

# Lake Erie and Lake Ontario Boating and Water Safety

## KEY MESSAGES:

Donning a life jacket is much harder once you're in the water, especially if you're injured. The law states you must have a life jacket for every person on board, but the Coast Guard recommends you wear your life jacket at all times when boating.

A life jacket especially a snug-fitting flotation coat or deck-suit style can help you survive in cold water.

A boater operating his or her boat while intoxicated is a danger to everyone. The Coast Guard and state and local law enforcement agencies rely on boaters to help report dangerous conditions on the water.

Alcohol is even more hazardous on the water than on land. The marine environment – motion, vibration, engine noise, sun, wind and spray – accelerates a drinker's impairment. These stressors cause fatigue that makes a boat operator's coordination, judgment and reaction time decline even faster when using alcohol than consuming alcohol on land.

Even during record high water temperatures, the water is above “cold” for only 3 to 4 weeks.

In waters below 60 degrees, cold shock response can cause unintended aspiration of water and can lead to what has been termed “**Sudden Disappearance Syndrome**”; instances where a person enters cold water, are seen struggling briefly and then slip beneath the surface.

*“Much like wearing a seatbelt, during or after an accident happens is too late to start reaching for your life jacket.”*

*“100% of boating accidents and fatalities have one thing in common, the operator. Don't be the lowest common denominator, boat safe, boat smart, boat sober.”*

## Life Jackets - Wear it!

- All recreational boats must carry one wearable life jacket for each person aboard. Any boat 16ft or longer (except canoes, kayaks and SUP) must also carry one throwable (Type IV) personal flotation device immediately available for use.
- Life jackets have changed over the years and are much more comfortable, lightweight and stylish than the bulky orange style most boaters know. There are innovative options designed specifically to provide safety AND comfort for specific on water activities allowing mobility and flexibility for boating, fishing, paddling or hunting, and are much cooler in the warmer weather.
- The National Safe Boating Council is asking all participants to take a picture of themselves in their life jacket while at work and post it to the Ready, Set, Wear It! Facebook page or submit directly to the NSBC at outreach@safeboatingcouncil.org. Participants are also encouraged to tweet their picture using #RSWI2018.
- Donning a life jacket is much harder once you're in the water, especially if you're injured. The law states you must have a life jacket for every person on board, but the Coast Guard recommends you wear your life jacket at all times when boating.
- All states have regulations regarding life jacket wear by children. Factors such as age, size of the boat/vessel and/or boating operations play a factor. The Coast Guard recommends ALL children wear a life jacket at all times when on a boat or in the water. Certain life jackets are designed to keep your head above water and help you remain in a position which permits proper breathing.

- Adult-sized life jackets will not work for children. Special life jackets are available. To work correctly, a life jacket must be worn, fit snugly, and not allow the child's chin or ears to slip through.
- Lifejackets must be Coast Guard approved, in good and serviceable condition, and the appropriate size for the intended user. Life jackets should be tested for wear and buoyancy at least once each year. Waterlogged, faded, or leaky jackets should be discarded.
- A life jacket especially a snug-fitting flotation coat or deck-suit style can help you survive in cold water.
- Additional information and a printable brochure on life jackets can be found at:  
<http://uscgboating.org/recreational-boaters/life-jacket-wear-wearing-your-life-jacket.php>.
- U.S. Coast Guard statistics show that drowning was the reported cause of death in three- fourths (76%) of recreational boating fatalities in 2017, and that 84.5 percent of those who drowned were not wearing life jackets.
- In the eight Great Lakes states for 2016, where life jacket use was known, 97% of those who drowned were not wearing lifejackets, only three (3) were known to be wearing their life jackets.
- Drowning can occur in less than 2 inches of water; there are 2,520 inches in the deepest parts of Lake Erie, the shallowest of the Great Lakes.
- PSAs:  
<https://youtu.be/3RQ4QNT1a40>  
<https://www.youtube.com/watch?v=4ZBqQeeS7kY>  
[https://www.youtube.com/watch?v=5e0WIXgNGDg&list=PLu5LxZSNVvNtL1vsWm7ahRUfZp2oYP\\_0K&index=6](https://www.youtube.com/watch?v=5e0WIXgNGDg&list=PLu5LxZSNVvNtL1vsWm7ahRUfZp2oYP_0K&index=6)
- **Operator safety - You're in charge.**

*"Boats are built to be as safe as possible; most danger comes when you add people."*

*"Don't play in traffic, learn and follow the maritime rules of the road."*

*"Be the captain of your vessel; everyone wants the title, few the responsibility."*

*"Like riding a bicycle, every boater has to learn how to boat and how to be safe; know the rules of your road, take a boating safety course."*

- Operator inattention is the leading primary contributing factor in recreational boating accidents, causing 620 accidents, 45 deaths and 381 injuries in 2017.
- Boaters should be familiar with the areas in which they operate, especially at night and during times of reduced visibility, and should rely on navigational charts and aids to navigation.
- The top five contributing factors to recreational boating accidents from 2017 are: **Operator inattention, improper lookout, operator inexperience**, machinery failure and alcohol use (**275 accidents for alcohol use resulting in 102 deaths and 227 injuries**).
- Operator inattention, operator inexperience and improper lookout have been the top three contributing factors since 2010. The operator of a vessel is as responsible as the driver of a car for the safety of passengers.
- **Operator Inattention** - Failure on the part of the operator to pay attention to the vessel, passengers, or the environment.

- **Improper Lookout** - No proper watch; the **failure of the operator** to perceive danger because no one was serving as lookout, or the lookout failed to communicate the danger to the operator. Every vessel shall at all times maintain a proper look-out by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and of the risk of collision.
- **Operator Inexperience** - Lack of practical experience or knowledge in operating a vessel or, more particularly, the vessel involved in the accident.
- Boaters should remain alert at all times and should keep an eye out for and, when safely possible, lend a hand to other boaters who may be in distress. The Coast Guard frequently broadcasts requests for assistance from good Samaritans on VHF-FM channel 16.
- When in doubt about something you see on the water, contact the Coast Guard or local law enforcement.
- A boater operating his or her boat while intoxicated is a danger to everyone. The Coast Guard and state and local law enforcement agencies rely on boaters to help report dangerous conditions on the water.
- In addition to helping us remove intoxicated boaters from the water, public reporting of suspicious activity, persons, or packages helps the Coast Guard keep American citizens and critical marine infrastructure safe.
- Boating under the influence is just as dangerous as driving a motor vehicle under the influence of drugs or alcohol, and just as illegal.
- **Alcohol use is the leading known contributing factor in fatal boating accidents;** where the primary cause was known, it was listed as the leading factor in **19% of deaths**.
- Alcohol affects judgment, vision, balance and coordination.
- Alcohol is even more hazardous on the water than on land. The marine environment – motion, vibration, engine noise, sun, wind and spray – accelerates a drinker's impairment. These stressors cause fatigue that makes a boat operator's coordination, judgment and reaction time decline even faster when using alcohol than consuming alcohol on land.
- Alcohol can cause an inner ear disturbance that can make it impossible for a person who falls into the water to distinguish up from down.
- The penalties for BUI can include large fines, revocation of operator privileges and serious jail terms. The Coast Guard aggressively prosecutes intoxicated operators.
- For more information on Boating Under the Influence, go to <http://uscgboating.org/recreational-boaters/boating-under-the-influence.php>
- PSAs:
  - <https://dvidshub.net/r/chkk5n>

## **Paddler Safety - Human Powered Vessels.**

*“Dress for the swim, it’s not if, but when”*

*It’s like riding a bike: inexpensive, accessible, and fun; don’t cheap out on your life, get the right gear for your safety.*

*Leave your concerns at the shore, take safety with you; pack smart, be ready, wear it.*

- Paddlesports continue to be the fastest growing segment of recreational boating, with more than 450,000 registered paddlecraft in the Great Lakes region. Paddlecraft are an extremely affordable entry point to recreational boating, which is attractive to new boaters, boaters downsizing from larger boats and those interested in getting closer to the environment.
- Paddlecraft, including canoes, kayaks, rowboats and stand-up-paddleboards accounted for 26% of the lives lost for 2017, second to open motorboats with 47% of deaths.
- Over a 5 year span, the average number of powerboat deaths have declined when compared to the 2006-2010 numbers; the average number of Paddlesport deaths have increased from 2011-2015, making up 26% of the deaths over that timeframe. [ <http://www.americancanoe.org/?page=Statistics>: Pulled from USCG presentation by the National Recreational Boating Safety Program office]
- New and inexperienced paddlers should seek out paddler education before heading out on the water. The Coast Guard Auxiliary offers the “Paddlesports America Course,” a four-hour, classroom based introduction to paddling safety, techniques and safety strategies. Courses may also be offered by the U.S. Power Squadrons, state departments of natural resources and local commercial outfitters. The state departments of natural resources, the U.S. Power Squadron, local commercial outfitters and American Canoe Association (ACA) also offer hands-on courses.
- Paddlers are more exposed to the elements than boaters on power and sail craft and should wear the personal protective clothing, including dry or wet suits, appropriate for the water temperature where they are paddling.
- Paddlers don’t just need to wear the proper gear, but also need to equip their boats with required and recommended safety gear, such as a hand-held VHF-FM radio, a Personal Locator Beacon (PLB) and flares.
- Weather changes quickly across the Great Lakes; always, always, check the weather forecast before paddling and prepare for the worst potential weather.
- No one should go out alone; resist the temptation to paddle alone and instead paddle with a partner or in groups. This reduces risk in the event of an emergency. Additionally, paddling in groups increases the chances of being seen by boaters operating power and sail craft in the vicinity.
- Paddlers are strongly encouraged to use life jackets that are inherently buoyant rather than inflatable. Inflatable life jackets make re-entering a paddlecraft, especially a sit-inside kayak, more difficult after capsizing.
- Paddlers should practice, in a controlled environment, various techniques to re-enter paddlecraft from the water. Many paddlers underestimate how difficult it is to re-enter a paddlecraft after capsizing and discover they are unable to do so in emergencies. An inexpensive, inflatable paddle float usually makes reentry much easier.

- Kayaking is the \*most popular form of paddling, increasing from 3 percent of Americans participating in 2010 to 4.4 percent in 2014. While the less popular forms of sea/tour kayaking and whitewater kayaking made marginal gains in participation in 2014, recreational kayaking remained stagnant.
- \* Kayakers are the most avid paddlers, averaging 8.1 outings.
- \* Overall, kayaking is most popular among young adults, ages 18 to 24, a majority of participants in this age group — 62 percent — are female.
- \*\* From 2012 to 2015, stand up paddling was the top outdoor activity for growth, increasing participation an average of 26 percent.
- \*\* Kayak fishing, white water kayaking and sea/tour kayaking also saw some of the biggest participation increases over the same three-year period
- The top 10 safety tips published by the ACA are available here:  
[http://www.americancanoe.org/?page=Top\\_10](http://www.americancanoe.org/?page=Top_10).
- PSAs:
- [https://youtu.be/NbfsxVdW7KY?list=PLu5LxZSNVvNtL1vsWm7ahRUfZp2oYP\\_0K](https://youtu.be/NbfsxVdW7KY?list=PLu5LxZSNVvNtL1vsWm7ahRUfZp2oYP_0K)
- [https://youtu.be/bheFrcxOl6k?list=PLu5LxZSNVvNtL1vsWm7ahRUfZp2oYP\\_0K](https://youtu.be/bheFrcxOl6k?list=PLu5LxZSNVvNtL1vsWm7ahRUfZp2oYP_0K)
- [https://youtu.be/5e0WIXgNGDg?list=PLu5LxZSNVvNtL1vsWm7ahRUfZp2oYP\\_0K](https://youtu.be/5e0WIXgNGDg?list=PLu5LxZSNVvNtL1vsWm7ahRUfZp2oYP_0K)
- [https://youtu.be/CKN39iwSIDI?list=PLu5LxZSNVvNtL1vsWm7ahRUfZp2oYP\\_0K](https://youtu.be/CKN39iwSIDI?list=PLu5LxZSNVvNtL1vsWm7ahRUfZp2oYP_0K)
- [https://youtu.be/jqVedcWXrxM?list=PLu5LxZSNVvNtL1vsWm7ahRUfZp2oYP\\_0K](https://youtu.be/jqVedcWXrxM?list=PLu5LxZSNVvNtL1vsWm7ahRUfZp2oYP_0K)
- [https://youtu.be/TIJJBLN995o?list=PLu5LxZSNVvNtL1vsWm7ahRUfZp2oYP\\_0K](https://youtu.be/TIJJBLN995o?list=PLu5LxZSNVvNtL1vsWm7ahRUfZp2oYP_0K)
- [https://youtu.be/RDtF8j\\_wdOI?list=UUlNlxxysO2GR4rO6JGNhE0g](https://youtu.be/RDtF8j_wdOI?list=UUlNlxxysO2GR4rO6JGNhE0g)
- [https://youtu.be/axU0QpSdi\\_M](https://youtu.be/axU0QpSdi_M)
- <http://www.americancanoe.org/page/webtv> [many more kayaking and SUP videos]
- \* 2015 Special Report on Kayaking / Canoeing / Rafting / Stand up paddling, accessed at:  
<https://outdoorindustry.org/wp-content/uploads/2017/05/2015-Paddlesports-Research.pdf>, by The Outdoor Foundation and The Coleman Company, Inc.
- \*\* 2016 Outdoor Recreation Participation Topline Report, accessed at:  
<http://c.ymcdn.com/sites/www.americancanoe.org/resource/resmgr/general-documents/ResearchParticipation2016Top.pdf>, by The Outdoor Foundation, Washington, DC, 20002,  
[www.outdoorfoundation.org](http://www.outdoorfoundation.org)

### **Social Boating: Float Plans and the CG App**

*“The Coast Guard and other response agencies do not search for 100% of the people who are not reported missing, in distress or overdue; always file a float plan.”*

*“Embrace solitude not isolation; share your day out with someone on shore; file a float plan.”*

*“Build suspense, communicate your plans, avoid the surprise ending”*

- A float plan is a lifesaving tool that provides emergency responders with valuable information they need to search for a missing boater or a boater in distress
- A float plan should be completed and left with someone remaining on shore
- Float plans apply to all boaters, even kayakers, and are easy to create. Information on float plans and how to obtain a blank form can be found at [floatplancentral.org](http://floatplancentral.org) or on the free, downloadable Coast Guard Boating Safety App.
- The Coast Guard Boating Safety App provides important information and services including safety information within your state, a safety equipment checklist, weather reports from NOAA buoys, an emergency call button, navigation rules and requesting a free vessel safety check.
- The Coast Guard App is a self-contained App; no personal data is collected by the Coast Guard or any other person or agency unless it is intentionally transmitted by the user.
- Geolocation on the app only works when the user is active in the App and has location services enabled; there is no tracing of a user's location through the App by any government agency until the user decides to send that information.
- Boaters should first contact the Coast Guard using their marine radios on VHF Channel 16. The mobile App is not meant to replace a radio.
- Information on a float plan, and how to obtain a blank float plan, can be found at <http://uscgboating.org/recreational-boaters/floating-plan.php>
- BEWARE OF BOAT SHARING APPS – Many boat owners and operators advertising their boats for charter trips on boat-sharing apps similar to Uber are doing so illegally.
- Anyone considering renting a boat through a boat-sharing app should ask to see the operator's license and a Certificate of Inspection before paying for the trip. A COI means the vessel has been inspected by a qualified member of the Coast Guard Auxiliary and the boat has the proper safety equipment on board. Licensed operators have demonstrated they possess the knowledge and skills to safely operate the boat, respond to emergencies and to keep passengers safe.
- Operators found not in compliance with applicable standards and operating as an illegal charter can be fined, arrested, have the voyage terminated and the vessel confiscated.

## **Cold Water**

*“Dress for the water temperature not the air; cold water lowers body heat dramatically fast even in warm air.”*

*“Every minute counts in cold water and preparation may mean the difference between a life saved or a body recovered.”*

- There are three phases to the body's immersion into cold water: **1)** initial immersion and the cold-shock response; **2)** short-term immersion and loss of performance; and **3)** long-term immersion and the onset of hypothermia.

- The first two phases of cold water immersion are the least understood and, are the most common causes of cold water drowning on the Great Lakes.
- Cold water is lethal. Understanding the risks and taking steps to reduce those risks could save your life.
- According to data from the National Weather Service, the warmest of the Great Lakes, Lake Erie, only reaches an average of 73 degrees at the warmest; reached between mid-July through mid-August, (data observations from 1927-2015).
- Even during record high water temperatures, the water is above “cold” for only 3 to 4 weeks.
- When engaging in paddle-sport activities, expect to enter the water. Ensure you are wearing adequate thermal protection that is effective while immersed in cold water.
- Cold shock response is a physiological reflex initiated by sudden immersion in cold water, including: uncontrollable gasping, profound hyperventilation, cardiac arrhythmias and heart attack or stroke.
- In waters below 60 degrees, cold shock response can cause unintended aspiration of water and can lead to what has been termed “**Sudden Disappearance Syndrome**”; instances where a person enters cold water, are seen struggling briefly and then slip beneath the surface. <sup>2</sup>
- “Cold Water” is defined as anything below 77 degrees Fahrenheit. <sup>3</sup>
- Loss of Performance occurs within minutes of cold water immersion.
- In cold water, added to a decreased ability to hold breath, vasoconstriction of the extremities squeezes blood to the core as a natural reaction to preserve the vital organs. As a result, cold muscle tissue quickly reduces the functionality of the hands, arms and legs.
- Even superb swimmers have been known to drown within just a few minutes in cold water due to loss of performance or swim failure.
- Without a life jacket, the ability to stay above the surface quickly deteriorates, as does the ability to hold on to something in order to stay afloat.
- For more information about cold water safety, recommended safety gear and tips for handling emergencies, visit the Cold Water Boot Camp web site at: <http://www.coldwaterbootcampusa.org/>

<sup>1</sup> Steinman, Alan, “Immersion Into Cold Water,” abridged from “Cold-Water Immersion.” Steinman A, Giesbrecht G., *Wilderness Medicine*. 4th edition. Auerbach P, editor. C.V. Mosby, St. Louis, 2001

<sup>2</sup> *The Biology of Human Survival: Life and Death in Extreme Environments*, Claude A. Piantadosi

<sup>3</sup> <http://www.experts.com/Articles/Immersion-Into-Cold-Water-By-Dr-Alan-Steinman>

## REFERENCES:

- National Safe Boating Council’s web page, <http://www.safeboatingcouncil.org/>
- U.S. Coast Guard’s Boating Safety web page, <http://www.uscgboating.org/index.aspx>

- Safe Boating Course web page, <http://uscgboating.org/recreational-boaters/boating-safety-courses.php>
- Vessel Safety Check web page, <http://www.vesselsafetycheck.org/>
- Life Jacket information page, [http://www.uscgboating.org/safety/life\\_jacket\\_wear\\_wearing\\_your\\_life\\_jacket.aspx](http://www.uscgboating.org/safety/life_jacket_wear_wearing_your_life_jacket.aspx)
- Boating Under the Influence information page, <http://uscgboating.org/recreational-boaters/boating-under-the-influence.php>
- U.S. Coast Guard Auxiliary web page, <http://www.cgaux.org/>
- U.S. Power Squadron web page, <http://www.usps.org/>
- American Canoe Association (ACA): <http://www.americancanoe.org/>
- Water safety tips from the U.S. National Park Service: <http://www.webrangers.us/ACTIVITIES/WATERSAFETY/>
- River safety tips from the Bureau of Land Management: Know Before You Go: River Safety [ <https://www.blm.gov/programs/recreation/know-before-you-go> ]
- NOAA Rip Current Awareness: <http://www.ripcurrents.noaa.gov/>
- National Drowning Prevention Alliance (NDPA): <http://ndpa.org/home/>