

Technical Report – Basic Boating Knowledge - Power



FOR USE WITH:

ANSI/NASBLA 103-2016:
BASIC BOATING KNOWLEDGE – POWER
(AMERICAN NATIONAL STANDARD)

A Technical Report prepared by the
National Boating Education Standards
Panel and registered with ANSI.

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National Association of State Boating Law
Administrators

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Adapted from: American Camping Association. (1998). UAccreditation Standards for Camp Programs and Services. American Camping Association: Martinsville, IN.

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Foreword

Publication of this Technical Report that has been registered with ANSI has been approved by the National Association of State Boating Law Administrators, 1648 McGrathiana Parkway, Suite 360, Lexington, Kentucky 40511. This document is registered as a Technical Report according to the Procedures for the Registration of Technical Reports with ANSI. This document is not an American National Standard and the material contained herein is not normative in nature. Comments on the content of this document should be sent to NASBLA's National Boating Education Standards Panel, 1648 McGrathiana Parkway, Suite 360, Lexington, Kentucky 40511.

This Technical Report was developed by the National Boating Education Standards Panel. Its contents were developed to advance use and common understanding of the American National Standards for Basic Boating Knowledge. This Technical Report supports the American National Standard (ANS) entitled *ANSI/NASBLA 103-2016: Basic Boating Knowledge – Power* (hereafter called the “Standard”), which was formulated through voluntary consensus of representatives of federal and state government, industry, non-profit organizations, and public sectors.

The purpose of this Technical Report is to provide information that helps design and implement successful recreational powerboating education and training programs. NASBLA wishes to thank the countless numbers of individuals, current and past, who contributed to the development of instructional strategies, techniques, and processes included in this publication. Your work and efforts continue to advance safe boating in North America.

Technical Report

for

ANSI/NASBLA 103-2016: Basic Boating Knowledge – Power

Chapter 1 - Introduction

This Technical Report supports the American National Standard (ANS) entitled *ANSI/NASBLA 103-2016: Basic Boating Knowledge – Power* (hereafter called the “Standard”), which was formulated through voluntary consensus of representatives of federal and state government, industry, non-profit organizations, and public sectors.

The purpose of this Technical Report is to provide information that helps design and implement successful recreational powerboating education programs.

History of Recreational Boating Education Standards

In 1978, minimum boating education guidelines existed for state, non-profit and commercial providers to follow in developing boating education materials. These guidelines, were developed under the oversight of the National Association of State Boating Law Administrators (NASBLA) Education Committee to “emphasize generic safety and emergency procedures” for the recreational boater. In 1989, state members of NASBLA agreed to recognize NASBLA Certified Boating Safety Courses as a means to “reduce boater confusion as to various state or provincial education requirements.” To facilitate this recognition, in 1990, NASBLA implemented a process for review and approval of courses to ensure they met the published guidelines.

In July 1998, with financial assistance provided by a national non-profit grant administered by the United States Coast Guard (USCG), NASBLA, in partnership with the National Safe Boating Council (NSBC), contracted with a research team anchored at The Pennsylvania State University to evaluate existing guidelines and develop a new minimum “standard of care” for boating education. This new set of standards was intended to prescribe the minimum body of knowledge necessary to effect safe, legal, and enjoyable boating. In addition, the proposed standard of care was predicated on reducing risks to recreational boaters based on empirical accident and boating violation statistics.

Many documents, a number of which are included as references in this Technical Report, were reviewed and interviews conducted with nationally prominent and recognized boating educators for development of the new National Boating Education Standards. A result was a working draft of the standards which were submitted to the NASBLA Standards Advisory Committee¹ for review and comment. Several more drafts of the standards were completed, each going through a revision process. In December 1998, the research team met with the Standards Advisory Committee for two days of review and comment. The result of that meeting was a draft set of standards, which was validated and pilot-tested in the second phase of the study between January and August 1999. The results of this second phase showed a strong consensus among boating educators that the draft standards represented the minimum information that should be taught in an eight-hour boating safety course. The final version of the standards was approved by NASBLA membership on September 22, 1999.

In 2009, NASBLA membership requested that the standards be analyzed in order to determine whether they had contributed to the reduction of risks to recreational boaters in the 10 years in which they were in use. NASBLA was fortunate to be able to work with the original researchers from the 1998 project now anchored at Colorado State University. The 2009 Standards Advisory Committee was made up of a combination of state agency staff as well as stakeholders in the recreational boating education field. The researchers analyzed 10 years of USCG accident and fatality statistics and noted how this data compared to the existing boating education standards. The advisory committee and the researchers were able to link the available statistics to almost all of the standards, thus

¹ The Standards Advisory Committee was comprised of education specialists representing the NSBC, U.S. Coast Guard Auxiliary, United States Power Squadrons, various states, NASBLA, and NASBLA associates.

justifying their existence and continued inclusion in the document. In addition, several standards were modified, combined, or reworded to emphasize key points related to the statistics. Along with revisions made in the education standards, separate test standards were revised resulting in a distinct number of test questions per standard required for course approval to reflect overall importance of the subject for boater safety. The revised standards were approved by the 2009 Standards Advisory Board, the Education & Awareness Committee and were approved by the overall membership of NASBLA on September 28, 2009.

NASBLA-approved National Boating Education Standards are referenced in numerous state laws and regulations as the minimum criteria for state-mandated boater education; however, several state legislatures enacted process rules in conflict with the NASBLA Standards. In 2011, the NASBLA Executive Board directed that the standard-setting process follow nationally recognized procedures for development of recognized American National Standards (ANSs) and formed the National Boating Education Standards Panel (the “Panel”) to implement this process. The Panel adopted the Essential Requirements of the American National Standards Institute (ANSI) for development of ANSs. ANSI is recognized both nationally and internationally for oversight in creation, promulgation and use of thousands of standards, norms, and guidelines that directly impact businesses in nearly every sector. NASBLA received recognition from ANSI as an Accredited Standards Developer in 2014.

Development of the ANS as referenced in this Technical Report was developed with adherence to these ten ANSI Essential Requirements:

- **Openness** to all directly and materially affected
- **Lack of dominance** by any single interest category, individual, or organization
- **Balance** of interests represented on the Panel
- **Coordination and harmonization** between existing and candidate standards
- **Notification** of standards development
- **Consideration of views and objections**
- **Consensus vote**
- **Appeals** process
- **Written procedures**
- **Compliance** with normative American National Standards Policies and administrative procedures

In accordance with the Panel’s recommendation and the NASBLA Executive Board’s subsequent approval on March 30, 2012, the standard document once covering both the educational content and the conformity assessment (review) process was formatted to present a single National Boating Education Standard for a basic boating safety course and to separate out administrative policy for the purpose of course approval not to be included as part of the Panel’s review. In addition, rationales in support of the content of the standard would be separated and presented in a separate document. This Technical Report includes these rationales, in addition to instructional strategies, assessment considerations, and more in facilitate understanding and implementation of the ANS for Basic Boating Knowledge - Power.

Chapter 2 - Recreational Boating Instructional Design and Performance Assessment

The American National Standard (ANS) for Basic Boating Knowledge – Power (ANSI/NASBLA 103-2016) (the “Standard”) was developed to establish minimum national content for basic boating courses to address and reduce primary risk factors and mitigate their effects on recreational boating. The elements of the Standard can (and should) be implemented into a broad range of educational approaches (e.g., on-line, classroom, instructor-led distance learning, hands-on simulation, on-water skill development, etc.). For ease in presentation, face-to-face instructor-led training in a classroom setting is the primary approach addressed in this Technical Report.

Successful Instructional Strategies for Face-to-Face Basic Boating Safety Education Courses

This Technical Report reflects information on successful instruction strategies gained as a result of many years of teaching experience from a broad diversity of subject matter experts, including boating safety education course designers, instructor-trainers, and instructors. The successful strategies identified are not intended to be a complete list of all teaching practices nor will the use of these strategies guarantee an excellent course experience. Teaching is an ever-changing series of choices made by an educator to provide the student the best possible opportunity to learn a given subject. Considerations for designing a successful learning opportunity include the student’s readiness for learning, well-written student performance objectives, well-defined course goals and content, a prepared and motivated instructor, a safe location conducive to learning, suitable and practical instructional materials, organizational context, and other factors.

General Instructional Strategies

Effective programs clearly define the “Educational Purpose,” which includes the program’s mission, goals, and objectives, and assures that all are aligned with each other. Important considerations include:

- Planning effective programs;
- Relying on experienced, well informed, prepared, and ethical staff;
- Having a clear understanding of agency goals and objectives;
- Being inclusive of all audiences;
- Aligning curricula with national and state educational standards when appropriate;
- Presenting accurate and balanced information, incorporating many different perspectives;
- Clearly addressing safety and other regulations, and reducing real risks to everyone involved;
- Empowering learners - teaching them “how” to think not “what” to think;
- Using multiple teaching methods to accommodate diverse learning styles; and
- Using instructors as facilitators, not “transmitters.”

Course Instructors:

- Are selected through a process that ascertains their knowledge of boating safety content and teaching ability related to boating safety education courses;
- Are regularly evaluated by students, peers and supervisors in order to improve their instructional skills;
- Participate in professional development opportunities such as training sessions, workshops, or conferences to improve their boating safety knowledge and teaching skills;
- Use a variety of instructional strategies in the course such as:
 - demonstrations with boating equipment,

- student interaction including involvement in demonstrating skills,
- simulations of practical boating situations,
- students solving hypothetical boating situations,
- short videos of boating topics,
- role playing boat operator decision-making,
- reading texts and attending lectures of boating safety content,
- computer simulations and content, and
- incorporating situational awareness scenarios when possible;
- Provide opportunities for students to demonstrate their understanding of course objectives through hands-on activities that encourages application of their boating safety knowledge and skill; and
- Monitor student attainment of the learning objectives during the course through a variety of assessment strategies such as: verbal conversations, written tasks, and formal assessments.

Human learning styles

Boating safety course instructors should have an excellent working knowledge of how people learn and seek to continually extend their understanding of human learning. A teacher's effectiveness is in part due to knowledge of the content area but also rests on their ability to ascertain their student's learning processes and match instructional strategies to the learning needs of their students. While each student and class is unique, there are some general human learning characteristics that can assist boating safety instructors in making their teaching decisions. The amount of research and written material on human learning is vast and beyond the scope of this document.

Current explanations for how people learn are varied and complex. While learning can encompass memorization of discrete facts (retention rates are typically low), most current explanations focus on the ability to learn for understanding. This is thought of as learning that contains rich, deep content knowledge organized around conceptual themes, which can be applied to new situations and contexts. In other words, providing opportunities for students to apply and use recently acquired information is paramount to improving and prolonging retention rates.

Every student brings with them previously established conceptions and beliefs about the wide variety of boating safety education topics. One common approach in elevating human learning is to provide the student with opportunities to actively derive meaning from their past experiences by providing opportunities to apply the new knowledge against previously held beliefs or experiences. An implication for the boating safety instructor is that they must actively and explicitly pre-assess the student's prior understandings to identify any misconceptions. Instructional choices can then be better targeted to challenge existing misconceptions and present the student with overwhelming motivation and experiences to transform misconceptions into the more sophisticated understanding held by expert boaters. Teaching for understanding focuses on developing an educated boater that knows how and when to apply knowledge rather than a boater who simply knows boating facts.

There are some general suggestions for boating safety instructors. Human learning can be organized into categories such as knowledge, skills and attitudes. The boating safety instructor should design learning experiences that address each of these categories and consciously select instructional strategies matched to the learning category. Another consideration is that students utilize preferred learning styles, which can be categorized as visual learners, auditory learners and kinetic learners. The main message for boating safety instructors is to NOT imagine their students as identical in their learning style but INSTEAD view their students as using different learning styles. The boating safety instructor should deliver a course that intentionally includes a variety of learning activities that target different learning styles. The boating safety instructor must also consider

that differences in culture, language, family, community and socio-economic status affect how a student learns. In order to be most effective, the ideal instructor explicitly identifies the learning needs of his/her students and provides a variety of instructional experiences to meet those needs. Finally, instructors should focus on designing a significant percentage of learning experiences that incorporate higher order thinking skills such as analysis, synthesis, evaluation and application. Long term retention rates for remembering specific facts or vocabulary are low. Learning is retained when students are given an opportunity to apply the information received. A boating safety instructor should focus on the most crucial content using instructional strategies that result in a highly-educated boater.

More information about human learning and teaching successful boating safety courses can be obtained through state/province/territory boating agencies, the U.S. Coast Guard, The National Safe Boating Council and organizations such as NASBLA, Coast Guard Auxiliary, U.S. Power Squadrons, U.S. Sailing, American Canoe Association, and many others.

Program planning

Instructors, text authors, boating professionals, and organizations are encouraged to go beyond the Standard when, in their judgment and experience, it encourages the boat operator to boat more safely. In addition, the Standard is intended to show just the minimum content of the course materials, not the sequence or organization of the material. Although the Standard is organized in a logical fashion, course/text developers are encouraged to organize their information to be most effective in their environment.

Boat Operator Knowledge Assessments

A written assessment must be well-designed and comprehensive in covering the elements of the Standard. Comprehensive assessments evaluate boat operator knowledge equally as well as an independent exam or as an exam at the end of a course.

A well-designed assessment covers the entire body of knowledge as outlined by the Standard, however, certain sections carry more importance and should receive more attention within the assessment.

Each assessment should have a plan for how the test administrator will seek to maintain assessment integrity. Since course completion cards are required in many states, the plan should address security issues commensurate with the purpose of the exam and perceived opportunity to commit assessment fraud. It is essential that assessment security be designed to be appropriate for the exam purpose and the context of the assessment. Assessment security plans might address procedures such as: confirming the identity of the assessment taker; randomizing assessment items; using different versions of an assessment; observing assessment takers during the assessment; protecting the security of the assessment item answers; using distinctive, hard to duplicate certificates; maintaining assessment taker records; etc.

If a classroom presents more than one assessment to the same student, the subsequent assessments should be constructed such that at least 50 percent of the questions or situations differ from the previous assessment. A question or situation will be considered to be the same as another if it has substantially the same stem, the same set of distractors as the question it is replacing, or it assesses essentially the same situational awareness as previously presented.

A critical step in issuing a boater education card is the inclusion of a well-designed and comprehensive assessment using professional assessment procedures.

The following are assessment standards for written items required for courses seeking national approval and state authorization through NASBLA². These assessment standards are presented here as best practices for creation of multiple-choice testing instruments by a course provider. These best practices are required if seeking NASBLA course approval.

ASSESSMENT BEST PRACTICES – Part 1

Each item in the assessment will be a four-option multiple-choice question composed of a premise (or stem); a key (or correct alternative); and three distractors (or incorrect alternatives).

- A. A premise that states an opinion of an author or source, rather than reflecting a fact or principle, should use the statement, “According to. . . .”
- B. The alternatives must be in a logical order if one exists. Alternatives beginning with the same words should follow each other.
- C. A test item must be a grammatical and logical completion of the premise or a concise reply to the question asked.
- D. Avoid overlapping alternatives.
- E. Alternatives must not combine options such as ‘all of the above’, ‘none of the above’, ‘a and b’, or ‘(1) or (2).’
- F. When possible, avoid developing questions using negative words, i.e.: no, not, never. Also, NEVER use double negatives.
- G. Avoid repeating information in all the alternatives that can be included in the premise.
- H. Alternatives should not be distinguishable from the correct answer based on length.
- I. Each test item must be linked to an element in the Standard.
- J. The test should include clearly written directions to the candidates on how to respond to the questions.
- K. The correct answer for the test items should be equally distributed (or as nearly so as possible) among each of the options, i.e. 25% of the answers should be option ‘a’, 25% should be option ‘b’, 25% should be option ‘c’, and 25% should be option ‘d’.
- L. There should be no more than three items in a row with the same option as the correct answer.

ASSESSMENT BEST PRACTICES – Part 2

Each test item must be documented in at least one reference from the nationally recognized reference and documented by the course provider.

EXAMPLE - Recognized Reference List for Test Items *(add additional data such as year and publisher as appropriate):*

1. USCG Handbook of Navigation Rules & Regulations
2. 33 Code of Federal Regulations (CFR), 46 CFR, 50 CFR
3. Federal Requirements for Recreational Vessels
4. The Refuse Act, 1899, The Act of Prevent Pollution from Ships (Marpol Annex V)
5. ASTM Standard F1739-96 “Standard Guide for Performance of a Water Rescuer”
6. U.S. Coast Guard Boating Accident Statistics/Reports
7. Information contained on U.S. Coast Guard websites (e.g., “Influence of Drugs & Alcohol on Boat Operation”)
8. American Red Cross

² See NASBLA Policy for Boating Course Approval at <https://www.nasbla.org/education/nasbla-course-approval>.

9. State statutes and administrative rules.
10. Other Courses/Texts:
 - a) America's Boating Course
 - b) Boating Fundamentals – A Manual for Safe Boating
 - c) Chapman Piloting: Seamanship and Boat Handling (63rd and future editions)
 - d) Personal Watercraft Rider's Handbook
 - e) Essentials of Sea Survival
 - f) Annapolis Book of Seamanship

ASSESSMENT BEST PRACTICES – Part 3

For a NASBLA-approved course, the aggregate of assessments must consist of at least 50 questions. Test weights for assessments based on *ANSI/NASBLA 103-2016: Basic Boating Knowledge – Power* or as described in Assessment Best Practices - Part 4 are developed in accordance with the following assessment plan. This plan, first developed by subject matter experts as a USCG-funded research project, focuses on educational elements most vital to reducing boater accidents, injury, and death:

Standard ANSI/NASBLA 103-2016	Test Weight
1.0 The Boat	
Section 1.1 - Boat Capacities	2%
Section 1.2 Personal Watercraft (PWC)	0%
2.0 Boating Equipment	
Section 2.1 - Personal Flotation Device (Wearable Life Jackets and Throwable Devices) Types and Carriage	2%
Section 2.2 – Personal Flotation Device Availability and Sizing	2%
Section 2.3 – Wearing Life Jackets	4%
Section 2.4 - Personal Flotation Device Serviceability	2%
Section 2.5 – Fire Extinguisher Equipment	2%
Section 2.6 – Back-Fire Flame Control Device	0
Section 2.7 – Ventilation Systems	0
Section 2.8 – Navigation Light Equipment	2%
Section 2.9 - Sound Signaling Equipment	0
Section 2.10 – Visual Distress Signal Equipment	2%
3.0 Trip Planning and Preparation	
Section 3.1 - Checking Local Weather and Water Conditions	2%
Section 3.2 - Checking Local Information	2%
Section 3.3 - Filing a Float Plan	2%
Section 3.4 - Boat Preventative Maintenance	2%
Section 3.5 – Launching and Retrieving from a Trailer	2%
Section 3.6 - Fueling Procedures	2%
Section 3.7 - Pre-Departure Checklist and Passenger Communication	2%
4.0 Safe Boat Operation	
Section 4.1 - Operator Responsibilities	8%
Section 4.2 - Influence of Drugs and Alcohol on Boat Operation	6%

Standard ANSI/NASBLA 103-2016	Test Weight
Section 4.3 – Navigation Rules (see below)	
- Rule of Responsibility – Rules 2(a) and 2(b)	2%
- Proper Lookout – Rule 5	4%
- Safe Speed – Rule 6(a)	4%
- Collision Avoidance Rules	4%
- Inland Rules	0%
- Restricted Visibility - Rules 19(a) – (e)	2%
Disclaimer	0%
Section 4.4 - Aids to Navigation	4%
Section 4.5 - Docking and Mooring	2%
Section 4.6 – Anchoring	2%
Section 4.7 – Carbon Monoxide	2%
Section 4.8 – Propeller Intervention and Awareness	2%
5.0 Emergency Preparedness	
Section 5.1 - Rendering Assistance	2%
Section 5.2 – Capsizing/Falls Overboard	6%
Section 5.3 – Cold Water Immersion	2%
Section 5.4- Fire Emergency Preparedness	2%
Section 5.5 - Running Aground Prevention and Response	2%
6.0 Other Water Activities	
Section 6.1 –Water-Jet Propelled Watercraft	6%
Section 6.2 - Water Skiing, Towed Devices and Wake Sports	2%
Section 6.3 - Diving and Snorkeling	0
Section 6.4 - Hunting and Fishing	2%
Section 6.5 –Small Boats	2%
Total (out of 50 questions)	100%

Note: In order to receive NASBLA-approval, any assessment offered for boater certification in a state must conform to the assessment plan adopted by the Boating Law Administrator of that state.

ASSESSMENT BEST PRACTICES – Part 4

The state specific portion of the NASBLA-approved assessment must contain a MINIMUM OF 10 state specific assessment questions written to the NASBLA item writing standards covering NASBLA Policy Section 8.2 (State Specific Information). It is recommended that the state-specific questions be in addition to the 50 questions covering the designated national standard.

However, if an assessment of 60 or more questions is not feasible, the state may choose to replace some of the 50 questions required by NASBLA with state-specific questions. In this case, the state-specific questions will not only address course content defined by NASBLA Policy Section 8.2, but also address course content defined in the designated national standard. For example, a question addressing NASBLA Section 4.2 (Influence of Drugs and Alcohol on Boat Operation) may be made into a state-specific question by ensuring that it also addresses NASBLA Standard 8.2.5.3 (state-specific laws on operating under the influence of drugs and alcohol such as implied consent and BAC levels).

The resulting assessment must have at least 50 questions, including 10 or more state-specific questions, and conform to the standard weighting of the assessment plan adopted by the Boating Law Administrator of that state.

ASSESSMENT BEST PRACTICES – Part 5

Developing a passing score for each assessment should not be arbitrarily determined. Using court approved testing techniques (e.g., [Angoff method](#), [Ebel method](#)) for establishing a passing score is recommended, but not required. If the test is submitted for NASBLA-approval, the minimum passing score will be determined by each state in which the course is authorized. In addition, the decision as to what happens when a student scores below the state-established threshold will be determined by the states.

Chapter 3 - Detail Behind the Standard

Scope

ANSI/NASBLA 103-2016: Basic Boating Knowledge – Power (the “Standard”) is the minimum required Standard that applies to all basic boating courses in the U.S. states and territories and District of Columbia.

Purpose

ANSI/NASBLA 103-2016: Basic Boating Knowledge – Power establishes the national Standard for use by course providers to meet the needs of recreational boaters for basic boating knowledge in order to identify and reduce primary risk factors and mitigate their effects on recreational boating.

Standard-Specific Successful Instructional Strategies for Face-to-Face Instruction

This chapter provides the course provider or boating safety instructor with a starting place for designing or improving a boating safety course based on the Standard. Each element of the Standard is presented individually along with rationale or additional background information. See Appendix A for a complete copy of the Standard as published.

Instructional strategies, collected from subject matter experts in the boating education community, provide a range of ideas to consider for instructor-led teaching of each Standard element. These are meant to provide guidance on how successful instruction might been implemented. Example multiple choice questions are provided using the assessment criteria presented in Chapter 2.

Each element of the Standard is presented in the left column. Instructional strategies are located in the right column. Example test questions are provided below each table. The correct response is presented in **bold**.

1.0 The Boat

1.1 Boat Capacities

1.1.1 The course shall describe how to determine acceptable loading based on:

- locating and determining a boat's gross load capacity (total weight and number of persons) from the boat capacity plate; and
- horsepower recommendations.

Rationale for 1.1 - Boat Capacities

A boat operator must be able to avoid capsizing situations by adhering to boat capacity limits for safe operation. U.S. Coast Guard accident statistics indicate that capsizing is a leading cause of fatal accidents. Many capsizing incidents have resulted from overloaded boats. For boats without capacity plates, a boater should reference the owner's manual and state laws.

Standard	In-Class Activities:
<u>1.1 - Boat Capacities</u>	<ol style="list-style-type: none">1. Show example of capacity plate or photo of one.2. Place a couple of chairs in front of the room to represent a boat. Ask for two volunteers to sit in "boat" and add gear (real or imaginary) to the "boat". List the weight of everything added to boat (plus people) and see if it is too heavy for the boat using the capacity equation. (This also ties in with Standard 2: Boating Equipment)3. Show pictures of possible boat capacity violations and ask students to evaluate them.4. Show slides of variety of boats (including seats) and ask students to guess the boat's capacity. Evaluate information from the capacity plate and explain any differences.

Knowledge Assessment (Example Test Questions)

1.1 a *What information is shown on a boat's capacity plate?*

- (A) Total weight and number of persons the boat is designed to carry.**
- (B) The location where every person is to sit during boat operation.
- (C) Information on how to start the boat's motor, including horsepower rating.
- (D) Total number of passengers and seating locations.

1.1b *What is checked by calculating the number of persons and amount of gear on a boat?*

- (A) Anchor size
- (B) Engine power
- (C) Trim adjustment
- (D) Weight capacity**

1.2 Personal Watercraft (PWC)

Personal Watercraft (PWC) or other boats without capacity plates should reference the owner's manual and state laws.

Rationale for 1.2 – Personal Watercraft

A personal watercraft (PWC) is exempt from many of the requirements that other boats must comply with: including display of capacity information, safe loading information, flotation requirements, electrical systems, fuel systems, and powered ventilation. The Operator must still comply applicable with state laws.

<u>Standard 1.2 – Personal Watercraft (PWC)</u>	In-Class Activities: <ol style="list-style-type: none">1. Provide a PWC on a trailer. Ask student's to determine its capacity.2. Show pictures of possible PWC capacity violations and ask students to evaluate them.3. Discuss state laws regarding capacity which may apply to PWC.4. Evaluate information presented in a PWC manufacturer's manual regarding capacity.
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Knowledge Assessment (Example Test Question)

- 1.1 c *What does it mean if your boat does not have a capacity plate?*
- (A) I do not have to worry about how much the boat can hold.
- (B) I need to check the owner's manual and/or state laws regarding capacity.**
- (C) The boat should not be used as it is in violation of federal law.
- (D) The boat has been vandalized and should be reported to the authorities.

2.0 Boating Equipment

2.1 Personal Flotation Devices (Wearable Life Jackets and Throwable Devices) Types and Carriage

2.1.1 The course shall explain the:

- different classifications and types of U.S. Coast Guard approved personal flotation devices (PFDs), including wearable and throwable devices;
- different sizes of U.S. Coast Guard approved PFDs; and
- respective uses, advantages, and disadvantages of life jackets based upon the activity for which they are intended.

2.1.2 The course shall also:

- describe the number and types of PFDs/life jackets that must be carried aboard the boat according to applicable regulations;
- discuss and clarify label restrictions; and
- emphasize that the best life jacket is the one that will be worn all the time.

Rationale for 2.1 - Personal Flotation Device (PFD) Types and Carriage

While state and federal law use the reference PFD (Personal Flotation Device), the U.S. Coast Guard and others in the boating community encourage use of the term “life jacket” when educating the boating public about wearable life jackets. The term “life jacket” has broader recognition and acceptance by the boating public than the term “PFD.”

U. S. Coast Guard recreational boating statistics show approximately seventy (70) percent of all fatal boating accident deaths are caused by drowning. Of those who drowned, approximately ninety (90) percent of the victims were not wearing their life jacket. Drowning death occurs to both swimmers and non-swimmers. Citations and fines are issued to boat operators who fail to carry sufficient PFDs/life jackets or are found carrying improper PFDs/life jackets for the number and types of passengers on board. It is important for boaters to understand that some PFDs are also referred to as life jackets and various designs are intended for different uses or activities, such as inflatable life jackets and throwable devices. Boaters should read and understand the information on the PFD/life jacket label and apply that to its intended use. The best life jacket is the one people will wear. Capsizing and falls overboard are leading causes for boaters unexpectedly entering the water.

In 2014, U.S. Code of Federal Regulations (33 CFR Part 175, Subpart B) revised language regarding PFDs and defined Wearable and Throwable PFDs as follows:

- *Throwable PFD* means a PFD that is intended to be thrown to a person in the water. A PFD marked as Type IV or Type V with Type IV performance is considered a throwable PFD. Unless specifically marked otherwise, a wearable PFD is not a throwable PFD.
- *Wearable PFD* means a PFD that is intended to be worn or otherwise attached to the body. A PFD marked as Type I, Type II, Type III, or Type V with Type (I, II or III) performance is considered a wearable PFD.

Many state laws continue to require PFD carriage by Type. It is important for the student to understand and comply with requirements in the state in which they are boating. States may enact stricter than for life jacket wear than that required in U.S. Code.

<p><u>Standard 2.1 -</u> <u>Personal Flotation</u> <u>Devices Types and</u> <u>Carriage</u></p>	<p><u>In-Class Activities:</u></p> <ol style="list-style-type: none"> 1. Ask students to respond to: What types of life jackets (PFDs) are acceptable for an 18-foot boat with the following passengers: 250 pound male, 15 pound infant, 150 pound female, two 57 pound twin boys? (Alternate using boats of various sizes.) 2. Provide a variety of life jacket of various sizes and types. Have students locate the following information on the labels: USCG Approval number; wearer size; activities approved for use; other special instructions or restrictions. 3. Discuss the importance of wearing a life jacket for both swimmers and non-swimmers.
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Knowledge Assessment (Example Test Questions)

- 2.1a *Why should a person be encouraged to wear a life jacket?*
- (A) A high percentage of drowning deaths while boating occur to non-swimmers.
 - (B) It is a federal law for boaters to wear a life jacket during the cold weather months.
 - (C) Life jacket labels describe who is required to wear the devices.
 - (D) **On average, 70% of all boating deaths occur from drowning.**
- 2.1b *When is it good advice for adults to wear USCG-approved PFDs?*
- a. When in bad weather
 - b. During the night time
 - c. **At all times when aboard**
 - d. Only when boating alone
- 2.1c *According to the U.S. Coast Guard, what are the leading causes of boaters unexpectedly entering the water?*
- a. Swamping and sinking
 - b. Collisions with other boats
 - c. Ejection from a boat
 - d. **Capsizing and falling overboard**

2.2 Personal Flotation Device Availability and Sizing

The course shall communicate that PFDs/life jackets must be:

- readily accessible, and
- correctly sized for the persons using them.

Rationale for 2.2 – Personal Flotation Device Sizing and Availability

Capsizing and falls overboard account for over half of all boating fatalities. All boat occupants must know where the PFDs/life jackets and throwable devices are located, how to readily access them, and how to put them on for proper performance. Participants need to understand how to select the correct size for themselves and other passengers and how to properly adjust for fit.

<u>Standard 2.2 – Personal Flotation Device Availability and Sizing</u>	<u>In-Class Activities:</u> 1. Demonstrate how to select for correct size and adjust for proper fit. Place life jackets on a variety of students and give them a tug at the shoulders with the student's arms extended over their heads to check for fit. 2. Regarding availability: Place several students in front of the room with a variety of sizes and types of life jackets buckled, tied, etc. and placed under their chairs. Simulate a boat crash and give the students 30 seconds to select, don and secure a life jacket. Review the success at the end of 30 seconds. Next, adjust the life jackets to fit the person, remove them and place them under the chair. Repeat the activity and monitor how much quicker the students' don and secure the devices. Third, leave the devices on, then repeat the activity. (With jackets already on, the person is protected).
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Knowledge Assessment (Example Test Questions)

2.2a *A life jacket on your vessel should be sized for which person on board?*

- a. The largest person
- b. The smallest person
- c. Average sized person
- d. **Its intended wearer**

2.2b *For a 15-foot boat, which object is required to be on-board?*

- a. A working VHF radio or cell phone
- b. A copy of the Navigation Rules book
- c. At least ten feet of extra line
- d. **One USCG-approved PFD for each person**

2.3 Wearing Life Jackets

The course shall inform boat operators the importance of:

- selecting the proper life jacket for the activity and everyone wearing life jackets at all times while aboard, skiing, or otherwise being towed;
- showing passengers how to correctly select the right size of life jacket and put on their life jackets;
- emphasizing the need to be aware that conditions can change quickly while boating (i.e., weather and water conditions, boat traffic, etc.); and
- stressing the need to always wear a life jacket while aboard due to the difficulty of putting a life jacket on in the water while under distress.

Rationale for 2.3 – Wearing Life Jackets

It is essential that boater safety education repeatedly emphasize the importance of always wearing a life jacket and how to select and put on the correct size for the activity. Research has shown most drownings associated with recreational boating might not have occurred if the person had been wearing a life jacket. In a recent 10 year period, life jackets were not worn in 82% of all fatal accidents. Today's life jacket designs allow more comfort and maneuverability for every boating activity including skiing and towed water sports. Wearing a life jacket at all times is the single most important behavior that a boater can do to be safe and prevent drowning. Once a person enters the water, it is very difficult to put on a life jacket especially under distress.

<u>Standard 2.3 - Wearing Life Jackets</u>	In-Class Activities: <ol style="list-style-type: none">1. Have a PFD fashion show using examples of many different styles.2. Have a relay race to show how long it can take to fully put on a PFD as appropriate for the age group (i.e. young children versus adults).3. Use assorted pictures of activities/people/boats and ask students to match recommended types of life jackets to pictures.4. Show an example of an inflatable lifejacket inflating it fully, deflating, re-packaging, and re-arming.5. Have students read and share stories from the National Safe Boating Council's "Saved by the Jacket" book.6. In a pool setting with a life guard on duty, have students put their lifejackets on while on shore; time them and establish how quickly they complete this. Then ask the students to enter the water until they can no longer touch bottom (CAUTION: follow appropriate swimming and rescue policies). Throw life jackets into the water and time the students as they try to put on lifejackets in the water; compare time required between donning life jackets on shore versus in the water. Emphasize that all people should wear lifejackets at all times regarding of how strong a swimmer they may be.
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Knowledge Assessment (Example Test Questions)

- 2.3a For which boating activity is an inflatable life jacket most appropriate?
- a. A swimmer when whitewater kayaking

- b. A non-swimmer being towed on a tube
- c. **A swimmer fishing from a rowboat**
- d. A swimmer operating a Personal Watercraft

2.3b *A properly fitted PFD should have which characteristic?*

- a. **Keeps the head and chin above water**
- b. Be loosely fitted to allow breathing
- c. Rides up around the neck and chin
- d. Allows the wearer to roll over

2.4 Personal Flotation Device Serviceability

2.4.1 The course shall describe:

- the characteristics of serviceable PFDs/life jackets, and
- when to replace PFDs/life jackets due to excessive wear or damage.

2.4.2 Special attention shall be given to the maintenance of inflatable life jackets as per manufacturer recommendations.

Rationale for 2.4 - Personal Flotation Device Serviceability

Life jackets are often subjected to rough handling, damaging ultra violet sunlight, and improper storage. These conditions reduce the ability of the PFD/life jacket to perform its intended function. The operator should be able to distinguish serviceable PFDs/life jackets and identify the key conditions that necessitate replacing the PFD/life jacket. Regular maintenance checks are essential to ensure the proper functioning of all PFDs/life jackets and especially inflatable life jackets which have additional manufacturer maintenance requirements.

As addressed in chapter 33 Code of Federal Regulations, section 175.23, a PFD is considered to be in serviceable condition if the following conditions are met:

(a) No PFD may exhibit deterioration that could diminish the performance of the PFD, including -

- (1) Metal or plastic hardware used to secure the PFD on the wearer that is broken, deformed, or weakened by corrosion;
- (2) Webbing or straps used to secure the PFD on the wearer that are ripped, torn, or which have become separated from an attachment point on the PFD; or
- (3) Any other rotted or deteriorated structural component that fails when tugged.

(b) In addition to meeting the requirements of paragraph (a) of this section, no inherently buoyant PFD, including the inherently buoyant components of a hybrid inflatable PFD, may exhibit -

- (1) Rips, tears, or open seams in fabric or coatings, that are large enough to allow the loss of buoyant material;
- (2) Buoyant material that has become hardened, non-resilient, permanently compressed, waterlogged, oil-soaked, or which shows evidence of fungus or mildew; or
- (3) Loss of buoyant material or buoyant material that is not securely held in position.

(c) In addition to meeting the requirements of paragraph (a) of this section, an inflatable PFD, including the inflatable components of a hybrid inflatable PFD, must be equipped with -

- (1) Except as provided in paragraph (d) of this section, a properly armed inflation mechanism, complete with a full inflation medium cartridge and all status indicators showing that the inflation mechanism is properly armed;
- (2) Inflatable chambers that are all capable of holding air;
- (3) Oral inflation tubes that are not blocked, detached, or broken;
- (4) A manual inflation lanyard or lever that is not inaccessible, broken, or missing; and
- (5) Inflator status indicators that are not broken or otherwise non-functional.

(d) The inflation system of an inflatable PFD need not be armed when the PFD is worn inflated and otherwise meets the requirements of paragraphs (a) and (c) of this section.

<u>Standard 2.4 - Personal Flotation Device Serviceability</u>	<u>In-Class Activity:</u> <ol style="list-style-type: none">1. Have several PFDs in various levels of serviceability (missing buckles, straps, small tears, broken seams). Have the students determine which devices would be deemed as 'serviceable' based on the USCG serviceability policies.2. Have a student demonstrate how to inflate an inflatable PFD using the oral inflation tube. Deflate and re-pack the device.3. Have a student demonstrate how a properly armed inflatable PFD works by pulling the inflation cord. Deflate and re-pack the device.4. Have students determine if a device is properly armed.5. Pass around an expended CO2 cylinder showing students how to determine it is expended.
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Knowledge Assessment (Example Test Questions)

2.4a *What is required for a PFD to be in "serviceable condition"?*

- A. **Fasteners work, no rips or holes**
- B. Proper size, fit and color
- C. The ability to turn a person face up
- D. Must be within easy reach

2.4b *After an inflatable PFD has been used, what action should be taken to make sure it functions properly in the future?*

- A. Refill the CO₂ cylinder
- B. **Replace the CO₂ cylinder and re-arm it**
- C. Send it to the USCG for inspection
- D. Use the oral inflating valve to refill the PFD

2.5 Fire Extinguisher Equipment

The course shall describe:

- the legal carriage requirements for fire extinguishers on recreational boats;
- the type and size of fire extinguishers needed for different types of fires;
- the importance of placing fire extinguishers in readily accessible locations; and
- the need for following manufacturer's recommendations for inspection and maintenance of fire extinguishers.

Rationale for 2.5 - Fire Extinguisher Equipment

U.S. Coast Guard requirements specify the number and types of fire extinguishers that must be carried for class "B" fires on boats of various sizes. Boat operators should also understand benefits of other classes of fire extinguishers based on the equipment on their boat. Boaters must be able to respond quickly in the event of fire by placing fire extinguishers in proper locations. Anticipating the emergency by outfitting the vessel with the appropriate equipment and understanding how to use it reduces exposure to danger. Fire Extinguishers must be regularly inspected and maintained.

Standard	In-Class Activities:
<u>2.5 – Fire Extinguishers</u>	<ol style="list-style-type: none">1. Show an inert Fire Extinguisher and pass around the room. Have students determine its rating, size, and if it is acceptable for use on a boat.2. Draw fire triangle on board (heat, fuel, oxygen) explain the elements necessary for fire.3. Give examples of types of fires: A – ash (wood); B – boil (gasoline); C – current (electric); D- dense (metals)4. Have students write and explain PASS acronym (Pull, Aim, Squeeze, and Sweep).5. Demonstrate how extinguish a fire using a fire extinguisher.

Knowledge Assessment (Example Test Questions)

- 2.5a *Motorboats under 26-feet with installed fuel tank(s) are required to have which type of fire extinguisher on-board?*
- A. Type A
 - B. Type B**
 - C. Type C
 - D. Type D
- 2.5b *A Type B fire extinguisher is made to be used on what type of fire?*
- A. Plastic
 - B. Wood
 - C. Gasoline**
 - D. Electrical

2.6 Back-Fire Flame Control Device

2.6.1 The course shall describe:

- the purpose, and
- maintenance of a back-fire flame control device.

Rationale for 2.6 - Back-Fire Flame Control Device

The U. S. Coast Guard requires that boats with gasoline engines be equipped with an acceptable means of backfire flame control. Boaters must understand the purpose and how to maintain installed devices.

<u>Standard 2.6</u> <u>- Back-Fire Flame</u> <u>Control Device</u>	<u>In-Class Activities:</u> 1. Demonstrate how a backfire flame control device works by passing a lighter under a piece of metal screen. The flame is 'cut off' by the screen. 2. Have a back-fire flame control device in class, or point out one on an inboard or Inboard /outboard boat. Discuss how to clean and maintain the device to keep it functioning properly.
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Knowledge Assessment (Example Test Question)

2.6a *What is the purpose of a back-fire flame control device?*

- (A) Controls the fire extinguisher nozzle.
- (B) Keeps flames from erupting from the engine.**
- (C) Recirculates fuel to the engine.
- (D) Provides heat to the boat's interior.

2.7 Ventilation Systems

The course shall discuss the ventilation system requirements for different types of boats.

Rationale for 2.7 – Ventilation Systems

The U. S. Coast Guard requires that all recreational boats which “use gasoline engines for electrical generation, mechanical power or propulsion” must be equipped with a ventilation system. Gasoline vapors can collect in the bilge and explode. “Boat owners are responsible for keeping their boats’ ventilation in operating condition.”

<u>Standard 2.7 – Ventilation Systems</u>	In-Class Activities: 1. Show pictures of ventilation ducts and cowls. 2. Have a boat available and have students chart all ductwork and cowling. Indicate flow of air which would occur if boat is underway. 3. Discuss how a blower works and how it should be positioned.
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Knowledge Assessment (Example Test Question)

- 2.7a *In what part of the boat are gasoline fumes most likely to accumulate?*
- A. Bow
 - B. Stern
 - C. Bilge**
 - D. Cockpit
- 2.7b *Which of the following best describes a ventilation system in operating condition?*
- A. When underway, the intake ducting and cowling scoops air into the boat’s closed compartments.
 - B. When underway, the outtake ducting and cowling removes air from the boat’s closed compartments.
 - C. The boat’s blower is functional and is operated when underway.
 - D. When underway making way, the intake and outtake ducting and cowling provide a way to move air through the boat’s closed compartments.**

2.8 Navigation Light Equipment

The course shall cover the navigation light requirements for recreational boats as set forth in the most recent version of the NAVIGATION RULES AND REGULATIONS HANDBOOK by the U.S. Coast Guard.

Recreational boats are required to display navigation lights between sunset and sunrise and during periods of reduced visibility. Boating accident statistics indicate that restricted visibility and nighttime accidents account for a significant proportion of total boat collisions. Boat operators who know, understand and follow navigation and anchorage light requirements can help reduce nighttime collisions. Many of the navigation rules are devoted to navigation lights. The U.S. Coast Guard Commandant NAV Rules Instruction (most recent series edition) provides a summary of the most relevant lighting requirements for recreational boaters.

<p><u>Standard 2.8 – Navigation Light Equipment</u></p>	<p>In-Class Activities:</p> <ol style="list-style-type: none"> 1. Show examples of navigation lights indicating proper placement. 2. Show video or online clips of lights at night and ask student to identify and explain what they are observing. 3. Have students should “position” themselves in proximity to a series of navigation lights in a dark classroom. Observe the displayed light pattern dead ahead; crossing left-to-right; crossing right-to-left; and overtaking. Students should indicate what the light patterns mean and how to identify the type of boat displaying them.
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Knowledge Assessment (Example Test Questions)

- 2.8a Which type and size vessel need only show navigation lights at night consisting of an electric torch or lighted lantern showing a white light in time to prevent collision?
- A. Rowboats with an electric motor
 - B. Sailing vessel over 40 ft.
 - C. Sailing vessel less than 65.6 ft.
 - D. Sailing vessel or vessel under oars less than 23 ft.**
- 2.8b What do a red, green, and white light indicate when seen together at night?
- A. It is the bow of a power vessel heading straight toward you.**
 - B. It is the port side of another vessel crossing your bow.
 - C. It is the starboard side of another vessel crossing your bow.
 - D. It is the stern side of another vessel that you are overtaking.

2.9 Sound Signaling Equipment

The course shall cover sound signal requirements for recreational boats as set forth in the most recent version of the NAVIGATION RULES AND REGULATIONS HANDBOOK by the U.S. Coast Guard describing:

- the types of sound-producing devices required on recreational boats, and
- the use of such devices on recreational boats.

Rationale for 2.9 - Sound Signaling Equipment

The means of producing an effective audible sound is required on all recreational boats. In certain boating conditions, boat operators must be able to alert other boats to their presence or operation intentions. The number one type of reported boating accident is “collision with another vessel.” Boating safety courses should demonstrate how sound producing equipment can be used to prevent collisions by signaling intentions to other recreational watercraft, commercial, and military vessels. The U.S. Coast Guard Commandant NAV RULES Instruction (most recent series edition) provides a summary of the most relevant sound requirements for recreational all boaters.

<u>Standard 2.9</u> <u>- Sound Signaling</u> <u>Equipment</u>	In-Class Activity: Set up a boating channel scheme with buoys (objects readily available such as a chair) and have the students practice moving through the course using appropriate sound signals to demonstrate their understanding of both international and inland rules.
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Knowledge Assessment (Example Test Question)

- 2.9a Which of the following is typically recognized as a sound signaling device?
- a. Your voice
 - b. Drumsticks
 - c. A police whistle**
 - d. Clapping your hands

2.10 Visual Distress Signal Equipment

The course shall describe:

- the types of visual distress signals required on recreational boats, and
- the use of visual distress signals required on recreational boats operating on coastal waters, and adjoining rivers two (2) or more miles wide at the mouth and up to the first point the river narrows to less than two (2) miles as summarized in the most recent version of the NAVIGATION RULES AND REGULATIONS HANDBOOK by the U.S. Coast Guard.

Rationale for 2.10 – Visual Distress Signal Equipment

Visual distress signals (VDS) provide an effective means for the recreational boater to alert others to a boater in distress. In those situations where electronic or wireless communications are ineffective, a boater may have no other means to gain the attention of another boater, or persons on shore, of their situation. Carriage and proper use of U.S. Coast Guard approved signaling devices provides an important visual distress signal. Numerous boaters in distress have successfully signaled for assistance using pyrotechnic devices such as flares or smoke signals, or daytime devices such as distress flags. The U.S. Coast Guard Commandant NAV RULES Instruction (most recent series edition) provides a summary of VDS requirements for recreational boaters. These are required in some areas of operation or when operating under certain conditions.

<u>Standard</u>	<u>In-Class Activity:</u>
<u>2.10 – Visual</u>	1. Show examples of VDS (ensure they are inert) and how they are best used/stored.
<u>Distress</u>	2. Determine if pyrotechnic or other devices are approved for marine use.
<u>Signal</u>	3. Determine if a device has an expired service date.
<u>Equipment</u>	4. Determine if a device is approved for daytime or nighttime use, or both.

Knowledge Assessment (Example Test Questions)

2.10a *How should a red hand-held flare be used as a distress signal?*

- A. Wave it in a slow arc over your head
- B. Hold it still facing upwind at the stern
- C. Move it up and down in front of your chest
- D. Aim it downwind over the side of the boat**

2.10b *Which of the following situations indicates an emergency aboard?*

- A. Flying a yellow flag from the bow
- B. A boat blowing its horn three times
- C. Orange smoke billowing from a boat**
- D. A flashing red light displayed on the stern

3.0 Trip Planning and Preparation

3.1 Checking Local Weather and Water Conditions

3.1.1 The course shall describe how to make informed boating decisions based on:

- forecasted local weather;
- water conditions;
- boater skill level;
- boat range; and
- capability of the operator and the boat pertinent to those conditions.

3.1.2 It shall describe:

- dangerous weather (i.e., strong winds, storms, lightning, hurricanes, fog);
- water conditions (i.e., high water, sand bars, currents, large waves); and
- their importance in trip planning.

Rationale for 3.1 –Checking Local Weather and Water Conditions

Boat operators must know the importance of getting, understanding, and using weather reports or reading weather changing signs in the sky in order to make an informed judgment about possible changing water conditions as they pertain relate to their boating skill and experience. It is the responsibility of the operator to decide to continue or make adjustments to the trip. Most accidents occur on calm, clear days. However, poor weather in combination with operator skill level and unexpected emergencies can accelerate the danger to operators and passengers. Dangerous weather results in changes to water conditions.

<u>Standard 3.1</u> <u>- Checking Local</u> <u>Weather And</u> <u>Water Conditions</u>	<u>In-Class Activities:</u> 1. List sources for weather information and forecasts (TV, radio, internet, look at clouds) 2. Discuss U.S. Coast Guard Local Notice to Mariners and how to obtain it for the area. 3. Listen to actual marine weather information via the weather channel on a VHF marine band radio (provide recording if otherwise not available) 4. Check with other boaters / anglers at the marina, fuel dock or restaurants. Discuss courses of action to take if a storm approaches. 5. Have an mock weather emergency drill –don life jackets, head to nearest safe harbor, ‘batten down the hatches’, securely stow gear in low areas, place heavy items in lowest point of boat, ensure bilge pumps/bailers are functional, secure anchor or sea anchor from bow.
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Knowledge Assessment (Example Test Questions)

3.1a *If a thunderstorm is approaching, it is best to take which action?*

A. anchor in place.

- B. Motor quickly through the storm.
- C. Head toward the nearest safe shore.**
- D. Head toward the area with clearest visibility.

3.1b *Which safety precaution should be taken first by a boat operator when boating in stormy weather?*

- A. Close all the windows, doors and hatches.
- B. Broadcast a "MAYDAY" call on the radio.
- C. Immediately ask the Coast Guard for help.
- D. Ensure all aboard are wearing properly fitted life jackets.**

3.2 Checking Local Information

3.2.1 The course shall describe how to obtain information about local hazards that may impede the safe operation of a recreational boat.

3.2.2 The course shall describe how to obtain information and inform the boater regarding local and state laws and regulations.

Rationale for 3.2 – Checking Local Hazards

It is important for the boat operator know how to find information on local hazard conditions and not become complacent with his/her knowledge of local hazards. Hazards are ever changing in every type of water system (i.e. lakes, ponds, rivers, oceans, etc.). Types of hazards to be discussed should include both man-made (i.e. low-head dams, overhead cables, bridges, heavy boating traffic) and natural hazards (i.e. rapids, sudden winds, tides, sand bars, currents, white water, waves, etc.).

Standard	In-Class Activities:
<u>3.2 - Checking Local Hazards</u>	<ol style="list-style-type: none">1. Watch video clips illustrating re-circulating water flow common over low-head dams.2. Review local charts to determine how to identify rapids, tides, sand bars, currents, whitewater, dams, bridges, sand bars, waves, areas of heavy boat traffic3. Discuss U.S. Coast Guard Local Notice to Mariners and how to obtain it for the area.4. Check with other boaters / anglers at the marina, fuel dock or restaurants – anywhere boaters tend to gather.

Knowledge Assessment (Example Test Questions)

3.2a *What is a characteristic of the danger of low head dams?*

- A. They pose the greatest hazards above the dam.
- B. They pose few hazards to inboard-powered boats.
- C. They may be crossed safely at a 45-degree angle to their faces.
- D. They usually have strong recirculating currents just below them.**

3.2b *Using a U.S. Geological Survey (USGS) chart can help locate known local hazards. Which items are NOT found on USGS charts?*

- A. Security zones.
- B. Dams and bridges.
- C. Rapids, tides and sand bars.
- D. Areas of current boat traffic congestion.**

3.3 Filing a Float Plan

The course shall describe:

- the importance of notifying someone of your boating plans, and
- the basic information that should be included.

Rationale for
3.3 – Filing a
Float Plan

Float
plans act as a

rescue tool for authorities in the event of an accident. Rescue authorities can respond faster and more efficiently if a float plan has detailed information about the time of departure, expected destination, boat description, how many people are on board, course, and time of expected return. Float plans can be communicated through paper plans, telephone conversations, electronic emails, text messages or other forms of communication. A boater should remember to cancel the plan upon their safe return to shore.

Standard	In-Class Activity:
3.3 - Filing a Float Plan	<ol style="list-style-type: none">1. Show a blank formal float plan to the students; then give them a blank float plan form and fill out together as a class, based on the specifics of a hypothetical boat trip; turn paper over and ask students to convert the float plan into the essential information for an email or text message to a family member who is staying ashore.2. Offer a list of online resources that provide an Internet based application with float plans.

Knowledge Assessment (Example Test Questions)

3.3a Which of the following is an example of a Float Plan?

- A. A MAYDAY, MAYDAY, MAYDAY message to the U.S. Coast Guard asking for assistance.
- B. An email to the marina operator requesting your dry docked boat be launched prior to your arrival.
- C. **Information left with a reliable individual about your boat trip including destination and time of expected return.**
- D. Information filed with the local law enforcement agency including your boat registration and listing all required equipment on board.

3.3b What should a boater do after returning safely from an outing?

- A. **Cancel the filed float plan.**
- B. Recharge the marine battery.
- C. Refill the boat's bilge with water.
- D. Loosen the back-fire flame arrestor.

3.4 Boat Preventative Maintenance

The course shall communicate the need for:

- regular inspection, and
- maintenance of the boat and its key components (e.g., through-hull fittings, motor, electrical system, fuel system, operation of engine cutoff device [if installed]).

Rationale for 3.4 – Boat Preventative Maintenance

Keeping a boat in good working order is as much a part of the boating experience as boating itself. Negligence in maintaining a boat may lead to an unsafe or disastrous experience. In recent USCG statistics, 8% of vessels in reported accidents involved boat equipment/maintenance related factors. In addition, 4% of all fatalities were due to boat equipment/maintenance related factors.

<u>Standard 3.4 - Boat Preventative Maintenance</u>	<u>In-Class Activity:</u> <ol style="list-style-type: none">1. Generate a list with the class of what should be checked and maintained regularly.2. Help the students understand where they can obtain check lists and other information regarding routine maintenance checks.3. Discuss the Coast Guard Auxiliary and U.S. Power Squadron vessel safety check program and how to obtain one every year for free.4. Remind students to incorporate a safety equipment (e.g. life jackets and fire extinguisher) check as well.
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Knowledge Assessment (Example Test Questions)

- 3.4a *Which of the following is recommended as part of the regular maintenance program for a gasoline-powered boat to safeguard against sinking?*
- A. Calibration and re-installation of an automotive-type fuel pump.
 - B. Examination of thru-hull fittings for signs of leakage or corrosion.**
 - C. Change spark plugs with automotive plugs and check spark distance.
 - D. Drain and check for invasive species along with topping off the anti-freeze level.
- 3.4b *Which test can be performed to detect a leak after fueling a gasoline-powered boat?*
- A. Sniff test.**
 - B. Poison test.
 - C. Electrical test
 - D. Carbon monoxide test.

3.5. Launching and Retrieving from a Trailer

The course shall cover safe trailering procedures including:

- safe towing preparation;
- road handling factors when pulling a trailer;
- launching a boat; and
- retrieving a boat from the water.

Rationale for 3.5 – Launching and Retrieving from a Trailer

The majority of recreational boats in the U.S. are trailered to and from the water. Neglecting the trailer's maintenance can result in damage to the trailer, boat, and the towing vehicle as well as create a hazard for other boats and vehicles. Good trailering skills can help boaters avoid accidents and reduce conflicts on boat ramps. Boaters should practice trailering and backing skills away from busy dock areas.

<u>Standard 3.5</u> <u>– Launching and</u> <u>Retrieving from a</u> <u>Trailer</u>	<u>In-Class Activities:</u> 1. If possible, take students to a parking area to view a properly fitted boat and trailer. Point out critical parts that should be regularly inspected. If not possible, show pictures of a trailered boat and discuss. 2. Watch a video demonstrating proper and courteous boat launching process, including boat preparation at the launch ramp, use of courtesy preparation lanes, courtesy docks, fenders and dock lines. 3. Demonstrate use of lines including useful knots (bowline, half hitches, figure eight, etc.) and use of cleats.
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Knowledge Assessment (Example Test Questions)

- 3.5a *How should safety chains be used with a trailer hitch?*
- A. Fastened to the trailer winch.
 - B. Crossed under the trailer tongue.**
 - C. Crossed above the trailer tongue.
 - D. Fastened to the tow vehicle bumper.
- 3.5b *What is the first thing you should do after retrieving a boat onto a trailer?*
- A. Check that the trailer lights are working.
 - B. Secure any items that are loose in the boat.
 - C. Transfer all gear from the boat to the vehicle.
 - D. Pull the trailer well away from the boat ramp.**

3.6 Fueling Procedures

The course shall provide information on proper procedures for:

- fueling, and
- ventilation during fueling.

Rationale for 3.6 – Fueling Procedures

Gasoline vapors are explosive and the ignition of spilled fuel vapors in boats cause injuries and fatalities annually. The probability of explosion can be reduced by following established safe fueling and ventilation procedures.

<u>Standard</u>	<u>In-Class Activities:</u>
<u>3.6 - Fueling Procedures</u>	<ol style="list-style-type: none">1. Discuss the differences in fueling a boat versus fueling a car.2. Discuss and point out the fuel vent (use slides or images if necessary.)3. Discuss marine fuels including ethanol and its impact to engine lines and hoses emphasizing the need for inspection every time the vessel is fueled.4. Discuss the “Rule of Thirds” (plan to use 1/3 fuel out bound, 1/3 in bound, and save 1/3 for emergencies) and why it is so important.5. Get samples of fuel absorbent pads and discuss why and how they are used as well as providing give sources to obtain them.6. Discuss the need to always ensure the fuel nozzle is in constant contact with the fuel filler tube during fueling to reduce the chance of a spark due to static electricity.7. Emphasize the need to operate the ventilation system (when applicable) for at least four minutes and doing a sniff test prior to starting the engine.8. Emphasize the need to have everyone off the boat when fueling.

Knowledge Assessment (Example Test Questions)

- 3.6a *Why is it important to properly ventilate after fueling a boat?*
- A. To remove trapped fuel fumes from a closed or semi-closed space.**
 - B. To remove spilled fuel so passengers are not exposed to fumes.
 - C. To ensure vents are not blocked or fuel lines are open.
 - D. To ensure fresh air is available to the engine.
- 3.6b *In what parts of the boat are gasoline fumes most likely to accumulate?*
- A. Bow or helm
 - B. Stern or transom
 - C. Bilge or engine space**
 - D. Cockpit or helm

3.7 Pre-Departure Checklist and Passenger Communication

3.7.1 The course shall describe:

- the importance of using a pre-departure checklist, and
- conducting an onboard safety discussion with passengers.

3.7.2 Passengers should be informed about the location and use of:

- PFDs/life jackets (and shown how to put them on),
- fire extinguishers, and
- visual distress signals and first-aid kit.

3.7.3 Passengers should be informed about:

- anchoring procedures,
- emergency radio operation (if applicable),
- storm/rough weather procedures,
- line handling;
- emergency boat operation and falls overboard procedure.

Rationale for 3.7 – Pre-Departure Checklist and Passenger Communication

The use of a pre-departure checklist ensures the boat is in a safe operating condition. Checklists aid the operator in determining if all operating systems (e.g. engines, electronics, navigation lights, etc.) are working properly and that all safety equipment is available and/or functional (e.g. life jackets, dewatering equipment, visual distress signals, etc.). Checklists also aid the operator in communicating important safety information to passengers. Safety information may include; location and importance of wearing life jackets, location of fire extinguishers, what to do in the event of a person falling overboard, emergency boat operation, emergency procedures, etc.

<u>Standard 3.7 – Pre-Departure Checklist and Passenger Communication</u>	In-Class Activity: <ol style="list-style-type: none">1. Have students brainstorm important information to be included in a pre-departure checklist for different sizes and types of boats.2. In small groups, have students practice onboard completion of a pre-departure checklist for various sizes of boats.3. Have students conduct a safety presentation designed for passengers on different types of boats.
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Knowledge Assessment (Example Test Question)

3.7a How is using pre-departure checklists beneficial to the boat operator?

- A. It eliminates the operator's responsibility for safe passage.
- B. The operator can rest after turning the boat over to a passenger.
- C. A passenger should be able to take over control of the vessel at any time.
- D. Passengers are briefed on emergency procedures in case of mishap.**

4.0 Safe Boat Operation

4.1 Operator Responsibilities

4.1.1 The course shall describe boat operator's ultimate responsibility for:

- operator proficiency,
- situational awareness,
- safety of boaters aboard and anyone coming into contact with the boat, and
- all activity aboard the boat.

4.1.2 The course shall describe a boat operator's responsibility regarding the impact of the boat's operation on other water users, including, but not limited to, the need for:

- controlling boat speed,
- obeying no wake/limited wake restrictions;
- refraining from careless, reckless, or negligent operations on the water; and
- observing and operating in accordance with homeland security measures.

4.1.3 The course shall describe homeland security measures, including:

- keeping a safe prescribed distance from military and commercial ships;
- avoiding commercial port operations areas;
- observing all security zones; and
- observing and reporting suspicious activities to proper authorities.

4.1.4 The course shall indicate that it is the beginning of the boater's education and that other courses are available.

Rationale for 4.1 – Operator Responsibilities

Boat operators are ultimately responsible for the safe operation and conduct of their boat. Boat operators must be familiar with the capability and/or limitations of their boat and be proficient in its operation. Boat operators must be equipped for and know how to respond in the case of an emergency. Boat operators must understand the navigation rules, aids to navigation, and safety/warning markings and how they apply. Boat operators should have an understanding of established security zones. It's also important boat operators understand they are important to the safety and security of the U.S. by being the eyes and ears for law enforcement personnel.

If an emergency situation occurs, a boat operator has an obligation to respond without endangerment to their boat, crew, or passengers.

Boat operators must recognize the need for development of boat handling skills and additional knowledge beyond this basic course.

<p><u>Standard 4.1 - Operator Responsibilities</u></p>	<p><u>In-Class Activity:</u></p> <ol style="list-style-type: none"> 1. Show the most recent USCG Boating Accident Statistics and discuss boating incidents, accidents and fatalities and related causes. 2. Discuss how they can assist law enforcement by reporting violations of law and/or suspicious activity. 3. Discuss how a boat operator can assist another boater in distress without jeopardizing their own safety or the safety of those aboard. 4. Discuss what is meant by the phrase “be familiar with the capability and/or limitations of their boat.” 5. Have students brainstorm on safe ways to assist another boater in distress. 6. Students should research and present information on how to participate in boating courses offering advanced knowledge and/or skill training.
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Knowledge Assessment (Example Test Questions)

4.1a *When is it important to maintain a proper lookout when a boat is operating?*

- A. Day time
- B. Night time
- C. During times of reduced visibility
- D. Always**

4.1b *A boat operator is responsible for whose conduct when on the water?*

- A. Only himself or herself
- B. Only non-paying passengers
- C. All on board
- D. Himself or herself and non-paying passengers

4.2 Influence of Drugs and Alcohol on Boat Operation

The course shall describe:

- the effects of drinking alcohol or using drugs while boating, and
- the boating laws pertinent to operating a boat while under the influence.

Rationale
for 4.2 –
Influence
of Drugs
and

Alcohol on Boat Operation

Alcohol use plays a major part in the number of boating accidents and fatalities. It is illegal to operate a boat while under the influence of alcohol or drugs. Alcohol is a “stressor” and significantly increases the effects of other conditions related to being on the water (e.g. heat, wind, fatigue, etc.). Passengers who are drinking should be especially encouraged to wear life jackets.

<u>Standard 4.2 - Influence of Drugs and Alcohol on Boat Operation</u>	In-Class Activity: <ol style="list-style-type: none">1. Show the most recent USCG Boating Accident Statistics and discuss the number of accidents and fatalities attributed to boating under the influence.2. Discuss the ways alcohol results in impaired judgment, even at very low levels of use.3. Discuss state and local laws regarding “Operating Under the Influence” including use of prescription and recreational drugs.4. Invite a marine patrol officer to discuss the impact of Alcohol and Drugs on Boat Operation.
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Knowledge Assessment (Example Test Questions)

- 4.2a Which of the follow annually contributes to about 1/5 of fatal boating accidents nationwide?
- A. Improper engine ventilation
 - B. Not using navigation lights
 - C. Operator intoxication**
 - D. Improper anchoring
- 4.2b What effect does the use of alcohol or drugs have on an operator while boating?
- A. Heightened awareness
 - B. Impaired judgment**
 - C. Faster reaction time
 - D. Reduced risk-taking

4.3 Navigation Rules

4.3.1 This course shall describe basic navigation rules applicable to recreational boaters.

4.3.2 The course shall be designed to assist the recreational boater when encountering typical navigation rules of the road situations.

4.3.3 Boat operators are responsible to be knowledgeable of the NAVIGATION RULES AND REGULATIONS HANDBOOK by the U.S. Coast Guard, however this course will focus on only the following Inland Rules*:

- Rule of responsibility – Rules 2(a) and 2(b);
- Proper lookout – Rule 5;
- Safe speed – Rule 6(a);
- Collision avoidance rules;
 - Rules 7(a),
 - 7(d),
 - 7(d)(i),
 - 7(d)(ii),
 - Rule 8,
 - Rules 13(a),
 - 13(b),
 - Rule 16,
 - Rule 17,
 - Rule 18 (a-d)
- Inland Rules;
 - 14(a),
 - 14(b),
 - 14(c),
 - Rule 15(a)
- Restricted visibility – Rules 19(a) through (e); and
- Disclaimer* (Include verbatim in course materials.)

**The navigation rules contained in this course summarize basic navigation rules for which a boat operator is responsible on inland waterways. Additional and more in-depth rules apply regarding various types of waterways, such as International Waters and Western Rivers, and operation in relation to commercial vessels and other watercraft. For a complete listing of the navigation rules, refer to the document NAVIGATION RULES AND REGULATIONS HANDBOOK by the U.S. Coast Guard. For State specific navigation requirements, refer to applicable state laws.”*

Boats must operate according to established navigation rules. Each year, U.S. Coast Guard boating accident statistics show that there are numerous violations of the navigation rules by recreational boaters.

<p><u>Standard 4.3 - Navigation Rules</u></p>	<p><u>In-Class Activities:</u></p> <ol style="list-style-type: none"> 1. Read applicable Navigation Rules and interpret what the rule means in layman’s terms. 2. Show a video clip that illustrates basic Navigation Rules principles. 3. Provide scenarios to determine if Navigation Rules were/were not followed appropriately. 4. Show the most recent USCG Boating Accident Statistics and discuss the number of accidents and fatalities that are caused by Navigation Rules violations. 5. Practice proper navigation around the room. Pretend people are the boats and have them move through a course in the room. Practice correct sound signals, collision avoidance rules, and act responsibly with other boats they encounter. 6. Provide Navigation Rules knowledge study aids (e.g. flash cards). 7. Discuss how the navigation rules apply to non-motorized craft such as paddlers or boats under sail
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Knowledge Assessment (Example Test Questions)

- 4.3a *Abiding by the Navigation Rules applies to which boaters?*
- A. Only Recreational Boats and Vessels
 - B. Only Commercial Shipping
 - C. Only Motorized Boats
 - D. All Boats and Vessels**
- 4.3b *Which of the following can best assist you when operating your vessel during times of restricted visibility?*
- A. Wave a distress flag
 - B. Operate with docking lights on
 - C. Notify Coast Guard of your location
 - D. Assign passengers as look-outs**

4.4 Aids to Navigation

4.4.1 The course shall describe the Federal U.S. Aids to Navigation System (USATONS).

4.4.2 The course will provide information about regulatory/informational markers (identified by orange bands on the top and bottom of each buoy) used to advise of:

- situations,
- dangers, or
- directions indicating:
 - shoals,
 - swim areas, and
 - speed zones, etc.

Rationale for 4.4 – Aids to Navigation

To ensure safe and effective boat operations, boat operators must have an understanding of Aids to Navigation. Aids to Navigation (ATONS) are the road signs of the water. ATONS include all visible, audible and electronic symbols that are established by government and private authorities for piloting purposes including buoys, day beacons, lights, lightships, radio beacons, fog signals, and marks. The U.S. Aids to Navigation System (USATONS) prescribes regulatory markers and aids to navigation that mark navigable waters of the United States to be used by boaters to determine position or to follow a safe course. USATONS are intended for use with nautical charts. Together they provide information on hazards, channels, water depth, and other important features.

The Uniform State Waterways Marking System (USWMS) were originally intended for use on waterways not covered by nautical charts. In 1998, the U.S. Coast Guard announced the phase out the USWMS to avoid potential confusion of boaters. The phase out period ended in 2003. Regulatory Marks - consisting of white 'can' buoys with orange geometric shapes- are used to inform boaters of special restrictions or dangers. The orange shape determines the type of buoy it is (e.g. open diamond = danger; diamond with cross = exclusion area; circle = operating restriction; rectangle = information or instructions.)

Because floating aids do not always stay put, it is important to use a fixed point of reference whenever possible for a navigation fix.

<u>Standard 4 .4 - Aids to Navigation</u>	<u>In-Class Activities</u>
	<ol style="list-style-type: none">1. Display and discuss the purpose and use of Aids to Navigation.2. Display and discuss the purpose and use of regulatory markers.3. Have students identify various types of buoys, light characteristics, markers, etc. and state the purpose.4. Have students draw a river flowing to the ocean and place ATONS at appropriate points. Students may then present their rivers and explain ATON placement.5. Provide a nautical chart and ask students to determine safe passage between two or more points.6. Using a nautical chart and chart book reference, have students find and identify various nautical features or navigation hazards.

4.4a *Regulatory and informational markers are easily identified through which features?*

- A. Vertical black and white striping
- B. Triangular shape and red lettering
- C. Yellow square or rectangular symbol
- D. White color with orange geometric shapes**

4.4b *When returning from sea, you see a red buoy. How should you respond?*

- A. Keep the buoy on your port side.
- B. Keep the buoy on your starboard side.**
- C. Stay clear of the buoy entirely.
- D. Red means to stop before proceeding.

4.5 Docking and Maneuvering

The course shall describe common practices for docking and maneuvering a boat relative to:

- boat size,
- type of boat,
- location,
- weather, and
- current.

Rationale
for 4.5 –
Docking
and

Maneuvering

Significant boat/property damage, accidents and injuries result from docking and maneuvering of boats in marinas and boat ramp areas, particularly in adverse weather conditions. Docking and maneuvering techniques, including the use of lines and fenders, vary depending on wind, current, location, degree of boat traffic, type of boat, size of boat and the skills/abilities of the boat operator.

<u>Standard 4.5 - Docking and Mooring</u>	<u>In-Class Activity:</u> Using video clips, animated PowerPoint, magnetic visual aids, etc., demonstrate sound docking techniques and procedures under various scenarios and environmental conditions.
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Knowledge Assessment (Example Test Questions)

- 4.5a *When entering a docking or mooring area, why should you watch your wake?*
- A. It may be used to estimate boat speed.
 - B. It may cause personal injury or damage.**
 - C. It should not be more than three inches high.
 - D. It can be used to judge clearance from other boats.
- 4.5b *It is a windy day. Which is the preferred way to approach a crowded dock?*
- A. Downwind, so you can power up to it.**
 - B. Upwind, so the wind will blow you into it.
 - C. From the end of the dock heading downwind.
 - D. Beach your boat and avoid the dock.

4.6 Anchoring

4.6.1 The course shall describe the importance of:

- carrying an anchor, and
- the selection of anchors, related ground tackle, and their use for different types of boats in various boating conditions.

4.6.2 The course shall describe:

- procedures for anchoring;
- use of anchors as safety devices in emergency situations; and
- the hazards of stern anchoring.

Rationale for 4.6 – Anchoring

Anchoring skills and decisions of where to anchor, as well as where not to anchor (e.g. busy channel), can make the difference between a successful and unsuccessful boating experience. Significant property and environmental damage can occur when improperly anchored boats slip anchor and drift into reefs, other boats, marinas, or run aground. Knowing how to anchor is one way to reduce or avoid other causes of accidents.

Standard	In-Class Activities:
<u>4.6 – Anchoring</u>	<ol style="list-style-type: none">1. Show different types of anchors and explain their uses.2. Illustrate anchoring and removal procedures using anchor, rode, and lines.3. Discuss where boaters should avoid anchoring.4. Illustrate how various anchors work.

Knowledge Assessment (Example Test Questions)

4.6a *What is the proper technique for anchoring?*

- A. Over the stern.
- B. Over the bow.**
- C. Over the port side.
- D. Over the starboard quarter.

4.6b *You are operating on a fast flowing river above a dam when your engine stalls and you cannot restart it. What emergency actions should you **first** take?*

- (A) Ensure all have on life jackets and call the United States Coast Guard for assistance.
- (B) Ensure all have on life jackets and anchor your boat from the bow.**
- (C) Ensure all have on life jackets and anchor your boat from the stern.
- (D) Ensure all have on life jackets and secure a sea anchor from the side of your boat.

4.7 Carbon Monoxide

The course shall describe the dangers, symptoms, and avoidance practices associated with carbon monoxide (CO) poisoning in recreational boating.

Rationale for 4.7 – Carbon Monoxide

Carbon monoxide (CO) poisoning, the leading cause of accidental poisoning death in America, has been identified as a serious problem on our nation's waters. Carbon monoxide is an odorless, colorless, tasteless gas that can be toxic in even small quantities. It is produced by engines, generators, grills and other equipment commonly used by boaters. Every year people who recreate on and around boats are overcome by the effects of carbon monoxide.

Recreational boaters need to be aware of carbon monoxide poisoning prevention practices such as regular professional boat inspections; the installation and maintenance of marine rated carbon monoxide detectors in living spaces; trusting the detector when the alarm is sounding; the hazards of sitting in the back of certain boats due to the 'station wagon effect'; exhaust leaks from CO sources such as engines, generators, grills and propane appliances; specific boat design features of concern; and the danger of swimming near the stern of the watercraft while generators, engines or other carbon monoxide producing equipment is in operation.

<u>Standard 4.7 – Carbon Monoxide</u>	<u>In-Class Activities:</u> <ol style="list-style-type: none">1. Show an empty water bottle that has been "filled up" with CO from a car or boat. Ask the class to note what they see (Nothing- it is colorless and odorless)2. Have students describe the 'station wagon effect.'3. Pass around a CO indicator for people to look at.4. Review CO accident scenarios from USCG or review a CO booklet.5. Describe the symptoms of CO poisoning.
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Knowledge Assessment (Example Test Questions)

- 4.7 a *What is a characteristic of carbon monoxide?*
- A. Smells like propane.
 - B. Has a light blue color.
 - C. Harmless to humans.
 - D. It is odorless.**
- 4.7b *Which is the best precaution against carbon monoxide poisoning?*
- a. Install a battery-operated smoke alarm.
 - b. Keep fresh air flowing through the vessel.**
 - c. Run the engine blower when underway.
 - d. Stay in the stern area of the vessel when underway.

4.8 Propeller Intervention and Awareness

The course shall describe the dangers, unsafe activities, safety equipment (e.g., engine cutoff device), and avoidance practices to mitigate or prevent propeller strikes in recreational boating.

Rationale for 4.8 –Propeller Intervention & Awareness

Motorboat propellers can inflict severe, devastating injuries that result in death, loss of extremities, severe permanent deformity, disfigurement, and/or disability. Common propeller strike scenarios are man-overboard and/or the “circle of death” from runaway vessels due to the unexpected loss of the operator. Every year people who recreate on and around boats are struck by the propeller of their boat or another boat. Since the danger is not readily visible to boating participants, the boat operator and passengers may not recognize or consider the consequences of accidental or inadvertent contact with propellers.

Even propellers in neutral or at rest can cause serious injuries. Engine cutoff devices, when used properly, can reduce the number of propeller casualties.

<u>Standard 4.8 - Propeller Intervention & Awareness</u>	<u>In-Class Activities:</u> 1. Using a boat available in the parking lot, have students look at prop and illustrate the proximity of a prop to swimmers in the water behind the boat. Discuss how an engine cut-off device works and proper use. 2. Discuss the best location for a swim ladder. 3. Discuss safety procedures for operating in proximity of swimmers. 4. Review propeller awareness handouts from the CG.
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Knowledge Assessment (Example Test Questions)

4.8a *What should an operator do to prevent propeller strike injuries?*

- A. **Keep a proper lookout at all times.**
- B. Ensure everyone is wearing a life jacket.
- C. Operate at idle speed in swim zones.
- D. Put boat in neutral gear during re-boarding.

4.8b *What is the primary cause of propeller strike accidents?*

- A. Falls overboard
- B. Capsizing
- C. **Operator error**
- D. Re-boarding

5.0 Emergency Preparedness

5.1 Rendering Assistance

5.1.1 The course shall explain that, according to the Navigation Rules, boat operators are required to render assistance to a boat in distress to the extent they are able.

Rationale for 5.1 – Rendering Assistance

Good Samaritans are responsible for hundreds of rescues every year. In the event of an emergency, individuals in charge of a vessel are required to provide assistance so far as they can do so without serious danger to their own vessel or the individuals on board their vessel. Assistance from other boaters can reduce the loss of life, injury or property damage resulting from boating accidents.

Standard 5.1 - <u>Rendering Assistance</u>	<u>In-Class Activity:</u> Discuss various ways to render assistance without needing to tow a boat.
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Knowledge Assessment (Example Test Questions)

- 5.1a *What is the primary responsibility for a vessel operator assisting a boat in distress?*
- A. Keeping his/her vessel and him/herself out of danger.**
 - B. Finding fault with the operator of the distressed boat.
 - C. Operating the radio on the distressed boat.
 - D. Notifying the Coast Guard of the situation.
- 5.1b *According to the Navigation Rules, how are boat operators required to respond to a boat in distress?*
- A. Render assistance to a boat in distress to the extent they are able.**
 - B. No assistance is required.
 - C. Make a note of the location and report it as soon as you return from your outing.
 - D. File a boating accident report to the local authorities.

5.2 Capsizing/Falls Overboard

5.2.1 The course shall describe how to prevent and respond to these emergencies.

5.2.2 The prevention responses shall include:

- stay centered and low;
- avoid standing and sudden moves;
- maintain three points of contact;
- never overload;
- balance your load; and
- avoid rough water.

5.2.3 The responding procedures shall include:

- wearing life jackets;
- taking a head count;
- staying with the boat when appropriate;
- signaling for assistance;
- using improvised floating aids; and
- initiation of procedures to recover people in the water.

Rationale for 5.2 – Capsizing/Falls Overboard

Capsizing and falls overboard emergencies are consistently the leading causes of boating fatalities. Overloading, shifting of loads, and passenger movement on smaller craft contribute to most of the capsizing/falls overboard accidents. Boat operators must take action to prevent themselves and their passengers from falling overboard. In addition, boat operators need to provide sufficient instruction to their passengers on how to avoid a fall overboard or capsize by maintaining balance and control when moving in the boat. Passengers should be instructed in how to assist in the quick recovery of persons in the water in various water conditions, water temperatures and watercraft. Procedures could include throwing a throwable Personal Flotation Device or any other immediately available floating aid. Boater education courses should stress prevention of falls overboard, wearing of life jackets at all times, and the proper response/action in a capsizing/fall overboard emergency.

<u>Standard 5.2 - Capsizing/Falls Overboard</u>	<u>In-Class Activities</u>
	<ol style="list-style-type: none">1. Discuss if any student has experienced falling overboard? Why do people fall overboard?2. Discuss what you should do in a case of falling overboard.3. Discuss how falling overboard can be prevented.4. Practice tossing a throwable device or rescue rope at a target.5. Place a canoe or small rowboat on truck inner tubes. Practice safe movement in the boat (Caution: Position safety spotters on each side of the boat to assist in case of 'capsize.' Practice safe movement in the boat and how to keep the center of gravity low and balanced even when retrieving items floating in the water by keeping shoulders within the gunwales of the boat.6. Discuss what to do if a boat capsizes.

Knowledge Assessment (Example Test Questions)

5.2a *What should you do if your boat capsizes in an area where assistance is available?*

- A. Begin to swim for the closest shore
- B. Stay with the boat and climb on top of it**
- C. Swim toward the last vessel you passed
- D. Tread water to reduce the risk of hypothermia

5.2b *What should you do to avoid capsizing or swamping?*

- A. Load passengers and gear on the bow
- B. Load passengers and gear in the stern
- C. Anchor from the stern, rather than the bow
- D. Anchor from the bow, rather than the stern**

5.3 Cold Water Immersion

5.3.1 The course shall describe the effects of cold water immersion and how to prepare for, prevent, and respond to a cold water immersion event, including:

- Stages and the physiological effects of cold water immersion:
 - Initial reaction (cold shock response; gasping and hyperventilation);
 - Short-term response (cold incapacitation; swim failure, functional loss); and
 - Long-term response (immersion hypothermia).
- Preparation and Prevention:
 - Wearing a life jacket enhances chances of survival during each stage;
 - Carrying communication and signaling devices on person; and
 - Preventing capsizing, swamping, and falls overboard.
- Response:
 - Initial reaction (first 1-5 minutes) – airway protection and breath control;
 - Short-term (first 30 minutes) – performing the most important functions first (emergency communication, situational assessment, decision making, and self-rescue activities); and
 - Long-term (after 30 minutes or more) – slow body core heat loss and be prepared at all times to signal rescuers.

Rationale for 5.3 – Cold Water Immersion

Capsizing and falls overboard into cold water account for a high number of boating fatalities. Boaters' risk of dying increases with colder water temperatures. Sportsmen who hunt or fish from boats in cold weather are at greater risk of fatalities from capsizing or falling overboard. Water temperature varies by season and location, but the water does not have to be exceptionally cold for someone to experience the effects of cold water immersion. Researchers (Golden and Harvey 1981) identified four distinct stages in which a person immersed in cold water may become incapacitated and die. Boaters who understand the stages and physiology of cold water immersion, understand the behaviors and conditions that cause immersion events (such as reaching overboard and improper loading), are adequately prepared for a cold water immersion event (such as wearing life jackets and carrying communication devices), and understand the decisions that should be made during such an event, such as breath control and performing the most important functions first, have a greater understanding of the importance of prevention and preparation for a cold water immersion and surviving if it does occur.

<u>Standard 5.3 – Cold Water Immersion</u>	<u>In-Class Activities:</u>
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	<p>1. Cold Water Tank Demonstration: Have students place hand in ice water for 30 seconds and then attempt to pick up items or tie a knot with cold hands. Stress importance of wearing life jacket.</p> <p>2. Watch Videos on cold water immersion. Have follow up discussions on how physical agility and mental acuity diminish rapidly during cold water immersion.</p>
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Knowledge Assessment (Example Test Questions)

- 5.3a *A person involved in a sudden cold water immersion event will likely experience what initial reaction?*
- A. gasping and hyperventilation**
 - B. elevated body temperature
 - C. fainting
 - D. frostbite and tissue damage
- 5.3b *During the first stage (gasp reflex) of cold water immersion, how does a life jacket help you survive?*
- A. Keeps your head above water, creating an airway**
 - B. Deploys a mayday call upon initial immersion
 - C. Reduces tingling in your fingers and toes
 - D. Slows the heat loss from your head

5.4 Fire Emergency Preparedness

The course shall describe procedures to prevent and respond to boating fires such as:

- proper use of fire extinguishers, and
- basic knowledge of fire suppression principles.

Rationale for 5.4 – Fire Emergency Preparedness

Everyone on the boat should be familiar with the location and correct use of fire extinguishers. You are your own fire department if a fire breaks out onboard. According to researchers, hands-on practice with fire extinguishing agents can increase your effectiveness in fighting a fire by a factor of three. The potential for catastrophic emergencies from fire requires that boat operators take measures to prevent and be prepared to deal quickly and efficiently with fires. A key to understanding fire suppression, including fire extinguisher use, is to know that eliminating one of the fire's key ingredients, fuel, oxygen, or heat, can extinguish the fire.

<u>Standard 5.4- Fire Emergency Preparedness</u>	In-Class Activities: 1. Discussion: <i>Have you ever seen or read about a boat catching fire or blowing up? What would you do if you had a fire on your boat?</i> 2. Discussion: <i>How can fire be prevented?</i> 3. Use a simulated fire and an empty or inert fire extinguisher, have each student practice P.A.S.S. (Pull Pin, Aim at Base of fire, Squeeze handle, Sweep at the base of the flames).
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Knowledge Assessment (Example Test Questions)

- 5.4a *Where should you aim a fire extinguisher's stream when extinguishing a fire?*
- Aim at the top of the fire and use little motion.
 - Aim toward the center of the fire and use a circular motion.
 - Aim at the edge of the fire and use a rapid motion.
 - Aim at the base of the fire and use a sweeping motion.**
- 5.4b *Which ingredients can be eliminated from a fire in order to extinguish it?*
- Fuel, oxygen, or heat.**
 - Water, ice, or steam.
 - Wood, fuel, or logs.
 - Gasoline or carbon monoxide

5.5 Running Aground Prevention and Response

The course shall describe how to prevent and respond to running aground for recreational boats.

Rationale for 5.5 – Running Aground Prevention and Response

According to the U.S. Coast Guard statistics, groundings account for fatalities, injuries, and millions of dollars of property damage every year. Preventing running aground is an important boat operator competency. Following proper procedures in the event of a grounding can reduce or eliminate fatalities, injuries, boat damage, damage to submerged objects and responses by public and private entities for rescue and salvage operations.

<u>Standard 5.5 - Running Aground Prevention and Response</u>	In-Class Activity: 1. Simulate placement of operator and passengers to illustrate the most effective location for lookouts. Describe the lookout's responsibilities and actions. 2. Simulate steps to safely release a small power boat from a grounded position.
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Knowledge Assessment (Example Test Questions)

- 5.5a *After shifting weight away from the grounded area of the hull, what action should you take to free a small inboard/outboard boat on a sandbar?*
- A. Lift the outdrive part-way then shift into reverse**
 - B. Put the boat in reverse and gun the engine
 - C. Put the boat in forward and gun the engine
 - D. Keep the engine in forward and drop the anchor
- 5.5b *Which of the following is a requirement for boat operators at all times when a boat is underway?*
- A. Maintain a proper lookout**
 - B. Use the running lights
 - C. Stay seated or kneeling
 - D. Monitor the VHF radio

6.0 Other Water Activities

6.1 Water-Jet Propelled Watercraft

The course shall inform all operators of jet-propelled and personal watercraft about:

- safe boating practices, and
- special accident risks unique to personal watercraft (PWC), such as:
 - off throttle loss of steering,
 - stopping (including braking and reverse systems),
 - re-boarding a PWC, and
 - the use of a lanyard cutoff switch.

Rationale for 6.1 – Water-Jet Propelled Watercraft

Recreational boaters share waterways with water-jet propelled watercraft, including personal watercraft (PWC), or may themselves be operators of water-jet propelled craft. Many states and local areas have laws and regulations specific to water-jet propelled watercraft operation and safety.

Boat operators must understand the unique characteristics of water-jet propelled watercraft operation and regulations in order to operate any boat safely and legally.

Water-jet propelled watercraft are operated differently from other boats, and each model has its own unique characteristics. Operators of water-jet propelled watercraft need to consult their owner's manual and understand the handling characteristics. These craft are highly maneuverable. The jet drive propulsion system is extremely responsive to slight steering turns. This responsiveness in maneuvering can encourage operators to attempt maneuvers that are dangerous and outside the safe operation recommendations of the watercraft. Further, some water-jet propelled craft lose the ability to steer when the operator releases the throttle. Newer technology reduces the off-throttle steering loss. Operators must be able to re-board the craft in deep water after falling off. This is most easily accomplished from the rear (stern) of the craft and is more challenging when the operator is tired or hindered by water conditions. A properly used lanyard cut-off switch stops the watercraft when an operator falls overboard, preventing the operator from being stranded or the watercraft running uncontrolled. Knowing how to effectively handle a water-jet propelled watercraft takes practice. New operators should practice their skills with an experienced operator who can guide them on controlling the craft and making safe boating decisions.

A review of boating accident reports indicates that water-jet propelled devices are more likely than other vessels to be involved in certain types of accidents (collisions with other vessels or hazards). The course should provide information on these common accidents and how to prevent them such as: maintaining a proper lookout when turning (scanning all around and behind); maintaining a proper distance from other boats and hazards; and making sure that all operators, not just the owners of the water-jet propelled device, have proper knowledge and skill to operate the craft.

See the American National Standard [ANSI/NASBLA 103.1-2018: Supplement – Basic Boating Knowledge – Water Jet Propelled Boats](#) for supplemental information on water-jet propelled watercraft.

<p><u>Standard 6.1 –</u> <u>Water-Jet Propelled</u> <u>Watercraft</u></p>	<p><u>In-Class Activities:</u></p> <ol style="list-style-type: none"> 1. Use Videos or additional information to demonstrate PWC operation and safety. 2. Discuss that all power boat operators should know about and use engine cut-off devices, but it is a legal requirement for PWC use in most states. 3. Provide a PWC as a visual aide to discuss unique characteristics of water-jet propelled watercraft. 4. Show and discuss videos from the Personal Watercraft Industry Association.
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Knowledge Assessment (Example Test Questions)

- 6.1a *Which action is most likely to cause the loss of steering ability in a water-jet propelled watercraft?*
- A. Over-steering
 - B. Under-steering
 - C. Running at maximum throttle
 - D. Releasing the throttle control**
- 6.1b *Why is it important to use the engine cut-off device on a Personal Watercraft (PWC)?*
- A. It allows a skier to control the boat while being towed.
 - B. It keeps the operator from falling overboard.
 - C. It secures the PWC to its trailer to prevent theft.
 - D. It shuts off the engine if the operator falls overboard**

6.2 Water Skiing, Towed Devices and Wake Sports

The course shall describe safety practices specific to:

- pulling water skiers;
- towing anyone behind a vessel; and
- allowing anyone to participate in an activity using the wake of the vessel (wake boards, tubes, etc.).

Rationale for 6.2 – Water-Skiing, Towed Devices and Wake Sports

The forces exerted on water skiers and their possible trajectory in a fall necessitate that each boat maintain as much distance as possible with a minimum of a 200-foot wide “ski-corridor” (100 feet on either side of the boat and behind the skier). “Skier mishaps” has been consistently listed in the top five types of boating accidents as measured by total number of boats involved. Courses should emphasize the unique characteristics and potential dangers of all towed water sports and any towed device that has the potential to become airborne.

<u>Standard 6.2 - Water Skiing, Towed Devices and Wake Sports</u>	<u>In-Class Activities:</u>
	1. Demonstrate waterskiing hand signals and then ask students to practice with a partner making and interpreting the signals correctly.
	2. Water Skiing videos or additional information can be used in teaching the course. However, if the audience is not primarily made up of water skiers, this information need only be covered at the minimum.

Knowledge Assessment (Example Test Questions)

- 6.2a *While water skiing, what is the preferred form of communication between the skier and the observer?*
- A. Hand signals**
B. Verbal commands
C. Head signals
D. Body language
- 6.2b *Which of the following poses the greatest risk of serious injury to a fallen water skier near a 21-foot powerboat?*
- A. Getting burned by hot exhaust
B. Being struck by a moving propeller
C. Contact with the boat’s hull
D. Broken skis

6.3 Diving and Snorkeling

The course shall describe:

- how to recognize a diver down flag, and the International Code Flag A, and
- the legal requirements for operating a boat in the vicinity of snorkeling or scuba diving activities.

Rationale for 6.3– Diving and Snorkeling

Recreational boats can present a hazard to divers in the water. Federal and state navigation rules require that diving flags be displayed during diving activities and that boaters in the area keep a safe distance from the flags.

<u>Standard 6.3 - Diving and Snorkeling</u>	<u>In-Class Activities:</u> <ol style="list-style-type: none">1. Videos on diving can be used to demonstrate important information.2. Get a dive flag and an “alpha” dive flag to demonstrate how dive boats should display them and safe operation of other watercraft in the vicinity of dive operations.3. Ask a certified diver to attend class and discuss preferred boating behavior around divers.4. Display examples of the red diver down and vessel involved in diving (alpha) flags. Discuss the meaning of both flags.
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Knowledge Assessment (Example Test Questions)

- 6.3a *Why would a boat display a Diver Down flag?*
- A. To alert boaters of diving activity near the boat**
 - B. To indicate divers within ten feet of the surface
 - C. To indicate deep diving
 - D. To signal the boat’s intent to cease diving activity
- 6.3b *What does a Code Alpha flag displayed on a boat mean to other boats?*
- A. The boat is engaged in fishing
 - B. The boat is engaged in towing.
 - C. The boat is engaged in diving.**
 - D. The boat is engaged in whale watching.

6.4 Hunting and Fishing

6.4.1 The course shall inform people who fish and hunt from boats that they are boaters, and need to follow safe boating practices.

6.4.2 Information will be provided about accident risks unique to this group of recreational boaters.

Rationale for 6.4 – Hunting & Fishing

Anglers and hunters often don't consider themselves boaters and thus pay little attention to learning and observing boating safety rules.

Approximately one-third of all boating fatalities occur on trips involving fishing activities. Likewise, more hunters die each year from drowning and the effects of cold-water shock and hypothermia than from gunshot wounds.

Many water-based hunting and fishing accidents occur from actions as simple as falling overboard while standing up to cast a line or while reaching for a decoy. Other accidents are caused when the boat capsizes from an unbalanced load. Many hunting and fishing related fatalities could be prevented if the sports enthusiast had been wearing a life jacket.

<u>Standard 6.4 - Hunting & Fishing</u>	<u>In-Class Activities:</u> Videos on hunting and fishing can be used to demonstrate specific boating dangers. Boat Fly Fishing Safety Video by Anglian Water - Part 1: Safe Start Boat Fly Fishing Safety Video by Anglian Water - Part 2: Basic Watercraft Use Boat US hunting and fishing materials for any hunters or anglers in the class
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Knowledge Assessment (Example Test Questions)

- 6.4a *What type of life jacket is best for protecting anglers?*
- A. Inflatable
 - B. Orange, reflective
 - C. Type VI
 - D. Whichever one he/she will wear**
- 6.4b *How should duck hunters dress when hunting from a boat?*
- A. Heavy coveralls to keep warm
 - B. Light clothing to remain flexible
 - C. Camouflage clothing so they can't be seen
 - D. Prepared to enter the water**

6.5 Small Boats

6.5.1 The course shall describe that all boat operators should be aware of their interactions around small boats including the effect of boat wakes.

6.5.2 Additionally, the course shall provide information about the safety considerations inherent to all small watercraft, as to:

- the importance of donning a life jacket prior to entering the watercraft;
- stabilizing a small boat for entering;
- boarding a small boat safely;
- proper loading for stability;
- moving around in the boat (e.g., keeping the weight centered from side-to-side and bow-to-stern);
- maintaining stability while underway; and
- being prepared for unintended water entry.

Rationale for 6.5 – Small Boats

Since small boat fatalities occur across a range of activities, education efforts should be directed to all segments of the small boat community. Analysis of accident statistics identified the following priority problem areas:

1. The vast majority of all small boat related fatality victims were not wearing a life jacket at the time of the accident.
2. Occupant movement and weight shift within a small boat played a major role in roughly 50 percent of all accidents.
3. Approximately 50 percent of fatalities from small boats were fishing at the time of the accident.
4. Many victims in fatal small boat accidents are believed to have consumed alcohol immediately prior to the accident.

<u>Standard 6.5</u> <u>–Small Boats</u>	<u>In-Class Activities:</u> 1. Videos on paddlesports can be used in teaching the course. 2. Use free pamphlets and resources available from sources such as the American Canoe Association: http://www.americancanoe.org/site/c.lvIZIkNZJuE/b.4486093/k.98B2/For_Instructors.htm
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- 6.5a *What is the preferred method for learning the skill of paddling a kayak or canoe?*
- A. Videos/DVDs
 - B. On-line courses
 - C. Formal instruction through hands-on training**
 - D. Reading the manufacturer's boat manual
- 6.5b *What is the best action to take to avoid falling overboard while fishing or hunting from a boat?*
- A. Stand in the middle of the boat
 - B. Sit on a pedestal seat
 - C. Sit in a designated passenger area**
 - D. Hold onto the railing while sitting on the gunwale

Chapter 4 - “Taking it Further”

State-Specific Boating Information

In addition to addressing the American National Standard, it is recommended that a course contain (as part of the text or a separate handout) state-specific information in regard to boating laws/regulations and local boating conditions. The following state-specific topics are required for NASBLA and state approval*:

- A. Boat registration and titling requirements such as the number of years a registration decal is valid, expiration date of registration, and decal placement.
- B. Laws for required wearing of PFDs/life jackets for children, certain types of boats, and for special boating activities such as personal watercraft, skiers and others being towed.
- C. Additional equipment requirements such as anchor, engine cutoff lanyard, bailing devices, visual distress signals, etc.
- D. Mufflers and noise levels.
- E. Requirements for waste disposal, no discharge zones, and litter laws.
- F. Special requirements for mandatory education, licensing, rental operation, and proficiency test certifications.
- G. Age/horsepower restrictions and adult supervision requirements for children.
- H. Laws further defining careless, reckless, unsafe, and negligent operations such as becoming airborne and operating less than specified distances behind a water skier.
- I. Boat speed limits and operation in zoned and restricted areas.
- J. Laws on operating under the influence of drugs and alcohol such as implied consent and Blood Alcohol Content (BAC) levels.
- K. Law enforcement officer authority and boater responsibility to comply.
- L. Boat accident reporting requirements including how, when, and where to file the report. Accident reports are legally required when the accident involves: 1) disappearance or loss of life; or 2) personal injury requiring medical treatment beyond first aid; or 3) property damage in excess of current state or federal thresholds; or 4) complete loss of the boat.
- M. A state approved boating accident report form or U.S. Coast Guard form.
- N. Other laws or regulations as required by the state approving authority.

*NOTE: All courses submitted to NASBLA for approval need to include state-specific information and provide supplemental materials and instruction to meet the intent of this requirement. State-specific content will be reviewed and accepted, endorsed, or recognized by each state in which the course will be taught. NASBLA approval is not complete without gaining the acceptance, endorsement, or recognition of at least one state through the state’s review of State-specific materials.

<u>State-Specific Boating Information</u>	<u>In-Class Activity:</u> <ul style="list-style-type: none">1. Invite a state marine patrol officer or boat education officer to present this part of the class. Market it by advertising he/she will be there.2. Find out what “advanced” courses are coming up and have the information available for anyone who may show an interest.
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The following items contain recommended course content but are not considered part of the minimum standards for boater education courses.

R1 – Boat Types and Uses

The course should describe the common types of recreational boats, common hull designs, and their performance in various types of boating situations.

Boat operators should understand the handling characteristics of various boat types so as to match the boat to the water and planned activity. Boat performance characteristics as determined by design features should be known to a boat operator and factored into their boating decisions.

<u>Boat Types and Uses</u>	<u>In-Class Activities:</u> <ol style="list-style-type: none">1. Have pictures of the different types of boats so that the students can see them as they are being discussed.2. Provide images of common hull designs. Have students match the hull shape with the description of its performance.
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R2 - Boating Terms

The course should describe commonly used boating terms in addition to those terms required to follow the Navigation Rules. Knowing common boating terms could save time and confusion in the event of an emergency by enabling boat operators to secure the situation efficiently and communicate clearly.

<u>Boating Terms</u>	<u>In-Class Activities:</u> <ol style="list-style-type: none">1. Write boating-specific terms and their definitions on chart paper or the board throughout the class so that they can be referenced while teaching the content.2. Discuss the origin of certain terms, such as 'port', 'starboard', 'gunwale', etc.
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R3 - Boat Theft Prevention

The course should contain information that addresses actions the boat owner can take to deter or prevent boat theft. Statistics indicate that boat theft is increasing. Boat owners can deter theft and assist law enforcement authorities through their actions and observations.

<u>Boat Theft Prevention</u>	<u>In-Class Activities:</u> <ol style="list-style-type: none">1. Have students brainstorm and discuss ways to prevent boat theft.
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R4 - Communication Procedures

The course should describe the protocol and use of VHF marine radios and other equipment for contacting the U.S. Coast Guard or other rescue personnel in the event of a boating emergency. In the event of an emergency the boat operator must be able to respond quickly and communicate his or her situation to relevant authorities. Understanding how to use marine communication procedures is an essential element of responding to emergencies.

<p><u>Communication Procedures</u></p>	<p><u>In-Class Activities:</u></p> <ol style="list-style-type: none"> 1. Print out a list of VHF radio channels and the protocol for using the radios on a small business-size card for students to keep as a reference while on board. 2. Have students practice making simulated VHF radio calls including Mayday calls with one another. 3. Provide a recording of actual radio traffic between recreational boaters and between boaters and the U.S. Coast Guard. 4. Discuss the importance of EPIRBs in open water situations. 5. Discuss Personal Locator Beacons and how these can be used in the marine environment.
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On-Water Instruction and Education

There are many different ingredients associated with helping individuals learn how to engage in safe and enjoyable recreational boat operation. In recent years, experiential learning has become increasingly recognized as a highly effective approach to teaching recreational boating operation.

Accordingly, acquiring boat operator skills through “learning by doing” augmented with knowledge acquisition on-land, is the long-term goal to be achieved through the development of a set of national standards for on-water, skills-based instruction in recreational boat operation.

Skills-Based Standards for Recreational Boat Operators

The National On-Water Standards (NOWS) initiative, under funding from the Sport Fish Restoration and Boating Trust Fund administered by the U.S. Coast Guard, produced American National Standards defining entry-level skills for recreational boat operation for power, sail, and human-propelled domains. These standards identify the outcome skills recreational boat operators should be able to demonstrate as a result of engaging in on-water, skill-based instruction in recreational boat operation.

A copy of the EDU-1 ON-Water Power Standard (American National Standard) and the separate Technical Support Document supporting this standard are available for free download at <https://www.usnows.org/powerboat-instruction>.

Chapter 5 – Additional Resources

The National Association of State Boating Law Administrators

Since its inception, the National Association of State Boating Law Administrators (NASBLA) has functioned effectively as the voice of the states and territories regarding state boating law enforcement and boating safety. Today, NASBLA coordinates approval of state and private boating education programs, promotes uniform boating regulations through the adoption of model acts and policies, develops methods to improve the nation's boating accident database, fosters cooperation between the U.S. Coast Guard and the states, and strives for the general advancement of boating safety.

NASBLA is a 501(c)(3) non-profit organization. Membership in the association consists of state officials responsible for administering and/or enforcing state boating laws. "State" means a state of the United States, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, Northern Mariana Islands and the District of Columbia. Officers of the association consist of a President, Vice President, Secretary-Treasurer, and an executive board composed of three other members-at-large and the immediate Past President. The Board is augmented with an Executive Director. Officers are elected annually and take office on the first day following the conference at which they were elected, and hold office until the last day of the conference at which their successors are chosen.

NASBLA has a wide-range of Associate members consisting of national non-profit organizations, Federal partners, industry, and course providers.

NASBLA is recognized for its stewardship of recreational boating safety and has worked closely with the U.S. Coast Guard (USCG), the States and others to ensure that the intent of the congress to promote uniformity, reciprocity and comity among the various states was given priority. The many resolutions and model acts that have been generated by the association are testament to this intent. In doing this, NASBLA brings highly-qualified personnel in the fields of boating law enforcement, education, boating safety and on-the-water search and rescue.

Conformity Assessment (a.k.a. Course Approval)

NASBLA reviews boating courses to determine if a course meets an indicated National Boating Education Standard. Course providers seeking NASBLA review and certification of a course must first complete and submit the application package in both electronic and hard copy formats, including: the completed application, course materials, chapter assessments, final exam (minimum of two versions), signed Terms and Conditions document, all completed appendices, and application fee. Complete information is posted at <https://www.nasbla.org/education/nasbla-course-approval>.

Research

The number of research projects address the topic of the efficacy of boater education. Research was conducted by NASBLA with financial support from the Sport Fish Restoration and Boating Trust Fund administered by the U.S. Coast Guard. Grant projects are listed at <https://www.nasbla.org/education/education-research>.

Data

A wide range of boating accident data, state law enforcement and education data, and Recreational Boating Safety Fiscal data is available via interactive Dashboards at this link <https://www.nasbla.org/idashboard>. The Recreational Boating Safety Dashboards were made possible through a grant from the Sport Fish Restoration and Boating Trust Fund administered by the U. S. Coast Guard.

Definitions

The following terms and definitions are presented to help clarify information presented in this Technical Report. The original source or the authoritative reference for each term is identified as follows:

- ANSI = American National Standards Institute
- ESP = National Boating Education Standards Panel
- Federal = A term commonly used by the U.S. Government
- NASBLA = National Association of State Boating Law Administrators
- Nav Rules = USCG Handbook of Navigation Rules and Regulations
- NBSAC = National Boating Safety Advisory Council
- NOWS = National On-Water Skills Standards

TERM	Source	Definition
<i>Advanced Education</i>	<i>NBSAC</i> <i>NASBLA</i>	Any course of instruction that goes beyond a basic boating safety course that is NASBLA approved.
<i>ANSI</i>	<i>ANSI</i>	American National Standards Institute
<i>ANSI Essential Requirements</i>	<i>ANSI</i> <i>ESP</i>	The minimum acceptable due process requirements applying to activities associated with developing consensus for the purposes of approving, revising, reaffirming, and withdrawing standards sanctioned as American National Standards. In abbreviated form, the requirements are: Openness; Lack of Dominance; Balance; Coordination and harmonization; Notification of standards development; Consideration of views and objections; Consensus vote; Appeals (procedural); Written procedures; and Compliance.
<i>Approved Scope of Activity</i>	<i>ANSI</i> <i>NASBLA</i>	“NASBLA’s standards development scope of activity covers knowledge and competencies for the recreational boater and boating professionals working within or on behalf of the recreational boating community in North America.”
<i>conformity assessment</i>	<i>ANSI</i>	Methods of evaluating whether products, processes, systems, services and personnel comply with a standard.
<i>consensus</i>	<i>ANSI</i>	General agreement, but not necessarily unanimity, and includes a process for attempting to resolve objections by interested parties, as long as all comments have been fairly considered, each objector is advised of the disposition of his or her objection(s) and the reasons why, and the consensus body members are given an opportunity to change their votes after reviewing the comments.

TERM	Source	Definition
<i>consensus</i>	<i>ESP</i>	Means that substantial agreement has been reached by directly and materially affected interests. Consensus requires that all views and objections be considered, and that an effort be made toward their resolution.
<i>consensus body</i>	<i>ANSI ESP</i>	The group that approves the content of a Standard and whose vote demonstrates evidence of consensus.
<i>course</i>	<i>NASBLA</i>	1) Refers to all components of “a boating education course, including instruction, texts, supplemental materials, and tests. A boating course may be presented in various formats, including classroom instruction, home study, video, distance learning, CD-ROM, or any combination of these formats.” 2) A NASBLA -approved boating safety education course, including all documents and materials submitted as part of an application for NASBLA approval of said Course.
<i>course</i>	<i>NOWS</i>	A series of specific learning experiences such as lectures or training sessions focused on a specific topic. It is designed to accomplish the acquisition of a defined level of knowledge and skills association with the specific topic; a framework of specific goals and objectives for learning experiences individual will engage in to transfer knowledge and skills.
<i>Course Provider</i>	<i>NASBLA</i>	A party, including a state, seeking application to NASBLA for approval of a boating safety Course and, after approval, providing that Course in compliance with the education standards.
<i>curriculum</i>	<i>NOWS</i>	A high level plan or overarching framework for all the experiences individuals will engage in as part of a their education; identifies what is to be learned and takes into account the needs of the individual learner, the domain of knowledge and skill and the needs of the society overall. The core ingredients of a curriculum include: the overall needs to be addressed through education; the specific goals and objectives to be pursued; and a method of evaluating its impact.
<i>ESP</i>	<i>NASBLA</i>	Means the National Boating Education Standards Panel. See “Consensus body.”
<i>Executive Board</i>	<i>ESP</i>	The Executive Board of the National Association of State Boating Law Administrators.
<i>experiential learning</i>	<i>NOWS</i>	An instructional method based on the belief that people learn best by doing; learning new knowledge and skills takes place through active, hands-on experiences. The best approaches to experiential learning involve both focus on knowledge and understanding and activity with a focus on skills and behavior.
<i>government unique standards</i>	<i>Federal</i>	Government developed standards for its own uses when, for security or uniqueness of application, no other standard is acceptable (Ex. Military, Fed Specifications, individual agency standards).

TERM	Source	Definition
<i>in good standing</i>	ESP	For a duly appointed Standards Panel member, means remaining in compliance with the Panel's attendance, balloting, conduct, and performance requirements. See Part V.2. of the Panel Rules.
<i>Incorporation by Reference</i>	Federal	1) A process which allows Federal agencies to comply with the requirement to publish rules in the Federal Register and the Code of Federal Regulations (CFR) by referring to materials already published elsewhere; 2) The legal effect of incorporation by reference is that the material is treated as if it were published in the Federal Register and CFR. This material, like any other properly issued rule, has the force and effect of law.
<i>instructional design</i>	NOWS	A specific plan on how learning will be transferred. It identifies the specific approaches, sequence of activities or events, the required resources and time frames that will be used to enable the learning of new knowledge, skills and behaviors. It includes identification of instructional delivery strategies to be employed such as lecture, cooperative learning, experiential learning, as well as the structure in which instruction will take place such as individually, one-to-one, in small or large groups.
<i>in-writing</i>	ANSI	Communication sent by either mail or electronic mail (email).
<i>knowledge</i>	ESP	Cognitive outcome of the learning process. Usually tested by verbal or written questions.
<i>lesson</i>	NOWS	A specific occasion when students meet with their teacher to learn a particular topic. Students engage in multiple lessons when the topic of a course is too large to be learned in one meeting.
<i>meeting</i>	ESP	Means any gathering of members in person or electronically (through webinar or teleconference or other electronic communication methods open and accessible to all members) to conduct official business.
NASBLA	ESP	Means the National Association of State Boating Law Administrators.
<i>National Technology Transfer and Advancement Act (NTTAA)</i>	ANSI Federal	1) Directs Federal Agencies to use consensus standards developed by consensus standards bodies; 2)Encourages participation in voluntary consensus standards bodies when compatible with missions, authorities, etc.; 3)Directs NIST to coordinate Federal standards and conformity assessment activities with those of the private sector
NIST	Federal	An abbreviation for the National Institute of Standards and Technology
<i>non-consensus standard</i>	Federal	"Industry standards," "company standards," or "de-facto standards" are standards developed in the private sector but not in the full consensus process.
NTTAA	Federal	An abbreviation for the National Technology Transfer and Advancement Act of 1995

TERM	Source	Definition
<i>on-water education</i>	NBSAC NASBLA	Any course of instruction that is boat based for skills development, regardless of the level of the course content
<i>Panel</i>	ESP	Means the National Boating Education Standards Panel. See “Consensus body.”
<i>performance standard</i>	ANSI	states requirements in terms of required results with criteria for verifying compliance but without stating the methods for achieving required results
<i>prescriptive standard</i>	ANSI	may specify design requirements, such as materials to be used, how a requirement is to be achieved, or how an item is to be fabricated or constructed
<i>power-driven vessel</i>	Nav Rules	Any vessel propelled by machinery.
<i>resolved</i>	ANSI	A negative vote cast by a member of the consensus body or a comment submitted as a result of public review where the negative voter agrees to change his/her vote or the negative commenter accepts the proposed resolution of his/her comment.
<i>restricted visibility</i>	Nav Rules	Any condition in which visibility is restricted by fog, mist, falling snow, heavy rainstorms, sandstorms, or any other similar causes.
<i>sailing vessel</i>	Nav Rules	Any vessel under sail provided that propelling machinery, if fitted, is not used.
<i>skills</i>	ESP	An outcome of the learning process, most often a psychomotor ability. Usually tested by demonstration. Skill testing may often be accomplished either within or outside the classroom.
<i>small boat</i>	ESP	In reference to the standards, a 'small boat' includes all boats less than 26 feet in length.
<i>Standard</i>	ANSI	1) a recognized unit of comparison by which the correctness of others can be determined; 2) a set of characteristics or qualities that describes features of a product, process, or service.
<i>standard</i>	NOWS	A definition of the qualities or characteristics used to judge desired level of acceptability.
<i>Standard</i>	ESP	(Upper case) means the NASBLA National Boating Education Standards or the Paddlesports Education Standards or any other national boating education standards that the Executive Board authorizes the Standards Panel to address.
<i>standards development</i>	ESP	The overall process and procedures associated with reviewing, revising, reaffirming, withdrawing, and approving standards.

TERM	Source	Definition
<i>Standards Panel</i>	<i>ESP</i>	Means the National Boating Education Standards Panel. See “Consensus body.”
<i>standardization</i>	<i>ANSI</i>	A broad range of activities and ideas – from the actual development of a standard to its promulgation, acceptance and implementation.
<i>state</i>	<i>NASBLA</i>	For the purposes of NASBLA course approval, means a state, commonwealth, federal district, or territory of the United States or, if outside the United States, another regulating jurisdiction.
<i>substantive change</i>	<i>ANSI</i>	Substantive Change: A substantive change in a proposed American National Standard is one that directly and materially affects the use of the standard. Examples of substantive changes are: "shall" to "should" or "should" to "shall"; addition, deletion or revision of requirements, regardless of the number of changes; addition of mandatory compliance with referenced standards.
<i>syllabus</i>	<i>NOWS</i>	Identifies the specific topics that will be examined, or the experiences that will be provided, during a particular course.
<i>teaching</i>	<i>NOWS</i>	To show or explain how to do something where the focus is to develop or transfer knowledge and understanding.
<i>Technical Report</i>	<i>ANSI</i> <i>ESP</i>	A document registered with ANSI which informs a user on technical considerations for use of a Standard.
<i>template</i>	<i>NOWS</i>	The specific form, structure, or framework used to prescribe how something is configured, organized or designed.
<i>training</i>	<i>NOWS</i>	Learning experiences where the priority focus is to develop or transfer skills and behaviors through instruction and practice.
<i>TSD</i>	<i>NOWS</i>	Technical Support Document
<i>unresolved</i>	<i>ANSI</i>	Either (a) a negative vote submitted by a consensus body member or (b) written comments, submitted by a person during public review expressing disagreement with some or all of the proposed standard, that have not been satisfied and/or withdrawn after having been addressed according to the developer's approved procedures.
<i>underway</i>	<i>Nav Rules</i>	A vessel is not at anchor, or made fast to the shore, or aground.
<i>vessel</i>	<i>Nav Rules</i>	Includes every description of water craft, including non-displacement craft and seaplanes, used or capable of being used as a means of transportation on water.

TERM	Source	Definition
<i>voluntary consensus body</i>	ANSI	A body of balanced interest group representatives which plan, develop, establish, or coordinate voluntary consensus standards using agreed-upon procedures as defined by ANSI Essential Requirements.
<i>voluntary consensus standards</i>	ANSI	standards developed or adopted by voluntary consensus standards bodies

AUTHORIZED VESSEL TYPES and OPTIONAL VESSEL SUB-TYPES

This section presents the vessel types/sub-types work product voted on and approved by the NASBLA membership in a process authorized under NASBLA's Bylaw III, Section 8. The **12 Authorized Vessel Types** have been set in regulation as per the U.S. Coast Guard's Final Rule on Changes to Standard Numbering System, Vessel Identification System, and Boating Accident Report Database, 33 C.F.R. Parts 173, 174, 181, 187, issued March 28, 2012, with implementation by the states no later than January 2017. The **Vessel Sub-Types** are for **optional use**. Following the vessel types is a list of terms and definitions for all entries. The **History, Voting Process, and Overview of Process** presented below provides additional background information.

History: Vessel sub-types entries were vetted through a multi-stage review process involving the project team (subgroup of NASBLA Engineering, Reporting & Analysis Committee (ERAC), including additional U.S. Coast Guard subject matter experts); the full ERAC; the NASBLA Executive Board; and the broader NASBLA community via two open comment solicitations – the first, Feb. 22-March 24, 2013, and the second, July 11-26, 2013 (following the release of a revised version of the list on July 11). Comments also were received from NASBLA membership during a Feb. 28, 2013 session conducted as part of the NASBLA Spring BLA Workshop and a July 15, 2013 national teleconference/webinar.

Voting process: Voting was authorized under NASBLA Bylaw III, Section 8 (Conducting Interim Business). A Request for Vote was initiated in an Aug. 2, 2013 email to all Boating Law Administrators. By the Sept. 3 deadline, 44 NASBLA member States had cast ballots, with 43 in the affirmative.

Overview of Process: The review process for this Accident Reporting Terms and Definitions Project was accepted by the NASBLA Executive Board and the USCG Office of Auxiliary and Boating Safety in mid-June 2011.

On September 11, 2012, NASBLA membership approved Resolution 2012-3 (In support of the Accident Reporting Terms and Definitions Project, the adoption of standardized terms and definitions by the U.S. Coast Guard, and actions to facilitate their application), and under its provisions, the first two work products in the series – Accident Types/Events and Accident Contributing Factors/Causes.

On September 3, 2013, NASBLA membership approved the final three work products in the series – Operation, Activity, and Vessel Sub-Types (for optional use with authorized Vessel Types).

AUTHORIZED VESSEL TYPES AND OPTIONAL VESSEL SUB-TYPES

VESSEL TYPES terms authorized in 33 CFR 173.57 (eff. 1/17)	VESSEL SUB-TYPES for optional use with the authorized Vessel Types, to expand the selections
Open Motorboat	Bass Boat
	Center Console
	Runabout
	Runabout-Bow Rider
	Runabout-Low Profile
	Ski Boat
	Wakeboard Boat
	Deck Boat
	Jon/Utility Boat
	Offshore Performance Boat (Open Style)
	Rigid Hull Inflatable Boat
	Open Motorboat (unspecified)
Cabin Motorboat	Cabin Cruiser
	Cuddy Cabin Cruiser
	Offshore Performance Boat (Cuddy Cabin Style)
	Cabin Motorboat (unspecified)
Paddlecraft	Canoe – Unspecified
	Canoe – Whitewater version
	Canoe – Decked version
Paddlecraft	Kayak – Unspecified
	Kayak – Whitewater version
	Kayak – Recreational version
	Kayak – Touring version
	Kayak – Sit-on-top version
	Paddleboard
	Paddlecraft (unspecified)
Personal Watercraft	
Pontoon Boat	
Sail Only	Sailboat
	Kiteboard
	Sailboard
	Sail Only (unspecified)
Auxiliary Sail	
Airboat	
Houseboat	
Inflatable Boat	Whitewater Raft
	Inflatable Boat (unspecified)
Rowboat	Drift Boat
	Rowing Shell
	Rowboat (unspecified)
Other	Other (Describe)
	Possible sub-types to code as Other
	Amphibious Vehicle
	Hovercraft
	Pedal Boat

In this list, the main Vessel Types entries authorized and defined in regulation as a result of the issuance of the Final Rule on Changes to Standard Numbering System, Vessel Identification System, and Boating Accident Report Database are **identified by yellow highlighted** term labels. The optional use Vessel Sub-Types entries—and in the case of Paddlecraft Sub-Types, “versions” of two of the sub-types—are identified by underlined term labels.

The term labels and definitions for the authorized Types—Open Motorboat, Cabin Motorboat, Paddlecraft, Personal Watercraft, Pontoon Boat, Sail Only, Auxiliary Sail, Airboat, Houseboat, Inflatable Boat, and Rowboat—are as defined in regulation. However, clarifying information—not intended to be part of the official definitions—has been appended to Personal Watercraft, Pontoon Boat and Inflatable Boat. Also, a definition is presented for “Other,” a Vessel Type term label that was authorized, but not defined in Code of Federal Regulations.

OPEN MOTORBOAT

OPEN MOTORBOAT: *A vessel equipped with propulsion machinery and having an open load carrying area that does not have a continuous deck to protect it from the entry of water.*

Bass Boat: *Generally, an outboard powered vessel designed for inland bass fishing or inshore fishing; usually distinguished by a small, two or three occupant cockpit with decking covering most of the rest of the vessel; the decking typically has built-in sockets for the insertion of pedestal fishing seats for use only when the vessel is still or moving slowly; usually propelled additionally by a bow-mounted electric trolling motor.*

Center Console: *A single-decked open hull vessel where the console is in the center of the vessel. The deck surrounds the console so that a person can walk all around the vessel from stern to bow with ease.*

Runabout: *A vessel with a deck covering the bow, with an offset helm, conventional seating and windshield, and typically between 17 and 30 feet in length.*

Runabout-Bow Rider: *A vessel with an open bow area and seats in front of an offset helm station, with conventional seating and windshield, and typically between 17 and 30 feet in length.*

Runabout-Low Profile: *A closed bow vessel, with low freeboard/transom, shallow V configuration, powered by a large engine, and typically between 17 and 30 feet in length.*

Ski Boat: *A vessel with a shallow draft V bottom hull; typically inboard powered; designed primarily for towed watersports.*

Wakeboard Boat: *A vessel with a shallow draft V bottom hull; typically inboard powered; designed primarily for wakeboarding; typically has a wakeboard tower and some type of adjustable variable onboard ballast system or adjustable transom tab in order to create larger wakes.*

Deck Boat: *A vessel with large open spaces in the interior and plenty of seating, typically with a deep-V or tri-hull construction. If closed cylinder buoyancy, see **PONTOON BOAT**.*

Jon/Utility Boat: *An open, lightweight vessel, usually constructed of aluminum and usually with bench seats.*

Offshore Performance Powerboat (Open Style): *A high performance vessel of open fiberglass construction with a deep V or catamaran offshore racing hull; usually 30 to 50 feet long; relatively narrow in beam and generally equipped with two or more powerful engines.*

Rigid Hull Inflatable Boat (RIB/RHIB): *A relatively light-weight vessel constructed with a solid, shaped hull and flexible or foam-filled tubes around much of the vessel's perimeter.*

Open Motorboat (unspecified): *Vessel does not fit any of the Open Motorboat Sub-Type descriptions.*

CABIN MOTORBOAT

CABIN MOTORBOAT: *A vessel propelled by propulsion machinery and providing enclosed spaces inside its structure.*

Cabin Cruiser: *A vessel with a cabin that can be completely closed by means of doors or hatches.*

Cuddy Cabin Cruiser: *A vessel with a small cabin, galley, head, and berth; typically, the cuddy is not tall enough to stand in.*

Offshore Performance Powerboat (Cuddy Cabin Style): *A high performance cabin vessel of fiberglass construction with a deep V or catamaran offshore racing hull; usually 30 to 50 feet long; relatively narrow in beam and generally equipped with two or more powerful engines.*

Cabin Motorboat (unspecified): *Vessel does not fit any of the Cabin Motorboat Sub-Type descriptions.*

PADDLECRAFT

PADDLECRAFT: *A vessel powered only by its occupants, using a single- or double-bladed paddle as a lever without the aid of a fulcrum provided by oarlocks, thole pins, crutches, or similar arrangements.*

Canoe-Unspecified: *A vessel typically pointed upwards at both ends and open on top; propelled by single-bladed paddles.*

Canoe-Whitewater version: *A vessel designed for whitewater; propelled by single-bladed paddles; generally has more bow and stern curvature (rocker) and supplemental flotation, in the form of bow, stern or center air bags, than its flatwater counterpart; may be outfitted for tandem, solo or both.*

Canoe-Decked version: *A vessel propelled by single-bladed paddles; has a spray-skirt to enclose the open portion of the canoe; the paddler kneels in it and uses a canoe paddle.*

Kayak-Unspecified: *A vessel propelled by double-bladed paddles, by one or more seated individuals*

facing the direction of travel.

Kayak-Whitewater version: *A vessel designed for whitewater; propelled by double-bladed paddles; generally has more bow and stern curvature (rocker), which aids in maneuverability; generally uses a spray-skirt; generally, a shorter kayak, but may be as long as 12 feet.*

Kayak-Recreational version: *A vessel propelled by double-bladed paddles; typically has a large cockpit with or without a provision for sealing the opening to the body of the occupant (i.e., spray-skirt); typically less than 12 feet in length, with wider beam and larger cockpit than a touring version kayak.*

Kayak-Touring version: *A vessel propelled by double-bladed paddles; typically has built-in storage capacity for gear and provision for sealing the cockpit opening to the body of the occupant with a water-tight spray-skirt; normally longer and more slender in construction than a recreational version kayak. (Includes sea kayaks)*

Kayak-Sit-on-top version: *A vessel that one sits on top of, not inside of; propelled by double-bladed paddles; has a sealed, watertight deck surface into which seats and features might be molded; does not have an opening that can be sealed around the occupant, but may have thigh straps.*

Paddleboard: *A vessel, similar in appearance to a surfboard, but may vary significantly in length; intended to be propelled with a single- or double-bladed paddle.*

Paddlecraft (unspecified): *Vessel does not fit any of the Paddlecraft Sub-Type descriptions.*

PERSONAL WATERCRAFT

PERSONAL WATERCRAFT: *A vessel propelled by a water-jet pump or other machinery as its primary source of motive power and designed to be operated by a person sitting, standing, or kneeling on the vessel, rather than sitting or standing within the vessel's hull. [Includes tethered water thrust equipment.][§]*

PONTOON BOAT

PONTOON BOAT: *A vessel with a broad, flat deck that is affixed on top of closed cylinders which are used for buoyancy, the basic design of which is usually implemented with two rows of floats as a catamaran or with three rows of floats as a trimaran. [If typical deep-V or tri-hull construction, see **OPEN MOTORBOAT - Deck Boat.**]^{**}*

[§] Bracketed information is intended only for clarification of application and is not part of official definition.

^{**} Bracketed information is intended only for clarification of application and is not part of official definition. Definition for **Deck Boat** (proposed **OPEN MOTORBOAT** sub-type) directs users to **PONTOON BOAT** in the event of closed cylinder buoyancy. The distinction and appropriate application is also to be addressed in training.

SAIL ONLY

SAIL ONLY: *A vessel propelled only by sails.*

Sailboat: *A vessel with sail as its only method of propulsion.*

Kiteboard: *A vessel, similar in appearance to a surfboard, with or without foot-straps or bindings, combined with a large controllable kite to propel the rider and board across the water.*

Sailboard: *A vessel, similar in appearance to a surfboard, equipped with a swivel mounted mast and sail not secured to a hull by guys or stays.*

Sail Only (unspecified): *Vessel does not fit any of the Sail Only Sub-Type descriptions.*

AUXILIARY SAIL

AUXILIARY SAIL: *A vessel with sail as its primary method of propulsion and mechanical propulsion as its secondary method.*

AIRBOAT

AIRBOAT: *A vessel that is typically flat-bottomed and propelled by an aircraft-type propeller powered by an engine.*

HOUSEBOAT

HOUSEBOAT: *A motorized vessel that is usually non-planing and designed primarily for multi-purpose accommodation spaces with low freeboard and little or no foredeck or cockpit.*

INFLATABLE BOAT

INFLATABLE BOAT: *A vessel that uses air-filled flexible fabric for buoyancy. [If equipped with mechanical propulsion, see **OPEN MOTORBOAT.**]*^{††}

Whitewater Raft: *A vessel designed for use on whitewater, consisting of very durable, multi-layered rubberized (hypalon) or vinyl fabrics (PVC) with independent air chambers; may be steered with paddles at the stern or with central helm oars.*

Inflatable Boat (unspecified): *Vessel does not fit the Whitewater Raft Sub-Type descriptions.*

ROWBOAT

ROWBOAT: *An open vessel manually propelled by oars.*

Drift Boat: *A vessel with a wide, flat bottom for low draft; flared sides; a narrow, flat bow, often mistaken for the transom; and a pointed stern; specialized to run rapids on rivers.*

Rowing Shell: *A light, long, narrow racing vessel for rowing by one or more persons.*

Rowboat (unspecified): *Vessel does not fit any of the Rowboat Sub-Type descriptions.*

OTHER

OTHER (Describe): *If the vessel does not fit any of the descriptions above, enter another term for the vessel that best describes it.*^{††}

Proposed SUB-TYPES that would appropriately fit under “OTHER”

Amphibious Vehicle: *A motorized, wheeled vehicle that can be operated as a vessel.*

Hovercraft: *A vessel capable of moving over water or land on a cushion of air created by downward directed fans powered by engine(s).*

Pedal Boat: *A vessel mechanically propelled by paddles, worked by one or more operators’ feet and legs.*

^{††} Bracketed information is intended only for clarification of application and is not part of official definition. **INFLATABLE BOAT**, unlike the other main, authorized Vessel Types, focuses on hull type instead of propulsion. Given how vessels are currently coded in BARD, users are directed to look to the propulsion type as a primary consideration before resorting to use of this entry.

^{‡‡} **OTHER** is an authorized Vessel Type, but was not defined in the Final Rule. This is the recommended definition.

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Appendix - American National Standards

ANSI/NASBLA 103-2016: Basic Boating Knowledge – Power

ANSI/NASBLA 103.1-2018: Supplement – Basic Boating Knowledge – Water-Jet Propelled



This National Boating Education Standard, as overseen by the National Boating Education Standards Panel (ESP), is the product of voluntary consensus of representatives of federal and state government, industry, nonprofit organizations, and public sectors. It is intended as a guide to aid the boating community in the design and implementation of boating courses and boater education.

ESP will review this standard at least every five years, at which time it may be reaffirmed, revised, or withdrawn. ESP welcomes written comments on the Standard during open public comment periods via <http://esp.nasbla.org/esp/>. Requests for interpretation may be submitted at any time via esp@nasbla.org.

American National Standard

ANSI/NASBLA 103-2016: Basic Boating Knowledge – Power



American National Standard (ANS)

Approval of an American National Standard requires review by ANSI that the requirements for due process, consensus, and other criteria for approval have been met by the standards developer. Consensus is established when, in the judgment of the ANSI Board of Standards Review (BSR), substantial agreement has been reached by directly and materially affected interests. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that a concerted effort be made towards their resolution. The use of American National Standards is completely voluntary; their existence does not in any respect preclude anyone, whether that person has approved the standards or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standards. The American National Standards Institute does not develop standards and will in no circumstances give an interpretation of any American National Standard. Moreover, no person shall have the right or authority to issue an interpretation of an American National Standard in the name of the American National Standards Institute. Requests for interpretations should be addressed to the secretariat or sponsor whose name appears on the title page of this standard.

CAUTION NOTICE: This American National Standard may be revised or withdrawn at any time. The procedures of the American National Standards Institute require that action be taken periodically to reaffirm, revise, or withdraw this standard. Purchasers of American National Standards may receive current information on all standards by calling or writing the American National Standards Institute.



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This list represents the membership at the time the standard was presented for final consensus ballot in August and September 2015.

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American National Standard

Basic Boating Knowledge - Power

Scope

This is the minimum required standard that applies to all basic boating courses in the U.S. states and territories and District of Columbia.

Purpose

To establish the national standard for use by course providers to meet the needs of recreational boaters for basic boating knowledge in order to identify and reduce primary risk factors and mitigate their effects on recreational boating.

1.0 The Boat

1.1 Boat Capacities

1.1.1 The course shall describe how to determine acceptable loading based on:

- locating and determining a boat's gross load capacity (total weight and number of persons) from the boat capacity plate; and
- horsepower recommendations.

1.2 Personal Watercraft (PWC)

Personal Watercraft (PWC) or other boats without capacity plates should reference the owner's manual and state laws.

2.0 Boating Equipment

2.1 Personal Flotation Devices (Wearable Life Jackets and Throwable Devices) Types and Carriage

2.1.1 The course shall explain the:

- different classifications and types of U.S. Coast Guard approved personal flotation devices (PFDs), including wearable and throwable devices;
- different sizes of U.S. Coast Guard approved PFDs; and
- respective uses, advantages, and disadvantages of life jackets based upon the activity for which they are intended.

2.1.2 The course shall also:

- describe the number and types of PFDs/life jackets that must be carried aboard the boat according to applicable regulations;
- discuss and clarify label restrictions; and
- emphasize that the best life jacket is the one that will be worn all the time.

2.2 Personal Flotation Device Availability and Sizing

The course shall communicate that PFDs/life jackets must be:

- readily accessible, and
- correctly sized for the persons using them.

2.3 Wearing Life Jackets

The course shall inform boat operators of the importance of:

- selecting the proper life jacket for the activity and everyone wearing life jackets at all times while aboard, skiing, or otherwise being towed;
- showing passengers how to correctly select the right size of life jacket and put on their life jackets;
- emphasizing the need to be aware that conditions can change quickly while boating (i.e., weather and water conditions, boat traffic, etc.); and
- stressing the need to always wear a life jacket while aboard due to the difficulty of putting a life jacket on in the water while under distress.

2.4 Personal Flotation Device Serviceability

2.4.1 The course shall describe:

- the characteristics of serviceable PFDs/life jackets, and
- when to replace PFDs/life jackets due to excessive wear or damage.

2.4.2 Special attention shall be given to the maintenance of inflatable life jackets as per manufacturer recommendations.

2.5 Fire Extinguisher Equipment

The course shall describe:

- the legal carriage requirements for fire extinguishers on recreational boats;
- the type and size of fire extinguishers needed for different types of fires;
- the importance of placing fire extinguishers in readily accessible locations; and
- the need for following manufacturer's recommendations for inspection and maintenance of fire extinguishers.

2.6 Back-Fire Flame Control Device

2.6.1 The course shall describe:

- the purpose, and
- maintenance of a back-fire flame control device.

2.7 Ventilation Systems

The course shall discuss the ventilation system requirements for different types of boats.

2.8 Navigation Light Equipment

The course shall cover the navigation light requirements for recreational boats as set forth in the most recent version of the NAVIGATION RULES AND REGULATIONS HANDBOOK by the United States Coast Guard.

2.9 Sound Signaling Equipment

The course shall cover sound signal requirements for recreational boats as set forth in the most recent version of the NAVIGATION RULES AND REGULATIONS HANDBOOK by the United States Coast Guard describing:

- the types of sound-producing devices required on recreational boats, and
- the use of such devices on recreational boats.

2.10 Visual Distress Signal Equipment

The course shall describe:

- the types of visual distress signals required on recreational boats, and
- the use of visual distress signals required on recreational boats operating on coastal waters, and adjoining rivers two (2) or more miles wide at the mouth and up to the first point the river narrows to less than two (2) miles as summarized in the most recent version of the NAVIGATION RULES AND REGULATIONS HANDBOOK by the United States Coast Guard

3.0 Trip Planning and Preparation

3.1 Checking Local Weather and Water Conditions

3.1.1 The course shall describe how to make informed boating decisions based on:

- forecasted local weather,
- water conditions,
- boater skill level,

- boat range, and
- capability of the operator and the boat pertinent to those conditions.

3.1.2 It shall describe:

- dangerous weather (i.e., strong winds, storms, lightning, hurricanes, fog);
- water conditions (i.e., high water, sand bars, currents, large waves); and
- their importance in trip planning.

3.2 Checking Local Information

3.2.1 The course shall describe how to obtain information about local hazards that may impede the safe operation of a recreational boat.

3.2.2. The course shall describe how to obtain information and inform the boater regarding local and state laws and regulations.

3.3 Filing a Float Plan

The course shall describe:

- the importance of notifying someone of your boating plans, and
- the basic information that should be included.

3.4 Boat Preventative Maintenance

The course shall communicate the need for:

- regular inspection, and
- maintenance of the boat and its key components (e.g., through-hull fittings, motor, electrical system, fuel system, operation of engine cutoff device [if installed]).

3.5 Launching and Retrieving from a Trailer

The course shall cover safe trailering procedures including:

- safe towing preparation,
- road handling factors when pulling a trailer,
- launching a boat, and
- retrieving a boat from the water.

3.6 Fueling Procedures

The course shall provide information on proper procedures for:

- fueling, and
- ventilation during fueling.

3.7 Pre-Departure Checklist and Passenger Communication

3.7.1 The course shall describe:

- the importance of using a pre-departure checklist, and
- conducting an onboard safety discussion with passengers.

3.7.2 Passengers should be informed about the location and use of:

- PFDs/life jackets (and shown how to put them on),
- fire extinguishers, and
- visual distress signals and first-aid kit.

3.7.3 Passengers should be informed about:

- anchoring procedures,
- emergency radio operation (if applicable),
- storm/rough weather procedures,
- line handling;
- emergency boat operation and falls overboard procedure.

4.0 Safe Boat Operation

4.1 Operator Responsibilities

4.1.1 The course shall describe boat operator's ultimate responsibility for:

- operator proficiency,
- situational awareness,
- safety of boaters aboard and anyone coming into contact with the boat, and
- all activity aboard the boat.

4.1.2 The course shall describe a boat operator's responsibility regarding the impact of the boat's operation on other water users, including, but not limited to, the need for:

- controlling boat speed,
- obeying no wake/limited wake restrictions;
- refraining from careless, reckless, or negligent operations on the water; and
- observing and operating in accordance with homeland security measures.

4.1.3 The course shall describe homeland security measures, including:

- keeping a safe prescribed distance from military and commercial ships;
- avoiding commercial port operations areas;
- observing all security zones; and
- observing and reporting suspicious activities to proper authorities.

4.1.4 The course shall indicate that it is the beginning of the boater's education and that other courses are available.

4.2 Influence of Drugs and Alcohol on Boat Operation

The course shall describe:

- the effects of drinking alcohol or using drugs while boating, and
- the boating laws pertinent to operating a boat while under the influence.

4.3 Navigation Rules

4.3.1 This course shall describe basic safe boating operation and good seamanship for recreational boaters.

4.3.2 The course shall be designed to assist the recreational boater when encountering typical navigation rules of the road situations.

4.3.3 Although boat operators are responsible to be knowledgeable of the NAVIGATION RULES AND REGULATIONS HANDBOOK by the United States Coast Guard in their entirety, this course will focus on only the following Inland Rules*:

*In those states that Inland Rules do not apply, the equivalent International, Western Rivers or Great Lakes rule(s) may be substituted by the Course Provider.

- Rule of responsibility – Rules 2(a) and 2(b)
- Proper lookout – Rule 5
- Safe speed – Rule 6(a)
- Collision avoidance rules
 - Rules 7(a),
 - 7(d),
 - 7(d)(i),
 - 7(d)(ii),
 - Rule 8,
 - Rules 13(a),
 - 13(b),
 - Rule 16,
 - Rule 17,
 - Rule 18 (a-d)
- Inland Rules
 - 14(a),
 - 14(b),
 - 14(c),
 - Rule 15(a)
- Restricted visibility – Rules 19(a) through (e)
- Disclaimer (Include verbatim in course materials.)

“The navigation rules contained in this course summarize basic navigation rules for which a boat operator is responsible on inland waterways. Additional and more in-depth rules apply regarding various types of waterways, such as International Waters and Western Rivers, and operation in relation to commercial vessels and other watercraft.

For a complete listing of the navigation rules, refer to the document NAVIGATION RULES AND REGULATIONS HANDBOOK by the United States Coast Guard.

For State specific navigation requirements, refer to the state laws where you intend to boat.”

4.4 Aids to Navigation

4.4.1 The course shall describe the Federal U.S. Aids to Navigation System (USATONS).

4.4.2 The course will provide information about regulatory/informational markers (identified by orange bands on the top and bottom of each buoy) used to advise of:

- situations,
- dangers, or
- directions indicating:
 - shoals,
 - swim areas, and
 - speed zones, etc.

4.5 Docking and Mooring

The course shall describe common practices for docking and mooring a boat relative to:

- boat size,
- type of boat,
- location,
- weather, and
- current.

4.6 Anchoring

4.6.1 The course shall describe the importance of:

- carrying an anchor, and
- the selection of: anchors, related ground tackle, and their use for different types of boats in various boating conditions.

4.6.2 The course shall describe:

- procedures for anchoring,
- use of anchors as safety devices in emergency situations, and
- the hazards of stern anchoring.

4.7 Carbon Monoxide

The course shall describe the dangers, symptoms, and avoidance practices associated with carbon monoxide (CO) poisoning in recreational boating.

4.8 Propeller Intervention & Awareness

The course shall describe the dangers, unsafe activities, safety equipment (e.g., engine cutoff device), and avoidance practices to mitigate or prevent propeller strikes in recreational boating.

5.0 Emergency Preparedness

5.1 Rendering Assistance

5.1.1 The course shall explain that, according to the Navigation Rules, boat operators are required to render assistance to a boat in distress to the extent they are able.

5.2 Capsizing/Falls Overboard

5.2.1 The course shall describe how to prevent and respond to these emergencies.

5.2.2 The prevention responses shall include:

- stay centered and low,
- avoid standing and sudden moves,
- maintain three points of contact,
- never overload,
- balance your load, and
- avoid rough water.

5.2.3 The responding procedures shall include:

- wearing life jackets,
- taking a head count,
- staying with the craft when appropriate,
- signaling for assistance,
- using improvised floating aids, and
- initiation of procedures to recover people in the water.

5.3 Cold Water Immersion

5.3.1 The course shall describe the effects of cold water immersion and how to prepare for, prevent, and respond to a cold water immersion event, including:

- Stages and the physiological effects of cold water immersion:
 - Initial reaction (cold shock response; gasping and hyperventilation),

- Short-term response (cold incapacitation; swim failure, functional loss), and
- Long-term response (immersion hypothermia).
- Preparation and Prevention:
 - Wearing a life jacket enhances chances of survival during each stage;
 - Carrying communication and signaling devices on person; and
 - Preventing capsizing, swamping, and falls overboard.
- Response:
 - Initial reaction (first 1-5 minutes) – airway protection and breath control;
 - Short-term (first 30 minutes) – performing the most important functions first (emergency communication, situational assessment, decision making, and self-rescue activities); and
 - Long-term (after 30 minutes or more) – slow body core heat loss and be prepared at all times to signal rescuers.

5.4 Fire Emergency Preparedness

The course shall describe procedures to prevent and respond to boating fires such as:

- proper use of fire extinguishers, and
- basic knowledge of fire suppression principles.

5.5 Running Aground Prevention and Response

The course shall describe how to prevent, and respond to running aground for recreational boats.

6.0 Other Water Activities

6.1 Water-Jet Propelled Watercraft

The course shall inform all operators of jet-propelled and personal watercraft about:

- safe boating practices, and
- special accident risks unique to personal watercraft (PWC), such as:
 - off throttle loss of steering,
 - stopping (including braking and reverse systems),
 - re-boarding a PWC, and
 - the use of a lanyard cutoff switch.

6.2 Water Skiing, Towed Devices and Wake Sports

The course shall describe safety practices specific to:

- pulling water skiers,

- towing anyone behind a vessel, and
- allowing anyone to participate in an activity using the wake of the vessel (wake boards, tubes, etc.).

6.3 Diving and Snorkeling

The course shall describe:

- how to recognize a diver down flag, and the International Code Flag A, and
- the legal requirements for operating a boat in the vicinity of snorkeling or scuba diving activities.

6.4 Hunting and Fishing

6.4.1 The course shall inform people who fish and hunt from boats that they are boaters, and need to follow safe boating practices.

6.4.2 Information will be provided about accident risks unique to this group of recreational boaters.

6.5 Small Boats

6.5.1 The course shall describe that all boat operators should be aware of their interactions around small boats including the effect of boat wakes.

6.5.2 Additionally, the course shall provide information about the safety considerations inherent to all small watercraft, as to:

- the importance of donning a life jacket prior to entering the watercraft,
- stabilizing a small boat for entering,
- boarding a small boat safely,
- proper loading for stability,
- moving around in the boat (e.g., keeping the weight centered from side-to-side and bow-to-stern),
- maintaining stability while underway, and
- being prepared for unintended water entry.



This National Boating Education Standard, as overseen by the National Boating Education Standards Panel (ESP), is the product of voluntary consensus of representatives of federal and state government, industry, nonprofit organizations, and public sectors. It is intended as a guide to aid the boating community in the design and implementation of boating courses and boater education.

ESP will review this standard at least every five years, at which time it may be reaffirmed, revised, or withdrawn. ESP welcomes written comments on the Standard during open public comment periods via <http://esp.nasbla.org/esp/>. Requests for interpretation may be submitted at any time via esp@nasbla.org.

American National Standard

ANSI/NASBLA 103.1-2018: Supplement - Basic Boating Knowledge – Water-Jet Propelled Boats



American National Standard (ANS)

Approval of an American National Standard requires review by American National Standards Institute (ANSI) that the requirements for due process, consensus, and other criteria for approval have been met by the standards developer. Consensus is established when, in the judgment of the ANSI Board of Standards Review (BSR), substantial agreement has been reached by directly and materially affected interests. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that a concerted effort be made towards their resolution. The use of American National Standards is completely voluntary; their existence does not in any respect preclude anyone, whether that person has approved the standards or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standards. The American National Standards Institute does not develop standards and will in no circumstances give an interpretation of any American National Standard. Moreover, no person shall have the right or authority to issue an interpretation of an American National Standard in the name of the American National Standards Institute. Requests for interpretations should be addressed to the secretariat or sponsor whose name appears on the title page of this standard.

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Title: ANSI/NASBLA 103.1-2018: Supplement - Basic Boating Knowledge – Water-Jet Propelled Boats

- A. Scope:** This supplement applies to basic boating knowledge education and proficiency assessment in the United States, U.S. Territories, and the District of Columbia.
- B. Purpose:** This document provides optional, supplementary content for ANSI/NASBLA 103-2016: Basic Boating Knowledge – Power to address basic recreational Water-Jet Propelled knowledge with a primary focus on safety and mitigation of risks associated with recreational boating. It contains basic knowledge elements that a beginner (entry-level) operator should have in order to safely operate a water-jet propelled watercraft.
- C. Description:** *This supplement focuses on operational characteristics of two principle water-jet propelled vessels currently available to the recreational boating public; Personal Watercraft (PWC) and Jet Boats. Water Jet-Pack types of vessels such as Jet-Lev, Fly-Boards and Hover Boards are not addressed in this education standard.*

1.0 Water-Jet Propelled Propulsion**1.1 Propulsion**

The course shall explain how a water-jet propelled propulsion system works.

1.2 Water-Jet Propelled Considerations

1.2.1 The course shall describe how to determine acceptable loading, passenger and operator placement based on:

- capacity and related information;
 - Standup model (one-passenger)
 - Sport model (up to two-passengers)
 - Runabout model (up to three-passengers)
 - Sport-utility model (up to four-passengers)
- passenger placement and special considerations such as occupant balance points; and
- legal requirements for observer and seating placement.

1.2.2. The course shall explain start-up, shut down, operating controls, and characteristics including but not limited to:

- Single throttle control;
- Dual throttle control;

- Tiller control;
- Trim control;
- Off-throttle steering;
 - Determine if feature is on model
 - Confusion of off-throttle steering
- Engine interruption cut-off lanyard;
- Twin Engines;
- Hull Design;
- Four stroke engine;
- Two stroke engine;
- Electric motor; and
- Tachometer.

2.0 Boating Equipment – Specialized

The course shall explain the appropriate U.S. Coast Guard approved life jacket wear, and protective clothing (gloves, eye protection, foot protection, wetsuit, drysuit, and helmet).

3.0 Trip Planning and Preparation

3.1 Preventative Maintenance

The course shall communicate the need for regular maintenance on the following:

- Jet pump (impeller, reverse bucket, bowl and stator vanes, shift linkage)
- Drive Train (linkage)
- Engine (hydro-lock concerns and exhaust system)
- Hull
- Fueling and fuel management (ethanol fuel, portable fuel tank)
- Clearing intake grate blockages
- Fuel/water separators - cold weather
- Battery – cold weather
- Digitized ignition keys including other remote vessel starting/stopping/operational devices and use of aftermarket equipment

4.0 Safe Boat Operation

4.1 Hazards of Jet Intake and Wash

The course shall describe the hazards of jet intake and wash relative to:

- safety risks to a person behind a jet intake and exit (e.g. focused stream of water to any swimmer or object); and
- zone of awareness.

4.2 Operator Responsibilities

The course shall describe boat operator's ultimate responsibility for situational awareness.

4.3 Docking, Mooring and Beaching

The course shall describe common practices for docking, mooring and beaching a jet propelled boat.

4.4 Anchoring

The course shall describe the importance of anchoring nearshore and types of anchors.

5.0 Emergency Preparedness

5.1 Capsizing Awareness and Issues

5.1.1 The course shall describe how to prevent capsizing including these factors:

- Stern wake;
- Environmental conditions (water state and wind); and
- Turning.

5.1.2 The course shall describe the process for righting a capsized personal watercraft.

5.2 Carbon Monoxide Risk

The course shall describe how to be aware of symptoms and treatment.

5.3 Aquatic Invasive Species

The course shall describe how to prevent and respond to:

- Intake inspection and clearing;
- Bilge and engine compartment inspection; and
- Water cooling system flush.

6.0 Water-Jet Propelled Watercraft Operational Characteristics

The course shall explain:

- Slow (idle speed) operation and maneuvering;
- Braking;
- Reverse;
- Neutral;
- Constant motion when engine is running (transmission in neutral);
- Stopping the boat's motion;
- Operation in shallow water;
 - Maintain manufacturer's recommended minimum water depth
- Boarding and disembarking boat safely;
- Use of retractable rear step and stowage;
- High speed operational control issues;
- Dangers of operating beyond skill and ability of operator;
- Weight capacity passenger overloading; and
- Understanding weather conditions and changing water effects for safe operations while underway.



This Technical Report was produced by the National Association of State Boating Law Administrators through work of the National Boating Education Standards Panel.

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