's Counties are shown in Figure 2.

### Boat Characteristics

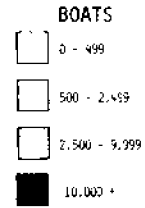
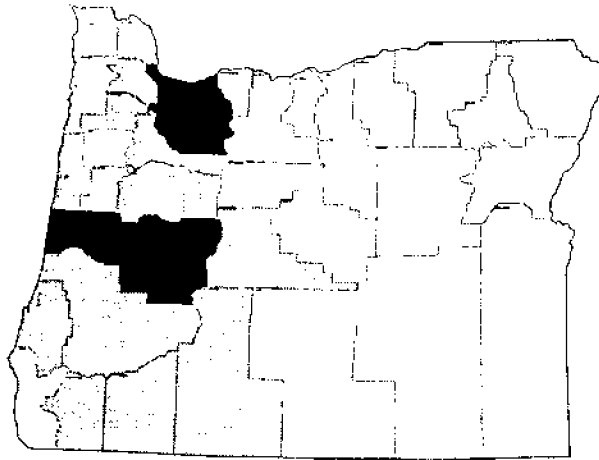
Differences in sample selection procedures and the wording of related but dissimilar questions make direct comparisons between the 1975 and 1978 survey findings tenuous, if not misleading. The reader should note carefully where and how the data was derived before making such comparisons. 1978 survey questions were directed toward the acquisition of information not otherwise available. For example: In the case of boat length (see

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<sup>1</sup> These figures were effective as of 31 December 1978.

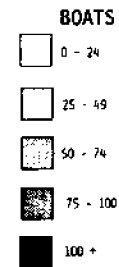
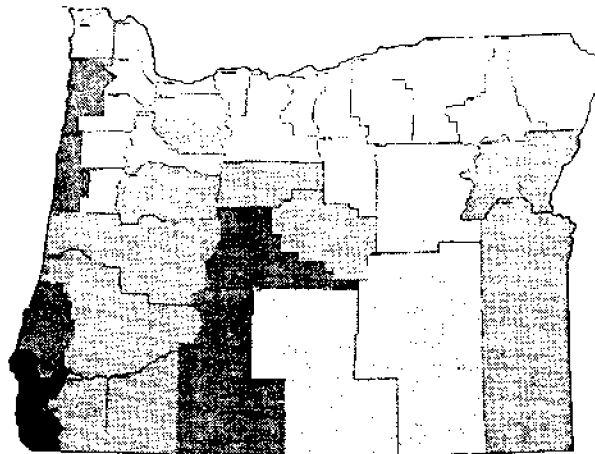
**NUMBER OF PLEASURE BOATS REGISTERED**

The total number of boats registered in Oregon for 1978 was 124,060.



**PLEASURE BOATS PER THOUSAND POPULATION**

The State average for 1978 was 51.4 boats per thousand people.



**Figure 2. County variation in pleasure boat registration in Oregon, 1978.**

Figure 3A), the 1975 survey chart was based on respondent's answers while the 1978 survey chart reflects official information found on form 250LA-1, "Application for Boat Registration," for each registered boat.<sup>2</sup>

There are close relationships of data between the 1975 and 1978 surveys when looking at the percentage of boats that are over or under 16 feet in length. In 1975, 59.4 percent were under 16 feet while 60.4 are in that class for 1978. Figure 3A gives a further breakdown by class length and Table 2 contains boat length data for each county.

Registration data indicates that 76.2 percent of Oregon's pleasure boats have an outboard motor as their primary propulsion system. This compares with the responses in 1975 which had 78 percent saying their boats had outboard only, power systems. The only other comparable category is sailboats, comprising 2.7 percent in 1975 and now making up 3.0 percent of the State's pleasure boats. Figure 3B gives the state-wide percentages of various power systems.

The horsepower ratings of the primary, and any additional, power systems, on a state-wide basis, are presented in Figure 3C. The data comes from the 1978 survey entirely, because boat owners are not required to inform the OSMB when motors are added, changed or deleted. The only significant change between 1975 and 1978 are those for the 0-24 horsepower class, which decreased 4.7 percent, and the 100 plus horsepower class, which increased 6.9 percent. Figure 4 presents state-wide registration data on primary power systems as related to hull material for the four categories: Outboard; Inboard and Inboard/Outboard; Sailboat; and Steam for the years 1972 to and through 1978.

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<sup>2</sup> A sample copy of Form 250LA-1 is included as part of Appendix E.

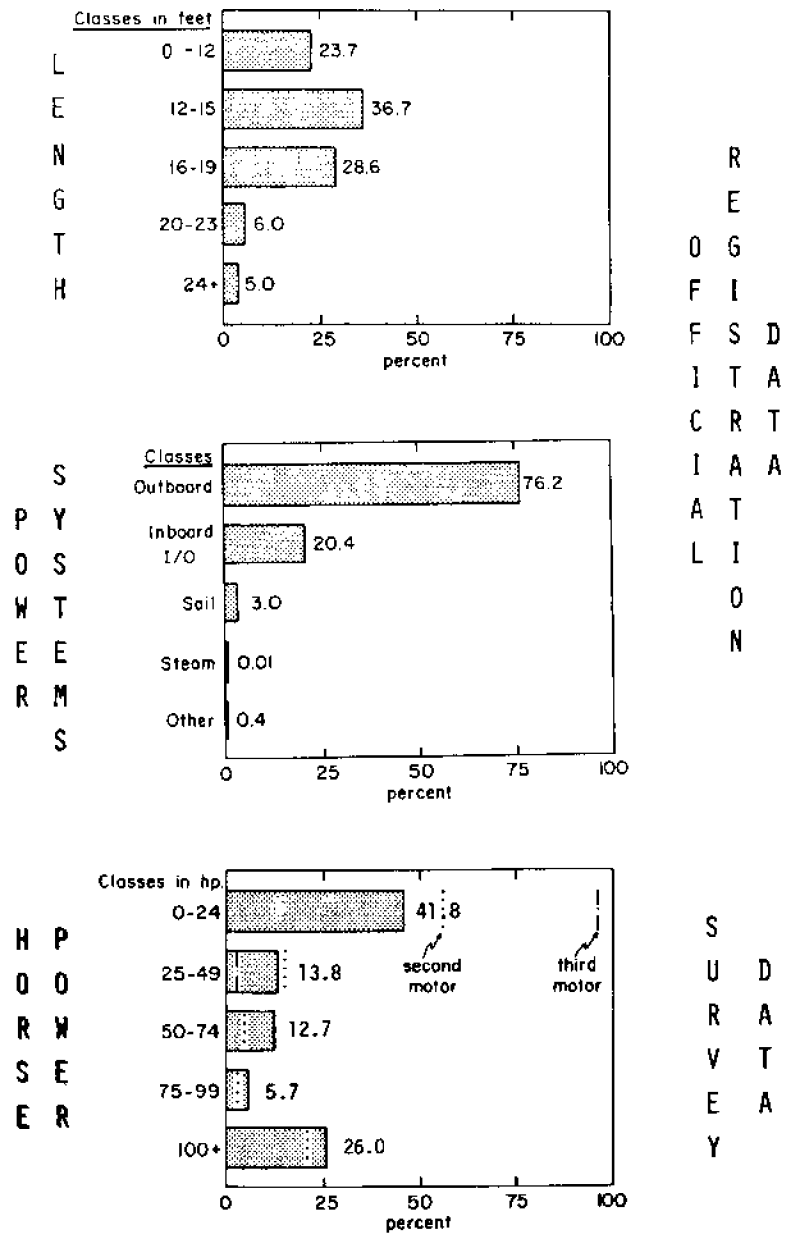


FIGURE 3 LENGTH, POWER SYSTEMS AND HORSEPOWER CHARACTERISTICS OF PLEASURE BOATS IN OREGON, 1978.

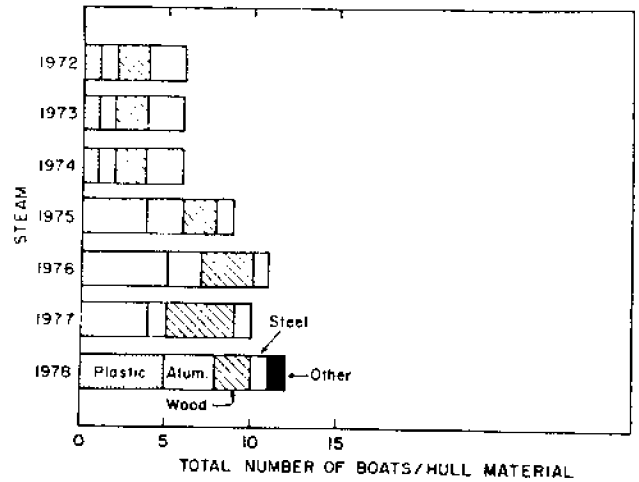
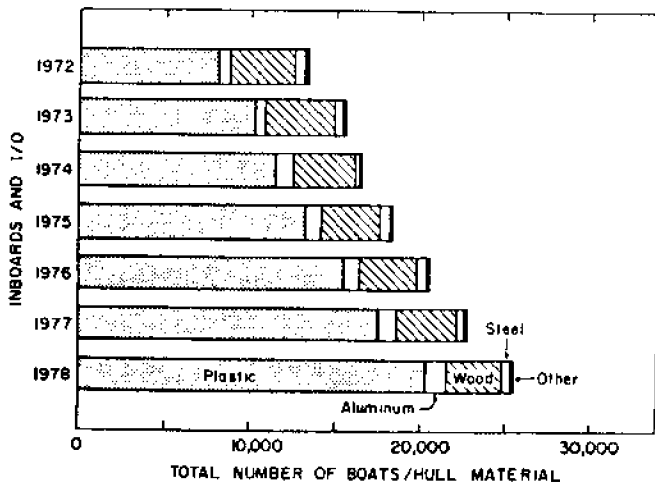
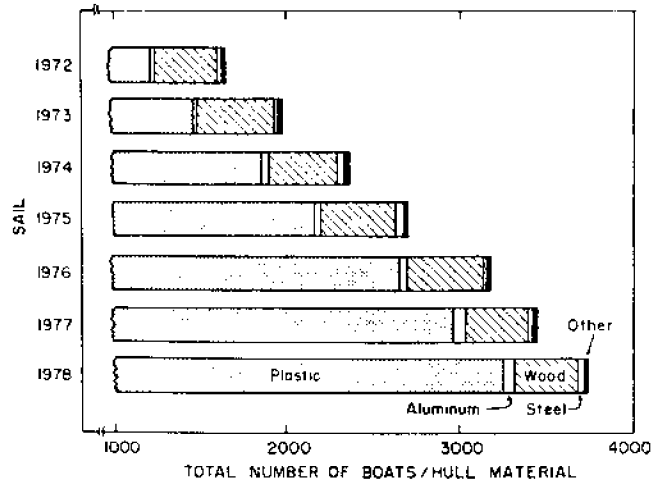
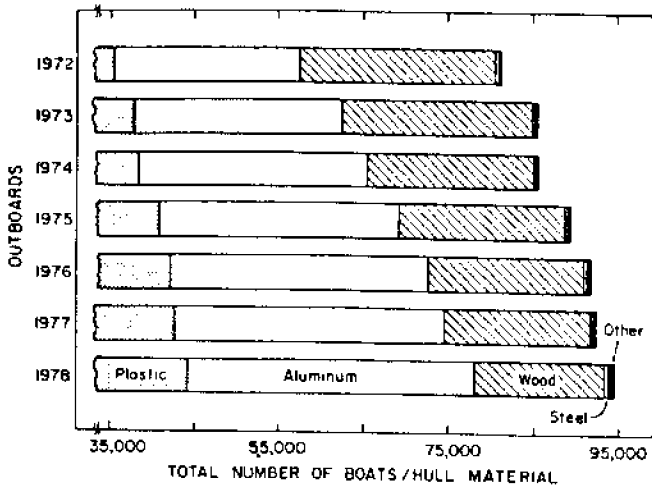


FIGURE 4 Distribution of Hull Materials and Power Systems of Oregon's Pleasure Boats.



TABLE 2  
 OREGON PLEASURE BOAT CHARACTERISTICS  
 BY COUNTY OF REGISTRATION

County	Less Than 16 Feet	Over 16 Feet	Avg Primary Motor h.p.	Avg Fuel Used/Day	Times Transported Per Year-Avg	Number* Damaged
Baker	579	247	25-49	7.77	13.61	89
Benton	1,624	850	50-74	7.46	12.67	162
Clackamas	6,190	5,203	50-74	7.57	12.60	651
Clatsop	1,054	814	75-99	10.56	16.00	255
Columbia	1,169	1,115	75-99	8.30	17.10	211
Coos	3,430	1,941	50-74	6.27	14.67	244
Crook	518	199	50-74	6.52	12.49	24
Curry	646	847	75-99	6.88	9.03	45
Deschutes	3,407	1,025	50-74	5.74	12.45	154
Douglas	3,632	2,227	50-74	6.07	14.30	99
Gilliam	51	24	50-74	5.90	16.38	5
Grant	253	61	50-74	7.84	10.02	0
Harney	239	52	25-49	4.73	7.34	0
Hood River	421	224	50-74	10.06	9.36	0
Jackson	4,892	2,507	50-74	5.63	10.94	334
Jefferson	378	203	75-99	6.76	7.73	11
Josephine	2,014	825	25-49	5.19	15.30	135
Klamath	3,038	1,296	50-74	6.29	12.37	241
Lake	223	31	25-49	5.17	24.88	0
Lane	8,872	5,530	50-74	6.83	12.76	218
Lincoln	1,606	925	50-74	7.65	8.61	88
Linn	3,067	1,511	50-74	7.35	11.09	104
Malheur	868	476	75-99	9.76	12.80	105
Marion	5,016	3,049	50-74	7.13	11.56	378
Morrow	135	79	50-74	7.85	4.14	11
Multnomah	11,357	10,462	75-99	8.90	11.12	1,564
Polk	968	627	50-74	5.56	10.35	61
Sherman	41	36	75-99	7.85	14.15	0
Tillamook	1,040	606	50-74	8.22	13.02	54
Umatilla	1,094	763	50-74	7.93	11.56	90
Union	590	320	50-74	6.31	11.02	18
Wallowa	165	113	50-74	5.11	10.68	52
Wasco	536	348	50-74	7.67	11.43	53
Washington	4,540	3,699	50-74	7.17	14.66	452
Wheeler	33	8	50-74	5.45	5.60	0
Yamhill	1,311	829	50-74	8.61	16.86	25
State Totals	74,997	49,072	50-74	7.32	12.47	5,872

\* This number is the projected value from survey data and does not reflect actual numbers of reported boat damages.

As a result of the 1978 survey and its questions of a peripheral nature concerning boat characteristics, a picture of the "Average Boat" can be pieced together. The typical Oregon pleasure boat has a plastic hull of less than 16 feet in length, it has an outboard engine rated at 50 to 74 horsepower that consumes 7.3 gallons of fuel every day that it is used, it was transported from home to its owner's favorite body of water by trailer 12.5 times a year, and stood a one in twenty chance of being damaged in some way while in use. These characteristics of Oregon's pleasure boats, by county of registration, are presented in Table 2 and Appendix E.

#### Characteristics of Pleasure Boat Owners

Returns from the 1978 survey sketch the following profile of the State's pleasure boat owners. They are 53 years of age and 97.6 percent are males. Retired persons own 34.4 percent of the registered boats. Most owners now work as private enterprise wage earners in a consumer oriented industry, or did so before retirement. Average family income ranges from \$15,000 to \$20,000 per year and most have had some college or technical school training.

Of the boat owners that responded to the survey, 19.4 percent made comments of both a constructive and critical nature, (see Appendix C). Over 50 percent of the respondents sealed their questionnaires with tape (28.9 percent), staples (22.3 percent), or other means (0.8 percent). Almost 10 percent identified themselves and one-half of a percent paid for the return postage for the questionnaire even though they were told that no stamp was necessary.

Survey data also indicated that 1.4 percent of boat owners registered as of 1 January 1978 had sold their boat during the year and had not purchased a replacement. In addition, 1,330 boats initially listed as pleasure

TABLE 3  
OREGON PLEASURE BOAT OWNER CHARACTERISTICS  
BY COUNTY OF REGISTRATION

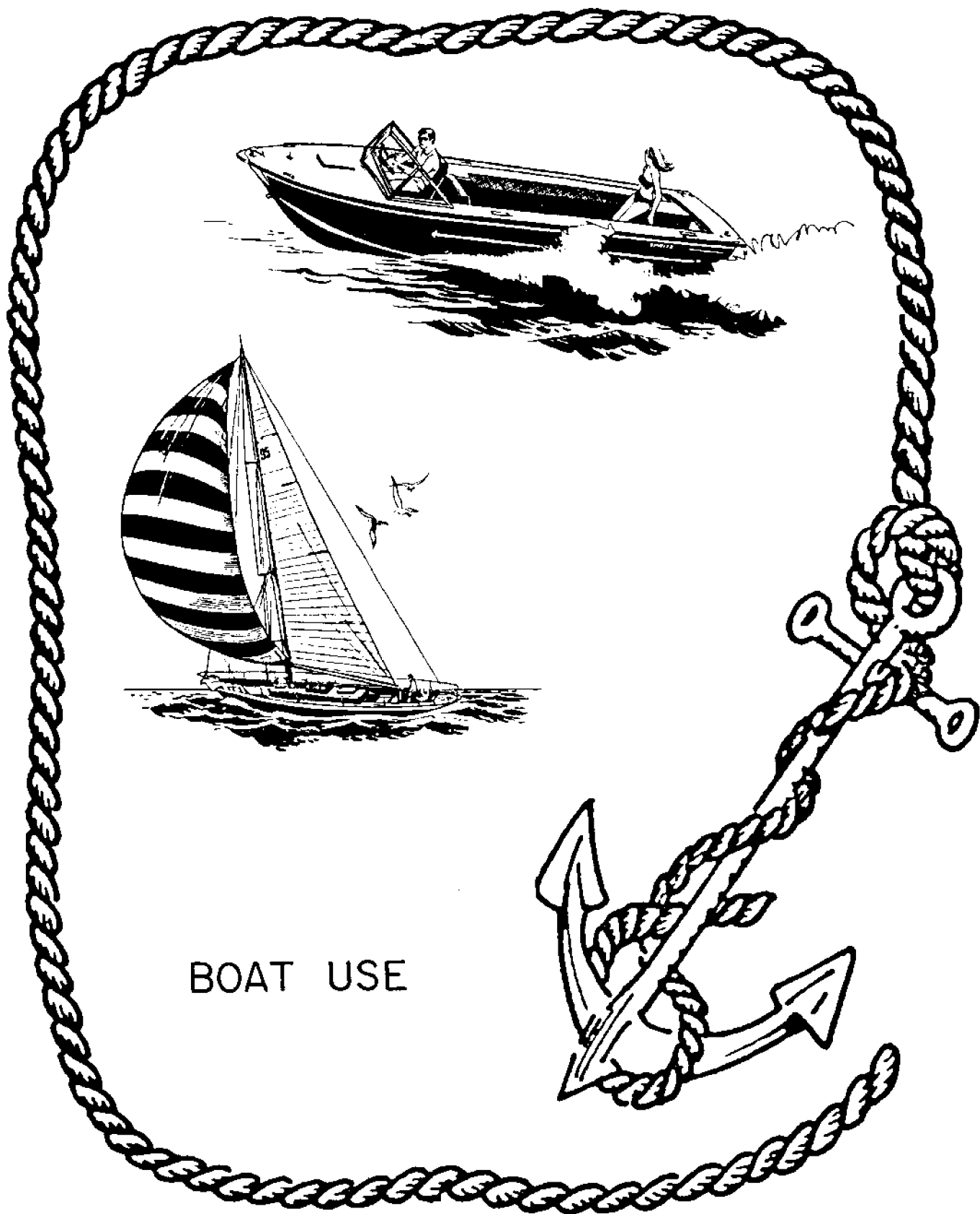
County	Avg Age	Percent* Male	Percent Female	Percent Retired	Avg Level of Education	Avg* Famil. Incom
Baker	55	98.4	1.6	44.72	H.S. Grad	10-15
Benton	52	97.2	2.8	28.42	Some Coll	20-30
Clackamas	50	97.6	2.4	24.92	Some Coll	20-30
Clatsop	51	98.1	1.9	30.13	Some Coll	15-20
Columbia	51	96.8	3.2	28.72	H.S. Grad	15-20
Coos	55	95.6	4.4	44.65	H.S. Grad	15-20
Crook	54	100.0	0.0	49.09	H.S. Grad	10-15
Curry	58	97.6	2.4	55.75	Some Coll	15-20
Deschutes	56	96.9	3.1	53.38	Some Coll	15-20
Douglas	54	98.0	2.0	33.55	H.S. Grad	15-20
Gilliam	50	91.5	8.5	37.28	Some Coll	15-20
Grant	56	100.0	0.0	41.52	H.S. Grad	10-15
Harney	47	100.0	0.0	7.88	H.S. Grad	15-20
Hood River	53	98.3	1.7	41.39	H.S. Grad	15-20
Jackson	55	99.4	0.6	42.94	H.S. Grad	15-20
Jefferson	51	92.7	7.3	29.23	H.S. Grad	15-20
Josephine	58	96.6	3.4	60.22	H.S. Grad	10-15
Klamath	53	94.8	5.2	37.26	Some Coll	15-20
Lake	50	95.6	4.4	16.60	H.S. Grad	15-20
Lane	53	98.3	1.7	33.99	Some Coll	15-20
Lincoln	55	93.1	6.9	50.98	H.S. Grad	15-20
Linn	52	100.0	0.0	32.10	H.S. Grad	15-20
Malheur	55	94.8	5.2	40.99	Some Coll	15-20
Marion	53	98.2	1.8	34.52	Some Coll	15-20
Morrow	55	95.2	4.8	42.67	H.S. Grad	10-15
Multnomah	52	97.5	2.5	29.12	Some Coll	20-30
Polk	54	98.6	1.4	33.38	2 yrs+ Coll	15-20
Sherman	50	100.0	0.0	27.14	Some Coll	15-20
Tillamook	57	98.8	1.2	48.22	H.S. Grad	10-15
Umatilla	53	97.8	2.2	37.36	Some Coll	15-20
Union	55	98.8	1.2	36.45	H.S. Grad	15-20
Wallowa	59	100.0	0.0	50.00	H.S. Grad	15-20
Wasco	53	97.7	2.3	37.42	H.S. Grad	15-20
Washington	49	97.2	2.8	19.78	2 yrs+ Coll	20-30
Wheeler	59	100.0	0.0	41.93	H.S. Grad	10-15
Yamhill	52	98.6	1.4	36.09	H.S. Grad	15-20
<b>State Totals</b>	<b>53</b>	<b>97.6</b>	<b>2.4</b>	<b>34.43</b>	<b>Some Coll</b>	<b>15-20</b>

\* Includes married couples who have registered joint ownership.

\*\* Expressed in thousands of dollars per year.

boats were projected as not being used as such, but were being used for other activities ranging from commercial fishing vessels to a boat used by a lumber company on one of its mill ponds. Responses also show that registered boat owners in Oregon own many other watercraft. Only 49.8 percent said that they owned no other watercraft. Almost one percent claim that they own or use three or more watercraft in addition to the one on the questionnaire. The three types of watercraft most often indicated as a second or third boat include outboards (27.0 percent), rowboats (26.2 percent), and rafts or other inflatables (21.6 percent). Details on types, length and propulsion systems of additional watercraft are contained, by county of registration, in Appendix D.

Table 3 and Appendix F detail boat owner characteristics by county of registration. Although a characteristic, the ways in which boat owners use their boat will be the subject of the next chapter.



BOAT USE

## BOAT USE

### Where and When

Oregon pleasure boaters use their boats in all counties of the State and during every month of the year. However, given the seasonal nature of most water related recreational uses, there is a wide variance in the numbers of boats and people involved at any one time or location. Figure 5 displays pictorially the county variations as to where people, and their boats, went to participate in water activities during the 1977-1978 boating year. Figure 6 displays the county variations in how much boating was done by the boats and people from each county by county of registration. As might be expected, Multnomah County leads the State in total volume of use by boats and people but drops back into the pack when one considers the times each boat was used and how many people from that county went boating during the year. As an example; Throughout the 1977-1978 boating year, bodies of water in Multnomah County were used by Oregon boats a total of 454,361 days, thus producing 1,508,613 activity occasions. At the same time, Multnomah County boat owners used their boats for 562,387 days with 1,630,271 people aboard. This means that each boat used by a Multnomah owner spent an average of 33 days of the boating year in operation, either in Multnomah County or elsewhere. This compares with a state-wide average of 22.87 days of use per year by each registered pleasure boat.<sup>1</sup>

The top five counties receiving the most use, after Multnomah, are Lincoln, Lane, Coos, Douglas and Tillamook. Since all five have large numbers of boats registered to their citizens and border the Pacific Ocean, it is little wonder that they should lead the State in popularity.

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<sup>1</sup> Tables 4 and 5 present boat days and people days, by activity, for the county of use. Appendix G contains a month by month total, and average, of both boat and people days by county of registration.

The total number of "BOAT DAYS" for 1978 was 2,709,356.

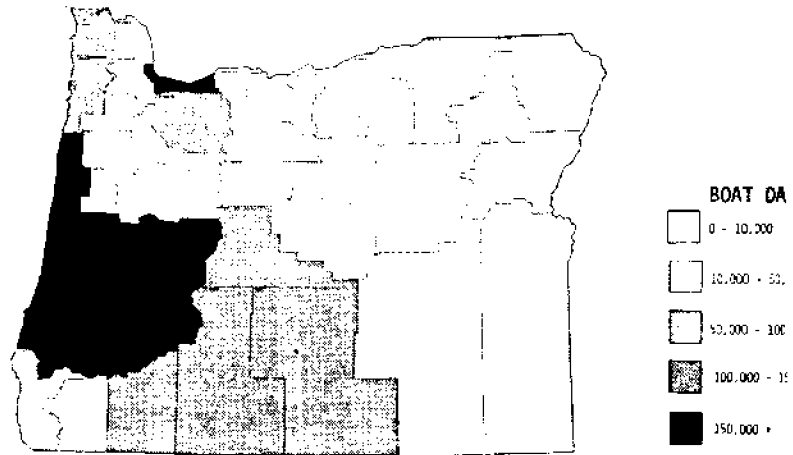


FIGURE 5A "BOAT DAYS" OF USE BY OREGON PLEASURE BOAT USERS BY COUNTY OF USE FOR THE 1977-1978 BOATING YEAR.

The total number of "PEOPLE DAYS" for 1978 was 8,300,007.

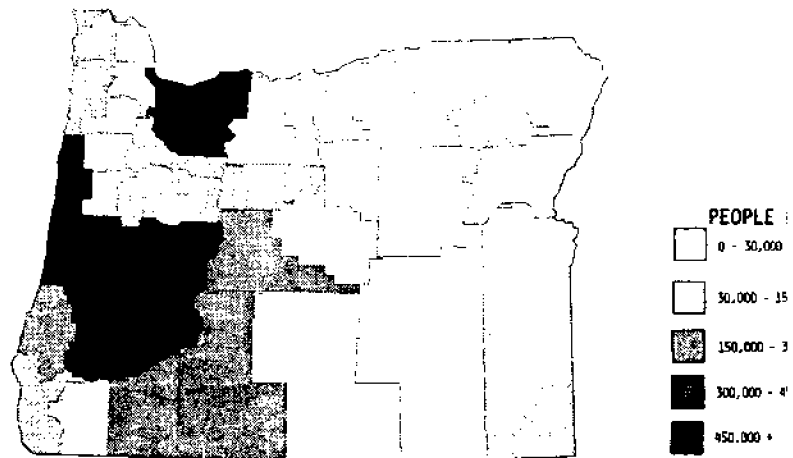


FIGURE 5B "PEOPLE DAYS" OF USE BY OREGON PLEASURE BOAT USERS BY COUNTY OF USE FOR THE 1977-1978 BOATING YEAR.

The total number of "BOAT DAYS" for 1978 was 2,709,356.

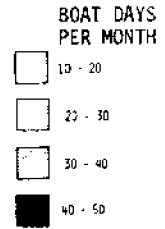
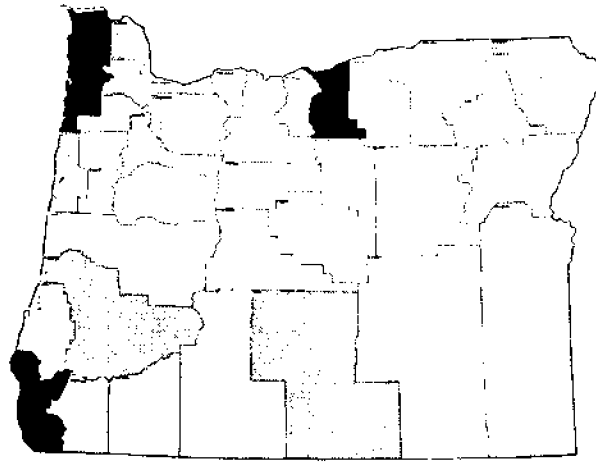


FIGURE 6A "BOAT DAYS" OF USE BY OREGON PLEASURE BOAT USERS BY COUNTY OF REGISTRATION FOR THE 1977 - 1978 BOATING SEASON.

The total number of "PEOPLE DAYS" for 1978 was 8,300,001.

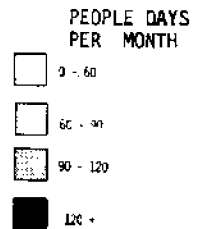
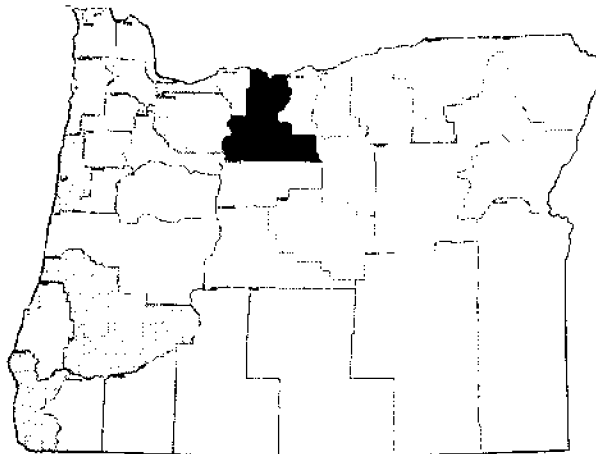


FIGURE 6B "PEOPLE DAYS" OF USE BY OREGON PLEASURE BOAT USERS BY COUNTY OF REGISTRATION FOR THE 1977 - 1978 BOATING SEASON.



TABLE 4  
BOAT DAYS OF USE

COUNTY	# BOATS	FISHING	SAILING	SKIING	CRUISING	OTHER	TOTAL
BAKER	2,075	22,732	18	3,154	1,139	327	27,408
BENTON	509	10,193	76	324	477	899	11,538
CLACKAMAS	5,591	71,663	641	23,148	13,219	3,563	114,544
CLATSOP	4,655	92,573	1,142	2,347	11,830	4,767	111,991
COLUMBIA	3,029	65,635	744	5,182	9,163	3,019	83,787
COOS	10,321	141,345	5,404	17,662	24,230	8,999	195,576
CROOK	3,059	19,975	0	9,380	2,612	1,066	31,721
CURRY	3,255	83,919	0	314	3,418	1,553	90,525
DESCHUTES	10,321	115,993	1,328	2,607	3,486	1,502	126,801
DOUGLAS	10,268	165,170	1,270	11,123	6,803	5,750	190,721
GILLIAM	88	1,480	0	152	28	42	1,702
GRANT	219	2,330	0	0	0	0	2,330
HARNEY	340	3,308	0	0	0	217	3,525
HOOD RIVER	338	2,103	958	1,114	2,440	157	6,771
JACKSON	6,947	82,312	3,470	8,218	10,236	1,371	105,389
JEFFERSON	4,478	39,651	669	17,153	6,897	862	65,482
JOSEPHINE	732	17,480	178	108	460	108	18,336
KLAMATH	6,438	71,710	7,312	14,610	9,429	7,554	110,638
LAKE	510	5,832	0	1,233	0	285	7,350
LANE	11,759	145,079	15,930	25,444	28,660	4,273	220,627
LINCOLN	10,901	214,503	4,771	8,873	6,127	6,765	239,963
LINN	3,605	23,702	81	16,773	5,413	1,183	48,603
MALHEUR	1,349	13,163	419	2,318	1,133	283	17,315
MARION	4,588	36,926	2,274	11,109	8,255	2,400	60,961
MORROW	216	2,853	198	469	329	162	2,985
MULTNOMAH	17,262	187,459	68,902	54,349	133,246	13,618	454,361
POLK	579	6,454	0	3,702	373	869	11,480
SHERMAN	420	3,439	54	637	549	555	5,117
TILLAMOOK	7,109	120,532	350	2,540	3,955	8,295	137,231
UMATILLA	1,028	9,556	0	6,317	5,415	144	21,252
UNION	342	2,202	80	386	54	126	2,856
WALLOWA	903	8,562	80	3,441	1,746	63	13,892
WASCO	920	7,091	0	2,049	4,331	561	14,236
WASHINGTON	2,968	24,264	4,422	4,384	723	839	35,371
WHEELER	4	62	0	0	0	0	62
YAMHILL	614	923	31	5,392	1,269	743	8,359
UNKNOWN	100,834	70,853	11,607	10,188	13,767	3,586	110,001
TOTALS	2,681,493	1,893,029	132,409	276,200	321,212	86,506	2,709,356

TABLE 5  
 OREGON PLEASURE BOAT "PEOPLE DAYS" OF USE, BY COUNTY OF USE  
 DURING THE 1977-1978 BOATING SEASON

COUNTY OF USE	TYPE OF ACTIVITY					TOTAL
	FISHING	SAILING	SKIING	CRUISING	OTHER	
BAKER	66,804	54	12,729	3,770	1,022	84,379
BENTON	27,441	304	1,336	1,231	2,131	32,443
CLACKAMAS	253,167	9,022	128,098	87,188	13,560	491,035
CLATSOP	281,516	3,694	8,866	54,891	12,871	361,838
COLUMBIA	176,430	2,932	21,333	34,566	9,302	244,563
COOS	318,198	5,660	28,995	31,972	23,534	408,359
CROOK	60,870	0	47,131	10,860	3,579	122,440
CURRY	219,136	0	941	11,656	3,979	235,712
DESCHUTES	301,845	2,729	11,850	11,863	4,141	332,428
DOUGLAS	431,660	6,859	48,097	21,973	14,812	523,401
GILLIAM	4,652	0	346	56	84	5,138
GRANT	6,437	0	0	0	0	6,437
HARNEY	7,788	0	0	0	435	8,223
HOOD RIVER	6,238	2,874	4,622	9,502	599	23,835
JACKSON	227,124	11,375	38,180	32,506	3,197	312,382
JEFFERSON	139,287	3,870	78,564	29,403	3,581	254,705
JOSEPHINE	49,919	356	325	1,056	135	51,791
KLAMATH	184,945	25,236	65,164	41,166	20,256	336,767
LAKE	13,739	0	4,886	0	560	19,185
LANE	372,436	57,796	106,121	87,112	11,770	635,235
LINCOLN	583,839	13,740	27,441	18,026	19,657	662,703
LINN	64,855	323	78,786	18,216	3,728	165,908
MALHEUR	40,389	419	10,882	4,034	956	56,680
MARION	100,940	15,370	43,992	32,410	5,778	198,490
MORROW	8,380	720	1,875	1,127	648	12,750
MULTNOMAH	520,864	241,445	239,368	462,566	44,370	1,508,613
POLK	25,153	0	18,764	1,309	2,447	47,673
SHERMAN	7,878	216	3,028	1,381	1,350	13,853
TILLAMOOK	329,888	1,029	9,856	14,070	25,138	379,981
UMATILLA	27,577	0	27,005	22,627	504	77,713
UNION	6,473	161	1,218	215	252	8,319
WALLOWA	25,224	161	14,854	4,958	160	45,357
WASCO	29,439	0	15,677	32,796	1,679	79,564
WASHINGTON	66,773	11,543	18,773	2,577	3,350	103,016
WHEELER	107	0	0	0	0	107
YAMHILL	3,250	126	22,370	4,018	2,146	31,910
STATE OF IDAHO	1,396	1,206	1,912	134	925	5,573
STATE OF WASH.	130,306	24,683	9,929	25,308	5,304	195,530
STATE OF CALIF.	25,251	0	15,177	1,597	1,392	43,417
STATE OF NEVADA	888	0	0	0	45	933
UNKNOWN	90,642	8,578	35,543	20,581	17,908	173,252
TOTALS	5,237,480	452,481	1,204,034	1,138,721	267,285	8,300,001

The total number of boat days of use for the 1977-1978 season by boats registered in Oregon is estimated to be 2,709,356 days or 22.87 days per registered pleasure boat. Projected survey data indicates that for every day of use each boat carried an average of three people. Therefore, in terms of people or users, there were over 8.3 million activity occasions of boating in Oregon. This number reflects only Oregon registered boat use and does not include non-registered and out-of-state boaters.<sup>2</sup>

Considering the investment in owning a pleasure boat and given the stereotyped Oregonian's attitude of being an avid outdoorsman, it was curious that the survey results point to a probability that 20.8 percent of the State's registered pleasure boats were never used during the past boating year. The variation in non-use ranges from a high of 60.5 percent for Gilliam County to a low of 6.0 percent for Wallowa County. Appendix G contains each county's non-use data.

It appears that most Oregon boaters preferred to conduct their activities within their own county or only as far away as the next county, (see Table 6). This fact raised the number of counties that are net importers of boating and people from 20 in 1975 to 28 in 1978. However, it should be obvious that even though Wheeler County is a net exporter, county residents still account for 100 percent of the use of Wheeler's bodies of water. Table 6 uses launch data to illustrate graphically the counties generating greater boating activity than can be accounted for by their own registered boats. Listed in table form, on page 28, are those counties that are classified as either importers or exporters of boats and people.

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<sup>2</sup> Use by non-registered and out-of-state boaters is discussed in Chapters 4 and 5.

TABLE 6  
 OREGON PLEASURE BOAT LAUNCHES BY COUNTY OF REGISTRATION  
 AND COUNTY OF LAUNCH, 1977-1978 BOATING SURVEY

County of Registration	County of Use																			
	Baker	Benton	Clackamas	Clatsop	Columbia	Coos	Crook	Curry	Deschutes	Douglas	Gilliam	Grant	Harney	Hood River	Jackson	Jefferson	Josephine	Klamath	Lake	
Baker	518	0	0	0	10	10	0	0	0	19	0	0	0	0	0	0	0	10	0	
Benton	20	405	0	40	0	0	0	20	121	141	0	0	0	0	20	61	0	40	0	
Clackamas	34	0	4,487	309	205	34	446	0	890	274	0	0	0	0	0	686	0	34	0	
Clatsop	0	0	36	1,020	18	0	0	0	0	0	0	0	0	0	0	18	0	0	18	
Columbia	0	0	0	105	1,077	0	21	0	42	21	21	0	0	0	0	84	0	21	0	
Coos	0	0	0	0	0	3,360	0	275	183	825	0	0	0	0	0	31	0	61	31	
Crook	0	0	0	12	0	0	427	0	95	12	0	0	0	0	12	48	12	0	0	
Curry	15	0	0	0	0	89	0	579	30	15	0	0	0	0	0	0	15	0	0	
Deschutes	44	0	0	66	0	0	461	22	2,239	22	0	22	0	0	44	483	0	110	44	
Douglas	33	0	0	0	0	1,028	66	99	199	2,982	0	0	0	0	198	66	0	331	33	
Gilliam	0	0	0	0	5	0	5	0	0	0	16	0	0	0	0	0	0	0	0	
Grant	86	0	0	0	0	0	0	0	0	0	0	57	19	0	0	0	0	0	0	
Harney	0	0	0	0	0	0	0	0	0	0	0	19	148	0	0	0	0	0	0	
Hood River	0	0	37	27	0	0	28	0	56	28	0	0	0	230	0	0	0	0	0	
Jackson	0	0	0	0	0	222	0	630	37	520	0	0	0	0	4,079	0	74	371	0	
Jefferson	0	0	0	0	0	11	33	0	77	11	0	0	0	0	0	266	0	0	0	
Josephine	0	0	0	0	0	27	0	380	54	352	0	0	0	0	894	0	595	162	0	
Klamath	0	0	0	0	0	96	0	241	194	218	0	0	24	0	314	24	0	2,148	120	
Lake	0	0	0	0	0	0	0	11	11	0	0	0	11	0	0	0	0	53	147	
Lane	36	0	0	0	0	692	72	109	1,492	2,038	0	0	0	0	0	182	36	1,273	0	
Lincoln	0	22	22	0	22	44	0	0	22	0	0	0	0	0	0	0	0	22	0	
Linn	26	78	0	0	0	156	78	0	572	260	0	0	0	0	0	156	0	156	0	
Malheur	195	0	15	15	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	
Marion	0	0	189	94	62	63	157	0	723	409	0	0	31	0	63	252	0	314	31	
Morrow	0	0	0	0	0	0	0	0	0	0	22	0	0	0	0	0	0	0	0	
Multnomah	0	0	1,743	1,117	402	45	536	0	1,251	258	0	89	0	0	0	983	0	45	0	
Polk	0	20	0	0	0	20	40	0	262	0	0	0	0	0	20	81	0	20	0	
Sherman	0	0	0	0	0	0	0	0	9	0	5	0	0	0	0	14	0	0	0	
Tillamook	0	0	0	54	0	0	0	0	54	0	0	0	0	0	0	18	0	0	0	
Umatilla	270	0	0	36	0	0	18	0	72	18	0	18	0	0	0	0	0	9	0	
Union	420	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Wallowa	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Wasco	0	0	27	0	0	0	18	0	80	0	0	0	0	35	0	97	0	0	0	
Washington	41	0	410	451	287	0	123	0	492	164	0	0	0	0	41	309	0	0	0	
Wheeler	2	0	2	0	0	0	4	0	2	0	0	0	2	0	0	2	0	2	0	
Yamhill	0	0	50	51	0	0	76	0	279	0	0	0	0	0	0	51	0	25	0	
TOTAL	1,792	525	7,018	3,397	2,097	5,897	2,609	2,366	9,538	8,622	42	227	250	265	6,685	3,981	732	5,207	424	

TABLE 6 (CONT.)

Lane	County of Use																			Used where Moored	TOTAL		
	Lincoln	Linn	Maheur	Marion	Morrow	Multnomah	Polk	Sherman	Tillamook	Umatilla	Union	Wallowa	Masco	Washington	Wheeler	Yamhill	Idaho	Washington	California			Nevada	
0	0	0	10	0	0	10	0	0	0	19	0	10	0	0	0	0	10	0	0	58	674		
283	850	546	0	0	0	81	20	20	61	0	0	0	20	20	0	0	0	0	0	0	2,769		
206	548	0	0	377	0	1,576	0	34	685	69	0	0	138	171	0	0	34	309	0	993	12,539		
0	36	0	18	18	0	0	0	0	109	18	0	0	0	0	0	0	0	0	0	0	473	1,782	
0	42	0	0	0	0	42	0	0	232	0	0	0	0	42	0	0	0	0	0	0	496	2,362	
123	31	0	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	764	5,715	
0	12	12	12	0	0	0	0	0	12	0	0	0	12	0	0	0	0	0	0	0	47	725	
0	0	0	15	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	594	1,367	
0	176	22	0	22	0	0	0	22	22	0	0	0	0	0	0	0	22	44	0	220	4,107		
365	33	0	33	0	0	0	0	0	0	0	0	0	0	0	0	0	33	33	0	895	6,427		
0	5	5	0	0	11	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	52	52	
0	0	0	48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	230	
0	0	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0	205	205	
0	0	0	0	0	0	0	0	18	0	9	0	0	27	0	0	0	0	0	0	0	64	533	
0	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	445	6,600	
0	11	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	111	531	
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	2,572	
24	0	0	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	169	0	507	4,103	4,103	
11	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53	308	308
6,732	436	145	0	36	0	182	0	0	73	0	0	0	0	0	0	0	109	109	0	1,128	14,880	14,880	
132	857	0	0	0	0	0	0	0	22	0	0	22	0	0	0	0	44	0	0	1,824	3,055	3,055	
260	910	1,899	26	182	0	26	0	0	26	0	0	0	0	0	0	0	26	0	0	78	4,915	4,915	
0	0	0	822	0	0	0	0	0	0	0	15	0	0	0	0	75	45	0	15	15	1,242	1,242	
378	1,667	378	62	2,611	0	220	252	0	220	0	0	0	31	94	0	125	62	0	0	220	8,708	8,708	
0	11	0	0	0	55	0	0	0	44	0	22	0	0	0	0	0	11	0	0	11	176	176	
179	938	45	45	357	0	7,595	0	89	1,789	45	0	90	89	358	0	45	45	983	45	3,977	23,192	23,192	
141	323	141	0	363	0	80	283	0	142	0	0	20	0	0	0	0	20	0	0	28	2,004	2,004	
0	0	0	0	0	0	0	0	52	0	0	0	0	0	0	0	0	0	0	0	0	80	80	
0	36	0	0	0	18	0	0	0	858	0	0	0	0	0	0	0	18	0	0	429	1,485	1,485	
0	0	0	18	0	144	0	0	18	18	756	72	198	36	0	0	36	72	0	0	108	1,908	1,908	
0	0	9	36	0	0	0	0	0	9	45	232	179	0	0	0	9	9	0	0	27	975	975	
0	0	0	0	0	0	0	0	0	17	0	0	189	0	9	0	0	0	0	0	95	362	362	
0	9	0	0	0	0	9	0	88	9	0	0	0	381	9	0	0	45	0	0	71	878	878	
41	533	0	0	287	0	1,601	0	41	1,396	0	0	0	41	1,888	0	82	410	0	0	82	8,739	8,739	
2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2	24	24	
51	430	50	0	126	0	76	25	0	152	0	0	0	0	304	0	329	0	25	0	25	2,125	2,125	
8,955	7,931	3,252	1,230	4,379	210	11,525	580	387	5,862	1,020	304	745	775	2,897	2	581	190	2,417	639	34	13,867	29,456	

## BOATS AND PEOPLE

IMPORTERS				EXPORTERS			
BAKER	(31)*	GRANT	(28)*	LINN	(59)*	BENTON	(77)*
CLACKAMAS	(68)	HARNEY	(59)	MALHEUR	(67)	JOSEPHINE	(82)
CLATSOP	(39)	HOOD RIVER	(89)	MORROW	(30)	MARION	(62)
COLUMBIA	(61)	JACKSON	(74)	MULTNOMAH	(75)	POLK	(51)
COOS	(62)	JEFFERSON	(09)	SHERMAN	(13)	UNION	(78)
CROOK	(18)	KLAMATH	(47)	TILLAMOOK	(20)	WASHINGTON	(66)
CURRY	(40)	LAKE	(42)	UMATILLA	(82)	WHEELER	(100)
DESCHUTES	(25)	LANE	(78)	WALLOWA	(34)	YAMHILL	(58)
DOUGLAS	(41)	LINCOLN	(27)	WASCO	(53)		
GILLIAM	(38)						

*\* The numbers in parenthesis are the percentage that resident county boats contribute to the total use of that county's bodies of water.*

Tables 7 and 8 contain the use data for those bodies of water most used by Oregon boaters. Table 7 is based on boat days of use and Table 8 on people days of use. From the tables it can be seen that certain bodies of water are preferred over others for those water activities involving multiple users, such as water-skiing and cruising. As a result, there are ranking changes in popularity of the bodies of water depending on which criteria is used. For example, Lake Billy Chinook, located in Jefferson County, is ranked 17th in popularity by boat days of use but climbs to 9th place when people days of use is measured. This phenomenon is the result of the multiple uses that certain bodies of water can be put to compared with others. Those that can be used for water-skiing, cruising or sailing will attract more people than those which can only be used for fishing, have limited access and are limited in size. Complete use data for all ranked bodies of water can be found in Appendix G.

TABLE 7  
 BODIES OF WATER RECEIVING 25,000 OR MORE "BOAT DAYS" OF USE  
 DURING THE 1977-1978 BOATING YEAR

BODY OF WATER	COUNTY	TYPE OF AVTIVITY					TOTAL
		FISHING	SAILING	SKIING	CRUISING	OTHER	
COLUMBIA RIVER	MULTNOMAH	107,662	59,140	27,262	103,100	9,197	306,084
WILLAMETTE RIVER	MULTNOMAH	74,502	9,762	25,300	29,020	4,421	140,078
WILLAMETTE RIVER	CLACKAMAS	69,299	504	23,096	12,247	2,946	110,401
PACIFIC OCEAN	LINCOLN	79,241	1,146	709	1,246	1,175	83,518
YAQUINA BAY	LINCOLN	57,035	2,933	464	1,344	2,828	64,560
COLUMBIA RIVER	CLATSOP	50,575	1,142	1,331	4,041	3,405	60,495
COLUMBIA RIVER	COLUMBIA	43,956	644	3,302	7,827	2,094	57,823
STATE OF WASHINGTON		36,606	9,090	2,417	8,572	1,119	57,116
PACIFIC OCEAN	CURRY	51,454	0	54	887	388	53,099
DIAMOND LAKE	DOUGLAS	41,955	1,038	1,261	2,319	556	47,269
KLAMATH LAKE	KLAMATH	24,542	6,470	5,645	4,771	4,028	45,503
TILLAMOOK BAY	TILLAMOOK	36,571	0	1,593	1,950	2,921	43,929
PACIFIC OCEAN	DOUGLAS	40,771	0	1,012	729	851	43,728
DETROIT RESERVOIR	MARION	28,608	2,274	7,087	3,001	483	41,451
PACIFIC OCEAN	CLATSOP	32,950	0	181	6,285	761	39,506
PACIFIC OCEAN	COOS	37,824	0	122	825	886	39,352
LAKE BILLY CHINOOK-JEFFERSON		25,728	600	9,122	3,420	195	39,335
PACIFIC OCEAN	TILLAMOOK	36,232	22	0	87	914	37,920
UMPQUA RIVER	DOUGLAS	29,949	66	507	1,292	1,137	32,985
HAAG LAKE	WASHINGTON	21,701	4,422	3,487	581	511	31,441
S.TEN MILE LAKE	COOS	21,400	1,520	3,933	2,997	1,703	31,277
SIUSLAW RIVER	LANE	26,189	0	73	4,257	764	31,248
SILTCOOS LAKE	LANE	27,247	0	1,819	680	364	30,111
PACIFIC OCEAN	LANE	25,029	0	764	3,020	328	29,141
CRANE PRAIRIE RES.-DESCHUTES		26,674	0	66	511	163	28,599
LAKE OSWEGO	CLACKAMAS	2,398	3,494	9,590	12,163	377	28,021
FERN RIDGE RES.	LANE	2,078	14,584	4,599	4,186	222	25,945

TABLE 8  
 BODIES OF WATER RECEIVING 75,000 OR MORE "PEOPLE DAYS" OF USE  
 DURING THE 1977-1978 BOATING SEASON

BODY OF WATER	COUNTY	TYPE OF ACTIVITY					TOTAL
		FISHING	SAILING	SKIING	CRUISING	OTHER	
COLUMBIA RIVER	MULTNOMAH	307,268	220,078	122,300	357,719	28,211	1,038,949
WILLAMETTE RIVER	MULTNOMAH	202,533	21,367	109,919	103,730	16,159	448,117
WILLAMETTE RIVER	CLACKAMAS	191,520	1,636	89,027	40,475	9,153	333,901
PACIFIC OCEAN	LINCOLN	231,201	4,462	3,018	4,395	2,880	245,957
STATE OF WASHINGTON		130,306	24,683	9,929	25,308	5,304	194,105
COLUMBIA RIVER	CLATSOP	157,207	3,694	5,053	13,687	8,955	188,595
YAQUINA BAY	LINCOLN	158,858	8,520	1,305	4,428	9,823	182,758
COLUMBIA RIVER	COLUMBIA	123,140	2,532	18,077	31,051	6,142	178,411
LAKE BILLY CHINOOK-JEFFERSON		86,383	3,596	42,623	17,185	910	151,919
KLAMATH LAKE	KLAMATH	59,234	22,933	30,274	23,723	11,657	147,918
PACIFIC OCEAN	CURRY	136,547	0	162	2,256	1,136	141,361
PACIFIC OCEAN	CLATSOP	101,816	0	578	35,796	1,932	139,452
TILLAMOOK BAY	TILLAMOOK	104,200	0	5,963	7,081	9,991	130,809
DETROIT RESERVOIR-MARION		77,074	15,370	26,900	9,706	1,095	130,144
DIAMOND LAKE	DOUGLAS	108,273	6,229	4,306	5,135	1,277	125,503
PACIFIC OCEAN	COOS	113,646	0	367	3,758	2,772	119,016
PACIFIC OCEAN	DOUGLAS	109,634	0	3,686	2,154	2,001	118,202
PACIFIC OCEAN	TILLAMOOK	98,753	44	0	348	2,188	104,005
FERN RIDGE RES.	LANE	5,725	54,302	18,176	14,193	468	93,419
HAAG LAKE	WASHINGTON	58,962	11,543	14,649	2,049	2,036	91,455
PRINEVILLE RES.	CROOK	38,148	0	45,658	9,431	2,460	90,974
S.TEN MILE LAKE	COOS	56,126	5,416	16,304	8,942	5,638	90,500
UMPQUA RIVER	DOUGLAS	79,144	133	1,455	6,065	2,566	89,460
PACIFIC OCEAN	LANE	72,577	0	2,984	10,408	1,638	87,606
LAKE OSWEGO	CLACKAMAS	4,932	6,576	33,428	39,965	960	85,861
FOSTER RESERVOIR	LINN	24,768	323	41,428	9,351	2,372	83,594



Seasonal variation in boating use continues to be the norm with Oregon's boaters. Although there is a peak in use during the month of July, as shown in Figure 7, there has been a trend toward more constant use since 1975. Then the maximum difference was 20.3 percent between the months of July and January, now the maximum is only 18.2 percent between the same months. By utilizing the factor of people days, January, the month of least use, is the month when the number of people, per boat being used, is highest, at an average of 3.7 people per boat. By contrast, November sees the minimum number of 2.8 people per boat. The yearly average of people per boat in use is 3.1. Table 9 lists the numbers of boat days and people days, by month, by county of registration as well as monthly and yearly totals for the State.

#### How Did They Get There

Base line data indicates that 11.7 percent of Oregon's pleasure boats are moored and used from that moorage. This percentage compares very closely to the percentage of Oregon's registered boats that are 20 feet or longer in length,(see Figure 3). Another 20.8 percent were not used at all. The remaining 67.5 percent were transported primarily by trailer (82.4 percent), car-top carrier (9.8 percent), a combination of means (6.1 percent), and the rest (1.7 percent), got there in vans , the back of pickups, in station wagons or by other ingenious methods. Appendix H gives a county by county listing of the number of times a pleasure boat was transported by some means from its county of registration or location of storage to a body of water for use.

Table 10 shows the number of launchings made by Oregon boaters at the type facility they thought they were launching from, i.e. commercial, private

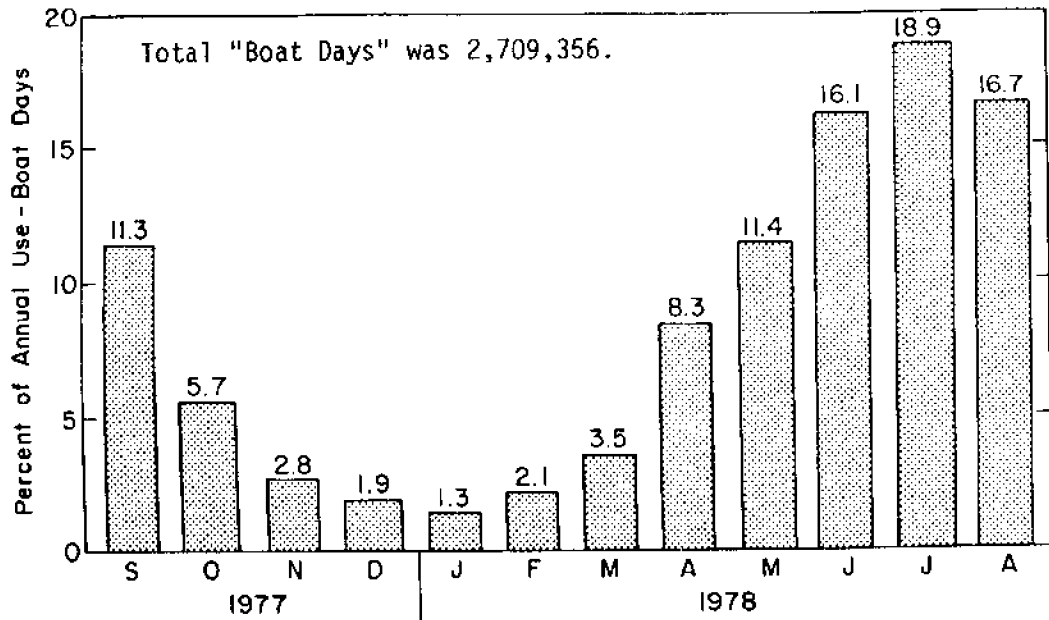


FIGURE 7A Monthly Variation in Pleasure Boat Use for Oregon by "BOAT DAYS" during the 1977-1978 Boating Season.

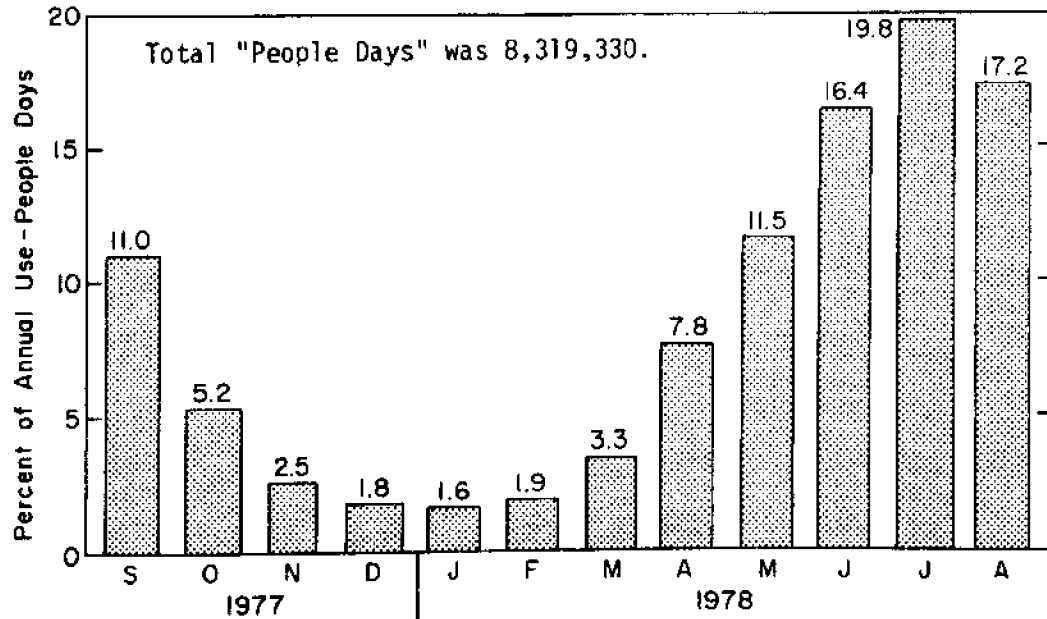


FIGURE 7B Monthly Variation in Pleasure Boat Use for Oregon by "People Days" during the 1977-1978 Boating Season.



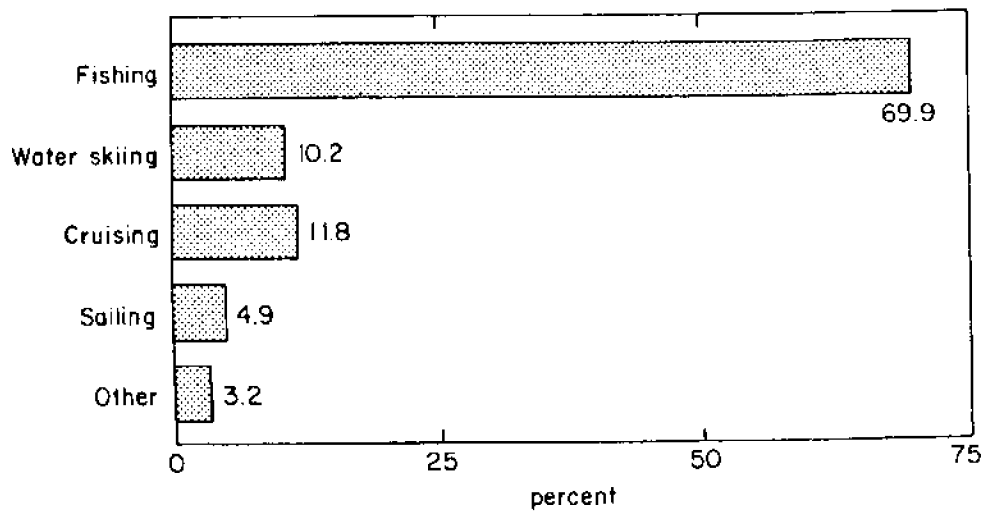


FIGURE 8A Preferred Activities of Pleasure Boat Users by "BOAT DAYS" for the 1977-1978 Boating Season.

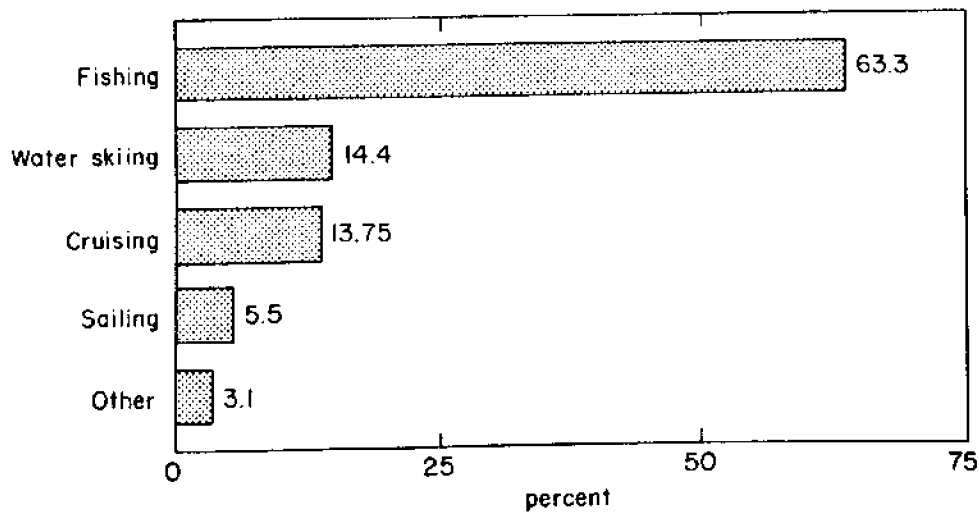


FIGURE 8B Preferred Activities of Pleasure Boat Users by "PEOPLE DAYS" for the 1977-1978 Boating Season.

property, federal, state, or county/city. Responses indicate that many boaters perceive the launch facilities to be different than they actually are, as far as who owns or maintains them. As a result, totals for federal, state and county/city owned or operated marinas and ramps must be used as indicators, which may or may not be accurate. The reader should note that Table 10 is arranged by county of registration not county of use. The results of the survey show that each pleasure boat transported was launched an average of 15 times during the 1977-1978 boating year, twice from commercial marinas, 1.6 times from private property, 1.9 times from a federal ramp, 3.6 times from state facilities and 5.9 times from county or city ramps.

#### What Did They Do

Figure 8A and 8B depict graphically the participation by Oregon boaters in five categories of water-borne activities. To no ones surprise, fishing is the most popular activity for both boats and people. Over 60 percent of the people and 69.9 percent of the boats are so engaged during the boating year. Water-skiing is the next most popular activity for people (14.4 percent), but more boats are involved in cruising (11.8 percent). Sailing occupies approximately five percent of both pleasure boaters and their boats. However, since there is no requirement for sailboats under 12 feet in length to be registered, this figure is probably underrepresentative of sailboat activity within the State. Hunting and other undifferentiated pursuits took up the boating activity of just over three percent of the State's boats and boaters.

As put forward in the 1975 report, it is very difficult to discuss or delineate where one type of water activity ends and another begins. Most boaters do not just go fishing or cruising, often they do both on the same

TABLE 10  
 OREGON PLEASURE BOAT LAUNCHES BY COUNTY OF  
 REGISTRATION AND BY LAUNCH FACILITY TYPE  
 DURING THE 1977-1978 BOATING SEASON

COUNTY	COMMERCIAL MARINAS	PRIVATE PROPERTY	FEDERAL MARINA/RAMP	STATE MARINA/RAMP	COUNTY/CITY MARINA/RAMP
BAKER	308	2,199	2,026	6,893	4,637
BENTON	1,963	891	425	1,903	3,967
CLACKAMAS	8,221	10,618	6,577	18,770	44,354
CLATSOP	4,771	3,988	455	5,981	21,141
COLUMBIA	6,695	5,344	528	6,230	15,376
COOS	17,719	6,324	5,530	13,320	35,132
CROOK	1,141	344	1,055	6,298	3,119
CURRY	3,650	4,408	3,829	2,107	3,561
DESCHUTES	4,676	5,872	30,795	22,960	11,019
DOUGLAS	15,179	7,987	14,482	19,459	49,809
GILLIAM	0	32	54	465	71
GRANT	0	38	306	277	125
HARNEY	0	38	482	1,296	925
HOOD RIVER	727	55	212	231	1,086
JACKSON	8,491	2,188	10,605	19,912	22,137
JEFFERSON	355	1,122	2,120	8,026	1,043
JOSEPHINE	460	2,112	1,192	1,598	11,374
KLAMATH	6,493	6,132	12,045	10,163	15,788
LAKE	53	32	2,153	1,124	1,155
LANE	18,650	15,794	23,326	26,892	44,978
LINCOLN	20,749	7,319	1,649	11,298	26,530
LINN	4,606	1,613	6,453	15,299	12,073
MALHEUR	657	553	807	5,542	4,437
MARION	3,146	5,506	4,278	19,915	5,286
MORROW	33	33	541	564	1,348
MULTNOMAH	20,598	32,706	7,417	33,331	83,775
POLK	485	1,191	908	848	4,179
SHERMAN	248	14	736	464	61
TILLAMOOK	8,644	2,822	1,143	9,502	22,735
UMATILLA	936	576	4,256	5,598	1,638
UNION	81	36	143	671	1,180
WALLOWA	103	620	525	3,479	345
WASCO	745	603	2,066	2,437	1,818
WASHINGTON	2,422	738	5,419	9,647	16,707
WHEELER	0	0	0	18	0
YAMHILL	0	177	152	430	4,532
TOTAL	163,215	130,036	154,700	292,953	477,441
PERCENT OF ALL LAUNCHES	13.4	10.7	12.7	24.0	39.2

day. This is especially true if they must cruise a considerable distance to and from or between fishing points as often happens on the Pacific Ocean. Therefore, to ask a boater to indicate how many days he spent doing a particular activity results in only finding out what was perceived as the main, or preferred, activity of the day. While this is useful and desirable information, it does not present the total picture of "pleasure boating activities" or their recreational value to the boater.

#### Fuel Use and Tax

Response data concerning the amount of fuel used by Oregon's pleasure boats show that 84 percent consumed ten gallons of fuel or less per day of operation. Average consumption rates for each county of registration and state-wide are shown in Table 4. Total fuel consumption is projected to be 686,849 gallons on an average day or 15,708,237 gallons for the 1977-1978 boating year. Of the total fuel consumed, 98.7 percent was gasoline or a gasoline/oil mixture. The remaining 1.3 percent was composed of diesel and other fuels, e.g., propane. There was no attempt made in this survey to estimate the amount of fuel consumed in transporting the boater's vessel to and from its place of use. It might be approximated using the number of times boats were transported by assuming a standard travel distance and vehicle mileage ratings. Other surveys have addressed this problem and conclude that the average mileage from place of storage to launch point is 57.8 miles one way and from residence to moored boat is 39.2 miles one way.<sup>3</sup>

Marine fuel taxes are collected by the Motor Vehicles Division (MVD). Since the gasoline used in boats is not used on public roads, the MVD refunds,

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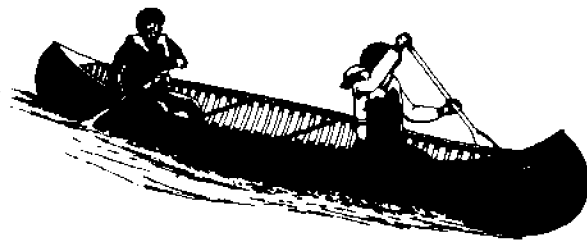
<sup>3</sup>First Draft, Part II, "Recreational Boating in Western Oregon," R. Charles Vars, Jr., 22 August 1978.

upon request, the gasoline tax (seven cents per gallon) paid by boat owners on gasoline used in motorboats. The Fuel Tax Branch of MVD has refunded the following amounts since 1975:

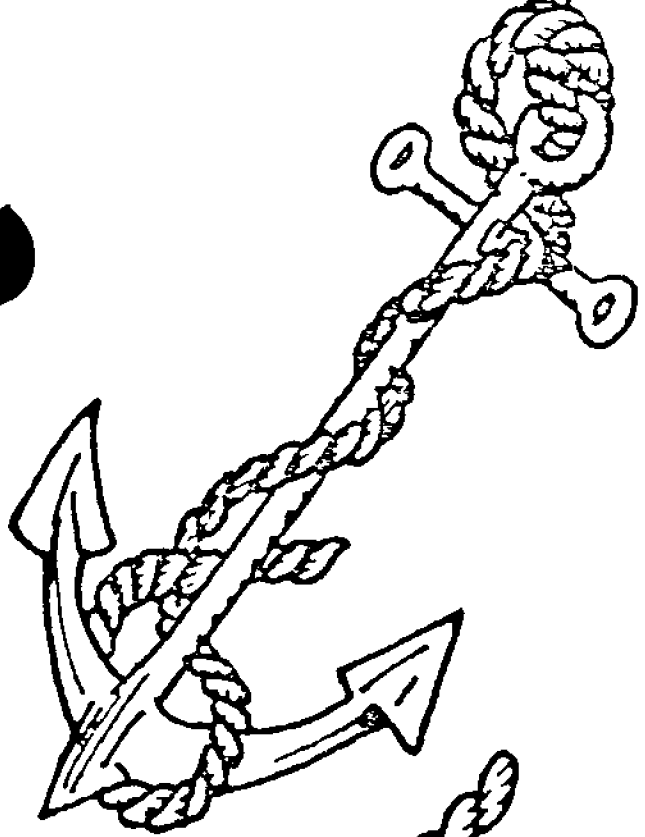
<u>1975</u>	<u>1976</u>	<u>1977</u>
\$87,260.95	\$80,612.42	\$75,559.75

The 1978 State-wide Boating Survey, conducted under ORS 488.833, estimates the marine fuel tax in 1978 to be \$1,326,475.00 or a projection of \$2,652,950.00 during the 1977-1979 biennium. Assuming a refund of approximately \$80,000.00/year (\$160,000.00/biennium), the net income to the MVD should exceed \$2.4 million. In addition, out-of-state boaters benefit from Oregon's boating facilities. They contribute to the recreation and tourism economy of the State and pay marine fuel taxes which are not included in the above estimate of unrefunded fuel taxes. Given the 2.7 million days of boat use by Oregon registered boats, and the assumptions that (1) there is an additional fifteen percent out-of-state use (405,000 days), (2) an average daily fuel use of 7 gallons, and (3) purchase of fuel in Oregon by out-of-state users, then another \$200,000.00 in marine fuel tax would be contributed to the MVD by out-of-state boaters. This money is not refundable and ends up in State Highway Department programs. Appendix E contains the detailed computations used to arrive at the projected fuel taxes.





Non-Registered  
Boating Use  
in  
Oregon



## NON-REGISTERED BOATING USE IN OREGON

### Introduction

Oregon Revised Statutes provide the following definition of a boat for numbering, titles and licenses:

*"Boat" means every description of watercraft used or capable of being used as a means of transportation on the water, but does not include aircraft equipped to land on water, boathouses, floating homes, air mattresses, beach and water toys or single inner tubes. (ORS 488.705-2)*

Under this definition, "boats" include not only motorboats and sailboats of various sizes and types, but also canoes, kayaks, inflatable rafts, drift boats, row boats and other non-motorized craft. However, ORS 488.732 does not provide for the registration of sailboats of less than 12 feet in length, nor the registration of other watercraft that are non-motorized. Consequently, no data are available on the actual number of such vessels in the State. This makes it impossible to accurately assess the location and amount of use generated by these boats on a state-wide basis.

Nevertheless, the use of these non-registered boats on individual waterways can be substantial and may result in serious impacts on the environment, public safety, law enforcement and facilities. Without registration data, there is no way to survey these boaters as was done in the present survey of registered boat owners. However, some use statistics are available for specific bodies of water from other sources. This data will be discussed later in the chapter.

### How Many

In the absence of a registration requirement, it is only possible to estimate the quantity of these boats in Oregon. The 1976, "National Rec-

reational Boating Survey" prepared by the United States Coast Guard, indicates that in 1976, 23.9 percent of the boats nation-wide had no motors at all.<sup>1</sup> This figure includes canoes, kayaks, inflatable rafts, drift boats and sailboats without motors. Excluding sailboats 12 feet and over, which would be registered in Oregon, an estimate of 20 percent non-motorized and non-registered boats seems appropriate for the purpose of projecting the population of these boats in Oregon. Therefore, given the assumption that for every five registered boats there is one non-registered boat, and, that in 1978 there were 124,069 registered boats, an estimate of the total number of non-registered vessels in Oregon at present is 24,814.

Extensive additional research would be required to project the distribution of these non-registered boats throughout the State or to fully describe the overall state-wide use, demographic characteristics or other impacts of non-registered boat use. The registration of these boats would provide a more accurate picture of all boating use in Oregon. If all boats were registered, the triennial survey would then include data on the state-wide use of non-motorized vessels. This data would provide much needed information in regard to boating facilities, law enforcement and safety.

#### Boat Use

The total amount of non-registered boat use state-wide is unknown, but some use data has been collected or estimated for selected water-ways throughout Oregon. A compilation of this data provides only a partial picture of the use generated by non-registered boats. In the absence of additional research, this data is presented in Table 11 in order to provide estimates

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<sup>1</sup> United States Coast Guard Recreational Boating in the Continental United States in 1973 and 1976: The Nationwide Boating Survey (Washington, D.C.: March 1978, Report Number CG-B-003-78).

as to the potential magnitude of non-registered use on selected bodies of water.

In recent years, the popularity of non-motorized boating, especially white-water boating in canoes, kayaks, inflatable rafts and drift boats, has increased. A dramatic example of this can be found on the "Wild" section of the Rogue River where non-commercial, non-motorized, boating use during a 100 day period increased 380 percent from 1973 to the same period in 1978 along a 33 mile segment of the river. Combined commercial and non-commercial use doubled during this same period. Percentage increases such as this are also taking place on other popular white-water rivers such as the Deschutes, Owyhee, Snake and others. These increases are of special concern to river resource managers, law enforcement officials and others involved in the protection of river resources and the public's safety.

#### Selected River Use Data

The information presented in Table 11 was collected through a variety of sources, including the United States Forest Service, the Bureau of Land Management (BLM), and the Oregon State Parks Department. This data was collected for different lengths of river, over varying periods of time and by different research methods, (permits, user surveys, aerial counts, etc.). Therefore, reliable comparisons of use levels between rivers with this data are not possible.

#### Discussion

Based upon the use statistics from Table 11, it is clear that the use of non-motorized, non-registered boats on selected water-ways is substantial and has greatly increased over the past several years. Non-motorized boating

TABLE 11

## NON-REGISTERED BOATING USE ESTIMATES

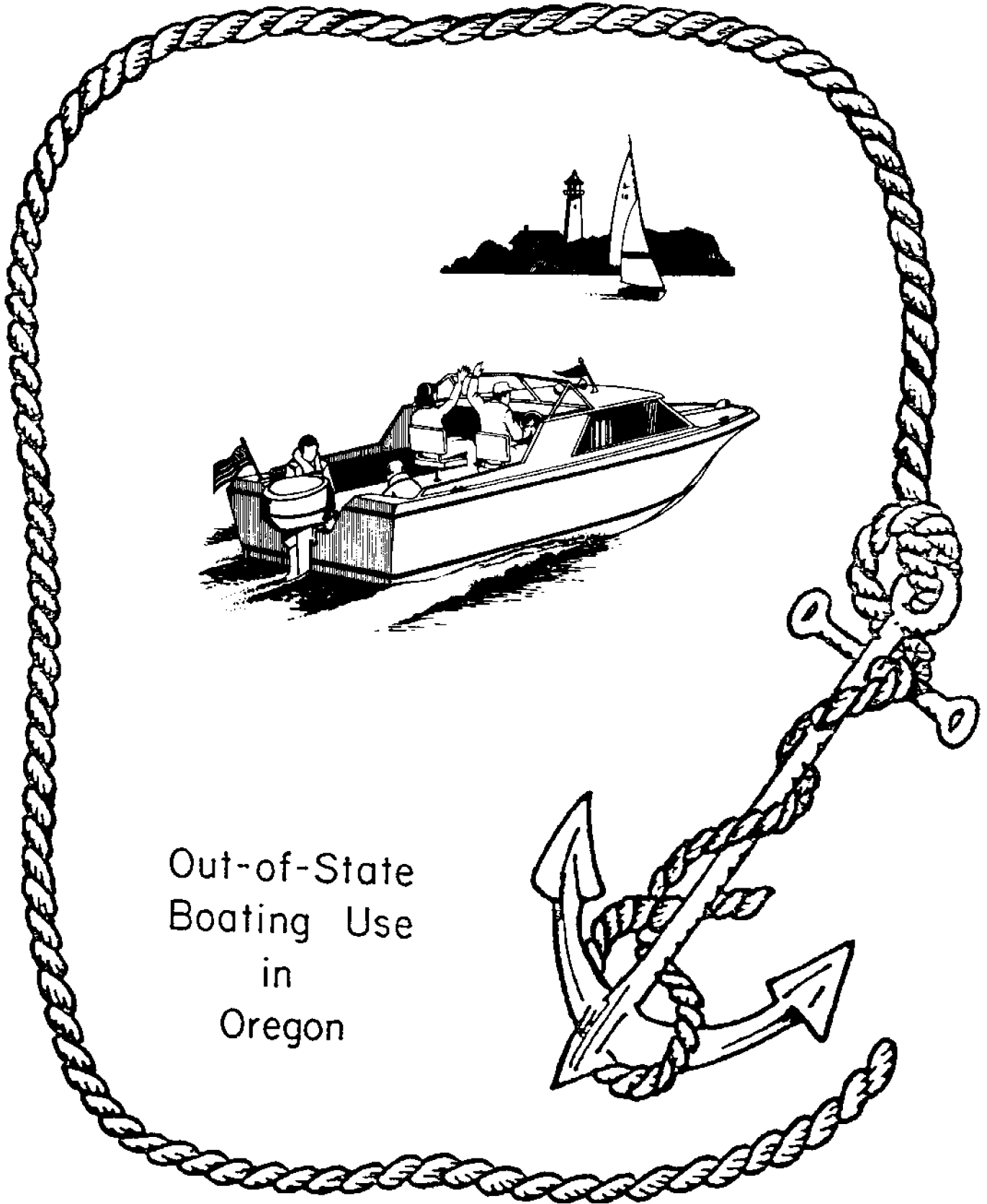
BODY OF WATER	USE YEAR	VISITORS - VISITOR DAYS		SOURCE
CLACKAMAS RIVER	1978	6,000 *		U.S.Forest Service <sup>1</sup>
DESCHUTES RIVER	1975	22,815 (97% Non-Comm)**		Bureau of Land Mg. <sup>2</sup>
	1978	20,540 (12 hour days)*		" " " " " "
DESCHUTES RIVER	1976	25,974***		Bureau of Land Mg. <sup>2</sup>
ILLINOIS RIVER	1978	189	756	U.S.Forest Service <sup>3</sup>
OWYHEE RIVER (Three Forks-Rome)	1974	85	323+	Bureau of Land Mg. <sup>4</sup>
	1975	74	281+	" " " " " "
	1976	84	319+	" " " " " "
	1977++	30	114	" " " " " "
	1978	189	711	" " " " " "
OWYHEE RIVER (Rome-Leslie Gulch)	1974	397	1,786+++	Bureau of Land Mg. <sup>4</sup>
	1975	483	2,174+++	" " " " " "
	1976	654	2,943+++	" " " " " "
	1977++	50	225+++	" " " " " "
	1978	800	3,581+++	" " " " " "

BODY OF WATER	USE YEAR	NON-COMM/COMM	VISITORS	TOTAL	USER DAYS <sup>#</sup>
ROGUE RIVER	1973	1,002	3,340	4,342	13,026 <sup>5</sup>
	1974	1,736	2,908	4,644	13,932
	1975	2,520	3,091	5,611	16,833
	1976	3,854	3,814	7,668	23,004
	1977	3,197	3,278	6,475	19,425
	1978	3,889	4,414	8,303	24,909
SNAKE RIVER <sup>6</sup> (Hell's Canyon)	1973	1,395	4,776		
	1974	1,586	7,070		
	1975	1,982	7,755		
	1976	2,710	7,449		
	1977	4,555	7,653		
WILLAMETTE RIVER <sup>7</sup>	1978			34,080	

- \* Number is for "Boating Days," not Visitor days on these Rivers.  
 \*\* Figures are for the Deschutes River from Warm Springs Bridge to Maupin.  
 \*\*\* Figures are for the Deschutes River from Sherars Falls to the Mouth.  
 + Figure is an estimate based on an average length of stay of 3.8 days.  
 ++ Indicates Low Water Years.  
 +++ Figure is an estimate based on an average length of stay of 4.5 days.  
 # Figures are for Non-Commercial and Commercial Visitors and based on a 24 hour day.
- 1 Letter Communication from Estacada Ranger District, Mt.Hood Nat.Forest.  
 2 Personal communication with Paul W.Arrasmith,Prineville Dist.Mgr.,BLM.  
 3 Communication with Mr. Lloyd DeWurff, Siskiyou National Forest.  
 4 Owyhee River Visitor Statistics,Fearl M.Parker Vale Dist.Mgr.,BLM.  
 5 Rogue Use Statistics, Siskiyou Nat.Forest and Medford Dist. BLM.  
 6 Recreation Use Statistics,Hell's Canyon NRA,July 1978,Wallowa-Whitman NF.  
 7 Based upon aerial user counts on July 8,22, August 2,9,& October 1,1978.

use on the Owyhee, Rogue and Snake Rivers has more than doubled in the last five years. Recently, use regulations have been established for the Rogue to limit use within the 33 mile "Wild" section to a maximum of 12,000 total visitors during the 100 day season. Restrictions on non-motorized boating already exist on portions of the Snake River.

The data presented in Table 11 indicates the popularity of non-motorized boating and the likelihood that it will continue to increase for the foreseeable future. Use statistics are absent or poorly developed for most of Oregon's water-ways on which non-registered boating occurs. The popularity of drift boating, especially for fishing, on Oregon's coastal rivers, such as the Alsea, Siletz, Nehalem, Coquille and others, is known, but reliable use data does not exist. Non-registered boat use of the McKenzie and Umpqua Rivers is also believed to be substantial but is presently undocumented.



Out-of-State  
Boating Use  
in  
Oregon

## OUT-OF-STATE BOATING USE

There is a considerable amount of boating use in Oregon that is generated by out-of-state visitors who transport their boats to Oregon, or travel to the State in their boats. Data on the amount of boating use taking place in Oregon by residents and out-of-state users has been developed by the Pacific Northwest River Basins Commission's (PNRBC), Regional Recreation Data Program for the Northwest.<sup>1</sup> This data program estimated boating activity occasions by means of a computer model which used origins and destinations to project in-state and out-of-state use on a county by county basis. The program defines Boating as, "the recreational use of any type boat or floating device."<sup>2</sup> The PNRBC data for 1975 indicates a state-wide total of 9,799,900 activity occasions of boating in Oregon. Of this, 8,706,700 or 88.8 percent was generated by in-state users, while 1,093,200 occasions or 11.2 percent was generated by out-of-state boaters. The percentages for in-state and out-of-state use vary considerably when looking at individual counties. Some, especially those bordering other states, where local boating opportunities may be limited, experience a greater percentage of the out-of-state use. Examples of these latter counties would include Baker, Lake, Clatsop, Curry and Malheur counties.

Table 12 presents the boating activity occasions estimated by the PNRBC computer model for 1975. The table indicates total use and the origin of the user by in-state or out-of-state categories.

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<sup>1</sup> Pacific Northwest River Basins Commission, *Regional Recreation Data Program for the Northwest*, June 1975.

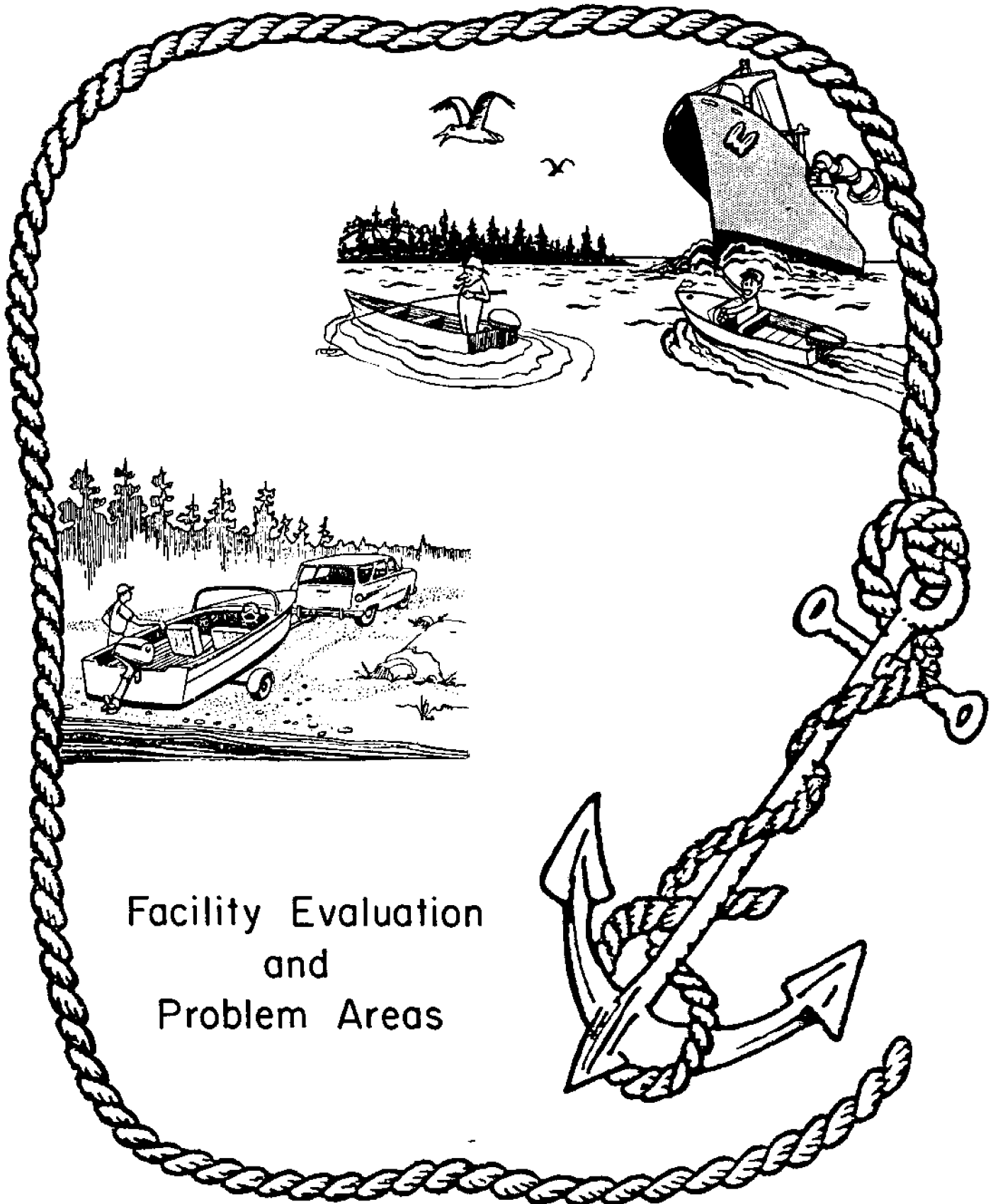
<sup>2</sup> *Ibid*, p. 53.



TABLE 12

## ACTIVITY-OCCASIONS OF BOATING - 1975

COUNTY	TOTAL USE	IN-STATE	PERCENT	OUT-OF-STATE	PERCENT
BAKER	87,000	44,600	50.7	43,200	49.3
BENTON	97,200	93,100	95.8	4,100	4.2
CLACKAMAS	1,504,100	1,443,400	95.9	61,700	4.1
CLATSOP	83,700	45,000	53.8	38,700	46.2
COLUMBIA	89,000	68,600	77.1	20,400	22.9
COOS	186,200	167,000	89.7	19,200	10.3
CROOK	87,500	61,600	70.4	25,900	29.6
CURRY	101,300	62,000	61.2	39,300	38.8
DESCHUTES	164,100	135,600	82.6	28,500	17.4
DOUGLAS	617,000	567,600	92.0	49,400	8.0
GILLIAM	24,800	6,500	26.2	18,300	73.8
GRANT	47,600	18,200	38.2	29,400	61.8
HARNEY	48,200	23,300	48.3	24,900	51.7
HOOD RIVER	17,500	12,800	73.1	4,700	26.9
JACKSON	472,100	412,000	87.3	60,100	12.7
JEFFERSON	578,900	509,500	88.0	69,400	12.0
JOSEPHINE	165,500	145,300	87.8	20,200	12.2
KLAMATH	171,300	131,200	76.6	40,100	23.4
LAKE	66,500	28,600	43.0	37,900	57.0
LANE	829,300	788,400	95.1	41,200	4.9
LINCOLN	138,700	106,300	76.6	32,400	23.4
LINN	548,000	526,600	96.1	21,400	3.9
MALHEUR	93,100	57,000	61.2	36,100	38.8
MARION	538,100	512,000	95.1	26,100	4.9
MORROW	30,500	8,900	29.2	21,600	70.8
MULTNOMAH	1,765,900	1,733,200	98.1	32,700	1.9
POLK	145,200	131,100	90.3	14,100	9.7
SHERMAN	56,600	21,800	38.5	34,800	61.5
TILLAMOOK	22,900	14,800	64.6	8,100	35.4
UMATILLA	281,900	209,600	74.4	72,300	25.6
UNION	108,400	76,100	70.2	32,300	29.8
WALLOWA	39,100	17,200	44.0	21,900	56.0
WASCO	54,200	43,600	80.4	10,600	19.6
WASHINGTON	180,900	164,700	91.0	16,200	9.0
WHEELER	32,500	11,400	35.1	21,100	64.9
YAMHILL	324,300	308,100	95.0	16,200	5.0
<b>TOTAL</b>	<b>9,799,900</b>	<b>8,706,700</b>	<b>88.8</b>	<b>1,093,200</b>	<b>11.2</b>



Facility Evaluation  
and  
Problem Areas

## FACILITY EVALUATION AND PROBLEM AREAS

As part of the 1978 survey, boaters were asked to designate which of the listed facilities were adequate to meet their boating and personal needs. If they felt all was in order, no response was required. If the facilities were deemed to be inadequate, then the respondent was to indicate the type of facility, the county and the specific body of water involved. Over 40 percent of the respondents found at least one facility that did not meet their standards. Of the total respondents who identified some problem, the largest deficiency was in ramps and parking lots (32.4 percent), closely followed by loading and moorage docks (30.6 percent). A lack of rest rooms affected 21.1 percent and 15.9 percent noted a need for more pump-outs for sanitary systems. The size of the last complaint is an indication of the growing number of boats with onboard self-contained sanitary waste systems. Table 13 lists the bodies of water and the percentage of users that found the facilities inadequate.

A further question asked owners if any of four different problems had been encountered at their favorite boating spot? Almost one third said, "Yes, they had." Of the problems encountered, lack of courtesy by other boaters (40.9 percent), led the list. Approximately half that number (20.5 percent), were bothered by conflicts between one or more additional users of the same body of water. Water pollution problems concerned 19.5 percent of the respondents, while a similar number (19.1 percent), listed a lack or laxity of the enforcement of rules as their perceived problem area. Several comments by respondents dealt with specifics of these and other problem areas. Included is an apparent problem with erratic boat handling that most

boaters attribute to an over indulgence of alcoholic beverages. These comments may be found in Appendix C. Table 14 gives a full listing of those bodies of water where boaters observed or experienced water-related problems.

Note, Tables 13 and 14 reflect raw survey data and are not projected estimates of facilities inadequacies or problem areas. If a body of water was not listed by a respondent, it was not included in the tables. Therefore, no inference should be drawn that there are no problems or that all facilities are fine, if a body of water does not appear in the table.

TABLE 13  
 REPORTED INADEQUATE FACILITIES BY COUNTY  
 AND BODY OF WATER, 1978 BOATING SURVEY.

COUNTY	BODY OF WATER	# BOATS	TYPE OF FACILITY <sup>1</sup>			
			REST ROOMS	DOCKS	SANITARY SYS. PUMP - OUTS	PARKING LOTS
<b>BAKER</b>						
	Anthony Lakes	0	0 (0)	2 (0)	0 (0)	0 (0)
	Brownlee Reservoir	53	9 (17)	8 (15)	4 (8)	13 (25)
	Phillips Reservoir	38	1 (3)	6 (16)	0 (0)	1 (3)
	Snake River	54	4 (7)	10 (19)	4 (7)	10 (19)
	Unity Reservoir	28	1 (4)	2 (7)	0 (0)	1 (4)
	Other Bodies of water <sup>2</sup>	3	0 (0)	0 (0)	0 (0)	1 (33)
<b>BENTON</b>						
	Willamette River	17	5 (29)	2 (12)	1 (6)	1 (6)
	Other Bodies of water <sup>2</sup>	1	0 (0)	1 (100)	0 (0)	0 (0)
<b>CLACKAMAS</b>						
	Big Cliff Reservoir	0	0 (0)	0 (0)	0 (0)	1 (0)
	Clackamas River	30	4 (13)	8 (27)	2 (7)	6 (20)
	Lake Oswego	22	0 (0)	0 (0)	0 (0)	1 (5)
	North Fork Reservoir	9	0 (0)	0 (0)	0 (0)	1 (11)
	Timothy Lake	20	1 (5)	1 (5)	1 (5)	1 (5)
	Willamette River	140	18 (13)	25 (18)	8 (6)	26 (19)
<b>CLATSOP</b>						
	Columbia River	97	12 (12)	10 (10)	12 (12)	6 (6)
	John Day River	2	3 (150)	0 (0)	0 (0)	1 (50)
	Klaskanine River	8	0 (0)	1 (13)	0 (0)	2 (25)
	Pacific Ocean	46	2 (4)	0 (0)	1 (2)	1 (2)
	Skipanon River	0	0 (0)	1 (0)	2 (0)	2 (0)
	No body of water listed <sup>3</sup>	4	0 (0)	0 (0)	1 (25)	0 (0)
<b>COLUMBIA</b>						
	Clatskanie River	5	0 (0)	0 (0)	2 (40)	0 (0)
	Columbia River	78	14 (18)	11 (14)	10 (13)	11 (14)
	Willamette River	34	2 (5)	1 (3)	2 (6)	3 (9)
<b>COOS</b>						
	Bradley Lake	1	0 (0)	0 (0)	0 (0)	1 (100)
	Coos Bay	49	8 (16)	9 (18)	4 (8)	7 (14)
	Coos River	17	0 (0)	2 (12)	0 (0)	3 (18)
	Coquille River	12	1 (8)	1 (8)	0 (0)	1 (8)
	South Fork, Coquille River	2	1 (50)	0 (0)	0 (0)	0 (0)
	Eel Lake	7	1 (14)	1 (14)	0 (0)	1 (14)
	Millicoma River	0	0 (0)	0 (0)	1 (0)	0 (0)
	North Ten Mile Lake	30	1 (3)	0 (0)	1 (3)	1 (3)
	Pacific Ocean	45	0 (0)	4 (9)	1 (2)	2 (4)
	Saunders Lake	2	0 (0)	1 (50)	0 (0)	1 (50)
	South Ten Mile Lake	48	2 (4)	0 (0)	3 (6)	0 (0)
<b>CROOK</b>						
	Ochoco Reservoir	49	2 (4)	5 (10)	0 (0)	4 (8)
	Prineville Reservoir	76	8 (11)	13 (17)	5 (7)	12 (16)

TABLE 13 CONTINUED

COUNTY	BODY OF WATER	# BOATS	TYPE OF FACILITY <sup>1</sup>			
			REST ROOMS	DOCKS	SANITARY SYS. PUMP - OUTS	PARKING LOTS
CURRY						
	Chetco Bay	10	0 ( 0)	4 (40)	0 ( 0)	4 (40)
	Elk River	1	0 ( 0)	1 (100)	0 ( 0)	1 (100)
	Garrison Lake	6	1 (17)	0 ( 0)	1 (17)	1 (17)
	Pacific Ocean	84	3 ( 4)	10 (12)	2 ( 2)	14 (17)
	Rogue River	36	7 (19)	10 (28)	3 ( 8)	14 (39)
	Other bodies of water <sup>2</sup>	0	0 ( 0)	1 ( 0)	0 ( 0)	0 ( 0)
	No body of water listed <sup>3</sup>	9	1 (11)	0 ( 0)	1 (11)	0 ( 0)
DESCHUTES						
	Big Lava Lake	12	1 ( 8)	1 ( 8)	1 ( 8)	0 ( 0)
	Crane Prairie Reservoir	64	4 ( 6)	4 ( 6)	3 ( 5)	5 ( 8)
	Cultus Lake	18	0 ( 0)	4 (22)	1 ( 6)	4 (22)
	Davis Lake	5	0 ( 0)	1 (20)	0 ( 0)	1 (20)
	Devils Lake	2	0 ( 0)	0 ( 0)	0 ( 0)	1 (50)
	East Lake	84	0 ( 0)	2 ( 2)	2 ( 2)	8 (10)
	Elk Lake	5	0 ( 0)	1 (20)	1 (20)	1 (20)
	Little Cultus Lake	2	1 (50)	1 (50)	0 ( 0)	1 (50)
	North Twin Lake	5	1 (20)	0 ( 0)	0 ( 0)	0 ( 0)
	Paulina Lake	59	2 ( 3)	4 ( 7)	1 ( 2)	3 ( 5)
	Wickiup Reservoir	79	4 ( 5)	5 ( 6)	1 ( 1)	6 ( 8)
	No body of water listed <sup>3</sup>	27	0 ( 0)	1 ( 4)	0 ( 0)	1 ( 4)
DOUGLAS						
	Cooper Creek Reservoir	21	0 ( 0)	2 (10)	0 ( 0)	2 (10)
	Diamond Lake	125	5 ( 4)	13 (10)	3 ( 2)	14 (11)
	Lemolo Reservoir	8	2 (25)	1 (13)	0 ( 0)	1 (13)
	Loon Lake	9	0 ( 0)	2 (22)	0 ( 0)	2 (22)
	Pacific Ocean	37	0 ( 0)	1 ( 3)	1 ( 3)	0 ( 0)
	Plat I Reservoir	2	1 (50)	0 ( 0)	0 ( 0)	0 ( 0)
	Smith River	9	0 ( 0)	1 (11)	0 ( 0)	0 ( 0)
	South Umpqua River	3	1 (33)	0 ( 0)	0 ( 0)	1 (33)
	Tahkentic Lake	8	2 (25)	0 ( 0)	0 ( 0)	1 (13)
	Umpqua River	50	5 (10)	1 ( 2)	1 ( 2)	1 ( 2)
	North Fork, Umpqua River	5	2 (40)	0 ( 0)	0 ( 0)	1 (20)
	South Fork, Umpqua River	5	0 ( 0)	0 ( 0)	0 ( 0)	2 (40)
	Umpqua River (Tidewater)	3	0 ( 0)	1 (33)	0 ( 0)	1 (33)
	Winchester Bay	21	2 (10)	4 (19)	3 (14)	2 (10)
HARNEY						
	Krumbo Reservoir	4	0 ( 0)	1 (25)	0 ( 0)	0 ( 0)
	Warm Springs Reservoir	3	1 (33)	1 (33)	1 (33)	1 (33)
HOOD RIVER						
	Columbia River	23	3 (13)	1 ( 4)	3 (13)	2 ( 9)
	Kingsley Reservoir	7	0 ( 0)	1 (14)	0 ( 0)	1 (14)
	Lost Lake	3	0 ( 0)	0 ( 0)	1 (33)	0 ( 0)
JACKSON						
	Emigrant Lake	18	1 ( 6)	4 (22)	0 ( 0)	2 (11)
	Fish Lake	14	1 ( 7)	0 ( 0)	0 ( 0)	0 ( 0)
	Howard Prairie Reservoir	53	0 ( 0)	3 ( 6)	0 ( 0)	1 ( 2)

TABLE 13 CONTINUED

COUNTY	BODY OF WATER	# BOATS	TYPE OF FACILITY <sup>1</sup>			
			REST ROOMS	DOCKS	SANITARY SYS. PUMP - OUTS	PARKING LOTS
	Hyatt Reservoir	19	0 (0)	2 (11)	0 (0)	0 (0)
	Lost Creek Reservoir	55	3 (5)	10 (18)	5 (9)	11 (20)
	Rogue River	12	0 (0)	1 (8)	0 (0)	1 (8)
	Willow Creek Reservoir <sub>2</sub>	11	0 (0)	0 (0)	0 (0)	1 (9)
	Other bodies of water	3	1 (33)	1 (33)	0 (0)	0 (0)
JEFFERSON						
	Deschutes River	3	1 (33)	0 (0)	0 (0)	1 (33)
	Lake Billy Chinook	79	2 (3)	5 (6)	4 (5)	5 (6)
	Lake Simtustus	2	0 (0)	1 (50)	0 (0)	1 (50)
	Olallie Lake	1	0 (0)	0 (0)	1 (100)	0 (0)
	Round Butte Reservoir	49	1 (2)	2 (4)	1 (2)	5 (10)
	Suttle Lake	22	0 (0)	2 (9)	1 (5)	2 (9)
	No body of water listed <sup>3</sup>	1	0 (0)	0 (0)	0 (0)	1 (100)
JOSEPHINE						
	Illinois River	1	0 (0)	0 (0)	0 (0)	1 (100)
	Rogue River	18	1 (6)	1 (6)	1 (6)	0 (0)
	Selmac Lake	5	0 (0)	1 (20)	0 (0)	0 (0)
KLAMATH						
	Agency Lake	7	2 (29)	0 (0)	0 (0)	0 (0)
	Crescent Lake	35	1 (3)	5 (14)	3 (9)	4 (11)
	Four Mile Lake	1	1 (100)	1 (100)	0 (0)	1 (100)
	Gerber Reservoir	13	0 (0)	3 (23)	2 (15)	1 (8)
	Hemlock Lake	1	1 (100)	0 (0)	0 (0)	1 (100)
	Klamath (upper) Lake	79	6 (8)	8 (10)	8 (10)	8 (10)
	Lake of the Woods	24	1 (4)	1 (4)	1 (4)	0 (0)
	Lost River	5	0 (0)	1 (20)	0 (0)	2 (40)
	Odell Lake	43	2 (5)	6 (14)	3 (7)	9 (21)
	Other bodies of water <sup>2</sup>	5	1 (20)	0 (0)	0 (0)	1 (20)
LAKE						
	Dog Lake	12	0 (0)	1 (8)	0 (0)	1 (8)
	Drews Lake	3	2 (67)	0 (0)	0 (0)	0 (0)
	Hart Lake	1	1 (100)	0 (0)	0 (0)	0 (0)
LANE						
	Blue River Reservoir	7	2 (29)	0 (0)	0 (0)	0 (0)
	Carter Lake	1	0 (0)	1 (100)	0 (0)	0 (0)
	Cottage Grove Reservoir	14	0 (0)	2 (14)	0 (0)	2 (14)
	Cougar Reservoir	12	0 (0)	1 (8)	0 (0)	1 (8)
	Dexter Reservoir	12	0 (0)	0 (0)	0 (0)	2 (17)
	Dorena Reservoir	28	2 (7)	3 (11)	1 (4)	1 (4)
	Fall Creek Reservoir	20	3 (15)	4 (20)	2 (10)	7 (35)
	Fern Ridge Reservoir	49	3 (6)	4 (8)	1 (2)	3 (6)
	Hills Creek Reservoir	13	0 (0)	4 (31)	0 (0)	2 (15)
	Lookout Point Reservoir	1	1 (100)	0 (0)	1 (100)	0 (0)
	McKenzie River	7	1 (14)	0 (0)	0 (0)	2 (29)
	Mercer Lake	10	5 (50)	1 (10)	1 (10)	1 (10)
	Munsel Lake	1	1 (100)	0 (0)	0 (0)	0 (0)
	Pacific Ocean	25	0 (0)	0 (0)	0 (0)	1 (4)

TABLE 13 CONTINUED

COUNTY	BODY OF WATER	# BOATS	TYPE OF FACILITY <sup>1</sup>			
			REST ROOMS	DOCKS	SANITARY SYS. PUMP - OUTS	PARKING LOTS
	Siltcoos Lake	36	0 (0)	1 (3)	1 (3)	1 (3)
	Siuslaw Bay	3	2 (67)	2 (67)	2 (67)	2 (67)
	Siuslaw River	44	2 (5)	5 (11)	3 (7)	4 (9)
	Triangle Lake	14	0 (0)	0 (0)	0 (0)	2 (14)
	Waldo Lake	3	0 (0)	1 (33)	0 (0)	0 (0)
	Woahink Lake	6	0 (0)	0 (0)	0 (0)	1 (17)
	Other bodies of water <sup>2</sup>	5	0 (0)	0 (0)	1 (20)	0 (0)
	No body of water listed <sup>3</sup>	20	1 (5)	0 (0)	2 (10)	0 (0)
LINCOLN						
	Alsea Bay	38	6 (16)	3 (8)	0 (0)	5 (13)
	Alsea River	27	1 (4)	1 (4)	1 (4)	2 (7)
	Depoe Bay	10	7 (70)	17 (170)	4 (40)	15 (150)
	Devils (D) Lake	44	2 (5)	7 (16)	0 (0)	3 (7)
	Eckman Lake	0	0 (0)	0 (0)	0 (0)	1 (0)
	Pacific Ocean	114	4 (4)	6 (5)	6 (5)	10 (9)
	Salmon River Bay	2	0 (0)	1 (50)	0 (0)	1 (50)
	Siletz River	34	0 (0)	0 (0)	1 (3)	2 (6)
	Yaquina Bay	109	26 (24)	31 (28)	16 (15)	31 (28)
	Other bodies of water <sup>2</sup>	2	1 (50)	0 (0)	0 (0)	0 (0)
	No body of water listed <sup>3</sup>	5	2 (40)	1 (20)	2 (40)	2 (40)
LINN						
	Big Cliff Reservoir	0	0 (0)	1 (0)	0 (0)	0 (0)
	Big Lake	5	0 (0)	2 (40)	0 (0)	1 (20)
	Clear Lake	8	0 (0)	2 (25)	0 (0)	1 (13)
	Detroit Reservoir	5	0 (0)	1 (20)	0 (0)	0 (0)
	Foster Reservoir	70	3 (4)	4 (6)	3 (4)	6 (9)
	Green Peter Reservoir	28	5 (18)	8 (29)	3 (11)	9 (32)
	Lost Lake	2	0 (0)	1 (50)	0 (0)	1 (50)
	Willamette River	14	3 (21)	1 (7)	1 (7)	2 (14)
	Other bodies of water <sup>2</sup>	1	0 (0)	1 (100)	0 (0)	1 (100)
MALHEUR						
	Malheur Reservoir	5	0 (0)	2 (40)	0 (0)	2 (40)
	Owyhee Reservoir	52	3 (6)	7 (13)	3 (6)	5 (10)
	Snake River	20	0 (0)	2 (10)	2 (10)	3 (15)
MARION						
	Detroit Reservoir	100	2 (2)	14 (14)	4 (4)	10 (10)
	North Santiam River	2	0 (0)	1 (50)	0 (0)	0 (0)
	Willamette River	30	4 (13)	9 (30)	3 (10)	7 (23)
MORROW						
	Columbia River	8	2 (25)	1 (13)	1 (13)	3 (38)
MULTNOMAH						
	Columbia River	230	23 (10)	28 (12)	32 (14)	27 (12)
	Willamette River	180	17 (9)	28 (16)	8 (4)	32 (18)
	Other bodies of water <sup>2</sup>	3	0 (0)	1 (33)	0 (0)	2 (67)
	No body of water listed <sup>3</sup>	6	0 (0)	0 (0)	1 (17)	0 (0)
POLK						
	Willamette River	18	3 (17)	2 (11)	1 (6)	3 (17)
	Other bodies of water <sup>2</sup>	3	1 (33)	0 (0)	0 (0)	0 (0)



TABLE 13 CONTINUED

COUNTY	BODY OF WATER	# BOATS	TYPE OF FACILITY <sup>1</sup>			
			REST ROOMS	DOCKS	SANITARY SYS. PUMP - OUTS	PARKING LOTS
SHERMAN						
	Columbia River	4	0 (0)	1 (25)	0 (0)	2 (50)
	John Day River	26	1 (4)	1 (4)	0 (0)	1 (4)
TILLAMOOK						
	Lake Lytle	6	1 (17)	0 (0)	0 (0)	0 (0)
	Nehalem Bay	32	1 (3)	1 (3)	2 (6)	0 (0)
	Nehalem River	20	1 (5)	1 (5)	0 (0)	1 (5)
	Nestucca Bay	10	0 (0)	1 (10)	0 (0)	1 (10)
	Nestucca River	17	3 (18)	1 (6)	1 (6)	2 (12)
	Netarts Bay	17	0 (0)	2 (12)	0 (0)	0 (0)
	Pacific Ocean	54	3 (6)	4 (7)	2 (4)	7 (13)
	Tillamook Bay	78	7 (9)	13 (17)	4 (5)	18 (23)
	Wilson River	4	0 (0)	0 (0)	0 (0)	1 (25)
UMATILLA						
	Columbia River	35	3 (9)	5 (14)	4 (11)	1 (3)
	Indian Lake	6	1 (17)	0 (0)	0 (0)	0 (0)
	McKay Reservoir	14	7 (50)	2 (14)	4 (29)	5 (36)
UNION						
	Morgan Lake	7	0 (0)	0 (0)	1 (14)	0 (0)
	Thief Valley Reservoir <sup>3</sup>	11	1 (9)	1 (9)	1 (9)	0 (0)
	No body of water listed <sup>3</sup>	3	0 (0)	0 (0)	1 (33)	0 (0)
WALLOWA						
	Snake River	5	1 (20)	1 (20)	1 (20)	0 (0)
	Wallowa Lake	73	3 (4)	5 (7)	2 (3)	4 (5)
WASCO						
	Clear Lake	0	1 (0)	0 (0)	0 (0)	0 (0)
	Columbia River	46	9 (20)	9 (20)	7 (15)	10 (22)
	Deschutes River	6	2 (33)	0 (0)	0 (0)	2 (33)
	Frog Lake	1	0 (0)	0 (0)	0 (0)	1 (100)
	Pine Hollow Reservoir	8	3 (38)	1 (13)	2 (25)	1 (13)
WASHINGTON						
	Haag Lake	69	1 (1)	1 (1)	0 (0)	1 (1)
	Scoggins Lake	8	0 (0)	1 (13)	2 (25)	1 (13)
YAMHILL						
	Willamette River	18	1 (6)	2 (11)	1 (6)	6 (33)
	STATE OF IDAHO	10	0 (0)	1 (10)	1 (10)	0 (0)
	STATE OF WASHINGTON	90	2 (2)	2 (2)	2 (2)	2 (2)
	STATE OF NEVADA	0	0 (0)	1 (0)	0 (0)	0 (0)
	UNKNOWN	0	7 (0)	8 (0)	15 (0)	9 (0)
TOTALS		4,660	375 (8)	544 (12)	283 (6)	576 (12)

<sup>1</sup> The number in parenthesis is the percentage of boats using the body of water whose owners complained of the inadequacy, e.g., Brownlee Reservoir was used by 53 respondents, 9, or 17 percent, complained about inadequate rest rooms. If NO boats actually used the body of water but respondents complained of inadequacies then numbers will appear, but the one in parenthesis will be zero, e.g., Anthony Lakes had no boats but two respondents complained of inadequate docks, this equals a percentage of zero (0), as shown.

<sup>2</sup> Respondents identified a county and listed a body of water other than those presently categorized as useable bodies of water.

<sup>3</sup> Respondents identified the county but did not list a body of water.

TABLE 14  
 REPORTED PROBLEM AREAS BY COUNTY AND  
 BODY OF WATER 1978 BOATING SURVEY

COUNTY	BODY OF WATER	# BOATS	TYPE OF PROBLEM <sup>1</sup>			
			WATER POLLUTION	USER CONFLICT	ENFORCEMENT OF RULES	LACK OF COURTESY
BAKER						
	Brownlee Reservoir	53	4 (8)	5 (9)	8 (15)	6 (11)
	Phillips Reservoir	38	0 (0)	1 (3)	1 (3)	0 (0)
	Snake River	54	3 (5)	1 (2)	3 (6)	3 (6)
	Unity Reservoir	28	0 (0)	0 (0)	1 (4)	3 (11)
BENTON						
	Willamette River	17	2 (12)	1 (6)	0 (0)	1 (6)
CLACKAMAS						
	Clackamas River	30	1 (3)	2 (7)	2 (7)	7 (23)
	Estacada Lake	1	0 (0)	0 (0)	0 (0)	1 (100)
	Lake Oswego	22	2 (9)	2 (9)	1 (5)	4 (18)
	North Fork Reservoir	9	0 (0)	0 (0)	0 (0)	1 (11)
	Timothy Lake	20	0 (0)	1 (5)	2 (10)	2 (10)
	Willamette River	140	12 (9)	18 (13)	15 (11)	31 (22)
	No body of water listed <sup>2</sup>	8	0 (0)	1 (13)	0 (0)	1 (13)
CLATSOP						
	Coffenbury Lake	1	0 (0)	0 (0)	1 (100)	1 (100)
	Columbia River	97	5 (4)	3 (3)	1 (1)	6 (6)
	Cullaby Lake	10	0 (0)	0 (0)	1 (10)	1 (10)
	John Day River	2	1 (50)	0 (0)	1 (50)	0 (0)
	Pacific Ocean	46	0 (0)	1 (2)	1 (2)	6 (13)
	Young's River	4	0 (0)	0 (0)	0 (0)	2 (50)
COLUMBIA						
	Columbia River	78	15 (19)	4 (5)	3 (4)	8 (10)
	Willamette River	34	1 (3)	1 (3)	1 (3)	4 (12)
COOS						
	Coos Bay	49	2 (4)	1 (2)	0 (0)	1 (2)
	Coos River	17	4 (24)	2 (12)	1 (6)	1 (6)
	Coquille River	12	4 (33)	1 (8)	0 (0)	1 (8)
	Coquille Middle Fork	5	2 (40)	0 (0)	0 (0)	0 (0)
	Eel Lake	7	0 (0)	0 (0)	1 (14)	0 (0)
	North Ten Mile Lake	30	2 (7)	4 (13)	0 (0)	8 (27)
	Pacific Ocean	45	2 (4)	1 (2)	1 (2)	3 (7)
	South Ten Mile Lake	48	4 (8)	2 (4)	1 (2)	7 (15)
CROOK						
	Ochoco Reservoir	49	1 (2)	0 (0)	1 (2)	1 (2)
	Prineville Reservoir	76	0 (0)	13 (17)	8 (11)	13 (17)
CURRY						
	Chetco Bay	10	0 (0)	3 (30)	2 (20)	5 (50)
	Garrison Lake	6	1 (17)	0 (0)	0 (0)	0 (0)
	Pacific Ocean	84	10 (12)	4 (5)	0 (0)	5 (6)
	Rogue River	36	0 (0)	2 (6)	3 (8)	8 (22)
DESCHUTES						
	Big Lava Lake	12	1 (8)	0 (0)	0 (0)	0 (0)
	Crane Prairie Reservoir	64	2 (3)	1 (2)	4 (6)	1 (2)
	Cultus Lake	18	0 (0)	0 (0)	1 (6)	0 (0)
	Deschutes River	24	0 (0)	3 (13)	0 (0)	3 (13)
	Devils Lake	2	0 (0)	0 (0)	1 (50)	0 (0)
	East Lake	84	0 (0)	1 (1)	4 (5)	4 (5)
	Little Cultus Lake	2	0 (0)	0 (0)	1 (50)	0 (0)
	Paulina Lake	59	1 (2)	0 (0)	0 (0)	4 (7)
	Wickiup Reservoir	79	0 (0)	2 (3)	1 (1)	3 (4)
	No body of water listed	27	0 (0)	0 (0)	1 (4)	0 (0)
DOUGLAS						
	Cooper Creek Reservoir	21	2 (10)	6 (29)	4 (19)	12 (57)
	Diamond Lake	125	6 (5)	1 (1)	7 (6)	10 (8)
	Elbow Lake	0	1 (0)	0 (0)	0 (0)	0 (0)
	Lemoie Reservoir	8	1 (13)	1 (13)	2 (25)	1 (13)
	Loon Lake	9	0 (0)	0 (0)	0 (0)	1 (11)

TABLE 14 CONTINUED

COUNTY	BODY OF WATER	# BOATS	TYPE OF PROBLEM					
			WATER POLLUTION	USER CONFLICT	ENFORCEMENT OF RULES	LACK OF COURTESY		
	Pacific Ocean	37	1 (3)	3 (8)	1 (3)	5 (14)		
	Smith River	9	2 (22)	0 (0)	0 (0)	0 (0)		
	Tahkentic Lake	8	0 (0)	0 (0)	1 (13)	0 (0)		
	Umpqua River	50	2 (4)	1 (2)	4 (8)	4 (8)		
	Umpqua River, North Fork	5	1 (20)	0 (0)	0 (0)	0 (0)		
	Umpqua, Tidewater (River)	3	0 (0)	0 (0)	0 (0)	1 (33)		
	Winchester Bay	21	3 (14)	1 (5)	4 (14)	7 (33)		
	Other bodies of water <sup>3</sup>	1	1 (100)	0 (0)	0 (0)	0 (0)		
HARNEY	Warm Springs Reservoir	3	0 (0)	1 (33)	0 (0)	0 (0)		
HOOD RIVER	Columbia River	23	0 (0)	2 (9)	2 (9)	0 (0)		
JACKSON	Emigrant Lake	18	2 (11)	2 (11)	1 (6)	3 (17)		
	Fish Lake	14	1 (7)	0 (0)	0 (0)	1 (7)		
	Howard Prairie Reservoir	53	0 (0)	3 (6)	1 (2)	4 (8)		
	Hyatt Reservoir	19	1 (5)	0 (0)	1 (5)	0 (0)		
	Lost Creek Reservoir	55	5 (9)	6 (11)	6 (11)	8 (15)		
	Rogue River	12	1 (8)	2 (17)	0 (0)	1 (8)		
	Willow Creek	11	0 (0)	1 (9)	1 (9)	0 (0)		
JEFFERSON	Haystack Reservoir	15	0 (0)	0 (0)	1 (7)	3 (20)		
	Lake Billy Chinook	79	4 (5)	6 (8)	3 (4)	16 (20)		
	Suttle Lake	22	0 (0)	3 (14)	0 (0)	2 (9)		
	Lake Simtustus	2	0 (0)	0 (0)	0 (0)	1 (50)		
	Round Butte Reservoir	49	2 (4)	6 (12)	9 (18)	10 (20)		
JOSEPHINE	Rogue River	18	1 (6)	1 (6)	2 (11)	3 (17)		
KLAMATH	Agency Lake	7	3 (43)	0 (0)	0 (0)	0 (0)		
	Crescent Lake	35	0 (0)	1 (3)	0 (0)	3 (9)		
	Davis Lake	1	0 (0)	0 (0)	1 (100)	1 (100)		
	Gerber Reservoir	13	0 (0)	0 (0)	0 (0)	1 (8)		
	Hemlock Lake	1	1 (100)	0 (0)	0 (0)	1 (100)		
	Klamath Lake (Upper)	79	23 (29)	8 (10)	6 (8)	6 (8)		
	Lake of the Woods	24	0 (0)	1 (4)	3 (13)	1 (4)		
	Lost River	5	2 (40)	0 (0)	1 (20)	0 (0)		
	Odeil Lake	43	1 (2)	0 (0)	0 (0)	3 (7)		
	Sprague Lake	4	0 (0)	1 (25)	0 (0)	0 (0)		
	Other bodies of water	5	0 (0)	1 (20)	0 (0)	2 (40)		
LAKE	Ana Reservoir	3	0 (0)	0 (0)	0 (0)	1 (33)		
	Dog Lake	12	1 (8)	0 (0)	0 (0)	0 (0)		
	Drews Lake	3	0 (0)	1 (33)	0 (0)	0 (0)		
	Goos Lake	1	1 (100)	0 (0)	0 (0)	0 (0)		
	Thompson Valley Reservoir	3	1 (33)	0 (0)	0 (0)	0 (0)		
LANE	Collard Lake	1	1 (100)	0 (0)	0 (0)	0 (0)		
	Cottage Grove Reservoir	14	0 (0)	1 (7)	2 (14)	3 (21)		
	Cougar Reservoir	12	0 (0)	3 (25)	0 (0)	2 (17)		
	Dexter Reservoir	12	0 (0)	0 (0)	2 (17)	2 (17)		
	Dorena Reservoir	28	0 (0)	4 (14)	3 (11)	5 (18)		
	Fall Creek Reservoir	20	1 (5)	7 (35)	2 (10)	5 (25)		
	Fern River Reservoir	49	4 (8)	8 (16)	7 (14)	12 (24)		
	Hills Creek	13	1 (8)	1 (8)	2 (15)	2 (15)		
	McKenzie River	7	0 (0)	0 (0)	0 (0)	2 (29)		
	Mercer Lake	10	1 (10)	2 (20)	0 (0)	3 (30)		
	Pacific Ocean	25	1 (4)	0 (0)	1 (4)	1 (4)		
	Siltcoos Lake	36	0 (0)	1 (3)	1 (3)	2 (6)		
	Siuslaw Bay	3	2 (67)	0 (0)	1 (33)	0 (0)		
	Siuslaw River	44	6 (14)	0 (0)	3 (7)	6 (14)		
	Sutton Lake	5	0 (0)	0 (0)	0 (0)	1 (20)		
	Triangle Lake	14	0 (0)	0 (0)	0 (0)	3 (21)		
	Willamette River (Main Fork)	3	1 (33)	0 (0)	0 (0)	0 (0)		
	Willamette River (Middle Fork)	0	1 (0)	0 (0)	0 (0)	0 (0)		

TABLE 14 CONTINUED

COUNTY	BODY OF WATER	# BOATS	TYPE OF PROBLEM							
			WATER POLLUTION		USER CONFLICT		ENFORCEMENT OF RULES		LACK OF COURTESY	
	Woahink Lake	6	0	(0)	0	(0)	0	(0)	1	(17)
	No body of water listed	20	1	(5)	0	(0)	0	(0)	2	(10)
LINCOLN										
	Aisea Bay	38	0	(0)	1	(3)	0	(0)	4	(11)
	Aisea River	27	0	(0)	2	(7)	2	(7)	3	(11)
	Depoe Bay	10	4	(40)	4	(40)	0	(0)	5	(50)
	Devils (D) Lake	44	5	(11)	7	(16)	6	(14)	9	(20)
	Pacific Ocean	114	1	(1)	2	(2)	2	(2)	7	(6)
	Salmon River Bay	2	1	(50)	0	(0)	0	(0)	0	(0)
	Siletz River	34	1	(3)	1	(3)	2	(6)	2	(6)
	Yaquina Bay	109	8	(7)	11	(10)	12	(11)	23	(21)
	Yaquina River	4	1	(25)	0	(0)	0	(0)	0	(0)
	Other bodies of water	2	0	(0)	0	(0)	0	(0)	1	(50)
LINN										
	Big Lake	5	0	(0)	0	(0)	1	(20)	0	(0)
	Clear Lake	8	0	(0)	0	(0)	0	(0)	1	(13)
	Detroit Reservoir	5	1	(20)	2	(40)	0	(0)	1	(20)
	Foster Reservoir	70	2	(3)	4	(6)	2	(3)	12	(17)
	Green Peter Reservoir	28	1	(4)	0	(0)	1	(4)	4	(14)
	North Santiam River	0	0	(0)	0	(0)	0	(0)	1	(0)
	Santiam River	1	0	(0)	1	(100)	0	(0)	0	(0)
	Smith Reservoir	3	0	(0)	0	(0)	0	(0)	1	(33)
	South Santiam River	0	1	(0)	0	(0)	0	(0)	0	(0)
	Willamette River	14	0	(0)	1	(7)	0	(0)	2	(14)
MALHEUR										
	Bully Creek	10	0	(0)	1	(10)	2	(20)	2	(20)
	Owyhee Reservoir	52	1	(2)	3	(6)	3	(6)	4	(8)
	Snake River	20	2	(10)	0	(0)	0	(0)	1	(5)
MARION										
	Detroit Reservoir	100	9	(9)	4	(4)	4	(4)	15	(15)
	North Santiam River	2	0	(0)	1	(50)	0	(0)	1	(50)
	Santiam River	1	0	(0)	0	(0)	0	(0)	1	(100)
	Willamette River	30	3	(10)	0	(0)	3	(13)	3	(10)
	Other bodies of water	6	1	(17)	0	(0)	0	(0)	0	(0)
MORROW										
	Columbia River	8	2	(25)	1	(13)	1	(13)	2	(25)
MULTNOMAH										
	Columbia River	230	19	(8)	18	(8)	23	(10)	52	(23)
	Willamette River	180	11	(6)	21	(12)	16	(9)	30	(17)
POLK										
	Willamette	18	1	(6)	4	(22)	1	(6)	2	(11)
	Other bodies of water	3	1	(33)	0	(0)	0	(0)	0	(0)
SHERMAN										
	John Day River	26	1	(4)	0	(0)	2	(8)	3	(12)
TILLAMOOK										
	Nehalem Bay	32	2	(6)	0	(0)	0	(0)	1	(3)
	Nehalem River	20	1	(5)	0	(0)	0	(0)	1	(5)
	Nestucca River	17	1	(6)	0	(0)	1	(6)	2	(12)

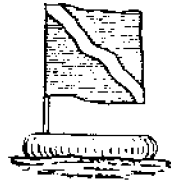
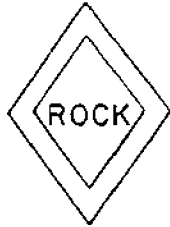
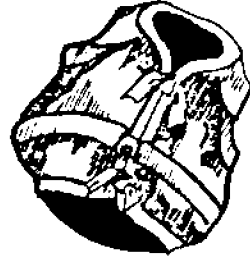
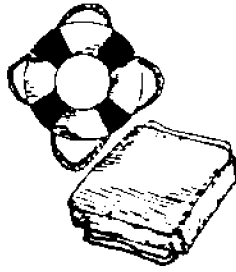
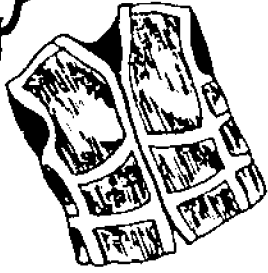
TABLE 14 CONTINUED

COUNTY	BODY OF WATER	# BOATS	TYPE OF PROBLEM							
			WATER POLLUTION		USER CONFLICT		ENFORCEMENT OF RULES		LACK OF COURTESY	
	Netarts Bay	17	0	(0)	0	(0)	0	(0)	1	(6)
	Pacific Ocean	54	0	(0)	5	(9)	2	(4)	7	(13)
	Tillamook Bay	78	0	(0)	3	(4)	4	(5)	8	(10)
	Trask River	1	0	(0)	0	(0)	0	(0)	1	(100)
	Wilson River	4	0	(0)	1	(25)	0	(0)	0	(0)
UMATILLA										
	Columbia River	35	1	(3)	0	(0)	1	(3)	4	(11)
	McKay Reservoir	14	2	(14)	1	(7)	0	(0)	0	(0)
UNION										
	Grande Ronde	0	1	(0)	0	(0)	0	(0)	0	(0)
	Thief Valley Reservoir	11	0	(0)	0	(0)	1	(9)	1	(9)
	Other bodies of water	8	0	(0)	1	(13)	1	(13)	2	(25)
WALLOWA										
	Snake River	5	0	(0)	1	(20)	0	(0)	1	(20)
	Wallowa Lake	73	4	(5)	7	(10)	7	(10)	11	(15)
WASCO										
	Columbia River	46	6	(13)	2	(4)	1	(2)	6	(13)
	Deschutes River	6	1	(17)	1	(17)	1	(17)	1	(17)
	Pine Hollow Reservoir	8	0	(0)	2	(25)	1	(13)	2	(25)
	Other bodies of water	0	0	(0)	0	(0)	0	(0)	1	(0)
WASHINGTON										
	Haag Lake	69	1	(1)	4	(6)	7	(10)	7	(10)
	Scoggins Lake	8	0	(0)	0	(0)	1	(13)	0	(0)
YAMHILL										
	Willamette River	18	1	(6)	2	(11)	1	(6)	2	(11)
	Idaho	10	0	(0)	0	(0)	1	(10)	0	(0)
	Washington	90	3	(3)	1	(1)	1	(1)	2	(2)
	California	20	1	(5)	0	(0)	0	(0)	0	(0)
	Unknown	0	3	(0)	2	(0)	0	(0)	7	(0)
Total		4,636	277	(6)	290	(6)	271	(6)	580	(13)

<sup>1</sup> The number in parenthesis is the percentage of boats using the body of water whose owners complained of the problem, e.g., Brownlee Reservoir was used by 53 respondents, 8 or 15%, felt there was a lack of the Enforcement of Rules. If no boats actually used the body of water but respondents said there was a problem then numbers will appear but the one in parenthesis will be zero, e.g., Elbow Lake had no boats using it but one respondent complained of water pollution, this equals a percentage of zero (0) as shown.

<sup>2</sup> Respondents identified this county but did not list a body of water.

<sup>3</sup> Respondents identified a county and listed a body of water other than those presently categorized as useable bodies of water.



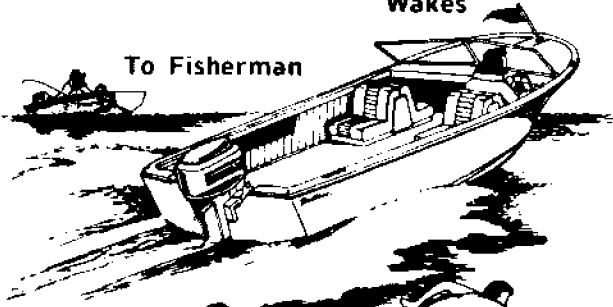
THE DIVERS FLAG



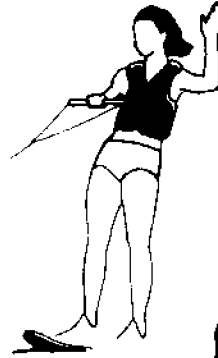
A MOORING BUOY

Damage from Wakes

To Fisherman



To Swimmers



Boating Safety  
and  
Law Enforcement



## BOATING SAFETY AND LAW ENFORCEMENT

### Accidents

Fishing, pleasure boating and water-skiing rank as the 5th, 6th and 7th most popular forms of outdoor recreation in Oregon. It is probable that these activities account for over 12 million activity occasions annually. Available statistics show that 27 percent of the State's population participates in motorized boating with an additional 15 percent participating in non-motorized boating.<sup>1</sup> Unfortunately, these boaters are vulnerable to the possibilities of a serious accident which could damage property and injure people. 1978 statistics of the OSMB, list 125 "reported" boating accidents within Oregon.<sup>2</sup> The results were 25 fatalities, 31 non-fatal injuries and over one-half million dollars in property damage. These accidents involved 140 boats and 386 people. Comparable data on accidents since 1975 are listed in Table 15.

TABLE 15<sup>3</sup>

REPORTED BOATING ACCIDENTS IN OREGON FROM OSMB DATA FILES				
YEAR	TOTAL NUMBER OF REPORTED ACCIDENTS	PERSONS HURT FATALITIES	NON-FATAL INJURIES	PROPERTY DAMAGE
1975	125	36	38	\$198,600
1976	147	41	38	\$208,600
1977	113	23	32	\$ 96,100
1978	125	25	31	\$550,000

<sup>1</sup> State-wide Comprehensive Outdoor Recreation Plan, (SCORP), State Parks and Recreation Branch, Oregon Department of Transportation, 4th Ed, 1978.

<sup>2</sup> Only those accidents involving an injury, fatality or more than \$100.00 in property damage are required to be reported.

<sup>3</sup> Source: Data files, Oregon State Marine Board for 1978.

The table reveals that the number of accidents remained near an average of 127. However, property damage has followed a roller coaster path ending the four year period at more than double the 1975 costs. Fortunately, the fatality rate has tended to decline. One reason for the 43 percent drop between 1976 and 1977 was the curtailment of boating activity brought about by the drought. In addition, an intensive safety education campaign was mounted at that time by various State agencies. This effort was primarily directed toward those boaters that were using the Oregon coast, as their numbers were expected to increase above normal as the drought affected water levels on inland waterways.

It must be emphasized that the data in the table reflects only reported accidents! Many accidents go unreported as they might cast doubt on the operator's seamanship. However, boat owner responses, to questions asked in the latest survey, indicate that it is highly probable that over 5,800 of the State's pleasure boats were damaged, in some way, while in operation during the 1977-1978 season,(see Table 2).

#### Assistance and Law Enforcement

Questions were also asked concerning other areas of marine safety services and various law enforcement agencies. When asked if their boats had received assistance of any kind,(e.g. towing, fuel, emergency repairs, etc.), over 80 percent indicated they had not received or needed assistance, 2.0 percent did not respond and 18.0 percent did get help. The needed assistance came from other boaters (49.9 percent), the United States Coast Guard (25.8 percent), Sheriff's Marine Patrol (6.3 percent) and other or non-specified agencies (6.4 percent). Multiple



responses to the question accounted for the remaining 11.6 percent.<sup>4</sup>

Projections of the returns are inconsistent as to the effectiveness and efficiency of law enforcement activities throughout the State. It appears that boaters do not know, or at least do not remember, when they have been stopped or checked for compliance with Federal or State Laws. In fact, only 10.9 percent admitted that they had been stopped or checked at all. This does not correlate with the reports of most law enforcement agencies. The only agency with similar data to that from the survey was the United States Coast Guard. This would point to the conclusion that the average boater remembers vividly being stopped by the Coast Guard but quickly forgets having been the subject of other law enforcement activity or their conversations with a passing Sheriff's Patrol. Almost one-fourth (24.5 percent), of Oregon's boaters do remember however, that they were provided safety or educational material by law enforcement personnel during the last boating season.<sup>4</sup>

### Safety

A most important facet of marine safety is the condition of the boat being used. Estimates from the survey indicate that 12,548 Oregon boats were given Free Courtesy Motorboat Examinations during 1977-1978. As in 1975, the number approximates ten percent of the registered boats in the State.<sup>4</sup>

During the three years preceeding the close of the 1978 survey, 19.7 percent of Oregon's pleasure boaters completed a course in boating skills or safety from one or more agencies. While many respondents indicated that they had not taken courses from certain agencies or did

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<sup>4</sup> Appendix I contains county response projections of all safety and law enforcement related questions by county of registration.

not respond to the question, 37.9 percent specifically noted that they had taken absolutely no courses of any kind. Of those taking courses, Basic Boating from the Coast Guard Auxiliary was the most popular (22.6 percent). For further details on courses and agencies see Appendix I which gives county levels for each type of course and their sponsors.

Two questions in the survey (18 and 19), were asked to test boater reaction and usefulness of the knowledge learned from the safety courses they attended and the Boater's Handbook that is prepared and distributed by OSMB. Of the boaters taking courses, 63.6 percent thought they were very helpful, 28.3 percent said they were useful, 6.3 percent considered them somewhat useful and 1.8 percent indicated that they were not useful. In response to the question on their familiarity and usefulness of the handbook, respondents said they were familiar with it (61.3 percent), were not familiar with it (24.2 percent) or failed to respond (14.5 percent). If they were familiar with the handbook, they thought it was very useful or useful (78.1 percent), somewhat useful (15.4 percent), considered it to be not useful at all (1.3 percent) or did not indicate its usefulness to them (5.2 percent). Table 16 lists county of registration response projections as to the utility of courses taken and the usefulness of the Oregon Boaters Handbook.

TABLE 16  
 OREGON PLEASURE BOAT OWNER'S REACTIONS, BY COUNTY OF REGISTRATION,  
 TO SAFETY COURSES TAKEN BETWEEN 1975 AND 1978, AND  
 THE "OREGON BOATERS HANDBOOK."

COUNTY	REACTION/UTILITY OF SAFETY COURSE				REACTION/UTILITY OF HANDBOOK			
	VERY USEFUL	USEFUL	SOMEWHAT USEFUL	NOT USEFUL	VERY USEFUL	USEFUL	SOMEWHAT USEFUL	NOT USEFUL
BAKER	19	0	0	0	125	202	38	29
BENTON	324	20	40	0	486	648	263	20
CLACKAMAS	1,130	445	171	0	1,644	3,425	1,028	34
CLATSOP	146	0	18	0	310	401	55	18
COLUMBIA	169	63	0	0	422	528	127	84
COOS	397	244	0	0	978	1,589	458	0
CROOK	24	24	0	12	95	202	47	0
CURRY	208	59	0	15	475	371	74	15
DESCHUTES	220	88	0	0	571	1,119	483	0
DOUGLAS	663	199	33	66	829	1,524	563	166
GILLIAM	16	0	0	0	16	27	0	0
GRANT	0	0	0	0	29	105	10	0
HARNEY	19	0	0	0	37	111	19	0
HOOD RIVER	28	0	0	0	101	147	55	0
JACKSON	371	148	74	74	1,372	2,002	853	74
JEFFERSON	33	0	0	0	89	189	22	0
JOSEPHINE	108	27	54	0	758	515	190	0
KLAMATH	314	290	0	0	917	1,400	459	24
LAKE	11	0	0	0	32	74	42	0
LANE	983	546	73	73	2,402	4,076	1,565	109
LINCOLN	242	132	22	0	703	747	154	0
LINN	364	260	0	0	859	1,197	390	52
MALHEUR	120	45	0	0	239	388	60	0
MARION	881	315	94	0	1,667	2,076	1,007	63
MORROW	11	0	11	0	55	55	11	11
MULTNOMAH	2,904	1,385	313	45	3,932	6,345	1,564	134
POLK	81	101	20	0	363	363	283	0
SHERMAN	5	0	0	0	0	23	14	0
TILLAMOOK	179	107	54	0	268	464	232	0
UMATILLA	194	54	0	0	468	468	144	18
UNION	9	9	0	9	107	223	72	0
WALLOWA	9	0	17	0	9	103	69	0
WASCO	80	18	9	9	133	284	80	0
WASHINGTON	903	328	41	0	1,190	2,709	534	82
WHEELER	0	0	0	0	2	27	0	0
YAMHILL	177	152	76	0	203	709	228	25
TOTALS	11,346	5,059	1,120	321	21,886	34,836	11,193	958

## GLOSSARY

Activity Occasion - one individual participating in one recreational activity during any reasonable portion or all of one day.

Boat Day - one boat being involved in a boating activity for any portion of a 24 hour period. Also, Boating Day.

Boat Owners - those individuals who own a pleasure boat registered with the Oregon State Marine Board. Also, Boaters.

Boating Population - the aggregate of all registered pleasure boat owners in Oregon from which the 1978 survey was drawn.

Boating Season - a 12 month period beginning 1 September of any year and continuing through 31 August of the following year. This conforms to the guidelines for conducting the 1978 boating survey. Also, Boating year.

County of Registration - the County listed by the principal owner, on Form 250LA-1, when the boat was registered with the Marine Board.

Exporters - counties that lose more of their own boats and people to other counties for boating activities than they gained from the other counties.

Importers - counties that gain more boats and people from other counties that they lose to them for boating activities.

Launch Facility - any designated area from which watercraft may be put into or retrieved from the water. Often it is an inclined surface or ramp leading to the water allowing trailered boats to be floated without the necessity of a lifting device.

People Day - is one person being in a boat while it is involved in a boating activity for any portion of a 24 hour period. Also, an activity occasion.

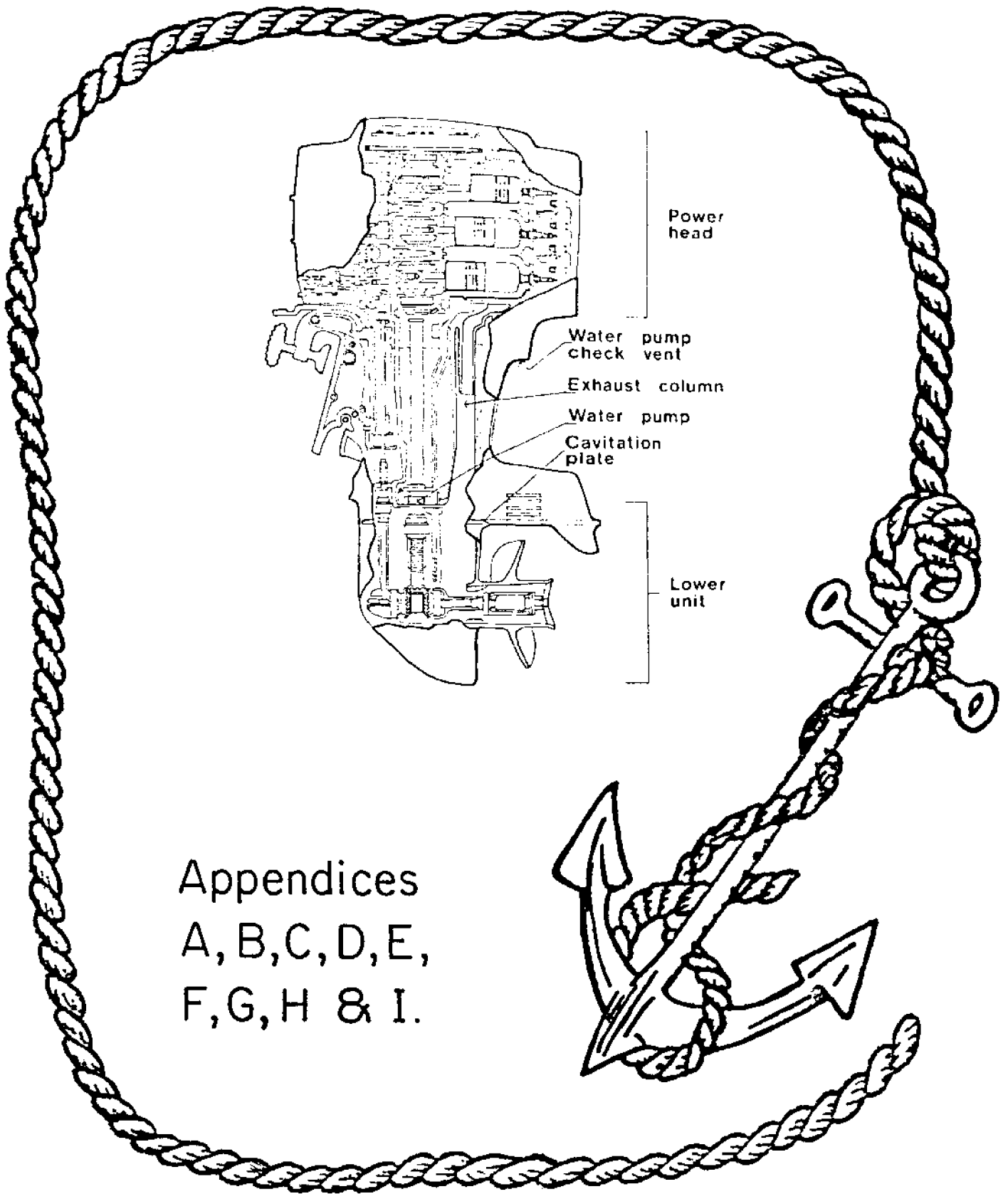
Registered Boat - a vessel which has been issued a certificate of number by the Oregon State Marine Board. All motorized pleasure vessels and sailboats, 12 feet and over, are required to obtain a certificate of number.

Sample - the percentage of the boating population of a county, or the entire State, that were selected to take part in the 1978 boating survey.

Watercraft - is any object capable of being used as a means of transportation on the water, but does not include aircraft equipped to land on water, boathouses, floating homes, air mattresses, beach toys or single inner tubes.

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Appendices  
A, B, C, D, E,  
F, G, H & I.

APPENDIX A  
SURVEY PROCEDURES

Population to be Surveyed

In compliance with ORS 488.833, the overall population to be surveyed consisted of those persons engaged in boating activities within the State of Oregon during the period, 1 September 1977 to 31 August 1978. To provide the highest degree of accuracy the population was narrowed to the principal owners of those watercraft, officially described as being used as pleasure boats, currently registered with the State Marine Board. Fiscal restraints limited the sample to those owners with Oregon mailing addresses. The names and addresses used were taken from the State of Oregon computer tapes for the OSMB as of 1 August 1978.

Selection of Survey Participants

Participants were selected from the total population using a modification of the method used in the 1975 OSMB survey, along the lines suggested by Dr. Lyle D. Calvin, Director, Survey Research Center, Oregon State University (OSU). The modifications were necessary to insure a reasonable level of reliability and an accurate overview of statewide boating activities when utilizing a voluntarily returned questionnaire as the survey base. Therefore, the counties were divided into three categories. "A" consisted of those counties with 1,000 or less registered boats. "B" counties had between 1,000 and 5,000 registered boats. "C" counties were those with more than 5,000 registered boats. See Figure 9 and its accompanying data for further information.

Following the division into categories, the questionnaires were

sent to owners within the counties by a formula derived from the number to be sent and the total number of registered boats in the county. As an example, Sherman County has 76 registered boats and it was assigned 50 questionnaires, this resulted in approximately two out of three of the county's owners receiving a questionnaire. In neighboring Wasco County, one out of every four owners received questionnaires. In all, 11,995 questionnaires were mailed out. Only five were returned as undeliverable. Although not a "true" random sample, it will be assumed to be so for all statistical analyses that appear in this publication.

#### Construction of Questionnaire

The survey questionnaire was constructed utilizing a design favored by R. Charles Vars, Jr., Professor of Economics, OSU. The questions were worded and positioned so as to minimize biases and to provide maximum information for a thorough assessment of boaters, their activities and how well the OSMB is accomplishing its assigned tasks. The questions evolved out of several discussion sessions with the OSMB Staff, the OSU Research Survey Center personnel and consultation with the project advisor. There was no pre-test sample of the questionnaire.

#### Mailing and Follow-Up

The questionnaires were bulk-mailed from Corvallis, Oregon on 23 August 1978 to each participant in a sealed envelope and a postcard follow-up message was sent on 8 September 1978. Examples of both are in Appendix B. Every effort was made to preclude address mistakes and to comply with current United States Postal Service directives. However, from letters received by OSMB, as a result of the follow-up post card, it can be assumed that a number of questionnaires did not reach their destination. Other



contributing factors to the lowered response rate would include the facts that: Bulk mail is not normally forwarded or returned; There had been a drought the previous year; There were shifts in the age groupings of Oregon boaters; There was a prevailing mood of rejecting any questioning of personal facts by any governmental agency at the time the questionnaires were mailed out. This last fact can be seen by a quick glance at the comments made by the respondents in Appendix C. A total response rate of 36 percent for the State resulted. For county rates of response, see Table 1. The rate is little more than half the rate of response to the 1975 survey but compares almost precisely with a somewhat similar survey conducted between 30 November 1977 and 28 February 1978, "Recreational Boating in Western Oregon." Without further follow-up, such as additional mailing of questionnaires, telephone surveys or more expensive survey techniques, it is doubtful that the response rate could have been substantially increased.

#### Reception and Processing

All returned questionnaires were received by the OSU Research Survey Center from the Postal Service and were periodically forwarded to the School of Oceanography for processing. Each questionnaire was manually coded and reduced to optical scanning sheets, (4,359 questionnaires, each requiring two sheets). They were subsequently converted to magnetic tape by the Data Reduction Center of the University of Oregon. A specialized computer program developed by Robert N. Falotico of EG&G Idaho, and Mike Drost OSU Computer Center, was utilized in changing the raw data into useable and logically correct information. This information was analyzed

with assistance from the Staff of the Department of Statistics, OSU, but all resultant conclusions and analysis are the responsibility of the principal investigator.

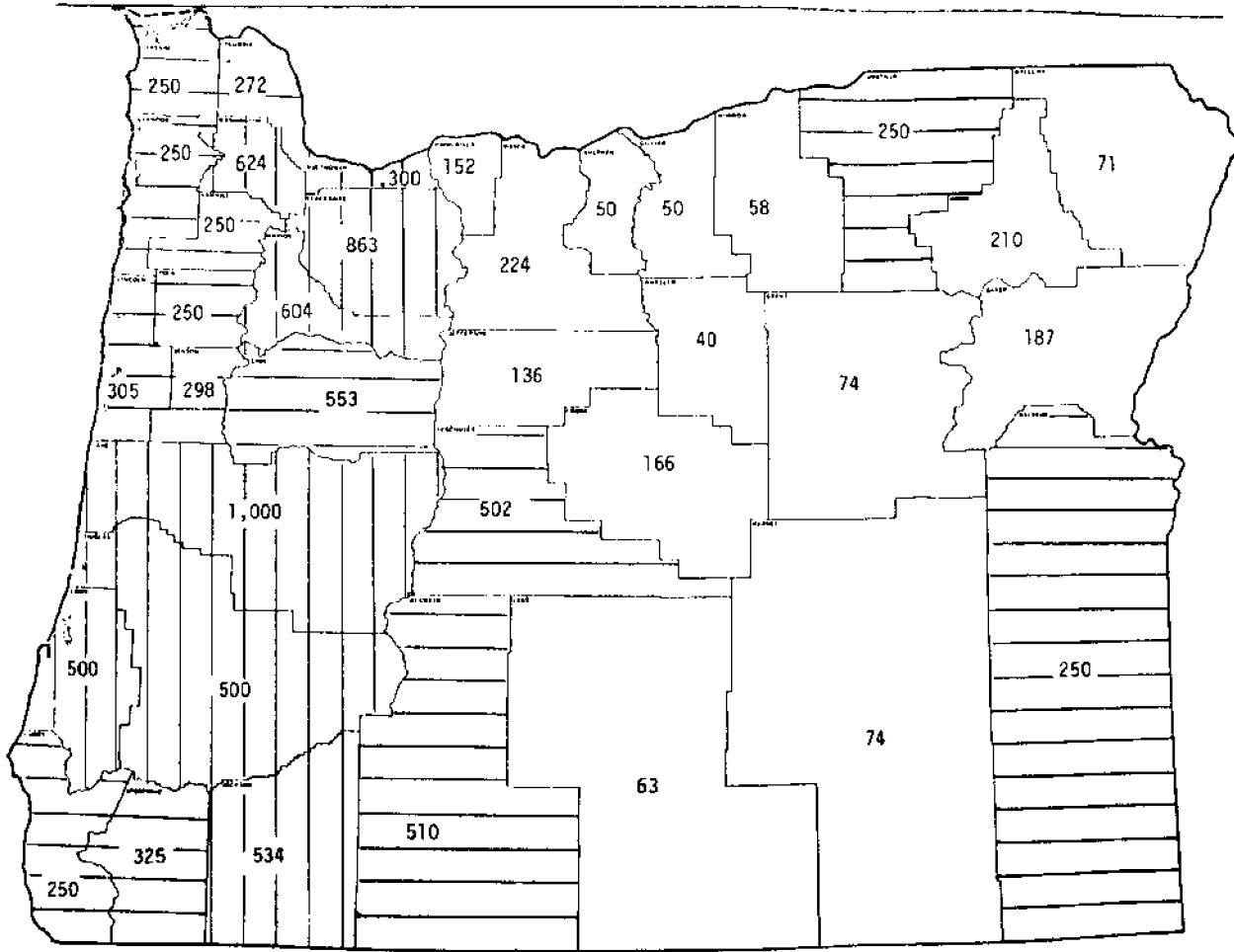


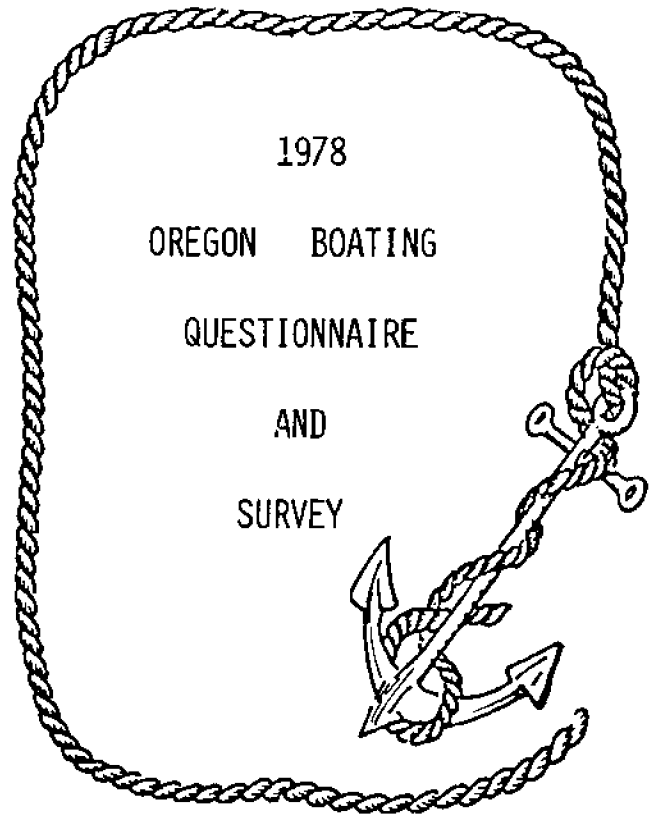
FIGURE 9 County variation in questionnaire distribution.

TOTAL REGISTERED BOATS - 118,465      TOTAL QUESTIONNAIRES SENT OUT - 11,995

- Group (A) - 1,000 or less boats - 25% Sample  
(5,849 boats - 1,555 Questionnaires)\*
- Group (B) - 1,000 to 5,000 boats - 12.5% Sample  
(33,705 boats - 4,515 Questionnaires)\*
- Group (C) - 5,000 or more boats - 08% Sample  
(78,911 boats - 5,925 Questionnaires)\*

\* In sample group (A) a minimum of 50 questionnaires were used to provide greater precision, (Wheeler County received only 40 as that is 100% of the boats in that County). In sample group (B) a minimum of 250 questionnaires were sent. In sample group (C) a minimum of 500 and a maximum of 1300 questionnaires were used to provide a corresponding precision of sampling in the groupings and throughout the State.

APPENDIX B  
1978 OREGON BOATING QUESTIONNAIRE AND SURVEY



BUSINESS REPLY MAIL  
FIRST CLASS PERMIT NO. 37 CORVALLIS, OREGON  
POSTAGE WILL BE PAID BY ADDRESSEE  
SURVEY RESEARCH CENTER  
STATE MARINE BOARD SURVEY  
OREGON STATE UNIVERSITY  
CORVALLIS, OREGON 97331



NO POSTAGE  
NECESSARY  
IF MAILED  
IN THE  
UNITED STATES

# OREGON BOATING QUESTIONNAIRE

ANSWER QUESTIONS 1 THROUGH 16 ONLY FOR THE BOAT IDENTIFIED BY THE REGISTRATION NUMBER WHICH APPEARS AFTER YOUR NAME.



**State Marine Board**  
OFFICE OF THE DIRECTOR  
3000 MARKET ST. N.E. No. 505  
SALEM, OREGON 97310

AUGUST 1978

Dear Oregon Boat Owner:

Oregon law directs that the State Marine Board:

Shall at least once every three years conduct a survey of owners to determine, by county, the kinds of boating activity on the various waters of the state during different periods of the year. (ORS 688.833)

The results of the survey are used to determine fund distribution to Counties for the construction of new or improved marine facilities, effective and timely safety and law enforcement activities, increased efficiency in educating young and novice boaters in boating safety and courtesy, and the establishment of adequate and reasonable boating regulations for Oregon waters.

We need and request your assistance to complete the 1978 survey. Your boat was selected at random, by registration number, from the total list of registered boats within the State. Replies will be tabulated for boaters as a whole, not for any one person. The results should indicate the general patterns of boating and specific areas of concern where we should focus our efforts to improve your opportunities for boating throughout the State. All information you give us is strictly confidential and in NO way will your responses be linked to your name. Please take a few minutes of your valuable time to complete the questionnaire and drop it in the mail to us before September 10th. NO STAMP IS NECESSARY.

Thank you for helping us help you to better boating.

Sincerely,

  
BRAD MORRIS  
DIRECTOR

1. In what County is YOUR BOAT registered? write in name

2. Indicate in the table below, the total number of days, by month, that YOUR BOAT was actually under power or sail between Sep. 1, 1977 and Aug. 31, 1978.\* If YOUR BOAT was NOT IN USE, check appropriate block and go to Question 16. \*A day is any part of a 24-hour period in which YOUR BOAT was used.

BOAT NOT IN USE.

SEP. 77 \_\_\_\_\_ JAN. 78 \_\_\_\_\_ MAY 78 \_\_\_\_\_

OCT. 77 \_\_\_\_\_ FEB. 78 \_\_\_\_\_ JUN. 78 \_\_\_\_\_

NOV. 77 \_\_\_\_\_ MAR. 78 \_\_\_\_\_ JUL. 78 \_\_\_\_\_

DEC. 77 \_\_\_\_\_ APR. 78 \_\_\_\_\_ AUG. 78 \_\_\_\_\_

3. During an average days use, how many persons, including yourself, were in YOUR BOAT? (Include water-skiers)

write in number

4. What is the Horsepower rating of the PRIMARY MOTOR, or motors, used in YOUR BOAT?

\_\_\_\_\_ Hp. \_\_\_\_\_ Hp. What is the Horsepower of any other motors on YOUR BOAT? \_\_\_\_\_ Hp.

5. Please estimate the number of gallons and type of fuel used in YOUR BOAT during an average day of Boating.

\_\_\_\_\_ gallons actually used. \_\_\_\_\_ type of fuel.

6. Was YOUR BOAT transported from its place of storage or moorage to a different launching site during the past Boating year, Sep. 1, 1977 to Aug. 31, 1978?

YES.  NO. If "YES," was it transported

by:  TRAILER,  CAR-TOP CARRIER, or  OTHER MEANS.

How many times was it transported altogether? specify other means  
write in number

7. In the table below, name the two Counties in which YOUR BOAT was most often launched and the number of times it was launched at each type of access point. If YOUR BOAT was used where it was moored, check the appropriate box and indicate the County or Counties of moorage.

BOAT USED WHERE MOORED IN \_\_\_\_\_ COUNTY.  
*write in County*

MOST LAUNCHES \_\_\_\_\_ 2nd MOST LAUNCHES \_\_\_\_\_  
NAME OF COUNTY \_\_\_\_\_

- Number of times YOUR BOAT was launched from -

COMMERCIAL MARINAS \_\_\_\_\_

PRIVATE PROPERTY \_\_\_\_\_

- Or from Public Marinas and Ramps such as -

FEDERAL \_\_\_\_\_

STATE \_\_\_\_\_

COUNTY/CITY \_\_\_\_\_

8. In the table below, name the Counties and Bodies of Water where YOUR BOAT was most used and the number of days\* it was used for each designated activity during the Boating year, Sep. 1, 1977 to Aug. 31, 1978. \*A day is any part of a 24-hour period in which YOUR BOAT was used.

MOST USE \_\_\_\_\_ 2nd MOST USE \_\_\_\_\_

NAME OF COUNTY \_\_\_\_\_

BODY OF WATER \_\_\_\_\_

TOTAL DAYS OF BOATING \_\_\_\_\_

- Number of days YOUR BOAT was used for -

FISHING \_\_\_\_\_

SAILING \_\_\_\_\_

WATER-SKIING \_\_\_\_\_

CRUISING \_\_\_\_\_

OTHER \_\_\_\_\_

9. During the past year, were any of the following problems encountered where YOUR BOAT was launched, moored or operated? If "YES," please indicate the County and Body of Water involved.

PROBLEMS	YES	NO	COUNTY	BODY OF WATER
WATER POLLUTION				
WATER USER CONFLICT				
ENFORCEMENT OF RULES				
LACK OF COURTESY				

10. Were the following facilities adequate for your needs? If "NO," please indicate the County and Body of Water involved.

FACILITIES	YES	NO	COUNTY	BODY OF WATER
REST ROOMS				
Loading/Moorage DOCKS				
Sanitary System Pump-Outs				
Ramps Parking Lots				

11. Was YOUR BOAT damaged in any way while in operation during the past Boating year, from Sep. 1, 1977 to Aug. 31, 1978?

YES.  NO.

12. Was YOUR BOAT given assistance of any kind during the last three years?

YES.  NO. If "YES," by what means?

OTHER BOATERS,  SHERIFF MARINE PATROL

OREGON STATE POLICE,  U.S.COAST GUARD,

OTHER(Please specify) \_\_\_\_\_

13. While YOUR BOAT was in use was it stopped or checked for compliance with Federal or State laws from Sep.1,1977 to Aug. 31, 1978?

YES.  NO. If "YES," by what agency?

SHERIFF MARINE PATROL,  OREGON STATE POLICE,

U.S.COAST GUARD,  OTHER(Specify) \_\_\_\_\_

14. Have you or any operator of YOUR BOAT been provided with written or verbal, boating safety or educational information, between Sep. 1, 1977 and Aug. 31, 1978, by County or State Law Enforcement personnel?

YES.  NO.

15. Has the boat, identified by the registration number after your name, been given the FREE U.S. Coast Guard Auxiliary "COURTESY MOTORBOAT EXAMINATION" during the past 12 months?

YES.  NO.

THE FOLLOWING QUESTION CONCERNS OTHER RECREATIONAL WATERCRAFT THAT YOU MAY OWN, IN ADDITION TO THE ONE IDENTIFIED BY THE REGISTRATION NUMBER WHICH APPEARS AFTER YOUR NAME.

16. In the table below, list the type of watercraft, the length and type of propulsion, for all other watercraft owned or used by you and members of your immediate family who reside with you. Include any type of watercraft. (Inboards, outboards, sailboats, canoes, rowboats, rafts, inboard-outboards, kayaks, rubber rafts, etc.) If you own no other watercraft, check the appropriate box and go to Question 17.

DO NOT OWN OR USE ANY OTHER TYPE OF WATERCRAFT.

TYPE OF WATERCRAFT	LENGTH	TYPE OF PROPULSION

17. Please indicate whether or not you, or a member of your household, completed a boating course within the past three years that was sponsored by one of the organizations (or others) listed below? (Check all that apply)

	<u>BASIC</u> <u>BOATING</u>	<u>SAFETY</u> <u>ONLY</u>	<u>OTHER</u>	<u>NONE</u>
A. U.S. POWER SQUADRON	_____	_____	_____	_____
B. COAST GUARD AUXILIARY	_____	_____	_____	_____
C. AMERICAN RED CROSS	_____	_____	_____	_____
D. OTHER <u>write in name</u>	_____	_____	_____	_____

18. Did you, or the person taking the course(s), feel it was,

VERY USEFUL,  USEFUL,  SOMEWHAT USEFUL, OR  
 NOT AT ALL USEFUL?

19. Are you familiar with the "OREGON BOATERS HANDBOOK?"

YES,  NO. If "YES," have you found it,  
 VERY USEFUL,  USEFUL,  SOMEWHAT USEFUL, OR  
 NOT AT ALL USEFUL?

IN ORDER TO MORE ACCURATELY FORECAST AND MEET THE FUTURE DEMANDS ON BOATING FACILITIES IN OREGON, IT IS OF GREAT HELP IF WE CAN CORRELATE FAMILY CHARACTERISTICS WITH PRESENT BOATING PATTERNS. PLEASE ASSIST US BY PROVIDING THE FOLLOWING INFORMATION.

20. What is the age, sex, primary occupation and level of education of the owner of the boat identified by the registration number which appears on the address label.

AGE: \_\_\_\_\_ SEX:  MALE,  FEMALE.  
*write in age*

OCCUPATION: Please indicate the type of work and general industry. If retired, check the appropriate box and list the last type and industry of employment.

RETIRED:

TYPE OF WORK: \_\_\_\_\_

GENERAL INDUSTRY: \_\_\_\_\_

EDUCATION:  Some Grade School  Technical School  
 Grade School  Some College  
 Some High School  College Degree  
 High School  Post College

21. Please estimate your total family income for 1978.

Under \$3,000  \$15,000 to \$19,999  
 \$3,000 to \$5,999  \$20,000 to \$29,999  
 \$6,000 to \$7,999  \$30,000 to \$39,999  
 \$8,000 to \$9,999  \$40,000 to \$49,999  
 \$10,000 to \$14,999  \$50,000 and over

If you have any questions or comments about this questionnaire, or feel there are areas you would like to have the Marine Board look into, please make note of them below or write to us in care of the DIRECTOR, STATE MARINE BOARD, 3000 Market St. N.E. #505, Salem, Oregon 97310.



State Marine Board  
OFFICE OF THE DIRECTOR  
3000 MARKET ST. N.E. No. 505. SALEM, OREGON 97310

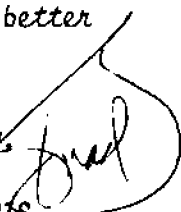
September 8, 1978

Dear Oregon Boat Owner:

A few days ago we sent you a questionnaire as part of the 1978 Oregon Boating Survey. If you have already returned the questionnaire, please consider this a very special "THANK YOU" for your promptness. If, as we often do ourselves, you have put the questionnaire aside to finish later, please fill it out and return it right away. There will probably never be a better time than now.

Thank you for your help and have a nice day.

Sincerely,

  
BRAD MORRIS  
DIRECTOR

FOLLOW-UP POSTCARD

OREGON STATE MARINE BOARD  
3000 Market Street N.E., No. 505  
Salem, Oregon 97310

NON-PROFIT ORG.  
BULK RATE  
U.S. POSTAGE PAID  
PERMIT NO. 200  
CORVALLIS, OR.  
97331

## APPENDIX C

### SELECTED RESPONDENT COMMENTS

The following selected comments were received from participants in the 1978 Boating Survey. They are grouped into the generalized categories of: Comments on the Questionnaire; Safety Matters; Law Enforcement; Boating Courses; The Oregon Boaters Handbook; Boating Facilities; General Comments; and The Oregon State Marine Board. A complete listing of all comments is available, upon request, from the OSMB.

#### COMMENTS ON THE QUESTIONNAIRE

"A very well prepared questionnaire. Better than most."

"This form could be made much simpler and this page is none of your . . . business."

"It's nobody's business what my total income is. I can't see where this is relative . . . It's a wonder you don't ask for our Social Security numbers."

"Would it not have been more beneficial to all concerned to have spent the cost of this survey in a general census on who has a mole on their right hip?"

"The answers would be more accurate if the survey was sent ahead and then a person would keep track of the information and then sent it in upon completion at the end of the year or whatever."

"Survey does not address the contribution of private facilities to the State's marine industry."

"Glad to help out."

"I believe in this questionnaire. As I pilot ships on the Willamette and Columbia River, it is good to know that some boaters know the Rules of the Road and are concerned about safety. Your state and county boat ramps are O.K., well maintained."

"My sex, age, income and education have nothing to do with this survey and is none of your business. It almost makes me mad enough not to return this survey!"

"Why spend the time and money when the citizens are demanding less taxation--less snooping and interfering."

"By your questions, you don't even know if I use some other boat, or how much-- it is based on YOUR selection, rather than activities by ME, the USER!"

"This is some more tax payers money wasted. Also feel you are imposing on my constitutional rights and creating another State agency that is unneeded."

"I do not understand the importance of the board knowing how many times a person transports a boat from one moorage to another or number of gallons of fuel used in an average day of boating."

#### SAFETY MATTERS

"Unloading ramps at Bully Creek and Farewell Bend used by swimmers and skiing. Very dangerous as well as difficult to load and unload boats. Need better signs to restrict all activities except loading and unloading."

"Too many boats pulling skiers without an observer in boat. No flags to indicate skier is down in water. Boats that leave ski rope out after skier has dropped off at shore, grown-ups and kids swimming in launch and dock areas."



"Along the Alsea River between mileposts 8 and 10, there are at least 2 boat docks disintegrating. One at the upstream edge of Little Albany about half-way between milepost 9 and 10, across the river from road has a collapsed boat house and appears likely to break loose from moorings and become a hazard to navigation and property along the river. No correction all summer."

"Water skiers on Lake Billy Chinook have shown no regard for the lives and safety of fishermen. They cut across the front and back of fishing boats too close for safety. We were almost capsized by skiers on all four sides of our boat on three or four occasions."

"More time, effort and money should be spent to eliminate recklessness, disregard for others safety and drinking while operating a boat on the Columbia River. We have witnessed a number of serious accidents due to the above mentioned. Also several accidents due to overloading of boats."

"The largest problem with boating on the Rogue River is the inexperienced boat owner with a small unsafe boat. The river currents are strong and a small boat that works great in a lake will quickly overturn in the Rogue. The boat ramps ramps constructed along the river make it all too inviting for these death traps to be launched."

"I would get my boat examined but it is currently parked back of Depoe Bay and examinations are being conducted at Devils Lake State Launching ramp."

"I would like to see a rule prohibiting any canopy on a boat used for going over the ocean bar. In just 20 years I have witnessed many accidents on Columbia and Nehalem bars with loss of life due to cabin trapping or canopy injury."

"The John Day River is used by many boaters - the past 5 years the water has filled up with debris . . . . making it highly dangerous for water skiers - I know, I am one that has fallen from debris-the worst falls I have ever experienced and I have skied 20 years. . . . It seems our tax dollars could be used in cleaning up the debris during low water level periods. Boaters are concerned."

"I feel new boaters should be taught boat ramp manners and that would speed up the whole procedure and limit traffic jams."

"Guidelines making boating more fun and safer are thoroughly researched and hazardous areas of concern are posted. Wouldn't it be nice if people were compelled to comply. The above statement is one reason my wife and I will never boat on Foster Reservoir again. Boaters with no degree of responsibility or acceptance of risk. I am a certified safety professional and teach a boating safety course to firms I represent that work over navigable waters and mill ponds."

"Let's get the alcohol off the water!! OK."

#### LAW ENFORCEMENT

"There seems to be a total lack of enforcement of the 10 mph speed limit on East Lake in Deschutes County. Almost all of the larger boats with 50+ h.p. motors are running 20-30 mph. Boats of this size and power constitute an estimated 30-40% of the users on the lake."

"We have noted Sheriff patrols with 2 officers on Devils Lake on some weekdays with little or no boat traffic, it seems they might have more important needs elsewhere."

"Public education and posting of marine boating laws is very lax. Even enforcement officers are unsure of many marine inland boating laws."

"Something needs to be done about enforcement of rules and regulations concerning speed and safety, courtesy, game fishing laws and pollution. Out-of-staters are the worst violators, but Oregonians are a close second."

"Through June and most of July 1978, speeding and recklessly driven boats caused both discomfiture and danger to fishermen and pleasure cruisers in the 5 mph zone of Willow Lake; water-skiers were the worst violators. The Sheriff's marine patrol was too infrequently present; it took pressure from the Director of County Parks and from the Marine Board to effect a marine patrol of the lake in late July; this patrol effectively solved the problem in late July, too late for many boaters."

"My feeling is that this state requires drivers licenses to run a car, the Federal government requires pilots to be tested for their licenses. As most Oregon Boaters are unsafe, they should be tested and licensed."

"1) Paint the cop's boat red; 2) Make the fly the National; 3) Take guns from them (we won't hurt them); 4) Make Charleston a bigger harbor. Open up the slew."

"Spending a major portion of my free time on Timothy Lake, it is evident that boating rules are enforced on very few select weekends. The balance of the boating season the lake is ruled by only the courtesy of the few that care! Education should be mandatory, as we cannot afford to patrol every lake, every day! Thanks."

"Coast Guard examination should be mandatory."

"Baker County has the poorest water supervision and water law enforcement of any place I've ever seen."

"Boating rules and regulations and a traffic pattern should be posted at all public landings. Official patrol is very lax. We need more public information."

"You are to be congratulated on your concern for water safety. It is a pity that more people cannot be exposed to Power Squadron courses. They provide an excellent backup for the job you are working on."

"I would like to see more money spent on facilities and less on Sheriff Patrols, leave people alone."

"Make it against the law to drink and drive a boat of any kind!!!"

"I really think the time has come to have an operator's license for boat drivers. Even if it were just a written exam, it would make people aware there is more to boating than a throttle and a steering wheel."

"I do not like the manner in which the O.S.P. Game Commission check you out in the ocean—they come at you wide open and turn, at the last few feet. Their wake put water inside my boat one time and another put one passenger out of his seat."

"I think there is a serious law enforcement/courtesy problem on the lower Willamette. Speeds are excessive as is alcohol use. Would like to see stricter enforcement of laws."

"I have had repeated problems with drunk boat operators! What can be done?"

"Strict enforcement of laws concerning the abuse of alcohol by boat operators."

"U.S. Coast Guard and Coast Guard Auxiliary do not agree how things should be on a boat."

"Increase Sheriff Patrol, get State Police off the lakes."

## BOATING COURSES

"All boaters should be examined after Power Squadron or Coast Guard Auxiliary course and issued a license to operate a boat if they pass. Liability insurance is a must. The above for their own sake."

"I feel that anyone under 18 years of age should have a mandatory course completion to operate a power boat. More enforcement boating and safety rules."

"Started course with my son, age 14, too boring, dropped out."

"I would like a boating course when available in this area. As of now I haven't known of any in the Milton-Freewater, Oregon area!"

"Friends of mine took the U.S. Coast Guard Auxiliary course. All of them were well impressed. I hope to take a training course within 1 year."

"Not an advocate of licensing boat operators, but should they not have to prove successful completion of an approved boating safety course before boat is licensed? There are a lot of numb skulls operating boats who obviously don't know what they are doing."

"It was very difficult to get into Advanced Piloting not having a husband or father in Power Squadron. Basic boating is excellent and I feel it should be mandatory for acquiring the boat registration . . . but it does not go far enough in teaching charting, figuring tides, etc.. If the subject were offered anywhere else, I'd have taken it, but this type of class isn't offered. Optional educational classes like advanced piloting should be offered to the public-not necessarily free. We want safe boaters but if no one gives the opportunity to learn except 'private organizations,' it is no wonder there are many unnecessary accidents."

## OREGON BOATERS HANDBOOK

"In, 'Oregon Boaters Handbook'-emphasis should be made of numbering anywhere on front one half of hull and not on bow flare."

"Some boaters are very discourteous when they get into the water-I believe for safety as well as pleasure that the 'Oregon Handbook' should be enforced."

"Make sure all "US" boaters get 'Oregon Boaters Handbook.'"

"I would like to have one of these handbooks, where may I get one?"

"Could I get a copy of Oregon Boaters Handbook in Russian?"

"Where do I find the Oregon Boaters Handbook?"

## BOATING FACILITIES

"At Paulina Lake the launching side restroom plumbing was not repaired all summer. Turned off because of a leaking pipe."

"Since the private hoist at Depoe Bay is not in operation, the only ramp available is not only inadequate but extremely dangerous to launchers. There are no docks-only jagged and slippery rocks. Many minor accidents occur each year! I would appreciate a study. Private moorage in the bay is impossible. Thanks."

"The free camping spaces at Diamond Lake are marvelous for which we are grateful, however, the toilet facilities are inadequate. After one has been out in a boat for hours you know what happens if the biffie is full."

"We do not need any more launching ramps in Clatsop County. Quit wasting money!"

"Why isn't there any boat launch ramps on the Illinois River? Why isn't there a free boat ramp at Chetco Harbor?"

"My use limited, but would say State and County facilities OK."

"I live next to the Columbia River in The Dalles. We need more and better re-fueling facilities."

"Oregon City has about the poorest boat launching ramps and parking in the State."

"Yes, I would like to know why the dock rent at Charleston Boat Basin raised from \$180.00 to \$290.00 in a year, plus \$10.00 for a finger to board the boat. Also rest rooms open approximately 1/2 year, plus roads torn up and not repaired."

"Being as the State doesn't care anything about spending any money on facilities in Harney County, it's difficult to own a big boat and get it in the water."

"Parking too far from lake at Antelope Reservoir, Crook County. Too hard for older people to walk up hill where campers must park. Was a great place to go before they "fixed" it up."

"The State facilities are far superior to County or City facilities. Let's have more of them."

"We need some pump stations for the marine heads. NOW!"

"More unloading ramps with docks needed on the Columbia River as well as lakes for unloading trailerable craft. Sewage pumping stations need to be installed to handle boats complying with new regulations on sewage disposal."

"The Oregon or Federal law requires toilets with holding tanks. But-does not provide means of disposal!"

#### GENERAL COMMENTS

"When new marina was opened at Newport why was golden age not honored and therefore we can go fishing less?"

"Can't water be left in Detroit Reservoir longer each year? Really, flood control? Why does it have to be completely drained?"

"Usually keep my boats on Devils Lake but algae is so thick near shore you can't run your motor or fish."

"Washington County should not receive any boat license money because they charge for use of their boat launches."

"I would like to see more lakes restricted from water-skiing or "power" boat use. I would favor a 10 mph limit. Power boaters have no respect for sailboats."

#### THE OREGON STATE MARINE BOARD

"My boat is a Bonair Inflatable. Due to the expansion and contraction of the 'skin,' it is not possible to keep the registration sticker affixed in position specified adjacent to boat number. I have been attaching it to the transom instead. I believe some provision should be made for this in your rules."

"I am totally against any move by our Oregon State Legislature to abolish the Oregon State Marine Board and against any taxation. We must defeat these proposed bills for 1979."

"It would do no good to write to the board or any other government agency. They or you are so tied up in your own paper work there is no end result of anything."

"You are doing a good job and we appreciate it."

## APPENDIX D

Type, Length and Propulsion Systems of Other Owned or  
Used Watercraft by Respondents to the 1978 Boating Survey

### TYPE OF FIRST WATERCRAFT BY COUNTY OF REGISTRATION

County	Inboard	Outboard	Sail	Canoe	Rowboat	I/O*	Raft	Kayak	Inf**	Other
Baker	0	58	0	0	38	10	19	0	10	10
Benton	40	344	20	101	243	0	40	0	142	20
Clackamas	34	1199	103	343	1096	343	445	69	308	137
Clatsop	36	237	36	36	237	91	0	18	73	73
Columbia	42	317	0	42	211	42	63	21	21	0
Coos	0	672	61	31	550	214	92	31	183	0
Crook	0	71	0	0	47	0	0	12	12	0
Curry	30	74	15	15	119	59	15	0	59	45
Deschutes	22	549	0	66	198	44	110	0	88	22
Douglas	66	729	99	166	398	66	66	0	133	133
Gilliam	0	11	5	5	5	0	0	0	0	0
Grant	0	19	0	10	10	10	10	0	0	0
Harney	0	56	0	0	19	0	0	0	0	0
Hood River	0	74	0	0	64	9	9	0	0	0
Jackson	74	482	111	74	482	37	111	0	334	148
Jefferson	0	44	0	0	11	22	22	11	33	0
Josephine	27	162	0	54	108	27	27	0	135	54
Klamath	48	555	48	193	338	121	121	24	97	72
Lake	0	32	0	0	21	0	11	0	0	0
Lane	73	1346	146	255	1346	437	764	73	364	146
Lincoln	44	308	22	44	110	132	22	22	88	66
Linn	52	390	0	52	468	156	130	26	286	78
Malheur	15	60	30	30	120	90	30	15	0	0
Marion	63	566	0	283	566	94	126	31	378	126
Morrow	0	33	0	0	22	0	11	0	0	0
Multnomah	313	2100	581	268	2100	402	1028	89	402	402
Polk	0	101	20	40	121	40	20	0	40	20
Sherman	0	0	0	0	5	0	0	0	0	0
Tillamook	18	268	0	18	250	36	18	0	71	0
Umatilla	18	144	18	18	90	18	54	0	54	0
Union	0	63	9	9	36	9	27	9	0	0
Wallowa	0	43	0	0	17	0	0	0	0	0
Wasco	35	44	0	0	80	18	27	0	27	9
Washington	82	657	205	123	616	287	205	82	369	0
Wheeler	0	2	0	0	7	0	4	0	0	0
Yamhill	51	203	25	0	177	0	25	0	76	76
<b>Total</b>	<b>1183</b>	<b>12013</b>	<b>1554</b>	<b>2276</b>	<b>10326</b>	<b>2814</b>	<b>3652</b>	<b>533</b>	<b>3783</b>	<b>1637</b>

\* Inboard/outboard

\*\* Inflatable

## APPENDIX D

LENGTH IN FEET OF FIRST WATERCRAFT BY COUNTY OF REGISTRATION

County	1-4	4-6	6-12	12-15	15-20	20-24	24-27	27-30	30-35	35+
Baker	0	0	38	29	67	0	10	0	0	0
Benton	0	0	101	405	364	40	40	0	0	0
Clackamas	0	34	788	1507	1336	240	103	34	0	34
Clatsop	0	36	219	164	255	55	18	36	36	18
Columbia	0	0	169	211	317	21	0	21	21	0
Coos	0	31	397	825	489	31	61	0	0	0
Crook	0	0	12	95	36	0	0	0	0	0
Curry	0	0	30	134	148	104	15	0	0	0
Deschutes	0	22	176	439	439	0	0	22	0	0
Douglas	0	0	232	829	630	66	33	0	33	33
Gilliam	0	0	5	11	11	0	0	0	0	0
Grant	0	0	19	19	19	0	0	0	0	0
Harney	0	0	0	56	19	0	0	0	0	0
Hood River	0	0	55	46	46	0	9	0	0	0
Jackson	0	0	445	816	519	37	37	0	0	0
Jefferson	0	0	44	67	22	11	0	0	0	0
Josephine	0	0	81	217	271	27	0	0	0	0
Klamath	0	0	386	652	435	97	24	0	24	0
Lake	0	0	32	21	11	0	0	0	0	0
Lane	0	36	1419	1856	1274	255	73	0	0	36
Lincoln	0	0	44	352	286	110	0	22	22	22
Linn	0	0	442	546	572	52	0	0	0	26
Malheur	0	0	75	75	209	30	0	0	0	0
Marion	0	31	503	787	881	0	0	0	0	31
Morrow	0	0	22	22	22	0	0	0	0	0
Multnomah	0	89	2457	2234	1832	491	134	134	134	179
Polk	0	0	40	141	162	61	0	0	0	0
Sherman	0	0	5	0	0	0	0	0	0	0
Tillamook	0	0	161	286	125	89	0	18	0	0
Umatilla	0	0	144	162	108	0	0	0	0	0
Union	0	0	27	98	27	0	9	0	0	0
Wallowa	0	0	17	26	17	0	0	0	0	0
Wasco	0	0	9	98	89	9	0	9	18	9
Washington	0	82	410	821	862	287	82	41	0	41
Wheeler	0	0	7	7	0	0	0	0	0	0
Yamhill	0	0	152	203	253	0	0	25	0	0
<b>Total</b>	<b>0</b>	<b>361</b>	<b>9163</b>	<b>14257</b>	<b>12153</b>	<b>2113</b>	<b>648</b>	<b>362</b>	<b>288</b>	<b>429</b>

## APPENDIX D

### PROPULSION OF FIRST WATERCRAFT BY TYPE AND BY COUNTY OF REGISTRATION

County	Inboard	Outboard	Sail	Paddle	Oars	I/O*	Float	Jet	Air	Other
Baker	0	106	0	0	29	10	0	0	0	0
Benton	20	526	20	81	304	0	0	0	0	0
Clackamas	34	1987	137	445	1062	343	0	34	0	34
Clatsop	36	492	18	36	91	109	18	0	0	18
Columbia	42	507	0	63	106	42	0	0	0	0
Coos	0	1130	61	61	305	214	0	0	0	61
Crook	0	119	0	0	24	0	0	0	0	0
Curry	15	223	15	0	74	59	0	15	0	30
Deschutes	22	812	0	44	132	44	22	0	0	22
Douglas	66	1094	99	133	331	66	0	33	0	33
Gilliam	0	11	5	5	5	0	0	0	0	0
Grant	0	29	0	10	19	0	0	0	0	0
Harney	0	56	0	0	19	0	0	0	0	0
Hood River	0	120	0	9	18	9	0	0	0	0
Jackson	0	853	111	148	556	37	0	74	0	74
Jefferson	0	67	0	33	22	11	11	0	0	0
Josephine	0	217	0	54	217	27	0	81	0	0
Klamath	48	893	72	169	290	121	0	0	0	24
Lake	0	42	0	0	21	0	0	0	0	0
Lane	73	2220	182	364	1346	437	73	73	0	182
Lincoln	44	418	22	66	110	132	0	44	0	22
Linn	26	703	0	104	598	156	0	26	0	26
Malheur	15	149	15	60	45	90	0	0	0	0
Marion	31	881	0	315	724	126	31	63	0	63
Morrow	0	44	0	0	22	0	0	0	0	0
Multnomah	313	4066	670	313	1608	402	45	89	0	179
Polk	0	222	0	40	40	40	20	0	0	20
Sherman	0	5	0	0	0	0	0	0	0	0
Tillamook	18	375	0	18	214	54	0	0	0	0
Umatilla	18	216	36	36	54	18	18	0	0	18
Union	0	98	9	9	36	9	0	0	0	0
Wallowa	0	52	0	0	9	0	0	0	0	0
Wasco	35	106	0	9	71	18	0	0	0	0
Washington	82	1108	205	287	534	246	0	82	0	41
Wheeler	0	4	0	0	9	0	0	0	0	0
Yamhill	51	304	25	0	177	0	0	25	0	51
<b>Total</b>	<b>989</b>	<b>20255</b>	<b>1702</b>	<b>2912</b>	<b>9222</b>	<b>2820</b>	<b>238</b>	<b>639</b>	<b>0</b>	<b>898</b>

\* Inboard/outboard

## APPENDIX D

### TYPE OF OTHER WATERCRAFT BY COUNTY OF REGISTRATION

County	Inboard	Outboard	Sail	Canoe	Rowboat	I/O*	Raft	Kayak	Inf**	Other
Baker	10	29	0	0	10	0	0	0	20	10
Benton	40	81	40	81	61	40	40	40	60	40
Clackamas	0	137	206	68	411	0	480	103	206	172
Clatsop	36	109	0	18	237	110	18	0	145	36
Columbia	0	63	0	0	84	0	21	0	84	0
Coos	31	305	62	62	275	62	123	31	62	92
Crook	0	0	0	0	0	0	12	0	0	0
Curry	15	60	0	0	15	15	60	0	74	0
Deschutes	0	110	44	0	66	0	110	0	22	0
Douglas	33	232	33	33	199	66	0	0	99	33
Gilliam	0	0	0	0	5	0	0	0	0	0
Grant	0	0	0	0	0	0	10	0	0	0
Harney	38	0	0	0	0	0	0	0	0	0
Hood River	0	18	0	0	27	9	9	0	0	9
Jackson	0	148	37	74	445	37	74	37	148	74
Jefferson	0	22	0	0	33	0	11	0	22	0
Josephine	0	54	0	27	162	0	54	54	27	0
Klamath	24	241	96	93	241	48	96	0	48	0
Lake	0	11	0	22	0	0	0	0	0	0
Lane	72	655	145	146	509	36	473	0	374	36
Lincoln	0	44	22	22	198	22	44	0	44	0
Linn	26	78	0	0	130	26	78	78	78	0
Malheur	0	30	15	0	30	0	0	0	15	0
Marion	31	125	31	63	188	94	251	0	31	0
Morrow	0	0	0	0	0	0	22	0	11	0
Multnomah	89	402	223	268	849	134	581	45	313	45
Polk	0	40	0	0	40	0	0	0	0	20
Sherman	0	5	0	0	0	0	0	0	0	0
Tillamook	18	125	36	0	161	0	18	0	36	0
Umatilla	0	90	0	0	72	0	18	0	36	0
Union	0	9	0	18	18	0	27	0	0	0
Wallowa	0	77	0	9	0	0	9	0	0	9
Wasco	0	36	9	0	36	9	54	9	27	0
Washington	0	164	41	82	246	0	287	82	41	0
Wheeler	0	0	0	0	2	0	2	0	0	0
Yamhill	0	25	25	25	51	0	0	0	25	25
<b>Total</b>	<b>463</b>	<b>3525</b>	<b>1065</b>	<b>1211</b>	<b>4801</b>	<b>708</b>	<b>2982</b>	<b>477</b>	<b>2038</b>	<b>601</b>

\* Inboard/outboard

\*\* Inflatable



## APPENDIX D

### LENGTH IN FEET OF OTHER WATERCRAFT BY COUNTY OF REGISTRATION

County	1-4	4-6	6-12	12-15	15-20	20-24	24-47	27-30	30-35	35+
Baker	0	0	39	10	10	0	10	10	0	0
Benton	0	0	101	142	263	0	20	0	0	0
Clackamas	0	34	822	685	137	34	0	0	34	0
Clatsop	0	18	310	145	146	18	0	36	36	0
Columbia	0	0	147	42	42	0	0	0	0	0
Coos	0	62	306	366	275	31	62	0	0	0
Crook	0	0	12	0	0	0	0	0	0	0
Curry	0	0	60	104	30	45	0	0	0	0
Deschutes	0	0	154	88	66	0	0	0	0	44
Douglas	0	0	132	298	265	0	33	0	0	0
Gilliam	0	0	0	0	5	0	0	0	0	0
Grant	0	10	0	0	0	0	0	0	0	0
Harney	0	0	0	0	19	19	0	0	0	0
Hood River	0	0	28	18	9	9	0	9	0	0
Jackson	0	0	260	445	333	37	37	0	0	0
Jefferson	0	0	44	44	0	0	0	0	0	0
Josephine	0	27	189	81	81	0	0	0	0	0
Klamath	0	24	313	411	241	0	0	0	0	0
Lake	0	0	0	11	22	0	0	0	0	0
Lane	0	0	728	910	655	36	72	0	0	0
Lincoln	0	22	132	154	88	0	0	0	0	0
Linn	0	52	208	104	78	26	26	0	0	0
Malheur	0	0	0	60	30	0	0	0	0	0
Marion	0	0	377	188	188	0	62	0	0	0
Morrow	0	0	33	0	0	0	0	0	0	0
Multnomah	45	89	1162	760	894	0	0	0	0	0
Polk	0	0	0	81	20	0	0	0	0	0
Sherman	0	0	5	0	0	0	0	0	0	0
Tillamook	0	0	107	179	54	18	0	18	0	18
Umatilla	0	0	72	108	18	18	0	0	0	0
Union	0	9	9	18	18	9	0	0	0	0
Wallowa	0	0	34	51	9	0	0	0	0	9
Wasco	0	0	62	70	36	0	9	0	0	0
Washington	0	0	410	287	205	41	0	0	0	0
Wheeler	0	0	4	0	0	0	0	0	0	0
Yamhill	0	0	127	25	25	0	0	0	0	0
<b>Total</b>	<b>45</b>	<b>356</b>	<b>6387</b>	<b>5885</b>	<b>4262</b>	<b>341</b>	<b>331</b>	<b>73</b>	<b>70</b>	<b>71</b>

## APPENDIX D

### PROPULSION OF OTHER WATERCRAFT BY TYPE AND COUNTY OF REGISTRATION

County	Inboard	Outboard	Sail	Paddle	Oars	I/O*	Float	Jet	Air	Other
Baker	10	48	0	0	10	0	0	0	0	10
Benton	40	121	40	81	182	40	0	20	0	0
Clackamas	69	548	206	240	582	0	34	0	0	0
Clatsop	36	419	18	0	110	110	0	0	0	103
Columbia	0	148	0	0	105	0	0	0	0	0
Coos	62	519	31	184	153	62	0	0	0	0
Crook	0	0	0	0	12	0	0	0	0	31
Curry	15	60	0	0	119	15	30	0	0	0
Deschutes	0	154	44	0	154	0	0	0	0	0
Douglas	33	397	33	33	132	66	0	33	0	0
Gilliam	0	5	0	0	0	0	0	0	0	0
Grant	0	0	0	0	10	0	0	0	0	0
Harney	38	0	0	0	0	0	0	0	0	0
Hood River	0	28	0	0	18	9	0	9	0	0
Jackson	0	556	37	111	334	37	0	37	0	0
Jefferson	0	44	0	0	44	0	0	0	0	0
Josephine	0	162	0	81	135	0	0	0	0	0
Klamath	24	458	96	231	120	48	0	0	0	0
Lake	0	11	0	22	0	0	0	0	0	0
Lane	72	1201	146	328	582	36	0	0	0	73
Lincoln	0	110	22	44	198	22	0	0	0	0
Linn	26	104	0	130	156	26	0	0	0	52
Malheur	0	75	15	0	0	0	0	0	0	0
Marion	31	220	31	94	346	94	0	0	0	0
Morrow	0	0	0	0	33	0	0	0	0	0
Multnomah	89	1027	313	491	804	179	45	0	0	0
Polk	0	101	0	0	0	0	0	0	0	0
Sherman	0	5	0	0	0	0	0	0	0	0
Tillamook	18	215	36	0	125	0	0	0	0	0
Umatilla	0	126	0	18	72	0	0	0	0	0
Union	0	18	0	18	36	0	0	0	0	0
Wallowa	0	86	0	8	9	0	0	0	0	0
Wasco	0	62	9	9	88	9	0	0	0	0
Washington	0	328	41	205	369	0	0	0	0	0
Wheeler	0	2	0	0	2	0	0	0	0	0
Yamhill	0	76	25	25	25	0	0	25	0	0
<b>Total</b>	<b>563</b>	<b>7434</b>	<b>1143</b>	<b>2364</b>	<b>5060</b>	<b>753</b>	<b>109</b>	<b>124</b>	<b>0</b>	<b>278</b>

## APPENDIX E

Characteristics of Oregon Pleasure Boats by County of Registration  
for Motors, Fuel Usage and Damage from 1978 Boating Survey.

Explanation of fuel tax computations and example of  
Form 250LA-1, "Application for Boat Registration."

### MOTORS - PROJECTED BOAT DAMAGE

County	Single Primary Motor		Two Primary Motors		Other Motors		Boat Damaged (Yes)
	No.	Avg HP	No.	Avg HP	No.	Avg HP	
Baker	605	25-49	77	50-74	163	0-24	19
Benton	1882	50-74	405	25-49	385	0-24	162
Clackamas	8700	50-74	1267	50-74	1987	0-24	651
Clatsop	1548	75-99	200	100-124	310	0-24	255
Columbia	1774	75-99	317	50-74	444	0-24	211
Coos	4308	50-74	764	50-74	886	0-24	244
Crook	534	50-74	119	25-49	95	0-24	24
Curry	1247	75-99	312	25-49	252	0-24	45
Deschutes	3117	50-74	439	25-49	549	0-24	154
Douglas	4408	50-74	696	50-74	829	0-24	99
Gilliam	38	50-74	0	0	5	0-24	5
Grant	191	50-74	29	0-24	57	0-24	0
Harney	185	25-49	19	0-24	0	0	0
Hood River	405	50-74	55	75-99	37	0-24	9
Jackson	5265	50-74	667	50-74	742	0-24	334
Jefferson	444	75-99	33	0-24	100	0-24	11
Josephine	1896	25-49	460	25-49	190	0-24	135
Klamath	3090	50-74	435	25-49	676	0-24	241
Lake	200	25-49	32	25-49	32	0-24	0
Lane	10808	50-74	2111	25-49	1674	0-24	218
Lincoln	1890	50-74	550	50-74	242	0-24	88
Linn	3357	50-74	755	50-74	598	0-24	104
Malheur	956	75-99	134	50-74	269	0-24	105
Marion	6072	50-74	1510	25-49	1290	0-24	378
Morrow	177	50-74	22	50-74	33	0-24	11
Multnomah	16710	75-99	2770	75-99	3396	0-24	1564
Polk	1373	50-74	222	0-24	262	0-24	61
Sherman	66	75-99	9	0-24	14	0-24	0
Tillamook	1286	50-74	268	25-49	304	0-24	54
Umatilla	1314	50-74	252	100-124	468	0-24	90
Union	635	50-74	116	25-49	304	0-24	18
Wallowa	267	50-74	34	0-24	77	0-24	52
Wasco	683	50-74	115	50-74	106	0-24	53
Washington	6075	50-74	1026	50-74	1355	0-24	452
Wheeler	22	50-74	0	0	4	0-24	0
Yamhill	1494	50-74	405	50-74	304	0-24	25
<b>Total</b>	<b>93022</b>	<b>50-74</b>	<b>16625</b>	<b>50-74</b>	<b>18439</b>	<b>0-24</b>	<b>5872</b>

## APPENDIX E

### FUEL USAGE IN GALLONS BY COUNTY OF REGISTRATION

County	Gas Premium/Regular	Gas/Oil Mix	Diesel	Propane/Butane Other	Total
Baker	4138	326	0	0	4464
Benton	12508	1680	202	61	14451
Clackamas	63465	4247	0	206	67918
Clatsop	12492	1256	1803	0	15551
Columbia	14615	444	0	0	15059
Coos	20560	6324	122	0	27006
Crook	3368	344	0	0	3712
Curry	6886	1068	119	0	8073
Deschutes	14750	2875	0	0	17625
Douglas	23695	3645	365	0	27705
Gilliam	189	0	0	0	189
Grant	1232	38	0	0	1270
Harney	759	111	0	0	870
Hood River	3380	83	230	0	3693
Jackson	24695	4895	0	37	29627
Jefferson	2631	222	0	0	2853
Josephine	8476	1219	0	0	9695
Klamath	17357	2583	24	97	20061
Lake	788	179	0	0	967
Lane	68413	4840	0	473	73726
Lincoln	14353	242	220	0	14815
Linn	24667	1535	0	26	26228
Malheur	9098	583	0	45	9726
Marion	41181	3115	0	535	44831
Morrow	1094	122	0	0	1216
Multnomah	138240	7640	3217	313	149410
Polk	7490	283	0	61	7834
Sherman	413	113	0	0	526
Tillamook	9412	661	0	0	10073
Umatilla	9648	486	0	108	10242
Union	3934	188	0	0	4122
Wallowa	990	370	0	0	1360
Wasco	4781	718	0	0	5499
Washington	41789	2135	164	0	44088
Wheeler	98	11	0	0	109
Yamhill	10331	1924	0	0	12255
<b>Total</b>	<b>621916</b>	<b>56505</b>	<b>6466</b>	<b>1862</b>	<b>686849</b>

## APPENDIX E

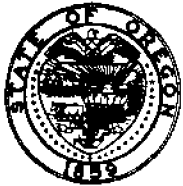
### FUEL TAX COMPUTATIONS

Total Oregon registered boats, during the 1977-1978 boating survey, totaled 118,485. Subtracting the boats that were not used, (24,627), leaves 93,858 Oregon registered boats in use during the 1977-1978 boating season. There were 3,473 sailboats registered with OSMB which equals 2.93 percent of all registered boats, (3,473/118,485). Assuming the same relationship exists between used and not used sailboats, as exists for all registered boats, then 721 sailboats were not used, (24,627 x .0293). This results in a total of 2,751 sailboats in use, (3,473 - 721). Subtracting these sailboats, which are assumed as not using fuel, from all boats, (93,858 - 2,751), there remain a total of 91,107 powered Oregon registered boats used during the 1977-1978 boating year.

The 1978 Survey estimates indicate a total of 2,709,356 boat days of use during 1977-1978. This equals 28.86 days of use per boat, (2,709,356/93,858). Subtracting those days attributed to sailboats, (2,709,356 - 131,046), results in 2,578,310 powered boating days or an average of 28.999 days per powered boat in use, (2,578,310/91,107). Diesel and other types of propulsion systems accounted for 1.3 percent of all powered boats. Therefore, this percentage was subtracted from the average, (28.3 x .013 = .36), resulting in a final figure of 27.932 average days of boat use, (28.299 - .367).

During the 1977-1978 boating year there was an estimated 678,421 gallons of gasoline or gasoline/oil mixture used on an average boating day. This equals 18,949,655 gallons of fuel per year, (678,421 x 27.932). Multiplying this total by seven cents (.07) results in a marine fuel tax of \$1,326,475.80 per year. Assuming an average refund to boaters of \$80,000.00 per year, (\$1,326,475.80 - \$80,000.00), the State receives \$2,492,950.00 per biennium in unrefunded marine fuel taxes, (\$1,246,475.00 x 2).

No attempt was made to estimate the contribution to marine fuel taxes by out-of-state users that purchase fuel in Oregon for use on the State's waterways.



# APPLICATION FOR BOAT REGISTRATION

(REQUIRED FOR ALL ORIGINAL REGISTRATIONS AND TRANSFER OF OWNERSHIP)

OUT OF STATE CERTIFICATES OF NUMBER MUST BE SURRENDERED WITH OREGON APPLICATION.

(1)  NUMBER \_\_\_\_\_ (2)  TITLE \_\_\_\_\_  
(FOR MARINE BOARD USE ONLY)

(3) **PRINCIPAL OWNERS PLEASE PRINT CLEARLY**

TELEPHONE NUMBER \_\_\_\_\_

(LAST NAME) \_\_\_\_\_ (FIRST NAME) \_\_\_\_\_ (MIDDLE INITIAL) \_\_\_\_\_

(MAILING ADDRESS) \_\_\_\_\_ (CITY) \_\_\_\_\_ (STATE) \_\_\_\_\_ (ZIP CODE) \_\_\_\_\_ (COUNTY) \_\_\_\_\_

(CO-OWNER'S LAST NAME) \_\_\_\_\_ (FIRST) \_\_\_\_\_ (MIDDLE & INITIAL) \_\_\_\_\_

(4)  OR SURVIVOR  
IF THIS BLOCK IS CHECKED SIGN SECTION (1)

(5) **CITIZENSHIP**  
 U.S.  ALIEN  
IF ALIEN GIVE NATIONALITY

(6) **FIRST SECURITY INTEREST HOLDER**

(NAME) \_\_\_\_\_

(MAILING ADDRESS) \_\_\_\_\_ (CITY) \_\_\_\_\_ (STATE) \_\_\_\_\_ (ZIP CODE) \_\_\_\_\_

(8) **PRESENT NUMBER**

(7) **SECOND SECURITY INTEREST HOLDER**

(NAME) \_\_\_\_\_

(MAILING ADDRESS) \_\_\_\_\_ (CITY) \_\_\_\_\_ (STATE) \_\_\_\_\_

(9) **WHERE WAS BOAT ACQUIRED**

(10) **NAME OF PREVIOUS OWNER**

(11) **SURVIVORSHIP CLAUSE**

WE REQUEST THE OREGON CERTIFICATE OF BOAT TITLE BE ISSUED WITH THE RIGHT OF SURVIVORSHIP. IT IS OUR INTENTION IN MAKING THIS REQUEST THAT THE TITLE BE ISSUED TO SHOW JOINT OWNERSHIP IN THE BOAT WITH THE RIGHT OF SURVIVORSHIP SO THAT UPON THE DEATH OF EITHER, TITLE MAY BE TRANSFERRED TO THE SURVIVOR WITHOUT PROBATE PROCEEDINGS.

SIGNATURE \_\_\_\_\_

SIGNATURE \_\_\_\_\_

(14) **DEALER'S REPORT**  
**TRANSFER OF UNDOCUMENTED VESSEL**  
INCLUDING STATEMENT OF PRIOR OWNERSHIP

I (WE) HEREBY CERTIFY THAT THE VESSEL DESCRIBED ON THIS APPLICATION WAS ACQUIRED (NEW \_\_\_\_\_ USED \_\_\_\_\_) FROM \_\_\_\_\_

OF \_\_\_\_\_ (ADDRESS) \_\_\_\_\_

AND ON \_\_\_\_\_ WAS SOLD BY THE UNDERSIGNED TO \_\_\_\_\_

OF \_\_\_\_\_ (ADDRESS) \_\_\_\_\_

TO MY (OUR) KNOWLEDGE THIS VESSEL HAS NOT BEEN TITLED OR REGISTERED HERETOFORE IN ANY STATE. (IF PREVIOUSLY TITLED OR REGISTERED), INDICATE WHERE \_\_\_\_\_

THE VESSEL DESCRIBED ON THIS APPLICATION IS FREE OF ALL ENCUMBRANCES EXCEPT AS SHOWN IN APPLICATION FOR CERTIFICATE OF TITLE.

SIGNATURE \_\_\_\_\_

FOR \_\_\_\_\_ REGISTERED NAME OF DEALERSHIP

DEALER'S ADDRESS \_\_\_\_\_ TELEPHONE \_\_\_\_\_

(12) **FEES ENCLOSED**

CERTIFICATE OF TITLE OR TRANSFER OF TITLE \$ \_\_\_\_\_

CERTIFICATE OF NUMBER \$ \_\_\_\_\_

DUPLICATE TITLE AND/OR DUPLICATE CERTIFICATE OF NUMBER \$ \_\_\_\_\_

TOTAL FEES ENCLOSED \$ \_\_\_\_\_

(13) **AMPHIBIOUS VEHICLES**

IF AMPHIBIOUS VEHICLE CHECK THIS BOX  AMPHIBIOUS VEHICLES (INCLUDING AMPHIBIOUS HOUSEBOAT AND AMPHIBIOUS TRAILER HOUSES) ARE REQUIRED TO HAVE A CERTIFICATE OF NUMBER ISSUED BY THE STATE MARINE BOARD AND A MOTOR VEHICLE LICENSE AND CERTIFICATE OF TITLE ISSUED BY THE DEPARTMENT OF MOTOR VEHICLES

(15) **BOAT DESCRIPTION**

HULL LENGTH \_\_\_\_\_

HULL MATERIAL  1 ALUMINUM  2 STEEL  3 WOOD  4 PLASTIC (INCLUDING FIBERGLASS)  5 OTHER

USE OF BOAT  1 PLEASURE  2 LIVERY  3 DEALER  4 MANUFACTURER  5 COMMERCIAL FISHING  6 COMMERCIAL PASSENGER  7 TUG  8 OTHER

RATED HORSEPOWER OF MOTOR TO BE USED \_\_\_\_\_

TYPE OF PROPULSION  1 OUTBOARD  2 INBOARD OR INBOARD-OUTDRIVE  3 SAIL  4 STEAM  5 OTHER

TYPE OF FUEL  1 GAS  2 DIESEL  3 OTHER

MANUFACTURER'S OR BUILDER'S NAME (HULL) \_\_\_\_\_

CONSTRUCTION  1 OPEN BOAT  2 CABIN CRUISER  3 CRUISING HOUSEBOAT  4 OTHER

MODEL YEAR \_\_\_\_\_

12 CHARACTER HULL NUMBER \_\_\_\_\_

INDICATE WHAT COUNTRY \_\_\_\_\_

IF VESSEL NOT BUILT IN THE U.S.

NOTE: ALL BOATS LESS THAN 20 FT. IN LENGTH, BUILT AFTER NOVEMBER 1, 1972 AND REGISTERED IN OREGON, ARE REQUIRED TO HAVE A WEIGHT AND CAPACITY PLATE.

**AUTHENTICATION—THIS SECTION MUST BE COMPLETED BY ALL APPLICANTS**

I HEREBY CERTIFY UNDER PENALTY OF LAW THAT THE INFORMATION GIVEN BY ME ON THIS APPLICATION IS TRUE, CORRECT AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT OREGON IS THE STATE OF PRINCIPAL USE.

(SIGNATURE) \_\_\_\_\_ (DATE) \_\_\_\_\_

**PLEASE DO NOT MAIL CASH**  
MAKE ALL CHECKS AND MONEY ORDERS PAYABLE TO  
**STATE MARINE BOARD**  
3000 MARKET STREET N.E., #505  
SALEM, OREGON 97310  
PHONE 378-8567

## APPENDIX F

Characteristics of Oregon pleasure boat owners by age group, sex, retired status, type of work, general industry and education by county of registration, including the number of owners that sold their boats and those boats that are not now used as pleasure boats as well as the number of respondents who made comments, identified themselves and sealed their questionnaires from the 1978 Boating Survey.

Age Group (Number of Boat Owners)

County	Less than 24 yrs.	24-34 yrs.	35-44 yrs.	45-54 yrs.	55-64 yrs.	65-74 yrs.	More than 74 yrs.	Total Number of Boat Owners
Baker	0	67	86	1144	240	116	0	653
Benton	40	162	404	729	486	304	81	2206
Clackamas	240	1028	2227	3014	2466	993	171	10139
Clatsop	198	164	309	474	492	237	54	1839
Columbia	63	233	443	359	549	317	42	2006
Coos	31	367	825	916	1283	1131	183	4736
Crook	24	36	118	83	213	94	36	604
Curry	0	89	104	208	430	312	75	1218
Deschutes	22	264	417	856	1054	812	88	3513
Douglas	66	530	596	1260	1491	928	166	5037
Gilliam	0	16	5	16	16	0	5	58
Grant	10	19	38	48	105	38	29	287
Harney	0	56	74	19	74	19	0	242
Hood River	28	65	92	64	184	92	46	571
Jackson	37	296	964	1743	1706	1224	259	6229
Jefferson	11	44	123	89	100	78	22	467
Josephine	27	162	270	325	812	487	271	2354
Klamath	96	362	604	893	821	917	48	3741
Lake	0	32	42	106	32	43	0	255
Lane	72	1383	2038	3057	3639	2329	364	12882
Lincoln	66	198	242	396	704	528	110	2244
Linn	78	468	650	1092	1118	676	104	4186
Malheur	15	135	135	269	314	254	45	1167
Marion	157	598	1227	1762	1761	1353	125	6983
Morrow	0	22	33	55	77	44	0	231
Multnomah	224	2457	2770	5272	5585	2636	760	19704
Polk	20	142	142	404	424	161	101	1394
Sherman	0	19	5	18	14	14	0	71
Tillamook	18	108	142	322	428	393	107	1518
Umatilla	54	180	234	342	522	234	72	1638
Union	0	27	134	223	197	107	72	760
Wallowa	0	9	51	26	78	69	35	268
Wasco	36	98	106	133	177	240	18	808
Washington	123	903	1929	2217	1273	780	82	7307
Wheeler	0	0	9	2	8	4	6	61
Yamhill	127	76	278	507	481	304	51	1824

Total

## APPENDIX F

### CHARACTERISTICS OF OREGON PLEASURE BOAT OWNERS BY COUNTY OF REGISTRATION

COUNTY	MALE*	FEMALE	RETIRED	SOLD BOAT	NOT PLEASURE	MADE COMMENTS	RESPONDENT IDENTIFIED	SEALED RETURN
BAKER	634	10	288	29	0	14	9	39
BENTON	2145	61	627	20	0	25	9	57
CLACKAMAS	9933	240	2535	69	0	61	23	161
CLATSOP	1839	36	565	0	237	21	14	50
COLUMBIA	1922	63	570	21	21	15	10	51
COOS	4644	214	2169	122	61	50	21	100
CROOK	605	0	297	12	0	14	8	25
CURRY	1247	30	712	45	30	26	12	57
DESCHUTES	3468	110	1910	44	0	43	20	92
DOUGLAS	4938	99	1690	33	66	32	20	81
GILLIAM	54	5	22	11	0	7	2	9
GRANT	277	0	115	0	10	5	1	18
HARNEY	241	0	19	0	0	3	1	8
HOOD RIVER	525	9	221	28	0	12	8	38
JACKSON	6267	37	2707	74	111	34	18	105
JEFFERSON	422	33	133	33	0	8	3	23
JOSEPHINE	2302	81	1435	27	0	24	12	56
KLAMATH	3500	193	1376	24	24	27	17	84
LAKE	242	11	42	0	0	6	3	12
LANE	12846	218	4440	291	146	61	40	213
LINCOLN	2088	154	1376	0	22	25	8	52
LINN	4215	0	1353	26	0	40	13	80
MALHEUR	1106	60	478	15	0	14	5	46
MARION	6890	126	2422	126	157	44	25	137
MORROW	221	11	99	0	0	3	1	16
MULTNOMAH	19302	491	5764	447	268	87	53	255
POLK	1433	20	485	20	0	14	6	40
SHERMAN	70	0	19	0	5	4	1	8
TILLAMOOK	1500	18	732	18	71	28	10	43
UMATILLA	1602	36	612	36	0	18	10	53
UNION	751	9	277	9	0	14	9	52
WALLOWA	276	0	138	0	17	3	3	18
WASCO	789	18	302	35	18	22	8	45
WASHINGTON	7061	205	1437	41	41	29	17	84
WHEELER	31	0	13	2	0	3	2	7
YAMHILL	1798	25	658	25	25	10	6	33

\* Includes those boats with joint ownership registrations.



## APPENDIX F

### CHARACTERISTICS OF OREGON PLEASURE BOAT OWNERS BY TYPE OF WORK AND COUNTY OF REGISTRATION

COUNTY *	UNEMP*	WAGE PRIV	WAGE GFED	WAGE GLOC	SUPER PRIV	SUPER GFED	SUPER GLOC	PROF L/M	PROF OTHER	OTHER
BAKER	10	221	48	49	49	29	38	19	19	48
BENTON	0	648	61	121	263	40	223	61	506	142
CLACKAMA	34	3631	137	377	2569	274	377	240	1028	206
CLATSOP	18	765	36	91	492	36	119	36	164	0
COLUMBIA	0	887	0	169	380	42	63	42	169	42
COOS	0	1894	153	275	430	193	92	153	275	92
CROOK	12	237	12	12	59	24	12	0	59	59
CURRY	15	341	74	0	252	39	59	59	74	59
DESCHUTE	0	1054	88	66	637	66	176	44	176	198
DOUGLAS	0	1956	99	99	795	133	298	133	232	464
GILLIAM	0	22	0	0	5	0	0	0	5	22
GRANT	0	96	29	19	19	0	10	10	0	19
HARNEY	0	148	0	19	19	0	0	0	37	0
HOOD RIV	0	184	0	9	64	0	29	9	55	55
JACKSON	37	2039	185	185	1261	74	334	74	408	371
JEFFERSON	0	144	0	56	56	0	33	0	0	122
JOSEPHIN	77	765	31	0	406	162	54	27	162	27
KLAMATH	24	1159	48	241	579	145	193	48	290	435
LAKE	0	105	32	21	21	21	11	0	11	21
LANE	146	5386	364	473	2365	146	255	192	983	619
LINCOLN	0	637	44	66	418	0	98	36	220	198
LINN	0	1978	52	104	729	52	78	26	338	442
MALHEUR	0	329	15	30	194	60	30	60	60	149
MARION	31	1982	220	252	1416	220	598	63	503	315
MORROW	0	22	11	11	33	22	11	0	0	66
MULTNOMA	134	7283	313	491	4736	432	531	719	2189	447
FOLK	0	384	26	162	262	26	26	40	232	81
SHERMAN	0	14	0	0	0	0	0	0	5	47
TILLAMOO	0	482	18	71	321	18	54	0	125	143
UMATILLA	0	324	18	144	324	18	72	30	72	286
UNION	0	232	0	45	161	9	36	18	36	72
WALLOWA	0	60	9	17	52	17	9	9	0	43
WASCO	9	316	35	27	124	9	9	35	62	35
WASHINGTON	0	2331	41	328	2217	0	257	246	657	410
WHEELER	0	13	2	2	4	0	0	0	2	2
YAMHILL	51	582	51	0	354	25	76	51	51	152

\* UNEMP = UNEMPLOYED, WAGE/PRIV = Wage earner in Private Enterprise, WAGE/GFED = Wage earner in Federal Government, WAGE/GLOC = Wage earner in State or Local Government, SUPER/PRIV = Supervisor in Private Enterprise, SUPER/GFED = Supervisor in Federal Government, SUPER/GLOC = Supervisor in State and Local Government, PROF/L/M = Professional in Law or Medicine, PROF/OTHER = Other Professionals, OTHER = All other types of work including agricultural.

## APPENDIX F

### CHARACTERISTICS OF OREGON PLEASURE BOAT OWNERS BY GENERAL INDUSTRY AND COUNTY OF REGISTRATION

COUNTY *	GOV *	ED	MANF LT	MANF HV	BUSN LAND	BUS MAR	SERV CONS	SERV BUSN	SERV MEDN	OTHER
BAKER	154	19	19	0	115	10	115	38	19	48
BENTON	385	324	202	142	162	20	405	182	61	202
CLACKAMA	856	480	1096	582	1781	206	2089	1473	103	274
CLATSOP	200	91	182	55	328	473	219	91	18	41
COLUMBIA	190	84	380	21	380	317	148	148	63	63
COOS	519	305	519	153	764	244	611	367	61	122
CROOK	47	12	83	24	119	12	47	71	0	71
CURRY	163	30	74	15	163	59	297	104	7	45
DESCHUTE	439	44	37	66	483	22	680	285	44	132
DOUGLAS	530	133	497	331	1060	66	663	265	99	464
GILLIAM	0	5	5	5	0	0	11	5	0	16
GRANT	48	10	10	10	86	0	19	0	10	10
HARNEY	37	0	0	19	111	0	37	19	0	0
HOOD RIV	28	9	46	0	101	9	101	9	9	92
JACKSON	667	260	519	111	1112	0	1446	519	74	334
JEFFERSON	33	67	22	11	22	22	67	56	0	111
JOSEPHIN	298	54	135	0	352	108	379	352	27	27
KLAMATH	483	266	241	97	676	48	603	314	24	435
LAKE	84	11	21	0	53	0	42	21	0	11
LANE	837	728	1310	400	3057	182	2511	1055	218	619
LINCOLN	176	66	132	132	308	132	396	198	44	198
LINN	312	234	650	416	833	26	520	364	78	390
MALHEUR	105	45	45	30	179	0	239	90	45	164
MARION	1195	189	566	220	724	63	1636	692	31	315
MORROW	33	33	0	0	22	0	11	11	0	66
MULTNOMA	1519	760	1653	1519	2868	626	4111	2681	938	670
POLK	182	141	81	61	182	0	222	222	20	81
SHERMAN	5	0	0	5	5	0	5	0	0	47
TILLAMOO	161	36	71	18	268	250	214	107	18	107
UMATILLA	198	90	90	54	144	0	216	144	90	324
UNION	72	36	63	9	161	0	116	45	27	80
WALLOWA	26	26	0	0	34	43	17	26	9	34
WASCO	89	9	27	53	160	35	151	71	18	44
WASHINGT	452	410	657	944	862	82	1396	1106	246	410
WHEELER	4	0	2	0	9	0	4	2	0	4
YAMHILL	101	101	279	51	203	0	304	152	51	152

\* GOV = All levels of Government, ED = Education, MANF/LT = Light Manufacturing, MANF/HV = Heavy Manufacturing, BUSN/LAND = Land Related Business, BUS/MAR = Marine Related Business, SERV/CONS = Consumer Service Related Business, SERV/BUSN = Business Service Related Business, SERV/MEDN = Medicine Service Related Business, OTHER = All other categories of Industries.

## APPENDIX F

### CHARACTERISTICS OF OREGON PLEASURE BOAT OWNERS BY EDUCATION LEVELS AND COUNTY OF REGISTRATION

COUNTY	SOME GRDE	COMP GRDE	SOME HIGH	COMP HIGH	TECH SCHOOL	SOME COLL	COMP COLL	POST COLL
AKER	0	77	106	192	48	96	67	50
BENTON	0	101	81	385	182	486	263	648
CLACKAMA	34	514	891	2158	1233	2466	1541	1267
CLATSOP	36	91	146	492	255	473	127	146
COLUMBIA	42	211	127	676	211	422	148	127
COOS	31	519	580	1130	672	703	305	590
CROOK	12	59	83	130	71	95	95	24
CURRY	15	74	119	371	89	193	208	148
DESCHUTE	0	263	461	812	505	768	307	220
DOUGLAS	199	365	653	1425	563	829	464	431
GILLIAM	0	5	5	0	16	22	5	5
GRANT	0	19	29	76	29	67	10	10
HARNEY	0	19	19	130	0	37	19	19
HOOD RIV	0	74	64	157	37	92	37	37
JACKSON	111	482	779	1669	593	1224	593	482
JEFFERSO	11	11	111	144	44	44	22	56
JOSEPHIN	27	190	325	785	190	596	81	135
KLAMATH	48	217	531	845	410	700	483	386
LAKE	11	21	53	53	32	32	21	32
LANE	36	764	1346	3748	1237	2766	1274	1310
LINCOLN	4	176	330	615	154	396	198	242
LINN	78	416	494	1197	312	937	338	338
MALHEUR	15	75	154	284	105	269	75	105
MARION	31	409	724	1699	724	1699	1133	472
MORROM	0	33	44	77	22	22	0	33
MULTNOMA	134	983	1787	4423	2457	4557	2681	2323
FOLK	0	121	262	303	61	323	101	262
SHERMAN	0	5	0	23	5	23	9	5
TILLAMOO	18	161	214	447	161	179	232	71
UMATILLA	0	54	130	486	90	396	252	126
UNION	9	89	54	286	72	116	18	98
WALLOWA	0	26	9	95	17	26	43	43
WASCO	27	53	124	186	89	160	62	71
WASHINGT	82	246	452	1478	862	1396	1396	1231
WHEELER	0	7	4	9	9	0	4	0
YAMHILL	25	127	279	582	127	304	76	203





APPENDIX G

COUNTY	MONTH	TOTAL BOAT DAYS	AVERAGE BOAT DAYS	TOTAL PEOPLE DAYS	AVERAGE PEOPLE DAYS
-----					
WASCO	SEP	2218	3	12795	18
	OCT	985	1	5401	9
	NOV	266	0	1144	2
	DEC	124	0	523	1
	JAN	257	0	1162	2
	FEB	246	0	1854	3
	MAR	541	1	1827	3
	APR	1464	2	20514	30
	MAY	2173	3	34646	50
	JUN	3184	5	42984	62
	JUL	3504	5	12278	47
	AUG	3468	5	11741	46
	TOTAL	18432	27	187209	271
-----					
WASHINGTON	SEP	17651	3	50932	8
	OCT	9441	2	27257	4
	NOV	3736	1	12069	2
	DEC	2145	0	6978	1
	JAN	2011	0	6696	1
	FEB	1573	1	11021	2
	MAR	7344	1	21346	3
	APR	16802	3	46345	7
	MAY	18790	3	54761	9
	JUN	27380	4	83537	13
	JUL	32512	5	99382	16
	AUG	30295	5	94074	15
	TOTAL	170972	28	514478	83
-----					
WHEELER	SEP	41	2	135	7
	OCT	11	1	44	2
	NOV	0	0	0	0
	DEC	0	0	0	0
	JAN	0	0	0	0
	FEB	0	0	0	0
	MAR	13	1	27	1
	APR	22	1	55	3
	MAY	44	2	127	6
	JUN	91	5	271	14
	JUL	78	4	344	17
	AUG	47	2	160	8
	TOTAL	346	17	1163	58
-----					
YAMHILL	SEP	4801	3	13774	9
	OCT	1620	1	5343	4
	NOV	709	0	2253	2
	DEC	481	0	1190	1
	JAN	608	0	2583	2
	FEB	430	0	1663	2
	MAR	982	1	2792	2
	APR	2507	2	7824	5
	MAY	5144	3	17699	12
	JUN	6634	5	22164	18
	JUL	7988	5	24948	18
	AUG	7647	5	25160	17
	TOTAL	38639	26	128676	88

COUNTY	BOATS USED WHERE MOORED	NUMBER OF REGISTERED BOATS NOT IN USE
BAKER	58	173
BENTON	0	445
CLACKAMAS	993	1,815
CLATSOP	473	473
COLUMBIA	485	359
COOS	764	978
CROOK	47	95
CURRY	594	237
DESCHUTES	220	944
DOUGLAS	895	1,027
GILLIAM	0	49
GRANT	10	134
HARNEY	0	111
HOOD RIVER	64	238
JACKSON	445	1,409
JEFFERSON	111	122
JOSEPHINE	27	731
KLAMATH	507	893
LAKE	53	63
LANE	1,128	2,911
LINCOLN	1,824	506
LINN	78	859
MALHEUR	15	269
MARION	220	1,258
MORROW	11	77
MULTNOMAH	3,977	4,736
POLK	20	162
SHERMAN	0	9
TILLAMOOK	429	411
UMATILLA	108	504
UNION	27	188
WALLOWA	95	17
WASCO	71	204
WASHINGTON	82	1,642
WHEELER	2	20
YAMHILL	25	557

APPENDIX G

USE DATA FOR ALL RANKED BODIES OF WATER,  
EXCLUDING THOSE IN TABLES 7 AND 8.

COUNTY	BODY OF WATER	BOAT DAYS OF USE					OTHER	TOTAL
		NO. BOATS	FISHING	SAILING	SKIING	CRUISING		
BAKER	BALM CREEK	9	54	0	0	0	0	54
	BROWN LEE RESERVOIR	580	9506	0	1930	601	299	12201
	HIGGINS RESERVOIR	18	255	0	0	0	0	255
	PHILLIPS RESERVOIR	402	4252	0	421	28	10	4729
	POWDER RIVER	19	118	0	0	0	0	118
	SNAKE RIVER	641	5708	0	487	328	18	6746
BENTON	UNITY RESERVOIR	326	2567	18	200	182	0	2968
	ALSIS RIVER	61	1012	0	0	0	0	1012
	WILLAMETTE RIVER	357	6030	0	142	425	899	7399
CLACKAMAS	LONG TOM RIVER	25	760	76	0	0	0	506
	CLACKAMAS RIVER	1072	13807	0	1127	1678	223	16836
	ESTACADA LAKE	34	274	0	0	0	0	274
	HARRIET RESERVOIR	79	515	0	0	0	0	515
	NORTH FORK RESERVOIR	350	2341	0	0	45	0	2248
	ROSLYN LAKE	45	89	0	0	0	0	89
CLATSOP	TIMOTHY LAKE	645	8115	258	0	0	283	8666
	COFFENBURY LAKE	18	219	0	164	0	164	546
	CULLABY LAKE	257	992	0	289	484	36	1791
	FISH HAWK LAKE	86	1014	0	0	0	0	1014
	JOHN DAY RIVER	36	218	0	0	0	0	218
	KLASKANINE RIVER	150	2248	0	382	0	182	2813
COLUMBIA	NECANTICUM RIVER	18	146	0	0	0	0	146
	CLATSKAMIE RIVER	90	2302	11	190	186	127	2735
	WILLAMETTE RIVER	976	19166	89	1690	1230	798	23018
COOS	BRADLEY LAKE	33	66	0	0	0	0	66
	COOS BAY	1477	17959	0	31	560	3176	22034
	COOS RIVER	531	8734	0	155	114	609	9613
	COQUILLE BAY	102	177	0	0	65	31	272
	COQUILLE RIVER	369	5239	0	0	0	0	5239
	MIDDLE FORK, COQUILLE	153	3086	0	0	0	275	3360
	SOUTH FORK, COQUILLE	46	676	0	0	0	0	676
	EEL LAKE	218	2306	0	0	0	0	2306
CROOK	ANTELOPE FLAT RESERVOIR	68	180	0	0	0	0	180
	LITTLE HOUSTON LAKE	12	12	0	0	0	0	12
	OCHOCO RESERVOIR	936	6308	0	104	322	492	7227
	PRINEVILLE RESERVOIR	1456	12281	0	9100	2195	574	22837
	WALTON LAKE	91	598	0	0	0	0	598
CURRY	CHETCO BAY	227	5504	0	0	0	0	5504
	ELK RIVER	31	92	0	0	0	31	122
	FLORAS LAKE	46	165	0	0	0	0	165
	GARRISON LAKE	127	164	0	260	364	0	787
	ILLINOIS RIVER	15	1336	0	0	0	134	1469
DESCHUTES	ROGUE RIVER	697	19454	0	0	2167	1000	22887
	BIG LAVA LAKE	295	3238	0	0	20	0	3258
	CULTUS LAKE	541	1905	268	1236	301	103	3813
	DAVIS LAKE	168	580	0	0	0	0	580
	DESCHUTES RIVER	658	12248	0	123	1294	199	13854
	DEVILS LAKE	51	114	0	0	0	0	114
	EAST LAKE	2062	19538	0	127	306	423	20567
	ELK LAKE	118	735	988	22	22	0	1767
DOUGLAS	HOSMER (MUD) LAKE	12	107	0	0	0	0	107
	CLEAR LAKE	45	45	0	0	0	0	45
	COOPER CREEK RESERVOIR	679	2758	0	4835	1179	285	10449
	LEMOLO RESERVOIR	252	5569	0	0	0	291	5860
GILLIAM	LOON LAKE	284	3122	0	2658	244	244	6268
	COLUMBIA RIVER	15	394	0	0	0	42	436
GRANT	JOHN DAY RIVER	37	358	0	152	28	0	538
	BULL PRAIRIE IMPOUND	111	1619	0	0	0	0	1619
	CANYON CREEK MEADOWS RES	29	56	0	0	0	0	56
HADLEY	JOHN DAY RIVER	18	180	0	0	0	0	188
	MAGONE LAKE	19	220	0	0	0	0	220
	SPOOL LAKE	10	38	0	0	0	0	38
	CHUCKANOMINY RESERVOIR	19	167	0	0	0	0	167
	DELINMENT LAKE	47	289	0	0	0	0	289

BOAT DAYS OF USE CONTINUED

COUNTY	BODY OF WATER	NO. BOATS	FISHING	SAILING	SKIING	CRUISING	OTHER	TOTAL
WARNEY	FISH LAKE	24	507	0	0	0	217	724
	KRUMBO RESERVOIR	57	292	0	0	0	0	292
	MANN LAKE	39	210	0	0	0	0	210
HOOD RIVER	COLUMBIA RIVER	211	1013	958	1114	2440	129	5653
	KINGSLEY RESERVOIR	73	749	0	0	0	0	749
JACKSON	LOST LAKE	27	101	0	0	0	28	129
	AGATE RESERVOIR	175	1034	0	222	140	0	1406
	EMIGRANT LAKE	621	2381	74	3694	445	74	6670
	FISH LAKE	460	8484	0	0	7342	551	16377
	HOWARD PRAIRIE RES	1726	19791	3178	1298	579	0	24844
	HYATT RESERVOIR	615	7785	0	0	166	0	7951
	LOST CREEK RESERVOIR	1920	20835	37	556	1001	207	22679
JEFFERSON	ROGUE RIVER	416	11277	0	556	222	0	12056
	SQUAW LAKES	57	249	0	0	0	0	249
	WILLOW CREEK RES	391	8288	0	409	259	220	8991
	BLUE LAKE	34	69	0	0	0	0	69
	DESNUTES RIVER	56	1088	0	0	0	0	1088
	HAYSTACK RESERVOIR	305	2055	0	94	22	0	2150
	LAKE SIMTUSTUS	100	545	0	0	0	0	545
	METOLIAS RIVER	41	657	0	0	0	0	657
	OLALLIE LAKE	34	171	0	0	0	0	171
	ROUND BUTTE RESERVOIR	1177	5746	0	5685	2455	298	14186
JOSEPHINE	BOLAN LAKE	54	162	0	0	0	81	244
	ILLINOIS RIVER	27	135	0	0	0	0	135
	ROGUE RIVER	504	11127	0	108	379	0	16614
	SELMAC LAKE	120	1056	178	0	81	0	1316
KLAMATH	AGENCY LAKE	176	4837	0	121	169	547	5673
	ASPEN LAKE	44	564	0	0	0	0	564
	CRESCENT LAKE	1098	10574	0	2087	725	297	13681
	DAVIS LAKE	24	97	0	0	0	0	97
	FOUR MILE LAKE	24	145	0	0	0	0	145
	GERBER RESERVOIR	266	1736	0	74	0	0	1810
	HEMLOCK LAKE	24	241	0	0	0	217	459
	KENO RECREATION AREA	24	24	0	0	0	0	24
	LAKE OF THE WOODS	639	3887	619	5801	3414	386	14082
	LAKE	ANA RESERVOIR	32	767	0	21	0	0
CAMPBELL LAKE		79	48	0	0	0	285	333
COTTONWOOD MEADOWS LAKE		11	347	0	0	0	0	347
COTTONWOOD RESERVOIR		11	284	0	0	0	0	284
CRUMP LAKE		24	1014	0	0	0	0	1014
DEADHORSE LAKE		12	178	0	0	0	0	178
DOG LAKE		163	2175	0	0	0	0	2175
DREWS RESERVOIR		46	74	0	1875	0	0	1149
BLUE RIVER RESERVOIR		234	770	0	0	0	0	770
LANE		CARTER LAKE	36	73	0	0	0	0
	CLEAFOX LAKE	72	73	0	109	0	73	255
	COLLARD LAKE	36	364	0	0	0	0	364
	COTTAGE GROVE RES.	488	946	0	4809	73	0	5828
	COUGAR RESERVOIR	422	8114	0	36	218	0	8368
	DEXTER RESERVOIR	436	983	992	364	1019	182	4112
	DORENA RESERVOIR	992	8933	0	1369	345	0	10627
	FALL CREEK RESERVOIR	712	7363	0	5968	1638	36	15886
	ALSEA BAY	1004	12139	626	20	62	780	13627
	ALSEA RIVER	722	22983	0	110	886	224	23279
LINCOLN	BEAVER CREEK	75	1886	0	0	0	127	2013
	DEPOE BAY	335	5503	0	123	82	369	6077
	DEVILS (D) LAKE	1367	11742	0	6434	2122	811	20999
	SALMON RIVER BAY	48	96	66	0	0	22	484
	SILETZ BAY	128	974	0	0	0	0	974
	BIG LAKE	154	327	0	536	0	0	551
	CLEAR LAKE	202	1217	0	1171	309	0	2697
	DETROIT RESERVOIR	124	364	0	781	416	0	1561
	FOSTER RESERVOIR	1745	9614	81	9027	2399	596	23476
	FREWAY LAKE # 1	31	1161	0	0	26	0	1187
MALHEUR	GREEN PETER RESERVOIR	725	3765	0	3906	1947	0	9618
	BULLY CREEK	150	224	299	484	98	0	1016
	MALHEUR RESERVOIR	88	1321	0	134	0	0	1455
	OWYHEE LAKE RESERVOIR	792	8466	120	941	879	149	10559
	SNAKE RIVER	301	3088	8	839	164	134	4217



BOAT DAYS OF USE CONTINUED

COUNTY	BODY OF WATER	NO. BOATS	FISHING	SAILING	SKIING	CRUISING	OTHER	TOTAL
MARION	BIG CLIFF RESERVOIR	141	1761	0	0	0	0	1761
	ELK LAKE	26	781	0	26	0	0	807
	NORTH SANTIAM RIVER	62	598	0	0	0	0	598
	SANTIAM RIVER	31	220	0	0	0	0	220
	WILLAMETTE RIVER	943	3889	0	3996	5228	1301	14413
MORROW	COLUMBIA RIVER	111	1858	162	469	275	162	1900
	PENLAND PRAIRIE IMP.	87	977	36	0	36	0	1049
MULTNOMAH	SANDY RIVER	86	1477	0	0	0	0	1477
	STURGEON LAKE	65	89	0	0	0	0	89
POLK	VALSETZ LAKE	20	606	0	0	0	0	606
	WILLAMETTE RIVER-	453	4575	0	3662	373	607	9378
	YAMHILL RIVER	25	506	0	0	0	0	506
SHERMAN	BIBBY RESERVOIR	5	9	0	14	23	0	47
	COLUMBIA RIVER	73	848	54	42	412	374	1730
	DESCHUTES RIVER	43	1302	0	0	0	18	1320
	JOHN DAY RIVER	299	1283	0	581	114	163	2020
TILLAMOOK	CAPE MEARES LAKE	31	0	0	0	0	31	31
	KILCHIS RIVER	59	386	0	0	0	0	386
	LAKE LYTLE	157	1725	0	357	0	0	2383
	LITTLE NESTUCCA RIVER	18	554	0	0	0	161	714
	NEHALEM BAY	964	16145	328	54	738	1309	18573
	NEHALEM RIVER	568	9905	0	0	42	829	10777
	NESTUCCA BAY	278	1436	0	0	0	0	1436
UMATILLA	COLD SPRINGS RESERVOIR	43	143	0	0	0	0	143
	COLUMBIA RIVER	596	6122	0	5669	5397	144	17152
	INDIAN LAKE	101	393	0	0	0	0	393
	McKAY RESERVOIR	234	1764	0	648	18	0	2430
UNION	GRANDE RONDE RIVER	9	384	0	54	0	0	438
	JUBILEE IMPOUND	27	99	0	36	0	0	135
	MORGAN LAKE	81	474	0	162	0	126	762
	THIEF VALLEY RESERVOIR	108	367	80	134	54	0	643
WALLOWA	WALLOWA RIVER	9	27	0	0	0	0	27
	SNAKE RIVER	64	489	0	558	0	0	1047
	WALLOWA LAKE	838	8073	80	2883	1746	54	12836
WASCO	BADGER LAKE	9	53	0	0	0	0	53
	COLUMBIA RIVER	507	3158	0	1641	4295	240	9374
	DESCHUTES RIVER	79	2081	0	0	0	250	2331
	FROG LAKE	9	55	0	0	0	0	55
	JOHN DAY RIVER	48	615	0	9	18	0	642
	PINE HOLLOW RESERVOIR	162	526	0	359	18	0	1107
	ROCK CREEK RESERVOIR	45	447	0	0	0	0	447
WASHINGTON	SCOGGINS LAKE (RES)	238	1107	0	406	101	328	1942
WHEELER	JOHN DAY RIVER	2	18	0	0	0	0	18
	ROCK CREEK LAKE	2	44	0	0	0	0	44
YAMHILL	WILLAMETTE RIVER	538	796	31	5392	1269	692	8181
	YAMHILL RIVER	51	76	0	0	0	51	127
STATE OF IDAHO		205	600	402	478	45	308	1838
STATE OF CALIFORNIA		603	9044	0	2901	375	302	12622
STATE OF NEVADA		34	444	0	0	0	15	459
CLACKAMAS	TRILLIUM LAKE	177	785	0	0	0	0	785
	TUALATIN RIVER	45	223	0	0	0	0	223
CLATSOP	SUNSET LAKE	36	18	0	0	0	0	54
	YOUNG'S RIVER	73	2822	0	0	0	95	3017
COOS	EMPIRE LAKE	36	189	0	0	1020	164	1403
	NORTH TEN MILE LAKE	919	11822	122	2704	5653	947	19591
DESCHUTES	SAUNDERS LAKE	62	305	0	0	0	0	305
	LITTLE CULTUS LAKE	48	182	0	0	44	0	226
	NORTH TWIN LAKE	127	1408	0	0	0	0	1408
	PAULINA LAKE	1517	15249	72	0	122	0	15749
	SOUTH TWIN LAKE	80	402	0	182	0	0	584
DOUGLAS	TAYLOR LAKE	22	439	0	0	0	0	439
	LOST LAKE	41	41	0	0	0	0	82
	PLAT I RESERVOIR	66	1756	166	0	0	0	1922
	SMITH RIVER	245	4650	0	0	0	33	4683
	SOUTH UMPQUA RIVER	188	3251	0	0	0	166	3417
	TANKENTICH LAKE	252	1866	0	0	0	392	2258
	NORTH FORK, UMPQUA	176	1843	0	166	199	182	1990
	SOUTH FORK, UMPQUA	163	2268	0	0	166	269	2698

BOAT DAYS OF USE CONTINUED

COUNTY	BODY OF WATER	NO. BOATS	FISHING	SAILING	SKIING	CRUISING	OTHER	TOTAL
	TIDEWATER, UMPQUA	99	5666	0	0	0	298	5965
HARNEY	WINCHESTER BAY	667	13507	0	684	365	580	15135
	WARM SPRINGS RESERVOIR	56	222	0	0	0	0	222
	YELLOW JACKET IMPOUND	79	1602	0	0	0	0	1602
JEFFERSON	SUTTLE LAKE	128	3530	0	0	0	434	3964
KLAMATH	LOST RIVER	105	607	0	0	0	0	607
	MILLER LAKE	1367	18040	223	375	326	0	18966
	ODELL LAKE	26	130	0	0	0	0	130
	PETRIC LAKE	108	712	0	0	24	763	1499
	SPRAGUE LAKE	70	136	0	0	0	0	136
	SUMMIT LAKE	24	290	0	0	0	217	507
	WILLIAMSON LAKE	24	0	0	0	0	121	121
LAKE	WOOD RIVER	11	525	0	0	0	0	525
	GOOSE LAKE	11	0	0	11	0	0	11
	HART LAKE	11	53	0	0	0	0	53
	LOFTEN RESERVOIR	22	84	0	0	0	0	84
	THOMPSON VALLEY RES.	77	283	0	126	0	0	439
LANE	GOLD LAKE	36	255	0	0	0	0	255
	HILLS CREEK RESERVOIR	468	9404	0	73	109	328	9914
	LAKE CREEK	36	364	0	0	0	0	364
	LOOKOUT POINT RES.	36	364	0	0	0	0	364
	McKENZIE RIVER	255	3603	0	218	1237	655	5713
	MERCER LAKE	365	5869	0	73	3421	0	9362
	MUNSEL LAKE	36	109	0	0	0	0	109
	SIUSLAW BAY	93	2667	0	0	315	228	3213
	SUTTON LAKE	177	813	0	0	0	0	813
	TRIANGLE LAKE	415	1649	0	3089	838	0	6123
	WALDO LAKE	88	681	0	0	472	0	1153
	WILLAMETTE RIVER	109	655	0	0	109	328	1092
	WOAHINK LAKE	196	291	364	345	4840	656	6494
LINCOLN	SILETZ RIVER	986	16319	0	0	20	319	16658
	YACHATS RIVER	31	94	0	0	0	0	94
	YAQUINA RIVER	88	2418	0	0	242	110	2550
LINN	LOST LAKE	52	52	0	0	0	0	52
	SANTIAM RIVER	31	2265	0	0	0	0	2265
	SMITH RESERVOIR	99	307	0	0	109	0	416
	WILLAMETTE RIVER	318	3147	0	815	211	587	4760
TILLAMOOK	NESTUCCA RIVER	381	9269	0	0	679	464	10412
	NETARTS BAY	513	5172	0	0	441	1469	7082
	SALMON RIVER BAY	20	20	0	0	0	0	20
	SAND LAKE	18	71	0	0	0	0	71
	TRASK RIVER	18	536	0	0	0	0	536
	WILSON RIVER	72	1854	0	536	0	161	1751

APPENDIX I

SAFETY AND LAW ENFORCEMENT RESPONSES TO THE  
1978 BOATING SURVEY BY COUNTY OF REGISTRATION

BOAT ASSISTANCE

COUNTY	YES	NO	OTHER ROVER	SHERIFF PATROL	STATE POLICE	COAST GUARD	OTHER	COD30
BAKER	0	444	11	0	0	10	10	0
BENTON	0	1922	41	23	0	41	0	0
CLACKAMA	0	4214	219	69	0	261	132	171
CLATSOP	0	1748	123	18	0	127	0	18
COLUMBIA	0	1124	141	0	0	21	21	7
COOS	0	1840	141	61	0	183	61	41
CRICK	0	444	31	0	0	0	0	12
CURRY	0	444	11	14	0	21	0	30
DESCHUTE	0	311	174	0	0	265	0	0
DOUGLAS	0	1117	244	1	0	3	0	0
GILLIAM	0	12	11	0	0	0	0	0
GRANT	0	172	11	0	0	0	0	0
HARNEY	0	187	1	14	0	0	0	0
HOOD RIV	0	174	14	0	0	9	0	0
JACKSON	0	4704	247	0	0	247	37	37
JEFFERSON	0	377	14	0	0	1	11	0
JOSEPHIN	0	1456	27	0	0	27	0	27
KLAMATH	0	2742	24	48	0	48	74	48
LAKE	0	212	0	0	0	0	0	0
LANE	0	10189	801	16	0	302	18	0
LINCOLN	0	1440	27	27	0	242	22	22
LINN	0	3304	312	0	0	0	0	24
MALHEUR	0	941	12	34	0	0	0	0
MARION	0	9600	544	94	0	149	0	11
MCKRACK	0	133	11	0	0	11	0	0
MULTNOMA	0	14244	1114	248	0	760	248	313
OLYMPIA	0	1237	141	0	0	20	0	0
SHERMAN	0	56	0	0	0	0	0	0
TILLAMOO	0	1137	143	0	0	36	36	0
UNATILLA	0	1296	72	14	0	0	18	14
UNION	0	408	27	0	0	9	9	0
WALLOA	0	224	9	0	0	14	0	0
WASCO	0	634	71	0	0	0	0	9
WASHINGTON	0	1336	521	144	0	287	82	41
WHEELER	0	20	4	0	0	1	0	0
YAMHILL	0	1418	181	24	0	76	51	0

FREE COURTESY MOTORBOAT EXAMINATION

COUNTY	YES	NO
BAKER	19	614
BENTON	243	1720
CLACKAMA	788	8547
CLATSOP	182	1475
COLUMBIA	275	1524
COOS	193	4194
CRICK	0	514
CURRY	444	747
DESCHUTE	144	3041
DOUGLAS	547	3911
GILLIAM	16	27
GRANT	0	172
HARNEY	0	144
HOOD RIV	0	322
JACKSON	630	4740
JEFFERSON	74	166
JOSEPHIN	324	1652
KLAMATH	450	2800
LAKE	21	184
LANE	1092	10371
LINCOLN	176	1780
LINN	398	3174
MALHEUR	274	742
MARION	1070	5411
MCKRACK	11	144
MULTNOMA	3351	13945
OLYMPIA	182	1232
SHERMAN	0	56
TILLAMOO	161	1181
UNATILLA	252	1152
UNION	27	644
WALLOA	0	282
WASCO	0	603
WASHINGTON	734	3747
WHEELER	2	22
YAMHILL	274	1443

BOAT STOPPED

COUNTY	YES	NO	SHERIFF PATROL	STATE POLICE	COAST GUARD	OTHER	COD30
BAKER	0	944	10	10	14	0	10
BENTON	0	1401	40	40	48	20	20
CLACKAMA	0	2044	183	34	240	137	216
CLATSOP	0	1344	36	14	109	18	36
COLUMBIA	0	1626	21	21	42	42	21
COOS	11	3880	92	31	214	61	61
CRICK	0	510	12	12	0	0	12
CURRY	0	939	10	15	217	15	48
DESCHUTE	0	3051	22	22	0	22	22
DOUGLAS	33	3444	33	33	248	33	33
GILLIAM	0	36	0	0	5	0	0
GRANT	0	172	18	18	0	0	0
HARNEY	0	185	0	14	0	0	0
HOOD RIV	4	387	9	9	9	9	0
JACKSON	0	4746	37	37	257	74	74
JEFFERSON	0	349	11	0	0	22	0
JOSEPHIN	0	1480	27	27	54	27	0
KLAMATH	0	2742	72	24	72	48	72
LANE	0	221	11	11	11	0	0
LANE	0	10226	73	39	540	0	10
LINCOLN	0	1678	44	22	284	0	44
LINN	0	3331	26	26	26	26	26
MALHEUR	0	941	45	14	19	19	19
MARION	31	9680	184	31	124	31	43
MCKRACK	0	134	0	0	0	0	0
MULTNOMA	0	14253	315	45	884	264	357
OLYMPIA	0	1252	20	20	40	0	0
SHERMAN	0	56	5	5	0	0	0
TILLAMOO	0	1137	18	18	18	18	18
UNATILLA	0	1316	16	16	16	16	16
UNION	0	617	9	9	11	10	9
WALLOA	0	232	0	0	0	0	0
WASCO	0	644	9	9	0	0	10
WASHINGTON	41	5290	205	41	220	41	82
WHEELER	0	20	2	0	0	0	0
YAMHILL	0	1418	91	0	111	0	25

BOATING SAFETY OR EDUCATIONAL MATERIAL HANDED OUT

COUNTY	YES	NO
BAKER	182	481
BENTON	488	1478
CLACKAMA	2363	7021
CLATSOP	162	1434
COLUMBIA	524	1352
COOS	855	3666
CRICK	114	427
CURRY	401	481
DESCHUTE	415	2612
DOUGLAS	1292	3381
GILLIAM	22	22
GRANT	29	143
HARNEY	19	187
HOOD RIV	111	286
JACKSON	1339	3468
JEFFERSON	144	289
JOSEPHIN	396	1354
KLAMATH	1830	2317
LANE	93	158
LANE	3857	8297
LINCOLN	484	1499
LINN	885	2786
MALHEUR	254	762
MARION	1644	4782
MCKRACK	22	133
MULTNOMA	3753	13495
OLYMPIA	262	1131
SHERMAN	9	56
TILLAMOO	164	964
UNATILLA	170	1152
UNION	47	581
WALLOA	47	232
WASCO	195	532
WASHINGTON	1519	5886
WHEELER	7	16
YAMHILL	932	1139

APPENDIX I  
BOATING COURSES TAKEN BY SPONSOR  
AND COUNTY OF REGISTRATION

POPEYE SQUADRON BOATING COURSES					COAST GUARD AUXILIARY BOATING COURSES						
COUNTY	NONE	BASIC BOATING	SAFETY	OTHER	CORNO	COUNTY	NONE	BASIC BOATING	SAFETY	OTHER	CORNO
BAKER	346	1	0	0	0	BAKER	317	18	0	0	0
BENTON	1397	0	0	0	0	BENTON	1316	223	0	0	81
CLACKAMA	6336	582	0	34	171	CLACKAMA	5994	274	34	34	103
CLATSOP	1129	56	0	14	10	CLATSOP	1093	0	0	10	10
COLUMBIA	1331	84	0	0	0	COLUMBIA	1267	84	0	0	21
COOS	2688	336	0	31	31	COOS	2475	122	0	31	0
CROOK	403	0	0	0	0	CROOK	356	36	0	0	12
CURRY	673	38	0	0	0	CURRY	723	134	15	15	49
DESCHUTE	2129	22	0	0	27	DESCHUTE	1883	110	22	0	110
DOUGLAS	2416	66	0	0	66	DOUGLAS	2651	294	33	0	265
GILLIAM	22	0	0	0	0	GILLIAM	22	11	0	0	0
GRANT	162	0	0	0	0	GRANT	162	0	0	0	0
HARNEY	185	19	0	0	0	HARNEY	105	0	0	0	0
HOOD RIV	332	9	0	0	9	HOOD RIV	304	9	0	9	0
JACKSON	3923	0	0	0	37	JACKSON	3189	371	0	0	37
JEFFERSON	322	0	0	0	0	JEFFERSON	311	0	0	11	11
JOSEPHIN	1408	0	0	0	0	JOSEPHIN	1327	54	27	0	27
KLAMATH	2110	97	0	0	24	KLAMATH	1927	97	0	0	96
LAKE	189	0	0	0	0	LAKE	189	0	0	0	0
LAKE	4261	364	0	26	254	LAKE	3715	691	36	36	75
LINCOLN	1319	0	0	0	0	LINCOLN	1185	176	0	0	110
LINN	2750	0	26	26	26	LINN	2590	234	0	0	208
MALHEUR	657	0	0	0	0	MALHEUR	503	45	30	0	60
MARION	3638	440	0	63	94	MARION	3555	315	31	0	167
MORRIS	133	0	0	0	0	MORRIS	133	13	0	0	11
MULTNOMA	10991	1026	49	134	826	MULTNOMA	10317	1072	0	0	313
FOLK	989	28	0	61	28	FOLK	868	61	0	0	20
SHERMAN	47	0	0	0	0	SHERMAN	47	0	0	0	0
TILLAMOO	786	107	0	0	0	TILLAMOO	697	83	16	0	16
UMATILLA	990	36	0	0	0	UMATILLA	954	72	14	14	54
UNION	492	0	0	0	0	UNION	429	0	0	0	9
WALLOA	189	0	0	0	0	WALLOA	189	0	0	0	9
WASCO	488	27	0	0	0	WASCO	444	62	0	0	9
WASHINGTON	4864	334	0	41	41	WASHINGTON	3859	369	0	0	164
WHEELER	29	0	0	0	0	WHEELER	29	0	0	0	0
YAMHILL	1663	25	51	0	51	YAMHILL	1631	253	0	0	25

AMERICAN RED CROSS BOATING COURSES					OTHER BOATING COURSES						
COUNTY	NONE	BASIC BOATING	SAFETY	OTHER	CORNO	COUNTY	NONE	BASIC BOATING	SAFETY	OTHER	CORNO
BAKER	517	0	10	0	0	BAKER	211	0	0	0	10
BENTON	1245	0	61	20	20	BENTON	1632	20	0	0	20
CLACKAMA	9960	0	34	0	34	CLACKAMA	4596	69	34	69	206
CLATSOP	1111	0	0	0	0	CLATSOP	765	0	0	10	10
COLUMBIA	1267	0	0	0	0	COLUMBIA	993	21	0	0	21
COOS	2444	51	0	0	0	COOS	1986	31	0	0	31
CROOK	386	0	0	0	0	CROOK	286	0	0	0	0
CURRY	608	15	0	0	0	CURRY	445	0	0	45	19
DESCHUTE	1910	22	22	0	0	DESCHUTE	1537	0	0	0	22
DOUGLAS	2618	33	33	0	0	DOUGLAS	2254	66	0	33	0
GILLIAM	22	0	0	0	0	GILLIAM	22	11	0	0	0
GRANT	143	0	0	0	0	GRANT	124	0	0	0	0
HARNEY	185	0	0	0	0	HARNEY	145	0	0	0	0
HOOD RIV	384	0	0	0	0	HOOD RIV	221	0	0	0	0
JACKSON	3115	37	74	27	27	JACKSON	2559	0	0	0	37
JEFFERSON	311	0	0	0	0	JEFFERSON	200	11	0	0	0
JOSEPHIN	1394	0	27	0	0	JOSEPHIN	894	27	0	0	27
KLAMATH	1859	0	24	40	24	KLAMATH	1521	97	0	24	44
LAKE	189	0	0	0	0	LAKE	147	11	0	0	0
LAKE	7686	36	189	26	0	LAKE	6312	36	0	73	36
LINCOLN	1315	0	0	0	0	LINCOLN	967	64	22	22	0
LINN	2590	0	104	0	0	LINN	1847	0	0	26	0
MALHEUR	658	0	0	0	0	MALHEUR	413	0	0	0	0
MARION	3642	63	61	31	31	MARION	2454	0	31	31	62
MORRIS	133	0	0	0	0	MORRIS	111	0	0	0	0
MULTNOMA	9964	89	134	89	0	MULTNOMA	7864	223	0	223	264
FOLK	864	0	0	0	0	FOLK	727	0	0	0	0
SHERMAN	47	0	0	0	0	SHERMAN	33	0	0	0	0
TILLAMOO	697	18	0	0	0	TILLAMOO	536	18	0	0	18
UMATILLA	980	0	36	10	0	UMATILLA	428	0	0	10	10
UNION	429	0	0	0	0	UNION	250	0	0	0	0
WALLOA	189	0	0	0	0	WALLOA	146	0	0	0	0
WASCO	425	0	0	0	0	WASCO	381	0	0	0	0
WASHINGTON	3727	42	0	41	0	WASHINGTON	3282	41	0	123	0
WHEELER	29	0	0	0	0	WHEELER	19	0	0	0	0
YAMHILL	1638	0	0	0	0	YAMHILL	861	0	0	25	0