## Pleasure Boating in Oregon 1975



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OREGON STATE MARINE BOARD
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# PLEASURE BOATING IN OREGON - 1975 

A Report to the OREGON STATE MARINE BOARD James A. Hadley, Director

APRIL 1976

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## SUMMARY OF FINDINGS

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Pleasure boating in Oregon has grown rapidly in the past 15 years. In 1975, there were 111,045 pleasure craft registered ${ }^{1}$ with the State Marine Board. This survey was conducted in order to assess the type, amount, and location of boating use within Oregon as required by Oregon Revised Statute 488.833. A 10 percent sample of the boats registered in Oregon was taken in the fall of 1975 and this report presents the findings of those responding to the state-wide boating survey. The following is a summary of the information reported herein.

The five most populated counties contain 52 percent of all the registered pleasure boats in Oregon but they do not have the largest number of boats on a per capita basis.

Nearly 60 percent of the registered pleasure boats are less than 16 feet in length and 78 percent are powered with outboard motors. Slightly over 46 percent of the primary motors used with pleasure boats have a rating of less than 25 horsepower.

There is a great deal of difference between the counties in which boats are registered and those in which they are used. Not surprisingly, Multnomah county experiences the greatest amount of use in the state. Six counties generate 60 percent of the total use in Oregon while 30 water bodies accommodate nearly 60 percent of the total state-wide use. The total amount of annual boating use is estimated to be at least 1.9 million boating days.

Boating use varies considerably during the year with 68 percent of it occurring during the months of May, June, July, and August.

[^0]More than four-fifths of the pleasure boats are transported at some time during the season with over 75 percent being transported less than 10 times.

Fishing is reported as the most popular boating activity and accounts for over 60 percent of all boating days.

Only 10 percent of the boat owners obtained a Courtesy Motorboat Examination in 1975, however, it is estimated that 24 percent of all pleasure boats were stopped for an inspection--primarily by the Sheriff's Marine Patrol.

Two-thirds of the respondents in the survey indicated they encountered no problems in their visits to boating facilities in the 1975 season, but of those encountering some problem, most felt that overcrowding was a concern which needed attention.
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## INTRODUCTION



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## INTRODUCTION

## Background

Recreational boating has increased noticeably in Oregon within the past fifteen years. One indicator of this growth is the increase of registered boats ${ }^{1}$ which totaled 33,638 in 1960 and 111,045 in 1975. This increase is an important indicator of the popularity of pleasure boating and raises questions as to where participation in boating activities occurs within Oregon and the adequacy of boating facilities to serve the public.

In 1971 and again in 1973, the Oregon State Legislature amended the statute under which the Oregon State Marine Board functions. One of the effects of the amendments is to require the Marine Board to distribute certain funds to counties according to the amount and different kinds of boating activity taking place within each county of use, rather than where the boats are registered. Concerning fund distribution, individual counties may make substantiated proposals to the Board for the development and improvement of boating facilities or boating programs within their jurisdiction.

To facilitate fund distribution in relation to boating activity and county proposals, the Oregon Legislature has mandated the Marine Board:
> 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)

[^1]
## Purpose and Objectives

It is the primary purpose of this report to fulfill the legislative requirement of a comprehensive, accurate, up-to-date survey of boating activities in Oregon. Where deemed important, data items were solicited in this survey which permit comparisons between it and the 1971-1972 survey. Tho'se items reported in the 1971-1972 study of pleasure boating and in this study are:

1. Characteristics of the boat for the population from which the sample was drawn.
2. Characteristics of the respondent--presumably the boat owner or principal user of the boat.
3. Total boating days of the respective populations identified in each study (preselected versus 'most used' boat).

Several differences should be noted between the present survey and that conducted in 1971-1972:

1. In 1975, the data base represents a 10 percent systematic sample of boat owners with Oregon mailing addresses. In 1972, a special survey of ten counties was incorporated into the selected statewide sample.
2. The unit sampled in 1975 was a specified boat with its registration number printed on the address label of the pleasure boat owner. The sample unit in 1972 was the boat owner and information requested about the 'most used' boat of the respondent rather than an identified boat registered with the State Marine Board during that boating season.
3. In 1975 the location of boating activity throughout the state was identified by county and body of water whereas location of the activity was not identified in 1972.

## Sampling and Boat Owner Response

A 10 percent systematic sample of boats registered in Oregon as of August 1975 was selected by the State Marine Board using U.S. Postal Service Zip Code numbers. The procedure used was to choose the first boat registered in every zip code number and every tenth boat thereafter. Thus, if 23 boats were registered in a zip code number, the first would be chosen followed by the 10th and 20th respectively in that zip code, a total of three boats. An expanded discussion of the research methodology appears in Appendix A.

Altogether, 7,222 questionnaires were returned and qualified for analysis. This represents a response of 62 percent. The rate of return for the 1975 survey was 15 percent higher than that attained in the 1971-1972 survey of pleasure boat owners and can probably be attributed to the use of a follow-up postcard mailed to all respondents two weeks after the initial questionnaire. Received questionnaires were checked for completeness, coded, optically or electronically scanned, and key-punched in preparation for statistical analysis and tabulation. Data was processed onto magnetic tape, and statistically manipulated by a standard statistical computer program (see Appendix A for a more thorough discussion). The 47 percent of returned questionnaires in 1972 represented about 28 percent of the 85,596 pleasure boats registered in Oregon while the present survey,
with 7,222 returned questionnaires, represents about 6.5 percent of the 111,045 pleasure boats registered in Oregon as of September 1975.

The number of questionnaires returned in this survey by county of boat registration is presented in Table 1. This more uniform sampling of the entire Oregon boating population differs from that of 1971-1972 where a complete survey was conducted for boaters in Benton, Clackamas, Lincoln, Linn, Marion, Multnomah, Polk, Tillamook, Washington, and Yamhill Counties and a ten percent sample of boaters in the remaining 26 counties.

County by county level of sampling in Table 1 reflects the overall response rate of 62 percent to a 10 percent sample. Higher return in the smaller more rural counties can be accounted for, in part, by the sampling strategy which automatically included one boat in each zip code number. Some counties, notably Multnomah and Sherman exhibited poorer return rates, the reasons for which have not been evaluated.

The cover letter, printed as page one of the questionnaire (Appendix B), was labeled with the Oregon boat registration number, boat length, questionnaire identification number and address of the individual under whose name the boat was registered. Twenty-two questions were contained on the questionnaire, the first fourteen pertained to the registered boat, the remaining eight questions pertained either to other boats owned or general information concerning the respondents.

Table 1
Questionnaires Returned by County of Registration,
1975 Boating Survey 1975 Boating Survey

| County | Number Returned | Percent of all Returns | Percent of Registered Boats in County |
| :---: | :---: | :---: | :---: |
| Baker | 65 | 0.9 | 8.9 |
| Benton | 147 | 2.0 | 6.7 |
| Clackamas | 659 | 9.1 | 6.7 |
| Clatsop | 106 | 1.5 | 5.7 |
| Columbia | 124 | 1.7 | 6.3 |
| Coos | 286 | 4.0 | 5.6 |
| Crook | 38 | 0.5 | 6.1 |
| Curry | 94 | 1.3 | 7.2 |
| Deschutes | 229 | 3.2 | 6.6 |
| Douglas | 333 | 4.6 | 6.4 |
| Gilliam | 6 | 0.1 | 7.5 |
| Grant | 23 | 0.3 | 8.0 |
| Harney | 20 | 0.3 | 6.8 |
| Hood River | 30 | 0.4 | 5.2 |
| Jackson | 389 | 5.4 | 6.3 |
| Jefferson | 34 | 0.5 | 6.6 |
| Josephine | 152 | 2.1 | 6.3 |
| Klamath | 255 | 3.5 | 6.5 |
| Lake | 20 | 0.3 | 8.4 |
| Lane | 836 | 11.6 | 6.4 |
| Lincoln | 152 | 2.1 | 6.8 |
| Linn | 261 | 3.6 | 6.1 |
| Malheur | 84 | 1.2 | 6.8 |
| Marion | 445 | 6.2 | 6.5 |
| Morrow | 16 | 0.2 | 7.6 |
| Multnomah | 1,174 | 16.3 | 5.5 |
| Polk | 90 | 1.2 | 6.2 |
| Sherman | 4 | 0.1 | 4.8 |
| Tillamook | 95 | 1.3 | 6.5 |
| Umatilla | 102 | 1.4 | 6.7 |
| Union | 65 | 0.9 | 8.3 |
| Wallowa | 17 | 0.2 | 6.4 |
| Wasco | 47 | 0.7 | 5.6 |
| Washington | 471 | 6.5 | 6.7 |
| Wheeler | 4 | 0.1 | 11.1 |
| Yamhill | 109 | 1.5 | 6.0 |
| Not Identified | 240 | 3.3 |  |
| Total | 7,222 |  |  |

As to be expected, boat owner response to certain questions was not consistent even when the information requested was similar to a previous question. In the case of "boating days by month", (question number nine in Appendix B), it is understandable that there would be some inexactness in the respondent's ability to recall the details of a previous 12 -month period. However, when a second question was presented to the respondent requesting information concerning the number of days of boating use by a given body of water, the question was apparently answered as if it were unrelated to the previous question on the questionnaire. This introduced difficulties in interpretation of the data when cross-tabulated. The reader should recognize that total boating days by county, body of water, or by activity is not a part of total boating days state-wide. Although it is a true statement conceptually, the practical reality is that the quantities shown were generated from two different questions. Because of recall problems by the respondents, their answers may vary five to six percent from one question to the next. Thus, the reader cannot take individual responses from question number ten and expect them to equal the response to question number nine.

## CHARACTERISTICS OF PLE ASURE BOATS

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CHARACTERISTICS OF PLEASURE BOATS ${ }^{1}$

Trends
Within the past 15 years, pleasure boat registration has grown more than three-fold--from 33,638 pleasure boats in 1960 to 111,045 pleasure boats in 1975 (Figure 1). The annual rate of increase has remained approximately constant at about nine percent. Changes in criteria for boat registration can account for a portion of this growth. Changes in pleasure boat registration per 1,000 people is shown in Figure 1 as well, and suggests a somewhat slower per capita annual growth rate of approximately seven percent with a slight tendency toward decline. Such a marked increase in pleasure boat registration relative to population increase poses a challenge to the public agencies serving the boating population of the State.

## County of Registration

As to be expected, the greatest concentration of registered pleasure boats in Oregon occurs in the highly urbanized counties such as Multnomah, Lane, Clackamas, Washington, and Marion. In 1975, those five counties contained 59 percent of the state's population and 52 percent of all pleasure boats registered with Oregon's State Marine Board. However, when the proportional relationship of registered boats per capita by county is considered, then five entirely different counties can be noted as containing the highest per capita registration.
${ }^{1}$ The age and income characteristics of Oregon pleasure boat owners are found in Appendix D (p. 61-62).



[^2]Figure 1. Growth of pleasure boat registration in Oregon, 1960-1975.

The five counties having the highest number of registered pleasure boats per thousand are four coastal counties--Curry, Coos, Lincoln, Tillamook, and the inland county of Deschutes. A county by county comparison of pleasure boat registration is shown by total number and per capita in Figure 2.

## Boat Characteristics

The characteristics of pleasure boats in this study differ slightly from those in the 1971-1972 survey done by the Bureau of Governmental Research and Service (1972, page 21) and is most likely related to difference in sample selection (see page 2 ).

As shown in Figure 3, 59.4 percent of registered pleasure boats are under 16 feet in length in 1975, whereas 70 percent were in this category in 1972. Pleasure boats between 16 and 19 feet in length comprised 32.3 percent of the current boating population and only 23 percent of the 1972 population. For those boat lengths ranging from 20 to 23 feet the most recent figure is 5.2 percent, up from three percent in 1972, and boats longer than 24 feet comprise three percent of the 1975 population; equal to the 1972 figure for this category. Not shown in Figure 3 is a 2.7 percent 'no response' due to the removal of the mailing label which furnished the boat length data. Table 2 provides boat length data on a county by county basis.

Figure 3 further reveals that about 78 percent of the boating population classify their power system as an outboard motor; 4.7 percent as inboard motor; 13.2 percent as an inboard/outboard power system, and

## NUMBER OF PLEASURE BOATS REGISTERED

The total number of boats registered in Oregon for 1975 was III,045.


## PLEASURE BOATS PER THOUSAND POPULATION

The state average for 1975 was 48.3 boats per thousand.


Figure 2. County variation in pleasure boat registration in Oregon, 1975.

Table 2
Oregon pleasure boat registration by county and
by length of boat, 1975.

| County of Reg. | Boat Length (Number of Boats) |  |  |  |  | Total Number of Boats |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Less than 12 feet | $\begin{aligned} & 12-15 \\ & \text { feet } \end{aligned}$ | $\begin{aligned} & 16-19 \\ & \text { feet } \end{aligned}$ | $\begin{aligned} & 20-23 \\ & \text { feet } \end{aligned}$ | 24 feet and over |  |
| Baker | 31 | 769 | 169 | 0 | 0 | 969 |
| Benton | 62 | 1,122 | 907 | 46 | 77 | 2,214 |
| Clackamas | 461 | 5,105 | 3,444 | 646 | 231 | 9,887 |
| Clatsop | 215 | 707 | 461 | 108 | 123 | 1,614 |
| Columbia | 62 | 861 | 676 | 154 | 92 | 1,845 |
| Coos | 292 | 2,383 | 1,368 | 185 | 92 | 4,320 |
| Crook | 15 | 354 | 185 | 15 | 15 | 584 |
| Curry | 46 | 615 | 538 | 169 | 46 | 1,414 |
| Deschutes | 138 | 2,276 | 830 | 77 | 31 | 3,352 |
| Douglas | 215 | 2,891 | 1,599 | 246 | 62 | 5,013 |
| Gilliam | 0 | 46 | 46 | 0 | 0 | 92 |
| Grant | 0 | 246 | 92 | 0 | 0 | 338 |
| Harney | 15 | 246 | 31 | 15 | 0 | 307 |
| Hood River | 15 | 261 | 138 | 0 | 46 | 460 |
| Jackson | 123 | 3,613 | 1,768 | 246 | 108 | 5,858 |
| Jefferson | 15 | 323 | 123 | 0 | 46 | 507 |
| Josephine | 123 | 1,338 | 707 | 108 | 31 | 2,307 |
| Klamath | 138 | 2,599 | 876 | 62 | 77 | 3,752 |
| Lake | 15 | 231 | 62 | 0 | 0 | 308 |
| Lane | 431 | 7,350 | 3,936 | 553 | 154 | 12,424 |
| Lincoln | 108 | 1,384 | 600 | 169 | 46 | 2,307 |
| Linn | 138 | 2,552 | 1,138 | 108 | 15 | 3,951 |
| Malheur | 15 | 800 | 415 | 31 | 15 | 1,276 |
| Marion | 308 | 3,536 | 2,291 | 308 | 154 | 6,597 |
| Morrow | 15 | 123 | 62 | 15 | 0 | 215 |
| Multnomah | 692 | 8,149 | 6,012 | 1,246 | 1,399 | 17,498 |
| Polk | 77 | 846 | 353 | 31 | 31 | 1,338 |
| Sherman | 0 | 0 | 46 | 0 | 0 | 46 |
| Tillamook | 92 | 800 | 430 | 92 | 31 | 1,445 |
| Umatilla | 77 | 815 | 569 | 92 | 15 | 1,568 |
| Union | 15 | 507 | 400 | 46 | 0 | 968 |
| Wallowa | 15 | 77 | 154 | 0 | 0 | 246 |
| Wasco | 46 | 400 | 215 | 15 | 15 | 691 |
| Washington | 369 | 3,106 | 2,783 | 523 | 231 | 7,012 |
| Wheeler | 0 | 62 | 0 | 0 | 0 | 62 |
| Yamhill | 46 | 938 | 492 | 169 | 15 | 1,660 |
| TOTAL | 4,425 | 57,431 | 33,916 | 5,474 | 3,198 | 104,444 |
| Non-Response |  |  |  |  |  | 6,581 |
| TOTAL |  |  |  |  |  | 111,025* |

*Total does not equal 111,045 due to rounding.


Figure 3. Boat and motor characteristics of pleasure boats in Oregon, 1975.

Table 3
Oregon pleasure boat registration by county and by power system type, 1975.

| County of Reg. | Power System Type (Number of Boats) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Inboard Only | Outboard Only | Inboard/ Outboard | Sailboat <br> w/ Motor | Sailboat w/o Motor | Other | Total Number of Boats |
| Baker | 46 | 892 | 46 | 0 | 0 | 15 | 999 |
| Benton | 108 | 1,830 | 246 | 31 | 31 | 15 | 2,261 |
| Clackamas | 554 | 7,780 | 1,369 | 108 | 138 | 169 | 10,118 |
| Clatsop | 108 | 1,261 | 200 | 31 | 0 | 15 | 1,615 |
| Columbia | 123 | 1,476 | 277 | 15 | 0 | 15 | 1,906 |
| Coos | 169 | 3,429 | 707 | 0 | 15 | 62 | 4,382 |
| Crook | 0 | 538 | 46 | 0 | 0 | 0 | 584 |
| Curry | 185 | 1,015 | 231 | 0 | 0 | 15 | 1,446 |
| Deschutes | 62 | 3,044 | 261 | 15 | 46 | 92 | 3,520 |
| Douglas | 185 | 4,228 | 538 | 15 | 15 | 138 | 5,119 |
| Gilliam | 0 | 77 | 15 | 0 | 0 | 0 | 92 |
| Grant | 0 | 338 | 15 | 0 | 0 | 0 | 353 |
| Harney | 0 | 277 | 15 | 0 | 0 | 15 | 307 |
| Hood River | 15 | 369 | 77 | 0 | 0 | 0 | 461 |
| Jackson | 231 | 4,782 | 692 | 77 | 92 | 108 | 5,982 |
| Jefferson | 0 | 477 | 46 | 0 | 0 | 0 | 523 |
| Josephine | 46 | 2,091 | 123 | 0 | 0 | 77 | 2,337 |
| Klamath | 108 | 3,091 | 477 | 77 | 77 | 77 | 3,907 |
| Lake | 15 | 261 | 15 | 0 | 0 | 15 | 306 |
| Lane | 446 | 10,071 | 1,876 | 123 | 231 | 108 | 12,855 |
| Lincoln | 108 | 1,999 | 169 | 31 | 31 | 0 | 2,338 |
| Linn | 154 | 3,352 | 400 | 31 | 62 | 15 | 4,014 |
| Malheur | 46 | 1,030 | 169 | 0 | 0 | 46 | 1,291 |
| Marion | 261 | 5,397 | 1,015 | 62 | 46 | 46 | 6,827 |
| Morrow | 15 | 169 | 46 | 0 | 15 | 0 | 245 |
| Mul tnomah | 1,476 | 12,654 | 2,706 | 538 | 477 | 200 | 18,051 |
| Polk | 77 | 984 | 231 | 15 | 0 | 62 | 1,369 |
| Sherman | 0 | 46 | 15 | 0 | 0 | 0 | 61 |
| Tillamook | 15 | 1,322 | 92 | 0 | 15 | 15 | 1,459 |
| Umatilla | 31 | 1,169 | 246 | 31 | 15 | 77 | 1,569 |
| Union | 15 | 800 | 154 | 0 | 0 | 31 | 1,000 |
| Wallowa | 0 | 185 | 77 | 0 | 0 | 0 | 262 |
| Wasco | 46 | 584 | 77 | 15 | 0 | 0 | 722 |
| Washington | 369 | 5,136 | 1,292 | 108 | 185 | 154 | 7,244 |
| Wheeler | 0 | 62 | 0 | 0 | 0 | 0 | 62 |
| Yamhill | 15 | 1,369 | 231 | 31 | 15 | 15 | 1,676 |
| TOTAL | 5,029 | 83,585 | 14,192 | 1,354 | 1,506 | 1,597 | 107,263 |
| Non-Response |  |  |  |  |  |  | 3,767 |
| TOTAL |  |  |  |  |  |  | 111.030* |

*Total does not equal 111,045 because of rounding errors.
2.7 percent identified their craft as sailboats (an almost equal number having auxilary motors as those not having a motor). These 1975 figures are comparable to those of 1972 except that outboard motors were five percent higher in the 1972 study and the inboard/ outboard category was four percent lower. Other than this difference, distinct changes are not evident between 1972 to 1975 in the type of power systems used. This characteristic of boats by county of registration is presented in Table 3.

The horsepower rating of the primary power system used with pleasure boats on a state-wide basis is classified in Figure 3 with Table 4 providing a county-by-county summary of this data item. On a state-wide basis, a noticeable increase occurred between the 1972 study and this study in the first horsepower category. In the present survey, 46.5 percent of the pleasure boats in the state had a primary power system with a rating of less than 25 horsepower whereas in 1972, 33.5 percent of the pleasure boats were in this class. However, the difference between 1972 and 1975 cannot be easily interpreted, because a portion of the 13 percent change may be related to the change in the sample unit surveyed--the 'most used' boat in 1972 versus a preselected boat in 1975. Thus, the 'shift' to smaller boat motors is not a logical conclusion since two different populations are encompassed in each study. For the remaining horsepower rating categories, 16.7 percent of the 1975 pleasure boats had power systems between 25 and 49 horsepower; 12 percent had power systems from 50 to 74 horsepower; 5.7 percent from 75 to 99 horsepower; and 19.1 percent had power systems 100 horsepower or greater.

Oregon pleasure boat registration by county and by horsepower class of primary motor or motors, 1975.

| County of Reg. | Horsepower Class (Number of Boats) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Less Than 25 np . | $\begin{aligned} & 25 \mathrm{to} \\ & 49 \mathrm{hp} . \end{aligned}$ | $\begin{aligned} & 50 \mathrm{to} \\ & 74 \mathrm{hp} . \end{aligned}$ | $\begin{aligned} & 75 \text { to } \\ & 99 \mathrm{hp} . \end{aligned}$ | 100 hp . \& Over | Total Number of Boats |
| Baker | 477 | 231 | 123 | 31 | 123 | 985 |
| Benton | 953 | 323 | 323 | 215 | 354 | 2,168 |
| Clackamas | 3,829 | 1,645 | 1,353 | 738 | 2,106 | 9,671 |
| Clatsop | 676 | 354 | 92 | 123 | 323 | 1,568 |
| Columbia | 615 | 507 | 200 | 138 | 415 | 1,875 |
| Coos | 2,214 | 630 | 384 | 231 | 830 | 4,289 |
| Crook | 215 | 138 | 62 | 61 | 108 | 584 |
| Curry | 477 | 323 | 154 | 61 | 415 | 1,430 |
| Deschutes | 1,891 | 538 | 369 | 185 | 369 | 3,352 |
| Douglas | 2,292 | 707 | 815 | 215 | 831 | 4,860 |
| Gilliam | 15 | 31 | 15 | 15 | 15 | 91 |
| Grant | 184 | 62 | 46 | 31 | 31 | 354 |
| Harney | 154 | 77 | 31 | 15 | 15 | 292 |
| Hood River | 215 | 46 | 62 | 46 | 92 | 461 |
| Jackson | 2,830 | 769 | 554 | 354 | 1,107 | 5,614 |
| Jefferson | 200 | 169 | 92 | 15 | 46 | 522 |
| Josephine | 1,307 | 415 | 215 | 77 | 246 | 2,260 |
| Klamath | 2,046 | 508 | 292 | 138 | 661 | 3,645 |
| Lake | 231 | 0 | 15 | 0 | 31 | 277 |
| Lane | 5,445 | 2,092 | 1,661 | 584 | 2,553 | 12,335 |
| Lincoln | 1,276 | 461 | 246 | 62 | 231 | 2,276 |
| Linn | 1,691 | 784 | 600 | 231 | 584 | 3,890 |
| Malheur | 384 | 246 | 185 | 185 | 246 | 1,246 |
| Marion | 2,752 | 1,046 | 1,030 | 508 | 1,307 | 6,643 |
| Morrow | 46 | 15 | 62 | 31 | 77 | 231 |
| Multnomah | 5,829 | 2,506 | 2,707 | 1,415 | 4,353 | 16,810 |
| Polk | 615 | 231 | 169 | 0 | 277 | 1,292 |
| Sherman | 0 | 0 | 15 | 15 | 31 | 61 |
| Tillamook | 799 | 323 | 108 | 77 | 123 | 1,430 |
| Umatilla | 477 | 231 | 231 | 154 | 338 | 1,431 |
| Union | 384 | 169 | 77 | 61 | 277 | 968 |
| Wallowa | 108 | 15 | 46 | 0 | 92 | 261 |
| Wasco | 277 | 108 | 108 | 61 | 138 | 692 |
| Washington | 2,138 | 969 | 1,230 | 554 | 1,892 | 6,783 |
| Wheeler | 31 | 31 | 0 | 0 | 0 | 62 |
| Yamhill | 677 | 308 | 308 | 46 | 277 | 1,616 |
| TOTAL | 43,750 | 17,008 | 13,980 | 6,673 | 20,914 | 102,325 |
| Non-Response |  |  |  |  |  | 1,601 |
| Non-motorized Pleasure Craft |  |  |  |  |  | 7,119 |
| TOTAL |  |  |  |  |  | 111,045 |

## BOAT USE



## Boat Use

There is a great amount of spatial and temporal variation in the use of pleasure boats in Oregon. This is to be expected given the diversity of water environments within the state, and the seasonal nature of many water-related activities, e.g., water skiing. Figure 4 depicts the variation in boat use among the 36 Oregon counties. According to this map, Multnomah County experiences the greatest amount of use within Oregon, with over 272,900 days of boating use reported, or 14.8 percent of the total annual use of the entire state. This is not especially surprising given the large number of boats registered in that county and the location of the county with respect to the Willamette and Columbia Rivers. Other counties which receive a great deal of use include Clackamas, Douglas, Lane, Lincoln and Tillamook. The location of these counties with respect to major rivers and the Pacific Ocean and their sizeable number of registered boats, can explain a large amount of this use. The total amount of boating use within the state during the 1975 boating season by boats registered in Oregon is estimated to be at least 1,843,400 days, or 16.5 days per registered pleasure boat.

Of interest are the differences that occur between the counties in which boats are registered and those in which the boats are actually used. Some counties, because of their location relative to large and outstanding bodies of water, tend to attract boaters from outside the county, especially from those counties with an insufficient supply of


Figure 4. County variation in pleasure boat use in Oregon, 1975.
water bodies suitable for various types of boating recreation. The amount of boating use within a county by boats registered in that same county varies greatly, as seen in Table 5. This table shows the counties in which boats were actually used with respect to the county in which they were registered. The percentage of boating use taking place within the county of registration varies from nearly 92 percent for Curry County to only 10 percent for Washington County. Based upon this information, Oregon counties can generally be classified as either net importers or net exporters of boating use. Importing counties are those in which the total use within the county exceeds the use generated by that county, while exporting counties generate more use than takes place within that county. The list below shows those counties which are net importers and net exporters of use. The figures in parentheses indicate the percentage of total use taking place in the county, which is accounted for by boats registered in that same county.

## Net Importers of Use

| Baker (71) | Hood River (65) <br> Clatsop (87) <br> Jefferson (70) |
| :--- | :--- |
| Columbia (68) | Klamath (70) |
| Coos (78) | Lake (80) |
| Crook (66) | Lincoln (84) |
| Curry (92) | Malheur (80) |
| Deschutes (61) | Morrow (73) |
| Douglas (74) | Sherman (23) |
| Gilliam (36) | Tillamook (89) |
| Harney (39) | Wallowa (72) |

Net Exporters of Use

| Benton (15) | Multonmah (55) |
| :--- | :--- |
| Clackamas (54) | Polk (14) |
| Grant (14) | Umatilla (64) |
| Jackson (54) | Union (12) |
| Josephine (31) | Wasco (48) |
| Lane (62) | Washington (10) |
| Linn (38) | Wheeler (*) |
| Marion (31) | Yamhill (27) |
| *insufficient data |  |

Clackamas (54) Polk (14) Grant (14) Umatilla (64) Jackson (54) Union (12) Josephine (31) Wasco (48) Lane (62) Washington (10) Linn (38) Wheeler (*)
*insufficient data

Figures 5, 6, and 7 show the location and amount of use which took place for six selected Oregon counties. The total use generated by these six counties is over $1,113,000$ days, or 60 percent of the total annual use in the entire state. Along similar lines, Table 6 shows the amount of use at the 30 "most used" bodies of water within Oregon. The Willamette and Columbia Rivers, together with the Pacific Ocean, represent the three most popular bodies of water used by Oregon boat owners. Taken together, these three water bodies account for 31 percent of the total use within the state. The 30 most used bodies represent over 59 percent of the total use.

Just as there is a great deal of variation in the location of boating use, so too is there a large amount of variability in the seasons of use. As Figure 8 indicates, there is a considerable degree of change in the amount of use occurring during the year. As one might expect, the majority of use takes place during the late spring and summer months of May, June, July and August when 68 percent of the total annual use occurs. Boating use declines during the fall and reaches a minimum during the month of January. A description of the number of boating days estimated for each month in the 36 counties is given in Table 7. The total amount of boating use estimated from this table is $1,967,137$ days, or an average of 17 days for each registered boat in the entire state. This, of course, is comparable to the figure derived from the data concerning boating days in different activities.

Oregon pleasure boat use by county of registration and
by county of use during the 1975 boating season．

|  | County of Use（Boating Days） |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| County of Registration | $\begin{aligned} & \frac{1}{\vdots} \\ & \frac{2}{8} \\ & \text { um } \end{aligned}$ |  |  | $\begin{aligned} & \text { a } \\ & \text { y } \\ & \frac{0}{3} \end{aligned}$ | n <br> $\frac{0}{5}$ <br> $\frac{5}{8}$ | $\begin{aligned} & \text { ni } \\ & 80 \end{aligned}$ | $\begin{aligned} & \text { \% } \\ & \text { d } \end{aligned}$ | $\frac{2}{3}$ |  | $\begin{aligned} & \text { n } \\ & \frac{0}{0} \\ & \text { 呂 } \end{aligned}$ | $\frac{\frac{E}{6}}{\frac{0}{6}}$ | $\begin{aligned} & \text { 范 } \\ & \text { 䒸 } \end{aligned}$ |  |  | $\begin{aligned} & \text { ᄃ } \\ & \text { o } \\ & \text { u } \\ & \text { 0. } \end{aligned}$ | $\begin{aligned} & \text { ㄷ } \\ & \text { 엔 } \\ & 4 \\ & \stackrel{\omega}{\omega} \end{aligned}$ |  |  |  |
| Baker | 6，135 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 108 | 0 | 0 | 15 | 0 | 61 | 0 | 0 | 0 | 0 |
| Jenton | 0 | 4，982 | 0 | 185 | 0 | 369 | 92 | 46 | 1，261 | 815 | 0 | 0 | 0 | 0 | 46 | 1，030 | 0 | 907 | 0 |
| Clackamas | 184 | 31 | 117．426 | 7，181 | 1，784 | 554 | 4，090 | 0 | 8，810 | 1，491 | 46 | 31 | 384 | 461 | 138 | 13，485 | 0 | 846 | 231 |
| Clatsop | 0 | 0 | 415 | 32，843 | 46 | 0 | 369 | 554 | 155 | 0 | 0 | 0 | 0 | 0 | 0 | 323 | 0 | 0 | 0 |
| Columbla | 0 | 0 | 0 | 3，490 | 26，554 | 592 | 815 | 92 | 584 | 62 | 0 | 0 | 0 | 0 | 0 | 1，107 | 0 | 15. | 0 |
| Coos | 0 | 0 | 0 | 0 | 0 | 67，008 | 292 | 4，044 | 677 | 9，548 | 0 | 0 | 123 | 0 | 31 | 77 | 0 | 461 | 215 |
| Crook | 0 | 0 | 0 | 0 | 0 | 51 | 3，936 | 0 | 338 | 108 | 0 | 0 | 0 | 0 | 0 | 800 | 0 | 154 | 0 |
| Curry | 0 | 0 | 0 | 0 | 0 | 1，307 | 92 | 32，658 | 323 | 108 | 0 | 0 | 0 | 0 | 138 | 154 | 0 | 369 | 0 |
| Deschutes | 31 | 0 | 231 | 15 | 0 | 77 | 4，813 | 384 | 27，851 | 2，107 | 0 | 0 | 169 | 0 | 0 | 7，673 | 0 | 630 | 138 |
| Douglas | 0 | 0 | 231 | 0 | 77 | 6，827 | 200 | 738 | 1，415 | 56，906 | 0 | 0 | 0 | 0 | 1，338 | 123 | 61 | 2.552 | 0 |
| Gilliam | 0 | 0 | 31 | 0 | 0 | 0 | 154 | 0 | 0 | 0 | 277 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grant | 2，430 | 0 | 0 | 0 | 0 | 0 | 61 | 0 | 0 | 0 | 46 | 492 | 154 | 0 | 0 | 0 | 0 | 0 | 0 |
| Harney | 323 | 0 | 0 | 323 | 0 | 15 | 31 | 0 | 369 | 0 | 0 | 0 | 892 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hood River | 0 | 0 | 62 | 215 | 92 | 0 | 784 | 0 | 46 | 0 | 0 | 0 | 0 | 3，721 | 0 | 200 | 0 | 0 | 0 |
| Jackson | 0 | 0 | 0 | 0 | 0 | 1.691 | 277 | 11，809 | 1，861 | 4，428 | 46 | 0 | 0 | 0 | 45，559 | 0 | 2，076 | 14，822 | 15 |
| Jefferson | 0 | 0 | 0 | 0 | 0 | 77 | 523 | 0 | 538 | 62 | 0 | 31 | 46 | 0 | 0 | 4，428 | 0 | 0 | 0 |
| Josephine | 0 | 0 | 0 | 0 | 0 | 553 | 0 | 4，828 | 384 | 2.768 | 0 | 0 | 0 | 0 | 8，841 | 0 | 8，949 | 1，599 | 0 |
| Klamath | 0 | 0 | 0 | 0 | 0 | 738 | 169 | 4，290 | 3，429 | 2.199 | 0 | 0 | 15 | 61 | 3，659 | 0 | 0 | 40，885 | 1，169 |
| Lake | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 92 | 369 | 0 | 0 | 0 | 0 | 277 | 0 | 0 | 0 | 3，368 |
| Lane | 0 | 154 | 108 | 369 | 0 | 6，289 | 400 | 246 | 12，993 | 30，014 | 0 | 0 | 0 | 0 | 553 | 1，476 | 77 | 12.639 | 184 |
| Lincoln | 61 | 0 | 92 | 0 | 0 | 815 | 1.661 | 0 | 323 | 430 | 923 | 31 | 0 | 0 | 0 | 154 | 0 | 154 | 0 |
| Linn | 0 | 1，015 | 0 | 46 | 31 | 251 | 1，476 | 0 | 5，628 | 1，399 | 231 | 0 | 61 | 0 | 0 | 1，507 | 0 | 2，030 | 0 |
| Malheur | 1，984 | 0 | 0 | 61 | 0 | 61 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Marion | 169 | 0 | 2.276 | 999 | 815 | 507 | 2，583 | 292 | 8.088 | 4，797 | 0 | 0 | 31 | 0 | 62 | 1，676 | 0 | 1，353 | 77 |
| Morrow | 92 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Multnomah | 784 | 138 | 22，495 | 20，896 | 17，605 | 3，121 | 6，812 | 108 | 13，116 | 2.722 | 31 | 0 | 431 | 446 | 200 | 12，393 | 0 | 1，107 | 784 |
| Poik | 77 | 0 | 0 | 123 | 0 | 0 | 646 | 123 | 1.030 | 661 | 0 | 62 | 0 | 0 | 46 | 292 | 62 | 600 | 0 |
| Shernan | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tillamook | 0 | 0 | 0 | 31 | 0 | 215 | 138 | 0 | 369 | 200 | 0 | 0 | 0 | 0 | 0 | 138 | 0 | 0 | 154 |
| Unatilla | 1，614 | 0 | 0 | 384 | 0 | 108 | 62 | 0 | 134 | 169 | 0 | 46 | 0 | 0 | 0 | 77 | 0 | 0 | 0 |
| Union | 5.551 | 0 | 0 | 461 | 0 | 46 | 0 | 15 | 0 | 108 | 0 | 138 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Wallowa | 707 | 0 | 0 | 0 | 0 | 0 | 0 | 62. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Wasco | 0 | 0 | 77 | 61 | 0 | a | 369 | 0 | 261 | 0 | 77 | 77 | 0 | 1，845 | 0 | 1，661 | 0 | 0 | 0 |
| Washington | 507 | 46 | 8.857 | 7，027 | 5，320 | 154 | 2，722 | 61 | 4．797 | 1.799 | 0 | 0 | 0 | 123 | 77 | 2，891 | 0 | 784 | 15 |
| Wheeler | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 0 | 0 | 31 | 0 | 0 | 15 | 46 | 0 | 31 | 0 |
| Yamht11 | 0 | 0 | 338 | 461 | 307 | 138 | 200 | 0 | 892 | 200 | 0 | 0 | 0 | 0 | 0 | 707 | 0 | 246 | 108 |
| N／R－－Not Specified | 0 | 77 | 1，737 | 77 | 507 | 677 | 138 | 92 | 492 | 108 | 0 | 15 | 0 | 154 | 446 | 46 | 0 | 0 | 0 |
| Total Number of Boating Days | 20，649 | 6，443 | 154，376 | 75，248 | 53.138 | 93.161 | 33.920 | 60.442 | 96，347 | 123．686 | 1.723 | 985 | 2，321 | 6，811 | 61，487 | 52，464 | 11，225 | 82，184 | 6，458 |



## CLACKAMAS COUNTY



Figure 5. Out-of-county pleasure boat use for selected Oregon counties, 1975.

## LANE COUNTY



Out-of-County Use


Figure 6. Out-of-county pleasure boat use for selected Oregon counties, 1975.

Total In-County and Out-of-County Use

Out-of-County Use
$\left.\begin{array}{c}\text { over } 150,000 \\ \text { Total } \\ \text { Volume } \\ 90,001-120,000 \\ \text { under } 60,001-90,000 \\ \text { Number of }\end{array}\right)$

Total In-County and Out-of-County Use


Figure 7. Out-of-county pleasure boat use for selected Oregon counties, 1975.

Table 6
The 30 "Most Used" Bodies of Water by Activity Type, in Oregon, 1975.


* Indicates an "Activity Specialized" Body of Water

Table 7

Month and Year (Number of Boating Days)
Total Number

| County of Registration | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | June | July | Aug B | of <br> Boating Days |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Baker | 584 | 323 | 46 | 31 | 31 | 0 | 138 | 185 | 815 | 1,491 | 2,106 | 1,461 | 7,211 |
| Benton | 3,121 | 1,860 | 646 | 477 | 369 | 292 | 615 | 1,199 | 3,352 | 5,643 | 7,642 | 7,427 | 32,643 |
| Clackamas | 19,097 | 9,518 | 2,829 | 1,630 | 1,737 | 3,659 | 9,871 | 26,431 | 27,446 | 34,996 | 43,437 | 43,406 | 224,057 |
| Clatsop | 4,551 | 4,028 | 3,060 | 1,876 | 1,276 | 769 | 1,030 | 2,060 | 2,829 | 4,090 | 5,289 | 6,304 | 37,162 |
| Columbia | 3,998 | 1,799 | 1,199 | 600 | 554 | 1,015 | 2,875 | 8,118 | 5,443 | 5,043 | 7,334 | 7,304 | 45,282 |
| Coos | 8,149 | 5,658 | 4,690 | 2,091 | 2,030 | 1,876 | 2,937 | 6,350 | 9,794 | 12,701 | 13,792 | 12,885 | 82,953 |
| Crook | 538 | 384 | 46 | 0 | 31 | 31 | 15 | 77 | 692 | 1,215 | 1,568 | 1,384 | 5,981 |
| Curry | 5,566 | 3,552 | 1,338 | 507 | 446 | 384 | 584 | 1,737 | 4,997 | 6,489 | 9,610 | 7,796 | 43,006 |
| Deschutes | 4,428 | 1,876 | 169 | 46 | 46 | 0 | 231 | 2,368 | 5,397 | 10,594 | 12,285 | 9,179 | 46,619 |
| Douglas | 7,749 | 4,905 | 2,998 | 1,645 | 1,322 | 1,368 | 2,460 | 7,457 | 10,210 | 15,361 | 18,605 | 14,284 | 88,364 |
| Gilliam | 77 | 15 | 0 | 0 | 0 | 31 | 0 | 0 | 154 | 77 | 200 | 246 | 800 |
| Grant | 384 | 215 | 15 | 0 | 0 | 0 | 0 | 277 | 461 | 738 | 938 | 677 | 3,705 |
| Harney | 169 | 62 | 0 | 0 | 0 | 0 | 0 | 31 | 138 | 215 | 600 | 876 | 2,091 |
| Hood River | 523 | 292 | 108 | 62 | 61 | 92 | 231 | 215 | 507 | 846 | 984 | 1,307 | 5,228 |
| Jackson | 9,902 | 4,920 | 2,182 | 1,092 | 846 | 707 | 892 | 4,367 | 10,717 | 19,035 | 22,003 | 19,758 | 96,421 |
| Jefferson | 415 | 108 | 0 | 0 | 0 | 31 | 46 | 323 | 584 | 830 | 2,076 | 1,261 | 5,674 |
| Josephine | 2,752 | 1,922 | 1,245 | 861 | 861 | 600 | 538 | 1,630 | 3,429 | 5,458 | 6,381 | 5,458 | 31,135 |
| Klamath | 4,505 | 3,137 | 1,830 | 600 | 246 | 77 | 800 | 2,568 | 8,549 | 12,178 | 15,437 | 11,517 | 61,444 |
| Lake | 108 | 46 | 200 | 31 | 0 | 15 | 61 | 46 | 446 | 923 | 1,215 | 892 | 3,983 |
| Lane | 21,388 | 10,548 | 3,521 | 1,107 | 1,122 | 830 | 2,230 | 8,334 | 20,373 | 40,193 | 51,110 | 47,266 | 208,022 |
| Lincoln | 6,811 | 5,105 | 1,614 | 815 | 492 | 615 | 892 | 2,060 | 4,152 | 8,103 | 11,609 | 12,993 | 55,261 |
| Linn | 3,952 | 1,537 | 569 | 492 | 292 | 277 | 477 | 1,999 | 4,567 | 8,718 | 12,654 | 9,579 | 45,113 |
| Malheur | 799 | 461 | 154 | 123 | 123 | 46 | 154 | 677 | 1,753 | 2,768 | 3,091 | 2,522 | 12,671 |
| Marion | 10,948 | 6,688 | 2,337 | 1,230 | 1,015 | 1,122 | 2,199 | 6,150 | 10,794 | 19,035 | 28,046 | 26,862 | 116,426 |
| Morrow | 523 | 169 | 0 | 0 | 0 | 0 | 15 | 200 | 584 | 1,138 | 1,399 | 1,368 | 5,396 |
| Multnomah | 44,206 | 22,695 | 8,749 | 4,244 | 4,613 | 6,719 | 18,759 | 47,635 | 47,204 | 57,583 | 75,711 | 83,891 | 422,009 |
| Polk | 1,538 | 676 | 200 | 246 | 215 | 62 | 277 | 1,076 | 1,907 | 2,829 | 4,751 | 4,213 | 17,990 |
| Sherman | 277 | 0 | 0 | 0 | 0 | 0 | 15 | 15 | 46 | 92 | 138 | 277 | 860 |
| Tillamook | 4,274 | 3,767 | 969 | 185 | 292 | 277 | 431 | 1,230 | 2,998 | 4,551 | 5,874 | 7,242 | 32,090 |
| Umatilla | 1,953 | 584 | 15 | 15 | 77 | 77 | 169 | 800 | 2,983 | 4,136 | 6,181 | 5,013 | 22,003 |
| Union | 907 | 661 | 92 | 31 | 0 | 0 | 46 | 384 | 1,245 | 2,691 | 3,214 | 2,583 | 11,854 |
| Wallowa | 200 | 15 | 0 | 0 | 0 | 0 | 67 | 61 | 554 | 861 | 815 | 907 | 3,475 |
| Wasco | 1,261 | 446 | 154 | 61 | 61 | 31 | 277 | 477 | 1,430 | 1,953 | 2,660 | 5,244 | 12,055 |
| Washington | 12,547 | 6,919 | 2,014 | 1,153 | 999 | 1,107 | 3,506 | 10,056 | 12,993 | 22,541 | 31,013 | 31,813 | 136,661 |
| Wheeler | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 62 | 0 | 0 | 46 | 123 |
| Yamhill | 2,260 | 1,061 | 185 | 108 | 138 | 215 | 384 | 1,584 | 2,214 | 3,337 | 5,766 | 5,920 | - 23,172 |


| TOTAL | 190,460 | 105,952 | 43,174 | 21,359 | 19,295 | 22,325 | 53,217 | 148,192 | 211,819 | 318,452 | 415,534 | 399,161 | $1,948,940$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |


| Non-Response | 18,196 |
| :--- | ---: |
| Missing Cases $3 \%$ | 62,749 |
| TOTAL | $2,029,885$ |



Month

Figure 8. Monthly variation in pleasure boat use in Oregon, during the boating season, 1974-1975.

Oregon pleasure boat launches by county of launch and by launch facility type during the 1975 boating season.

| County of Registration | Launch Facility Type (Number of Launches) |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Government | Commerical | Private | Total Number of Launches |
| Baker | 10,994 | 108 | 999 | 12,101 |
| Benton | 4,751 | 861 | 492 | 6,104 |
| Clackamas | 39,485 | 3,029 | 5,751 | 48,265 |
| Clatsop | 17,682 | 2,353 | 4,843 | 24,878 |
| Columbia | 11,916 | 3,183 | 1,599 | 16,698 |
| Coos | 30,014 | 2,906 | 3,598 | 36,518 |
| Crook | 9,056 | 431 | 876 | 10,363 |
| Curry | 10,548 | 1,414 | 2,983 | 14,945 |
| Deschutes | 33,335 | 1,168 | 4,490 | 38,993 |
| Douglas | 37,594 | 3,444 | 4,459 | 45,497 |
| Gilliam | 92 | 0 | 0 | 92 |
| Grant | 77 | 0 | 92 | 169 |
| Harney | 292 | 0 | 246 | 538 |
| Hood River | 923 | 0 | 15 | 938 |
| Jackson | 20,604 | 1,614 | 2,276 | 24,494 |
| Jefferson | 10,025 | 154 | 1,830 | 12,009 |
| Josephine | 5,997 | 138 | 723 | 6,858 |
| Klamath | 18,236 | 2,445 | 7,319 | 28,000 |
| Lake | 1,737 | 15 | 308 | 2,060 |
| Lane | 52,416 | 4,782 | 8,057 | 65,255 |
| Lincoln | 19,466 | 12,039 | 5,228 | 36,733 |
| Linn | 21,557 | 953 | 2,691 | 25,201 |
| Malheur | 6,212 | 123 | 784 | 7,119 |
| Marion | 18,328 | 1,999 | 1,876 | 22,203 |
| Morrow | 1,676 | 1,153 | 323 | 3,152 |
| Mul tnomah | 64,671 | 8,072 | 15,545 | 88,289 |
| Polk | 4,336 | 431 | 138 | 4,905 |
| Sherman | 892 | 0 | 0 | 892 |
| Tillamook | 33,397 | 5,105 | 4,228 | 42,730 |
| Umatilla | 4,951 | 753 | 400 | 6,104 |
| Union | 907 | 0 | 138 | 1,045 |
| Wallowa | 2,429 | 15 | 1,169 | 3,613 |
| Wasco | 3,844 | 154 | 815 | 4,813 |
| Washington | 9,487 | 692 | 1,153 | 11,332 |
| Wheeler | 46 | 0 | 31 | 77 |
| Yamhill | 7,934 | 0 | 215 | 8,149 |
| County Not Specified | 26,093 | 2,891 | 4,736 | 33,720 |
| TOTAL IN STATE | 542,000 | 62,427 | 90,425 | 694,852 |
| Out of State | 9,594 | 3,690 | 5,997 | 19,281 |
| TOTAL | 551,594 | 66,117 | 96,422 | 714,133 |

## Boat Transportation

Over 80 percent of the respondents indicated that they transported their boat at some time during the 1975 boating season. Of those transporting their boats, 81.4 percent used a trailer as their means of transportation, with the remainder using either the tops of automobiles or the beds of pickup trucks in order to transport their boats. The length and weight characteristics of the boat are undoubtedly among the prime determinants of the mode of transportation chosen. Information on the number of times a boat was transported indicates that over 75 percent of the boats sampled were transported ten times or less during the year, while over 90 percent were transported 20 times or less in the 1975 boating season.

Table 8 shows the number of launchings that were made by Oregon boat owners at various types of facilities around the state. The majority of these launchings ( 77.4 percent) were made at some type of publicly owned launch facility (federal, state, or county). The remainder of launchings were made at either private (13.5 percent) or commercial ( 9.2 percent) launch facilities. The estimated total number of launchings within the state during the 1975 season is 694,852 , which represents an average of eight launchings for each registered boat transported during the year.

## Boating Activities

Participation in various water related activities by Oregon boaters is shown in Figure 9. Fishing is reported as the most popular


Figure 9. Preferred activities of pleasure boat users in Oregon, 1975.

activity, accounting for over 60 percent of the total activities engaged in. Water skiing and cruising are the next most popular activities, each being responsible for about 15 percent of all boating use. While sailing only accounts for about four percent of the use in this survey, this may represent an underestimate of the total amount of sailing due to the fact that sailboats under 12 feet in length are not required to register, and thus are not represented in this report.

In discussing various boating activities, it must be noted that these activities do not necessarily occur in exclusion of each other. Boating, as a form of outdoor recreation, does not usually consist of just one activity or phase, but rather a series of activities and phases which combine to form the total recreation experience. For example, a boater may indicate that his "principal" activity is fishing, but even fishing will quite often require some amount of cruising, and the recreation experiences which result from this activity. Similarly, boating may be combined with other activities such as swimming, picnicing, camping, hunting, and so forth. While the identification of recreationists by their activity preference is both useful and necessary, there is also the need to view water-based recreation such as "boating" as an activity in itself.

Tables 9 and 10 show the amount of boating use for various activities in the county of boat registration and the county of boat use. Once again, as in Table 5, there is a great deal of difference between the amount of use generated by the county of registration and the county in which the activities actually take place. The types of

Oregon pleasure boat use by county of registration and by activity type during the 1975 boating season.

| Activity Type (Number of Boating Days) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| County of Reg. | Fishing | Sailing | Water Skiing | Cruising | Other | Total Number of Boating Days |
| Baker | 5,151 | 0 | 1,799 | 1,107 | 538 | 8,595 |
| Benton | 21,941 | 784 | 6,289 | 1,876 | 2,122 | 33,012 |
| Clackamas | 125,960 | 5,935 | 41,638 | 36,672 | 5,951 | 216,155 |
| Clatsop | 23,648 | 0 | 969 | 4,305 | 8,365 | 37,287 |
| Columbia | 26,385 | 200 | 4,275 | 6,765 | 1,122 | 38,747 |
| Coos | 49,864 | 846 | 7,811 | 10,471 | 16,898 | 85,890 |
| Crook | 3,998 | 0 | 1,568 | 400 | 0 | 5,966 |
| Curry | 30,290 | 0 | 523 | 2,122 | 2,291 | 35,226 |
| Deschutes | 33,335 | 922 | 5,028 | 4,459 | 1,784 | 45,528 |
| Douglas | 56,783 | 0 | 9,564 | 3,337 | 6,827 | 76,511 |
| Gilliam | 261 | 0 | 523 | 0 | 0 | 784 |
| Grant | 2,445 | 0 | 1,015 | 46 | 0 | 3,506 |
| Harney | 1,768 | 0 | 369 | 123 | 0 | 2,260 |
| Hood River | 2,168 | 0 | 569 | 2,875 | 62 | 5,674 |
| Jackson | 59,843 | 4,444 | 10,779 | 6,335 | 3,167 | 84,568 |
| Jefferson | 3,475 | 0 | 1,292 | 1,276 | 231 | 6,273 |
| Josephine | 22,926 | 0 | 3,152 | 1,153 | 1,153 | 28,384 |
| Klamath | 33,335 | 3,890 | 6,504 | 10,425 | 4,321 | 58,475 |
| Lake | 3,152 | 31 | 431 | 446 | 92 | 4,152 |
| L.ane | 132,571 | 8,749 | 32,612 | 19,420 | 6,027 | 194,767 |
| Lincoln | 44,483 | 677 | 2,829 | 2,983 | 5,535 | 56,507 |
| Linn | 30,552 | 784 | 10,071 | 4,413 | 892 | 46,712 |
| Mal heur | 8,180 | 92 | 2,091 | 784 | 615 | 11,763 |
| Marion | 66,808 | 969 | 24,648 | 14,238 | 4,275 | 110,937 |
| Morrow | 2,414 | 77 | 2,199 | 538 | 46 | 5,274 |
| Multnomah | 203,424 | 30,106 | 55,599 | 87,351 | 10,978 | 387,458 |
| Polk | 10,978 | 769 | 1,799 | 1,522 | 723 | 15,791 |
| Sherman | 77 | 0 | 446 | 15 | 0 | 538 |
| Tillamook | 20,880 | 277 | 984 | 1,384 | 6,212 | 29,737 |
| Umatilla | 8,687 | 277 | 5,612 | 4,244 | 569 | 19,389 |
| Union | 7,503 | 0 | 2,706 | 415 | 62 | 10,686 |
| Wallowa | 2,183 | 0 | 1,292 | 169 | 0 | 3,644 |
| Wasco | 3,905 | 1,507 | 4,474 | 1,799 | 0 | 11,686 |
| Washington | 58,921 | 7,242 | 26,954 | 21,296 | 3,782 | 118,195 |
| Wheeler | 123 | 0 | 31 | 0 | 0 | 154 |
| Yamhill | 14,115 | 630 | 5,028 | 1,599 | 707 | 22,080 |
| TOTAL | 1,122,534 | 69,209 | 283,473 | 256,363 | 95,347 | 1,826,926 |
| Non-Response | 5,720 | 3,321 | 2,337 | 3,690 | 1,568 | 16,637 |
| TOTAL | 1,128,252 | 72,529 | 285,810 | 260,053 | 96,915 | 1,843,559 |

Oregon pleasure boat use by county of use and by activity type during the 1975 boating season.

Activity Type (Number of Boating Days)

| County of Use | Fishing | Sailing | Water Skiing | Cruising | Other | Total Number of Boating Days |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Baker | 14,945 | 31 | 4,290 | 892 | 0 | 20,650 |
| Benton | 3,598 | 0 | 953 | 600 | 1,291 | 6,442 |
| Clackamas | 84,983 | 2,168 | 33,289 | 31,659 | 2,276 | 154,374 |
| Clatsop | 57,368 | 600 | 1,768 | 6,412 | 9,103 | 75,250 |
| Columbia | 38,348 | 1,092 | 3,229 | 8,933 | 1,538 | 53,139 |
| Coos | 53,477 | 753 | 8,887 | 12,009 | 18,036 | 93,163 |
| Crook | 24,279 | 15 | 7,304 | 1,999 | 323 | 33,919 |
| Curry | 54,216 | 0 | 261 | 2,737 | 3,229 | 60,443 |
| Deschutes | 82,953 | 1,261 | 6,781 | 4,905 | 446 | 96,346 |
| Douglas | 100,974 | 431 | 8,518 | 5,382 | 8,380 | 123,684 |
| Gilliam | 523 | 184 | 569 | 261 | 185 | 1,722 |
| Grant | 907 | 0 | 77 | 0 | 0 | 984 |
| Harney | 1,922 | 0 | 215 | 184 | 0 | 2,322 |
| Hood River | 1,768 | 1,507 | 507 | 2,998 | 31 | 6,812 |
| Jackson | 45,067 | 4,182 | 8,088 | 2,906 | 1,245 | 61,488 |
| Jefferson | 22,126 | 1,768 | 17,744 | 7,626 | 3,198 | 52,463 |
| Josephine | 8,657 | 0 | 1,307 | 969 | 292 | 11,224 |
| Klamath | 43,760 | 4,059 | 13,531 | 14,592 | 6,243 | 82,184 |
| Lake | 4,966 | 46 | 953 | 400 | 92 | 6,458 |
| Lane | 86,197 | 10,594 | 38,870 | 17,283 | 3,367 | 156,312 |
| Lincoln | 115,166 | 2,875 | 4,874 | 6,442 | 7,980 | 137,338 |
| Linn | 17,744 | 584 | 13,715 | 4,736 | 1,522 | 38,301 |
| Malheur | 10,025 | 77 | 2,568 | 876 | 846 | 14,392 |
| Marion | 20,911 | 523 | 16,683 | 9,733 | 2,399 | 50,249 |
| Morrow | 2,506 | 108 | 1,876 | 692 | 369 | 5,551 |
| Multnomah | 91,641 | 35,918 | 48,696 | 90,195 | 6,427 | 272,877 |
| Polk | 2,014 | 0 | 4,428 | 1,722 | 1,261 | 9,425 |
| Sherman | 969 | 0 | 338 | 77 | 15 | 1,399 |
| Tillamook | 87,735 | 1,138 | 2,875 | 4,736 | 13,085 | 109,569 |
| Umatilla | 4,059 | 461 | 5,689 | 3,552 | 262 | 14,023 |
| Union | 1,507 | 15 | 261 | 77 | 62 | 1,922 |
| Wallowa | 3,629 | 0 | 2,629 | 646 | 0 | 6,904 |
| Wasco | 4,751 | 0 | 5,474 | 1,369 | 15 | 11,609 |
| Washington | 7,903 | 846 | 5,397 | 1,707 | 338 | 16,191 |
| Wheeler | 46 | 0 | 0 | 0 | 0 | 46 |
| Yamhill | 1,907 | 0 | 6,827 | 2,875 | 523 | 12,132 |
| Non-Response |  |  |  |  |  | 23,602 |
| County Not Specified |  |  |  |  |  | 18,574 |
| TOTAL | 1,116,985 | 72,267 | 282,702 | 256,855 | 96,100 | 1,843,483 |

[^3]activity taking place for the 30 "most used" bodies of water in the state is shown in Table 6 (p. 29). An examination of this table reveals that certain water bodies tend to be "activity-specialized" (Lentnek, et al., 1969) in that, over 50 percent of the use at that water body is devoted to a single use. The Pacific Ocean can be used as an example of such an activity-specialized water body since 92 percent of the total use results from fishing. A complete tabulation of water bodies for which such a specialization exists is shown in Appendix E by an asterisk (*) in the column of activity type.

## Fuel Consumption

Data regarding the amount of fuel consumed by pleasure boats registered in Oregon indicates that over 85 percent of the respondents used ten gallons or less of fuel for boat operation on a typical boating day, with an overall average daily consumption of 6.5 gallons. Fuel consumption amounts to over 716,000 gallons on a typical boating day for the entire state. The total amount of fuel used by pleasure boats registered in Oregon is therefore estimated to be at least 12,695,000 gallons in 1975, which is equivalent to an average of 118 gallons per motorized boat annually. It should be noted that fuel is also consumed in the transportation of boats to and from their place of use.

At seven cents per gallon state tax and discounting refunds made only upon request of the boat owner, the total annual gross state marine fuel income is at least $\$ 888,692$, of which $\$ 87,261$ was refunded in 1975 at the request of boat owners. The net income to the State of Oregon thus probably exceeded $\$ 801,431$.


## BOAT INSPECTION AND SAFETY

In 1975, there were 130 reported boating accidents within Oregon involving 34 fatalities and over $\$ 242,000$ in property damage (U.S. Coast Guard, 1975). While the number of reported accidents in 1975 declined from the 146 recorded in 1974, when Oregon ranked tenth in boating accidents nationwide, the number of fatalities nevertheless remained high and property damage increased by nearly $\$ 40,000$ over the 1974 figure. ${ }^{1}$ A continued program of boating equipment inspection, law enforcement, and boating safety education would appear necessary in order to encourage safer boating in the waters of Oregon.

During the 1975 boating season there were over 20,000 boats which were stopped for an inspection, or approximately 24 percent of the boats registered in the state. Table 11 shows a breakdown of these inspections by the type of boat and the agency conducting the inspection. According to this, of the vessels inspected, the Sheriff's Marine Patrol was responsible for nearly 45 percent of all inspections, followed by the U.S. Coast Guard ( 19.6 percent) and the Oregon State Police (18 percent). Most of the boats inspected in 1975 were either outboards (73.6 percent) or inboard/outboards (19.2 percent). Very few sailboats (1.1 percent) were reported as being inspected during the 1975 season.

One aspect of the boating safety education is to encourage boat

[^4]| Type of Boat | U.S. Coast Guard | Inspecting Agency (Number of Boats) |  |  |  |  | ```Total No. NOT Inspected or Not Used``` | Percent of Total Boats Inspected |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Oregon State Police | Sheriff's <br> Marine Patrol | Other | Multiple Response | ```Total No. of Inspected Boats``` |  |  |
| Inboard | 354 | 46 | 477 | 169 | 108 | 1,154 | 3,905 | 5.7\% |
| Outboard | 1,983 | 3,306 | 7,288 | 1,015 | 1,430 | 15,022 | 67,885 | 73.6\% |
| Inboard w/ Outboard Drive | 1,614 | 261 | 1,261 | 431 | 354 | 3,920 | 10,134 | 19.2\% |
| Sailboat <br> w/ Motor | 46 | 0 | 46 | 46 | 15 | 154 | 1,214 | 0.8\% |
| Sailboat w/o Motor | 15 | 0 | 46 | 0 | 0 | 61 | 1,446 | 0.3\% |
| Other | 0 | 62 | 31 | 15 | 0 | 108 | 1,522 | 0.5\% |
| Percent of Inspections | 19.6 | 18.0 | 44.8 | 8.2 | 9.3 |  |  |  |
| TOTAL | 4,012 | 3,675 | 9,149 | 1.676 | 1,907 | 20,419 | 86,106 |  |
|  |  |  |  |  | Missing | Observations TOTAL | - 4,520 |  |

owners to have their craft checked by authorized examiners. There were an estimated 9,700 Oregon boat owners who contacted the U.S. Coast Guard Auxiliary for a Courtesy Motorboat Examination (CME) in the 1975 boating season, or roughly ten percent of the total registered boats. Table 12 describes the estimated number of pleasure boat owners contacting the Coast Guard Auxiliary for a CME for each county in Oregon.

The percentage of boat owners completing a course in boating safety from various agencies between 1972 and 1975 is shown in Figure 10. Overall, only 12.8 percent of the respondents reported taking such a course during this period. The largest number of those completing a course in boating safety took it from either the U.S. Coast Guard Auxiliary ( 40 percent) or the U.S. Power Squadron ( 36 percent). Table 13 provides a county-by-county breakdown of pleasure boat owners completing a boating safety course from the various agencies.

Oregon pleasure boat owners contacting the Coast Guard Auxiliary for a Courtesy Motorboat Examination during the 1975 boating season.

| County of Registration | Total Number of Registered Boat Owners | Number of Boat Owners Contacting CGA for Courtesy Motorboat Exam | Percent of Total |
| :---: | :---: | :---: | :---: |
| Baker | 938 | 15 | 1.6 |
| Benton | 2,153 | 200 | 9.3 |
| Clackamas | 9,579 | 677 | 7.1 |
| Clatsop | 1,614 | 92 | 5.7 |
| Columbia | 1,830 | 92 | 5.0 |
| Coos | 4,190 | 231 | 5.5 |
| Crook | 554 | 15 | 2.8 |
| Curry | 1,430 | 338 | 23.7 |
| Deschutes | 3,275 | 92 | 2.8 |
| Douglas | 4,890 | 538 | 11 |
| Gilliam | 93 | 31 | 33.3 |
| Grant | 338 | 15 | 4.5 |
| Harney | 261 | 15 | 5.9 |
| Hood River | 431 | 31 | 7.1 |
| Jackson | 5,658 | 630 | 11.1 |
| Jefferson | 477 | 31 | 6.5 |
| Josephine | 2,230 | 215 | 9.7 |
| Klamath | 3,721 | 308 | 8.3 |
| Lake | 262 | 0 | 0 |
| Lane | 12,239 | 938 | 7.7 |
| Lincoln | 2,245 | 231 | 10.3 |
| Linn | 3,829 | 308 | 8.0 |
| Malheur | 1,230 | 154 | 12.5 |
| Marion | 6,581 | 538 | 8.2 |
| Morrow | 231 | 31 | 13.3 |
| Multnomah | 17,236 | 2,291 | 13.3 |
| Polk | 1,307 | 77 | 5.9 |
| Sherman | 63 | 0 | 0 |
| Tillamook | 1,415 | 108 | 7.6 |
| Umatilla | 1,461 | 138 | 9.5 |
| Union | 984 | 0 | 0 |
| Wallowa | 246 | 0 | 0 |
| Wasco | 646 | 92 | 14.3 |
| Washington | 6,935 | 892 | 12.9 |
| Wheeler | 63 | 0 | 0 |
| Yamhill | 1,584 | 338 | 21.4 |
| Not Specified (0. of S.) | 16 | 0 | 0 |
| TOTAL | 102,235 | 9,702 | 9.5 |
| Missing Observations | 8,810 |  |  |
| TOTAL | 111,045 |  |  |



Figure 10. Sponsor of boating safety courses completed by registered boat owners in Oregon (September 1972 through August 1975).

Oregon pleasure boat owners completing boating safety courses during the period September 1975
through August 1975 by county of registration and by sponsoring agency.

| County of Reg. | $\begin{gathered} \text { USCG } \\ \text { Auxiliary } \end{gathered}$ | U.S. Power Squadron | Red Cross | Oregon State Marine Board | Other | Multiple Response | Total Number Taking Course | No Course | Percent Completing Course |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Baker | 12 | 0 | 12 | 0 | 12 | 0 | 36 | 646 | 5.3 |
| Benton | 256 | 28 | 14 | 28 | 43 | 0 | 369 | 1,660 | 18.2 |
| CTackamas | 174 | 832 | 27 | 55 | 165 | 101 | 1,354 | 7,791 | 14.8 |
| Clatsop | 51 | 66 | 2 | 0 | 66 | 33 | 218 | 1,508 | 12.6 |
| Columbia | 110 | 16 | 16 | 31 | 16 | 0 | 189 | 1,639 | 10.3 |
| Coos | 105 | 300 | 19 | 105 | 19 | 0 | 548 | 4,219 | 11.5 |
| Crook | 15 | 15 | 0 | 15 | 15 | 0 | 60 | 524 | 10.3 |
| Curry | 224 | 39 | 0 | 0 | 27 | 13 | 303 | 922 | 24.7 |
| Deschutes | 123 | 61 | 0 | 16 | 45 | 0 | 245 | 2,985 | 7.6 |
| Douglas | 456 | 63 | 0 | 92 | 0 | 0 | 611 | 4,242 | 12.6 |
| Gilliam | 13 | 0 | 0 | 0 | 0 | 0 | 13 | 62 | 17.3 |
| Grant | 0 | 0 | 12 | 0 | 0 | 0 | 12 | 258 | 4.4 |
| Harney | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 273 | 0 |
| Hood River | 0 | 37 | 18 | 18 | 0 | 0 | 73 | 460 | 13.7 |
| Jackson | 327 | 0 | 46 | 92 | 46 | 0 | 511 | 5,225 | 8.9 |
| Jefferson | 28 | 0 | 0 | 14 | 0 | 0 | 42 | 434 | 8.8 |
| Josephine | 76 | 31 | 16 | 0 | 0 | 16 | 139 | 2,099 | 6.2 |
| Klamath | 227 | 15 | 15 | 30 | 45 | 15 | 342 | 3,304 | 9.4 |
| Lake | 0 | 0 | 0 | 12 | 0 | 0 | 12 | 209 | 5.4 |
| Lane | 545 | 266 | 24 | 61 | 170 | 48 | 1,114 | 10,998 | 9.2 |
| Lincoln | 203 | 29 | 0 | 29 | 29 | 0 | 290 | 1,807 | 13.8 |
| Linn | 330 | 48 | 16 | 32 | 32 | 16 | 474 | 3,491 | 12.0 |
| Malheur | 43 | 0 | 14 | 14 | 0 | 0 | 71 | 1,082 | 6.2 |
| Marion | 360 | 225 | 13 | 103 | 32 | 58 | 791 | 5,625 | 12.3 |
| Morrow | 39 | 0 | 0 | 0 | 0 | 0 | 39 | 157 | 19.9 |
| Multnomah | 850 | 1,858 | 20 | 198 | 277 | 178 | 3,381 | 16,405 | 17.1 |
| Polk | 64 | 32 | 0 | 32 | 0 | 0 | 128 | 1,223 | 9.5 |
| Sherman | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 77 | 0 |
| Tillamook | 124 | 15 | 0 | 30 | 15 | 0 | 184 | 1,188 | 13.4 |
| Umatilla | 45 | 0 | 0 | 16 | 31 | 0 | 92 | 1,319 | 6.5 |
| Union | 0 | 0 | 0 | 0 | 23 | 0 | 23 | 710 | 3.1 |
| Wallowa | 0 | 0 | 0 | 18 | 0 | 0 | 18 | 249 | 6.7 |
| Wasco | 39 | 77 | 0 | 0 | 19 | 0 | 135 | 696 | 16.2 |
| Washington | 304 | 713 | 13 | 86 | 73 | 13 | 1,202 | 5,392 | 18.2 |
| Wheeler | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | 0 |
| Yamhill | 177 | 16 | 0 | 32 | 0 | 0 | 225 | 1,457 | 13.4 |
| TOTAL | 5,315 | 4,782 | 297 | 1,159 | 1,200 | 491 | 13,244 | 90,370 |  |
| Percent of Total <br> Taking Course | 40.1\% | 36.1\% | 2.2\% | 8.8\% | 9.1\% | 3.7\% |  |  |  |



## USER EVALUATION OF BOAT FACILITIES

With increased demand for water-based recreation and a limited supply of water bodies and facilities to satisfy this demand, there is a growing concern for the problems and conflicts associated with this demand. Identification of problems and conflicts among various users, and between recreationists and the resource, is necessary in order to guide management programs which seek to reduce these conflicting uses and protect the physical environment.

Boat owners were asked whether or not they encountered any problems at the facilities they visited, and if they did, to specify the type of problem, county and body of water. Slightly over onethird of the respondents indicated that they encountered some type of problem during the 1975 boating season as shown in Figure 11. Three-fourths of those responding that they encountered problems at boating facilities felt that overcrowding needed attention at the place where they participated in boating activities. Figure 11 shows the opinions of boaters who found one or more conditions to be a problem at the facilities they visited during the boating season. Along with overcrowding, a lack of law enforcement and sanitary facilities were also found to need attention. It should be noted that the percentage of boat owners who did or did not find one of the four conditions to be a problem only represents those responding to Question 14 (see Appendix B) and that the number of opinions on each condition is not uniform.


Note: Percentages may not total $100 \%$ due to"no opinion" responses.

Figure 11. Identification of boating problems encountered by registered pleasure boat owners during the boating season, 1974-1975.

The estimated number of boaters experiencing problems at various bodies of water is shown in Table 14. An examination of this table indicates that the greatest number of problems are encountered at the most used bodies of water, especially the problem of overcrowding, as seen for the Willamette and Columbia Rivers. A complete tabulation of problems by body of water appears in Appendix F.

The 30 "Most Problem" Bodies of Water by Type of Problem, in Oregon, 1975.

| Rank | Body of Water | Type of Problem (Number of Boat Owners) |  |  |  | Total Number of Reported Problems | Total Number of Boating Days at Body of Water |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Water Pollution | OverCrowding | $\begin{aligned} & \text { Sanitary } \\ & \text { Facilities } \end{aligned}$ | Lack of Law Enforcement |  |  |
| 1 | Willamette River | 1,030 | 2,783 | 1,184 | 1,522 | 6,519 | 259,284 |
| 2 | Columbia River | 846 | 2,168 | 738 | 799 | 4,551 | 201,025 |
| 3 | Yaquina Bay | 169 | 1,030 | 523 | 200 | 1,922 | 13,193 |
| 4 | Tillamook Bay | 92 | 1,246 | 261 | 185 | 1,784 | 23,956 |
| 5 | Diamond Lake | 277 | 630 | 46 | 231 | 1,184 | 25,647 |
| 6 | Chetco Bay | 154 | 553 | 185 | 215 | 1,107 | 6,627 |
| 7 | Pacific Ocean | 46 | 447 | 261 | 92 | 876 | 110,368 |
| 8 | Detroit Reservoir | 108 | 384 | 62 | 261 | 815 | 33,673 |
| 9 | Fern Ridge Reservoir | 138 | 261 | 62 | 308 | 769 | 22,710 |
| 10 | Klamath Lake | 477 | 15 | 108 | 154 | 754 | 23,510 |
| 11 | Haag Lake | 15 | 369 | 215 | 77 | 676 | 8,610 |
| 12 | Lake Billy Chinook | 123 | 307 | 46 | 154 | 630 | 22,926 |
| 13 | Rogue River | 77 | 292 | 92 | 108 | 569 | 31,182 |
| 14 | Winchester Bay | 92 | 231 | 154 | 77 | 554 | 7,703 |
| 15 | Depoe Bay | 31 | 323 | 154 | 31 | 539 | 3,659 |
| 16 | Prineville Reservoir | 31 | 184 | 138 | 185 | 538 | 21,449 |
| 17 | Coos Bay | 200 | 184 | 46 | 62 | 492 | 9,226 |
| 18 | South Tenmile Lake | 108 | 261 | 31 | 92 | 492 | 38,717 |
| 19 | Foster Reservoir | 15 | 308 | 31 | 123 | 477 | 14,007 |
| 20 | Fall Creek Reservoir | 46 | 200 | 31 | 169 | 446 | 4,121 |
| 21 | Crane Prairie Reservoir | 15 | 154 | 154 | 92 | 415 | 18,051 |
| 22 | Umpqua River | 92 | 92 | 138 | 77 | 399 | 23,417 |
| 23 | Snake River | 92 | 108 | 92 | 92 | 384 | 10,625 |
| 24 | Hyatt Reservoir | 15 | 92 | 123 | 108 | 338 | 10,732 |
| 25 | Cooper Creek Reservoir | 0 | 154 | 0 | 169 | 323 | 4,843 |
| 26 | Lake 0-Woods | 0 | 138 | 15 | 169 | 322 | 13,762 |
| 27 | East Lake | 31 | 123 | 46 | 108 | 308 | 9,425 |
| 28 | Emigrant Lake | 108 | 62 | 15 | 123 | 308 | 3,644 |
| 29 | Round Butte Reservoir | 15 | 215 | 15 | 46 | 291 | 13,085 |
| 30 | Howard Prairie Reservoir | 0 | 169 | 31 | 77 | 277 | 18,205 |

## GLOSSARY

Boating Day - any portion of a 24-hour period in which a participant is engaged in boating activities.

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

Boating Population - the aggregate of pleasure boat owners in Oregon from which the sample for the 1975 study was drawn.

Boating Season - a 12-month period beginning September 1, 1974 and ending August 31, 1975 which conforms to the guidelines for conducting the 1975 boating survey.

Inboard - a type of boat for which the primary power system is located within and permanently attached to the hull.

Inboard/Outboard - a type of boat for which the engine of the primary power system is located within and permanently attached to the hull but with an external "outboard" propulsion unit which steers and drives the water craft.

Launching Ramp - an inclined surface leading to the water from which trailered boats may be launched and retrieved.

Other Boats - watercraft other than outboard, inboard/outboard, inboard and sailboats.

Outboard - a type of boat for which the power system is not permanently attached to the structure of the watercraft.

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.

Sailboat - a type of boat intended to be propelled primarily by wind using a sail, regardless of size or design.

Sample - a collection of those sample units which have been selected from a sample population.

Sample Population - a complete list of all sample units.
$\frac{\text { Sample Unit }}{\text { unique. a subdivision of a target population, which is considered }}$

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## APPENDIX A

## SUMMARY OF METHODOLOGY

## Description of Sample Population

The sample was drawn from a population of watercraft registered with the Oregon State Marine Board and classified by use as pleasure boats. Furthermore, the population was restricted to include only those boat owners with Oregon mailing addresses. New registrations were included in the population in August, 1975, and the sample drawn September, 1975.

Sampling Procedures
In order to adequately assess boating use in all portions of the state, the State Marine Board had the population stratified by U.S. Postal Service Zip Code numbers and provided Oregon State University with a ten percent systematic sample beginning with the first boat registered in that strata, and selecting each tenth boat in that strata until no more boats were registered in that strata. This procedure yielded 11,637 units. Subsequent statistical analysis of the sample was based on the assumption the selection procedures had produced a simple random sample.

## Questionnaire Design

The survey questionnaire was constructed following a design previously employed in the Michigan Recreational Boating Needs Study - 1968 (Michigan State University, 1968). Modifications were made to the Michigan questionnaire to reflect the needs of
the Oregon State Marine Board and to better assess boating activity in Oregon. Some improvement over the original survey instrument resulted from a limited pre-test, although time constraints precluded thorough assessment of the questionnaire design, therefore the impact of wording and positional bias of questions on response is unknown. A copy of the questionnaire is included in Appendix C.

## Mailing and Follow-Ups

The questionnaire was bulk-mailed to each sampling unit in a window envelope and a postcard follow-up was sent to all sampling units approximately two weeks later. A final response rate of 62 percent was achieved. While the percentage of questionnaires returned compares favorably with other surveys of this type, several incidents involving the mailing procedure might have precluded the opportunities for a higher return rate. First, approximately 370 of the addresses were without proper Zip Code and therefore were added manually to the questionnaires for the initial mailing. The additions were not made on the postal card follow-up possibly reducing the return rate on these 370 questionnaires. Second, bulk mail is not normally forwarded or returned to sender, therefore the percentage of the sampling units which did not receive the questionnaire is unknown. Third, a problem occurred when a certain number of address labels were defaced while being affixed to the questionnaire prior to mailing. Subsequently, some of these defaced labels failed to contain information necessary to be properly handled by the U.S. Postal

Service or lacked other identifying data needed by the respondent to properly complete the questionnaire. While the effect of the above conditions is speculation, there is high probability the response rate could have been improved.

Information from the returned survey instrument was manually coded and converted to a digitized form for processing by computer, initially, by production keypunching (3,120 questionnaires), subsequently, by optical scanning (4,102 questionnaires). Three computer cards were used to register information from one questionnaire. Several editing programs were employed to scan the data for coding errors and guard against logical contradictions in responses. A commercially produced statistical analysis program (Statistical Package for the Social Sciences) was called upon for the majority of reporting and analysis.

## STATE MARINE BOARD

# OFFICE OF THE DIRECTOR 

3000 MARKET ST. N.E., \#505 • SALEM, OREGON • 97310 • 378-8587, 378-8588
September 1975

Dear Oregon Boat Owner:
Oregon law directs that the State Marine Board conduct a boating survey every three years.

The last survey, conducted in 1971-1972, has resulted in the construction of new or improved marine facilities, more efffective safety and law enforcement patrol, increased emphasis on boating safety education for the young and novice boaters, and establishment of reasonable boating regulations where needed.

We now request your assistance in this 1975 survey. Your name was selected at random from our list of boat registrants and your reply will not be personally identified. It will be used with all other replies to show us the pattern of boating in Oregon and indicate where we should focus attention in order to improve boating opportunities in the state. Please place your completed questionnaire in the enclosed prepaid, preaddressed envelope and return it to us before October 20th.

Thank you for your assistance!

> Sincerely,


Enclosures

## OREGON RECREATIONAL BOATING QUESTIONNAIRE

Please answer questions 1 through 14 for the boat identified by the registration number and boat length which appear above your address on page 1.

1. WHAT TYPE OF POWER SYSTEM DOES THIS BOAT HAVE? (Check one)
$\square$ Inboard motor
$\square$ Outboard motorInboard motor with outboard driveSailboat without motor
$\square$ Sailboat with motor
(other)
2. PLEASE ESTIMATE THE AMOUNT OF FUEL YOU PURCHASE FOR THIS BOAT FOR A TYPICAL DAY OF BOATING ACTIVITY.

## gallons

(write in)
3. WHAT IS THE HORSEPOWER RATING OF THE PRIMARY MOTOR (OR MOTORS) USED ON THIS BOAT?
. Hp .
Hp.
Indicate horsepower of any other motors used on this boat
4. WHAT COUNTY IS THIS BOAT REGISTERED IN?

County
5. WAS THIS BOAT TRANSPORTED FROM YOUR HOME OR OTHER LOCATION TO PARTICULAR LAUNCHING SITES DURING THE PAST BOATING SEASON (year ending Sept. 1, 1975)?
$\square$ YESNo
If "NO," skip over questions $6,7, \& 8$ and proceed with question 9 .
6. WAS THIS BOAT TRANSPORTED BY:Trailer

Car-top carrier
7. PLEASE INDICATE THE TOTAL NUMBER OF TIMES YOU TRANSPORTED THIS BOAT FROM THE PLACE OF STORAGE OR MOORING TO THE PLACE OF USE.
8. in the table below, name the counties where you most often launched this boat and indicate THE NUMBER OF TIMES THE BOAT WAS LAUNCHED AT EACH BOATING ACCESS POINT.

|  | County(Write in) | Number of Times This Boat Launched at- |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Commercial marina | Private property or other | Public Marina or Ramp |  |  |
|  |  |  |  | Federal | State | City, County |
| Most Launches: | $\rightarrow$ |  |  |  |  |  |
| 2nd most Launches: | $\rightarrow$ |  |  |  |  |  |
| All other Launches: | $\rightarrow$ |  |  |  |  |  |

9. PLEASE INDICATE BELOW THE TOTAL NUMBER OF DAYS* BY MONTH THAT THIS BOAT WAS ACTUALLY UNDER POWER OR SAIL BETWEEN SEPTEMBER 1, 1974 AND AUGUST 31 OF THIS YEAR. IF THIS BOAT WAS NOT IN USE, PLEASE CHECK HERE $\square$ AND PROCEED TO QUESTION 15.

| NUMBER OF DAYS* |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sept. | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. |
| 1974 |  |  |  | 1975 |  |  |  |  |  |  |  |

* a day is any portion of a 24-hour period in which you used this boat.

10. IN THE TABLE BELOW, NAME THE BODIES OF WATER AND COUNTIES WHERE THIS BOAT WAS USED DURING THE PAST BOATING SEASON. Give the number of days that this boat was actually in the water under power or sail in each of these counties; and give the number of boating days spent on various activities.


* Name the lake, river, bay, etc.

11. WAS THIS BOAT STOPPED AND BOARDED FOR INSPECTION DURING THE PAST 12 MONTHS?
$\square$ YES
$\square \mathrm{NO}$
If "NO," please skip to question
12. PLEASE INDICATE THE ORGANIZATION WHICH INSPECTED THIS BOAT. (Check one)
$\square$ Sheriff Marine Patrol
$\square$ United States Coast Guard
$\square$ Oregon State Police
$\square$ Other (specify)
13. IN YOUR BOATING ACTIVITIES IN OREGON THIS PAST YEAR, DID YOU ENCOUNTER ANY PROBLEMS AT THE FACILITIES THAT YOU VISITED?
```
\squareYES - If "YES," please continue with question 14.
\(\square\) NO - If "NO," please proceed to question 15.
```

14. DO YOU FEEL ANY OF THE FOLLOWING CONDITIONS NEEDS ATTENTION AT THE PLACE YOU PARTICIPATE IN BOATING ACTIVITIES?

| Problem or condition | Check how you feel: |  |  | County, Body of Water |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Not a problem | No opinion | Yes, a problem |  |  |
| Water pollution | $\square$ | $\square$ | $\square$ | $\rightarrow$ |  |
| Overcrowding | $\square$ | $\square$ | $\square$ | $\rightarrow$ |  |
| Sanitary facilities | $\square$ | $\square$ | $\square$ | $\rightarrow$ |  |
| Lack of enforcing rules and regulations | $\square$ | $\square$ | $\square$ | $\rightarrow$ |  |
| (other) | $\square$ | $\square$ | $\square$ | $\rightarrow$ |  |

THE FOLLOWING QUESTION CONCERNS OTHER RECREATIONAL BOATS OWNED IN ADDITION TO THE ONE IDENTIFIED BY THE REGISTRATION NUMBER ON PAGE 1.
(Note: If you own no other boats, please check here $\square$ and skip over to question 16.)
15. In the table below, give the number of other registered and unregistered boats owned by YOU, AND BY THE MEMBERS OF YOUR IMMEDIATE FAMILY RESIDING WITH YOU. Also, give the boat length and horsepower rating of the motor used on it.

| Type of boat* | Length | Horsepower rating of the motor |
| :--- | :--- | :--- |
|  |  |  |
|  |  |  |

* Include other inboards, outboards, sailboats, canoes, inboard-outboards, rowboats, etc.

16. HAVE YOU CONTACTED THE COAST GUARD AUXILIARY FOR A VOLUNTARY "Courtesy Motorboat Examination" DURING THE PAST 12 MONTHS?
$\square$ YES
NO
17. HAVE YOU OR A MEMBER OF YOUR HOUSEHOLD COMPLETED A BOATING SAFETY COURSE WITHIN THE PAST 3 YEARS? $\quad$ YES $\quad \square$ NO If "NO," please skip to question 19
18. PLEASE INDICATE THE SPONSOR OF THE COURSE. (check one.)Coast Guard Auxiliary
$\square$ Red Cross
$\square$ U.S. Power Squadron
$\square$ State Marine BoardOther (specify)

IN ORDER TO FORECAST THE FUTURE DEMAND FOR BOATING FACILITIES IN OREGON, IT IS NECESSARY FOR US TO BE ABLE TO TIE IN FAMILY CHARACTERISTICS WITH BOATING USE PATTERNS. PLEASE ASSIST US BY ANSWERING THE QUESTIONS IN THE FOLLOWING SECTION.
19. What is the age and sex of the "head of your family"?

Age: years

Sex:
$\square$ Male
$\square$ Female
20. WHAT IS THE OCCUPATION OF THE "HEAD OF YOUR FAMILY"? (Please indicate the type of job that you hold, NOT the organization for which you work).
(write in)
21. PLEASE ESTIMATE YOUR TOTAL FAMILY INCOME FOR 1975 BY CHECKING THE PROPER BOX BELOW. (Check only one box).
$\square$ Under $\$ 3,000$
$\square \$ 3,000$ to $\$ 5,999$
$\square \$ 6,000$ to $\$ 7,999$
$\square \$ 10,000$ to $\$ 14,999$
$\square \$ 25,000$ and over
$\square \$ 8,000$ to $\$ 9,999$
$\square \$ 15,000$ to $\$ 24,999$
22. WHICH OF THE ANSWERS BELOW BEST INDICATES THE TOTAL YEARS OF EDUCATION COMPLETED BY THE "HEAD OF YOUR FAMILY"? (Check one box)

$$
\begin{array}{lllllllllll}
\square & \square & \square & \square & \square & \square & \square & \square & \square & \square & \square \\
8 & 9 & 10 & 11 & 12 & 13 & 14 & 15 & 16 & 17 & \text { or more }
\end{array}
$$

## THANKS FOR YOUR HELP!

> APPENDIX C

Follow-up postcard mailed to all boat owners in the sample:


Appendix D
Characteristics of Oregon pleasure boat owners by age group and by county of registration, 1975.

| County of Reg. | Age Group (Number of Boat Owners) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Less Than 24 yrs. | $\begin{gathered} 24-34 \\ \text { yrs. } \end{gathered}$ | $35-44$ yrs. | $\begin{gathered} 45-54 \\ \text { yrs. } \end{gathered}$ | $\begin{gathered} 55-64 \\ \text { yrs. } \end{gathered}$ | $\begin{gathered} 65-74 \\ \text { yrs. } \end{gathered}$ | More Than 74 yrs. | Total Number of Boat Owners |
| Baker | 15 | 62 | 138 | 323 | 215 | 200 | 15 | 968 |
| Benton | 31 | 323 | 461 | 554 | 630 | 185 | 15 | 2,199 |
| Clackamas | 231 | 1,368 | 2,183 | 2,568 | 2,122 | 1,076 | 277 | 9,825 |
| Clatsop | 31 | 200 | 200 | 523 | 400 | 200 | 62 | 1,616 |
| Columbia | 31 | 261 | 384 | 431 | 507 | 215 | 31 | 1,860 |
| Coos | 31 | 615 | 769 | 1,092 | 953 | 569 | 185 | 4,214 |
| Crook | 0 | 31 | 108 | 154 | 169 | 108 | 15 | 585 |
| Curry | 15 | 92 | 108 | 246 | 492 | 431 | 62 | 1,446 |
| Deschutes | 46 | 308 | 584 | 677 | 876 | 753 | 123 | 3,367 |
| Douglas | 62 | 569 | 784 | 1,322 | 1,445 | 661 | 62 | 4,905 |
| Gilliam | 0 | 15 | 0 | 0 | 31 | 15 | 15 | 76 |
| Grant | 15 | 0 | 15 | 77 | 108 | 108 | 15 | 338 |
| Harney | 0 | 46 | 31 | 77 | 108 | 15 | 15 | 292 |
| Hood River | 0 | 46 | 123 | 31 | 123 | 108 | 0 | 431 |
| Jackson | 123 | 661 | 892 | 1,584 | 1,491 | 784 | 154 | 5,689 |
| Jefferson | 15 | 77 | 77 | 123 | 154 | 62 | 15 | 523 |
| Josephine | 62 | 261 | 461 | 384 | 569 | 400 | 108 | 2,245 |
| Klamath | 31 | 461 | 600 | 1,092 | 969 | 523 | 92 | 3,768 |
| Lake | 0 | 46 | 77 | 62 | 46 | 31 | 0 | 262 |
| Lane | 185 | 1,614 | 2,014 | 3,321 | 3,290 | 1,876 | 246 | 12,546 |
| Lincoln | 0 | 138 | 292 | 492 | 769 | 461 | 108 | 2,260 |
| Linn | 77 | 431 | 615 | 1,138 | 876 | 523 | 185 | 3,845 |
| Mal heur | 15 | 108 | 123 | 261 | 415 | 292 | 15 | 1,229 |
| Marion | 92 | 800 | 1,292 | 1,737 | 1,614 | 830 | 200 | 6,565 |
| Morrow | 0 | 46 | 31 | 123 | 31 | 0 | 0 | 231 |
| Multnomah | 369 | 2,245 | 3,060 | 4,859 | 4,398 | 2,076 | 384 | 17,391 |
| Polk | 0 | 108 | 277 | 400 | 338 | 185 | 46 | 1,354 |
| Sherman | 0 | 46 | 0 | 15 | 0 | 0 | 0 | 61 |
| Tillamook | 31 | 77 | 77 | 338 | 507 | 185 | 138 | 1,353 |
| Umatilla | 46 | 185 | 246 | 369 | 308 | 261 | 92 | 1,507 |
| Union | 0 | 92 | 123 | 323 | 308 | 77 | 31 | 954 |
| Wallowa | 0 | 15 | 46 | 31 | 123 | 31 | 0 | 246 |
| Wasco | 0 | 138 | 108 | 215 | 92 | 154 | 15 | 722 |
| Washington | 92 | 1,338 | 1,722 | 2,107 | 1,338 | 384 | 92 | 7,073 |
| Wheeler | 0 | 0 | 0 | 46 | 0 | 15 | 0 | 61 |
| Yamhill | 62 | 77 | 323 | 461 | 384 | 261 | 77 | 1,645 |
| TOTAL | 1,708 | 12,900 | 18,344 | 27,556 | 26,199 | 14,055 | 2,890 | 103,652 |
| Non-Response |  |  |  |  |  |  |  | 7,393 |
| TOTAL |  |  |  |  |  |  |  | 111,045 |

Appendix D
Characteristics of Oregon pleasure boat owners by
income group and by county of registration, 1975.

| County of Reg. | Income Group (Number of Boat Owners) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Less Than $\$ 3,000$ | $\begin{aligned} & \$ 3,000- \\ & \$ 5,999 \end{aligned}$ | $\begin{aligned} & \$ 6,000- \\ & \$ 7,999 \end{aligned}$ | $\begin{aligned} & \$ 8,000- \\ & \$ 9,999 \end{aligned}$ | $\begin{aligned} & \$ 10,000- \\ & \$ 14,999 \end{aligned}$ | $\begin{aligned} & \$ 15,000- \\ & \$ 24,999 \end{aligned}$ | $\begin{aligned} & \$ 25,000 \\ & \& \text { Over } \end{aligned}$ | Total Number of Boat Owners |
| Baker | 77 | 108 | 92 | 108 | 246 | 200 | 77 | 908 |
| Benton | 15 | 46 | 123 | 185 | 661 | 584 | 446 | 2,060 |
| Clackamas | 108 | 538 | 492 | 461 | 2,537 | 3,290 | 1,691 | 9,117 |
| Clatsop | 46 | 108 | 62 | 154 | 477 | 492 | 108 | 1,447 |
| Columbia | 92 | 62 | 62 | 200 | 507 | 646 | 138 | 1,707 |
| Coos | 185 | 446 | 308 | 431 | 1,153 | 1,061 | 308 | 3,892 |
| Crook | 31 | 77 | 31 | 46 | 185 | 138 | 62 | 570 |
| Curry | 108 | 261 | 62 | 185 | 369 | 200 | 62 | 1,247 |
| Deschutes | 77 | 308 | 200 | 338 | 953 | 969 | 338 | 3,183 |
| Douglas | 215 | 569 | 461 | 384 | 1,584 | 1,138 | 338 | 4,689 |
| Gilliam | 0 | 15 | 0 | 0 | 15 | 15 | 31 | 76 |
| Grant | 15 | 92 | 15 | 31 | 62 | 77 | 15 | 307 |
| Harney | 0 | 46 | 15 | 46 | 108 | 62 | 15 | 292 |
| Hood River | 15 | 62 | 15 | 15 | 138 | 108 | 77 | 430 |
| Jackson | 200 | 538 | 400 | 584 | 1,399 | 1,676 | 538 | 5,335 |
| Jefferson | 15 | 0 | 62 | 46 | 169 | 138 | 62 | 492 |
| Josephine | 108 | 354 | 154 | 338 | 477 | 415 | 108 | 1,954 |
| Klamath | 92 | 231 | 185 | 292 | 1,199 | 1,061 | 354 | 3,414 |
| Lake | 15 | 31 | 31 | 31 | 92 | 77 | 0 | 277 |
| Lane | 338 | 1,122 | 769 | 1,153 | 3,567 | 3,613 | 1,015 | 11,577 |
| Lincoln | 138 | 477 | 231 | 123 | 492 | 446 | 215 | 2,122 |
| Linn | 46 | 507 | 354 | 338 | 1,138 | 1,015 | 231 | 3,629 |
| Malheur | 31 | 169 | 92 | 185 | 338 | 215 | 138 | 1,168 |
| Marion | 200 | 461 | 415 | 646 | 1,584 | 2,014 | 830 | 6,150 |
| Morrow | 15 | 15 | 0 | 15 | 62 | 77 | 46 | 230 |
| Multnomah | 338 | 1,153 | 784 | 1,138 | 4,275 | 5,797 | 2,829 | 16,314 |
| Polk | 92 | 62 | 108 | 123 | 338 | 369 | 185 | 1,277 |
| Sherman | 0 | 15 | 0 | 0 | 15 | 0 | 15 | 45 |
| Tillamook | 123 | 261 | 154 | 123 | 323 | 138 | 123 | 1,245 |
| Umatilla | 31 | 108 | 138 | 185 | 308 | 446 | 200 | 1,416 |
| Union | 46 | 92 | 92 | 15 | 369 | 292 | 62 | 968 |
| Wallowa | 0 | 15 | 15 | 31 | 46 | 77 | 46 | 230 |
| Wasco | 0 | 62 | 31 | 92 | 231 | 138 | 108 | 662 |
| Washington | 108 | 215 | 200 | 323 | 1,522 | 2,629 | 1,599 | 6,596 |
| Wheeler | 0 | 31 | 0 | 0 | 15 | 15 | 0 | 61 |
| Yamhill | 77 | 169 | 46 | 215 | 369 | 400 | 169 | 1,445 |
| TOTAL | 2,997 | 8,826 | 6,199 | 8,580 | 27,323 | 30,028 | 12,579 | 96,532 |
| Non-Response |  |  |  |  |  |  |  | 14,513 |
| TOTAL |  |  |  |  |  |  |  | 111,045 |

## Appendix E

Oregon Pleasure Boat Use by Body of Water and by Activity Type During the 1975 Boating Season.

|  |  |  |  |  |
| :--- | :---: | :---: | ---: | :--- | ---: | :--- |


| Body of Water | Fishing | Activity Type (Number of Boating Days) |  |  |  | Total Number of Boating Days |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Crescent Lake | 5,689* | 61 | 1,784 | 492 |  | 8,026 |
| Croft Lake | 154* |  |  |  | 92 | 246 |
| Crump Lake | 46 |  |  |  |  | 46 |
| Cullaby Lake | 108 | 61 | 1,122* | 261 | 92 | 1,644 |
| Cultus Lake | 676 | 61 | 1,707* | 246 |  | 2,690 |
| Davis Lake | 323* |  |  |  |  | 323 |
| Davis Lake (Deschutes) | 861* |  |  |  |  | 861 |
| Deadhorse Lake | 231 | 184 | 184 | 185 | 185 | 969 |
| Delintment Lake | 261* |  |  |  |  | 261 |
| Depoe Bay | 2,952* |  |  | 15 | 692 | 3,659 |
| Deschutes River | 7,734* |  | 646 | 400 | 261 | 9,041 |
| Detroit Reservoir | 17,774* | 215 | 9,810 | 5,351 | 523 | 33,673 |
| Devils Lake (Deschutes) | 185* |  |  |  |  | 185 |
| Devils Lake (Lincoln) | 3,506 | 46 | 3,121 | 2,722 | 215 | 9,610 |
| Dexter Reservoir | 31 | 77 | 1,475* | 477 | 31 | 2,097 |
| Diamond Lake | 24,909* | 338 | 61 | 231 | 108 | 25,647 |
| Dog Lake | 2,491* | 15 |  |  |  | 2,506 |
| Dorena Reservoir | 4,028 | 846 | 2,768 | 615 | 61 | 8,318 |
| Drews Reservoir | 15 |  | 216 | 215 |  | 446 |
| East Lake | 9,241* | 77 |  | 61 | 46 | 9,425 |
| Eel Lake | 631* |  |  | 15 |  | 646 |
| E1k Lake (Deschutes) | 323 | 646 |  | 492 |  | 1,461 |
| Elk River | 154* |  |  |  |  | 154 |
| Emigrant Lake | 246 | 123 | 2,891* | 338 | 46 | 3,644 |
| Empire Lake | 108 |  | 15 | 77 | 215* | 415 |
| Fall Creek Reservoir | 1,630 |  | 2,260* | 231 |  | 4,121 |
| Fern Ridge Reservoir | 1,414 | 8,887 | 8,626 | 3,583 | 200 | 22,710 |
| Fish Hawk Lake |  | 61 |  |  |  | 61 |
| Fish Lake (Baker) | 62 |  |  |  |  | 62 |
| Fish Lake (Harney) | 31 |  |  |  |  | 31 |
| Fish Lake (Jackson) | 1,599* |  |  | 107 | 231 | 1,937 |
| Floras Lake | 630* |  | 77 | 31 | 31 | 769 |
| Foster Reservoir | 4,767 | 15 | 6,581 | 2,506 | 138 | 14,007 |
| Fourmile Lake | 231* |  |  |  |  | 231 |
| Frog Lake | 231* |  |  |  |  | 231 |
| Garrison Lake | 46 |  |  |  |  | 46 |
| Gerber Reservoir | 2,153* |  |  |  | 61 | 2,214 |
| Gold Lake | 123 |  |  |  |  | 123 |
| Goose Lake |  |  | 185 | 184 |  | 369 |
| Grande Ronde River | 62 | 15 |  |  |  | 77 |
| Green Peter Reservoir | 2,276 | 154 | 2,599 | 615 | 154 | 5,798 |
| Haag Lake | 4,121 | 523 | 2,722 | 1,045 | 200 | 8,611 |
| Harriet Reservoir | 169* |  |  |  |  | 169 |
| Hart Lake | 92 |  |  |  |  | 92 |
| Haystack Reservoir | 707* | 15 | 154 |  |  | 876 |
| Higgins Reservoir | 215* |  |  |  |  | 215 |
| Hills Creek Reservoir | 1,092 |  | 999 | 415 | 108 | 2,614 |
| Hemlock Lake | 31 |  |  |  |  | 31. |
| Hosmer (Mud) Lake | 31 |  |  |  |  | 31 |


| Body of Water | Fishing | Sailing | Type (Numbe Water Skiing | oating Day <br> Cruising | Other | Total Number of Boating Days |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Howard Prairie Reservoir | 12,639* | 3,275 | 769 | 953 | 569 | 18,205 |
| Hyatt Reservoir | 9,659* |  |  | 1,046 | 31 | 10,736 |
| Illinois River | 292* |  |  |  |  | 292 |
| Indian Lake | 31 |  |  |  |  | 31 |
| Indian Prairie Lake | 369* |  |  |  |  | 369 |
| John Day River | 477* |  | 1,015 | 231 |  | 1,723 |
| Jubilee Impound | 77 |  |  |  |  | 77 |
| Kingsley Reservoir | 584* |  |  |  |  | 584 |
| Klamath Lake | 8,134 | 2,691 | 3,952 | 5,074 | 3,659 | 23,510 |
| Klamath River | 46 |  |  | 62 | 169* | 277 |
| Klaskanine River | 123 |  |  |  |  | 123 |
| Krumbo Reservoir | 46 |  |  |  |  | 46 |
| Lake Billy Chinook | 10,609 | 354 | 8,810 | 3,152 |  | 22,925 |
| Lake Creek | 77 |  |  |  |  | 77 |
| Lake Lytle | 231 | 46 | 615* |  |  | 892 |
| Lake Marie | 354* |  |  |  |  | 354 |
| Lake Oswego | 308 | 1,476 | 12,793 | 11,255 | 1,553 | 27,385 |
| Lake 0-Woods | 2,276 | 492 | 5,489 | 5,289 | 215 | 13,761 |
| Lake Simtustus | 969* |  |  | 46 |  | 1,015 |
| Lemolo Reservoir | 969* |  | 354 | 108 |  | 1,431 |
| Little Cultus Lake | 92 |  |  | 138* |  | 230 |
| Little Lava | 46 |  |  |  |  | 46 |
| Little Nestucca | 92 |  |  |  |  | 92 |
| Lofton Reservoir | 46 | 31 |  |  |  | 77 |
| Long Tom River | 15 |  |  |  |  | 15 |
| Lookout Point Reservoir | 61 |  |  |  | 31 | 92 |
| Loon Lake | 876 |  | 1,476 | 369 | 938 | 3,659 |
| Lost Lake (Douglas) | 31 |  |  |  |  | 31 |
| Lost Lake (Hood River) | 246* |  |  |  | 15 | 261 |
| Lost Lake (Linn) | 554* |  |  |  |  | 554 |
| Lost River | 31 |  |  |  | 108 | 139 |
| Magone Lake | 92 |  |  |  |  | 92 |
| Malheur Reservoir | 1,584* |  | 61 |  | 31 | 1,676 |
| Mann Lake | 215* |  |  |  |  | 215 |
| McKay Reservoir | 461 | 185 | 1,015* | 277 |  | 1,938 |
| McKenzie River | 1,399* |  |  | 15 | 231 | 1,645 |
| Mercer Lake | 1,768 | 154 | 3,582 | 2,076 |  | 7,580 |
| Metolias River | 108 |  | 77 | 61 |  | 246 |
| Miller Lake | 15 |  |  |  |  | 15 |
| Miller Lake | 1,584* |  |  | 231 |  | 1,815 |
| Millicoma River | 77 |  |  | 77 |  | 154 |
| Monon Lake | 15 |  |  |  |  | 15 |
| Morgan Lake | 354* |  |  |  |  | 354 |
| Munsel Lake | 477* |  |  |  |  | 477 |
| Mecanicum River | 431* |  |  |  |  | 431 |
| Neacoxie Lake | 62 |  |  |  |  | 62 |
| Nehalem Bay | 3,183* |  | 31 | 123 | 2,353 | 5,690 |
| Nehalem River | 8,272* |  |  | 1,123 | 631 | 10,026 |
| Nestucca Bay | 1,276* |  |  |  | 185 | 1,461 |


| Body of Water | Fishing | $\begin{array}{r} \text { Act } \\ \text { Sailing } \end{array}$ | Type (Number Water Skiing | ating Days <br> Cruising | Other | Total Number of Boating Days |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nestucca River | 6,504* |  | 62 | 784 | 415 | 7,765 |
| Netarts Bay | 2,722* |  |  | 138 | 2,276 | 5,136 |
| North Fork John Day |  |  | 46 | 46 |  | 92 |
| North Fork Reservoir | 2,722* |  | 753 | 646 | 138 | 4,259 |
| North Santiam River | 215* |  | 31 | 46 |  | 292 |
| North Tenmile Lake | 292* |  | 46 | 15 |  | 353 |
| North Twin Lake | 338* |  |  |  |  | 338 |
| Ochoco Reservoir | 7,442* |  | 77 | 184 |  | 7,703 |
| Odell Lake | 10,594* | 738 | 1,199 | 800 |  | 13,331 |
| Olallie Lake | 261* |  |  |  |  | 261 |
| Olive Lake (Grant) | 108 |  |  |  |  | 108 |
| Owyhee Reservoir | 3,982* |  | 1,215 | 492 | 92 | 5,781 |
| Pacific Ocean | 101,481* | 2,599 | 1,107 | 1,876 | 3,307 | 110,370 |
| Paulina Lake | 4,659* | 77 | 46 | 200 |  | 4,982 |
| Penland Prairie Impound | 123 |  |  |  |  | 123 |
| Phillips Reservoir | 3,121* | 31 | 815 | 185 |  | 4,152 |
| Pine Hollow Reservoir | 554 |  | 1,537* |  |  | 2,091 |
| Powder River | 92 |  |  |  |  | 92 |
| Prineville Reservoir | 13,316* | 15 | 6,243 | 1,707 | 169 | 21,450 |
| Rock Creek Reservoir | 892* |  |  | 31 | 15 | 938 |
| Rogue River | 24,279* |  | 2,706 | 1,107 | 3,091 | 31,183 |
| Roslyn Lake | 169* | 31 |  |  |  | 200 |
| Round Butte Reservoir | 4,351 |  | 5,535 | 1,830 | 1,368 | 13,084 |
| Salmon River Bay | 907* | 31 |  |  | 31 | 969 |
| Sand Lake | 154* |  |  |  |  | 154 |
| Sandy River | 354* |  |  |  |  | 354 |
| Santiam River | 123* |  |  | 61 |  | 184 |
| Scoggins Lake | 1,030 | 261 | 1,676* | 261 |  | 3,228 |
| Selmac Lake | 800* |  |  |  |  | 800 |
| Siletz Bay | 646* |  |  |  |  | 646 |
| Siletz River | 17,267* |  | 15 | 646 | 1,691 | 19,619 |
| Siltcoos Lake | 15,545* | 77 | 2,045 | 3,306 | 61 | 21,034 |
| Siuslaw Bay | 661* |  |  | 31 | 31 | 723 |
| Siuslaw River | 13,946* |  | 138 | 200 | 600 | 14,884 |
| Skipanon River | 999* |  |  |  |  | 999 |
| Smith River | 907* |  |  | 31 | 31 | 969 |
| Smith River Reservoir | 369* |  |  |  |  | 369 |
| Snake River | 6,627* | 108 | 2,537 | 938 | 415 | 10,625 |
| South Coquille River | 123 |  |  |  | 15 | 138 |
| South Santiam River | 477 |  |  | 846* | 123 | 1,446 |
| South Tenmile Lake | 12,516 | 584 | 7,196 | 8,657 | 9,764 | 38,717 |
| South Twin Lake | 846* |  |  |  |  | 846 |
| South Umpqua River | 477 |  |  |  | 1,507* | 1,984 |
| Sparks Lake | 92 |  |  |  |  | 92 |
| Sprague Lake |  |  |  |  | 154 | 154 |
| Squaw Lake | 46 |  |  |  |  | 46 |
| Summit Lake | 215* |  | 15 | 15 |  | 245 |
| Sunset Lake | 400* |  |  |  |  | 400 |


| Body of Water | Fishing | $\begin{array}{r} \text { Act } \\ \text { Sailing } \end{array}$ | Type (Number Water Skilng | oating Day <br> Cruising | Other | Total Number of Boating Days |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Suttle Lake | 2,645 | 46 | 400 | 323 | 108 | 3,522 |
| Sutton Lake | 46 |  |  |  |  | 46 |
| Tahkentich Lake | 4,551* |  | 31 | 31 |  | 4,613 |
| Taylor Lake | 77 |  |  |  |  | 77 |
| Thief Valley Reservoir | 354* |  | 138 | 77 | 61 | 630 |
| Thompson Lake | 907* |  |  |  | 62 | 969 |
| Three Creeks Lake | 261* |  |  |  |  | 261 |
| Tillamook Bay | 19,097* |  | 400 | 661 | 3,798 | 23,956 |
| Timothy Lake | 1,230* | 77 | 15 | 92 |  | 1,414 |
| Tokatee Reservoir | 384* | 92 |  |  |  | 476 |
| Trail Bridge Reservoir | 123 |  |  |  |  | 123 |
| Trask River | 1,983* |  |  | 154 |  | 2,137 |
| Triangle Lake | 1,614 |  | 3,290* | 415 | 31. | 5,350 |
| Trillium Lake | 431* |  |  |  |  | 431 |
| Tualatin River | 354 |  |  | 354 | 307 | 1,015 |
| Umpqua River | 19,743* |  | 308 | 584 | 2,783 | 23,418 |
| Umpqua River N Fork | 676 |  | 1,384* |  |  | 2,060 |
| Unity Reservoir | 1,076* |  | 600 | 92 | 92 | 1,860 |
| Valsetz Lake | 123 |  |  |  |  | 123 |
| Waldo Lake | 169* | 46 |  | 31 |  | 246 |
| Wallowa Lake | 3,398* |  | 2,522 | 584 |  | 6,504 |
| Walton Lake | 523* |  |  |  |  | 523 |
| Warm Springs Reservoir | 723* |  | 154 |  |  | 877 |
| Wickiup Reservoir | 11,670* |  | 1,061 | 538 | 46 | 13,315 |
| Willamette River | 139,198* | 9,656 | 54,415 | 47,635 | 8,380 | 259,284 |
| Williamson River | 553* |  |  |  |  | 553 |
| Willow Creek Reservoir | 1,307* | 154 | 861 | 15 |  | 2,337 |
| Wilson River | 2,076* |  |  |  |  | 2,076 |
| Winchester Bay | 7,503* |  |  | 108 | 92 | 7,703 |
| Withers Reservoir | 46 |  |  |  |  | 46 |
| Woahink Lake | 461 |  | 738 | 692 | 154 | 2,045 |
| Wood River | 200* |  |  |  |  | 200 |
| Yachats River | 77 |  |  |  |  | 77 |
| Yamhill River | 861* |  |  | 31 | 31 | 923 |
| Yaquina Bay | 11,301* | 323 | 338 | 261 | 969 | 13,192 |
| Yaquina River | 1,092* |  | 46 |  |  | 1,138 |
| Yellow Jacket Impound | 123 |  |  |  |  | 123 |
| Multiple Response | 274,630 | 6,366 | 38,501 | 51,863 | 16,237 | 387,597 |
| Non-Response | 28,645 | 1,507 | 6,904 | 4,582 | 2,445 | 44,083 |
| Total | 1,116,986 | 72,266 | 282,698 | 256,855 | 96,103 | 1,824,908 |

Oregon Pleasure Boat Owners Experiencing Problems on Oregon Waterways During the 1975 Boating Season by Type of Problem and Body of Water.

| Body of Water | Type of Problem (Number of Boat Owners) |  |  |  | Total Number of Reported Problems | Total Number of Boating Days at Body of Water |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ```Water``` | OverCrowding | $\begin{aligned} & \text { Sanitary } \\ & \text { Facilities } \end{aligned}$ | Lack of Law Enforcement |  |  |
| Agate Reservoir |  | 15 | 15 | 31 | 61 | 123 |
| Agency Lake | 31 | 15 |  |  | 46 | 707 |
| Alsea Bay | 15 | 77 | 46 | 31 | 169 | 5,966 |
| Alsea River | 15 | 62 | 92 | 31 | 200 | 13,823 |
| Ana Reservoir |  |  | 15 | 15 | 30 | 784 |
| Antelope Flat Reservoir |  |  |  |  |  | 123 |
| Badger Lake |  |  |  |  |  | 123 |
| Balm Creek |  |  |  |  |  | 31 |
| Beaver Creek |  |  |  |  |  | 77 |
| Beulah Reservoir |  | 15 | 46 |  | 61 | 1,030 |
| Big Cliff Reservoir |  |  |  |  |  | 31 |
| Big Lake |  |  | 15 | 15 | 30 | 554 |
| Big Lava Lake |  |  | 15 | 31 | 46 | 1,261 |
| Blue Lake |  |  |  |  |  | 8,564 |
| Blue River Reservoir |  |  |  |  |  | 477 |
| Bradley Lake |  |  |  |  |  | 123 |
| Bull Prairie Impound |  |  |  |  |  | 138 |
| Bully Creek Reservoir |  | 15 |  | 15 | 30 | 185 |
| Campbell Lake |  |  |  |  |  | 707 |
| Camp S. Lake |  |  |  |  |  | 46 |
| Canyon Cr Meadows Res |  |  |  |  |  | 15 |
| Cape Meares Lake |  | 15 | 15 |  | 30 | 246 |
| Carmen Reservoir | 15 | 15 | 15 | 15 | 60 | 400 |
| Carter Lake |  |  |  |  |  | 630 |
| Chetco Bay | 154 | 553 | 185 | 215 | 1,107 | 6,627 |
| Chickahominy Reservoir | 31 | 15 | 15 | 15 | 76 | 554 |
| Clackamas River | 15 | 123 | 31 |  | 169 | 7,580 |
| Clatskanie River |  |  |  |  |  | 108 |
| Clear Lake |  |  |  |  |  | 1,122 |
| Clear Lake (Linn) |  | 15 |  |  | 15 | 492 |
| Cleawox Lake |  |  | 15 |  | 15 | 15 |
| Coffenbury Lake |  | 15 |  |  | 15 | 277 |
| Cold Springs Reservoir |  |  |  |  |  | 507 |
| Collard Lake |  |  |  |  |  | 661 |
| Columbia River | 846 | 2,168 | 738 | 799 | 4,551 | 201,025 |
| Cooper Creek Reservoir |  | 154 |  | 169 | 323 | 4,843 |
| Coos Bay | 200 | 184 | 46 | 62 | 492 | 9,226 |
| Coos River | 92 | 31 | 31 | 15 | 169 | 2,583 |
| Coquille River | 31 | 15 | 31 |  | 77 | 4,982 |
| Coquille River Middle | 15 |  | 15 |  | 30 | 738 |
| Coquille River N Fork |  |  |  |  |  | 31 |
| Cottage Grove Reservoir | 15 | 31 | 46 | 31 | 123 | 4,228 |
| Cottonwood Mows Lake |  | 15 |  |  | 15 | 92 |
| Cougar Reservoir |  | 31 | 15 | 31 | 77 | 1,661 |
| Crane Prairie Reservoir | 15 | 154 | 154 | 92 | 415 | 18,051 |


| Body of Water | Type of Problem (Number of Boat Owners) |  |  |  |  | Total Number of Boating Days at Body of Water |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Water } \\ \text { Pollution } \end{gathered}$ | OverCrowding | Sanitary <br> Facilities | Lack of Law Enforcement | Total Number of Reported Problems |  |
| Crescent Lake | 15 | 46 | 15 | 31 | 107 | 8,026 |
| Croft Lake |  |  |  |  |  | 246 |
| Crump Lake |  |  |  |  |  | 46 |
| Cullaby Lake | 15 |  |  | 15 | 30 | 1,645 |
| Cultus Lake |  | 31 | 15 | 15 | 61. | 2,691 |
| Davis Lake |  |  |  |  |  | 323 |
| Davis Lake (Deschutes) |  |  |  |  |  | 861 |
| Deadhorse Lake | 15 | 15 | 15 | 15 | 60 | 969 |
| Delintment Lake |  |  |  |  |  | 261 |
| Depoe Bay | 31 | 323 | 154 | 31 | 539 | 3,659 |
| Deschutes River |  | 46 | 31 | 15 | 92 | 9,041 |
| Detroit Reservoir | 108 | 384 | 62 | 261 | 815 | 33,673 |
| Devils Lake (Deschutes) |  |  |  |  |  | 185 |
| Devils Lake (Lincoln) | 31 | 15 | 15 | 31 | 92 | 9,610 |
| Dexter Reservoir |  | 31 |  | 77 | 108 | 2,091 |
| Diamond Lake | 277 | 630 | 46 | 231 | 1,184 | 25,647 |
| Dog Lake |  |  |  |  |  | 2,506 |
| Dorena Reservoir |  | 92 | 31 | 46 | 169 | 8,318 |
| Drews Reservoir |  |  |  |  |  | 446 |
| Duncan Reservoir |  |  | 15 |  | 15 | 0 |
| East Lake | 31 | 123 | 46 | 108 | 308 | 9,425 |
| Eel Lake |  |  |  |  |  | 646 |
| Elk Lake (Deschutes) |  |  |  |  |  | 1,461 |
| Elk River |  |  |  |  |  | 154 |
| Emigrant Lake | 108 | 62 | 15 | 123 | 308 | 3,644 |
| Empire Lake |  |  |  | 15 | 15 | 415 |
| Fall Creek Reservoir | 46 | 200 | 31 | 169 | 446 | 4,121 |
| Fern Ridge Reservoir | 138 | 261 | 62 | 308 | 769 | 22,710 |
| Fish Hawk Lake |  |  |  | 15 | 15 | 62 |
| Fish Lake (Baker) |  |  |  |  |  | 62 |
| Fish Lake (Harney) |  |  |  |  |  | 31 |
| Fish Lake (Jackson) |  | 15 |  |  | 15 | 1,937 |
| Floras Lake |  |  |  |  |  | 769 |
| Foster Reservoir | 15 | 308 | 31 | 123 | 477 | 14,007 |
| Fourmile Lake |  |  |  |  |  | 231 |
| Frog Lake |  |  | 15 |  | 15 | 231 |
| Garrison Lake | 15 | 15 |  | 15 | 45 | 46 |
| Gerber Reservoir | 15 |  | 15 |  | 30 | 2,214 |
| Gold Lake |  |  |  |  |  | 123 |
| Goose Lake |  |  |  |  |  | 369 |
| Grande Ronde River |  |  |  |  |  | 77 |
| Green Peter Reservoir | 46 | 31 | 77 | 108 | 262 | 5,797 |
| Haag Lake | 15 | 369 | 215 | 77 | 676 | 8,610 |
| Harriet Reservoir |  |  | 15 |  | 15 | 169 |
| Hart Lake |  |  |  |  |  | 92 |
| Haystack Reservoir |  | 15 | 31 | 15 | 61 | 876 |
| Hemlock Lake |  |  |  |  |  | 31 |
| Higgins Reservoir |  |  |  |  |  | 215 |
| Hills Creek Reservoir | 15 | 15 | 15 | 15 | 60 | 2,614 |
| Hosmer (Mud) Lake |  |  |  |  |  | 31 |


| Body of Water | Type of Problem (Number of Boat Owners) |  |  |  | Total Number of Reported Problems | Total Number of Boating Days at Body of Water |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Water Pollution | OverCrowding | $\begin{gathered} \text { Sanitary } \\ \text { Facilities } \end{gathered}$ | Lack of Law Enforcement |  |  |
| Howard Prairie Reservoir |  | 169 | 31 | 77 | 277 | 18,205 |
| Hyatt Reservoir | 15 | 92 | 123 | 108 | 338 | 10,732 |
| Illinois River |  |  |  |  |  | 292 |
| Indian Lake |  |  |  |  |  | 31 |
| Indian Prairie Lake |  |  | 15 |  | 15 | 369 |
| John Day River |  | 46 |  |  | 46 | 1,722 |
| Jubilee Impound |  |  |  |  |  | 77 |
| Kingsley Reservoir |  |  |  |  |  | 584 |
| Klamath Lake | 477 | 15 | 188 | 154 | 754 | 23,510 |
| Klamath River | 15 |  | 15 | 15 | 45 | 277 |
| Klaskanine River |  |  |  |  |  | 123 |
| Krumbo Reservoir |  |  |  |  |  | 46 |
| Lake Billy Chinook | 123 | 307 | 46 | 154 | 630 | 22,926 |
| Lake Creek | 15 |  |  |  | 15 | 77 |
| Lake Lytle | 15 |  | 15 | 15 | 45 | 892 |
| Lake Marie |  |  |  |  |  | 354 |
| Lake Oswego | 46 | 108 | 15 |  | 169 | 27,384 |
| Lake 0-Woods |  | 138 | 15 | 169 | 322 | 13,762 |
| Lake Simtustus |  |  |  | 15 | 15 | 1,015 |
| Lemolo Reservoir |  | 15 | 15 |  | 30 | 1,430 |
| Little Cultus Lake |  |  |  |  |  | 231 |
| Little Lava |  |  |  |  |  | 46 |
| Little Nestucca |  |  |  |  |  | 92 |
| Lofton Reservoir |  |  |  |  |  | 77 |
| Long Tom River |  |  |  |  |  | 15 |
| Lookout Point Reservoir | 15 |  | 15 | 15 | 45 | 92 |
| Loon Lake | 15 | 92 | 15 | 46 | 168 | 3,659 |
| Lost Lake (Douglas) |  |  |  |  |  | 31 |
| Lost Lake (Hood River) |  |  |  |  |  | 261 |
| Lost Lake (Linn) |  | 15 | 15 |  | 30 | 554 |
| Lost River |  |  |  |  |  | 138 |
| Magone Lake |  |  | 15 |  | 15 | 92 |
| Malheur Reservoir |  |  | 92 |  | 92 | 1,676 |
| Mann Lake |  |  | 15 |  | 15 | 215 |
| McKay Reservoir | 31 |  | 62 | 15 | 108 | 1,937 |
| McKenzie River | 15 | 15 | 15 | 15 | 60 | 1,645 |
| Mercer Lake |  | 15 | 15 | 31 | 61 | 7,580 |
| Metolias River |  |  |  |  |  | 246 |
| Miller Lake |  |  |  |  |  | 15 |
| Miller Lake |  | 15 |  |  | 15 | 1,814 |
| Millicoma River | 15 |  |  |  | 15 | 154 |
| Monon Lake |  |  |  |  |  | 15 |
| Morgan Lake |  |  |  |  |  | 354 |
| Munsel Lake |  |  |  |  |  | 477 |
| Mecanicum River | 15 |  |  |  | 15 | 431 |
| Neacoxie Lake |  |  | 15 |  | 15 | 62 |
| Nehalem Bay |  | 61 | 31 | 31 | 123 | 5,689 |
| Nehalem River | 31 | 77 | 61 | 77 | 246 | 10,025 |
| Nestucca Bay |  |  | 15 | 15 | 30 | 1,461 |


| Body of Water | Type of Problem (Number of Boat Owners) |  |  |  |  | Total Number of Boating Days at Body of Water |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Water Pollution | OverCrowding | Sanitary <br> Facilities | Lack of Law Enforcement | of Reported Problems |  |
| Nestucca River | 31 | 31 | 46 | 46 | 154 | 7,765 |
| Netarts Bay |  |  | 15 | 46 | 61. | 5,136 |
| North Fork John Day |  |  |  |  |  | 92 |
| North Fork Reservoir | 15 | 77 |  | 77 | 169 | 4,259 |
| North Santiam River | 15 |  |  | 15 | 30 | 292 |
| North Tenmile Lake |  |  | 15 | 15 | 30 | 354 |
| North Twin Lake | 15 |  | 31 |  | 46 | 338 |
| Ochoco Reservoir | 31 | 108 |  | 61 | 200 | 7,703 |
| Ode11 Lake | 15 | 31 | 31 |  | 77 | 13,331 |
| 0lallie Lake |  |  |  |  |  | 261 |
| Olive Lake (Grant) |  | 15 | 31 | 15 | 61 | 108 |
| Olive Lake (Union) |  |  | 15 |  | 15 | 0 |
| Owyhee Reservoir | 15 | 15 | 15 | 31 | 76 | 5,781 |
| Pacific Ocean | 46 | 477 | 261 | 92 | 876 | 110,368 |
| Paulina Lake | 15 | 15 | 15 | 46 | 91 | 4,982 |
| Penland Prairie Impound |  |  |  |  |  | 123 |
| Phillips Reservoir |  | 92 |  | 46 | 138 | 4,152 |
| Pine Hollow Reservoir |  |  | 15 |  | 15 | 2,091 |
| Powder River | 15 | 62 | 15 | 31 | 1.23 | 92 |
| Prineville Reservoir | 31 | 184 | 138 | 185 | 538 | 21,449 |
| Rock Creek Reservoir | 15 | 31 | 15 |  | 61 | 938 |
| Rogue River | 77 | 292 | 92 | 108 | 569 | 31,182 |
| Roslyn Lake |  |  |  |  |  | 200 |
| Round Butte Reservoir | 15 | 215 | 15 | 46 | 291 | 13,085 |
| Salmon River Bay | 15 |  |  |  | 15 | 969 |
| Sand Lake |  |  | 15 |  | 15 | 154 |
| Sandy River |  |  |  |  |  | 354 |
| Santiam River |  |  |  |  |  | 185 |
| Scoggins Lake | 15 | 108 | 77 | 15 | 215 | 3,229 |
| Selmac Lake |  |  |  |  |  | 800 |
| Siletz Bay |  |  | 15 |  | 15 | 646 |
| Siletz River | 46 | 31 | 31 | 77 | 185 | 19,620 |
| Siltcoos Lake | 46 | 62 | 92 | 46 | 246 | 21,034 |
| Siuslaw Bay | 31 | 31 |  | 31 | 93 | 723 |
| Siuslaw River | 215 | 62 | 77 | 77 | 431 | 14,884 |
| Skipanon River |  | 15 | 31 |  | 46 | 999 |
| Smith River | 31 | 15 | 15 |  | 61 | 969 |
| Smith River Reservoir |  | 15 | 15 | 15 | 45 | 369 |
| Snake River | 92 | 108 | 92 | 92 | 384 | 10,625 |
| South Coquille River |  |  |  |  |  | 138 |
| South Santiam River |  |  |  |  |  | 1,445 |
| South Tenmile Lake | 108 | 261 | 31 | 92 | 492 | 38,717 |
| South Twin Lake |  | 31 |  | 15 | 46 | 846 |
| South Umpqua River | 15 |  | 15 | 15 | 45 | 1,983 |
| Sparks Lake |  |  |  |  |  | 92 |
| Sprague Lake |  |  |  |  |  | 154 |
| Squaw Lake |  |  |  |  |  | 46 |
| Summit Lake |  |  | 15 |  | 15 | 246 |
| Sunset Lake |  |  |  |  |  | 400 |


| Body of Water | Type of Problem (Number of Boat Owners) |  |  |  | Total Number of Reported Problems | Total Number of Boating Days at <br> Body of Water |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Water Pollution | OverCrowding | Sanitary <br> Facilities | Lack of Law Enforcement |  |  |
| Suttle Lake | 15 | 61 | 77 | 62 | 215 | 3,521 |
| Sutton Lake |  |  |  |  |  | 46 |
| Tahkentich Lake |  | 61 | 77 | 31 | 169 | 4,613 |
| Taylor Lake |  |  |  |  |  | 77 |
| Thief Valley Reservoir | 15 |  | 46 |  | 61 | 630 |
| Thompson Lake | 15 | 15 | 15 | 15 | 60 | 969 |
| Three Creeks Lake |  |  | 15 |  | 15 | 261 |
| Tillamook Bay | 92 | 1,246 | 261 | 185 | 1,784 | 23,956 |
| Timothy Lake |  |  |  | 15 | 15 | 1,415 |
| Tokatee Reservoir |  | 15 | 15 |  | 30 | 477 |
| Trail Bridge Reservoir |  |  |  |  |  | 123 |
| Trask River | 15 | 15 |  | 15 | 45 | 2,137 |
| Triangle Lake |  | 77 | 15 | 92 | 184 | 5,351 |
| Trillium Lake |  |  |  |  |  | 431 |
| Tualatin River | 62 |  |  |  | 62 | 1,015 |
| Umpqua River | 92 | 92 | 138 | 77 | 399 | 23,417 |
| Umpqua River N Fork |  |  |  |  |  | 2,060 |
| Unity Reservoir | 15 | 62 | 46 | 31 | 154 | 1,860 |
| Valsetz Lake |  |  |  |  |  | 123 |
| Waldo Lake |  |  |  |  |  | 246 |
| Wallowa Lake |  | 62 | 46 | 15 | 123 | 6,504 |
| Walton Lake |  |  |  |  |  | 523 |
| Warm Springs Reservoir |  |  | 46 |  | 46 | 876 |
| Wickiup Reservoir |  | 92 | 46 | 138 | 276 | 13,316 |
| Willamette River | 1,030 | 2,783 | 1,184 | 1,522 | 6,519 | 259,284 |
| Williamson River |  |  |  |  |  | 554 |
| Willow Creek Reservoir |  | 46 | 15 | 15 | 76 | 2,337 |
| Wilson River | 46 |  |  |  | 46 | 2,076 |
| Winchester Bay | 92 | 231 | 154 | 77 | 554 | 7,703 |
| Withers Reservoir |  |  |  |  |  | 46 |
| Woahink Lake |  |  |  |  |  | 2,045 |
| Wood River |  |  |  |  |  | 200 |
| Yachats River |  | 15 |  |  | 15 | 77 |
| Yamhill River | 15 |  |  |  | 15 | 923 |
| Yaquina Bay | 169 | 1,030 | 523 | 200 | 1,922 | 13,193 |
| Yaquina River | 62 | 77 | 15 |  | 154 | 1,138 |
| Yellow Jacket Impound |  |  | 15 |  | 15 | 123 |
| Youngs River |  |  | 15 | 15 | 30 | 0 |
| Multiple Response | 200 | 661 | 185 | 400 | 1,446 | 387,597 |
| Non-Response |  |  |  |  |  | 44,083 |
| Missing Observation | 20,573 | 15,545 | 20,527 | 19,773 | 76,418 |  |
| Total | 26,741 | 32,502 | 28,103 | 28,437 | 115,783 | 1,824,908 |


[^0]:    TIn this report a "registered" boat refers to a vessel which has been issued a certificate of number by the Oregon State Marine Board. A11 motorized pleasure vessels and sailboats 12 feet and over are required to obtain a certificate of number.

[^1]:    1In this report a "registered" boat refers to 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.

[^2]:    ${ }^{(1)}$ Registration data for boats with motors of 8 h.p. or more.
    ${ }^{(2)}$ Registration of boats with motors of 3.5 h.p. or more, and sailboats 12 feet and over.
    ${ }^{(3)}$ All motorized pleasure boats, and sailboats 12 feet and over.

[^3]:    *Oregon registered boats only. This table does not account for boats used in Oregon which are registered in other states or for Oregon boats which are not registered.

[^4]:    1 Source: Accident statistics compiled by the Oregon State Marine Board for 1975.

