

Terms of Reference, Design Principles, and Recommendations: Revised Boating Accident Report (BAR) Form
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# Terms of Reference, Design Principles, and Recommendations: Revised Boating Accident Report (BAR) Form 

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## Introduction

The Coast Guard Auxiliary Association (CGAuxA) was awarded a grant from the United States Coast Guard (Coast Guard) to examine and recommend appropriate changes to the present Boating Accident Report (BAR) Form (CG-3865 [Rev. 12-06], Office of Management and Budget (OMB) No. 16250003). The latest version of the present BAR form ${ }^{1}$ is reproduced in Appendix A. The new BAR form developed as part of this effort is
 reproduced in Appendix B. This report explains the terms of reference, the principles used in the design of the recommended form, and recommendations for further work to improve the coverage and accuracy of recreational boating accident reporting.

## Summary

We developed a new and easier-to-use BAR form. The recommended form:

- Captures the requirements now contained in the Code of Federal Regulations (CFR),
- Incorporates many of the suggestions offered by key partners such as members of National Association of State Boating Law Administrators (NASBLA), ${ }^{2}$ the National Boating Safety Advisory Council (NBSAC), and the United States Power Squadrons (USPS ${ }^{\circledR}$ ) who read this report in draft,
- Is based on proven design principles to increase form readability and userfriendliness,
- Reflects lessons learned in the usability test, and
- Is slightly longer (largely because of increased white space and a more organized and consistent layout), but significantly easier to read and understand than the present form.

[^0]This recommended form (after incorporation of Coast Guard comments) will be submitted for public comment and later revision by the Coast Guard.

## Recommended Way Forward

We also made several suggestions for further work as part of the Coast Guard's ongoing efforts to improve the coverage, validity, and accuracy of recreational boating accident statistics. We believe these suggestions have merit and, moreover, that it is appropriate to act on these in a timely fashion. These are discussed in detail in the report. These recommended topics for more thorough examination include:

- Review the existing and projected uses of boating accident data and define the essential elements of information (EEIs) based on these uses. (This and following recommendations might require modifications to the code of federal regulations [CFR].)
- Investigate the suitability of a "two-tier" system in which the operator/owner of a recreational boat involved in a reportable accident would complete a much simplified form and state officials could follow up on all or a statistical sample of these accidents to provide required data to the Coast Guard. Such a system might increase the accuracy of reporting and lower the non-response rate.
- Consider the use of so-called "smart forms" that could be filled out on a computer via the Internet. Smart forms reduce the burden of form preparation and would probably increase the accuracy of the completed form. This idea has merit whether or not a two-tier system is adopted.
- Consider providing forms in other languages besides English to assist non-native speakers in the event that it is decided to retain the requirement that the operator/owner fill in the BAR form.
- Several possible ideas are identified in the report designed to decrease the nonresponse rate for completing BAR forms for otherwise reportable accidents, including those related to education, incentives for timely completion, and more traditional responses.


## Background

By federal law (33 CFR §173.55), a BAR form must be submitted by the operator (owner if the operator cannot) whenever a recreational vessel has a "reportable" accident. ${ }^{3}$ The Coast Guard and others use accident data for several purposes. These data are used for (among other things):

- Preparation of annual statistical summaries of these accidents to identify major causes of accidents and trends in accidents, injuries, and fatalities.

[^1]- Identification of accidents to be investigated in more detail by state or federal authorities to learn root causes and contributing factors.
- Identification of areas (and times) of high accident frequency so that the efficiency of enforcement or search and rescue efforts can be increased.
- Estimating costs and benefits of various strategies to reduce injuries or accidents.

Several studies show that nearly all fatal recreational boating accidents are reported, but less severe accidents are underreported. Underreporting is particularly common for accidents that involve minor injuries or property damage only (PDO). ${ }^{4}$ This underreporting is problematic for several reasons. Perhaps most important, underreporting means that the social costs of these accidents are not correctly estimated. In consequence, initiatives to reduce recreational boating accidents may likewise be undervalued and/or misdirected.

The Coast Guard and other organizations, notably NASBLA, have worked to increase response rates and to improve the BAR form to ensure collection of useful and accurate data.

The BAR form has been revised as new recreational boating safety issues have emerged and/or new uses for the data have been developed. Although well intentioned, these changes were not always "user friendly." ${ }^{5}$ As noted by Design Research Engineering, a firm that offered many useful comments ${ }^{6}$ on the BAR form design:
"We recognize that revising the form is not an easy task. Over time, the form's contents evolved like a coral reef, accumulating layer-upon-layer of information to address dynamic issues in boating safety. We believe that revising the form is made all the more arduous because it has attempted historically to meet the diverse needs and knowledge level (sic) of two populations that complete the form-vessel operators/owners and law enforcement officers. In trying to meet the needs of both, neither is well served."

The Coast Guard, NASBLA, and other partners have a continuing long-term objective to increase the coverage, accuracy, and utility of recreational boating accident data. One important first step in this process is to ensure that the BAR form is easy to understand and complete. ${ }^{7}$ This alone is unlikely to eliminate underreporting, but an easy-to-use form is certain to help.

[^2]As noted above, the Coast Guard awarded a grant to CGAuxA to assist in this process. CGAuxA worked with a nationally known expert in forms design, Dr. Deborah J. Mayhew, to recommend changes to the present BAR form. This report provides the terms of reference used in developing the form and the main principles used in forms redesign generally and for this form in particular. (We believe it advisable to modify these terms of reference for future forms-design efforts. For the present, however, it is necessary to make changes consistent with existing laws, regulations, and Coast Guard direction.) This report summarizes the initial redesign efforts. As noted above, the latest version of the present BAR form is given in Appendix A and our recommended revision in Appendix B. Removing these and placing them side-by-side will enable the reader to see the differences. The main body of this report explains why these changes were made.

## Possible benefits of a "user friendly" form

One intended benefit of an easy-to-read and understandable form is that more accidents will be reported. Boaters have a variety of reasons for failing to fill out forms including fears of self-incrimination, absence of perceived benefits, and lack of knowledge that reporting is mandatory for certain accidents. ${ }^{8}$ Included among these reasons is the complexity and time required to complete the present BAR form. A userfriendly form is likely to reduce the non-response rate. Forms should be easy to read, easy to understand, and easy to complete. ${ }^{9}$ Another potential benefit is that a userfriendly form is likely to increase the accuracy of responses. Several industries
 have discovered this and make a clear "business case" for use of plain English. ${ }^{10}$ Several US Government agencies (e.g., the Securities and Exchange Commission) require that forms and other documents be written in plain English. ${ }^{11}$ The Office of Management and Budget (OMB) Standards and Guidelines for Statistical

[^3]surveys ${ }^{12}$ notes that "agencies should clearly and correctly present all information products in plain language geared to their intended audiences." Indeed, under 5 CFR $\S 1320.9$ (Agency certifications for proposed collections of information) the Senior Official of an agency is required to certify that the form "is written using plain, coherent, and unambiguous terminology and is understandable to those who are to respond."13 Thus, use of plain English and intelligent forms design are not only good practice, but also required by regulation.

## Who submits the BAR form?

Under present regulations ( $33 \mathrm{CFR} \S 173.55$ (a) and (c)) the operator of the vessel (owner if the operator cannot complete the form) is required to submit the BAR form. Of course, the operator/owner might consult with authorities or other knowledgeable persons in filling out the form. ${ }^{14}$ And state or federal investigators sometimes complete these forms, particularly (though not exclusively) in cases where the owner/operator is deceased or missing. (State authorities may also complete a separate, more detailed form from which the federally-required data can be extracted.) However, per Coast Guard direction we developed the form on the assumption that the operator/owner must fill out the form without professional assistance. Many State personnel believe that trained accident investigators should complete the BAR form. This is because they believe that the accuracy of the data now collected from these forms is poor and that the only sources of reliable accident data are accident reports completed by trained accident investigators. This question is left for another day.

Why care who fills out the form? First, it determines the target reading level of the form. As noted by plain-language advocate William H. DuBay: ${ }^{15}$
"We should remember that the reading level of the average adult in our country is the $7^{\text {th }}$ grade. Because most people read comfortably two or more grades below their ability, experts recommend writing documents intended for the public at the $5^{\text {th }}$-grade level. The most popular novelists write at the $6^{\text {th }}$ and $7^{\text {th }}$ grade levels."

[^4](For your reference, this report is written at approximately the $12^{\text {th }}$-grade level!)
Second, the fact that the operator/owner submits ${ }^{16}$ the form also means that we need to avoid unfamiliar jargon. The person filling out the form must be able to understand and be able to answer the question(s) in order to provide accurate answers. According to some state officials, the accuracy of some elements of prior data are questionable; this belief is one of the reasons why some state personnel wish to have the form completed by trained investigators-or at least personnel more familiar with the form.

Even if the system is changed in the future so that only trained investigators complete and submit the BAR form, it is still important to ensure that the form is readily understood and in "plain English."

## What information is required to be on the BAR form?

In the longer term, this is an important question. For example:

- It might be efficient to have only a very short BAR form, limiting the questions to who, what, where, and when, assuming that state or other investigators will follow-up and complete a more thorough analysis on this or a statistically chosen sample of accidents with similar characteristics. ${ }^{17}$ Use of two separate forms for accident reporting has been suggested by NASBLA and others. Several states now have two different BAR forms, one to be used by the operator/owner
 and another to be used by the accident investigator. (However, this differs from a complete two-tier system because the State uses data from the investigator's form to provide data on reportable accidents.)

[^5]- Design Research Engineering (2007) suggested deletion of potentially incriminating questions from the BAR form, such as those relating to use of alcohol or drugs. Such questions might well be a deterrent to completion of the form by operators/owners. Moreover, the accuracy of these answers is open to question as there appear to be incentives for deception. However, 33 CFR § 173.57 (v) requires "the opinion of the person making the report as to the cause of the casualty including whether or not alcohol, or drugs, or both was a cause or contributed to causing the casualty." Whether or not this or related questions should be required to be answered by the operator is an appropriate topic for discussion in terms of possible future modifications to the form, but it is not addressed in this effort.

For purposes of this interim redesign effort, however, we assumed that all information presently specified in $33 C F R \$ 173.57$ (a) through (z) must be collected. These 26 required data elements are identified in Table 1. (All tables are included at the end of this section.)

Some of these elements of information specified in 33 CFR $\S 173.57$ (a) through (z) are very detailed. For example, item (w) requires data on "the make, model, type (open, cabin, house, or other), beam width at widest point, length, depth from transom to keel, horsepower, propulsion (outboard, inboard, inboard outdrive, sail, or other), fuel (gas, diesel, or other), construction (wood, steel, aluminum, plastic, fiberglass, or other), and year built (model year), of the reporting operator's vessel." For fields with detailed specifications we retained this detail adding explanatory material as necessary to facilitate accurate answers.

But, other information requirements in the CFR are much less specific. For example, item (1) requires "the cause of each death." This question does not specify the level of detail of the possible answers - and may not be able to be answered accurately by a layman. The BAR form formerly used listed only three possible causes of death; drowning, disappearance, ${ }^{18}$ and other. The present BAR form presents the following choices; drowning, trauma, carbon monoxide poisoning, heart attack, hypothermia, electrocution, and other (specify). For this and other less specific questions, we carefully considered the recommendations of those who commented on the form. Regarding cause of death, NASBLA ${ }^{19}$ offered the following suggestions:
"This report form is intended to be completed and turned in by the public-a boat owner or operator-following an accident, and the public is generally not qualified to make a cause of death determination. If

[^6]anyone other than a qualified medical professional enters cause of death on this form, it impeaches the quality of the data collected (even EMTs are not permitted to determine cause of death). If this information is important to collect, this form isn't the appropriate way to do it. In the old form there were only three choices for cause of death; drowning, disappearance, and other. Those choices were sufficient for lay persons.

If the cause of death field is retained, the term 'heart attack' is inappropriate and should at least be changed to the term cardiac arrest. Some cardiac arrests are the result of a heart attack (a lay term that means inadequate cardiac tissue perfusion) but not all 'heart attacks' result in cardiac arrest.

If this field is retained, remove the term hypothermia. Technically, one does not die from immersion hypothermia. Hypothermia eventually leads to unconsciousness and drowning and/or cardiac arrest, and those are already listed. Secondly, even if hypothermia is suspect, a lay person will not be able to determine it was the cause and even a medical professional would be unable to unless a body's core temperature was recorded right at the time of death. Without a life jacket, most people drown in cold water long before they become hypothermic, and those that don't drown die of cardiac arrest."

This is wise advice. We changed the cause of death question to read "Nature of death/disappearance" with answers "Death by drowning," "Death-other likely cause," with an option to provide more detail and finally, "Disappeared and not yet recovered." If more detailed and accurate answers are required, then it is necessary to have medically qualified personnel provide these answers.

More broadly, in cases where the wording of the requirements in the CFR permitted latitude in interpretation, we tried to frame questions that were easy (or at least easier) to understand and answer. For example, 33 CFR $\S 175.57$ (m) asks for information on "weather forecasts available to, and weather reports used by the operator before and during the use of the vessel." In the present version of the BAR form this is reduced to:
"Weather forecasts/reports available to and used by the operator before and during use of the vessel," to which the person completing the form has two choices "yes" and "no."

This particular question on the present form was criticized by one reviewer (Design Research Engineering [2007]) as "This is a classic 'double barreled' question." We agree. However, our terms of reference did not permit us to delete this required item of information. Instead, we believe it reasonable to assume that weather forecasts are
available for all areas where recreational boating accidents occur, ${ }^{20}$ and substituted the question: "Weather reports consulted prior to accident?" and added possible responses "Yes" and "No." 21

In comments on the present form, the Tennessee Wildlife Resources Agency ${ }^{22}$ identified several extra data fields (shown in Table 2) on the present BAR form that are not now required by the CFR. We commend their diligence in comparing data fields and the CFR requirements and have deleted some of these fields.

We did modify the form to add the question regarding the "number and type of fire extinguishers on board" because this is required by the federal regulations yet not listed on the present BAR form, an omission noted by the Tennessee Wildlife Resources Agency in their thoughtful comments. ${ }^{23}$

Finally, we changed some wording in the federal regulations in the interests of clarity and readability. For example, we changed "personal flotation device" to "life jacket" as this term is more widely understood. Likewise, with one exception ("Vessel safety check" a term of art) the word "boat" was substituted for "vessel" wherever it appeared in the present BAR form.

## Language

The BAR form is written in English. We did not translate this form into other languages. However, in the future we think that the benefits of providing the form in various foreign languages to assist the non-native English speaker should be evaluated.

There is ample precedent for providing accident reporting forms in other languages used in the United States. For example, the Federal Motor Carrier Safety Administration (FMCSA) provides many forms in both English and Spanish. ${ }^{24}$ There are commercial forms producers who provide motor vehicle accident forms in Spanish. ${ }^{25}$ According to Census data for the year 2000, 17.9\% of US residents (though an unknown proportion of boaters) spoke a language other than English at home and $8.1 \%$ spoke English less than "very well." ${ }^{26}$ Many forms used by social service agencies throughout

[^7]the US are now provided in other languages (e.g., Spanish, Chinese, French, German ${ }^{27}$ ) and this should be considered by the Coast Guard for the BAR form. California provides recreational boating information in Spanish. ${ }^{28}$

Of course, if (in the future) the regulations are revised so that BAR forms are to be completed and submitted by state personnel, this suggestion may be overtaken by events.


## Computerized forms

The use of computerized forms, such as through the Internet, has several benefits in terms of availability and ease of access and use. So-called "smart forms" can typically be shorter because these can be structured to "hide" questions and explanatory material that are not applicable or needed based on earlier responses. For example, in the case of a property damage only incident, it is unnecessary to ask questions regarding injuries or the causes of deaths. Pick lists or drop down lists can be incorporated to simplify filling in the form. A computerized form can also provide (with embedded hyperlinks) definitions, directions, and other explanatory material, which would increase comprehension and accuracy.

[^8]As a point of interest, many states now provide either downloadable copies of their forms on the Internet or enable a boater to fill in the form on-line. ${ }^{29}$ To our knowledge there are no States that presently use "smart forms" for accident reporting. For purposes of this initial project a "paper form" is assumed.

We believe that a smart form is a potentially useful idea for the future. This idea is applicable whether or not the form is to be filled by the operator/owner or an accident investigator. Online forms are inherently different than paper forms and should be developed according to a separate set of design guidelines and usability tested prior to implementation.

## Design principles used

We applied proven form design principles to develop the recommended BAR form. ${ }^{30}$ As shown in Fig. 1, these include use of consistent and simple terminology, easy to understand instructions, and good layout (and fonts). As noted above, we have used the CFR requirements as the essential elements of information (EEIs) for this project.

[^9]

Figure 1. Principles for improved forms design.

## -Consistent and simple terminology

To minimize confusion, we modified the form to use consistent terminology throughout. For example, as noted by Design Research Engineering (2007) the terms "USCG approved life jacket," "life jacket," and "personal flotation device" are used on the present form, inviting the person completing the form to speculate about possible differences in these terms. In the recommended form these are replaced by the single term "life jacket." The information requirements given in the federal regulations do not specify use of the term "USCG approved" and the person completing the form may not know whether or not these are USCG approved and/or have a motive for claiming that the lifejacket(s) used were USCG approved.

Terms used in the BAR form should be able to be readily understood by the owner/operator. ${ }^{31}$ Some terminology in the present form (e.g., VSC, ${ }^{32}$ tertiary, whitewater boating, off-throttle steering, runaway boat, water toys) might be unclear to

[^10]persons who fill in the form. In other places the language is overly complex (e.g., "Operator of this Vessel [Vessel A]), rather than "operator" within a group of entry fields labeled "Your Boat." We redesigned the form to minimize use of acronyms and abbreviations, substituted simple lay terms (e.g., boat rather than vessel, person rather than occupant or victim) where possible, and used plain English.

Where available, we relied on Coast Guard experience relative to questions or answers that seemed confusing to respondents and made modifications. For example, one of the choices under boat type was "jet boat." Experience shows that this answer was widely misunderstood and confused with "personal watercraft." The answer "jet boat" was deleted as a choice. Boaters who owned craft that could accurately be termed jet boats have the option on the recommended form of choosing "open motorboat" under boat type and "water jet" under type of power.

We used simpler and more familiar terms in the recommended form, even in cases where arguably more correct terms existed. For example, under "accident details-events" we included "collision with fixed object" as a choice. "Allision" is arguably the correct term, ${ }^{33}$ but one that is not generally known by the boating public.

Simpler word choices were not available in every instance. We learned from the usability test (see below) that certain terms, including vessel documentation number and hull identification number (HIN) were not known to all respondents. We kept these terms in the recommended form; further simplification would require a change in the CFR. However, we did include instructions that respondents should simply leave entry fields blank, rather than guess, if the answers were not known.

## -Easy to understand instructions

We did not provide a separate list of instructions or definitions of terms. There is ample evidence that separate instructions are not read by persons (at least the general public) completing forms. However, where appropriate we added explanatory material in the questions or data fields (such as possible answers) to try to reduce possible confusion and increase the accuracy of responses. We made it easier to read by using bullet points, short phrases, and additional white space rather than exclusive use of prose.

As noted below, we evaluated the recommended form with a usability test on a sample of boaters. Questions/data fields on the form that were reportedly difficult to understand were revised based on this feedback.

## -Improved layout

Proper layout is essential for user-friendly forms. As noted by the Australian Government Department of Education, Science, and Teaching: "The best written plain English document won't be effective-or perhaps won't even be read-if it is badly

[^11]designed." ${ }^{" 34}$ We have made many layout changes in the recommended form. Here are a few examples:

- The present BAR form uses all capital letters. Research shows that reading speed and comprehension are increased if mixed case text is used. ${ }^{35}$ (Interestingly, some people profess to prefer all caps. In fact, one respondent in the usability test (see below) preferred the current BAR form use of all caps. It's important to realize that preference and performance are different measures, which often are not highly correlated. In most cases performance is the more important measure.)
- The layout of the recommended form has been modified to group related items together, which also increases comprehension and accuracy. Guidelines suggested in the literature include: ${ }^{36}$
o Avoid using all uppercase for large text areas.
o Avoid using italics for large text areas.
o Avoid using bolded text for large text areas.
o Be careful when using colored text. Use dark text on light backgrounds to provide the most contrast, which in turn optimizes legibility.
o Mixed-case, black and un-bolded type (on a white or at least very light background) is easier to read for large text areas. Use color and bold only to call attention to important items.
0 Use Serif fonts (e.g., Times New Roman) for close-set blocks of text. ${ }^{37}$
o Use Sans-serif fonts (e.g., Arial) for large headlines.
o Use Sans-serif or serif fonts for airy (i.e., not close-set) sections of text.
o Break up the page by using a variety of font sizes, font weights, and capitalization for different readability focus-points on the page.
0 Use fonts with clearly-identifiable letter shapes, e.g., 'a' rather than ' $a$ ', ' $g$ ' rather than ' $g$.'
o Use 'fancy' fonts very sparingly and only for occasional quirky effect. There is no reason for use of these fonts in the BAR form.

[^12]- Short, "busy" forms are appropriate for knowledgeable high frequency userssuch as a professional accident investigator in this case. But longer, better organized forms are more user friendly for casual users (see comments on brevity below). ${ }^{38}$ We made several layout changes to the present BAR form to improve clarity-even though some of these changes increased the length of the form.
- The present form has dark grid lines and very little white space. ${ }^{39}$ This creates a busy look that is hard to scan and does
 not help lead the eye in the appropriate order through the various fields. ${ }^{40}$ We changed the layout to use very light gridlines ("watermark") and added white space to separate field groups to provide a cleaner look that is easier to scan and comprehend.

Entry fields in the present BAR form are not always grouped logically. Logical grouping facilitates the respondent's accurate recall and reporting of key information ${ }^{41}$ such as in this form,
o Report Submission
o Accident Summary
o Your Boat
o Accident Details-External Conditions
o Accident Details-Your Boat
o Accident Details-Activities and Operations on your boat
o Accident Details-Events on your boat
o Accident Details-Contributing Factors on your boat

[^13]o Accident Details-Your Boat-injured people receiving or in need of treatment beyond first aid
o Accident Details-Your boat-Deaths/disappearances
o Accident Details-Your boat operator
o Accident Details-Other key people
o Names and addresses
This grouping is more logical, reduces redundancy, and is easier to understand.

- The layout of the sections in the present form is inconsistent, making getting oriented in each new section difficult. ${ }^{42}$ The recommended form uses a common set of layout standards across all sections of the form.

As one example of how the layout of the recommended form has been improved and the instructions have been simplified, consider the following instruction in the header of the present BAR form:
"THE OPERATOR OF A VESSEL IS REQUIRED TO SUBMIT A REPORT IN WRITING TO THE STATE REPORTING AUTHORITY WHEN AS A RESULT OF AN OCCURRENCE THAT INVOLVES THE VESSEL OR ITS EQUIPMENT: (1) A PERSON DIES; OR (2) A PERSON IS INJURED AND REQUIRES MEDICAL TREATMENT BEYOND FIRST AID; OR (3) DAMAGE TO THE VESSEL AND OTHER PROPERTY TOTALS \$2,000 OR MORE OR THERE IS A COMPLETE LOSS OF THE VESSEL; OR (4) A PERSONS DISAPPEARS FROM THE VESSEL UNDER CIRCUMSTANCES THAT INDICATE DEATH OR INJURY. REPORTING AUTHORITIES MAY REQUIRE REPORTS OF PROPERTY DAMAGE LESS THAN \$2,000. THIS REPORT MUST BE SUBMITTED WITHIN 48 HOURS OF THE OCCURRENCE IF A PERSON DIES, IS INJURED, OR DISAPPEARS FROM THE VESSEL. THE REPORT MUST BE SUBMITTED WITHIN 10 DAYS OF THE OCCURRENCE IF THERE IS ONLY DAMAGE TO THE VESSEL AND OTHER PROPERTY.
THE OWNER OF THE VESSEL SHALL SUBMIT THIS REPORT TO THE STATE REPORTING AUTHORITY IF THE OPERATOR CANNOT."

The above five sentences in the present form are hard on the eyes (use of capital letters throughout), difficult (there are 160 words), and not very readable (e.g., use of sans serif font). The use of bold is generally not recommended under the heading of "Don't shout" at the audience. ${ }^{43}$ And, most authorities agree that you should "never set a whole sentence or paragraph in CAPITAL LETTERS. ${ }^{44}$

[^14]Consider the recommended alternative shown below:

Report required because in this accident (select all that apply)
At least one person died
If so, how many?
$\square$ At least one person involved in the accident required or was in need of treatment beyond first aid If so, how many? $\qquad$
$\square$ At least one person involved in this accident disappeared and has not yet been recovered

If so, how many?
All boat or other property damage (e.g., fishing hunting gear) caused by this accident totaled(or likely totaled) \$2,000 or more:

Approximate value of damage to your boat $\$$
Approximate value of damage to your other property $\quad \$$
Your or another boat in this accident was (or likely was) a total loss
Report submitted by (select all that apply):
$\square \quad$ Boat Operator (required if possible)
$\square \quad$ Boat owner (if operator unable or same as operator)
$\square \quad$ Other (describe):
The recommended alternative is much simpler and easier to read and understand, and also incorporates instructional information into the data fields themselves, ensuring that respondents will see and read the instructions.

## -Brevity

Other things being equal, shorter forms are better than longer forms. However, brevity is not the sole design criterion. The recommended BAR form is (in terms of the number of pages) longer than the present BAR form-six pages compared to four pages. But, all the information collected is used for the purpose of the form, no questions are asked that are readily available to the States or the Coast Guard, and much of the additional length is due to improved layout. (In future design efforts the length may be able to be reduced by, for example, use of a computerized form or reducing the information requirements now contained in the CFR.) To lend perspective, the recommended BAR form-though longer than the latest version-is actually no longer than those used as late as 2005 and no longer than the form currently in use by some states (e.g., Colorado, New Mexico, and Washington).

Related to the brevity objective, we redesigned the form so that, if the person reporting were to fill in only the first page, useful data could be captured to enable investigators to follow-up.

## Comments of key partners

Several key partners, such as members of NASBLA, ${ }^{45}$ the National Boating Safety Advisory Council (NBSAC), and the United States Power Squadrons (USPS ${ }^{\circledR}$ ) read this report in draft. For the most part reaction to the recommended form was very

[^15]favorable. This said, many constructively-critical comments were received and we made revisions to the recommended form based on these comments. For example:

- Four respondents (Major Felix Hensley, Boating Law Administrator, Indiana Department of Natural Resources, Sergeant Eric Lundin, Connecticut Environmental Conservation Police, Tamara L. Terry, Ohio Department of Natural Resources, and Mr. Dick Snyder, Mercury Marine) suggested that "engine make" (not on the present BAR form, but included in previous forms) be added. The Office of Boating Safety, however, did not agree that the "engine serial number" should also be added because of concerns that the reliability/accuracy of this information has proven questionable.
- Several respondents felt that the recommended BAR form was not sufficiently clear in terms of the definition of "other key people" on page 4 of the recommended form. We also observed some confusion on this definition on the usability test. This portion of the form has been revised to make clear that other key people include all who were other boat operators/owners, owners of damaged property, passenger on your boat, and any witnesses.

These are just two examples of the many revisions made in response to the comments of key partners.

However, not all suggestions made by our key partners were adopted. In particular, suggestions that were inconsistent with the terms of reference were not adopted, even if we thought they were reasonable. Thus, for example, Tamara L. Terry, Ohio Department of Natural Resources wrote in a preamble to detailed comments on the recommended form:
"Before launching into various adjustments to the revised form as presented, let me reiterate that many of the items on this form (both in its old form and in its revised form) continue to be outside the scope of what the Operator or Owner can reasonably be expected to fill out accurately and consistently. As examples, Operators/Owners are generally not qualified to determine a cause of death (unless, by chance, they happen to be a coroner), and most persons filling out this form would be hesitant to honestly indicate whether alcohol had been involved in, or might have been a cause of, the accident. These facts have been discussed at length at previous BAIRAC meetings, so I won't go into more detail here, but suffice to say that an in-depth look and potential (probable) revision to the CFR to eliminate and/or restructure information on the form continues to be needed...I was pleased to see that there was some thought given (as indicated in for form revision process document) to making this a two-part form in the future. This would definitely assist us here in Ohio where our officers complete many of the investigatory items included in BARD-web through our own Watercraft Accident Report form..."

Although we did not make the recommended revision because it would be inconsistent with CFR requirements (as stated elsewhere in this report) we do believe that it is a useful suggestion and have included an analysis of the two-tier strategy as part of our recommended way forward.

Mr. Dick Snyder of Mercury Marine asked: "Why does the BAR on page one in INFORMATION ASSOCIATED WITH THE VESSEL continue to ask for 'Depth from Transom (stern) to Keel (bottommost point) of Vessel?' Who would ever use or care about such an odd dimension. Who would ever try to measure it?" [Emphasis in original.] We did not change this-even though we believe that the comment has merit-because of the language in the CFR.

Another commenter (Design Research Engineering) also argued ${ }^{46}$ strenuously that the form should be designed for the investigator, not the boat operator/owner. In reading through an earlier draft of this report they commented:
"Design Principles [a reference to this report in draft] does hold out promise that this issue [who fills out the form] will be addressed...The operable words here are 'are being considered' and 'may' and 'if sufficient justification exists' [references to language in the draft report]. Our reasonable, lay interpretation is that it is not going to happen any time soon.

This is an ill-advised course of action. Basically there is a means, a demand, and a need for change to the reporting system: flexibility in the regulations, widespread use of an ill-suited boat owner/operator form by law enforcement officials, and the critical need for high quality information on boating accidents. The quality of the design process and data collection is compromised by not designing both forms concurrently (for the boat operator/owner and law enforcement)."

This report contains recommendations and does not present Coast Guard views or intentions. As noted above, we believe that some two-form system is a reasonable suggestion. It cannot be developed within the time frame necessitated by this effort because changes in the CFR are necessary to make this feasible. Whether or not this will be completed "any time soon" is not under our control. This said, USCG has received copies of all comments on this report and earlier comments on the present BAR form. They are also fully aware of views of NASBLA and are committed to continuous improvement in the system.

Design Research Engineering (August 2007) also commented on this report in draft as follows:
"We strongly recommend the development of a clear reverse path between the data elements that are required to meet the anticipated reporting and

[^16]analysis needs, and the data collected from the draft BAR form. These analytical and reporting needs can be drawn from, for example, the content of the USCG's annual "Boating Statistics" report or boating safety initiatives that require periodic evaluation."

We agree that such a procedure would be useful to define the essential elements of information. As noted above, we based the design of this form on the elements of information contained in the CFRs. Time and scope constraints precluded a more comprehensive approach. Nonetheless, there is merit to a "blank sheet" approach to forms design in which the need to each element of information would be justified based on the anticipated uses of the data derived from these forms.

This and other potentially useful suggestions are being retained for future work.

## Usability test

We conducted a limited (seven subjects, all boaters and some fisherman as well ${ }^{47}$ ) usability test as part of this work and made revisions to the recommended form based on the results of the usability test. The intent of the usability test was to identify any "serious" flaws in the design, rather than to draw statistical inferences. The majority of the individuals sampled were male (6 of 7), college educated (7 of 7), roughly half (3) were $41-55$ years of age, the other half were older, all were experienced boaters, most with around 50 years of experience.

The usability test provided information on respondents views of the present and recommended forms. More important, it identified questions/fields that were ambiguous or difficult to understand, and permitted us to make appropriate revisions.

Despite the limited sample size, the results of the usability test were interesting. For example we found that:

- Nearly half (3 of 7) of the respondents did not know that it was necessary for the operator/owner to complete a BAR form and most (5 of 7) did not know under what circumstances the form is required (i.e., the definition of a reportable accident). Most ( 6 of 7) did not know where to get blank forms when needed or where to submit them. This certainly highlights the need to educate recreational boaters on the requirements for submitting the form.

[^17]- The recommended form was consistently preferred to the present form in several respects. For example, respondents reported that it was easier to determine if a report was required, to whom to send the report, more likely to be completed, easier to understand and complete accurately, had an improved layout (including adequate space for responses), and the font and reduced capitalization were preferred. It is interesting to note that some respondents actually believed that the recommended BAR form was shorter than the present form-a subjective assessment.
- Respondents were unsure about the meaning of certain terms (e.g., medical treatment beyond first aid, vessel documentation number, hull identification number, dam/lock, failure to vent, external navigational aid, and gunwale). We made some changes based on this result, but retained certain terms, such as vessel documentation number and hull identification number even though one or more respondents did not know the meaning of these terms.
- Respondents felt answers to some questions were unclear or subjective. For example, possible answers relative to wind and water conditions were questioned by respondents. Regarding water conditions the use of the descriptors "Calm," "Choppy," "Rough," and "Very rough" were subjective-even though we defined each of these terms (e.g., the calm water condition was defined as up to 6 in. waves). We agree that the descriptive terms, by themselves, admitted to various interpretations-what is choppy relative to the operator of a $60-\mathrm{ft}$ sailing vessel might differ if an 8 - ft rowboat were being used. As a compromise, we placed the quantitative description first, followed by a qualitative characterization in parentheses, for example, "Up to 6 in. waves (calm).
- Respondents were irritated by certain questions. For example, they were irritated that "age" and "date of birth" were both included as fields. Thus, we eliminated "date of birth" and retained "age." As a second example, respondents queried the necessity of including "inches" as well as "feet" in characterizing the length and beam of their boats; we changed the fields to feet only and changed the header to read "Size estimates." In these and other cases we made changes to the form to address their concerns, unless doing so would compromise compliance with the CFR requirements.
- The recommended form still requires time and effort to complete. We made several revisions to the recommended form based on the usability test, but some difficulties remain. In our opinion these remaining difficulties can only be resolved by eliminating some of the essential elements of information EEIs now required by the CFR or relaxing the present requirement that the form be completed by the operator/owner.

Sensitive to the negative impression a longer form might make on operators/owners, we limited the length of the initial draft of the recommended form to six pages - two pages more than the current form, but in fact still fewer pages than many state forms.

We revised the initial draft of the recommended form to produce a final draft based on the comments and results of the usability test. However, we held the length of the final draft of the recommended BAR form to six pages while still improving the layout, readability, and impression of the form. In so doing we made several compromises. For example:

- Both internal reviewers and some usability test respondents indicated a desire for more room in the accident description entry area on page 1 of our initial draft of the recommended form. However, this (as well as other legitimate suggestions) would have required adding pages to the recommended form, so we chose not to take this suggestion at this time. Instead in this case, we added an instruction line indicating that respondents could attach additional pages on which to continue their accident description if necessary. This seemed like a reasonable compromise in the timeframe we had to complete the revision of the form.
- It is worth noting however, that during the usability test, some respondents clearly indicated they would prefer a longer form that was better organized, better laid out and easier to understand, to a shorter form that achieved brevity by sacrificing these things. Some indicated it really did not matter at all how long the form was if it was truly and optimally 'user friendly". In addition, some test respondents actually thought the recommended form (six pages) they filled out was shorter than the current form (four pages), and in addition they thought it took less time to fill out in spite of the fact that it actually took slightly longer.

We recommend that in any next revision of the form, consideration be given to the possibility of lengthening the form in order to incorporate more potentially useful redesign ideas learned during this current revision process. If this is done, it would be important to run another usability study on the lengthened and redesigned form to validate the hypothesis that these changes in fact resulted in positive benefits.

## Summary

A new BAR form has been developed. This form captures the requirements now contained in the CFR, incorporates many of the suggestions offered by NASBLA and other key partners, uses proven design principles to increase form readability and userfriendliness, and reflects lessons learned in the usability test. The new form is slightly longer (largely because of increased white space and a more organized and consistent layout), but significantly easier to read and understand. This recommended form (after Coast Guard review and possible revision) will be submitted for public comment.

There is a French proverb to the effect that "the good is the enemy of the excellent," meaning that an "adequate solution" may blind us to the possibility of a much better solution. The Russian version of the same proverb is "the excellent is the enemy of the good," meaning that the quest for perfection may prevent us from implementing an acceptable solution. In a sense, both versions of this proverb are correct. We believe that, given constraints on time and scope, the recommended BAR form is a significant improvement over the present form. We also believe that the recommended form is not the ultimate solution and that there are promising opportunities for further improvements.

As part of the BAR form redesign effort, we made several suggestions for further work. We believe that the design and evaluation of improved forms should continue expeditiously.

## The Way Forward

The next step is for the Coast Guard to decide whether to go forward with the recommended BAR form to replace the current form. Assuming that the Coast Guard favors the recommended form, it will be submitted (after possible changes) for public review and comment. The Coast Guard will consider these comments and decide on the final version of the form for the coming year.

Beyond this immediate action the BAR form will be periodically revised. As noted above, one of the assumptions of this preliminary redesign effort is that the new form would comply with all the information requirements of the present CFR. In the short term it was not possible to modify these requirements. However, in the longer term these can be changed. This is a topic for further review. One particular assumption made in this effort is that the BAR form should be completed by operator/owner of the boat. As noted above, many believe it is desirable to institute a two-tier reporting requirement in which the operator/owner fills out a much simplified form and the cognizant agency fills in a more comprehensive form on all reportable boating accidents. In principle, such a two-tier scheme might be very attractive because the operator notification form could be radically simplified, which should increase the response rate. As well, the operator form could be modified to eliminate possible self-incriminating questions; investigating authorities could provide these answers. Based on conversations with many NASBLA personnel and others, this is a potentially attractive option. (Nonetheless, it needs to be evaluated carefully. It is possible that many more accidents would be reported if a much simpler form were used by operators ${ }^{48}$, which would have workload implications for the States. Moreover, the present reporting deadlines must also be considered. Would each state be prepared to submit the BAR within the present submission deadlines?)

Many states already have two BAR forms at present-one that is filled in by the operator/owner and the other that is filled in by an accident investigator. The latter form is used for those accidents that qualify as "reportable." One reason for having such a system is that some data now provided by operators/owners are not believed reliable. Use of the recommended BAR form should make it easier to understand-it remains to be seen whether the responses from this form will be sufficiently accurate to use directly or whether a follow-up investigation is required in any event. If so, a radically simplified operator report form could be designed. The principal purpose of the simplified form would be to alert investigators to the fact that an accident occurred. Additionally, the simplified operator form could provide very basic information that might be used for statistical purposes in the event that the State did not follow-up on the accident. There is

[^18]no reason for undue delay in analyzing options or in developing a revised form (or set of forms). The Coast Guard and partners could easily begin such a project in parallel with the approval process for the recommended form.

We believe that it is appropriate to carefully review carefully the essential elements of information (EEIs) on the form. This should be done in parallel with any redesign effort.

Several other suggestions are noted above and/or have been made by others. For example, the use of smart forms and making these forms available in other languages are ideas with possible merit.

There is probably more to do on the selection of typeface, font size, and use (if any) of color. We chose the font size in part to avoid making the form "too long." But there is evidence that (particularly for older readers) larger font sizes are easier to read ${ }^{49}$ - and color can make a difference.

While forms should be designed to increase readability and clarity, this is only one of several possible initiatives that might be considered to increase response rates. Efforts to increase boater awareness of legal requirements might have merit. Here are some other ideas:

- Expand coverage of the requirements to report accidents in public education offerings of States and such organizations as the United States Coast Guard Auxiliary and the United States Power Squadrons. Produce additional flyers/posters that publicize accident reporting requirements. ${ }^{50}$ One such poster is reproduced at the end of this section.
- Publicize the fact that the BAR form cannot be used in any subsequent litigation in certain states. Under current law (46 USC Section 6102) "If a State marine casualty reporting system provides that information derived from casualty reports (except statistical information) may not be publicly disclosed, or otherwise prohibits use by the State or any person in any action or proceeding against a person, the Secretary may use the information provided by the State only in the same way that the State may use the information." Many States now require that this information be treated as confidential.
- Explain what is done with the data and why this benefits all boaters to help answer the question "why should I fill in this form?" One answer is that it is legally required. A more compelling reason is that it can help improve boating safety. Present texts used in public education classes generally mention that completing this form is required by law and may provide information on how to

[^19]get this form. Little (if any) space is devoted to an explanation of why completing this form benefits boating safety. ${ }^{51}$

- Have insurance companies require a copy of the completed BAR form as a condition for reimbursement-this is a common requirement for motor vehicle accidents.
- Increase the severity of penalties for and/or the likelihood of detection of noncompliance.
- Continue to develop statistical techniques to correct for non-response.

These are illustrative ideas only. These should be evaluated before making recommendations.

Thus, the work described in this report should be seen as one of many future efforts aimed at continuous improvement in the overall reporting and analysis methodology for recreational boating accidents. And the Coast Guard is well advised to be mindful of the comment ${ }^{52}$ that "quality data begins with quality data-collection forms."

## Acknowledgements

We appreciate the help and guidance furnished by Jeff Hoedt, Jeff Ludwig, and Bruce Schmidt of the Office of Boating Safety and Arthur A. Requina of the USCG Office of Information Management in the BAR form redesign effort. We also appreciate the many useful suggestions of all who commented on the present BAR form and on this report in draft. Their rapid turnaround of the review draft was particularly noteworthythis final report is materially better because of their contributions. The views and recommendations contained in this report are those of the authors and do not necessarily represent the positions or policies of the United States Coast Guard or the Coast Guard Auxiliary Association.

[^20]Table 1. Required contents of report as specified in 33 CFR Ch. 1, Part 173 Subpart C Casualty and Accident Reporting, $\$ 173.57$ Contents of report. This defines the minimum reporting requirements.
(a) The numbers and names of each vessel involved.
(n) The name and address of each owner of property involved.
(b) The name and address of each owner of each vessel involved.
(o) The availability and use of personal flotation devices.
(c) The name of the nearest city or town, the county, the State, and the body of water.
(p) The type and amount of each fire extinguisher used.
(d) The time and date the casualty or accident
(q) The nature and extent of each injury. occurred.
(e) The location on the water.
(r) A description of all property damage and vessel damage with an estimate of the cost of all repairs.
(f) The visibility, weather, and water
conditions.
(s) A description of each equipment failure that caused or contributed to the cause of the casualty.
(g) The estimated air and water temperatures.
(t) A description of the vessel casualty or accident.
(h) The name, address, age, or date of birth, telephone number, vessel operating experience, and boating safety training of the operator making the report.
(u) The type of vessel operation (cruising, drifting, fishing, hunting, skiing, racing, or other), and the type of accident (capsizing, sinking, fire, or explosion or other).
(i) The name and address of each operator of each vessel involved.
(v) The opinion of the person making the report as to the cause of the casualty, including whether or not alcohol or drugs, or both, was a cause or contributed to causing the casualty.
(j) The number of persons on board or towed on skis by each vessel.
(w) The make, model, type (open, cabin, house, or other), beam width at widest point, length, depth from transom to keel, horsepower, propulsion (outboard, inboard, inboard outdrive, sail, or other), fuel (gas, diesel, or other), construction (wood, steel, aluminum, plastic, fiberglass, or other), and year built (model year), of the reporting operator's vessel.
(k) The name, address, and date of birth of each person injured or killed.
(x) The name, address, and telephone number of each witness.
(l) The cause of each death.
(y) The manufacturer's hull identification number, if any, of the reporting operator's vessel.
(m) Weather forecasts available to, and weather reports used by, the operator before and during the use of the vessel.
(z) The name, address, and telephone number of the person submitting the report.

Table 2. Information requested on Form CG-3865 (Rev. 12-06) that does not appear to be prescribed by $33 C F R$ §173.57.


Source: Tennessee Wildlife Resources Agency



Collision with non-commercial boat?


Collision with fixed object?


Person left boat voluntarily?

## Appendix A

The Present BAR Form
This appendix provides a copy of the present BAR form that was revised (based on the contents of the main report) to produce the recommended form.
U.S. DEPARTMENT OF HOMELAND SECURITY
U. S. COAST GUARD

CG-3865 (Rev. 12-06)

BOATING ACCIDENT REPORT

## FORM APPROVED <br> OMB NO. 1625-0003 <br> EXPIRATION DATE

THE OPERATOR OF A VESSEL IS REQUIRED TO SUBMIT A REPORT IN WRITING TO THE STATE REPORTING AUTHORITY WHEN AS A RESULT OF AN OCCURRENCE THAT INVOLVES THE VESSEL OR ITS EQUIPMENT: (1) A PERSON DIES; OR (2) A PERSON IS INJURED AND REQUIRES MEDICAL TREATMENT BEYOND FIRST AID; OR (3) DAMAGE TO THE VESSEL AND OTHER PROPERTY TOTALS $\$ 2,000$ OR MORE OR THERE IS A COMPLETE LOSS OF THE VESSEL; OR (4) A PERSON DISAPPEARS FROM THE VESSEL UNDER CIRCUMSTANCES THAT INDICATE DEATH OR INJURY. REPORTING AUTHORITIES MAY REQUIRE REPORTS OF PROPERTY DAMAGE LESS THAN $\$ 2,000$. THIS REPORT MUST BE SUBMITTED WITHIN 48 HOURS OF THE OCCURRENCE IF A PERSON DIES, IS INJURED, OR DISAPPEARS FROM THE VESSEL. THE REPORT MUST BE SUBMITTED WITHIN 10 DAYS OF THE OCCURRENCE IF THERE IS ONLY DAMAGE TO THE VESSEL AND OTHER PROPERTY.
THE OWNER OF THE VESSEL SHALL SUBMIT THIS REPORT TO THE STATE REPORTING AUTHORITY IF THE OPERATOR CANNOT.
OVERALL ACCIDENT INFORMATION - TO BE COMPLETED BY THE OPERATOR OF THIS VESSEL (VESSEL A)

| STATE | DATE OF ACCIDENT | TIME $\quad \square$ AM $\square$ PM | NUMBER OF VESSELS INVOLVED |  |
| :---: | :---: | :---: | :---: | :---: |
| COUNTY |  | LOCATION ON THE WATER |  |  |
| NEAREST CITY OR TOWN |  | NAME OF BODY OF WATER |  |  |
| WEATHER FORECASTS / REPORTS AVAILABLE TO AND USED BY THE OPERATOR BEFORE AND DURING USE OF THE VESSEL |  |  |  | $\square$ YES $\square$ NO |
| WEATHER <br> (CHECK ALL THAT APPLY)) CLEAR RAIN CLOUDY SNOW FOG HAZY | WATER CONDITIONS CALM (WAVES LESS THAN $6^{*}$ ) CHOPPY (WAVES 6" TO 2') ROUGH (WAVES 2' TO 6') VERY ROUGH (GREATER THAN 6') | WIND NONE LIGHT (0-12 MPH) MODERATE (13-24 MPH) STRONG (25-54 MPH) STORM ( 55 MPH AND OVER) | VISIBILITY <br> DAY NIGHT GOOD $\square$ FAIR $\square$ POOR $\square$ | STRONG CURRENT YES NO |

OPERATOR INFORMATION - TO BE COMPLETED BY THE OPERATOR OF VESSEL A


## VESSEL INFORMATION - TO BE COMPLETED BY THE OPERATOR OF VESSEL A

| TYPE OF VESSEL AIR BOAT AUXILIARY SAIL CABIN MOTORBOAT CANOE houseboat INFLATABLE KAYAK JET BOAT |  | TYPE OF ENGINE USED TO PROPEL THE VESSEL OUTBOARD STERNDRIVE - (I/O) INBOARD NONE <br> TYPE OF PROPULSION PROPELLER WATER JET MANUAL SAIL AIR THRUST OTHER (SPECIFY) | ENGINE (S) USED TO PROPEL THE VESSEL <br> NUMBER OF ENGINES <br> TOTAL HORSEPOWER <br> TYPE OF FUEL GASOLINE DIESEL ELECTRIC |
| :---: | :---: | :---: | :---: |
| OPERATION AT TIME OF ACCIDENT AT ANCHOR BEING TOWED CHANGING DIRECTION CHANGING SPEED CRUISING DOCKING / UNDOCKING DRIFTING LAUNCHING ROWING / PADDLING SAILING TIED TO DOCK / MOORING TOWING ANOTHER VESSEL OTHER (SPECIFY) | ACTIVITY AT TIME OF ACCIDENT COMMERCIAL ACTIVITY FISHING FISHING TOURNAMENT FUELING HUNTING MAKING REPAIRS RACING SCUBA DIVING / SNORKLING STARTING ENGINE SWIMMING TUBING WATER SKIING WHITEWATER ACTIVITY | TYPE OF ACCIDENT (NUMBER BY ORDER OF OCCURRENCE)CAPSIZING FIRE / EXPLOSIONCARBON MONOXIDE EXPOSURECOLLISION WITH FIXED OBJECTCOLLISION WITH FLOATING OBJECTCOLLISION WITH VESSELCOLLISION WITH COMMERCIAL VESSELPERSON DEPARTED VESSELPERSON EJECTED FROM VESSELELECTROCUTIONFALL WITHIN A VESSELSTRUCK SUBMERGEDFALL ON A VESSEL OTHER (SPECIFY)FALLS OVERBOARD |  |
| DID THE ACCIDENT RESULT IN A "HIT AND RUN" YES NO | Vessel speed at the time of the accident NOT MOVING $\square$ UNDER 10 MPH $\square$ 10-20 MPH $\square$ 21-40 MPH $\square$ OVER 40 MPH |  |  |


| CONTRIBUTING FACTORS (CHECK ALL THAT APPLY) |  |
| :--- | :--- |
| $\square$ ALCOHOL USE | $\square$ NO PROPER LOOKOUT |
| $\square$ CARELESS/RECKLESS OPERATION | $\square$ NAVIGATION AID MISSING / INADEQUATE |
| $\square$ CONGESTED WATERS | $\square$ OPERATOR INATTENTION |
| $\square$ DAM / LOCK | $\square$ OPERATOR INEXPERIENCE |
| $\square$ DRUG USE | $\square$ OVERLOADING |
| $\square$ EQUIPMENT FAILURE | $\square$ PASSENGER / SKIER BEHAVIOR |
| $\square$ EXCESSIVE SPEED | $\square$ RESTRICTED VISION |
| $\square$ FAILURE TO VENT | $\square$ RULES OF THE ROAD VIOLATION |
| $\square$ FORCE OF WAKE / WAKE | $\square$ SHARP TURN |
| $\square$ HAZARDOUS WATERS | $\square$ STANDING / SITTING ON GUNWHALE, BOW, |
| $\square$ HULL FAILURE | $\square$ STARTING IN GEAR |
| $\square$ IGNITION OF SPILLED FUEL OR VAPOR | $\square$ SUDDEN MEDICAL CONDITION |
| $\square$ IMPROPER ANCHORING | $\square$ (HEART ATTACK, STROKE, SEIZURE) |
| $\square$ IMPROPER LOADING | $\square$ WEATHER (HEAVY) |
| $\square$ FAILURE TO YIELD | $\square$ LACK OF / IMPROPER SKI OBSERVER |
| $\square$ LACK OF / OR IMPROPER BOAT LIGHTS | $\square$ OTHER (SPECIFY): |
| $\square$ MACHINERY FAILURE |  |

## SPECIFY "EQUIPMENT FAILURE"

$\square$ AUXILIARY EQUIPMENT FAILURE (e.g., GENERATOR)
$\square$ COMMUNICATION EQUIPMENT FAILURE
$\square$ FIRE EXTINGUISHER NOT SERVICEABLESAIL DISMASTINGSEAT BROKE LOOSESOUND PRODUCING EQUIPMENT FAILURE
VISUAL DISTRESS SIGNALS FAILED

## SPECIFY "MACHINERY FAILURE"

$\square$ ELECTRIC SYSTEM FAILUREENGINE FAILUREFUEL SYSTEM FAILURESHIFT FAILURESTEERING SYSTEM FAILURETHROTTLE FAILUREVENTILATION SYSTEM FAILURE


## ACCIDENT DESCRIPTION

DESCRIBE WHAT HAPPENED (SEQUENCE OF EVENTS) AND CONTRIBUTING FACTORS. INCLUDE FAILURE OF MACHINERY OR EQUIPMENT. INCLUDE A DIAGRAM AND CONTINUE ON ADDITIONAL SHEETS IF NECESSARY. INCLUDE ANY INFORMATION REGARDING THE INVOLVEMENT OF ALCOHOL AND / OR DRUGS IN CAUSING OR CONTRIBUTING TO THE ACCIDENT. INCLUDE ANY DESCRIPTIVE INFORMATION ABOUT THE USE OF PERSONAL FLOATATION DEVICES (PFDS). PLEASE DO NOT LIST ANY PERSONAL IDENTIFIERS IN THIS SECTION -- SUCH AS NAMES OF INDIVIDUALS, TELEPHONE NUMBERS, STREET ADDRESSES, ETC. REFER TO INDIVIDUALS AS OPERATOR A, OPERATOR B, VICTIM 1, VICTIM 2, ETC. AND TO THE VESSEL(S) INVOLVED AS VESSEL A, VESSEL B, ETC. FOR EXAMPLE: OPERATOR OF VESSEL (A) DID NOT HAVE A PROPER LOOKOUT AND RAN INTO VESSEL (B) INJURING VICTIMS (1) AND (2) ON VESSEL (B).

| NAME | LAST | FIRST | TELEPHONE NUMBER ( |  | ) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ADDRESS | StREET | CITY | State | ZIP CODE |  |
| OWNERS OF PROPERTY INVOLVED (IF MORE THAN ONE - LIST ON A SEPARATE SHEET) |  |  |  |  |  |
| NAME | LAST | FIRST | TELEPHONE NUMBER ( |  | ) |
| ADDRESS | StREET | CITY | StATE | ZIP |  |
| OWNER INFORMATION FOR VESSEL A |  |  |  |  |  |
| NAME | LAST | FIRST | MIDDLE INITIAL |  |  |
| ADDRESS | Street | CITY |  |  |  |
| TELEPHONE NUMBER ( |  | State | ZIP CODE |  |  |
| PERSON SUBMITTING THIS REPORT FOR VESSEL A |  |  |  |  |  |
| STATUS OF PERSON COMPLETING THIS REPORT $\quad \square$ OPERATOR $\quad \square$ OWNER$\square$ OTHER (OPERATOR AND OWNER ARE UNABLE TO COMPLETE THIS REPORT) -- SPECIFY WHO IS COMPLETING THIS REPORT: |  |  |  |  |  |
| NAME | LAST | FIRST | TELEPHONE NUMBER ( ) |  |  |
| ADDRESS | Street | CITY | STATE | ZIP CO |  |
| Signature |  |  | date submitted |  |  |
| OPERATOR OR OWNER OF THE OTHER VESSEL (VESSEL B) INVOLVED IN THE ACCIDENT <br> each Vessel operator or owner is required to file a separate and complete report |  |  |  |  |  |
| NAME | LAST | FIRST | TELEPHONE NUMBER ( ) |  |  |
| ADDRESS | Street | CITY | state | ZIP CO |  |
| FOR STATE AGENCY USE ONLY |  |  |  |  |  |
| OFFICIAL | LAST NAN | FIRST | TELEPHONE NUMBER ( |  | ) |
| PRIMARY CAUSE OF THE ACCIDENT SECON |  |  |  |  |  |
| SIGNATURE OF REVIEWING OFFICIAL |  |  | DATE REVIEWED |  |  |

An Agency may not conduct or sponsor and a person is not required to respond to an information collection, unless it displays a currently valid OMB Control Number. The Coast Guard estimates that the average burden for this report form is 30 minutes. You may submit any comments concerning the accuracy of this burden estimate or any suggestions for reducing the burden to: Commandant (CG-3PCB), U.S. Coast Guard, Washington, DC 20593-0001 or Office of Management and Budget, Paperwork Reduction Project (1625-0003), Washington, DC 20593

## Appendix B

The Recommended BAR Form

This appendix provides a copy of the recommended BAR form developed as part of this project.

| U.S. Dept. of Homeland Security <br> U.S. Coast Guard CG-3865 (Rev. 08-07) | Recreational Boating Accident Report | $\begin{aligned} & \hline \text { OMB No: } 1625-0003 \\ & \text { Expires: } \quad \text { dd/yy/yyyy } \end{aligned}$ |
| :---: | :---: | :---: |

NOTE: each boat operator/owner involved in an accident should submit a separate report. Estimated report form completion time: 30 min
For each question below, please provide answers IF APPLICABLE AND IF KNOWN, otherwise leave blank.

## REPORT SUBMISSION

Report required because (select all that apply):
$\square$ At least one person in this accident died:

> If so, how many?
$\square$
$\square$ At least one injured person in this accident required or was in need of treatment beyond first aid:

If so, how many? $\square$
$\square$ At least one person in this accident disappeared and has not yet been recovered: If so, how many? $\qquad$
$\square$ All boat and other property damage (e.g., fishing/hunting gear) caused by this accident totaled (or likely totaled) $\$ 2,000$ or more:

Approximate value of damage to your boat:
Approximate value of damage to your other property:

$\square$ Your or another boat in this accident was (or likely was) a total loss
Report submitted by (select all that apply):
$\square$ Boat Operator (required if possible)
$\square$ Boat Owner (if operator unable, or same as operator)
$\square$ Other (describe): $\square$


To be submitted within:
48 hours (if injury, disappearance or death) 10 days (if boat/property damage only)

## To be submitted to:

(Local State Reporting Authority)
Town
ST 12345
Phone: 111-222-3333
An agency may not conduct or sponsor and a person is not required to
respond to an information collection, unless it displays a currently valid OMB Control number.

## For State Agency Use Only

First name:
Last name:
Phone:

Primary cause of accident:

## ACCIDENT SUMMARY



## ACCIDENT DESCRIPTION

Briefly describe this accident (attach extra pages if necessary):

## DAMAGE TO YOUR BOAT

Briefly summarize any damage to your boat:

## YOUR BOAT - PEOPLE

## DAMAGE TO YOUR OTHER PROPERTY (NOT BOAT)

Briefly summarize any damage to your other property (not boat):
\# people on board (including operator):
\# people being towed (e.g., on tubes, skis):
\# people wearing lifejackets (on board or towed):


## OTHER BOATS INVOLVED IN ACCIDENT

\# of other boats involved?

For each question below, please provide answers IF APPLICABLE AND IF KNOWN, otherwise leave blank.
YOUR BOAT


SIZE ESTIMATES


## BOAT TYPE

Boat type (select one):


## SAFETY MEASURES

| Organizations that hav | vessel safety check (VSC) | your boat within the past year | (including carriage |
| :---: | :---: | :---: | :---: |
| $\square$ US Coast Guard | VsC Decal? $\mathrm{O}_{\text {Yes }}$ O | $\square$ State Agency (Name): |  |
| $\square$ US Power Squadr |  | $\square$ Other Agency (Name): |  |
| \# Life jackets on board: | \# Fire extinguishers on board: | Type of fire extin | uishers (e.g., ABC): |

## ACCIDENT DETAILS - EXTERNAL CONDITIONS

| WEATHER |  |  |
| :---: | :---: | :---: |
| Overall weather was (select one): | It was Visibility was | Wind was (select one): |
| O Clear $\quad$ Raining | (select one): (select one): | O 0 mph (none) |
| $\bigcirc$ Cloudy $\bigcirc$ Snowing | $\bigcirc$ Day $\bigcirc$ Good | O Over 0, up to 12 mph (light) |
| O Foggy $\quad$ O Hazy | $\bigcirc$ Night $\bigcirc$ Fair | O Over 12, up to 25 mph (moderate) |
| O Other (describe): | $\bigcirc$ Poor | O Over 25 , up to 55 mph (strong) |
|  | Approximate air temperature: | O Over 55 mph (stormy) |

[^21]
## Other water conditions:

Approximate water temperature: $\quad \square{ }^{\circ} \mathrm{F}$
Strong current? $\bigcirc$ Yes $\bigcirc$ No
Hazardous waters?(e.g., rapid tidal flow, currents) 〇 Yes $\bigcirc$ no
Congested waters? $\quad$ Y Yes $\bigcirc$ no

For each question below, please provide answers IF APPLICABLE AND IF KNOWN, otherwise leave blank.

## ACCIDENT DETAILS - YOUR BOAT

## MACHINERY/EQUIPMENT FAILURE

Failure of the following machinery/equipment on your boat contributed to this accident (select all that apply):
$\square$ Engine
$\square$ Sail/mast
$\square$ Steering
$\square$ Radio
$\square$ Fire extinguisher
$\square$ Electrical systemOnboard lights $\quad \square$ Throttle
$\square$ Auxiliary equipment
$\square$ Ventilation
Fuel system
$\square$ Seats
$\square$ Shift
$\square$ Sound equipment (e.g., horn, whistle)
Onboard navigation aids (e.g., GPS, Loran)
Other (list):


## ACCIDENT DETAILS - ACTIVITIES AND OPERATIONS ON YOUR BOAT

## OPERATOR/PASSENGER ACTIVITIES

Operator/passenger activities on your boat at time of accident :
Activities were (select one): Operator/passenger activities (select all that apply):
O CommercialFishingTubingStarting engine
$\square$ Other (list):
O RecreationalHunting $\square$ Water Skiing White water activity (e.g., rafting)Making repairs $\square$ Relaxing $\qquad$

## BOAT OPERATIONS

Your boat operations at time of accident (select all that apply):

| $\square$ Sailing | $\square$ Racing | $\square$ Changing direction | $\square$ Towing another vessel |
| :--- | :--- | :--- | :--- |
| $\square$ Cruising (underway under power) | $\square$ At anchor | $\square$ Changing speed | $\square$ Launching |
| $\square$ Drifting | $\square$ Being towed | $\square$ Tied to dock/mooring | $\square$ Docking/undocking |
| $\square$ Rowing/paddling | $\square$ Other (list): | $\square$ |  |

## ACCIDENT DETAILS - EVENTS ON YOUR BOAT

## ACCIDENT EVENTS

Types of events occurring to/on your boat during accident (select all that apply):

| $\square$ Collision with recreational boat | $\square$ Flooding/swamping | $\square$ Person fell overboard |
| :--- | :--- | :--- |
| $\square$ Collision with commercial boat (e.g., tug, barge) | $\square$ Fire/explosion - fuel | $\square$ Person fell on/within boat |
| $\square$ Collision with fixed object (e.g., dock, bridge) | $\square$ Fire/explosion - non-fuel | $\square$ Sudden medical condition |
| $\square$ Collision with submerged object (e.g., stump, cable) | $\square$ Carbon monoxide exposure | $\square$ Person struck by boat |
| $\square$ Collision with floating object (e.g., log, buoy) | $\square$ Mishap of skier, tuber, | $\square$ Person struck by |
| $\square$ Capsizing | wakeboarder, etc. | propeller or propulsion unit |
| $\square$ Grounding | $\square$ Person left boat voluntarily | $\square$ Person electrocuted |
| $\square$ Sinking | $\square$ Person ejected from boat (caused by collision or manuever) |  |
| $\square$ |  |  |
| $\square$ Other (describe): |  |  |

## ACCIDENT DETAILS - CONTRIBUTING FACTORS ON YOUR BOAT

## CONTRIBUTING FACTORS

Indicate factors on your boat which may have contributed to this accident (select all that apply):

| $\square$ Alcohol use | $\square$ Operator inattention | $\square$ Hazardous waters | $\square$ Restricted vision (e.g., fog) |
| :--- | :--- | :--- | :--- |
| $\square$ Drug use | $\square$ Operator inexperience | $\square$ Heavy weather | $\square$ Missing/inadequate |
| $\square$ Excessive speed | $\square$ Language barrier | $\square$ Hull failure | aids to navigation (e.g., buoy, |
| $\square$ Improper anchoring | $\square$ Navigation rules violation | $\square$ Ignition of fuel or vapor | daymarker) |
| $\square$ Improper loading | $\square$ Failure to vent | $\square$ Starting in gear | $\square$ Inadequate on-board |
| $\square$ Overloading | $\square$ Dam/lock | $\square$ Sharp turn | navigation lights |
| $\square$ Improper lookout | $\square$ Force of wake/wave |  | $\square$ People on gunwale, bow |
| $\square$ Other (describe): |  | or transom |  |

For each question below, please provide answers IF APPLICABLE AND IF KNOWN, otherwise leave blank.

## ACCIDENT DETAILS - YOUR BOAT - <br> INJURED PEOPLE RECEIVING OR IN NEED OF TREATMENT BEYOND FIRST AID

Report only injured people on or struck by your boat, receiving or in need of treatment beyond first aid.
Do not report injured people on or being pulled by another boat or no boat (e.g., swimmers, scuba divers, people on a dock).
If more than one injured person to report, attach additional copies of this page. If none, SKIP INJURED PEOPLE section.


ACCIDENT DETAILS - YOUR BOAT - DEATHS/DISAPPEARANCES
Only report deaths/disappearances of people on your boat, or struck by your boat.
If more than one death/disappearance to report, attach additional copies of this page.
If none, SKIP DEATHS/DISAPPEARANCES section.
PERSON WHO DIED/DISAPPEARED


## DETAILS OF DEATH/DISAPPEARANCE

Injury caused when person (select all that apply):
$\square$ Struck the:
$\square$ Was struck by a:
$\square$ (e.g., boat, water)
$\square$ Was exposed to carbon monoxide poisoning
$\square$ Received an electric shock
$\square$ Other (describe): $\square$

Nature of death/disappearance (select one):
O Death - by drowning
O Death - other likely cause (describe):
Disappeared and not yet recovered

Person was wearing lifejacket? $\bigcirc$ Yes

For each question below, please provide answers IF APPLICABLE AND IF KNOWN, otherwise leave blank.
ACCIDENT DETAILS - YOUR BOAT OPERATOR


## OPERATOR EXPERIENCE

Experience operating this type of boat (select one):

| O 0 to 10 hours | O Over 100, up to 500 hours |
| :--- | :--- |
| O Over 10, up to 100 hours | O Over 500 hours |

## OPERATOR SAFETY MEASURES

On board, prior to accident, was operator wearing: A lifejacket?

```
O Yes \(\quad\) ○
```

An engine cut-off switch (Lanyard) if equipped?
O Yes $\bigcirc$ No
On board, prior to accident, was operator using:
Alcohol?
O Yes $\quad$ No
Drugs?
O Yes $\quad$ No
Operator arrested for Boating Under the Influence?
O Yes $\quad$ No
Weather reports consulted prior to accident?
O Yes $\quad$ O No

## ACCIDENT DETAILS - OTHER KEY PEOPLE

Only report other key people not already documented as injured, died, disappeared or operator/owner of your boat. If more than two other key people to report, attach additional copies of this page.


For each question below, please provide answers IF APPLICABLE AND IF KNOWN, otherwise leave blank.
YOUR BOAT OPERATOR


If same as your boat operator SKIP rest of YOUR BOAT OWNER section.


## PERSON SUBMITTING THIS REPORT

If same as your boat operator OR owner, SKIP rest of PERSON SUBMITTING THIS REPORT section.


## SIGNATURE OF PERSON SUBMITTING THIS REPORT

| Your signature: |  |  |  |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: |

Submit any comments on this report form to:
Office of Management and Budget, Paperwork Reduction Project (1625-0003), Washington DC 20593.

## Appendix C Illustrative State BAR Forms

This appendix contains examples of state BAR forms, including those from the States of Alaska, California, Colorado, Connecticut, Massachusetts, Nevada, New Mexico, Ohio, Rhode Island, Utah, and Washington.



The operator of every recreational vessel is required by Section 656 of the Harbors and Navigation Code to file a written report whenever a boating accident occurs which results in death, disappearance, injury that requires medical attention beyond first aid, total property damage in excess of $\$ 500$, or complete loss of a vessel. Reports must be submitted within 48 hours in case of death occurring within 24 hours of an accident, disappearance, or injury beyond first aid. All other reports must be submitted within 10 days of the accident. Reports are to be submitted to the California Department of Boating and Waterways at 2000 Evergreen Street, Suite 100, Sacramento, California 95815-3888, (916) $263-8189$. Failure to submit this report as required is a misdemeanor and is punishable by a fine not to exceed $\$ 1000$ or imprisonment not to exceed 6 months or both.


DESCRIBE WHAT HAPPENED AND WHAT YOU COULD HAVE DONE TO PREVENT THIS ACCIDENT
(Explain the cause of death or injury, medical treatment, etc. Use sketch if helpful. If needed, continue description on additional paper.)

VICTIM OR WITNESS INFORMATION

| VICTIM OR WITNESS INFORMATION |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| VICTIM / WITNESS NAME \& ADDRESS | VICTIM/WITNESS STATUS | RIDING IN VESSEL \# | AGE | INJURY DESCRIPTION | CAUSE OF DEATH | COULD VICTIM SWIM? | LIFE JACKET WORN? |
|  | INJURED DEAD WITNESS ONLY |  |  |  | $\square$ drowning $\square$ TRAUMA $\square$ OTHER | $\square$ YES | $\begin{aligned} & \square \mathrm{YES} \\ & \square \mathrm{NO} \end{aligned}$ |
|  |  |  |  |  | $\square$ DROWNING $\square$ TRAUMA $\square$ OTHER | $\begin{aligned} & \square \mathrm{YES} \\ & \square \mathrm{NO} \end{aligned}$ | $\begin{aligned} & \square \text { YES } \\ & \square \text { NO } \end{aligned}$ |
|  |  |  |  |  | $\square$ DROWNING $\square$ TRAUMA $\square$ OTHER | $\square$ YES | $\begin{aligned} & \square \mathrm{YES} \\ & \square \mathrm{NO} \end{aligned}$ |
|  | injured DEAD WITNESS ONLY |  |  |  | $\begin{aligned} & \square \text { dROWNING } \\ & \square \text { TRAUMA } \\ & \square \text { OTHER } \end{aligned}$ | $\square \mathrm{YES}$ $\square \mathrm{NO}$ | $\begin{aligned} & \square \mathrm{YES} \\ & \square \mathrm{NO} \end{aligned}$ |

## INFORMATION: OPERATOR \#1



INFORMATION: OPERATOR \#2



OPERATOR / OWNER INFORMATION 1 (IF MORE THAN 3, ATTACH ADDITIONAL FORMS)

| OPERATOR 1 LAST NAME |  | FIRST |  |  | MIDDLE INITIAL |
| :---: | :---: | :---: | :---: | :---: | :---: |
| STREET ADDRESS |  |  |  | CITY |  |
| STATE | ZIP | PHONE NO. ( |  | DATE OF BIRTH | AGE IN YEARS |
| - MALE <br> - FEMALE | OPERATOR EXPERIENCE WITH THIS VESSEL |  | - STATE COURSE <br> - USCG AUXILIARY <br> - US POWER <br> SQUADRONS | R INSTRUCTION IN BOA <br> - RED CROSS <br> - INTERNET COURSE (SPECIFY) | SAFETY <br> - NONE <br> - OTHER <br> (SPECIFY) |
| OWNER 1 LAST NAME |  |  | FIRST |  | MIDDLE INITIAL |
| STREET ADDRESS |  |  |  | CITY |  |
| STATE ${ }^{\text {SIP }}$ |  |  | PHONE NO. ( ) |  |  |


| OPERATOR / OWNER INFORMATION 2 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| OPERATOR 2 LAST NAME |  | FIRST |  |  | MIDDLE INITIAL |
| STREET ADDRESS |  |  |  | CITY |  |
| STATE | ZIP | PHONE NO. ( ) |  | DATE OF BIRTH | AGE IN YEARS |
| - MALE <br> - FEMALE | OPERATOR EXP $\text { < } 10 \text { HOURS }$ - 10-100 HOURS -100-500 HOURS | NCE WITH THIS VESSEL $\begin{aligned} & \text { - > } 500 \text { HOURS } \\ & \text { OTHER } \end{aligned}$ | - STATE COURSE <br> - USCG AUXILIARY <br> - US POWER <br> SQUADRONS | R INSTRUCTION IN BOA <br> - RED CROSS <br> - INTERNET COURSE (SPECIFY) | SAFETY <br> - NONE <br> - OTHER <br> (SPECIFY) |
| OWNER 2 LAST NAME |  |  | FIRST |  | MIDDLE INITIAL |
| STREET ADDRESS |  |  |  | CITY |  |
| STATE |  | ZIP | PHONE NO. ( ) |  |  |

OPERATOR / OWNER INFORMATION 3

| OPERATOR 3 LAST NAME |  | FIRST |  |  | MIDDLE INITIAL |
| :---: | :---: | :---: | :---: | :---: | :---: |
| STREET ADDRESS |  |  |  | CITY |  |
| STATE | ZIP | PHONE NO. ( ) |  | DATE OF BIRTH | AGE IN YEARS |
| - MALE <br> - FEMALE | OPERATOR EXPERIENCE WITH THIS VESSEL$\begin{array}{ll} a<10 \text { HOURS } & >500 \text { HOURS } \\ 10-100 \text { HOURS } & \square \text { OTHER } \\ 100-500 \text { HOURS } & \end{array}$ |  | - STATE COURSE <br> - USCG AUXILIARY <br> - US POWER <br> SQUADRONS | R INSTRUCTION IN BOA <br> - RED CROSS <br> - INTERNET COURSE (SPECIFY) | SAFETY NONE OTHER (SPECIFY) |
| OWNER 3 LAST NAME |  |  | FIRST |  | MIDDLE INITIAL |
| STREET ADDRESS |  |  |  | CITY |  |
| STATE |  | ZIP | PHONE NO. 1 |  |  |

## ACCIDENT DESCRIPTION

DESCRIBE WHAT HAPPENED (SEQUENCE OF EVENTS) AND CONTRIBUTING FACTORS. INCLUDE FAILURE OF MACHINERY OR EQUIPMENT. INCLUDE A DIAGRAM AND CONTINUE ON ADDITIONAL SHEETS IF NECESSARY. INCLUDE ANY INFORMATION REGARDING THE INVOLVEMENT OF ALCOHOL AND / OR DRUGS IN CAUSING OR CONTRIBUTING TO THE ACCIDENT. INCLUDE ANY DESCRIPTIVE INFORMATION ABOUT THE USE OF PERSONAL FLOATATION DEVICES (PFDS).

PLEASE DO NOT LIST ANY PERSONAL IDENTIFIERS IN THIS SECTION -- SUCH AS NAMES OF INDIVIDUALS, TELEPHONE NUMBERS, STREET ADDRESSES, ETC. REFER TO INDIVIDUALS AS OPERATOR 1, OPERATOR 2, VICTIM 1, VICTIM 2, ETC. AND TO THE VESSEL(S) INVOLVED AS VESSEL 1, VESSEL 2, ETC. FOR EXAMPLE: OPERATOR OF VESSEL 1 DID NOT HAVE A PROPER LOOKOUT AND RAN INTO VESSEL 2 INJURING VICTIMS 1 AND 2 ON VESSEL 2.

VESSEL \#
INITIAL IMPACT POINT \#
CIRCLE ALL DAMAGED AREAS
13 - BeLow waterline
14 - LOWER UNIT 15-WINDSHIELD 16 - BURNED 17 - SUNK
18 - NO DAMAGE
(PERSONAL INUURY ONLY)

VESSEL \#
INITIALIMPACT POINT \#


CIRCLE ALL DAMAGED AREAS
13 - beLOW WATERLINE
14-LOWER UNIT 15-WINDSHEELD 16 -BURNED
17 - SUNK
18 - NO DAMAGE
(PERSONALINURY ONLY)

VESSEL \#
INITIAL IMPACT POINT \#

## CIRCLE ALL DAMAGED AREAS

13 - below waterline
14-LOWER UNIT
15-WINDSHEELD
16 - BURNED
17 - SUNK
18 - NO DAMAGE

VESSEL INFORMATION (COMPLETE ONE FORM FOR EACH VESSEL) VESSEL\# - 1 - 3 (CHECK ONE)


VESSEL INFORMATION CONTINUED (COMPLETE ONE FORM FOR EACH VESSEL) VESSEL\# - 1 - 3 (CHECK ONE)


| VICTIM 1 LAST NAME | FIRST |  | MIDDLE INITIAL |
| :---: | :---: | :---: | :---: |
| VICTIM 1 STREET ADDRESS |  |  |  |
| CITY | STATE |  | ZIP |
| WITH WHICH VESSEL IS THIS VICTIM ASSOCIATED? | AGE OF VICTIM | DATE OF BIRTH |  |
| MEDICAL TREATMENT BEYOND FIRST AID? - YES a NO ADMITTED TO HOSPITAL? <br> - YES <br> - NO | TYPE OF INJURY (CHECK ALL THAT APPLY) |  |  |
| WAS PFD WORN? $\square$ YES NO <br> PRIOR TO ACCIDENT? $\square$ - YES NO <br> AS A RESULT OF ACCIDENT? YES <br> NO <br> TYPE OF PFD WORN <br> - TYPE I <br> - TYPE II <br> - TYPE III <br> - TYPE V | AMPUTATION <br> BACK INJURY <br> BROKEN BONE(S) <br> BURNS | PRIMARY | SECONDARY |
| PFD WORN WAS INHERENTLY BUOYANT <br> - INFLATABLE <br> USCG PFD APPROVAL NUMBER | CARBON MONOXIDE POISONING CONTUSION DISLOCATION |  | $\begin{aligned} & \square \\ & \square \\ & \square \end{aligned}$ |
| ALCOHOL USE APPARENT <br> - YES - NO BAC $\qquad$ | HEAD INJURY HYPOTHERMIA | - | - |
| INJURY CAUSED BY (CHECK ALL THAT APPLY) | HYPOTHERMIA | $\square$ | $\square$ |
| IMPACT WITH VESSEL - YES a NO <br> IMPACT WITH WATER a YES a NO | LACERATION | $\square$ | $\square$ |
| IMPACT WITH FIXED / |  | $\square$ | $\square$ |
| FLOATING OBJECT - YES $\square$ NO | SHOCK <br> SPINAL INJURY | $\square$ | $\square$ |
| STRUCK BY VESSEL Y YES NO |  | $\square$ | $\square$ |
| STRUCK BY PROPULSION SYSTEM a YES a NO <br> EXPOSURE TO ELEMENTS -YES a NO | SPINAL INJURY <br> SPRAIN / STRAIN | $\square$ | $\square$ |
|  | TEETH | $\square$ | $\square$ |
| INJURED STATUS $\square$ OPERATOR PASSENGER - SWIMMER WATER SKIER |  |  |  |
| VICTIM 2 LAST NAME | FIRST |  | MIDDLE INITIAL |
| VICTIM 2 STREET ADDRESS |  |  |  |
| CITY | STATE |  | ZIP |
| WITH WHICH VESSEL IS THIS VICTIM ASSOCIATED? | AGE OF VICTIM | DATE OF BIRTH |  |
| MEDICAL TREATMENT BEYOND FIRST AID? YES $\square$ NO ADMITTED TO HOSPITAL? <br> - YES <br> - NO | TYPE OF INJURY (CHECK ALL THAT APPLY) |  |  |
| WAS PFD WORN? <br> - YES - NO <br> PRIOR TO ACCIDENT? YES - NO <br> AS A RESULT OF ACCIDENT? - YES - NO <br> TYPE OF PFD WORN <br> - TYPE I <br> - TYPE II <br> - TYPE III <br> - TYPE V | AMPUTATION BACK INJURY BROKEN BONE(S) BURNS | PRIMARY <br> $\square$ <br> $\square$ <br> $\square$ | SECONDARY |
| PFD WORN WAS USCG PFD APPROVAL NUMBER <br> INHERENTLY BUOYANT 160. <br> INFLATABLE  | CARBON MONOXIDE POISONING CONTUSION DISLOCATION | $\square$ <br> $\square$ <br> $\square$ |  |
| ALCOHOL USE APPARENT <br> - YES <br> - NO <br> BAC $\qquad$ | ELECTROCUTION HEAD INJURY HYPOTHERMIA | - | ם [ |
| INJURY CAUSED BY (CHECK ALL THAT APPLY) | INTERNAL INJURIES | $\square$ | $\square$ |
| IMPACT WITH VESSEL <br> - YES $\quad \mathrm{NO}$ <br> IMPACT WITH WATER <br> - YES - NO | LACERATION | $\square$ | $\square$ |
| IMPACT WITH FIXED / | NECK INJURY | $\square$ | $\square$ |
| FLOATING OBJECT - YES $\square$ NO | SHOCK | $\square$ | $\square$ |
| STRUCK BY VESSEL - YES $\square$ NO | SPINAL INJURY SPRAIN / STRAIN TEETH | $\square$ | $\square$ |
| STRUCK BY PROPULSION SYSTEM YES  <br> EXPOSURE TO ELEMENTS YES NO |  | $\square$ | $\square$ |
| INJURED STATUS | TEETH | $\square$ | $\square$ |


| VICTIM 1 LAST N |  |  | FIRST | MIDDLE INITIAL |
| :---: | :---: | :---: | :---: | :---: |
| VICTIM 1 STREET ADDRESS |  |  |  |  |
| CITY |  |  | STATE | ZIP |
| WITH WHICH VESSEL IS THIS VICTIM ASSOCIATED? |  |  | AGE OF VICTIM | DATE OF BIRTH |
| ALCOHOL USE APPARENT <br> $\square$ YES - NO BAC |  |  | DRUG USE APPARENT <br> - YES $\qquad$ - NO TYPE |  |
| CAUSE OF DEATH <br> - CARBON MONOXIDE POISONING <br> - DROWNING <br> - HYPOTHERMIA <br> - TRAUMA <br> - ELECTROCUTION <br> - OTHER (SPECIFY) |  | VICTIM ACTIVITY <br> - FISHING <br> - HUNTING <br> - SCUBA DIVING / SNORKELING <br> - SWIMMING <br> - TUBING <br> - WATER SKIING <br> - OTHER (SPECIFY) | PFD WORN <br> - YES - NO <br> PFD WORN WAS <br> - INHERENTLY BUOYANT <br> - INFLATABLE <br> PFD USED - BUT NOT WORN <br> - YES TYPE $\qquad$ <br> - NO <br> PFD WAS NOT WORN AND NOT USED - YES NO - UNKNOWN | TYPE OF PFD WORN <br> - TYPE I <br> - TYPE II <br> - TYPE III <br> - TYPE V <br> PFD PERFORMANCE <br> - SUCCESSFUL <br> - FAILED <br> - IMPROPER WEAR / USE <br> COMMENTS |
| DISAPPEARANCE <br> - YES - NO |  |  | USCG PFD APPROVAL NUMBER 160. |  |
| DECEASED STATUS <br> - OPERATOR <br> - PASSENGER <br> - SWIMMER <br> - WATER SKIER <br> - OTHER (SPECIFY) |  | PHYSICAL CONDITION```\square UNKNOWN - NORMAL a ILL a HANDICAPPED \square UNDER INFLUENCE OF ALCOHOL / DRUGS \square OTHER (SPECIFY)``` |  | VICTIM SWIMMING ABILITY YES NO UNKNOWN |
| VICTIM 2 LAST NAME |  |  | FIRST | MIDDLE INITIAL |
| VICTIM 2 STREET ADDRESS |  |  |  |  |
| CITY |  |  | STATE | ZIP |
| WITH WHICH VESSEL IS THIS VICTIM ASSOCIATED? |  |  | AGE OF VICTIM | DATE OF BIRTH |
| ALCOHOL USE APPARENT |  |  | DRUG USE APPARENT <br> - YES - NO TYPE |  |
| CAUSE OF DEATH <br> - CARBON MONOXIDE POISONING <br> - DROWNING <br> - HYPOTHERMIA <br> - TRAUMA <br> - ELECTROCUTION <br> - OTHER (SPECIFY) |  | VICTIM ACTIVITY <br> - FISHING <br> - HUNTING <br> - SCUBA DIVING / SNORKELING <br> - SWIMMING <br> - TUBING <br> - WATER SKIING <br> - OTHER (SPECIFY) | PFD WORN <br> - YES <br> - NO <br> PFD WORN WAS <br> - INHERENTLY BUOYANT <br> - INFLATABLE <br> PFD USED - BUT NOT WORN <br> - YES TYPE $\qquad$ <br> - NO <br> PFD WAS NOT WORN AND NOT USED - YES a NO <br> - UNKNOWN | TYPE OF PFD WORN <br> - TYPEI <br> - TYPE II <br> - TYPE III <br> - TYPE V <br> PFD PERFORMANCE <br> - SUCCESSFUL <br> - FAILED <br> - IMPROPER WEAR / USE <br> COMMENTS |
| DISAPPEARANCE <br> - YES - NO |  |  | USCG PFD APPROVAL NUMBER 160. |  |
| DECEASED STATUS <br> - OPERATOR <br> - PASSENGER <br> - SWIMMER <br> - WATER SKIER <br> - OTHER (SPECIFY) |  | ```PHYSICAL CONDITION \square UNKNOWN - NORMAL ILL - HANDICAPPED ] UNDER INFLUENCE OF ALCOHOL / DRUGS \square OTHER (SPECIFY)``` |  | VICTIM SWIMMING ABILITY YES NO UNKNOWN |

The operator of a vessel used for recreation purposes is required to file a report in writing within 48 hours whenever an accident results in loss of life, disappearance from a vessel or an injury which requires medical treatment beyond first aid. If total damage to all property is in excess of $\$ 500$, a report must be filed within 5 days. Reports shall be submitted to the Commissioner of Environmental Protection at the above address. If the operator is unable to report the accident, the boat owner or survivor of the accident should prepare the report. Any person violating these requirements is subject to the penalties prescribed by law.


ACCIDENT DATA



# Massachusetts Environmental Police <br> Boating \& R.V. Safety Bureau <br> 1 Trowbridge Road <br> Bourne, MA 02532 <br> Phone: (508) 759-0002 Fax: (508) 759-3357 <br> BOATING ACCIDENT REPORT 

The operator/owner of a vessel used for recreational purposes is required to file a report in writing whenever an accident results in: loss of life or disappearance from a vessel; an injury which requires medical treatment beyond first aid; or property damage in excess of $\$ 500$ or complete loss of the vessel. Reports in death and injury cases must be submitted within 48 hours. Reports in other cases must be submitted within 5 days. Reports must be submitted to the above address. This form is provided to assist the operator in filing the required written report.


| If more than 3 fatalities and/or injuries, attach additional forms |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DECEASED |  |  |  |  |  |  |  |
| NAME | ADDRESS |  | DATE OF BIRTH | WAS VICTIM? <br> [ ] Swimmer <br> [ ] Non Swimmer | DEATH CAUSED BY <br> [ ] Drowing <br> [ ] Other |  | WAS PFD WORN? [ ] YES [ ] NO What Type? |
| NAME | ADDRESS |  | DATE OF BIRTH | WAS VICTIM? [ ] Swimmer [ ] Non Swimmer | DEATH CAUSED BY <br> [ ] Drowing <br> [ ] Other <br> [ ] DISAPPEARANCE |  | WAS PFD WORN? [ ] YES [ ] NO <br> What Type? |
| NAME | ADDRESS |  | DATE OF BIRTH | WAS VICTIM? <br> [ ] Swimmer <br> [ ] Non Swimmer | DEATH CAUSED BY <br> [ ] Drowing <br> [ ] Other <br> [ ] DISAPPEARANCE |  | WAS PFD WORN? [ ] YES [ ] NO What Type? |
| INJURED |  |  |  |  |  |  |  |
| NAME | ADDRESS |  | DATE OF BIRTH | NATURE OF INJURY |  |  | MEDICAL TREATMENT [ ] YES [ ] NO |
| NAME | ADDRESS |  | DATE OF BIRTH | NATURE OF INJURY |  |  | MEDICAL TREATMENT [ ] YES [ ] NO |
| NAME | ADDRESS |  | DATE OF BIRTH | NATURE OF INJURY |  |  | MEDICAL TREATMENT [ ] YES [ ] NO |
| ACCIDENT DESCRIPTION |  |  |  |  |  |  |  |
| DESCRIBE WHAT HAPPENED (Sequence of events. Include Failure of Equipment. If diagram is needed attach separately. Continue on additional sheets if necessary. Include any information regarding the involvement of alcohol and/or drugs in causing or contributing to the accident. Include any descriptive information about the use of PFD's) |  |  |  |  |  |  |  |
| VESSEL NO. 2 (if more than 2 vessels, attach additional forms) |  |  |  |  |  |  |  |
| NAME OF OPERATOR |  | OPERATOR ADDRESS |  |  |  | BOAT NUMBER |  |
| TELEPHONE NUMBER |  |  |  |  |  | BOAT NAME |  |
| NAME OF OWNER |  | OWNER ADDRESS |  |  |  |  |  |
| WITNESSES |  |  |  |  |  |  |  |
| NAME |  | ADDRESS |  |  |  | TELEPHONE NUMBER |  |
| NAME |  | ADDRESS |  |  |  | TELEPHONE NUMBER |  |
| NAME |  | ADDRESS |  |  |  | TELEPHONE NUMBER |  |
| PERSON COMPLETING REPORT |  |  |  |  |  |  |  |
| SIGNATURE |  | ADDRESS |  |  |  | TELEPHONE NUMBER |  |
| QUALIFICATION (Check one) <br> [ ] Operator [ ] Owner [ ] Investigator [ ] Other |  |  |  |  |  | DATE SUBMITTED |  |
| (Do Not Use) - FOR REPORTING AUTHORITY REVIEW (Use Agency date stamp) |  |  |  |  |  |  |  |
| CAUSES BASED ON (check one)[ ] This report [ ] Investigation and this report <br> [ ] Investigation [ ] Could not be determined |  | NAME OF REVIEWING OFFICE |  |  |  | DATE RECEIVED |  |
| PRIMARY CAUSE OF ACCIDENT |  | SECONDARY CAUSE OF ACCIDENT |  |  |  | REVIEWED BY |  |

## BOATING ACCIDENT REPORT



The operator of a vessel involved in an accident is required to file a report in writing whenever an accident results in loss of life, loss of consciousness, medical treatment or disability in excess of 24 hours or property damage in excess of $\$ 500$. Reports in death and injury cases must be submitted within 48 hours; reports in other cases are required within 10 days. All reports shall be submitted to the Nevada Division of Wildlife, 1100 Valley Road, Reno, Nevada 89512, and shall include a full description of the collision, accident or other casualty. (NRS 488.550, NAC 488.440 and 488.445.)




## Vessel and Operational Information

\begin{tabular}{|c|c|c|c|c|}
\hline \begin{tabular}{l}
Type of Boat \\
VA VB VC Vessel
\\
\(\square \square \square\) Cabin Motorboat \\
\(\square \square \square\) Canoe/Kayak \\
\(\square \square \square\) Houseboat \\
\(\square \square \square\) Open Motorboat \\
\(\square \square \square\) Personal watercraft
\end{tabular} \& \begin{tabular}{l}
VA VB VC Vessel \\
\(\square \square \square\) Pontoon Boat \\
\(\square \square \square\) Mini Jet Boat \\
\(\square \square \square\) Rowboat (Jon) \\
\(\square \square \square\) Sail (Aux. power) \\
\(\square \square \square\) Sail (only) \\
\(\square \square \square\) Seaplane \\
\(\square \square \square\) Other
\end{tabular} \& \begin{tabular}{l}
\# of Engines \\
Vessel A \(\qquad\) \\
Vessel B \(\qquad\) \\
Vessel C \(\qquad\) \\
Total H. P. \\
Vessel A \(\qquad\) \\
Vessel B \(\qquad\) \\
Vessel C \(\qquad\)
\end{tabular} \& \begin{tabular}{l}
Propulsion \\
VA VB VC Vessel
Air Thrust

Manual
Propeller

Sail

Water Jet

 \& 

Safety Equipment <br>
VA VB VC Vessel
Req. PFDs on board
PFDs accessible
Fire ext. on board
Fire ext. used
Nav. lights operational
Nav. lights turned on
Current Safety Exam
\end{tabular} <br>

\hline \begin{tabular}{l}
Hull Material <br>
VA VB VC Vessel
Aluminum

Fiberglass

Plastic

Rubber/Vinyl
\end{tabular} \& VA VB VC Vessel

Rigid hull infl.

Steel

Wood

Other \& \begin{tabular}{l}
Fuel <br>
VA VB VC Vessel
Diesel

Electric
Gasoline

 \& 

Engine <br>
VA VB VC Vessel
Airboat

Inboard

Outboard

I/O

 \& 

Vessel was- <br>
VA VB VC Vessel
Rented
$\square$ Borrowed (not in household)
\end{tabular} <br>

\hline
\end{tabular}

Operation at Time of Accident

| VA VB VC Vessel | VA VB VC Vessel |
| :--- | :--- |
| $\square \square \square$ At anchor | $\square \square \square$ Docking/Undocking |
| $\square \square \square$ Being towed | $\square \square \square$ Drifting |
| $\square \square \square$ Towing a boat | $\square \square \square$ Launching/Loading |
| $\square \square \square$ Changing direction | $\square \square \square$ Rowing/Paddling |
| $\square \square \square$ Changing speed | $\square \square \square$ Sailing |
| $\square \square \square$ Cruising | $\square \square \square$ Wake/Surf jumping |
| $\square \square \square$ Docked (moored) | $\square \square \square$ Other |

Activity at Time of Accident

| VA VB VC Vessel//njured | VA VB VC Vessel//Injured |
| :--- | :--- |
| $\square \square \square$ Commercial purpose | $\square \square \square$ Scuba diving |
| $\square \square \square$ Fishing (recreational) | $\square \square \square$ Skiing (surfing, etc.) |
| $\square \square \square$ Fueling | $\square \square \square$ Starting engine |
| $\square \square \square$ Hunting | $\square \square \square$ Swimming/snorkeling |
| $\square \square \square$ Making repairs | $\square \square \square$ Tournament (fishing) |
| $\square \square \square$ Racing | $\square \square \square$ Boat pulling tube |
| $\square \square \square$ Racing (unpermitted) | $\square \square \square$ White water sports |
| $\square \square \square$ Recreational cruising | $\square \square \square$ Other |
| $\square \square \square$ ( |  |

## Vessel A



Operator Information



## Injury Information




For the Boat Accident Diagram: Indicate the location of all damaged areas on the boat configuration in the diagram. Indicate if damage was only $\square$ Below Waterline, $\square$ Lower Unit, $\square$ Windshield, $\square$ Sunk, or $\square$ Injured no Damage. Indicate Vessel A, B, or C in the diagram. On the vessel configuration, indicate the location of persons involved using "O" for Operator and "P" for Passenger (use the number of the passenger from the Vessel $\mathrm{A}, \mathrm{B}$, or C sections).


Do Not Complete Below This Line - State Safety Review Only

## Date Investigation Completed (MM/DD/YY)

Federal Accident Classification (For Statistical Use)

| Recreational |  | $\square$ Commercial |  | $\square$ Government |  | $\square$ Non-Reportable |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Primary Type | Secondary Type | Tertiary Type | Primary Cause | Secondary Cause | Tertiary Cause | Reviewed by: | ID \# |

## Notes:

Additional Witnesses

| Name (Last, First, MI) | Address (Street, City, State, ZIP) | Phone \#'s Home/Bus |
| :--- | :--- | :--- |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

# OHIO OPERATOR BOATING ACCIDENT REPORT 

Ohio Department of Natural Resources
Division of Watercraft
2045 Morse Road, Building A
Columbus, Ohio 43229-6693
Phone: (614) 265-6480

> NOTE: SECTION 1547.59 of the Ohio Revised Code requires operators of all vessels to file the attached report in case of collision, accident, or other casualty involving a vessel.
> THE OPERATOR OF A VESSEL USED FOR RECREATIONAL PURPOSES IS REQUIRED TO FILE A REPORT IN WRITING WHENEVER AN ACCIDENT RESULTS IN: LOSS OF LIFE OR DISAPPEARANCE FROM A VESSEL; AN INJURY WHICH REQUIRES TREATMENT BEYOND FIRST AID; OR COMBINED PROPERTY DAMAGE IN EXCESS OF \$500, OR COMPLETE LOSS OF VESSEL. REPORTS IN DEATH AND INJURY CASES MUST BE SUBMITTED WITHIN 48 HOURS. REPORTS IN OTHER CASES MUST BE SUBMITTED WITHIN 10 DAYS. The report filed shall be used for statistical purposes only, as required by federal regulations, and shall not be admissable for any purpose in any civil, criminal, or administrative action at law.

SEND COMPLETED REPORT TO: Ohio Department of Natural Resources, Division of Watercraft , LE/SAR Section, Bldg. A-2, 2045 Morse Road, Columbus, Ohio 43229-6693.

INSTRUCTIONS: Complete pages 2, 3 and 4. Listed below are explanations for some of the questions on this form.

## Water Conditions:

Calm (waves $<6^{\prime \prime}$ ) $=$ Water smooth with little wave action.
Choppy ( $6^{\prime \prime}-2^{\prime}$ ) = White caps are becoming visible.
Rough ( $\left.2^{\prime}-6^{\prime}\right)=$ White caps are prevalent with strong wave action.
Very Rough ( $6^{\prime}$ ) = Very large and active wave action.
Strong Current $=$ Water movement in a certain direction.

## Wind Conditions:

Light (0-6 mph)
Moderate (7-14 mph)
Strong (15-25 mph)
Storm (over 25 mph )

No wind to rustle leaves. Enough wind to move small branches. Enough wind to move large branches. Difficult to walk against the wind.

Operator Experience: Estimate the total hours experience you have operating a boat.
Manufacturer's Hull ID Number: The hull identification number is usually found on the starboard (right) outside of the transom (back of the boat) and is at least a 12-digit number (if 1972 or newer). An example would be ABC456781272.

Boat Number: This refers to the boat registration number or, in the case of a federally documented vessel, the document number. An example of an Ohio boat number is $\mathbf{O H}-1234-\mathrm{BD}$.

Expiration Date: This is the date the boat registration (the decal) expires, found on the registration or the decal.

| Type of Boat: | Auxiliary Sail <br> Sail (only) <br> Rowboat <br> Personal Watercraft | A sailboat equipped with an inboard engine. <br> Any vessel equipped with mast and sails, dependant on the wind to propel it. <br> Any vessel designed to be rowed and is propelled by human muscular effort. <br> "Personal watercraft" means a vessel, less than 16 feet in length, propelled by machinery, and is <br> designed to be operated by a person sitting or kneeling on the vessel rather than by the individual <br> sitting or standing inside the vessel. |
| :--- | :--- | :--- |

Construction: LENGTH TRANSOM DEPTH


The Ohio D.N.R., Division of Watercraft thanks you for completing and mailing this form.

## Be sure to sign the last page of this form.

| ODNR Number <br> (Offical Use Only) |
| :--- |
| USCG Number <br> (Official Use Only) |

OHIO OPERATOR BOATING ACCIDENT REPORT


| ENVIRONMENTAL CONDITIONS (If not known, estimate) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Weather  <br> $\square$ Clear $\square$ Rain <br> $\square$ Cloudy $\square$ Snow <br> $\square$ Fog $\square$ Hazy | Water Conditions (Waves)  <br> $\square$ Calm $\left(<6^{\prime \prime}\right)$ $\square$ Choppy $\left(6^{\prime \prime}-2^{\prime}\right)$ <br> $\square$ Rough $\left(2^{\prime}-6^{\prime}\right)$ $\square$ Very Rough $\left(>6^{\prime}\right)$ <br> $\square$ Strong Current  | Temperatures <br> Air $\qquad$ ${ }^{\circ} \mathrm{F}$ <br> Water $\qquad$ ${ }^{\circ} \mathrm{F}$ | Wind (MPH)  <br> $\square$ None $\square$ Light (0-6) <br> $\square$ Mod. (7-14) $\square$ Strong (15-25) <br> $\square$ Storm (> 25)  | Visibility Day / Night <br> Good_______ $\square$ $\square$ <br> Fair___ $\square$ $\square$ <br> Poor____ $\square$ $\square$ |


| TYPE OF ACCIDENT | WHAT CONTRIBUTED TO ACCIDENT |
| :---: | :---: |
| Check all applicable. If more than one, number choices in chronological order of occurrence. | Check all applicable. If more than one, number choices in chronological order of occurrence. |

## OPERATOR/ OWNER INFORMATION

| Operator's Name | Telephone Number ( ) |  | Owner's Name (If different from Operator) | Telephone Number ( ) |
| :---: | :---: | :---: | :---: | :---: |
| Address |  |  | Address |  |
| City, State, Zip Code |  | County | City, State, Zip Code | County |
| Operator's Date of Birth SS\# / / | Age | Operator Experience <br> $\square$ Under 10 hours <br> ] 10-100 hours | Operator Instruction in Boating SafetyState Course U.S. Power Squadron1 American Red Cross 7 None | ㄱ USCG Auxiliary |
| $\square$ Male $\square$ Female |  | $\square>100$ hours |  |  |


| BOAT INFORMATION |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Boat Rented <br> $\square$ Yes $\square$ No | Number of Persons Onboard | Number of Persons Being Towed | Boat Manufacturer | Mfg. Hull ID Number |
| Boat Number | Expiration Date / / | Boat Name | Boat Model | Location of Boat After Accident |
| Type of Boat <br> $\square$ Open Motorboat <br> $\square$ Cabin Motorboat <br> $\square$ Auxiliary Sail <br> $\square$ Sail (only) <br> $\square$ Rowboat <br> $\square$ Canoe/Kayak <br> ㄱ Personal Watercraft <br> $\square$ Pontoon <br> $\square$ Houseboat <br> $\square$ Other $\qquad$ | Hull Material <br> - Wood <br> - Aluminum <br> $\square$ Steel <br> $\square$ Fiberglass <br> $\square$ Infl. Rubber/Canv. <br> $\square$ Rigid Hull Infl. <br> 口 Other $\qquad$ | Engine <br> $\square$ Outboard <br> $\square$ Inboard <br> - Inboard/Outdrive <br> $\square$ None | Propulsion <br> $\square$ Propeller <br> $\square$ Water Jet <br> $\square$ Air Thrust <br> $\square$ Manual <br> $\square$ Sail | Personal Floatation Devices (PFD's) Was boat adequately equipped with Coast Guard Approved Life Jackets? <br> $\square$ YES $\square$ NO <br> Were Life Jackets Accessible? <br> $\square$ YES $\square$ NO <br> Were Life Jackets Worn? <br> $\square$ YES $\square$ NO |
|  |  |  | -" Transom Depth______ Year Built_ |  |
| Capacity Plate Information (Boats after 1972) <br> If applicable: <br> Total Lb |  |  | ber of Persons |  |
| Operation at Time of Accident <br> $\square$ Cruising <br> $\square$ Changing Speed <br> $\square$ Changing Direction <br> ㄱ Drifting <br> I Towing Another Boat <br> $\square$ Being Towed <br> $\checkmark$ Rowing/Paddling | (Check all applicable) <br> $\square$ Sailing <br> $\square$ Launching <br> $\square$ Docking/Leaving D <br> $\square$ At Anchor <br> - Tied to Dock/Moored <br> $\square$ Other (specify) $\qquad$ |  | Activity at Time of Accident (Check any applicable)  <br> $\square$ Fishing $\square$ Whitewater Sports <br> $\square$ Hunting $\square$ Fueling <br> $\square$ Tournament $\square$ Starting Engine <br> $\square$ Swimming/Diving $\square$ Commercial Activi <br> $\square$ Making Repairs $\square$ Other (specify) <br> $\square$ Water Skiing/Tubing  <br> $\square$ Racing  |  |
| Estimated Speed $\square \square$ None | $\square$ Under 10 MPH | $\square 10-20 \mathrm{MPH} \quad \square 21-40 \mathrm{MPH}$ |  |  |
| FATALITIES INFORMATION (Attach additional pages if needed) |  |  |  |  |
| Victim from: <br> $\square$ This Boat <br> Name $\qquad$ <br> Address $\qquad$ <br> City, State, Zip $\qquad$ <br> Telephone \# $\qquad$ <br> Date of Birth $\qquad$ Age $\qquad$ |  | Victim from: |  | Victim from: |
| Death Caused By: $\square$ Imp <br> $\square$ Drowning $\square$ Unk <br> $\square$ Hypothermia $\square$ Other | $\square$ Impact/Trauma $\square$ Unknown $\square$ Other | Death Caused By: $\square$ Impact/Trauma <br> $\square$ Drowning $\square$ Unknown <br> $\square$ Hypothermia $\square$ Other |  | Death Caused By: $\square$ Impact/Trauma <br> $\square$ Drowning $\square$ Unknown <br> $\square$ Hypothermia $\square$ Other |
| $\square$ Was Victim: $\square$ Wat <br> $\square$ Operator Propel <br> $\square$ Passenger $\square$ Yes <br> $\square$ Swimmer $\square$ No | er Skier <br> ler Injury? | Was Victim: <br> $\square$ Operator <br> $\square$ Passenger <br> $\square$ Swimmer | - Water Skier <br> Propeller Injury? <br> $\square$ Yes <br> $\square$ No | $\square$ Was Victim: $\square$ Water Skier <br> $\square$ Operator Propeller Injury? <br> $\square$ Passenger $\square$ Yes <br> $\square$ Swimmer $\square$ No |
| Victim's Swimming Ability <br> $\square$ Unknown $\square$ Swimmer |  | Victim's Swimming Ability <br> $\square \square$ Unknown $\square$ Swimmer $\square$ Non-Swimmer |  | Victim's Swimming Ability <br> $\square$ Unknown Swimmer <br> $\square$ Non-Swimmer |
| PFD Worn? $\square$ No $\square$ Yes Ty |  | PFD Worn? $\square$ No $\square$ Yes Type |  | PFD Worn? $\square$ No $\square$ Yes Type |


| INJURED PERSONS (Attach additional pages if needed) |  |  |  |
| :---: | :---: | :---: | :---: |
| Victim: $\square$ This Boat $\square$ Other Boat $\square$ No Boat Name - Address City, State, Zip Telephone \# | Victim: $\square$ This Boat $\square$ Other Boat $\square$ No Boat <br> Name $\qquad$ <br> Address $\qquad$ <br> City, State, Zip $\qquad$ <br> Telephone \# $\qquad$ <br> Date of Birth $\qquad$ Age $\qquad$ <br> $\square$ Male $\square$ Female <br> Medical Treatment Beyond First Aid <br> (Treatment by a Physician) $\square$ Yes $\square$ No <br> Admitted to Hospital $\square$ Yes $\square$ No $\square$ Unknown |  | Victim: $\square$ This Boat $\square$ Other Boat $\square$ No Boat <br> Name $\qquad$ <br> Address $\qquad$ <br> City, State, Zip $\qquad$ <br> Telephone \# $\qquad$ <br> Date of Birth $\qquad$ Age $\qquad$ <br> $\square$ Male $\square$ Female <br> Medical Treatment Beyond First Aid <br> (Treatment by a Physician) $\square$ Yes $\square$ No <br> Admitted to Hospital $\square$ Yes $\square$ No Unknown |
|  | Was Victim: <br> $\square$ Operator <br> $\square$ Passenger <br> $\square$ Swimmer <br> $\square$ Water Skier <br> PFD Worn? $\square$ No $\square$ Y <br> Injury (If more than one, of severity) $\qquad$ Amputation $\qquad$ Back Injury $\qquad$ Broken Bone(s) $\qquad$ Burns $\qquad$ Contusion (Bruises) $\qquad$ Dislocation $\qquad$ Head Injury $\qquad$ Hypothermia | Propeller Injury? <br> Yes <br> 1 No <br> Type $\qquad$ number choices in order $\qquad$ Internal Injuries $\qquad$ Laceration (Cuts) $\qquad$ Neck Injury $\qquad$ Shock $\qquad$ Spinal Injury $\qquad$ Sprain/Strain $\qquad$ Teeth |  |
| ACCIDENT DESCRIPTION |  |  |  |
| DESCRIBE WHAT HAPPENED: Sequence of events leading up to the accident (attach additional pages if necessary) |  |  |  |
| OTHER BOAT(S) INVOLVED |  |  |  |
| Operator's Name Address |  |  | Telephone \# ( |
| Boat Number |  | Boat Name |  |
| WITNESSES |  |  |  |
| Name ${ }^{\text {Natas }}$ |  |  | Telephone \# ( |
| Name ${ }^{\text {Naddress }}$ |  |  | Telephone \# ( ) |
| SIGNATURE |  |  |  |
| $\square$ Operator $\square$ Owner $\square$ Investigator   Signature <br> $\square$ Other    <br> Accident Reported to Law Enforcement Agency  Date (Month, Day, Yea  <br> $\square$ Yes $\square$ No Name of Agency    |  |  |  |
| FOR REPORTING AUTHORITY REVIEW (Do Not Use) |  |  |  |
| Name of Reviewing Office |  | Name of Reviewing Offi | er Amended Report $\square$ Yes $\square$ No ${ }^{\text {date }}$ |
| Primary Cause |  | Secondary Cause |  |

## INSTRUCTIONS FOR COMPLETING RHODE ISLAND BOATING ACCIDENT REPORT

Rhode Island boating accident report must be filled out by the owner/operator of any vessel that is involved in a boating accident on the inland waters and the coastal waters contiguous to this state that meets the following criteria:

1. Loss of life or disappearance from a vessel.
2. Injury to any person that requires medical treatment beyond ordinary first aid. (if you go to the emergency room or call a rescue, it is beyond first aid)
3. Property damage in excess of $\$ 2000.00$ (combined damage to both vessels if more than one vessel involved)
4. Complete loss of a vessel.

Accidents that involve loss of life or injury must be submitted within 48 hours. All other accidents must be reported within 10 days of the incident.

Accidents must be reported to the State Authorities where the accident occurred.
If more than one vessel is involved the owner/operator of all vessels must fill out and file a boating accident report.

When filling out a boating accident report, insure that all of the blocks are filled out completely.

1. Most information about your boat can be found on the registration card.
2. Both, the operator and the owner information is required to be completed.
3. Addresses should be complete including zip codes.
4. Damage estimates MUST be filled out. (Best guess estimate is acceptable and changed as information is received).
5. Accident description should be as clear and accurate as possible. Diagrams and description can be continued on additional sheets if necessary. Include any information as to the involvement of alcohol or drugs in the cause or contributing to the accident. Include any descriptive information about the use of lifejackets (PFD's) that may have contributed to the survival or assistance to anyone involved.
6. Once the form has been completed it should be sent to:

Department of Environmental Management
Division of Law Enforcement
235 Promenade Street
Providence, RI 02908
Attention: Boating Accident
If you have any difficulty with/or questions regarding the BOATING ACCIDENT FORM, you may call this office at (401) 2223070 during normal business hours and your call will be referred to an Environmental Police Officer for assistance.



# UTAH BOATING ACCIDENT OWNER/OPERATOR REPORT 

An operator shall immediately and by the quickest means of communication available notify the nearest state park ranger or other law enforcement officer of an accident that involves a vessel or its equipment when one of the following occurs: a person dies or disappears from a vessel under circumstances that indicate death; a person is injured and receives medical treatment beyond first aid; or property is damaged in excess of $\$ 2000$ It the operator cannot provide this notification, then another person on board shall make the notification The operator owner or other person on board shall submit a completed and signed Owner/Operator Boating Accident Report (PR-53A) to the Division of Parks \& Recreation 1594 West North Temple, (PO Box 146001), Salt Lake City, UT 84114, within 10 days of the accident (Utah Administrative Code R651-223-1 to 3)






WASHINGTON STATE PARKS \& RECREATION COMMISSION

## WASHINGTON BOAT ACCIDENT REPORT (BAR)

| PARKS USE ONLY |  |
| :--- | :--- |
| V | F |
| I | D \$ |
|  |  |

When you have completed this report mail to sheriff or police department that has jurisdiction where accident occurred, or mail to Boating Program at :
Washington State Parks and Recreation Commission
PO Box 42654, Olympia WA 98504-2654
OPERATORIOWNER: Shall submit report to sheriff or police department that has authority where accident occurred. Reports in death and injury cases must be submitted within 48 hours. Reports in other cases are required within 10 days. When the operator is incapacitated, the operator/owner or law enforcement agency shall file the boating accident. Report. The operator of a boat involved in an accident is required by law to file a report in writing when:

- A boating accident results in loss of life.
- Injury which required medical treatment beyond first aid.
- Property damage is in excess of $\$ 500$, or there is a complete loss of a vessel.
- The disappearance of a person from a vessel under circumstances that indicate death or injury.

This report is confidential and will only be used by governmental agencies for statistical purposes as provided in RCW 79A.60.210.
PLEASE TYPE OR PRINT - Complete all requested information. Your Accuracy Will Help Make Our Waters Safer!

| County, WA, City of | REPORT NUMBER |  |  |  |  |  |
| :--- | :--- | :--- | :---: | :---: | :---: | :---: |
| OPERATOR INFORMATION |  |  |  |  |  |  |
| OPERATOR NAME (LAST/FIRST MI) | TELEPHONE NUMBER |  |  |  |  |  |
| OPERATOR ADDRESS (STREET, CITY, STATE, ZIP CODE) | DOB |  |  |  |  |  |
| ACCIDENT NARRATIVE (DESCRIBE ACCIDENT IN YOUR OWN WORDS - DESCRIBE HOW EACH EVENT OCCURRED IN THIS ACCIDENT) |  |  |  |  |  |  |



WASHINGTON BOAT ACCIDENT REPORT
P\&R A-000 (03/2005)

## BOAT \# 1 (continued)

## PERSONAL FLOTATION DEVICES (PFD's)

| Was there a USCG approved PFD for each person on | $\square$ Yes $\square$ No |
| :--- | :--- |
| board (POB)? | $\square$ Yes $\square$ No |
| Were PFDs accessible? | $\square$ Yes $\square$ No |

Were PFDs in good conditions?
How many POB were wearing PFDs at time of accident?
What type of approved PFDs were on board (check labels) $\square$ I $\square$ II $\square$ III $\square$ IV $\square$ V

## FIRE EXTINGUISHERS

Was there a Fire Extinguisher on board if required?
Was a Fire Extinguisher used?

If Yes, list types and \# used:

## ALCOHOL INVOLVEMENT

Was there any liquor or alcoholic beverages on board during the operation of this boat?


Did operator consume any alcohol before or during the operation of this boat?
Did any passengers consume any alcohol before or during the operation of this boat?
If 2 or more boats were involved in this accident, was there any indication that the operator(s) had been

drinking?
ESTIMATED USAGE OF BOAT
Estimated number of days vessel used this year:
Typical number of hours vessel used each day this year:
Typical number of persons (Including yourself) on board vessel each day this year:


OPERATION AT THE TIME OF ACCIDENT - WHAT WAS BOAT OPERATION AT TIME OF ACCIDENT?

| $\square$ At Anchor/Moorage | $\square$ Cruising | $\square$ Rowing or Padding | $\square$ Towing one or more persons |
| :--- | :--- | :--- | :--- |
| $\square$ Being Towed | $\square$ Docking/Undocking | $\square$ Sailing | $\square$ Start/Stop Engine |
| $\square$ Changing Direction | $\square$ Drifting/floating | $\square$ Tied to Dock/Mooring | $\square$ Fueling |
| $\square$ Changing Speed | $\square$ Launching/retrieving | $\square$ Towing another Boat | $\square$ Emergency Repairs |
|  |  | $\square$ Other |  |


| ACTIVITY AT TIME OF ACCIDENT - WHY WERE BOATERS ON WATER? |  | ESTIMATED SPEED |  |
| :--- | :--- | :--- | :--- |
| $\square$ Commercial | $\square$ Tournament/Race | $\square$ River Rafting | $\square$ Not Moving |
| $\square$ Diving or | $\square$ Traveling Between Locations | $\square$ Flat-water Paddling | $\square 1-10 \mathrm{mph}$ |
| Swimming | $\square$ PWC Play: Jumping Wakes, | $\square$ Racing | $\square 11-20 \mathrm{mph}$ |
| $\square$ Fishing | Turning Circles, etc. | $\square$ Sailing | $\square 21-30 \mathrm{mph}$ |
| $\square$ Hunting | $\square$ Maneuvering within Marina or | $\square$ Working on Boat | $\square 31-40 \mathrm{mph}$ |
| $\square$ Permitted Racing | Moorage | $\square$ Other | $\square 41-60 \mathrm{mph}$ |
| $\square$ Repairs | $\square$ Water Skiing or Other Tow Sport |  | $\square 61-80 \mathrm{mph}$ |
| $\square$ Site Seeing | $\square$ Whitewater Sports |  | $\square$ Over 80 mph |
| $\square$ Floating or drifting |  |  |  |



BOAT \# 2 (continued)


## INDIVIDUALS INVOLVED



## INJURY (S)



WASHINGTON BOAT ACCIDENT REPORT
P\&R A-000 (03/2005)



[^0]:    ${ }^{1}$ This is the federal form. Most states use a form that is similar (in some cases identical) in appearance to this form and which captures (at least) the same required information. Appendix C contains samples of BAR forms from Alaska, California, Colorado, Connecticut, Massachusetts, Nevada, New Mexico, Ohio, Rhode Island, Utah, and Washington.
    ${ }^{2}$ More specifically, members of the Boating Accident Investigation, Reporting \& Analysis (BAIRAC) Committee of NASBLA.

[^1]:    ${ }^{3}$ Under Federal law, a reportable accident is defined as an occurrence that involves the vessel or its equipment if (1) a person dies; or (2) a person is injured and requires medical treatment beyond first aid; or (3) damage to the vessel and other property totals $\$ 2,000$ or more or there is a complete loss of the vessel; or (4) a person disappears from the vessel under circumstances that indicate death or injury. Some states have a lower threshold of damage for reporting. For example, Arizona, Nevada, North Carolina, Ohio, South Carolina, Tennessee, Washington, and West Virginia have a \$500 threshold and Indiana has a \$750 threshold for a reportable accident.

[^2]:    ${ }_{5}^{4}$ Completion of the BAR form is legally required (33 CFR §173.55) for reportable accidents.
    5 "User-friendly" means easy to use or to learn to use, see http://www.answers.com/topic/user-friendly?cat=biz-fin.
    ${ }^{6}$ See letter from Erik Murphy and Barbara Moroski-Browne, Design Research Engineering, to Rear Admiral R. T. Hewitt dated January 19, 2007 (hereinafter, Design Research Engineering, 2007).
    ${ }^{7}$ In the longer term many other initiatives are being considered, such as developing two different forms; a much simplified form to be completed by the operator or owner and a more comprehensive form to be completed by a qualified accident investigator. The purpose of the first form would be to collect basic statistical information and define a "population" of accidents, some of which would be followed up by professional investigators.

[^3]:    ${ }^{8}$ In a letter from Carl W. Vogt, then Chairman of the National Transportation Safety Board to Admiral J. William Kime (then Commandant of the Coast Guard) dated 25 May 1993, reference is made to "deliberate nonreporting, ignorance by the boating public of the reporting requirements, reluctance by boaters to provide all pertinent information, and the lack of an effective mechanism to enforce the reporting requirements." (See http://www.ntsb.gov/recs/letters/1993/M93_10_14.pdf.)
    ${ }^{9}$ See "The plain English guide to forms" available electronically at http://www.plainenglish.co.uk/formsguide.pdf.
    ${ }^{10}$ See, e.g., "The business case for plain English" available electronically at http://www.wordcentre.co.uk/page57.htm.
    ${ }^{11}$ See e.g., "SEC adopts plain English in a 'sweeping revision' of rules governing prospectus disclosure" available electronically at http://www.friedfrank.com/cmemos/0197556.htm.

[^4]:    ${ }^{12}$ See http://www.whitehouse.gov/omb/inforeg/statpolicy/standards stat surveys.pdf. Note also that the OMB Guidance on Agency Survey and Statistical Information Collections lists several questions under the rubric of increasing response rates. These include "Is the questionnaire well-designed with userfriendly formatting? Is it as brief as possible? Are the questions, instructions, and definitions easy to understand? Is the content of the survey relevant to the respondent? See http://www.whitehouse.gov/omb/inforeg/pmc survey guidance 2006.pdf.
    ${ }^{13}$ See http://www.givemeliberty.org/RTP2/PRA/PRA-CFR/5 C_F_R_1320 9.pdf.
    ${ }^{14}$ In comments on an earlier draft of this report (August 30, 2007) Design Research Engineering personnel assert that this report is naïve in downplaying the prominent role that law enforcement officials play in completing the BAR form. They believe that it is appropriate to acknowledge that in many cases state reporting officials complete the form. We lack data on the percentage of BAR forms completed by operators/owners versus those actually completed by state officials. However, it follows that if the form is sufficiently straightforward to be completed with reasonable accuracy by boaters, it should also be useful to investigators.
    ${ }^{15}$ See, William H. DuBay "The plain-language crisis" in Plain Language at Work, Newsletter 22 March 2003, available at http://www.impact-information.com.

[^5]:    ${ }^{16}$ In comments on an earlier draft of this report Design, Research, Engineering (30 August 2007 memorandum) noted that "We read the regulation as requiring that the operator or owner submit the form, not necessarily fill out, or complete, the form." This may be so, but the fact that a more knowledgeable or experienced person might fill out the form in no way relieves the Coast Guard of the obligation of making the form understandable to the operator/owner. In short, this is a distinction without difference.
    ${ }^{17}$ Those who object to a radically simpler form note that valuable information would be lost. However, if the form were used to trigger a follow-up investigation of all (or a statistical sample) accident reports the overall accuracy of the data might be increased. It is self-evident that no follow-up investigation can take place if it is not known that one occurred.

[^6]:    ${ }^{18}$ It is arguable whether disappearance can be termed a cause of death. The standard reference on causes of death is based on the International Classification of Diseases (ICD)- $10^{\text {th }}$ Edition (see http://www.who.int/classifications/icd/en/). ICD-10 is high detailed. Of those causes related to transport accidents, code V92 comes closest. This category includes those who are thrown overboard by motion of ship of ship or washed overboard. "Disappearance" is not specifically mentioned. As noted in the main text the recommended form uses the category "disappeared and not yet recovered."
    ${ }^{19}$ See letter from John Johnson, Executive Director, NASBLA to "whom it may concern," dated January 19, 2007.

[^7]:    ${ }^{20}$ Weather information (current and forecast) is widely available from newspapers, radio (general and specialized), television, the Internet, weather fax, and from various mobile phone services. The hearing and visually impaired can also receive these warnings by connecting a specially designed NWR to attentiongetting devices like strobe lights, personal computers, and text printers. Many pager companies now offer alerting pagers that provide the latest weather information. And the National Weather Service is responsive to any claims of gaps in coverage (see e.g., http://www.nws.noaa.gov/com/nwsfocus/print/printfs112502.htm for one story).
    ${ }^{21}$ We recognize that this is still a leading question and that boaters may not provide an accurate answer. However, this question was retained because it is required by the CFR.
    ${ }^{22}$ See comments of this agency dated January 19, 2007.
    ${ }^{23}$ We did not include a question on the amount of each fire extinguisher used because we believed that there was no practical way for the boater to determine the amount of each fire extinguisher used.
    ${ }^{24}$ See e.g., http://www.fmcsa.dot.gov/forms/print/accident.htm.
    ${ }^{25}$ See e.g., http://www.tibf.com/images/large/frm Auto 1 lrg.gif.
    ${ }^{26}$ Data are available from the Census Bureau "Language Use and English-Speaking Ability" available electronically at http://www.census.gov/prod/2003pubs/c2kbr-29.pdf.

[^8]:    ${ }^{27}$ These are listed in decreasing frequency of languages spoken at home in the United States. The relative frequency of language use might differ among those who engage in recreational boating activity.
    ${ }^{28}$ See e.g., http://www.dbw.ca.gov/Espanol/index.htm.

[^9]:    ${ }^{29}$ Several states, e.g., Alaska (http://www.dnr.state.ak.us/parks/boating/pdf/accident.pdf), California (http://www.dbw.ca.gov/PDF/AccidentForms/BAR.pdf), Colorado (http://parks.state.co.us/NR/rdonlyres/843CD616-2341-4CA0-8FFF-7BBF77A3FCC7/0/Public BAR.pdf), Connecticut (http://www.ct.gov/dep/lib/dep/Boating/Boating forms/accidentreport.pdf), Indiana (http://www.in.gov/dnr/lawenfor/pdf/42528.pdf), Florida
    (myfwc.com/law/generalorders/LawForms/forms/FWCDLE_146IV.doc), Massachusetts (http://www.mass.gov/dfwele/dle/MEP BoatAccidentRpt.pdf), Maine (http://www.maine.gov/ifw/atv snowmobile watercraft/pdfs/accidentreportformboat.pdf), Nevada (http://www.ndow.org/boat/safety/boataccidentreport03.pdf), New Mexico (http://www.emnrd.state.nm.us/PRD/BOATINGWeb/documents/EXHIBITA.2.g.6.NewMexicoboatacciden treport2004.pdf), Ohio (http://www.dnr.state.oh.us/Portals/4/pdfs/forms/oobar.pdf), Oregon (http://www.boatoregon.com/PDF-Forms/BoatingAcc.pdf), Rhode Island (http://www.dem.ri.gov/programs/bnatres/enforce/pdfs/boatacc.pdf), Tennessee (http://tennessee.gov/twra/pdfs/boataccidentform.pdf), Wisconsin (http://www.dnr.state.wi.us/org/es/enforcement/DOCS/4100020.pdf), Utah (http://stateparks.utah.gov/docs/boat-incident-accident.pdf), Virginia (http://www.dgif.state.va.us/boating/boating_accident form.pdf), and Washington (http://www.boated.com $/ \mathrm{wa} / \mathrm{wa}$ specific images $/ \mathrm{pdfs} / \mathrm{wa}$ acc rep 2006.pdf), already have accident reporting forms available on the Internet. Not all of these forms can be completed electronically, however. And several states do not provide electronic copies of the forms.
    ${ }^{30}$ There are several standard works on principles of forms design. One very useful reference is from the Australian Government available electronically at http://www.anao.gov.au/uploads/documents/User_Friendly_Forms.pdf.

[^10]:    ${ }^{31}$ William H. DuBay "The plain-language crisis" in Plain Language at Work, Newsletter 22 March 2003, http://www.impact-information.com/impactinfo/newsletter/plwork01.htm. See also http://www.socra.org/pdf/200402 Principles Forms Design.pdf.
    ${ }^{32}$ Acronyms might not be understood by the respondent and most reference works indicate that these should be avoided (or defined), see e.g., http://www.anao.gov.au/uploads/documents/User Friendly Forms.pdf. In this specific example, we define VSC in the recommended form as "vessel safety check (VSC)."

[^11]:    ${ }^{33}$ An allision is the "act of striking or collision of a moving vessel against a stationary object." See http://www.answers.com/topic/allision.

[^12]:    ${ }^{34}$ See "Design tips" available electronically at http://www.dest.gov.au/sectors/training_skills/publications_resources/plain_english_at_work/design tips.htm.
    ${ }^{35}$ According to Karen Schriver in her book Dynamics in Document Design, "When the text is set in all capital letters, reading speed is slowed by about 13 to 20 percent. Reading speed is optimal when both uppercase and lower case letters are used." (see http://www.adobe.com/devnet/livecycle/articles/graph effective form design 02.html or http://www.mcneese.edu/colleges/ed/deptpsy/ajpr/vol1/ajpr11.pdf).
    ${ }^{36}$ See, for example, $\underline{h t t p}: / / \mathrm{www} . g r c . n a s a . g o v / W W W / u s a b i l i t y / t e x t f o n t c s s . h t m l ~ o r ~$ http://hgrebdes.com/typefaces/fontresearch.php.
    ${ }^{37}$ See
    http://www.dest.gov.au/sectors/training_skills/publications_resources/plain_english_at_work/design_tips.htm.

[^13]:    ${ }^{38}$ Mayhew, Deborah J., (1992). Principles and Guidelines in Software User Interface Design, Prentice-Hall, pp120-130, p 185, and pp 146-148.
    ${ }^{39}$ Appropriate use of white space is an important aspect of form design (see http://www.jasonsantamaria.com/archive/2006/01/05/under the loupe_1_white space.php).
    ${ }^{40}$ See e.g., Mayhew, Deborah J., (1992. Principles and Guidelines in Software User Interface Design, Prentice-Hall, pp 186-187.
    ${ }^{41}$ See Mayhew, Deborah J., (1992). Principles and Guidelines in Software User Interface Design, Prentice-Hall, pp 127-128 and 150-152.

[^14]:    ${ }^{42}$ Mayhew, Deborah J., (1992). Principles and Guidelines in Software User Interface Design, Prentice-Hall, pp 141-143.
    ${ }^{43}$ See
    http://www.dest.gov.au/sectors/training_skills/publications_resources/plain_english at work/design tips.htm.
    ${ }^{44}$ This is a direct quote from http://www.dest.gov.au/sectors/training_skills/publications_resources/plain_english_at_work/design_tips.htm.

[^15]:    ${ }^{45}$ More specifically, members of the Boating Accident Investigation, Reporting \& Analysis (BAIRAC) Committee of NASBLA.

[^16]:    ${ }^{46}$ Memorandum to Bruce Schmidt, USCG and L. Daniel Maxim, dated August 30, 2007.

[^17]:    ${ }^{47}$ Design Research Engineering (30 August 2007 memorandum) was pleased that a usability test was conducted. However, they stated "The draft form should be pre-tested with law enforcement officials, who frequently complete the form, especially for boating accidents involving serious injury or fatality. Since it is likely that law enforcement will find the draft form ill-suited to their needs and knowledge-level, an optimal course of action is to begin designing a form specifically for the law enforcement community. We respectfully disagree with the Design Principles assertion that the regulations do not allow this." We do not purport to provide legal analysis of the CFR. Our brief was to develop a form that could be completed by the operator/owner of the boat. We do agree that the development of any subsequent forms should be fieldtested with the population who will be filling out the form. If a two-tier system is implemented, then it will be appropriate to field test the form with the target populations.

[^18]:    ${ }^{48}$ Indeed, one goal of a radically simplified form is that non-response rates for otherwise "reportable" accidents would decrease substantially. This would be highly desirable in terms of correctly estimating the social costs of recreational boating accidents. However, this could result in substantial increases in workload if each accident were investigated by competent personnel. This is not meant to suggest that a two-tier system is not appropriate. Rather it means that systematic analysis is required.

[^19]:    ${ }^{49}$ See, e.g., http://hgrebdes.com/typefaces/fontresearch.php and also http://www.psych.ucalgary.ca/PACE/VA-Lab/gkconnol/Thesis.html.
    ${ }^{50}$ Such products are already available, see http://www.art4use.com/barposter/pdfs/involved11.pdf.

[^20]:    ${ }^{51}$ One useful web site posting provides a justification for completing the form: "The need to fill out an accident report is to be able to develop safety regulations as well develop manufacturing standards to provide better boats and, boating standards. The information contained in such reports is also helpful in educating people on boating safety...Without these reports the possibility exist that boating accidents are overlooked with more injuries and even fatalities as a result." See http://www.boating_ 102.com/tag/boating-accident/.
    ${ }^{52}$ Design Research Engineering 30 August memorandum, Op. Cit.

[^21]:    WATER
    Overall water conditions (select one):
    O Up to 6 in. waves (calm)
    O Over 6 in., up to 2 ft . waves (choppy)
    O Over 2 ft ., up to 6 ft waves (rough)
    O Over 6 ft . waves (very rough)

