



# National Transportation Safety Board

## Safety Recommendation Report

### Shared Waterways: Safety of Recreational and Commercial Vessels in the Marine Transportation System

In the late afternoon on August 30, 2016, a group of eight kayakers set off from the dock at West 44<sup>th</sup> Street in New York City for a guided tour along the Hudson River. The intended route was south along the waterfront of midtown Manhattan, then southwest down the river. As the tour passed the New York Waterways ferry piers at West 39<sup>th</sup> Street, a commercial passenger ferry backed out of its berth, then turned west to head toward New Jersey. The kayak tour guide attempted to signal the ferry captain by waving his arms, but the captain later told investigators that because of the glare of the setting sun he did not see the paddlers in time to avoid colliding with them. Three kayakers, including the guide, were injured in the collision—two of them seriously. The ferry captain alerted authorities and used his vessel and crew to help rescue the kayakers. New York Waterways did not learn until several hours later that all kayakers had been rescued and accounted for.

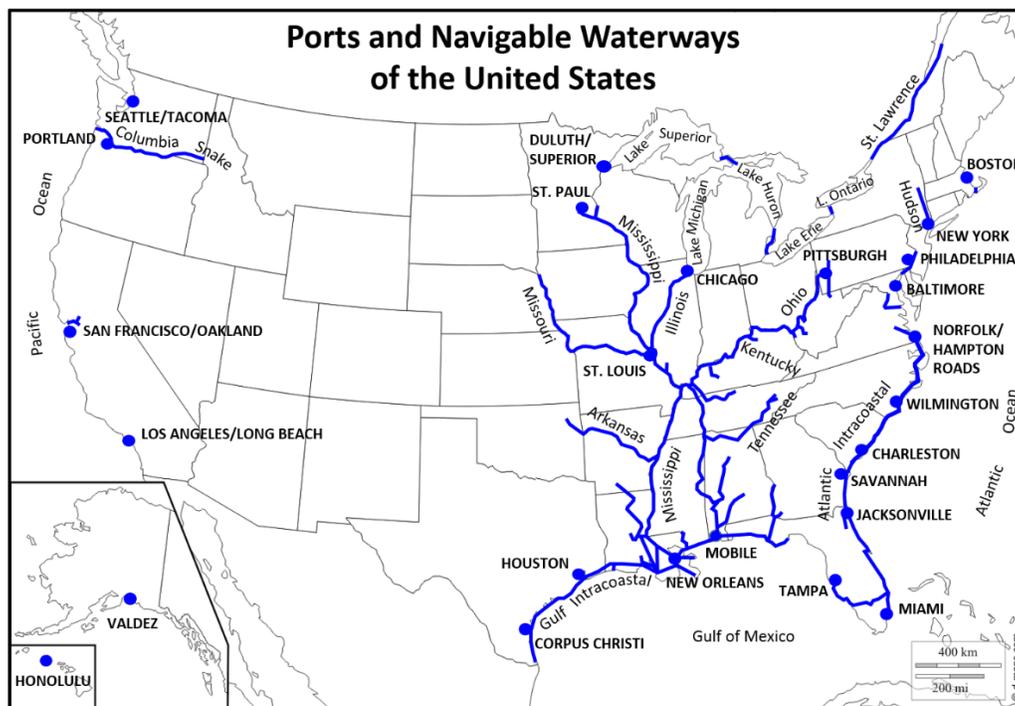


Screen capture from video camera on the bow of New York Waterways ferry, moments before the collision with kayakers. Note sun glare in upper right. (Image provided by US Coast Guard)

The New York City accident illustrates the dangers of recreational and commercial vessels operating on shared waterways, and several stakeholders had previously discussed with the National Transportation Safety Board (NTSB) their concerns rising from an increase in encounters between these types of vessels. Given the number of encounters currently observed between commercial and recreational vessels, the predicted increase in the number of such encounters, and feedback from marine industry representatives, the NTSB sought to better understand the scope of the issue and determine the extent to which the safety of our nation's waterways is impacted. This report provides the NTSB's findings as well as recommendations to improve shared waterway safety.

## The Marine Transportation System

America's Marine Transportation System (MTS)—the waterborne element of the National Transportation System—consists of navigable ocean, coastal, and inland waterways.<sup>1</sup> Although these waterways are essential to our economy, they face competing demands. Each year, the MTS serves approximately 115 million ferry passengers, 32.3 million recreational boating households, and 11 million cruise ship passengers, as well as sightseers, dinner cruisers, eco-tourists, whale watchers, and other waterway users.<sup>2</sup> In addition, more than 2 billion tons of cargo are transported by commercial vessels on America's waterways.<sup>3</sup>



**Ports, rivers, and lakes of the Marine Transportation System. (Map adapted from *National Strategy for the Marine Transportation System: A Framework for Action*; background by d-maps.com)**

<sup>1</sup> *Navigable waters* are defined in Title 33 *Code of Federal Regulations (CFR)* 2.36 as: (a) the territorial seas of the United States, (b) the internal waters of the United States subject to tidal influence, and (c) the internal waters of the United States not subject to tidal influence that: (i) are or have been used, or are or have been susceptible for use, by themselves or in connection with other waters, as highways for substantial interstate or foreign commerce, notwithstanding natural or man-made obstructions that require portage, or (ii) a governmental or nongovernmental body, having expertise in waterway improvement, determines to be capable of improvement at a reasonable cost (a favorable balance between cost and need) to provide, by themselves or in connection with other waters, as highways for substantial interstate or foreign commerce.

<sup>2</sup> Information originally obtained from the Committee on Marine Transportation System, *MTS Fact Sheet*, [www.cmts.gov/downloads/CMTS\\_MTS\\_Fact\\_Sheet\\_9.15.14\\_FINAL.pdf](http://www.cmts.gov/downloads/CMTS_MTS_Fact_Sheet_9.15.14_FINAL.pdf), accessed September 28, 2016, with data updated from the following: (a) ferry passengers – Bureau of Transportation Statistics, *2014 Highlights of Ferry Operations in the United States* (Washington, DC: US Department of Transportation, 2016), page 1; (b) recreational boating households – Coast Guard, *2012 National Recreational Boating Survey* (Washington, DC: US Department of Homeland Security, 2013), page 32; (c) cruise ship passengers – Maritime Administration, *2011 North American Cruise Statistical Snapshot* (Washington, DC: US Department of Transportation, 2012), page 2.

<sup>3</sup> Maritime Administration, *2011 US Water Transportation Statistical Snapshot* (Washington, DC: US Department of Transportation, 2013), page 1.

In a 2008 report, the Committee on the Marine Transportation System (CMTS), a cabinet-level committee representing a partnership of more than 25 federal agencies, stated that, as a result of different types of vessels converging in increasing numbers on the same waterways, “the MTS is at a crossroad.”<sup>4</sup> The report addressed the escalating issue of shared waterways, warning, “The expected increase of commercial and recreational vessel traffic ... will place burdens on waterway and port safety and security services, and raise the risk of accidents.”

The growth in both commercial and recreational vessel traffic on the MTS over the last several decades can be attributed to a number of factors, including population growth, greater demand for waterborne transportation of passengers and goods, growth in international trade, and an increase in the availability and use of recreational vessels. Although the number of registered recreational vessels has decreased over the last decade, the reduction is not reflective of the trend in the total number of vessels on the waterways. In fact, the number of canoers, kayakers, and standup paddleboarders (SUP) increased by 21.9 percent between 2008 and 2014 (see Appendix A), with the vast majority of their vessels being unregistered.<sup>5</sup> Consequently, the number of interactions between these diverse vessels has risen, thereby increasing the safety risk, especially where confined waterways limit the ability of vessels to maneuver safely.

The safety risk is exacerbated not only by the diversity of waterway users but also by differences in their experience, marine knowledge, and boat-handling skills. Moreover, state requirements vary considerably, and in some states, recreational vessel operators may not be required to attend a boating safety course, obtain a license or certificate, be familiar with the navigation rules (commonly called the “Rules of the Road”), or even demonstrate proficiency in watercraft operation.<sup>6</sup> Yet they can legally operate on any waterway regardless of the waterway’s size, complexity, or traffic density. According to a Coast Guard estimate, only 28 percent of motorized recreational vessel operators were required by state laws to complete a boating safety course or pass an examination of boating safety knowledge in 2015.<sup>7</sup>

Adding additional risk, recreational vessel operators may not realize that their vessels’ small sizes and nonmetal construction materials make both visual and radar detection more difficult. An officer in charge of the navigation watch on a large cargo or passenger ship positioned

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<sup>4</sup> (a) Chartered in 2005 and chaired by the Secretary of Transportation, the CMTS is responsible for assessing the adequacy of the MTS, including ports, waterways, channels, and intermodal connections; promoting the integration of the MTS with other modes of transportation and uses of the marine environment; and coordinating, improving coordination, and making recommendations with regard to federal policies that impact the MTS. See [www.cmts.gov](http://www.cmts.gov) for more information. (b) “The MTS is at a crossroad” from the CMTS, *National Strategy for the Marine Transportation System: A Framework for Action* (Washington, DC: US Department of Transportation, 2008), page 3.

<sup>5</sup> Registered vessel information from the Coast Guard, *2015 Recreational Boating Statistics*, Commandant Publication P16754.29 (Washington, DC: US Department of Homeland Security, 2016). Canoe, kayak, and SUP information from The Outdoor Foundation, *2009 Special Report on Paddlesports* (Washington, DC: The Outdoor Foundation, 2010) and *2015 Special Report on Paddlesports* (Washington, DC: The Outdoor Foundation, 2016).

<sup>6</sup> (a) National Association of State Boating Lay Administrators (NASBLA), *Reference Guide to State Boating Laws*, [www.nasbla.org/content.asp?contentid=321](http://www.nasbla.org/content.asp?contentid=321), accessed November 2, 2016. (b) Published by the Coast Guard, the *Navigation Rules and Regulations Handbook* contains the relevant navigation rules and regulations applicable to all vessels of the United States, or vessels navigating on waters subject to US jurisdiction, both inland and international. Available in electronic format only, a copy can be accessed free of charge at [www.navcen.uscg.gov](http://www.navcen.uscg.gov) under the link “Nav Rules.”

<sup>7</sup> US Coast Guard, *National Recreational Boating Safety (RBS) Program 2017-2021 Strategic Plan* (Washington, DC: US Department of Homeland Security, 2016), page 9.

100 feet or more above the water's surface will be challenged to see from the bridge window or detect by radar a paddleboard whose operator is maneuvering in close proximity to the larger vessel. (Because most small vessels are constructed of materials such as fiberglass or other composite materials, which either absorb or poorly reflect an electromagnetic wave, they may be difficult to detect by a ship's radar.) The risk of collision resulting from these potential interactions can lead to injury or, worse, loss of life.

When NTSB staff met with marine industry representatives, the owner of a Chicago waterway tour and taxi company provided accounts of multiple close encounters between his vessels and recreational vessels on the Chicago River. Further, the owner described the risk posed



Chicago River. (Photo courtesy of Steve Dahlman)

by the proliferation of motorized and nonmotorized watercraft rentals operating in the confined waterway. He described the rental practices as tantamount to renting out cars to people who have never driven before and sending them out on a crowded interstate highway. Representatives of the Passenger Vessel Association (PVA) shared accounts from other waterways within metropolitan areas where waterborne events—such as fireworks displays—or waterside venues—such as outdoor amphitheaters—created environments where recreational boaters, many of them inexperienced, gathered in large numbers.

According to the Coast Guard, 4,158 recreational boating accidents were reported in 2015. These accidents resulted in 626 deaths, 2,613 injuries, and approximately \$42 million in property damage.<sup>8</sup> Compared to 2014, the number of accidents increased 2.3 percent, the number of deaths increased 2.6 percent, and the number of injuries decreased 2.4 percent.

The Coast Guard identified the accident causes as:

- collisions with recreational vessels (990 accidents),
- collisions with fixed objects (470 accidents),
- flooding/swamping (449 accidents),
- groundings (350 accidents), and
- skier mishaps (301 accidents).

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<sup>8</sup> US Coast Guard, *2015 Recreational Boating Statistics*, Commandant Publication P16754.29 (Washington, DC: US Department of Homeland Security, 2016).

Open motorboats accounted for the highest number of injuries and fatalities (1,661), followed by personal watercraft (656), cabin motorboats (305), canoes and kayaks (230), and pontoon boats (139). A comparison with Coast Guard recreational vessel accident data from 2011 showed similar trends.<sup>9</sup>

Coast Guard data show that 2011 witnessed 66 accidents between recreational and commercial vessels, resulting in 2 deaths. In 2012, there were 56 such accidents and 4 deaths; in 2013, a total of 76 accidents and 7 deaths; in 2014, 51 accidents and 8 deaths, and in 2015, there were 76 accidents resulting in 6 deaths (see Appendix B for additional data). These data suggest that, although year-to-year fluctuations occur, the risk of interactions between commercial and recreational vessels persists.

## Waterways Management

Among its missions, the Coast Guard oversees waterway safety on the MTS via regulation, enforcement (in collaboration with local marine law enforcement authorities), and safety advocacy. In support of this mission, the Coast Guard also promotes and facilitates the activities of harbor safety committees (HSCs). HSCs are local associations comprised of maritime stakeholders who meet to discuss and develop local solutions to waterway safety issues. HSC members typically include commercial and recreational vessel operators, kayak or paddling clubs, terminal representatives, marine pilots, state and local authorities involved in port operations or oversight, and other interested parties. Coast Guard personnel may serve as MTS liaisons to regional and local authorities, port partners, and marine stakeholders, with the purpose of maintaining open communication lines. HSCs from across the country meet biennially at a national conference to discuss common safety issues.<sup>10</sup>

## Vessel Oversight

Throughout the MTS, Coast Guard personnel enforce national laws and regulations as well as international treaties that govern vessel construction, equipment, and operations. These laws, regulations, and treaties include rules for stability and design; fire suppression, containment, and detection systems; lifesaving equipment; the number and qualifications of crewmembers; safety drill performance; and the reporting of deficiencies, among others. Operational and equipment requirements generally increase with the size of the vessel and the complexity or risk associated with its operation.

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<sup>9</sup> US Coast Guard, *2011 Recreational Boating Statistics*, Commandant Publication P16754.25 (Washington, DC: US Department of Homeland Security, 2011).

<sup>10</sup> For details about the establishment and development of HSCs, see Coast Guard Navigation and Vessel Inspection Circular No. 1-00, *Guidance for the establishment and development of Harbor Safety Committees under the Marine Transportation System (MTS) Initiative*, April 25, 2000, which can be accessed at [www.uscg.mil/hq/cg5/nvic/2000s.asp](http://www.uscg.mil/hq/cg5/nvic/2000s.asp).

The Coast Guard is authorized to board vessels at any time on waters subject to the jurisdiction of the United States to conduct inquiries, examinations, inspections, searches, seizures, and arrests.<sup>11</sup> In this role, the Coast Guard often works alongside local law enforcement agencies, such as harbor police departments, municipal police departments, sheriff offices, and state police departments to enforce applicable laws and regulations that promote the safe and shared use of the waterways.<sup>12</sup>



Both the Coast Guard and local law enforcement authorities regularly conduct safety boardings on recreational boats—in excess of 1.4 million boardings annually—to verify compliance with safety standards. Regulations and requirements vary from state to state, but most regulations and requirements address basic vessel outfitting, lifesaving equipment, and, in some cases, minimum boating safety training.<sup>13</sup>

## Mariner Oversight

Most domestic commercial vessel operators are required to obtain Coast Guard-issued merchant marine credentials for which they must demonstrate knowledge, skills, and competencies gained through education and experience. In addition, mariners operating internationally are subject to International Maritime Organization standards that govern knowledge, skills, and training, among other requirements.

In contrast, very few operators of nonmotorized recreational vessels are required to be licensed or demonstrate knowledge of the navigation rules, and many operators of motorized recreational vessels are exempt from these requirements as well. Some states require operators of motorized vessels to receive some form of boating safety education, but these requirements may not apply to recreational vessel rental operators or bareboat charterers.<sup>14</sup> The content of boating education courses, conducted through the states, the United States Coast Guard Auxiliary, the United States Power Squadrons, the BoatU.S. Foundation, or other private organizations, varies among the states, and courses are generally only required to be completed once. Some include information on the navigation rules and other relevant information for operating on the MTS. Many

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<sup>11</sup> *Waters subject to the jurisdiction of the United States* are defined in Title 33 *CFR* 2.38 to be the following waters: (a) navigable waters of the United States, as defined in Title 33 *CFR* 2.36 (see footnote 1); (b) waters that are located on lands for which the United States has acquired title or controls; or (c) waters made subject to the jurisdiction of the United States by operation of international agreements and statutes.

<sup>12</sup> Title 14 *United States Code* 89 outlines the role of the Coast Guard.

<sup>13</sup> For a listing of each state's boating laws, visit NASBLA's website at [www.nasbla.org](http://www.nasbla.org) and select the link "Resources," then "State Boating Laws."

<sup>14</sup> Bareboat charter agreements have traditionally been used in the marine industry as a mechanism to allow charterers the ability to assume complete operational control of a vessel, including providing the crew. Adapted from Coast Guard Navigation and Vessel Inspection Circular No. 7-94, *Guidance on the Passenger Vessel Safety Act of 1993*, COMDTPUB P16700.4 (Washington, DC: US Department of Homeland Security, 1994).

states that have enacted boating educational requirements exempt boaters approved to operate before the requirements took effect.

To address the lack of common education and proficiency standards across the states, in 2004, the National Boating Safety Advisory Council (NBSAC) recommended that the Coast Guard seek statutory authority to require recreational boat operators on waters subject to jurisdiction of the United States to possess a certificate showing completion of an instructional course or an equivalent that meets the standards of the National Association of State Boating Law Administrators (NASBLA).<sup>15</sup> This recommendation was updated in 2007, with NBSAC advising the “Coast Guard [to] continue efforts to seek authority to require boat operators to possess proof of having completed an education course ... [and] assemble a task force to develop a draft of the minimum proposed mandatory education requirements prior to legislative authorization.”<sup>16</sup>

After a decade of working with the US Congress, the Coast Guard has not been able to obtain the authority to require boater safety education, and the Coast Guard believes that further efforts would likely not be successful. Therefore, at its spring 2016 meeting, NBSAC representatives modified the resolution a second time, advising the Coast Guard to—

Redirect its efforts from seeking federal statutory authority related to recreational boat operator education in response to previous resolutions by this Council and, instead, focus effort toward actively supporting state initiatives aimed at implementing boating safety education laws, such as those based upon the NASBLA Model Act for Mandatory Boating Safety Education, assisting in the resolution of import issues such as reciprocity among the states, and implementing those critical changes to the reporting of boating casualties as previously recommended by this Council.<sup>17</sup>

## Federal Recreational Boating Safety Initiatives

### a. Legislation

The US Congress enacted the *Motorboat Act of 1910* (Public Law 61-201), the *Motorboat Safety Act of 1940* (Public Law 76-484), and the *Federal Boating Act of 1958* (Public Law 85-911) to promote safety in recreational boating. Those original laws primarily imposed basic operational requirements related to firefighting equipment, vessel navigational lighting, and vessel numbering, but they did not address the design, construction, or operation of recreational boats or their propulsion systems.

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<sup>15</sup> (a) NBSAC is a federal advisory committee to the Coast Guard comprised of recreational boating stakeholders, including members of national recreational boating organizations, state boating officials, and the public. (b) NASBLA is an organization that brings each of the state recreational boating safety agencies together for the purposes of coordination, development, and implementation of policy relating to boating safety. (c) See Appendix C for NASBLA boating education standards.

<sup>16</sup> NBSAC Resolution 2007-80-02.

<sup>17</sup> NBSAC Resolution 2016-95-02.

The *Federal Boat Safety Act of 1971* (Public Law 92-75) established the National Recreational Boating Safety Program and provided the Coast Guard with the authority to participate, together with local marine law enforcement authorities, in the safety oversight of recreational boating. It also encouraged the participation of the states, the boating industry, and the boating public in developing more comprehensive boating safety programs. Among its provisions, the Act:

- established NBSAC as a federal advisory group to consult with and advise the Coast Guard on recreational boating regulations and other major boating safety matters;
- established minimum safety standards for recreational vessels and associated equipment, including:
  1. developing manufacturing standards governing the construction and performance of recreational boats, including safe loading, maximum powering, and emergency flotation, and
  2. creating a hull identification number system; and
- encouraged greater state participation and uniformity in boating regulations among the states and federal government.

In 1983, Public Law 98-89 revised and consolidated boating safety and other shipping laws under Title 46 *United States Code (USC)*. This legislation authorized the Coast Guard to carry out the National Recreational Boating Safety Program, which is in place today.<sup>18</sup> The Coast Guard's recreational vessel activities use “an appropriate combination of educational outreach initiatives, regulation, and, where appropriate, enforcement” to promote a safe, secure, and enjoyable public recreational boating experience.<sup>19</sup> Through the 1998 *Transportation Equity Act for the 21<sup>st</sup> Century* (Public Law 105-178), the *Sportfishing and Recreational Boating Safety Amendments Act of 2005* (Public Law 109-74), and the 2015 *Fixing America's Surface Transportation Safety Act* (Public Law 114-94), the Coast Guard receives \$7.7 million annually to carry out the National Recreational Boating Safety Program. Title 46 *USC* 13104 also mandates that funds be allocated to state boating safety programs annually (\$111.3 million in fiscal year 2016), of which up to 5 percent can be allocated to programs sponsored by nonprofit public service organizations at the national level.<sup>20</sup>

## **b. Coast Guard and Stakeholder Actions**

The Coast Guard has established a cooperative agreement with NASBLA to enhance recreational boating safety. Through the provision of grants and other cooperative efforts, the agency, along with its volunteer force in the United States Coast Guard Auxiliary, has also

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<sup>18</sup> Title 46 *USC* 13102.

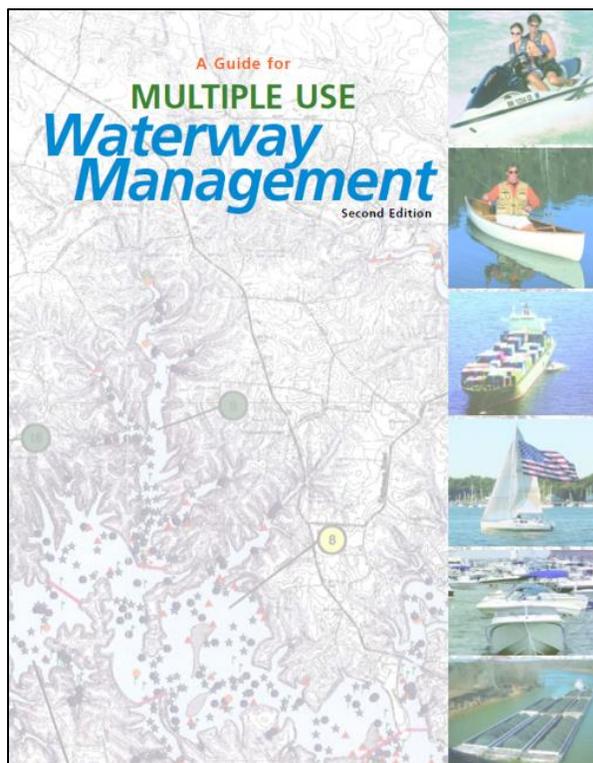
<sup>19</sup> For details about the *Strategic Plan of the National Recreational Boating Safety Program, 2012 to 2016*, visit [www.uscgboating.org](http://www.uscgboating.org) and select the link “About,” then “Strategic Plan.”

<sup>20</sup> Grant information from Chief, US Coast Guard Boating Safety Division, e-mail message to the NTSB, October 26, 2016.

established working relationships with other boating safety organizations such as the United States Power Squadrons, the National Safe Boating Council, the National Water Safety Congress (NWSC), the National Marine Manufacturers Association, the BoatU.S. Foundation, and others involved in the boating safety education effort.<sup>21</sup>

In 1992, the NBSAC first addressed safety issues regarding commercial and recreational vessels sharing the same waterways when it issued a formal recommendation to the Coast Guard to develop a plan that could incorporate the needs of all waterways users and balance the sometimes competing demands. In response, the Coast Guard provided a grant to the NWSC to develop the plan. On October 1, 1996, the NWSC completed its work, and on July 24, 1997, the Coast Guard distributed *A Guide to Multiple Use Waterway Management* to its units and personnel involved in boating safety, waterway management, and planning.

The initial guidance suggested a basic six-step process that emphasized the importance of a comprehensive and systematic waterway research and analysis program. At the time of its publication, the guide reported “the public demand for space on the water has never been greater.”



In 2004, the NWSC, in partnership with NASBLA, revised the first *Guide*, issuing a second edition of the guidance that remains in effect today.<sup>22</sup> The revisions reflected “the evolution in experience with multiple use waterway issues and management strategies over time.” According to both the NWSC and the NASBLA, neither organization has sought additional grants since then to determine if changes in waterway use necessitate a further update to the guidance. Moreover, the Coast Guard informed NASBLA that, according to statute, grants from the Coast Guard could no longer be used for waterways management activity that was not specifically designated for recreational boating safety initiatives, and it was determined that not all waterways management activities were part of recreational boating safety. As a result, the NASBLA Waterways Management Committee, a working group established to specifically address waterways risks, was dissolved in 2010. NASBLA’s promotion and support of waterway safety have continued in other activities.

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<sup>21</sup> The NWSC is a nongovernmental international organization that promotes recreational water and boating safety. The NWSC was organized in 1951, originally in response to growing concerns related to deaths in waters of the Cumberland and Tennessee Rivers.

<sup>22</sup> The second edition of the guide can be accessed online at [www.watersafetycongress.org/Guide](http://www.watersafetycongress.org/Guide).

### c. Previous NTSB Action

In 1967, the NTSB first addressed recreational boating safety when the agency recognized that an increase in recreational boating was accompanied by a rise in accident, death, and injury rates. Among other issues, the NTSB monitored the status of boater education and operator licensing requirements. In 1969, the NTSB completed its first safety study on these issues and published *Recreational Boat Accidents, Boating Safety Programs, and Preventive Recommendations*.<sup>23</sup> As a result of the study, the NTSB issued 23 safety recommendations to the Coast Guard, the states, and the recreational boating industry. Since then, the NTSB has conducted several studies and issued 40 additional safety recommendations to improve recreational boating safety, including:

1983 – *Recreational Boating Safety and Alcohol* study focused on alcohol use in boating, resulting in 9 new recommendations<sup>24</sup>

1986 – Three additional recommendations based on the 1983 study and an assessment of boating accident reports<sup>25</sup>

1988 – *Progress of State Laws on Alcohol Use in Recreational Boating* study, reviewing 12 alcohol-related boating accidents to support 1983 study recommendations<sup>26</sup>

1993 – *Recreational Boating Safety* study, resulting in 16 new recommendations<sup>27</sup>

1998 – *Personal Watercraft Safety* study, resulting in 7 new recommendations<sup>28</sup>

2014 – Special Investigation Report on *Parasailing Safety*, resulting in 6 new recommendations.<sup>29</sup>

Safety Recommendation M-93-1, from the 1993 study, specifically recommended that each state “implement minimum recreational boating safety standards to reduce the number and severity of accidents; consider requirements such as mandatory use of personal flotation devices for children, demonstration of operator knowledge of safe boating rules and skills, and operator licensing.” Thirty-four states, territories, and the District of Columbia responded to the recommendation with actions that the NTSB classified “Closed—Acceptable Action.” Seven states responded with actions that the NTSB classified “Closed—Acceptable Alternate Action.” By contrast, 12 states’ responses were closed in 2013 and classified “Closed—Unacceptable Action.” Only one of these states, California, has since enacted boating safety education requirements.

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<sup>23</sup> NTSB, *Recreational Boat Accidents, Boating Safety Programs, and Preventive Recommendations* (Washington, DC: National Transportation Safety Board, 1969).

<sup>24</sup> NTSB, *Recreational Boating Safety and Alcohol*, NTS/SS-83/02 (Washington, DC: National Transportation Safety Board, 1983).

<sup>25</sup> NTSB, Safety Recommendation M-86-32/100/101, 1986.

<sup>26</sup> NTSB, *Progress of State Laws on Alcohol Use in Recreational Boating*, NTS/SS-88/01 (Washington, DC: National Transportation Safety Board, 1988).

<sup>27</sup> NTSB, *Recreational Boating Safety*, NTS/SS-93/01 (Washington, DC: National Transportation Safety Board, 1993).

<sup>28</sup> NTSB, *Personal Watercraft Safety*, NTS/SS-98/01 (Washington, DC: National Transportation Safety Board, 1998).

<sup>29</sup> NTSB, *Parasailing Safety*, NTSB/SIR-14/02 (Washington, DC: National Transportation Safety Board, 2014).

## The Investigation

In examining shared waterway safety, NTSB investigators reviewed relevant literature, examined recent Coast Guard data on collisions between recreational and commercial vessels, and visited major ports—Chicago, Illinois; San Diego, Los Angeles/Long Beach, and San Francisco California; and Portland, Oregon—where they interviewed various waterway users. Additionally, investigators explored the shared waterways safety issue with stakeholders in Memphis and Nashville, Tennessee, and Louisville, Kentucky. NTSB investigators also met with Coast Guard representatives directly tasked with waterways management and accident prevention, along with Coast Guard headquarters personnel involved in policy development regarding recreational vessel and MTS oversight.

During the port visits, NTSB investigators observed sightseeing tours from the wheelhouses of commercial vessels in Chicago, San Diego, and San Francisco to discern firsthand the nature and severity of commercial and recreational vessel interactions and to obtain operators' views regarding the extent of the perceived safety hazards they encounter. Vessel observations were conducted at peak times when vessel traffic was considered to be the highest: in Chicago on Labor Day weekend and in San Diego and San Francisco on weekends in early fall. In addition to sightseeing vessels, investigators rode aboard a pilot vessel in the port of Long Beach and aboard a San Diego Harbor Police boat escorting a large passenger vessel.

The NTSB examined issues on the MTS only; the agency did not study issues on state, private, or other waterways. In general, few commercial vessels operate in those waters or, in cases where they do, the types of vessels that operate there and the geography of the waterways provide them sufficient room to avoid collisions.

## Investigation Results

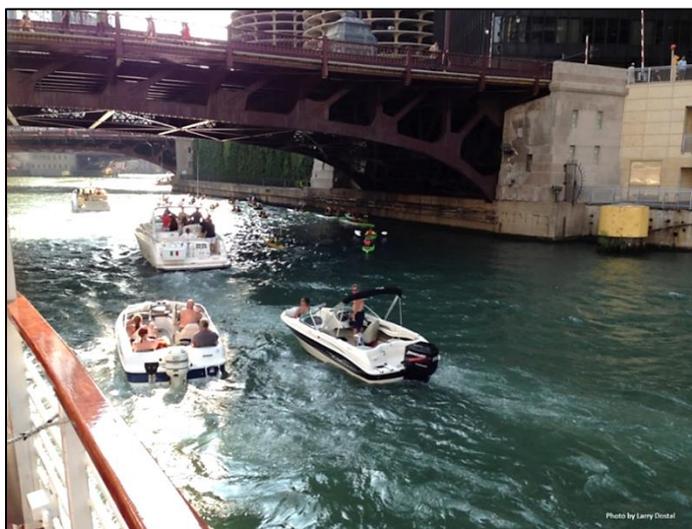
Despite the fact that each port was unique in its geographic features, vessel operations, and growth in traffic, the results of the visits, stakeholder interviews, and observation rides were similar, with the exception of Chicago. Both commercial and recreational vessel operators in each port stressed the need for recreational vessel operators to be familiar with basic navigation rules. They also expressed concern for the safety implications of the continued proliferation of kayaks, canoes, and SUPs. Outside of Chicago, operators, crewmembers, and other stakeholders generally believed that waterways were sufficiently large or that their layouts were such that the interaction of recreational vessels with commercial vessels could be safely managed.

NTSB investigators observed several examples of active safety management practices in each port. In San Francisco, an accident involving a recreational vessel led to changes that enhanced safety on the waterway. In fact, during their interviews, nearly all of the port's stakeholders referred to that case: in 2012, a kayaker maneuvering behind a passenger vessel was pulled down by the vessel's wash and fatally injured. In response, the San Francisco HSC worked with marinas and rental facilities to educate vessel operators by developing and distributing information packets that outlined basic navigation rules. Additionally, informational stickers about basic marine safety were given to kayak rental facilities, which placed them on their kayaks. The San Francisco HSC also collaborated with the Coast Guard to develop a video that was distributed

to the general public. The video explained some of the challenges vessel operators may encounter when operating in the San Francisco waterway.<sup>30</sup>

In Portland, the interaction between recreational and commercial vessels posed a safety risk primarily during salmon fishing season, when fishermen unfamiliar with the boundaries of the shipping channel unknowingly encroached on the channel. On the Columbia and Willamette Rivers, ocean-going vessels and tows, which are constrained by their draft and must maneuver inside the channels, run the risk of colliding with these fishing vessels. In response to the potential conflict, the local HSC developed “Operation Make Way” about 15 years ago to inform local fishermen of the need to avoid the shipping channel and other areas where commercial vessels operate. Without exception, each Portland stakeholder whom NTSB investigators interviewed referenced the program and its success in maintaining safety on the waterway. In addition, during salmon season, one of the marine pilot associations in the area voluntarily bought commercial air time on local radio stations to inform boaters of the hazards of encroaching on shipping lanes.

As an example of how local waterway stakeholders are effectively addressing the issue of navigation rules knowledge, the Coast Guard representatives provided a waterway management guide targeting recreational vessel operators published by the San Diego HSC. They noted that in addition to this outreach effort, the HSC has proposed that sections of the waterway be set aside for personal watercraft use only during certain times of the day.



**Photo of the Chicago River, taken from a commercial tour boat, with recreational vessels close by. (Photo courtesy of Larry Dostal)**

Chicago, in contrast to other ports, has unique risks involving interactions between recreational and commercial vessels because of the limited area in which vessels can maneuver. Observation rides on the Chicago River, a confined waterway that measures no more than 300 feet at its widest point, revealed many recreational vessels operating near commercial vessels during a busy summer weekend. Commercial vessels had little room to maneuver around recreational vessels, and the number of vessels—including rental and operator-owned motorized boats, kayaks, commercial vessels, water taxis, and tour boats—was particularly high near the river junction with Lake Michigan.

Responses to interview questions with the owner of the Chicago waterway tour and taxi company and other commercial operators in Chicago were consistent. Although the growth in commercial vessel traffic was deemed “moderate,” they believed that the growth of recreational vessel traffic had been, as they termed it, “exponential.” Chicago commercial operators believed

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<sup>30</sup> The video, *Sharing the Bay*, can be viewed at [www.sfm.org/support/hsc/hscsharingthebay.php](http://www.sfm.org/support/hsc/hscsharingthebay.php).

that the increase in recreational vessels had caused considerable stress to commercial vessel operators and that recreational vessel operators needed to be educated about the navigation rules and basic vessel operations. Several also called for additional police presence on the river and more enforcement of laws prohibiting boater intoxication.

The former commanding officer of the Coast Guard Marine Safety Unit in Chicago, who in 2013 was also the unit's liaison to the local HSC, told NTSB investigators that during his tenure the Chicago HSC had addressed some of the shared waterway safety issues. The committee did this by posting signs on the Chicago River to warn small recreational vessel operators of the location and hazards of cooling tower outflows that could propel their vessels into the paths of commercial vessels, among other actions. Commercial passenger vessel owners also posted signs along the river, stating, "Slower Vessels, Do Not Impede Traffic, Stay to the Right," which is consistent with Inland Navigation Rule no. 9, the steering and sailing rule for narrow channels. Additionally, guides for Chicago River recreational vessel tours, such as group kayak tours, carry VHF radios, which allow them to contact other vessels directly, including commercial operators, in case of emergencies or other issues.

On March 28, 2016, the Chicago HSC released and distributed *CHSC Safety Recommendations and Guide to Rules and Regulations*.<sup>31</sup> Among several recommendations, the guide called for the following:

- *Monetary penalties* of not more than \$5,000 for a recreational vessel, or \$25,000 for any other vessel for "a person operating a vessel in a negligent manner or interfering with the safe operation of a vessel," consistent with Title 46 *USC* 2302 (a).
- *Travel restrictions for construction and special purpose vessels* that forbid such vessels from constricting the width of the river "by more than 50 percent of the available width of the river or less than 100 feet accounting for bridge structures and dolphins."
- *Travel restrictions for hourly rental craft* that require them to "stay to the far right side of the channel with the exception of high-traffic locations such as barge facilities, water taxi and tour boat docks, hourly rental craft facilities or marinas."
- *Alcohol ban for operators of nonmotorized/human-powered craft (HPC)*.
- *Identification of operators of powered hourly rental craft* as the "designated driver" that forbids them from consuming alcohol while on board and requires them to wear "an orange wristband identifying them as such."
- *Collaboration between hourly HPC rental operations and the Chicago Harbor Safety Committee* to develop standardized training for renters, operators, and staff.

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<sup>31</sup> See Appendix D for the full text of *CHSC Safety Recommendations and Guide to Rules and Regulations*.

- *Demonstration of operational competency by persons renting craft on an hourly basis* “after receiving standardized training before being allowed to leave the immediate vicinity of the respective access point.”
- *Display of a placard by HPC rental operations* in a prominent location at rental facilities “or written text should be included in rental waiver” informing the renter of monetary penalties, stated in Title 46 *USC*, for operating the vessel in a negligent manner.<sup>32</sup>

Coast Guard headquarters representatives told NTSB investigators that the Coast Guard focuses its efforts on working with each individual state. They also said that in areas where the potential exists for moderate to high-risk interaction between commercial and recreational vessels, risks are, for the most part, being successfully managed by the Coast Guard and local stakeholders. They further believed that recreational boater education and skill development are key components to enhancing boating safety.

## Analysis



**Kayaks pass commercial barge on Chicago River. (Photo courtesy of Larry Dostal)**

The interaction between recreational vessels—including powerboats, kayaks, canoes, and SUPs—and commercial vessels is a safety concern in all of the MTS, with the level of risk varying between waterways. The degree of risk appears to be influenced largely by a lack of awareness or understanding of the navigation rules among a large portion of recreational boat operators and by their lack of adequate boating knowledge and skills, as many of the interviewees pointed out to NTSB investigators. The risk presented by this lack of education and training is compounded when:

1. the waterway is confined by its overall size, channel width, or depth so that there is insufficient room for vessel operators to maneuver around each other;
2. waterborne events are occurring (whether permitted or not), such as fireworks displays, regattas, or other activities that attract waterborne spectators and increase traffic density; and
3. stakeholders, through their local HSCs, are not effectively addressing safety concerns in their purview.

<sup>32</sup> The specific text of the placard, as recommended by the Chicago HSC, would read “46 *USC* §2302(a) A person operating a vessel in a negligent manner or interfering with the safe operation of a vessel, so as to endanger the life, limb or property of a person is liable to the United States Government for a civil penalty of not more than \$5,000 in the case of a recreational vessel, or \$25,000 in the case of any other vessel.”

All of these factors are present on the Chicago River, therefore posing the greatest risk for unsafe interaction between commercial and recreational waterway users. The other waterways that NTSB investigators visited, albeit a sample of the entire MTS system, presented a more moderate risk. For example, San Diego and San Francisco waterways have relatively large areas and water depths to



**Cruise ship departing San Diego.  
(Photo courtesy of Port of San Diego)**

enable recreational vessels to maneuver safely around commercial vessels. And in most cases, the large commercial vessels, although constrained by their draft, still had sufficient area around the shipping lanes to readily avoid collisions. NTSB investigators, while riding on a police vessel escorting a large cruise ship that was departing San Diego, observed that recreational vessels had considerable maneuvering room to avoid coming within close proximity to the outbound ship.

In Portland, Oregon, on the Columbia and Willamette Rivers, the potential safety hazard during the fishing season was mitigated through the locally led response. Shared interest in maintaining safety and committed stakeholder involvement led to an integrated program of boater education and rule enforcement that has largely addressed the safety threat.

In other ports that NTSB investigators visited, either the numbers of recreational vessels and commercial vessels were at such insignificant levels that potential interactions between the two did not pose a safety problem, or enough waterway was available to allow vessels room to maneuver away from each other. In those parts of the waterway where the room was insufficient (for example, near the ferry docks on San Francisco Bay), safety risks appeared to be mitigated by boater education—again, the result of active participation by port stakeholders.

The contributions of recreational boat operator education, oversight, and active stakeholder involvement to enhance waterway safety can be illustrated most notably by the changes that the Chicago HSC implemented on the waterway. The HSC members, representing users with competing interests yet with shared concerns for safety, developed guidance and suggested that government agencies enforce rules that would address many of the concerns. The NTSB is encouraged by the Chicago HSC's actions and believes that it has made considerable progress by developing and implementing them. The NTSB anticipates that ongoing efforts to enforce rules and regulations will continue to enhance waterway safety.

The NTSB found that, despite often competing objectives, in almost all cases port stakeholders work cooperatively to enhance waterway safety. Cooperation is needed because shared waterway safety issues are a function of geography, vessel types, predominant weather, and other local factors. Local stakeholders working cooperatively are in the best position to address local issues through mutual respect and a shared commitment to safety. Because of changes in waterway use over time, this engagement is most effective if done at regular intervals.

Once strategies to mitigate risk have been developed, they need to be shared among the stakeholders—both within and between the ports and waterways. The tour operator involved in the August 2016 New York City accident was unaware of the practice that counterparts in Chicago employed: the use of radios by kayak tour guides to communicate with commercial vessels. NTSB believes using radios is a practice that can enhance safety, and practices such as these should be shared among HSCs so that stakeholders can learn about them and implement them as appropriate. The NTSB recognizes that the circumstances and issues impacting each port vary widely, and thus a risk mitigation strategy implemented in one port may not be universally applicable. However, by sharing strategies, HSCs gain exposure to successful practices in other ports that they can modify, implement, or reject based on local conditions. The NTSB concludes that **HSCs can substantively improve safety between commercial and recreational vessels if risks are regularly identified, practices are developed and implemented to mitigate these risks, and these practices are shared with stakeholders and other HSCs.** Therefore, the NTSB recommends that the Coast Guard **establish a process whereby, at regular intervals, all HSCs identify the safety risks posed by the interaction of commercial and recreational vessels in their respective geographic areas; where necessary, develop and implement practices to mitigate those risks; and share successful practices among all HSCs.**

Although the HSCs' efforts will continue to support improvements in safety, further measures are necessary to mitigate the dangers of a rising number of unknowledgeable or unskilled recreational boaters operating in close proximity to commercial vessels. Given the proliferation of relatively inexpensive and widely available kayaks, canoes, and SUPs; the growing number of motorized and nonmotorized watercraft rental providers; and the increasing size of commercial vessels (which may have limited maneuverability), the risk of accidents will only rise unless action is taken to address gaps in boating safety knowledge and skills.

Despite previous Coast Guard efforts to obtain the legislative authority to require boater education and the NTSB's recommendation to the states to accomplish the same objective, over 70 percent of motorized vessel operators and most nonmotorized vessel operators are still not required to demonstrate minimum boating safety knowledge. Many of the accidents and safety risks that port stakeholders discussed with NTSB investigators involved lack of boater knowledge and skills when operating near commercial vessels on shared waterways, underscoring the need for a uniformly applied recreational boater education requirement. Based on observations of operations at selected ports and the predominant feedback from port stakeholders, Coast Guard representatives, and other authorities interviewed during this project, the NTSB concludes that **all recreational vessel operators need to attain a minimum level of boating safety education to mitigate the various risks associated with the type of vessel being operated.**

The states have made progress in instituting boater safety education requirements. However, differences in state boating education curricula exist, and current requirements do not ensure that all recreational vessel operators possess the minimum education and skills necessary to operate safely. Therefore, a national approach is needed. The Coast Guard's 2017–2021 National Recreational Boating Safety Program strategic plan states that one of its primary objectives is to “increase boater knowledge and skills to meet federal regulatory requirements and

work toward universal adoption by the states of national best practices and standards.”<sup>33</sup> After extensive involvement in recreational boating safety and enforcement, NASBLA has developed and updated widely accepted standards that would meet this need.<sup>34</sup> Given its role in national marine safety and oversight, the Coast Guard is in the best position to seek and obtain nationwide uniformity in boating education requirements and standards. Consequently, the NTSB concludes that **the Coast Guard should renew its efforts to seek legislative authority to require recreational boaters on waters subject to the jurisdiction of the United States to obtain education that meets the NASBLA or equivalent standards.**<sup>35</sup> Therefore, the NTSB recommends that the Coast Guard **seek statutory authority that requires all recreational boat operators on waters subject to the jurisdiction of the United States to demonstrate completion of an instructional course or an equivalent that meets the NASBLA standards.**

Since the release of the NWSC and NASBLA’s *A Guide to Multiple Use Waterway Management* in 2004, there have been many changes to waterways. For example, the perpetual development of new MTS infrastructure, such as commercial port facilities and marinas, causes continuous changes to local conditions. Furthermore, as noted above, the sizes, numbers, and types of watercraft using the MTS have changed.

Although the Coast Guard determined in 2010 that it could no longer fund NASBLA waterways management efforts, the NTSB believes these efforts promoted and enhanced recreational boating safety. Specifically, *A Guide to Multiple Use Waterway Management* and other NASBLA and NWSC waterways management activities targeted the increasing use of the MTS by the recreational boating segment and provided strategy, policy, and best practices for state and local authorities directly involved in the development of the laws and regulations applied to enhance recreational boating safety.

*A Guide to Multiple Use Waterway Management* identified risks and provided mitigation strategies for shared waterways. However, the waterways and user demands will continue to change over time, and unless this guidance is updated regularly, the risks may shift and/or mitigation strategies may become ineffective. The NTSB concludes that ***A Guide to Multiple Use Waterway Management* should be reviewed and updated at regular intervals.** Therefore, the NTSB recommends that NASBLA, the NWSC, and the Coast Guard **review and update *A Guide to Multiple Use Waterway Management* at regular intervals.**

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<sup>33</sup> US Coast Guard, *National Recreational Boating Safety (RBS) Program 2017–2021 Strategic Plan* (Washington, DC: US Department of Homeland Security, 2016), page 9.

<sup>34</sup> The NASBLA National Boating Education Standards consist of three fundamental modules: (a) ANSI/NASBLA 103-2016: Basic Boating Knowledge – Power, (b) NASBLA Paddlesports Education Standards 2009 (under revision), and (c) BSR/NASBLA 103.1 Supplement – Basic Boating Knowledge – Water-Jet Propelled Boats (Draft). See Appendix C for the full text of these modules.

<sup>35</sup> The MTS encompasses a majority of those waters *subject to the jurisdiction of the United States*, but a small subset of the *jurisdiction*, such as large landlocked lakes that cross state borders, is not part of the MTS. Although this investigation focused on the MTS, the NTSB believes that this recommendation should extend to all US jurisdictional waters.

## Findings

1. Harbor safety committees can substantively improve safety between commercial and recreational vessels if risks are regularly identified, practices are developed and implemented to mitigate these risks, and these practices are shared with stakeholders and other harbor safety committees.
2. All recreational vessel operators need to attain a minimum level of boating safety education to mitigate the various risks associated with the type of vessel being operated.
3. The Coast Guard should renew its efforts to seek legislative authority to require recreational boaters on waters subject to the jurisdiction of the United States to obtain education that meets National Association of State Boating Law Administrators or equivalent standards.
4. *A Guide to Multiple Use Waterway Management* should be reviewed and updated at regular intervals.

## Recommendations

As a result of this report, the National Transportation Safety Board makes the following safety recommendations:

### **To the US Coast Guard:**

1. Establish a process whereby, at regular intervals, all harbor safety committees identify the safety risks posed by the interaction of commercial and recreational vessels in their respective geographic areas; where necessary, develop and implement practices to mitigate those risks; and share successful practices among all harbor safety committees. (M-17-1)
2. Seek statutory authority that requires all recreational boat operators on waters subject to the jurisdiction of the United States to demonstrate completion of an instructional course or an equivalent that meets the National Association of State Boating Law Administrators standards. (M-17-2)
3. Work with the National Association of State Boating Law Administrators and the National Water Safety Congress to review and update *A Guide to Multiple Use Waterway Management* at regular intervals. (M-17-3)

### **To the National Association of State Boating Law Administrators:**

4. Work with the National Water Safety Congress and the US Coast Guard to review and update *A Guide to Multiple Use Waterway Management* at regular intervals. (M-17-4)

### **To the National Water Safety Congress:**

5. Work with the National Association of State Boating Law Administrators and the US Coast Guard to review and update *A Guide to Multiple Use Waterway Management* at regular intervals. (M-17-5)

### **Shared Waterways Best Practices**

During the development of this report, the NTSB learned of best practices in each port that have applicability across the entire marine transportation system. These included:

- Chicago kayak rental companies outfitted their group tour guides with radios to allow them to communicate with commercial operators directly, as needed.
- Chicago rental craft were also well-marked with information that allows other vessels to identify the nature of the tour groups or the rental company names.
- San Francisco HSC stakeholders developed informational stickers about basic marine safety that were given to kayak rental facilities to affix to rental kayaks.
- Portland HSC stakeholders developed “Operation Make Way” to inform local fishermen of the need to avoid the shipping channel and areas in which commercial vessels operate, and one of the marine pilot associations in the area voluntarily bought commercial air time on local radio stations to inform boaters of the hazards of encroaching on shipping lanes.
- San Diego HSC stakeholders published a waterway management guide targeting recreational vessel operators and proposed that sections of the bay be set aside only for personal watercraft use during certain times of the day.
- Nashville local officials posted signs on the Cumberland River at multiple access points where kayak rental companies routinely launch. These signs warned operators of the risk presented by commercial vessels. Additionally, commercial operators sounded their vessels’ horns before navigating blind bends in the downtown area to warn paddlers of their approach.

## **BY THE NATIONAL TRANSPORTATION SAFETY BOARD**

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**Adopted: January 25, 2017**

# Appendixes

## Appendix A – US Paddlesports Participation Rates and Numbers

Figure 1: US Paddlesports Participation Rates

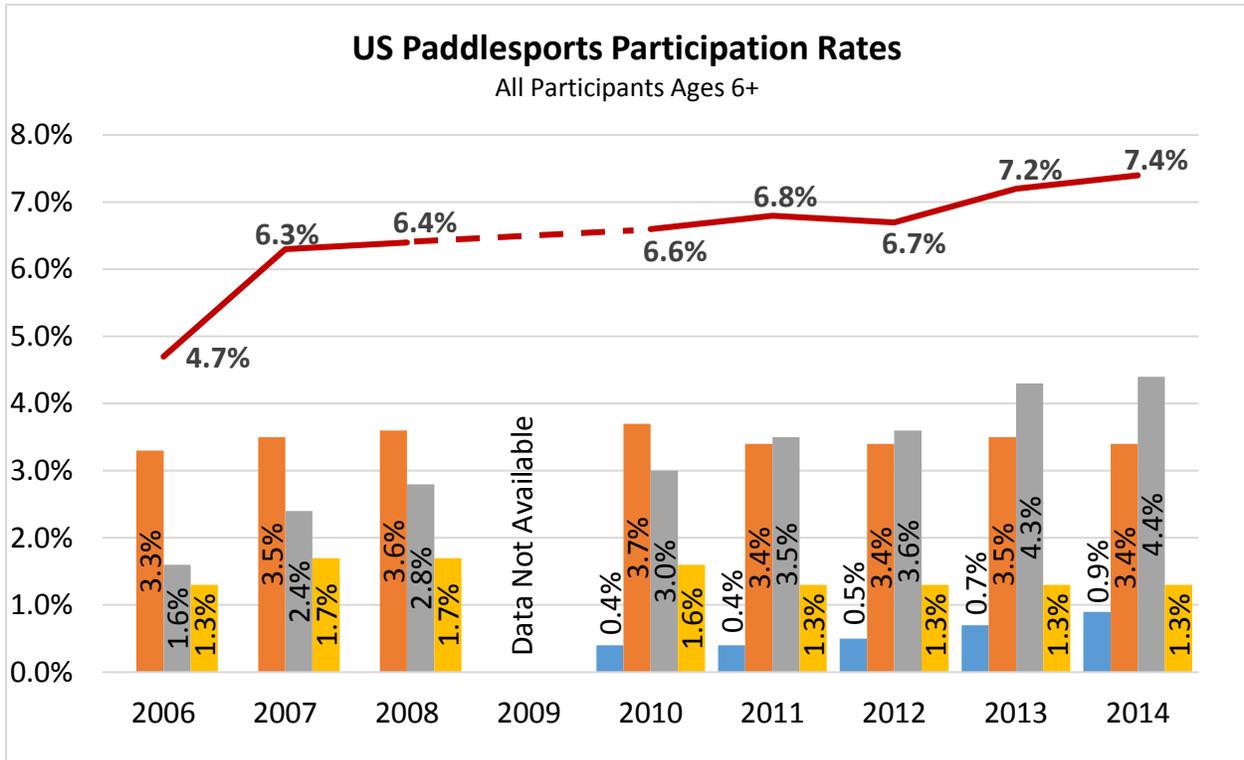


Table 1: Numbers of Paddlesports Participants

Numbers of Participants	2008	2014
Stand Up Paddling	Not avail	2.8 Million
Canoeing	9.9 Million	10.0 Million
Kayaking	7.8 Million	13.0 Million
Rafting	4.7 Million	3.8 Million
<b>Paddling (Any Type)</b>	<b>17.8 Million</b>	<b>21.7 Million</b>
<b>Overall Growth:</b>		<b>21.9%</b>

## Appendix B – Recreational and Commercial Vessel Accident Data

Table 2: Accidents that met Federal Reporting Requirements and involved both Recreational and Commercial Vessels

<b>Accidents that met Federal Reporting Requirements and involved both Recreational and Commercial Vessels</b>						
<b>Year</b>	<b>Accidents</b>	<b>Vessels Involved</b>	<b>Deaths</b>	<b>Injured</b>	<b>Damages</b>	<b>Vessels Lost</b>
2011	66	151	2	37	\$1,034,483	9
2012	56	135	4	26	\$943,316	4
2013	76	169	7	29	\$1,234,823	8
2014	51	113	8	26	\$571,403	13
2015	76	185	6	29	\$1,636,791	8
<b>Total</b>	<b>325</b>	<b>753</b>	<b>27</b>	<b>147</b>	<b>\$5,420,816</b>	<b>42</b>

# Appendix C – National Association of State Boating Legislators’ Boating Education Standards

## C.1. ANSI/NASBLA 103-2016: Basic Boating Knowledge – Power

Standard Number: ANSI/NASBLA 103- 2016  
Effective Date – January 1, 2016

Previous Version - NASBLA Boating Education Standards Effective January 2015



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](mailto:esp@nasbla.org).

**American National Standard**

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



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ANSI/NASBLA 103-2016  
American National Standard

## 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.

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***National Boating Education Standards Panel***

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	Robin Pope	

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

*NOTE: Membership on a panel or committee shall not in and of itself constitute an endorsement of the National Association of State Boating Law Administrators (NASBLA) or any document developed by the panel or committee on which the member serves.*

This standard was developed under procedures of essential requirements for the American National Standards Institute. The Panel that approved the standard was balanced based on interest categories to ensure that individuals representing those with material interests in the standard had an opportunity to participate.

This standard, which is the result of extended and careful consideration of available knowledge and experience on the subject, is intended to provide minimum performance requirements.

National Boating Education Standards Panel meetings are open to the public. All contact regarding standards activity, interpretations, or meeting attendance should be directed to NASBLA ESP Staff at [esp@nasbla.org](mailto:esp@nasbla.org).

***REQUEST FOR INTERPRETATIONS***

Upon written request, the Education Standards Panel will render an interpretation of any requirement of the standard. The request for interpretation should be clear and unambiguous. Requests should be presented to the ESP in a manner in which they may be answered in a 'yes' or 'no' fashion.

The Panel reserves the right to reconsider any interpretation when or if additional information which might affect it becomes available to the ESP. Persons aggrieved by an interpretation may appeal to the Panel for reinterpretation.

***REQUEST FOR APPEALS***

Any directly and materially affected interest who believe they have been or will be adversely affected by a Standard, or by the lack thereof, shall have the right to appeal substantive or procedural actions or inactions of the National Boating Education Standards Panel per Part XII of the [Panel Rules](#) (latest version) posted at [www.nasbla.org](http://www.nasbla.org) under *Education>Education Standards Panel*. As stated in the Rules, prior to the filing of a formal appeal, communication of the alleged actions or inactions, with mutual effort to informally resolve the dissatisfaction, shall be attempted and documented.

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ANSI/NASBLA 103-2016  
American National Standard

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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 capsize, 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.

C.2. NASBLA Paddlesports Education Standard 2009



**NATIONAL ASSOCIATION OF STATE  
BOATING LAW ADMINISTRATORS**

**PADDLESPTS EDUCATION STANDARDS**



*Produced under a grant from the Sport Fish Restoration and Boating Trust Fund, administered by the U.S. Coast Guard.*

**In Consultation with the American Canoe Association**

### **Disclaimer**

NASBLA and affiliated organizations do not undertake to verify the continuous adherence by courses or instructors to every applicable standard or guideline. Nor does the National Association of State Boating Law Administrators warrant, guarantee, or insure that compliance with these standards will prevent any or all injury or loss that may be caused by or associated with any person's use of boats, facilities, equipment, or other items or activities that are the subjects of these standards; nor does the National Association of State Boating Law Administrators assume any responsibility or liability for any such injury or loss.

Further, the National Association of State Boating Law Administrators hereby expressly disclaims any responsibility, liability or duty to affiliated courses, organizations, instructors, boaters or their families, for any such liability arising out of injury or loss to any person by the failure of such organizations, courses, or instructors to adhere to these standards.

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

## Preamble

The purpose of these standards is to educate boating education professionals regarding the practices and procedures followed generally within the paddlesports community. That purpose is furthered to the extent that the standards provide a basis for approval of paddlesports education courses by the National Association of State Boating Law Administrators (NASBLA). It is not the intention of NASBLA to attempt to include every practice or procedure that might be desirable or implemented within a paddlesports education course since the conditions, facilities, and goals of all courses are not identical or uniform.

## Standards Development

The National Boating Education Standards began as a guide for state, non-profit and commercial providers to follow in developing boating education materials. They were formally developed through a grant project in 1999 to prescribe the minimum body of knowledge necessary to effect safe, legal, and enjoyable boating. In addition, the standards were predicated on reducing risks in recreational boating based on empirical accident and boating violation statistics.

Although the National Boating Education Standards have been amended to include additional topics related to boating safety, the standards are primarily focused on the use of powered vessels. Manually propelled vessels like canoes and kayaks are mentioned in the standards, but the majority of the content is irrelevant to a paddler.

In 2006, a number of states began to look into requiring all vessel operators to pass a boating safety course. Other states had similar legislation with regards to powerboat operators, but there was a push to ensure that every person operating a boat on the waterways had been educated. Requiring a paddler to attend a 6-8 hour course which addressed mostly powered vessels did not seem fair. Therefore, a request was made for NASBLA to create a set of Paddlesports Education Standards.

The 2007 NASBLA Paddlesports Committee was charged with the task of drafting a set of standards with the help of the American Canoe Association. The National Boating Education Standards were used as a model for the creation of the Paddlesports Education Standards and the committee determined which of the standards were relevant to paddlers. The Paddlesports Education Standards are numbered in a similar fashion as the National Boating Education Standards, however, the letter "P" precedes each standard number to denote that this is a Paddlesports Education Standard. The final version of the Paddlesports Education Standards was formally approved by the NASBLA membership on September 8, 2009 at their 49<sup>th</sup> Annual Conference.

### Intended Audience

The Paddlesports Education Standards were developed for use by paddlesports education course instructors, paddlesports education text authors, and other paddlesports education professionals who intend to submit course materials for NASBLA review and approval. It is anticipated that this document will clearly communicate with prospective authors what must be included to provide a minimum standard of care, resulting in an efficient course review process.

### Applicability and Definitions

The Paddlesports Education Standards apply to courses for operators of manually-propelled recreational boats such as canoes and kayaks. It is recognized that there are different types of boating courses with different target audiences. The National Boating Education Standards were written specifically for operators of powered vessels whereas the Paddlesports Education Standards identify the core topics that must be covered in paddlesports-focused courses.

The standards use the term, “course,” to refer 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. “Boat” is used to refer to all types of recreational watercraft. “Paddlecraft” is used to refer to manually-propelled watercraft such as canoes and kayaks. It is expected that any unique words or terminology used in courses being submitted for approval will be clearly defined in the course materials.

### Minimum Standards

These standards were intended to convey to organizations and individuals the **minimum body of knowledge that must be included in a short, 2-3 hour, paddlesports education course.** Instructors, text authors, paddlesports professionals, and organizations are encouraged to go beyond the standards when in their judgment and experience it assists the paddler to boat more safely. In addition, the standards are intended to show just the minimum content of the course materials, not the sequence or organization of the material. Although the standards are organized in a particular way, course/text developers are welcome to organize their information as they prefer.

### Accuracy Requirement

It is mandatory that all information contained in course materials receiving NASBLA sanctioning be factually correct.

**Standards Revision**

Proposed revisions or additions to the Paddlesports Education Standards will be reviewed and considered by the NASBLA Education & Awareness Committee in the same manner as the National Boating Education Standards. Adoption of any changes must be approved by the NASBLA membership at their annual conference each year.

**Required Materials for NASBLA Review**

It is assumed that the standards will be met in various ways and that materials submitted to NASBLA may include course texts, supplemental texts, instructor guidelines or outlines, and handout materials. State-specific and localized information that is relevant to the particular course audience may be provided through any of these media (see standard 8.2 for the required content of this material). To assist in the determination of whether the standards are met, the complete set of application materials, including the final exam, UmustU be included in the package of materials submitted to NASBLA for review.

## **PADDLESPTS EDUCATION STANDARDS**

### **The Boat**

#### **Standard P:1.1 – Boat Capacities**

The course will describe how to determine acceptable loading capacity and how to properly balance the load.

Rationale – Overloading a small hand-powered boat or distributing the load improperly increases the likelihood of capsizing. While many capsizes cause no injury, capsizing is a leading contributor to boating fatalities. If a boat does not have a capacity plate, refer to the owner’s manual, the manufacturer’s website, or call the company for capacity recommendations.

#### **Standard P:1.2 – Boat Registration Requirements**

The course will describe state-specific registration requirements, including:

1. Registration requirements, if any;
2. Requirements for hull identification number;
3. Requirements for registration documentation and external display of numbers;
4. Reciprocity regulations.

Rationale - There are no federal requirements for registration of canoes and kayaks. State laws regarding paddleboat registration vary, as do rules for launch permits and other requirements. Paddlers should be informed about the specific requirements in their state, and in states where they plan to take their boats. If a motor is added, rules for motorized craft apply, including registration.

### **Boating Equipment**

#### **Standard P:2.1 – Personal Flotation Device**

The course will describe U.S. Coast Guard-approved personal flotation devices appropriate for paddlesports and emphasize the importance of wearing a PFD while paddling due to the elevated risk of capsizing in a small boat. The course will also describe carriage requirements and the importance of maintaining PFDs in serviceable condition.

Rationale – U.S. Coast Guard statistics consistently show that at least 85% of the people who die in boating accidents were not wearing a PFD. It is particularly important for paddlers to wear a lifejacket because of the increased likelihood of capsizing. The course should emphasize the availability of comfortable, lightweight PFDs that lend themselves well to paddling activities, particularly Type III and Type V, and should inform paddlers to always check the label of any PFD for to determine its suitability for the intended activity.

**Standard P:2.2 – Navigation Light Equipment**

The course will cover the requirement to carry a flashlight and/or flare-up light for use at night and in periods of restricted visibility.

Rationale – Small boats can be difficult for those in bigger boats to see, especially at night. Paddlers should know the specific state requirements for the waters where they plan to boat.

**Standard P:2.3 – Sound Signaling Equipment**

The course will cover the advisability of carrying a whistle and, for certain waters, a foghorn.

Rationale – Sound signaling devices help paddlers summon help when needed, and can be used in conditions of low visibility to help prevent a collision by letting other boaters know where you are. Paddlers should know the specific state requirements for the waters where they plan to boat.

**Standard P:2.4 – Visual distress signals**

The course will describe the requirement for carrying visual distress signals such as a signal mirror and flares for signaling for help if applicable.

Rationale – Visual distress signals provide an effective means for paddlers to alert others of the need for assistance. Paddlers should know the specific state requirements for the waters where they plan to boat.

## **Trip Planning and Preparation**

### **Standard P:3.1 – Checking Local Weather and Water Conditions**

The course will describe how to make informed paddling decisions based on forecasted local weather and water conditions. It will also describe dangerous weather conditions such as strong winds, storms, lightning, hurricanes and fog and their importance in trip planning.

Rationale –Paddlers must be able to use weather information to make judgments about probable water conditions and decisions about whether to continue with the float plan. Often, poor weather in combination with other unexpected emergencies accelerates the danger to paddlers.

### **Standard P:3.2 – Checking Local Hazards**

The course will describe how to obtain information about local hazards that may impede a paddling trip.

Rationale – A lack of understanding of local conditions can place paddlers in very dangerous situations. Low-head dams, rapids, strainers, currents, bridges, heavy boating traffic and tides can all cause serious paddling accidents and should be avoided. Open water hazards such as commercial shipping channels may not be obvious to inexperienced paddlers

### **Standard P:3.3 – Filing a Float Plan**

The course will describe the importance of notifying someone of your boating plans and the basic information that should be included.

Rationale – In the event of an accident, rescue authorities can respond much faster and in a more focused way if a float plan has detailed information about the group, the paddlers' route, the planned destination, the time of departure and expected return, and a description of the boats in the group.

### **Standard P:3.4 – Preventative Maintenance**

The course will communicate the need for regular inspection and maintenance of the boat and paddling equipment, including:

1. Inspecting the boat for water tightness, including the hull, gaskets, and hatch covers.

2. Patching holes with a material suited to the composition of the hull.
3. Cleaning the boat with plain water or a non-phosphate detergent.
4. Storing the boat off the ground and out of the sun.
5. Checking and tightening screws and deck fittings.
6. Treating the hull with an appropriate UV inhibitor if recommended by the manufacturer.
7. Checking flotation air bags to be sure they hold air.
8. Checking lines and grab handles for fraying.
9. Checking paddles for damage.

Rationale – Keeping your canoe or kayak in good condition can prevent leaks that could impede your trip. Particularly for sit-on-top boats, hull integrity and water tightness are crucial. Seams can fail, leading to leakage and dramatically affecting boat performance / flotation.

#### **Standard P:3.5 – Transporting**

The course will describe proper procedures for transporting a canoe or kayak on top of a car to prevent accidents and property damage, including:

1. Making sure the car top rack is strong and securely attached to the vehicle.
2. Cushioning the gunnels to avoid abrasion.
3. Using proper tie-downs and knots.
4. Positioning a vehicle at the take-out point for one-way trips.

Rationale – Most kayaks and canoes are transported to and from paddling venues on the top of a vehicle. Courses should emphasize that drivers are responsible for anything they attach to their car. Properly securing the boat to the car top is essential to prevent accidents. Paddlers should be urged to use bow and stern lines to attach the boat to the car, and lines perpendicular to the midline to attach the boat to the rack.

#### **Standard P:3.6 - Pre-Departure Checklist and Passenger Communication**

The course will describe the importance of using a pre-departure checklist and conducting a safety discussion with all in the paddling party. Hand signals should be reviewed. The skills of all paddlers in the group should be assessed as the route and pace are discussed. Gear should be secured in the boats to avoid loss in case of capsizing. The pre-departure checklist should help each paddler ensure that he/she:

1. Is wearing a lifejacket.
2. Has attached a whistle to the lifejacket.
3. Is wearing sunscreen and a visored hat or helmet.
4. Is properly dressed for the water temperature and conditions.

Rationale – Paddling in a group necessitates clear communication among the parties. Reviewing plans for the trip and safety precautions can reduce accidents and increase the efficiency of rescue operations in the event of an emergency.

### **Marine Environment**

#### **Standard P:4.1 – Environmental Laws and Regulations**

The course will describe environmental laws and regulations regarding littering and will emphasize responsible practices such as “leave no trace,” avoidance of wildlife, and use of plain water or non-phosphate detergents as cleaning agents.

Rationale – Taking steps to protect the environment when paddling is important to safeguard people’s health, wildlife, and the water resource itself. Careless disposal of trash can ruin the aesthetic beauty of the area and allow birds and wildlife to become entangled in discarded fishing line, plastic rings and other refuse.

### **Safe Boat Operation**

#### **Standard P:5.1 - Operator Responsibilities**

The course will describe a paddler’s ultimate responsibility for his or her personal safety, the safety of anyone else on board and all activity aboard the boat. This responsibility extends to other water users and includes but is not limited to: refraining from careless, reckless, or negligent operations on the water, abiding by other general boater courtesies, and observing and operating in accordance with homeland security measures.

Rationale – Paddling is safer in numbers. This ensures that someone will be available to help in the event of a mishap. However, it is every paddler’s responsibility to know their own skill level and to avoid weather or water conditions that are beyond their abilities. Paddlers should know and practice self-rescue techniques.

#### **Standard P:5.2 – Influence of Drugs and Alcohol on Boat Operation**

The course will 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 – It is illegal to operate a boat while under the influence of alcohol or drugs. This is true of hand-powered craft like canoes and kayaks, as well as powerboats. Alcohol impairs balance and judgment, which are critical to avoiding capsizing in a small craft.

### Standard P:5.3 – Navigation Rules

The course will assist the paddler in encountering typical navigational rules situations, including:

1. Paddling as close to shore as is safe, avoiding channels used by larger craft.
2. Crossing the channel as a group.
3. Avoiding collision with power craft by keeping a sharp lookout, using light and sound signals to identify your presence, and maneuvering out of the way.
4. Turning the bow into the wake of powerboats to help prevent capsizing.
5. Sharing water features such as eddies and rapids with other paddlers.
6. Observing and operating in accordance with homeland security measures by keeping a safe distance from military and commercial ships at sea and in port and observing all restrictions in security zones.
7. Rendering assistance to other paddlers in the event of a mishap, to the extent that you can do so without danger to yourself or your boat.
8. Disclaimer:

*“The navigation rules contained in this course summarize basic navigation rules for which a paddler 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 powered vessels and other watercraft. It is the responsibility of a boat operator to know and follow all of the navigation 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.”*

*“For a complete listing of the navigation rules, refer to the document “Navigation Rules of the Road” published by the U.S. Coast Guard (COMDTINST 16672.2 Series) and available through the U.S. Government printing office or on the web at <http://www.uscg.mil/vtm/navrules/navrules.pdf>. For State specific navigation requirements, refer to the state laws where you intend to boat.”*

Rationale – On waterways that are shared by power craft and paddlers, paddlers are at greater risk because their boats are small and difficult to see. Paddlers should not assume that a powerboat operator sees them, much less that the powerboat can maneuver to avoid them. Paddlers must be alert to others on the water and take action to avoid them.

**Standard P:5.4 – Aids to Navigation**

The course will describe the U.S. Aids to Navigation (USATONS) as they are relevant to paddlers, including:

1. Understanding channel markers.
2. Understanding regulatory markers, such as those marking dams, submerged objects and other hazards, and homeland security restrictions.

Rationale – Aids to Navigation are the “road signs” of the water. They assist boaters in navigating safely from place to place. They are particularly useful to paddlers in identifying known hazards such as low-head dams and in marking channels used by larger boats.

**Standard P:5.5 – Boarding, Exiting and Securing the Boat**

The course will describe how to safely board and exit a paddlecraft, emphasizing the need to maintain three points of contact. For kayaks, the course also should address proper fit so that entry into and exit from the boat is not impeded. The course will explain how to secure the craft at the shore to prevent it from drifting away.

Rationale: Boarding and exiting a paddlecraft can be challenging, especially for novice paddlers. Securing the boat is an essential skill.

**Emergency Preparedness****Standard P:6.1 – Rendering assistance**

The course will describe methods of and tools for assisting a paddler in difficulty.

Rationale – Falling in the water is to be expected in paddlesports. Paddling in a group is highly recommended so that paddlers can assist one another in case of a capsize or a fall into the water. Every paddler should carry rescue equipment such as ropes and throw bags and should know how to use them properly. Paddlers should also know how to tow or “bulldoze” a swimmer.

**Standard P:6.2 – Capsizing/Falls Overboard**

The course will describe how to prevent and respond to these emergencies. The prevention recommendations will include at least the following: stay centered and low,

avoid standing and sudden moves, maintain three points of contact, never overload, balance your load, and avoid rough water. The responding procedures will include at least the following: 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.

Rationale – Capsizing and falls overboard emergencies are consistently the leading causes of boating fatalities. Overloading and passenger movement on smaller craft contribute to most of the capsizing/falls overboard accidents. This issue highlights the need for boater education courses to stress the proper response/action in a capsizing/ falls overboard emergency.

#### **Standard P:6.3- Cold Water Immersion and Hypothermia Prevention**

The course will describe the dangers of cold-water immersion and hypothermia, including prevention, the physiological impact of cold-water immersion (initial reaction, short-term immersion/swimming failure, long-term immersion/immersion hypothermia, and post-rescue collapse), and treatment for hypothermia.

Rationale – Paddlers are at risk of dying when involved in a cold-water immersion accident. The body loses heat 25 times faster in cold water than in than cold air, and 35 times faster if the person is moving vigorously, as when swimming or struggling in the water. Sportsmen who hunt or fish from a canoe in cold weather should dress for both air and water temperatures, and be aware of movements that cause capsize or a fall over the side. If a person falls into the water, every effort should be made to rescue him/her as quickly as possible. The victim will most likely be unable to assist in his/her own rescue, so a plan should be in place for how to rescue someone who has fallen in the water. Paddlers should know how to recognize and treat hypothermia.

#### **Standard P:6.4 - Heat-related Illnesses**

The course will describe various illnesses that may result from overexertion in hot conditions, including heat exhaustion, heat cramps, and heat stroke as well as dehydration and water intoxication (excess water intake). The course will describe symptoms and treatment of these heat-related illnesses.

Rationale: Because they power their vessels through their own muscular effort, paddlers should be aware of the dangers of becoming overheated and know how to recognize and treat the symptoms of heat-related illnesses.

**Standard P:6.5- Accident Reports**

The course will describe what kinds of boating accidents require an accident report as well as how, when and where to file the report.

Rationale – Accidents reports are legally required when the accident involves:

1. Loss of life;
2. Personal injury requiring medical attention beyond first aid;
3. Property damage beyond federal or state thresholds; or
4. Complete loss of the boat.

Paddlers should know and comply with the law regarding accident reporting, including being aware of where to send an accident report in the states in which they boat. Accident reports provide information that can assist boating safety professionals in identifying and addressing the most serious concerns to boater safety.

**Standard P:6.6 – Boating Accident Report Form**

The course will include a sample accident report form, which can be included in the textbook or as a separate handout.

Rationale – U.S. Coast Guard reports indicate that only five to ten percent of non-fatal boating accidents are reported. Every effort to assist boaters to report accidents may increase compliance with the reporting requirements.

**Other Water Activities****Standard P:7.1 – Hunting and Fishing**

The course will inform people who hunt and fish from hand-powered boats that they are paddlers and need to follow safe paddling practices. Information must be provided about accident risks relevant to this group of paddlers.

Rationale – According to a study by the American Canoe Association, roughly half of those killed in a canoeing or kayaking accident (1996-2002) were fishing at the time the accident occurred. More hunters die each year from drowning and the effects of cold-water immersion than from gunshot wounds. Many accidents occur when a hunter reaches for a decoy, an angler leans over the gunnels for a fish, a person falls over the side while standing up, or a boat capsizes from an unbalanced load. An excited hunting dog can also unbalance the load and capsize a small canoe.

## State-Specific Boating Information

### Standard P:8.1 – Continuing Education

The course will outline the need for additional education on boating safety and paddling skills, including in-the-water instruction, and for staying informed of changes in boating safety requirements.

Rationale – Each type of paddlecraft handles differently. It is important for paddlers to become skillful at handling their boat and to understand their responsibility to keep up with new developments in boating laws and safety information. Boating equipment and safety information is constantly changing and improving. Paddlers who stay abreast of these developments will improve their own paddling enjoyment and the safety of all boating participants. Paddlers who add a sail or motor to their boat will need to be familiar with requirements for those types of vessels.

### Standard P:8.2 – State-Specific Boating Information

The course will contain, as part of the text or as a separate handout, state-specific information in regard to boating laws and regulations, and local boating conditions. The course will include as applicable:

- P:8.2.1 – registration and titling requirements, including number of years registration decals are valid, expiration date of registration, decal placement;
- P:8.2.2 – laws for required wearing of PFDs for children and/or for certain types of boats;
- P:8.2.3 – additional equipment requirements such as bailing devices, distress signals, lights;
- (P:8.2.4 was intentionally omitted)*
- P:8.2.5 – litter laws;
- P:8.2.6 – requirements for mandatory education, licensing, rental operations, and proficiency test certifications;
- P:8.2.7- adult supervision requirements for children;
- P:8.2.8 – laws for unsafe, reckless or negligent behavior
- P:8.2.9 – boat operations in restricted zones;
- P:8.2.10- paddling under the influence, implied consent, and BAC levels;
- P:8.2.11- law enforcement authority and obligation of paddlers to comply;
- P:8.2.12- boat accident reporting requirements;
- P:8.2.13- state approved boating accident report form;
- P:8.2.14- other laws/regulations by the state boating regulator.

Rationale – Although course materials intended for national distribution do not need to include state-specific information, it is assumed that sponsoring boating organizations have procedures in place to assure that instructors provide supplemental materials and instruction to meet the intent of this requirement.

### **Course Format and Testing Requirements**

#### **Standard P:9.1 – Boat Operator Knowledge Course Formats**

The course may be submitted for NASBLA review in any format that meets the standards as long as it can be easily reviewed. Courses may include classroom instruction, distance learning or self-study programs. However, paddling knowledge courses are best offered in conjunction with paddling skill courses on the water.

Rationale: It is important for paddlers to understand both basic boating safety and the safe handling of their craft. The American Canoe Association's review of U.S. Coast Guard accident descriptions indicates that a large portion of those killed in canoe or kayak accidents had little or no paddling experience, lacked fundamental paddling skills, and were unaware of boating safety messages.

#### **Standard P:9.2 – Boat Operator Knowledge Exams**

In order to receive NASBLA sanctioning, all exams must be submitted for review, whether administered as part of a course of study or as an independent exam.

P:9.2.1 – The exam must be well designed and comprehensive in covering NASBLA's standards for paddlesports.

Rationale: The exam should measure paddler knowledge equally well regardless of how the knowledge was obtained.

P:9.2.2 – Each exam submitted for review must be accompanied with a plan that explains how the test administrator will seek to maintain exam integrity. The plan must address security issues commensurate with the purpose of the test and perceived opportunity to commit exam fraud.

Rationale: Test security should be appropriate for the exam purpose. Measures associated with exams conducted for NASBLA-approved general boating education may be included as necessary.

*P:9.2.3* – The exam must be well-designed and comprehensive. The NASBLA testing standards relevant to paddlesports exams are:

**TESTING STANDARD P:1**

Paddlesports examinations should comply with the test construction guidance for NASBLA-approved general boating safety examinations.

**TESTING STANDARD P:2**

Each test item must be documented in at least one reference from the following list:

Recognized Reference List for Paddlesports Exam Items

1. Navigation Rules (U.S. Coast Guard)
2. Federal Requirements and Safety Tips for Recreation Boats (U.S. Coast Guard)
3. 33 Code of Federal Regulations (CFR)
4. Boating Safety Circulars (U.S. Coast Guard)
5. ATSM Standard F1739-96 “Standard Guide for Performance of a Water Rescuer”
6. Boating Accident Statistics and Reports (U.S. Coast Guard)
7. Information contained on U.S. Coast Guard web site, in particular Office of Boating Safety
8. America’s Boating Course
9. Canoeing and Kayaking (American Red Cross)
10. Canoeing and Kayaking (American Canoe Association, adapted from Ohio Department of Natural Resources)
11. Essentials of Kayak Touring (American Canoe Association)
12. Essentials of River Kayaking (American Canoe Association)
13. Introduction to Paddling: Canoeing Basics for Lakes and Rivers (American Canoe Association)
14. Paddle Safe, Paddle Smart brochure series (American Canoe Association) - includes: Paddler's Safety Checklist, Cold Water Survival, Practices Ethics and Conduct, River Paddler's Guide to Rescue, Rules of the Road & Wear It! Life Jackets Matter
15. American Canoe Association Instructor's Manual (American Canoe Association)
16. SmartStart for Paddlers Presentation Kit (American Canoe Association)

**TESTING STANDARD P:3**

The examination shall consist of 30 questions, 25 of which cover Standards P:1 through P:7 and five additional questions to cover the state-specific requirements (Standard P:8).

- Standard P:1 – 5% or 1-2 questions
- Standard P:2 – 15% or 3-4 questions
- Standard P:3 – 20% or 5-6 questions
- Standard P:4 – 5% or 1-2 questions
- Standard P:5 – 25% or 7-8 questions
- Standard P:6 – 25% or 7-8 questions
- Standard P:7 – 5% or 1-2 questions
- Standard P:8 – 5 additional questions

**Recommended Boating Safety Information**

The following items contain recommended course content but are not considered part of the minimum standards for boater education courses.

**P:R1 – Boat Types and Uses**

The course should describe the common types of recreational paddlecraft and their performance in various types of boating situations.

Rationale - 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.

**P:R2 - Boating Terms**

The course should describe commonly used boating terms relative to paddlers in addition to those terms required to follow the Navigation Rules. (see also standard P:5.3).

Rationale - 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.

### C.3. BSR/NASBLA 103.1-201X, Supplement – Basic Boating Knowledge – Water-Jet Propelled Boats

Standard Number: BSR/NASBLA 103.1- 201X  
Panel DRAFT– For Public Comment

Previous Version - None



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](mailto:esp@nasbla.org).

## Proposed American National Standard

(Draft for Public Review and Comment – Not yet approved.)

### BSR/NASBLA 103.1-201X: Supplement - Basic Boating Knowledge – Water-Jet Propelled Boats



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*Produced under a grant from the Sport Fish Restoration and Boating Trust Fund, administered by the U.S. Coast Guard.*

BSR/NASBLA 103.1-201X:  
Panel Draft

## 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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NOTE: Membership on a panel or committee shall not in and of itself constitute an endorsement of the National Association of State Boating Law Administrators (NASBLA) or any document developed by the panel or committee on which the member serves.

This draft was developed under procedures of essential requirements for the American National Standards Institute. The Panel that approved the draft was balanced based on interest categories to ensure that individuals representing those with material interests in the standard had an opportunity to participate.

This draft, which is the result of extended and careful consideration of available knowledge and experience on the subject, is intended to provide minimum performance requirements.

National Boating Education Standards Panel meetings are open to the public. All contact regarding standards activity, interpretations, or meeting attendance should be directed to NASBLA ESP Staff at [esp@nasbla.org](mailto:esp@nasbla.org).

**REQUEST FOR INTERPRETATIONS**

Upon written request, the Education Standards Panel will render an interpretation of any requirement of the standard. The request for interpretation should be clear and unambiguous. Requests should be presented to the ESP in a manner in which they may be answered in a 'yes' or 'no' fashion.

The Panel reserves the right to reconsider any interpretation when or if additional information which might affect it becomes available to the ESP. Persons aggrieved by an interpretation may appeal to the Panel for reinterpretation.

**REQUEST FOR APPEALS**

Any directly and materially affected interest who believe they have been or will be adversely affected by a Standard, or by the lack thereof, shall have the right to appeal substantive or procedural actions or inactions of the National Boating Education Standards Panel per Part XII of the [Panel Rules](#) (latest version) posted at [www.nasbla.org](http://www.nasbla.org) under Education>Education Standards Panel. As stated in the Rules, prior to the filing of a formal appeal, communication of the alleged actions or inactions, with mutual effort to informally resolve the dissatisfaction, shall be attempted and documented.

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BSR/NASBLA 103.1-201X  
Panel Draft

**Title: BSR/NASBLA 103.1-201X: Supplement - Basic Boating Knowledge – Water-Jet Propelled Boats**

**Scope:** This supplement applies to basic boating knowledge education and proficiency assessment in the United States, U.S. Territories, and the District of Columbia.

**Purpose:** This document provides supplementary content for BSR/NASBLA 103-201X: 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. Developed for optional use with BSR/NASBLA 103-201X: Basic Boating Knowledge – Power, this supplement contains the basic knowledge elements that a beginner (entry-level) operator should have in order to safely operate a water-jet propelled watercraft.

**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 Personal Watercraft (PWC) Features and Performance****1.1 Specifications**

- 1.1.1 The course shall identify, describe and, where appropriate, illustrate the watercraft's:
- 1.1.1.1 model year; make (manufacturer) of vessel; engine type (e.g. four stroke, two stroke or electric) and
  - 1.1.1.2 towing capacity and related information.

**1.2 Water-jet Propelled Propulsion**

- 1.2.1 The course shall identify, describe and illustrate how a water-jet propelled propulsion system works.

**1.3 PWC Hulls**

- 1.3.1 The course shall describe the purpose, functions and differences of PWC hull characteristics, operational capability and passenger and weight capacity of:
- 1.3.1.1 standup model (one-passenger);
  - 1.3.1.2 sport model (up to two passengers);
  - 1.3.1.3 run about model (up to three-passenger); and
  - 1.3.1.4 sport-utility vessel (up to four passengers).

## 2.0 Specific PWC Topics

### 2.1 Personal Watercraft

#### 2.1.1 The course shall identify, describe and, where appropriate, illustrate:

- 2.1.1.1 How to start and turn-off the vessel's engine
- 2.1.1.2 Stopping the vessel's motion
- 2.1.1.3 Functions of off throttle steering
  - 2.1.1.3.1 Definition of "Off-throttle steering," and
  - 2.1.1.3.2 How to determine if feature is on vessel
  - 2.1.1.3.3 Potential for operator confusion of off-throttle steering feature.
- 2.1.1.4 Slow (idle speed) operation and maneuvering
- 2.1.1.5 Braking (for those vessels so equipped)
- 2.1.1.6 Reverse (for those vessels so equipped)
- 2.1.1.7 Neutral (for those vessels so equipped)
- 2.1.1.8 Mooring and line attachment(s)
  - 2.1.1.8.1 Docking,
  - 2.1.1.8.2 Anchoring, and
  - 2.1.1.8.3 Towing.
- 2.1.1.9 Towing activities
  - 2.1.1.9.1 Capacity, and
  - 2.1.1.9.2 Legal requirements for observer and seating placement.
- 2.1.1.10 Passenger placement and special considerations
- 2.1.1.11 Fueling and fuel management
  - 2.1.1.11.1 Issues with fuel containing ethanol
- 2.1.1.12 Shallow water operation
- 2.1.1.13 Specialized clothing, gear and equipment
  - 2.1.1.13.1 Appropriate U.S. Coast Guard approved life jacket wear, and
  - 2.1.1.13.2 Other personal protective gear
    - 2.1.1.13.2.1 Life jacket use when swimming near vessel (WEAR IT!),
    - 2.1.1.13.2.2 Gloves,
    - 2.1.1.13.2.3 Eye protection, and
    - 2.1.1.13.2.4 Foot protection.
- 2.1.1.14 Digitized ignition keys
  - 2.1.1.14.1 Use and importance of Lanyards;
  - 2.1.1.14.2 Other remote vessel starting / stopping / operational devices;
  - 2.1.1.14.3 Use of an aftermarket rather than original equipment

manufacturer; and

2.1.1.14.4 (OEM) lanyard and potential for resulting operational problems.

2.1.1.15 Capsizing awareness and issues

2.1.1.15.1 Stern wake,

2.1.1.15.2 Environmental conditions (water state & wind),

2.1.1.15.3 Turning,

2.1.1.15.4 Occupant balance points, and

2.1.1.15.5 Righting a capsized watercraft.

2.1.1.15.1 Identifying the direction to turn capsized vessel

2.1.1.16 Boarding and disembarking

2.1.1.16.1 Use of retractable rear step, if so equipped, to board a PWC and its stowage;

2.1.1.16.2 Boarding and disembarking vessel safely; and

2.1.1.16.3 Maintaining manufacturer's recommended minimum water depth.

2.1.1.17 Modifications

2.1.1.17.1 Other recreational activity such as fishing

2.1.1.18 High performance PWC characteristics

2.1.1.18.1 High speed operational control issues, and

2.1.1.18.2 Dangers of operating beyond skill and ability of operator.

### 3.0 Specific Jet-Boat Watercraft Topics

#### 3.1 Required Maintenance

3.1.1 The course shall describe a boat operator's responsibility of required maintenance on the following:

3.1.1.1 Jet pump

3.1.1.1.1 Impeller wear,

3.1.1.1.2 Reverse bucket,

3.1.1.1.3 Bowl and stator vanes, and

3.1.1.1.4 Shift linkage.

3.1.1.2 Drive Train

3.1.1.2.1 Linkage

3.1.1.2 Engine

3.1.1.2.1 Hydro-lock concerns, and

3.1.1.2.2 Exhaust system.

3.1.1.3 Hull

## **3.2 Operational Characteristics and Considerations**

### **3.2.1 This course shall explain:**

#### **3.2.1.1 Situational awareness**

#### **3.2.1.2 Start-up, shut down and operating controls**

##### **3.2.1.2.1 Operational controls and characteristics;**

##### **3.2.1.2.1.1 Single control, and**

##### **3.2.1.2.1.2 Dual control.**

##### **3.2.1.2.2 Engine interruption cut-off lanyard; and**

##### **3.2.1.2.3 Cold weather considerations.**

#### **3.2.1.3 Understanding the tachometer**

#### **3.2.1.4 Carbon Monoxide Risk**

#### **3.2.1.5 Constant Motion when Engine Is Running (Transmission In Neutral)**

#### **3.2.1.6 Operation at Slow Speeds and Stopping**

#### **3.2.1.7 Operation in Shallow Water**

#### **3.2.1.8 Clearing intake grate blockages**

#### **3.2.1.9 Towing Issues**

##### **3.2.1.9.1 Mooring and line attachments**

#### **3.2.1.9.2 Passenger / Operator Placement**

##### **3.2.1.9.2.1 Twin Engines,**

##### **3.2.1.9.2.2 Hull Design,**

##### **3.2.1.9.2.3 Fueling with a portable fuel tank, and**

##### **3.2.1.9.2.4 Aquatic Invasive Species.**

## **3.3 Steering system and steerage**

### **3.3.1 This course shall describe the basic safe boating operation steering system for a tiller controlled jet-boat.**

**Appendix D – Chicago Harbor Safety Committee Safety Recommendations and Guide to Rules and Regulations**



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**Safety Recommendations  
and  
Guide to Rules and  
Regulations**

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# Chicago Harbor Safety Committee Safety Recommendations and Guide to Rules and Regulations

April 2016

After several years of extensive dialogue with Chicago Harbor Safety Committee (CHSC) stakeholders, waterway users and governmental authorities, comprehensive research, observation and assessment of the Chicago River and its users, the CHSC Board of Directors has identified and developed recommendations that will improve operational safety and promote and sustain the goals of marine safety for all users of the Chicago River.

These recommendations are provided to assist users of the navigable waters in the Chicago harbor and river system as best practices. They do not affect applicable laws or regulations. All vessel operators remain obligated to familiarize themselves with and follow applicable laws and regulations as they are in force at the time the vessel is operated. The Chicago Harbor Safety Committee provides references to laws and regulations as a convenience and does not provide legal advice.

## ALL VESSELS/GENERAL

### *Rules and Regulations*

- All vessels should displace a minimum wake at all times where practicable (with the exception of responding to an emergency) and shall comply with 10-40-261 of the Municipal Code of Chicago<sup>1</sup>
- All vessel operators shall comply with U.S. Coast Guard (USCG) Navigation Rules-Inland<sup>2</sup>
  - All vessels shall so far as practicable avoid crossing traffic lanes, but if obliged to do so shall cross as nearly as practicable at right angles to the general direction of traffic flow
  - No vessel shall overtake another vessel unless acknowledged and confirmed by VHF marine radio or whistle signal
- All vessels must carry at least one USCG-approved wearable PFD for each person on board and must be of the appropriate size of the wearer<sup>3</sup>

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<sup>1</sup> City of Chicago, *Municipal Code of Chicago Restrictions on Wake of Vessels* (Added Coun. J. 12-10-97, p.59008; Amend Coun. J. 7-29-98, p. 75119; Amend Coun. J. 11-8-12, p. 38872, § 193), <http://chicagocode.org/10-40-261>

<sup>2</sup> U.S. Department of Homeland Security, *USCG Navigation Rules International-Inland*, COMDTINST M16672.2D, <http://www.navcen.uscg.gov/pdf/navrules/navrules.pdf>

<sup>3</sup> State of Illinois, *Illinois Compiled Statutes (625 ILCS 45/) Boat Registration and Safety Act*, <http://ilga.gov/legislation/ilcs/ilcs4.asp?DocName=062500450HArt.+II&ActID=1826&ChapterID=49&SeqStart=700000&SeqEnd=1300000>

- In accordance with 625 ILCS 45/5-21, persons riding on the decking over the bow or stern, gunwale or tops of seat backs of a motorized vessel while underway unless within guard rails is prohibited <sup>4</sup>
- All persons operating vessels shall comply with 46 USC §2302(a)<sup>5</sup> (Monetary penalties are subject to Federal Civil Penalties Inflation Adjustment Act of 1990.) which states:
  - A person operating a vessel in a negligent manner or interfering with the safe operation of a vessel, so as to endanger the life, limb or property of a person is liable to the United States Government for a civil penalty of not more than \$5,000 in the case of a recreational vessel, or \$25,000 in the case of any other vessel.
- No person shall operate a vessel while under the influence of alcohol or a dangerous drug<sup>6</sup>
  - No person under the age of 21 shall be permitted to purchase or consume alcohol on board any vessel
  - Illegal drugs are prohibited on all vessels

#### Communications

- All businesses should establish a dedicated direct phone number to be shared with other businesses and waterway users
- All persons operating a vessel, or group leader in the case of a HPC group, should carry a VHF marine radio and understand its proper use including the following: monitoring channel 16; hailing a vessel on channel 16; switching to a working channel to converse; and accurate communication of security calls including name of vessel, group or company, location and direction
- Mobile devices should not be used by persons operating vessels while underway except in the event of an emergency

#### Navigation

- All vessels should keep clear of other vessels exiting and entering the Chicago Lock
- USACE Chicago Lock tenders should announce to inbound boaters that: *“In accordance with 10-40-261 of the Municipal Code of Chicago, the Chicago River is a no wake zone and is patrolled by the Chicago Police Marine Unit.”*

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<sup>4</sup> State of Illinois, *Illinois Compiled Statutes (625 ILCS 45/5-21) Boat Registration and Safety Act*, <http://www.ilga.gov/legislation/ilcs/documents/062500450K5-21.htm>

<sup>5</sup> United States Government Publishing Office, *Code of Federal Regulations Title 46-Shipping Chapter 23 §2302*, <http://www.gpo.gov/fdsys/pkg/USCODE-2011-title46/pdf/USCODE-2011-title46-subtitleII-partA-chap23-sec2302.pdf>

<sup>6</sup> United States Government Publishing Office, *Code of Federal Regulations Title 33- Navigation and Navigable Waters Chapter I Subchapter F §95*, <http://www.ecfr.gov/cgi-bin/text-idx?rgn=div5&node=33:1.0.1.6.46>

### Other

- Proposed new operations that may affect navigation should make a presentation to the Committee to be reviewed for safety concerns before submitting permit applications under the Regional Permit Program and the City of Chicago Harbor Permit Program. This does not include bridge operations or maintenance.
- Swimming should not be permitted in the Chicago River where there is commercial navigation

## BAREBOAT CHARTERS

### Rules and Regulations

- Entities conducting bareboat charter operations shall comply with the requirements of the Passenger Vessel Safety Act of 1993<sup>7</sup>
- All persons operating vessels shall comply with 46 USC §2302(a)<sup>8</sup> (Monetary penalties are subject to Federal Civil Penalties Inflation Adjustment Act of 1990.) which states:
  - A person operating a vessel in a negligent manner or interfering with the safe operation of a vessel, so as to endanger the life, limb or property of a person is liable to the United States Government for a civil penalty of not more than \$5,000 in the case of a recreational vessel, or \$25,000 in the case of any other vessel.
- All vessels shall comply with 33 CFR Parts 175 thru 187<sup>9</sup>
- All vessels shall be in compliance with State of Illinois registration, licensing and inspection requirements in 625 ILCS 45<sup>10</sup> and Administrative Rule 2080<sup>11</sup>
- All vessels shall be in compliance with the Illinois Boat Registration and Safety Act 625 ILCS 45<sup>12</sup>
  - No person shall operate a vessel while under the influence of alcohol or a dangerous drug
  - Illegal drugs are prohibited on all vessels

<sup>7</sup> United States Coast Guard, *NVIC 7-94 Guidance on the Passenger Vessel Safety Act of 1993*, September 30, 1994, <http://www.uscg.mil/hq/cg5/nvic/pdf/1994/n7-94.pdf>

<sup>8</sup> United States Government Publishing Office, *Code of Federal Regulations Title 46-Shipping Chapter 23 §2302*, <http://www.gpo.gov/fdsys/pkg/USCODE-2011-title46/pdf/USCODE-2011-title46-subtitle1-partA-chap23-sec2302.pdf>

<sup>9</sup> United States Government Publishing Office, *Code of Federal Regulations Title 33- Navigation and Navigable Waters Chapter I Subchapter S §175-187*, <http://www.ecfr.gov/cgi-bin/text-idx?SID=1a91c0f98b72c6f86937e8240b27ec04&mc=true&tpl=/ecfrbrowse/Title33/33CISubchapS.tpl>

<sup>10</sup> State of Illinois, *Illinois Compiled Statutes (625 ILCS 45/) Boat Registration and Safety Act*, <http://www.ilga.gov/legislation/ilcs/ilcs3.asp?ActID=1826&ChapterID=49>

<sup>11</sup> State of Illinois, *17 Illinois Administrative Code Chapter I, Sec. 2080 Operation of Watercraft Carrying Passengers for Hire on Illinois Waters*, August 24, 2006, <https://www.dnr.illinois.gov/adrules/documents/17-2080.pdf>

<sup>12</sup> State of Illinois, *Illinois Compiled Statutes (625 ILCS 45/) Boat Registration and Safety Act*, <http://ilga.gov/legislation/ilcs/ilcs4.asp?DocName=062500450HArt.+II&ActID=1826&ChapterID=49&SeqStart=700000&SeqEnd=1300000>

- All vessels must carry at least one USCG-approved Type I, II or III PFD for each person on board and must be of the appropriate size of the wearer
- All children under the age of 13 must wear a PFD on vessels less than 26 feet in length when underway, unless they are below decks in an enclosed cabin
- Persons under the age of 10 may not operate any motorized vessel, including personal watercraft

#### *Other*

- Bareboat charters must be legally authorized by the USCG, Chicago Park District, City of Chicago and/or the Illinois Department of Natural Resources where applicable
- Documentation that there is a legal agreement between the charterer and the bareboat charter company should be made available to law enforcement entities upon request
- All vessels shall display appropriate Livery License and/or Boat Rental decal

## **COMMERCIAL VESSELS**

#### *Rules and Regulations*

- Certain Commercial Towing Vessels shall comply with 46 CFR Parts 136 thru 144 (Subchapter M) where applicable (currently NPRM)<sup>13</sup>
- Credentialed mariners and crewmembers are subject to 46 CFR Part 16- Chemical Testing<sup>14</sup> and 46 CFR Part 4, Subpart 4.06- Mandatory Chemical Testing Following Serious Marine Incidents Involving Vessels in Commercial Service<sup>15</sup>
- USCG inspected small passenger vessels shall be in compliance with 46 CFR Parts 90 thru 139 (Subchapter K); 46 CFR Parts 166 thru 199 (Subchapter T); or 46 CFR Parts 70 thru 89 (Subchapter H) where applicable<sup>16</sup>
- Certain vessels and facilities shall comply with the Maritime Transportation Security Act of 2002<sup>17</sup> where applicable

<sup>13</sup> U.S. Department of Homeland Security, *Federal Register*, Vol. 76, No. 155, August 11, 2011, <http://www.uscg.mil/hq/cg5/TVNCOE/Documents/SubM/NPRM.pdf>

<sup>14</sup> United States Government Publishing Office, *Code of Federal Regulations Title 46-Shipping Chapter I Subchapter B §16 Chemical Testing*, <http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr;sid=de2439b0a1fb0c273b34d232e95630f8;rgn=div5;view=text;node=46:1.0.1.2.16;idno=46;cc=ecfr>

<sup>15</sup> United States Government Publishing Office, *Code of Federal Regulations Title 46-Shipping Chapter I Subchapter B §4.06 Mandatory Chemical Testing Following Serious Marine Incidents Involving Vessels in Commercial Service*, [http://www.ecfr.gov/cgi-bin/text-idx?rgn=div5&node=46:1.0.1.1.4#sp46.1.4.4\\_106](http://www.ecfr.gov/cgi-bin/text-idx?rgn=div5&node=46:1.0.1.1.4#sp46.1.4.4_106)

<sup>16</sup> United States Government Publishing Office, *Code of Federal Regulations Title 46-Shipping Chapter I Volumes 3, 4 and 7*, [http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title46/46tab\\_02.tpl](http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title46/46tab_02.tpl)

<sup>17</sup> U.S. Department of Homeland Security, *Maritime Transportation Security Act of 2002 Public Law 107-295*, November 25, 2002, <http://www.gpo.gov/fdsys/pkg/PLAW-107publ295/pdf/PLAW-107publ295.pdf>

- USCG inspected small passenger vessels shall be in compliance with State of Illinois registration, licensing and inspection requirements in 625 ILCS 45<sup>18</sup> and Administrative Rule 2080<sup>19</sup>
- Uninspected commercial vessels shall be in compliance with State of Illinois registration, licensing and inspection requirements in 625 ILCS 45<sup>20</sup> and Administrative Rule 2080<sup>21</sup> and 46 CFR Subchapter C Uninspected Vessels<sup>22</sup>

*Construction, Maintenance and Special Purpose Vessels*

- Operators of construction, maintenance and special purpose vessels (tugs, hopper barges, platform barges, skiffs, jumbo tank barges, performance stages, recreational platforms and the like) shall obtain proper permits prior to locating vessels in the Chicago River when there may be an impact on navigation
- Proposed operations should work with the CHSC to determine safety concerns before submitting permit applications
- Any project or operation on the Chicago River should be listed in the USCG Ninth District Local Notice to Mariners
- Construction and maintenance vessels should not constrict the width of the Chicago River by more than 50% of the available width of the river or less than 100 feet accounting for bridge structures and dolphins. Projects are reviewed by the USCG on a case by case basis to determine navigational risk
- Operators of vessels used to move or maneuver barges at construction sites should monitor VHF channel 16 and make appropriate security call prior to any movement
- The operator of construction, maintenance or special purpose vessels for shore side projects that may have an impact on navigation should notify the CHSC prior to transiting or mooring in the Chicago River
- If the movement of a construction, maintenance or special purpose vessel will significantly impact navigation on the river, a Broadcast Notice to Mariners should be generated

<sup>18</sup>State of Illinois, *Illinois Compiled Statutes (625 ILCS 45/)* Boat Registration and Safety Act, <http://www.ilga.gov/legislation/ilcs/ilcs3.asp?ActID=1826&ChapterID=49>

<sup>19</sup> State of Illinois, *17 Illinois Administrative Code Chapter I, Sec. 2080 Operation of Watercraft Carrying Passengers for Hire on Illinois Waters*, August 24, 2006, <https://www.dnr.illinois.gov/adrules/documents/17-2080.pdf>

<sup>20</sup>State of Illinois, *Illinois Compiled Statutes (625 ILCS 45/)* Boat Registration and Safety Act, <http://www.ilga.gov/legislation/ilcs/ilcs3.asp?ActID=1826&ChapterID=49>

<sup>21</sup> State of Illinois, *17 Illinois Administrative Code Chapter I, Sec. 2080 Operation of Watercraft Carrying Passengers for Hire on Illinois Waters*, August 24, 2006, <https://www.dnr.illinois.gov/adrules/documents/17-2080.pdf>

<sup>22</sup> United States Government Publishing Office, *Code of Federal Regulations Title 46-Shipping Chapter I Subchapter C §24 Uninspected Vessels*, <https://www.gpo.gov/fdsys/pkg/CFR-2011-title46-vol1/pdf/CFR-2011-title46-vol1-chapI-subchapC.pdf>

- Construction companies should establish a dedicated direct phone number to be shared with other businesses and waterway users
- All projects that may affect marine navigation should coordinate with the CHSC before permits are issued
- A manned rescue boat should be used for any project on the waterway. Boat should not impede navigation.
- Permitting agencies should send a copy of permit the CHSC to be posted on the website
- Contractors should receive a copy of these guidelines

*Other*

- Small passenger vessels should maintain a following distance of approximately 200' where practicable, while underway

## **EMERGENCY RESPONSE**

- USCG, Illinois Department of Natural Resources and Chicago Police & Fire Departments will work with the CHSC to create a list of areas accessible for emergency response throughout the Chicago River for all types of vessels
- A call for more proactive patrolling of the Chicago River
- All hourly rental operations should consider having a safety/rescue vessel at the ready to tend to their own disabled vessels or non-life threatening issues

## **HOURLY RENTALS- HUMAN-POWERED CRAFT (HPC)**

*Rules and Regulations*

- All vessels shall be in compliance with State of Illinois registration, licensing and inspection requirements in 625 ILCS 45<sup>23</sup> and Administrative Rule 2080<sup>24</sup>
- All vessels shall be in compliance with 33 CFR Parts 175 thru 187<sup>25</sup> where applicable
- Each vessel engaged in hourly rental should prominently display company name and IDNR identification number (where applicable) on the port and starboard sides of the vessel.
- State-issued water usage stickers may be kept at the rental facility if they do not properly adhere to the vessel.

<sup>23</sup> State of Illinois, *Illinois Compiled Statutes (625 ILCS 45/)* Boat Registration and Safety Act, <http://www.ilga.gov/legislation/ilcs/ilcs3.asp?ActID=1826&ChapterID=49>

<sup>24</sup> State of Illinois, *17 Illinois Administrative Code Chapter I, Sec. 2080 Operation of Watercraft Carrying Passengers for Hire on Illinois Waters*, August 24, 2006, <https://www.dnr.illinois.gov/adrules/documents/17-2080.pdf>

<sup>25</sup> United States Government Publishing Office, *Code of Federal Regulations Title 33- Navigation and Navigable Waters Chapter I Subchapter S §175-187*, <http://www.ecfr.gov/cgi-bin/text-idx?SID=1a91c0f98b72c6f86937e8240b27ec04&mc=true&tpl=/ecfrbrowse/Title33/33CISubchapS.tpl>

- All vessels must carry at least one USCG-approved wearable PFD for each person on board and must be of the appropriate size of the wearer

#### *Alcohol Use*

- Alcohol should not be permitted on HPC rentals

#### *Competency and Training*

- All hourly HPC rental operations will work with CHSC to develop standardized training which shall be provided to renters, operators and staff
- All persons renting craft on an hourly basis should demonstrate operational competency of the vessel and equipment after receiving standardized training before being allowed to leave the immediate vicinity of the respective access point
- All HPC group leaders/guides should have a general understand of the proper use of the VHF marine radio including the following: monitoring channel 16; hailing a vessel on channel 16; switching to a working channel to converse; and accurate communication of security calls including name of vessel, group or company, location and direction
- Group leaders/guides of hourly HPC rental craft must know the designated safe crossing points, once established, on the Chicago River
- HPC group leader/guide should give a security call on the VHF marine radio channel 16 to request a safe crossing or passing of commercial passenger docks

#### *Compliance*

- All operators of rented HPC should be directed to read and understand 46 USC§2302<sup>26</sup>
- The following placard should be prominently displayed at the rental premises or written text should be included in rental waiver, by businesses renting HPC to the general public on an hourly basis, either to individuals or groups:

*46 USC §2302(a) A person operating a vessel in a negligent manner or interfering with the safe operation of a vessel, so as to endanger the life, limb or property of a person is liable to the United States Government for a civil penalty of not more than \$5,000 in the case of a recreational vessel, or \$25,000 in the case of any other vessel.*

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<sup>26</sup> United States Government Publishing Office, *Code of Federal Regulations Title 46-Shipping Chapter 23 §2302*, <https://www.gpo.gov/fdsys/pkg/USCODE-2011-title46/pdf/USCODE-2011-title46-subtitleII-partA-chap23-sec2302.pdf>

### *Navigation*

- HPC rental operations should cap the number of vessels in a group or pod at 24 with a 6:1 vessel to leader/guide ratio. In the case of a special event which may require a deviation from the cap, the operator should notify all CHSC members in a timely manner
- It is critical that HPC rental group leaders/guides actively manage large groups and avoid long strings in front of boat docks
- Hourly HPC rentals should not use the Chicago Lock
- All hourly rental craft should stay to the far right side of the channel with the exception of high-traffic locations such as barge facilities, water taxi and tour boat docks, hourly rental craft facilities or marinas
- Hourly HPC rental operations should establish designated safe crossing points
- Hourly group HPC rentals should cross the river at designated crossing points unless another crossing point is agreed upon on the marine radio
- Hourly HPC rental group leaders/guides should keep group in as tight a formation as possible
- CHSC will work with USCG to establish local OCMI-approved standard navigational lighting for use on all HPC rentals operating at night

### *Operational*

- HPC renters may not stop or linger in front of boat docks or access points. All HPC users stopping to rest must do so as far to the right as possible and away from boat docking points so as to not inhibit or interfere with other users of the waterway.
- No nighttime HPC individual rentals. Guided tours only.
- A weapons policy should be considered

## **HOURLY RENTALS- POWERED**

### *Rules and Regulations*

- Entities conducting hourly rental operations shall comply with the requirements of the Passenger Vessel Safety Act of 1993<sup>27</sup>
- All hourly rental craft shall be in compliance with State of Illinois registration, licensing and inspection requirements in 625 ILCS 45<sup>28</sup> and Administrative Rule 2080<sup>29</sup>

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<sup>27</sup> United States Coast Guard, *NVIC 7-94 Guidance on the Passenger Vessel Safety Act of 1993*, September 30, 1994, <http://www.uscg.mil/hq/cg5/nvic/pdf/1994/n7-94.pdf>

<sup>28</sup> State of Illinois, *Illinois Compiled Statutes (625 ILCS 45/)* Boat Registration and Safety Act, <http://www.ilga.gov/legislation/ilcs/ilcs3.asp?ActID=1826&ChapterID=49>

<sup>29</sup> State of Illinois, *17 Illinois Administrative Code Chapter 1, Sec. 2080 Operation of Watercraft Carrying Passengers for Hire on Illinois Waters*, August 24, 2006, <https://www.dnr.illinois.gov/adrules/documents/17-2080.pdf>

- Each vessel engaged in hourly rental should prominently display company name and IDNR identification number (where applicable) on the port and starboard sides of the vessel
- All persons operating vessels shall comply with 46 USC §2302(a)<sup>30</sup> (Monetary penalties are subject to Federal Civil Penalties Inflation Adjustment Act of 1990.) which states:
  - A person operating a vessel in a negligent manner or interfering with the safe operation of a vessel, so as to endanger the life, limb or property of a person is liable to the United States Government for a civil penalty of not more than \$5,000 in the case of a recreational vessel, or \$25,000 in the case of any other vessel.
- All vessels shall be in compliance with the Illinois Boat Registration and Safety Act 625 ILCS 45<sup>31</sup>
  - No person shall operate a vessel while under the influence of alcohol or a dangerous drug
  - Illegal drugs are prohibited on all vessels
  - All vessels must carry at least one USCG-approved wearable PFD for each person on board and must be of the appropriate size of the wearer
  - All children under the age of 13 must wear a PFD on vessels less than 26 feet in length when underway, unless they are below decks in an enclosed cabin
  - Persons under the age of 10 may not operate any motorized vessel, including personal watercraft
- All vessels shall be in compliance with 33 CFR Parts 175 thru 187<sup>32</sup>

#### Alcohol Use

- Operator of the vessel must not be impaired by alcohol or dangerous drugs<sup>33</sup>
- Hard liquor should not be permitted on board hourly powered rental craft
- The renter/operator of a powered hourly rental craft shall be deemed the “designated driver” and shall not be permitted to consume alcohol while on board. The “designated driver” must wear an orange wristband identifying them as such.
- Beer and wine may be consumed by the “guests” of the renter however quantity should be limited to 2 beers per person per hour or 1/3 bottle of wine per person per hour

<sup>30</sup> United States Government Publishing Office, *Code of Federal Regulations Title 46-Shipping Chapter 23 §2302*, <http://www.gpo.gov/fdsys/pkg/USCODE-2011-title46/pdf/USCODE-2011-title46-subtitle11-partA-chap23-sec2302.pdf>

<sup>31</sup> State of Illinois, *Illinois Compiled Statutes (625 ILCS 45/) Boat Registration and Safety Act*, <http://ilga.gov/legislation/ilcs/ilcs4.asp?DocName=062500450HArt.11&ActID=1826&ChapterID=49&SeqStart=700000&SeqEnd=1300000>

<sup>32</sup> United States Government Publishing Office, *Code of Federal Regulations Title 33- Navigation and Navigable Waters Chapter I Subchapter S §175-187*, <http://www.ecfr.gov/cgi-bin/text-idx?SID=1a91c0f98b72c6f86937e8240b27ec04&mc=true&tpl=/ecfrbrowse/Title33/33CSubchapS.tpl>

<sup>33</sup> United States Government Publishing Office, *Code of Federal Regulations Title 33- Navigation and Navigable Waters Chapter I Subchapter F §95*, <http://www.ecfr.gov/cgi-bin/text-idx?rgn=div5&node=33:1.0.1.6.46>

### Competency and Training

- All hourly rental craft operations will work with CHSC to develop standardized training which shall be provided to renters, operators and staff
- All persons renting craft on an hourly basis should demonstrate operational competency of the vessel and equipment after receiving standardized training before being allowed to leave the immediate vicinity of the respective access point
- All persons operating a rental craft should have a general understand of the proper use of the VHF marine radio including the following: monitoring channel 16; hailing a vessel on channel 16; switching to a working channel to converse; and accurate communication of security calls including name of vessel, group or company, location and direction
- Renters must yield at all times to oncoming traffic and cross the river at right angles and should not linger in the middle of the waterway
- Operator of powered hourly rental craft should give a security call on VHF marine radio channel 16 to request a safe crossing when necessary

### Compliance

- All hourly renters should be directed to read and understand 46 USC§2302<sup>34</sup>
- The following placard should be prominently displayed at the rental premises and on each vessel and written text should be included in rental waiver, by businesses renting vessels to the general public on an hourly basis, either to individuals or groups:  
*46 USC §2302(a) A person operating a vessel in a negligent manner or interfering with the safe operation of a vessel, so as to endanger the life, limb or property of a person is liable to the United States Government for a civil penalty of not more than \$5,000 in the case of a recreational vessel, or \$25,000 in the case of any other vessel.*

### Navigation

- Renters should not use the Chicago Lock unless the vessel is operated by an appropriately credentialed USCG licensed mariner
- All hourly rental craft shall stay to the far right side of the channel with the exception of high-traffic locations such as barge facilities, water taxi and tour boat docks, hourly rental craft facilities or marinas
- Hourly rental craft operations should establish designated safe crossing points
- Hourly rental craft should cross the river only at designated crossing points
- Hourly rental craft should travel single file

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<sup>34</sup> United States Government Publishing Office, *Code of Federal Regulations Title 46-Shipping Chapter 23 §2302*, <https://www.gpo.gov/fdsys/pkg/USCODE-2011-title46/pdf/USCODE-2011-title46-subtitleI-partA-chap23-sec2302.pdf>

- CHSC will work with USCG to establish local OCMI-approved standard navigational lighting for use on all HPC rentals operating at night

#### *Operational*

- Hourly renters may not stop anywhere except designated locations on the Riverwalk
- Hourly rental craft may not stop along its route to pick up additional passengers or alcohol
- A weapons policy should be considered

## **RECREATIONAL VESSELS**

#### *Rules and Regulations*

- All vessels should displace a minimum wake at all times where practicable (with the exception of responding to an emergency) and shall comply with 10-40-261 of the Municipal Code of Chicago<sup>35</sup>
- All vessel operators shall comply with U.S. Coast Guard (USCG) Navigation Rules-Inland<sup>36</sup>
  - All vessels shall so far as practicable avoid crossing traffic lanes, but if obliged to do so shall cross as nearly as practicable at right angles to the general direction of traffic flow
  - No vessel shall overtake another vessel unless acknowledged and confirmed by VHF marine radio or whistle signal
  - All vessels shall so far as practicable avoid crossing traffic lanes, but if obliged to do so shall cross as nearly as practicable at right angles to the general direction of traffic flow (USCG Navigation Rule 10)
- All persons operating vessels shall comply with 46 USC §2302(a)<sup>37</sup> (Monetary penalties are subject to Federal Civil Penalties Inflation Adjustment Act of 1990.) which states:
 

A person operating a vessel in a negligent manner or interfering with the safe operation of a vessel, so as to endanger the life, limb or property of a person is liable to the United States Government for a civil penalty of not more than \$5,000 in the case of a recreational vessel, or \$25,000 in the case of any other vessel.

<sup>35</sup> City of Chicago, *Municipal Code of Chicago Restrictions on Wake of Vessels* (Added Coun. J. 12-10-97, p.59008; Amend Coun. J. 7-29-98, p. 75119; Amend Coun. J. 11-8-12, p. 38872, § 193), <http://chicagocode.org/10-40-261/>

<sup>36</sup> U.S. Department of Homeland Security, *USCG Navigation Rules International-Inland*, COMDTINST M16672.2D, <http://www.navcen.uscg.gov/pdf/navrules/navrules.pdf>

<sup>37</sup> United States Government Publishing Office, *Code of Federal Regulations Title 46-Shipping Chapter 23 §2302*, <http://www.gpo.gov/fdsys/pkg/USCODE-2011-title46/pdf/USCODE-2011-title46-subtitleI-partA-chap23-sec2302.pdf>

- All vessels shall be in compliance with the Illinois Boat Registration and Safety Act 625 ILCS 45<sup>38</sup>
  - No person shall operate a vessel while under the influence of alcohol or a dangerous drug
  - Illegal drugs are prohibited on all vessels
  - All vessels must have at least one USCG-approved PFD for each person on board and of the proper size for the intended wearer
  - All children under the age of 13 must *wear* an appropriately size PFD on vessels less than 26 feet in length when underway, unless they are below decks in an enclosed cabin
  - Persons under the age of 10 may not operate any motorized vessel, including personal watercraft

## ROWING AND INDIVIDUAL HPC

### *Rules and Regulations*

- All vessels must have at least one USCG-approved PFD for each person on board and of the proper size for the intended wearer<sup>39</sup>
- Watercraft propelled by muscular power when underway shall carry on board from sunset to sunrise, but not fixed to any part of the boat, a lantern or flashlight capable of showing a white light visible all around the horizon at a distance of 2 miles or more, and shall display such lantern in sufficient time to avoid collision with another watercraft.<sup>40</sup>

### *Other*

- Chase boats accompanying rowing shells should carry a sufficient number of appropriately sized, USCG-approved PFDs for every person on board the rowing shell and chase boat<sup>41</sup>

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<sup>38</sup>State of Illinois, *Illinois Compiled Statutes (625 ILCS 45/) Boat Registration and Safety Act*, <http://ilga.gov/legislation/ilcs/ilcs4.asp?DocName=062500450HArt.+II&ActID=1826&ChapterID=49&SeqStart=700000&SeqEnd=1300000>

<sup>39</sup> State of Illinois, *Illinois Compiled Statutes (625 ILCS 45/) Boat Registration and Safety Act*, <http://ilga.gov/legislation/ilcs/ilcs4.asp?DocName=062500450HArt.+II&ActID=1826&ChapterID=49&SeqStart=700000&SeqEnd=1300000>

<sup>40</sup>State of Illinois, *Illinois Compiled Statutes (625 ILCS 45/4-1) Boat Registration and Safety Act*, <http://ilga.gov/legislation/ilcs/ilcs4.asp?DocName=062500450HArt.+IV&ActID=1826&ChapterID=49&SeqStart=760000&SeqEnd=8900000>

<sup>41</sup> Willie Black, "PFDs and Rowing" *U.S. Rowing* (April 2011), [http://www.usrowing.org/news/details/11-04-06/PFDs\\_and\\_Rowing.aspx](http://www.usrowing.org/news/details/11-04-06/PFDs_and_Rowing.aspx)

- Rowing shells on the Main Branch of the Chicago River between the Lake Shore Drive Bridge (mile marker 326.9) and the Franklin Street Bridge (mile marker 325.7) should be limited to the hours of 5:00am-10:00am

## DEFINITIONS

**Bareboat Charter** Unless a vessel is Coast Guard Inspected and Certified, it may only carry 6 passengers, no matter the size of the vessel. In the event of a 'Bareboat Demise Charter Contract', the limit is 12 passengers. Per the Coast Guard, there are many stringent aspects of an acceptable 'Bareboat Demise Contract', some of which are very difficult to accomplish. Briefly, they are:

- The charter takes complete possession of the vessel, operating it as if it were their own.
- The charterer becomes the owner for most legal purposes, such as the vessel's seaworthiness.
- Assumes nearly total liability for the vessel's operation.
- Charter must provide a qualified Captain/crew
- Responsibility for pollution cleanup, and any other liability normally flowing to a vessel owner.

Guest may NOT pay individually or contribute by 'paying for gas', bring food, etc.

A valid bareboat charter is one where the incidents of ownership have been transferred to the charterer. When necessary to determine if a valid bareboat charter exists, the OCMI should discuss the vessel's operations with the vessel owner and make a determination if the vessel's charter is a valid bareboat charter. The elements listed below are indicative but not conclusive of a valid bareboat charter arrangement. Conversely, a valid bareboat charter may exist where one or more of the listed elements is not met. In any particular case, each arrangement must be evaluated on its own merits.<sup>42</sup>

1. The charterer must have the option of selecting the crew. Although a master or crew may be furnished by the owner, full possession and control must be vested in the charterer. This does not preclude the charterer from taking advice from the master and crew regarding hazardous conditions such as, inclement weather, navigational obstructions, etc.
2. The master and crew are paid by the charterer.
3. All food, fuel, and stores are provided by the charterer.
4. All port charges and pilotage fees, if any, are paid by the charterer.

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<sup>42</sup> United States Coast Guard, *NVIC 7-94 Guidance on the Passenger Vessel Safety Act of 1993*, September 30, 1994, <http://www.uscg.mil/hq/cg5/nvic/pdf/1994/n7-94.pdf>

5. Insurance is obtained by the charterer, at least to the extent of covering liability not included in the owner's insurance. A greater indication of full control in the charterer is shown if all insurance is carried by the charterer (of course, the owner retains every right to protect his or her interest in the vessel).
6. The charterer may discharge, for cause, the master or any crew member without referral to the owner.
7. The vessel is to be surveyed upon its delivery and return.

Any provision that tends to show retention of possession or control of the vessel such as the owner of the vessel being aboard during the charter of the vessel contradicts the claim that a valid bareboat charter exists.<sup>43</sup>

**Construction, Maintenance and Special Purpose Vessels** are vessels that are used for construction or maintenance of seawalls, break walls, shore side facilities, bridges, buildings or other infrastructure. Special purpose vessels are vessels that are engaged in diving, surveying, dredging or emergency towing of other vessels.

**Federal Navigable Waterway** Navigable waters of the United States are those waters that are subject to the ebb and flow of the tide and/ or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. A determination of navigability, once made, applies laterally over the entire surface of the waterbody, and is not extinguished by later actions or events which impede or destroy navigable capacity.<sup>44</sup>

**Hourly Rental Craft** are vessels designated by license and authorized by the State of Illinois to be rented out to members of the general public on an hourly basis only on bodies of water designated on the license.<sup>45</sup>

**Human-Powered Craft** are watercraft propelled by human power. These include oared, rowing and paddling craft such as sculls, skiffs, row boats, canoes, kayaks, dragon boats, dinghies, racing shells, dories and paddleboards.

**Recreational vessel** means a vessel meeting the definition in 46 U.S.C. 2101(25) that is then being used only for pleasure. A recreational vessel is any vessel manufactured or used primarily

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<sup>43</sup> Jason Neubauer, Captain U.S. Coast Guard, *Guidance on Small Passenger and Charter Vessel Operations*, December 11, 2013.

<sup>44</sup> United States Government Publishing Office, *Code of Federal Regulations Title 33- Navigation and Navigable Waters Volume 3 §329 Definition of Navigable Water of the United States*, <https://www.gpo.gov/fdsys/pkg/CFR-2011-title33-vol3/pdf/CFR-2011-title33-vol3-part329.pdf>

<sup>45</sup> State of Illinois, *17 Illinois Administrative Code Chapter 1, Sec. 2080 Operation of Watercraft Carrying Passengers for Hire on Illinois Waters*, August 24, 2006, <https://www.dnr.illinois.gov/adrules/documents/17-2080.pdf>

for non-commercial use; or leased, rented or chartered to another for the latter's non-commercial use. It does not include a vessel engaged in carrying paying passengers.<sup>46</sup>

**Small Passenger Vessel** means a vessel of less than 100 gross tons that carries more than 6 passengers, including at least one passenger for hire; is chartered with a crew provided or specified by the owner or the owner's representative and is carrying more than 6 passengers; is chartered with no crew provided or specified by the owner or the owner's representative and is carrying more than 12 passengers; or is a ferry carrying more than 6 passengers<sup>47</sup>

**Towing Vessel** means a commercial vessel engaged in or intending to engage in the service of pulling, pushing, or hauling alongside, or any combination of pulling, pushing, or hauling alongside.<sup>48</sup>

**Uninspected Passenger Vessel** generally means operations that carry 6 or fewer passengers for hire are referred to as Uninspected Passenger Vessels (UPV), 6 Passenger (pax), or 6 Pack operations. These are your typical charter boat fishing guide or tour boat operations that may use a state numbered boat. UPV operations traveling on navigable waters of the United States under U.S. Coast Guard jurisdiction are not required to be inspected by the Coast Guard. They must comply with minimal federal standards for safety, navigation, pollution prevention and the vessel operator must hold an Operator Uninspected Passenger Vessel (OUPV) license issued by the Coast Guard.<sup>49</sup>

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<sup>46</sup> United States Government Publishing Office, *Code of Federal Regulations Title 46-Shipping Part A Chapter 21 §2101(25)*, <https://www.gpo.gov/fdsys/pkg/USCODE-2011-title46/pdf/USCODE-2011-title46-subtitle1-partA-chap21-sec2101.pdf>

<sup>47</sup> United States Government Publishing Office, *Code of Federal Regulations Title 46-Shipping Chapter I Volumes 3, 4 and 7*, [http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title46/46tab\\_02.tpl](http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title46/46tab_02.tpl)

<sup>48</sup> United States Government Publishing Office, *Code of Federal Regulations Title 46-Shipping Part A Chapter 21 §2101(40)*, <https://www.gpo.gov/fdsys/pkg/USCODE-2011-title46/pdf/USCODE-2011-title46-subtitle1-partA-chap21-sec2101.pdf>

<sup>49</sup> U.S. Department of Homeland Security, *USCG Passenger Vessel Safety Program- Uninspected Passenger Vessel*, <http://www.uscg.mil/pvs/UPV.asp>

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**Approved by the Chicago Harbor Safety Committee  
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