

# ALASKA

## BOATER'S HANDBOOK



Tenth Edition, 2021





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Front cover photo:  
Jason Johnson and his son, Jason, Jr., and Ethan Paul (middle)  
enjoy an outing on the Black River near Chalkyitsik.

Although this media is not a National Association of State Boating Law Administrators-approved boating course, it is recognized by NASBLA to benefit boating safety.

The Alaska Boating Safety Program cooperates with the U.S. Coast Guard, U.S. Coast Guard Auxiliary, and other partners to produce educational programs and publications that promote safe and enjoyable boating, including this 2021 edition of the *Alaska Boater's Handbook*.



# A guide to safe and enjoyable boating in Alaska

A special thank you to the photo contributors for this publication:

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THE STATE  
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Dear Alaskan boaters,

The opportunities to enjoy Alaska's waterways are as broad as the Great Land itself. From pleasure sailing in the inlets of the Southeast to subsistence whaling in the arctic waters of the Northwest, boating activities are diverse. But no matter the boating activity, the message is the same: always wear your life jacket, carry emergency communication devices, and be familiar with self-rescue techniques.

The Alaska Boater's Handbook is intended to inform boaters of points to consider before departure, what to do when underway, and how to handle emergencies on the water to ensure a safe and memorable experience. Longtime Alaskans and first-time visitors will benefit from this handbook because education, preparation, and preparedness are key to reducing boating fatalities. Familiarize yourself with the information in the handbook. For even better protection against risk, consider taking a boating safety course that will bring you up to date on legal requirements, equipment innovations, the latest information on cold water immersion, and other relevant topics.

In addition to the handbook, the Alaska Office of Boating Safety provides other resources for boaters. To learn more about those, call (907) 269-8704, email [officeofboatingsafety@alaska.gov](mailto:officeofboatingsafety@alaska.gov) or visit [www.alaskaboatingsafety.org](http://www.alaskaboatingsafety.org). Follow the Alaska Boating Safety Program on social media to see updates on our latest activities and programs.

Great adventure awaits the well-prepared and adventurous boater. From all of us at the Division of Parks and Outdoor Recreation, we wish you bon voyage. But for your own sake and the sake of your loved ones, please follow safe boating practices when on the water. File a float plan, avoid alcohol, and most importantly, always wear a life jacket.

Sincerely,

A handwritten signature in cursive script that reads "Ricky Gease".

Ricky Gease  
Director, Division of Parks and Outdoor Recreation

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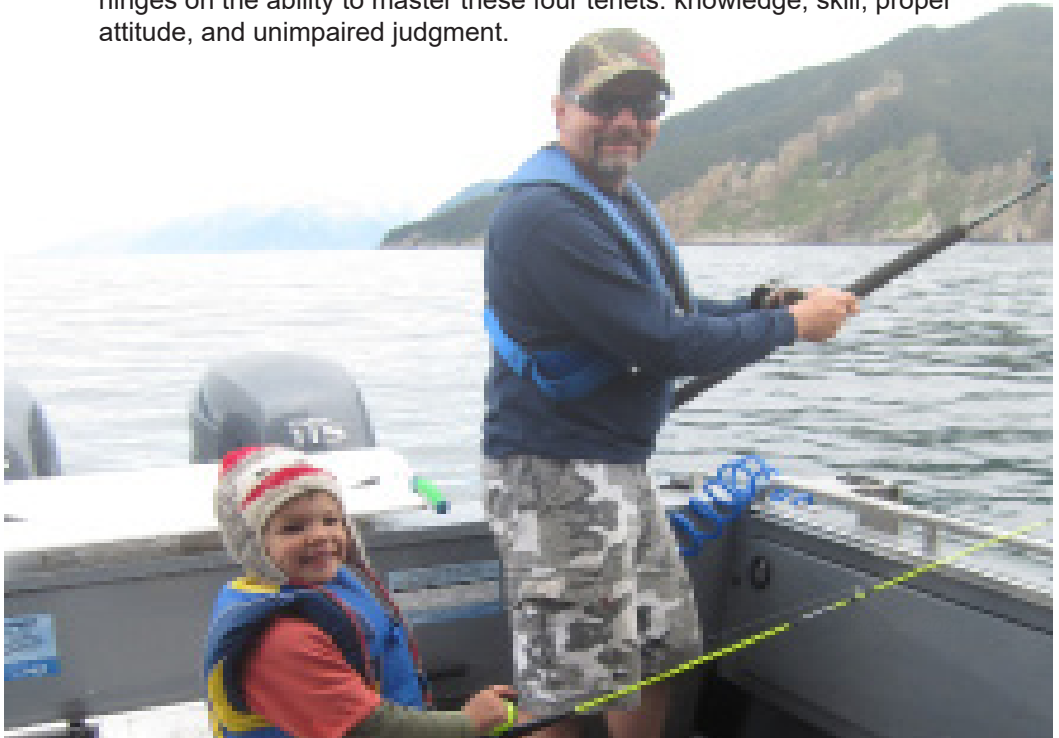
## PREPARATION

### INTRODUCTION

Alaska has a wide variety of boating opportunities, and the types of boats and activities are just as diverse. Alaska also has one of the highest non-commercial boating fatality rates in the nation. Here are some of the statistics relating to boating fatalities in Alaska:

- **5 out of 6 involve capsizing, swamping, ejection, or a fall overboard, resulting in a cold water immersion-related drowning**
- **9 out of 10 involve boats under 26 feet in length**
- **3 out of 4 involve powerboats**
- **9 out of 10 are adult males**
- **More Alaskans die in recreational boating incidents than die commercial fishing**

Because nearly all boating-related incidents involve operator controllable risk factors, most are both predictable and preventable. All boating entails some risk, and safe and enjoyable boating depends on effective risk management. The best skippers and paddlers know they must be able to anticipate, recognize, and assess risks, avoid or control what they can, and minimize the effects of those they cannot. The ability to do this hinges on the ability to master these four tenets: knowledge, skill, proper attitude, and unimpaired judgment.



## Knowledge

The Alaska Office of Boating Safety highly recommends all boaters take boating courses relevant to their type of boating and continue to refresh and build on their knowledge over time.

Powerboaters should look for courses approved by the National Association of State Boating Law Administrators (NASBLA). Completing a NASBLA-approved boating safety course fulfills the mandatory boating education requirements of many states and may qualify boaters for discounts on their boat insurance. For more information on NASBLA, visit [www.nasbla.org](http://www.nasbla.org).



Annie Grenier teaches an Alaska Water Wise course.

The U.S. Coast Guard Auxiliary, a civilian component of the U.S. Coast Guard, conducts NASBLA-approved boating classes in Alaska.

The Alaska Office of Boating Safety offers the NASBLA-approved *Alaska Water Wise* course and trains, certifies, and supports a statewide network of registered boating safety instructors who teach a variety of boating education programs in their communities. To learn more, visit [www.alaskaboatingsafety.org](http://www.alaskaboatingsafety.org) or email [officeofboatingsafety@alaska.gov](mailto:officeofboatingsafety@alaska.gov).

Marine safety instructor training and educational courses are also available through the Alaska Marine Safety Education Association (AMSEA). For more information, go to [www.amsea.org](http://www.amsea.org).

Paddlers should look for courses specific to their sports, such as those sponsored by the American Canoe Association and American Whitewater. There are also several Alaska paddling organizations that can offer more information:

- Knik Canoers and Kayakers: [www.kck.org](http://www.kck.org)
- Fairbanks Paddlers: [www.fairbankspaddlers.org](http://www.fairbankspaddlers.org)
- Alaska Sea Kayak Symposium: [www.alaskaseakayaking.org](http://www.alaskaseakayaking.org)

For approved online courses, visit [www.alaskaboatingsafety.org](http://www.alaskaboatingsafety.org).

## *Skills*

All boaters should have the skills to operate their boats under a variety of conditions and deal with a variety of problems. Beginning boaters may have enough skill to operate a boat under ideal conditions, but events such as deteriorating weather or a mechanical breakdown can suddenly require a much higher level of skill than the boater possesses. Skills are developed with instruction, practice, and experience. It is important for boaters to recognize their skill level and avoid operating in conditions that could potentially exceed their abilities.

## *Attitude*

Safe, enjoyable boating begins with the proper attitude. Alaska's waterways are a dynamic, ever-changing environment. Complacency, over-confidence, or carelessness are serious liabilities on a boat in Alaska. Avoid a "day trip" attitude, always have a contingency plan, and prepare for possible changes.

## *Judgment*

Sound judgment, unimpaired by alcohol, drugs, or fatigue, is a boater's most important tool. Boaters often have a choice of whether or not to put themselves and their passengers in a situation that could be beyond their skill or the capability of their boat or equipment. Be flexible in decision making; lives may depend on it.

## THE KEY TO SAFE BOATING

The four cornerstones  
of the prepared boater are:

- Knowledge
- Good judgment
- Skill
- Proper attitude



## REQUIRED EQUIPMENT

The federal and state laws requiring basic equipment on vessels are designed to save lives and reduce the need for rescue. Equipment required for a specific boat depends on many factors, including the size of the boat, source of propulsion, construction, and where and how the boat is used. The Alaska Requirements Summary (page 6) incorporates the items required under state and federal law. Please note these requirements are the minimum; every boater should carry additional equipment appropriate for the boat and the operating conditions.

### *Federal Requirements*

Federal requirements apply on all U.S. navigable waters. In Alaska, this includes all saltwater, rivers that empty into saltwater, and inland waterways designated as U.S. navigable waters under federal law. The requirements for non-commercial boats are found on the U.S. Coast Guard's website, [www.uscgboating.org](http://www.uscgboating.org).

### *State Requirements*

In Alaska, the state requirements are similar to the federal requirements and apply to all boats (except ship lifeboats, seaplanes, inspected passenger vessels, and water toys) on all waters of the state, including inland waters and saltwater within the territorial limits of the state. This section provides an overview of state requirements as of this printing.

### *Life Jackets*

A personal flotation device (PFD) is either wearable (life jackets) or throwable (life rings, cushions) and designed to keep a person afloat in water.

Life jackets keep persons afloat by providing supplemental buoyancy. Buoyancy is the upward force exerted on anything in the water that is less dense than the water it displaces. A U.S. Coast Guard-approved life jacket provides at least 15.5 lbs. of supplemental buoyancy, allowing a person to float with little or no effort.

Life jackets were historically thought of as a substitute for swimming ability or boating experience. However, with increased understanding of the effects of cold water immersion, many Alaskan boaters now realize the importance of always wearing a life jacket when in an open boat or on deck.

In a cold water immersion event, life jackets aid breathing by increasing

# ALASKA REQUIREMENTS SUMMARY

| Requirements                    | Boats under 16 feet   | Boats 16 feet to less than 26 feet   | Boats 26 feet to less than 40 feet   | Boats 40 feet to less than 65 feet   |
|---------------------------------|---|--|--|--|
| <b>Life Jackets</b>             | One U.S. Coast Guard approved life jacket for each person on board. Must be in serviceable condition, approved for the activity, and worn in accordance with the label and owner's manual. Persons under 13 must wear a life jacket when in an open boat, on the deck of a boat, or when being towed (i.e. tubing, waterskiing).  |  |  |  |
| <b>Throwable Devices</b>        | Recommended but not mandatory.  | Except for canoes and kayaks, one U.S. Coast Guard approved throwable device (i.e. seat cushion or throw ring).  |  |  |
| <b>Sound Producing Devices</b>  | Boats less than 39.4 feet (12 meters) in length must be able to make an efficient sound signal (such as that made with a whistle or horn) to signal intentions and to signal position in periods of reduced visibility.   |  | Boats 39.4 feet (12 meters) or more in length, a whistle or horn.          |  |
| <b>Visual Distress Signals</b>  | Night signals meeting federal requirements (33 CFR 175.110) between sunset and sunrise.   | Signals meeting federal requirements (33 CFR 175.110) for both day and night-time use.<br>Exception: boats and open sailboats not equipped with mechanical propulsion and under 26 feet in length are <b>not</b> required to carry day signals.<br><i>Note: Pyrotechnic devices, if used to meet this requirement, must be current, serviceable and readily accessible. At the minimum, a total of three day/night combination devices or three day and three night devices must be carried.</i> |  |  |
| <b>Fire Extinguishers</b>       | At least one U.S. Coast Guard approved B-I required for boats with inboard engines, living spaces, permanent fuel tanks or enclosed storage areas or hull voids not sealed or filled with flotation material.   |  | At least two B-I or one B-II U.S. Coast Guard approved fire extinguishers. | At least three B-I or one B-I and one B-II U.S. Coast Guard approved fire extinguishers. |
| <b>Navigation Lights</b>        | Display required between sunset and sunrise and when visibility is restricted. International configuration required (varies with length and mode of operation). See the International Navigation Rules.   |  |  |  |
| <b>Backfire Flame Arrestors</b> | One U.S. Coast Guard approved backfire control device on each carburetor of all inboard gasoline engines.   |  |  |  |
| <b>Ventilation</b>              | Boats with permanently installed engines, closed compartments, or permanent fuel tanks must have efficient natural or mechanical ventilation.   |  |  |  |
| <b>Registration</b>             | A boat placed on state waters that is equipped with mechanical propulsion (gas, diesel, or steam engines, and electric motors) and any vessel used in sport fishing charter activities must be registered and numbered with the Division of Motor Vehicles (AS 05.25.53). Certificate of Number must be carried onboard. Registration numbers and validation decals must be properly displayed on hull of boat. |  |  |  |

the distance between airways and the water. They also assist with rescues and self-rescues and keep a person floating even if disabled or unconscious. Certain designs can offer some protection in the event of an ejection, and some designs offer insulation from cold water.

There are important legal requirements concerning life jackets:

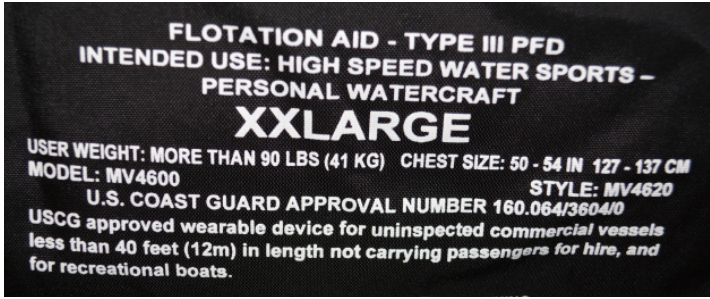
- A U.S. Coast Guard-approved life jacket must be carried on board for each person on the boat and must be readily accessible. The easiest way to ensure a life jacket is readily accessible is to wear it.
- Persons under 13 years old must wear a U.S. Coast Guard-approved life jacket when on an open boat, on an open deck, or when being towed on water skis or other devices.
- Life jackets must be of the proper size and fit for the intended wearer. Adult sizes do not satisfy the legal requirements for children or vice versa.
- Life jackets must be used in accordance with the manufacturer's label and owner's manual. Some life jackets must be worn to satisfy carriage requirements.
- Life jackets must be in serviceable condition, meaning they must be free of defects, such as missing or waterlogged flotation material or broken zippers, buckles, or straps. Special attention should be given to inflatable devices, which should be carefully maintained per manufacturer recommendations.



*This life jacket is too big!*

### **Life Jacket Selection**

Life jackets come in a wide variety of styles and colors. No single life jacket is perfectly suited for all persons in all situations. Body shape is one consideration; some life jackets are equipped with several adjustment points, enabling a custom fit. Some are designed for offshore use and others for nearshore and calm water. Some have bright colors, greatly increasing the visibility of a person in the water and improving the chances of a successful rescue or recovery. Some, such as float coats



Previous life jacket labeling system

and full body work suits, help slow heat loss when in the water.

## ADULT UNIVERSAL

User Weight: >40 kg (>88 lbs)  
Chest Size: 76-132 cm (30-52 in.)

70

- Drowning hazard if not worn.
- Must be fastened and properly adjusted to float the wearer.

Choose and wear the device which fits you and your activity, visit [www.wearlifejacket.org](http://www.wearlifejacket.org).  
Read and keep the owner's manual and tags for info such as rearming, wear, and care.

|  |  |
|--|--|
| Company Name<br>Company Address<br>Company website if available<br>Made in XXXXX | <div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;">                     Lab<br/>                     Certification<br/>                     Mark                 </div> |
| USCG Approved 160.064/XXXXX/X<br>TC Approved XXXXXXX-X<br>ANSII/CAN/UL 12402-5   | Certifying Lab<br>Identification   |

Model: XXXX      Style: XXXX  
Lot No. XXXX

Approval conditions state that this device must be worn to be counted as equipment required by vessels meeting Transport Canada or USCG regulations.

Current life jacket labeling system

The life jacket must be worn in accordance with the manufacturer's label. Life jackets are now being produced with a new labeling system, though boaters will likely see the older labels along with the new for some time. Read the label to determine if the life jacket is U.S. Coast Guard-approved for the intended use. Check for age restrictions or "approved only when worn." Some devices are not approved for recreational boats. In these cases, a U.S. Coast Guard-approved device for each person must also be carried on the boat in order to meet federal and state requirements.

Many life jackets perform differently in the water, and the same life jacket may perform differently on different people. Everyone should test their life jacket in water before taking it out boating. Become familiar with equipment before an emergency arises.



Consider these factors when choosing a life jacket:

**Swimming ability and confidence in water:** Inflatable life jackets and some other styles may not have the inherent buoyancy a nearshore or offshore life jacket provides. If swimming ability and confidence are low, choose a life jacket with a higher number of newtons (or pounds of buoyancy).

**Proximity to shore or rescue:** If near the shore and possessing strong swimming ability and confidence in water, an inflatable life jacket or a life jacket with a lower number of newtons may be appropriate. If boating offshore or far from rescue, the preferred life jacket is an offshore life jacket because they are designed to turn an unconscious wearer face up in the water.

**Whitewater:** If boating in whitewater, wear a life jacket approved for use in whitewater.

**Fit (number of adjustment points):** The more custom fit the life jacket, the better the performance in the water. Choose a life jacket with multiple adjustment points. A snug and comfortable fit is the best option.



Offshore



Nearshore



Whitewater



Nearshore



Float Coat



Inflatable

**Cold weather boating:** If boating during cold weather months, a float coat can offer additional protection and reduce body heat loss.

Immersion suits (survival suits) completely cover the wearer, slowing heat loss in the water. Although most recreational boating deaths are the result of a quick onset emergency, such as capsizing or falling overboard, it is a good idea to carry survival suits on board in case of a delayed onset emergency. Try them on first to ensure proper fit. Immersion suits are not substitutes for life jackets.



### Life Jacket Loaner Boards



There are more than 600 *Kids Don't Float* life jacket loaner boards located throughout Alaska. This grassroots program makes life jackets easily accessible at boat launch ramps or popular boating areas. Anyone can borrow a life jacket, and often there are a variety of sizes available. As of July, 2019, at least thirty-six lives have been saved thanks in part to borrowing a *Kids Don't Float*

life jacket. Anyone can donate a new or gently used U.S. Coast Guard-approved life jacket to a life jacket loaner board.

Visit <http://dnr.alaska.gov/parks/boating/kdf/loanboard.htm> for more information on how to establish a life jacket loaner board in your area.

### Sound Signals

International Navigation Rules 32-37 (Part D) address the signals used when maneuvering, warning other boaters, and attracting attention. According to both federal and state law:

- Vessels less than 39 feet, four inches (12 meters) are not specifically required to carry a sound-producing device, such as a whistle or horn, but must have some means of making an



Various types of sound signals a

“efficient sound signal.” Fastening a whistle to each life jacket is a great way to meet this requirement.

- Vessels over 39 feet, four inches (12 meters) are required to carry a whistle or horn.

### Visual Distress Signals

Problems can occur for many reasons when boating, and even well-prepared boaters sometimes need help. In these situations, boaters must be able to alert others. Signals can help, but only if they are the right type for the conditions and are used properly.

- Visual distress signals are classified by the U.S. Coast Guard as day signals, night signals, or combination day and night signals.
- Boats under 16 feet in length, manually propelled boats, and open sailboats under 26 feet without engines are not required to carry day signals. However, those boats must carry night signals when operating between sunset and sunrise, and in situations where there is diminished visibility, such as fog or smoke.



*Flares are a type of visual distress signal.*

- Carry extra visual and sound signaling devices in clothing or life jacket pockets; in the event of getting separated from your boat, you will be glad you have these devices with you.
- Pyrotechnic devices should be packaged in a waterproof container with the expiration date clearly marked on the outside.

If pyrotechnic devices (such as smoke signals and flares) are used to meet legal requirements, at least three must be carried. All devices are marked with an expiration date. If expired flares are carried as spares, put them in a separate container and clearly mark them “expired” and consider using them first. If the expired devices work, then the newer devices are still available as a backup.

Three flares will not last long in an emergency. For this reason, many experienced boaters carry other signaling devices in addition to the requirements. Other examples of devices to carry on your person include signal mirrors, white LED lights, glow sticks, and distress flags.

Examples of visual distress signals that meet U.S. Coast Guard requirements include:

- Electric, automatic SOS distress light (night signal)
- Three orange smoke canisters (day signal)
- Orange flag with distress symbol (day signal)
- Three handheld flares (day and night signal)
- Three red meteor aerial flares (day and night signal)
- Three parachute flares (day and night signal)



*Distress flag*



*Signal flares*

### **Fire Extinguishers**

Fire extinguishers are required on all powerboats with enclosed engine compartments, permanently installed fuel tanks, or enclosed areas that could trap fumes. Extinguisher labeling has changed. Extinguishers with old labels (size classified as I or II) are still accepted as long as they are in serviceable condition, but new labels are now on the market (size classified as 5 or 20). Extinguishers are classified by the type of fire they are designed for (A, B, C, or D) and by size (I or II/5 or 20).

- **Class A**—ordinary combustible materials, such as wood, cloth, paper, rubber, and many plastics
- **Class B**—flammable liquids, combustible liquids, petroleum, greases, tars, oils, oil-based paints, solvents, lacquers, alcohols, and flammable gases
- **Class C**—involves energized electrical equipment
- **Class D**—combustible metals, such as magnesium, titanium, zirconium, sodium, lithium, and potassium

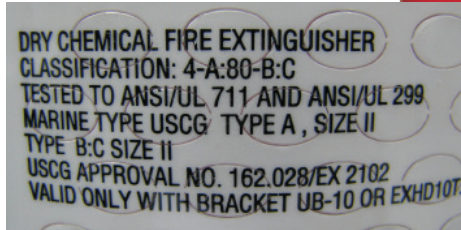
Extinguishers must have a label from the testing laboratory and have a U.S. Coast Guard approval number or specify “Marine Type USCG.” Marine extinguishers are typically B-I or B-II (5-B or 20-B).

The size and number of extinguishers required to be carried on a powerboat vary with the length of the boat (see Alaska Requirements Summary, page 6).

Everyone on the boat should be familiar with the location and correct use of fire extinguishers. Fire drills are highly recommended.

Some additional points:

- Do not test a fire extinguisher (this breaks the seal and causes leakage). See label for additional information.
- Place extinguishers in readily accessible locations, but not where a fire is most likely to break out. For example, an extinguisher mounted inside a closed engine compartment may be impossible to reach in the event of a fire.
- Inspecting fire extinguishers should be a regular part of the pre-departure checklist. Dry chemical extinguishers should be inspected monthly and shaken to redistribute the agent.



| Motorboat Size | Old | New | With no fixed fire extinguishing system | With a fixed fire extinguishing system |
|----------------|-----|-----|---|--|
| Under 16ft.    | B-I | 5-B | 1                                       | 0                                      |
| 16ft. – 26ft.  | B-I | 5-B | 1                                       | 0                                      |
| 26ft. – 40ft.  | B-I | 5-B | 2                                       | 1                                      |
| 40ft. – 65ft.  | B-I | 5-B | 3                                       | 2                                      |

1 One B-II (20-B) hand portable fire extinguisher may be substituted for two B-I (5-B) hand portable fire extinguishers.

### Navigation Lights and Shapes

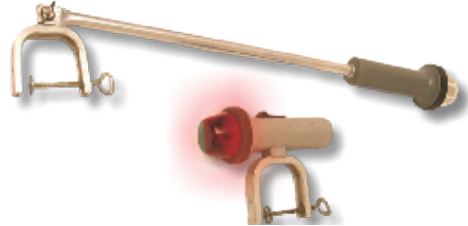
International Navigation Rules 20-31 (Part C) address navigation lights and shapes (shapes are the daytime equivalent of navigation lights and may be balls, cones, cylinders or diamonds that are black in color). It is the

boat operator's responsibility to learn and use these lights and shapes.

Boats on the waters of the state must display navigation lights between sunset and sunrise and during periods of restricted visibility.

The following summarizes the lighting requirements for non-commercial boats under 20 meters (65 feet, seven inches):

NOTE: Navigation light illustrations (Figures 1-6) can be found on the facing page.



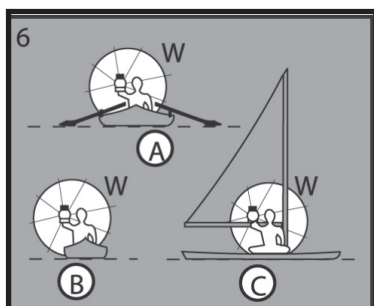
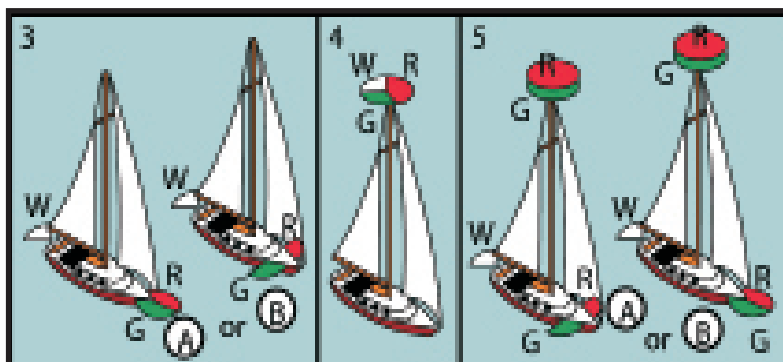
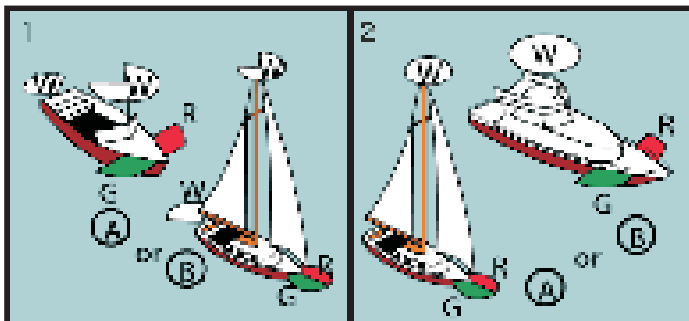
Powerboats must exhibit navigation lights as shown in Figure 1, except that boats less than 12 meters (39 feet, 4 inches) may show the lights in Figures 1 or 2. A power-driven boat of less than seven meters (23 feet) in length whose maximum speed does not exceed seven knots may instead exhibit an all-round white light and, if practicable, side lights. A sailboat operating under both machinery and sail power is considered a power-driven boat.

Sailboats under sail alone must exhibit navigation lights as shown in Figures 3 or 4, and may also display the lights shown in Figure 5. A sailboat of less than seven meters (23 feet) in length must either exhibit navigation lights as shown in Figures 3 or 4 or carry an electric torch or white light, which must be exhibited in sufficient time to prevent a collision (Figure 6).

Boats under oars must either exhibit navigation lights as shown in Figures 3 or 4, or carry an electric torch or white light, which must be exhibited in sufficient time to prevent a collision (Figure 6).

Anchor lights must be displayed on power-driven vessels and sailboats. An anchor light is a round white light visible for two miles and exhibited forward where it can best be seen. Vessels less than seven meters (23 feet) are not required to display anchor lights unless anchored in or near a narrow channel, fairway, anchorage, or where other vessels normally navigate. Anchor lights are not required on vessels less than 20 meters anchored in a special anchorage designated by the Secretary of Transportation.

## Navigation Light Illustrations (Figures 1-6)



**COLOR CODE**  
 W = White  
 R = Red  
 G = Green

Additional information, including all recognized signals, lighting, and shape requirements, can be found in the complete Navigation Rules at <https://www.navcen.uscg.gov/?pageName=navRuleChanges>.

## PRE-DEPARTURE CHECKLIST

*Powerboaters can avoid inconvenience and potential danger by taking a few minutes before departure to check the following:*

- ✓ Weather forecast checked
- ✓ Float plan prepared and given to responsible party
- ✓ Boat registration current and properly displayed, certificate on board
- ✓ Emergency locator beacons, radios, and other electronics functional
- ✓ Passenger briefing given: how to start, stop, and steer boat, clothing check, location and use of communications and emergency equipment
- ✓ Life jackets worn by each person (proper size, fit, and fastened)
- ✓ Emergency communication and distress signaling devices carried on person
- ✓ Throwable flotation device attached to floating line
- ✓ Fire extinguisher(s) fully charged and mounted securely
- ✓ Ability to make an efficient sound signal (horn or whistle)
- ✓ U.S. Coast Guard-approved visual distress signals on board (check expiration dates)
- ✓ Drain plugs installed, thru hull fittings leak-free, sea cocks closed
- ✓ Hoses/clamps, drive units/props, fuel lines/filters, blowers/backfire flame arrestors (inboards) inspected
- ✓ Scuppers clear and bilge clean
- ✓ Battery fully charged, secured, and terminals covered
- ✓ Back-up manual bailing device(s) accessible and functional
- ✓ Back-up propulsion source (spare engine, sail, and paddles or oars)
- ✓ Tools/parts e.g. spare batteries, fuses, spark plugs, belts, prop, and nut
- ✓ Anchors (2), each with chain and line, one attached to the boat
- ✓ Food, water, shelter, and spare clothing
- ✓ First aid kit
- ✓ Reboarding devices (foot sling, swim step, ladder)
- ✓ Navigation tools (e.g., GPS, chart plotter, depth sounder, compass, charts, tide book)
- ✓ Passengers and load distributed properly, items secured from shifting
- ✓ Fuel and oil sufficient for trip: 1/3 out, 1/3 return, 1/3 spare
- ✓ Engines, engine cut-off device, steering, gear shift, and lights tested
- ✓ Engine cut-off device(s) worn





## **Backfire Flame Arrestors**

Backfire flame arrestors are screen-like devices installed on inboard gas engine carburetors. They help prevent flames produced by engine backfire from causing a fire or explosion. These devices must be kept clean and periodically inspected for damage. They are required on all motorboats with inboard gas engines manufactured after April 25, 1940.

There are two exceptions to this requirement: a vessel that has an attachment to the carburetor or has the engine located so flames caused by engine backfire will be dispersed outside the vessel so neither the vessel nor the persons on board are endangered; or a vessel whose air and fuel intake system bears a U.S. Coast Guard-approval label stating it is safe without a flame arrestor.

## **Ventilation**

An enclosed space containing explosive vapors is a dangerous situation. Any boat equipped with a gasoline engine installed inside an enclosed engine or fuel tank space (not open to the atmosphere) must have an efficient ventilation system to disperse explosive vapors.

Natural ventilation consists of at least two ventilation ducts fitted with cowls or the equivalent. It is required to have at least one exhaust duct extending to the lower portion of the bilge, where fumes are most likely to accumulate, and at least one intake (supply) duct extending to a point midway to the bilge (or at least below the level of the carburetor air intake).

Boats built after July 31, 1980 are required to have powered ventilation (exhaust blower) for engine compartments that are not open to the atmosphere. Such boats are also required to display a warning label.

Butane and propane are even more dangerous than gasoline, so be diligent about checking inside the cabin and galley. Be sure the fuel tank enclosure is properly vented.

Before starting the engine, operate the blower for at least four minutes and check the engine compartment for gasoline vapors. If you smell vapors, do not start the engine.

## **REGISTRATION AND TITLING REQUIREMENTS**

In the event of a boating emergency or boat theft, boat registration provides critical information such as a detailed boat description, owner contact information and hull identification number, and can substantially

reduce the time and cost involved with responding to these cases.

All 50 states and six U.S. territories and commonwealths register boats. Under federal law, all boats equipped with machinery propulsion must be registered by the state in which principal use occurs. Once issued, this registration cannot be reassigned or transferred to another boat. Registration in Alaska is valid for a three-year period.

## ALASKA BOAT REGISTRATION

| <b>EXP DATE</b> | <b>NUMBER</b> | <b>DECAL NO</b> |
|-----------------|---------------|-----------------|
| JUL 2024        | AK-0000-P     | BE7233          |

**HULL IDENTIFICATION NUMBER**

NFL00000E000

**OWNER NAME/ADDRESS**

CAPT. JAMES COOK  
 2503 BLIGH DR.  
 ANCHORAGE AK 99500

*This is a boat registration. Boat registrations include a Certificate of Number. This number is required by Alaska law.*

In Alaska, exceptions to the state’s registration requirement apply to:

- Any documented or undocumented boat with a current registration from another state (though not to exceed 90 consecutive days)
- Government boats (NOTE: Government recreational boats are not exempt under federal law)
- Ship lifeboats used solely for lifesaving purposes
- Boats documented by a foreign government, but not those documented within the U.S. territories or other states
- Boats not equipped with mechanical propulsion, such as canoes or kayaks, unless used for sport fish guiding

While non-motorized boats, such as canoes and kayaks, are not required to be registered in Alaska, having a registration can help aid in recovery efforts in the event of loss or theft.

A boat’s registration (also referred to as the Certificate of Number)

must always be kept on the boat when in use. An example of a boat registration is shown in the illustration on page 18.

NOTE: The Alaska Department of Fish and Game vessel license for boats engaged in commercial fishing is not a boat registration.

### ***How to Register***

The boat owner must complete a state application for boat registration and present the application together with the appropriate fees to the Alaska Division of Motor Vehicles (DMV). An owner of a boat that has never had an Alaska registration must also provide one of the following documents to prove ownership:

- Manufacturer's Statement of Origin (new boats only)
- Carpenter's Certificate
- Bill-of-Sale from a dealer or the previous owner
- Title or Registration (Certificate of Number) from another state
- Affidavit of Ownership

Registration forms are available at any Alaska DMV office. Forms and additional information are also available online through the Alaska Office of Boating Safety's website at [www.alaskaboatingsafety.org](http://www.alaskaboatingsafety.org) or the DMV website at [www.state.ak.us/dmv/reg/boat.htm](http://www.state.ak.us/dmv/reg/boat.htm).

### ***Registration Fees***

Boats equipped with mechanical propulsion, including non-powered boats with auxiliary machinery propulsion (for three years):

- Original registration/Certificate of Number, transfer of ownership, or renewal: \$24
- Duplicate registration/Certificate of Number or replacement decal: \$5

Boats not equipped with mechanical propulsion (for three years):

- Original registration/Certificate of Number, transfer of ownership, or renewal: \$10
- Duplicate registration/Certificate of Number or replacement decal: \$5

### Titling

Under Alaska Statute (AS 05.25.055), motorized boats over 24 feet must also be titled, to help keep track of ownership and discourage owners of derelict vessels from abandoning their ships in Alaska waterways. This statute applies to undocumented as well as documented vessels.

If you sell your boat, you must transfer title to the new owner in order to be free of liability in the event of emergency, desertion, or other misuse of the boat. If you are a documented boat owner from another state or country, you must have proof of title from your home state/country for presentation to authorities.



*In Alaska, motorized boats over 24 feet must also be titled.*

### How to Title

The boat owner must complete a state application for boat title and present the application together with the appropriate fees to the Alaska DMV. An owner of a boat that has never had an Alaska title must also provide one of the following documents to prove ownership:

- Registration/Certificate of Number
- Proof of ownership, such as manufacturer's Statement of Origin (new boats only)
- Carpenter's Certificate
- Bill-of-Sale from a dealer or the previous owner or title or registration from another state

Titling forms are available at any Alaska DMV office. Forms and additional information are also available on the internet through the Alaska Office of Boating Safety's website at [www.alaskaboatingsafety.org](http://www.alaskaboatingsafety.org) or the DMV website at [www.state.ak.us/dmv/reg/boat.htm](http://www.state.ak.us/dmv/reg/boat.htm).

### Titling Fees

Boats over 24 feet must be titled in Alaska:

- Boat Title: \$20
- Duplicate Boat Title: \$20

## Notification Requirements

The boat owner is required to notify the DMV in writing within 15 days of:

- Any change in address
- Theft (or recovery) of a registered boat
- Loss or destruction of a valid registration/Certificate of Number
- Transfer of all or part of the owner's interest in the boat
- Destruction or abandonment of the boat

The boat owner is also required to surrender the registration/Certificate of Number to the DMV within 15 days if the Certificate of Number becomes invalid due to any of the following:

- U.S. Coast Guard documents the boat
- Owner transfers all of their ownership of the boat
- Boat is destroyed or abandoned
- Fees are not paid
- Application contains a fraudulent statement
- Boat is no longer principally used in Alaska
- Owner involuntarily loses their interest in the boat by legal process

## Display of Number

If a boat is required to be registered, the AK number assigned to the boat by the registration/Certificate of Number must be painted on or otherwise permanently attached to each side of the forward half of the boat. Boats not required to be registered are also not required to display the number, but doing so speeds identification in the event of an emergency or theft.

- Numbers must be plain, vertical block letters no less than three inches in height. Numbers must contrast with the color of the background and be distinctly visible and legible. They must read left to right and have either a space or hyphen that is the width of a letter or number (except the width of an l or a 1) between each group of letters and numbers (example: AK 5678 AA or AK-5678-AA).



- A backing plate made of plastic or other suitable material may be used as a surface to place the number if the boat is an inflatable or if the boat is so configured that the number would not easily be seen if it was affixed to the hull or superstructure.
- Boat dealers may use a removable backing plate to display the number, but only if the boat is actually being tested or demonstrated.
- Only the registration number officially assigned to a boat may be displayed.

### *Display of Validation Decals*

All boats required to be registered must display the validation decals issued with the registration/Certificate of Number. The decals must be visible when the boat is in operation and displayed within six inches of the registration number on each side of the boat. Only a current decal may be displayed. Expired decals must be covered or removed.

Decals may be applied to a backing plate if the plate is attached to the boat in the proper location and it is impractical to attach the decal directly to the boat.



### *Hull Identification Number (HIN)*

A hull identification number (HIN) is a unique serial number that identifies a specific boat, much like the vehicle identification number of an automobile.

State law requires a permanent HIN on every boat registered in Alaska. Manufacturers are required under federal law to put a HIN on the boat during construction. However, some boats, such as those manufactured before 1972 and homemade boats, do not have one assigned, so the owner must obtain a HIN from the DMV. HINs shall be permanently inscribed onto the hull in accordance with 02 AAC 70.080. It is unlawful for a person to remove, alter, deface, destroy, or otherwise make a HIN illegible.

## RECOMMENDED EQUIPMENT

Already reviewed are the required items for operating a vessel in Alaska, but there are additional items to consider that will help to ensure safe and enjoyable boating.

### *Anchor*

Boats in Alaska are not required to have anchors onboard; however, it is highly advisable. If you run out of fuel or your boat motor dies, an anchor can hold you steady while help is on the way.



*Anchor with appropriately equipped rode (chain and anchor line)*

### *Engine Cut-off Device*

As of April 1, 2021, all operators of recreational vessels less than 26 feet in length that have an engine cut-off device installed are required to use an engine cut-off switch and associated engine cut-off switch link whenever the boat is operating on plane or greater than displacement speed on all U.S. navigable waters. Most personal watercraft and powerboats come with a manufacturer-equipped emergency engine cut-off device. This safety item is specifically



*Always use an engine cut-off device to ensure your boat will stop running in the event that you go overboard or are disabled.*

designed to shut off the engine if the operator is separated from the helm. This critical piece of equipment can prevent overboard passengers from being struck by the spinning propeller of a boat that has lost its operator.

Always remember to secure the cut-off device to your person before operating your vessel. There are two types of cut-off devices: those that are physically attached to the motor with a lanyard, and electronic wireless devices, which detect when the wearer is a certain distance from the helm or captain's seat. One benefit of the electronic wireless devices is the ability to have multiple devices for multiple people on board. If your boat does not come equipped with an engine cut-off device, consider installing one.

### *Reboarding Device*

If you fall out of your boat, the surest way to safety is to get back in. A reboarding device, such as a built-in transom ladder, handhold, foothold or rope ladder, will help make reboarding easier.

Make sure any non-attached item, like a rope ladder, is easily accessible and can be attached quickly for fast retrieval from the water. A simple loop of line between cleats could make reboarding easier.



*Equip the boat with at least one means of reboarding.*

### *Emergency Communication Devices*

Radios and other forms of electronic communication are not required on Alaska waters, but they are a key to having a safe boating outing.

## **EMERGENCY COMMUNICATION DEVICES**

Boating trips do not always go as planned. Fast-approaching storms, powerful tides, mechanical breakdowns, or human error can turn a



tranquil day into an unexpected tragedy. Pushing a button on a device does not necessarily guarantee a timely rescue, but it greatly increases the chance of success.

Of the recreational boating fatalities to date in Alaska, five of six followed a capsizing, swamping, ejection, or fall overboard. Most of these events are sudden-onset emergencies and happen quickly with little time to react. Nine out of ten fatalities were adult male victims, most of whom were not wearing a life jacket or who were never found. Life-threatening situations arise in the blink of an eye, and regardless of swimming ability, boating experience, and physical or mental strength, death can occur. For this reason, it is imperative to have some way to call for help in the event of an emergency. Regardless of boat type, having some sort of emergency communication device can save your life.

Choose the right device for your activity and area. What might work for one person in one location may be ineffective for someone else in a different location or situation. The size of your boat, your destination, your proximity to other people, and especially the broadcast reach of the device all come into play when choosing the right device. Research the options carefully, and resist the urge to make an uninformed purchase.

The options below offer insights to help familiarize you with what might work best for your particular needs. Above all, carry some sort of combination of the tools listed below. Having a tool to initiate a rescue and a device to help pinpoint your



Dashboard-mounted VHF radio

## GET HELP WHEN YOU NEED IT

To get help as quickly as possible in an emergency, consider carrying a combination of the following emergency communication and distress signaling devices. Some are required and others are recommended, but having several communication devices as backup is wise.

### Emergency Locator Beacons

- EPIRB
- PLB
- Satellite Tracking Devices

### Radios

- VHF Radios
- HF Radios

### Phones

- Satellite phones
- Cellphones



Handheld VHF radio

### Distress Signaling Devices

- Visual distress signals
- Sound signals

location is the ideal combination.

### *Immediate Help: Distress Signaling Devices*

If you fall overboard, experience boat trouble, or have any other sort of emergency while boating, it is critical to have the ability to call or signal for help in a timely manner, especially if you are in the water. Even the most prepared boaters can find themselves in this situation, so carry an emergency communication device and learn how to use it. Visual distress and sound signals are part of the required equipment to have onboard in Alaska (pages 10-11). This equipment, combined with emergency communication devices, will improve your chances of getting rescued in an emergency. Distress signaling devices include visual distress signals, such as flares or mirrors, and sound signaling devices, such as a whistle or horn.

### *Emergency Locator Beacons*

There are different types of emergency locator beacons. Some are larger and geared toward large commercial vessels and others are smaller and can be carried on one's person.

#### **EPIRB**

---

Emergency Position Indicating Radio Beacons (EPIRBs) can activate automatically or manually, either while still mounted or when submerged in water. EPIRBs are linked to COSPAS SARSAT, a collaborative satellite system that was conceived and initiated by Canada, France, the United States, and the former Soviet Union in 1979 to aid in rescues.

- GPS: Available with and without GPS
- Registration: Required to be registered to the boat
- Two-way communication: No
- Homing signal: Yes
- Range: Interface with COSPAS SARSAT; very wide range
- Power mode: Battery; requires maintenance about every five years
- Ideal for: Off-shore vessels



## PLB

Personal Locator Beacons (PLBs) are smaller and cost less than EPIRBs. They also utilize the COSPAS SARSAT system.

- GPS: Available with some models, but not all
- Registration: Required to be registered to an individual
- Two-way communication: No
- Homing signal: Yes
- Range: Interface with COSPAS SARSAT; very wide range
- Power mode: Battery operated; batteries last up to five years
- Ideal for: Any remote recreational activity; can be stored on one's person



## Satellite Tracking Devices

Satellite tracking devices are one of the most recent products on the market. Rather than communicate with the COSPAS SARSAT system used by EPIRBs and PLBs, satellite tracking devices, such as the Spot or inReach, relay your position to a privately controlled satellite network, which will then relay your information to search and rescue (SAR) personnel. There are different manufacturers of satellite emergency notification devices (SENDs).

### Satellite Emergency Notification Devices

- GPS: Yes
- Registration: Required to be registered to an individual
- Two-way communication: Yes
- Homing signal: No
- Range: Interface on private satellite systems and relay information to local SAR personnel
- Power mode: Battery operated, rechargeable



- Ideal for: Any remote recreational activity; can be stored on one's person

## Radios

Buying a radio does not automatically mean you will get the help you need in the event of an emergency. If your radio is equipped with digital selective calling (DSC), follow these steps: First, make sure your dashboard-mounted radio is hard-wired to the boat's GPS, unless the



radio comes GPS-equipped. Second, the radio must be registered and you must receive your unique Marine Mobile Service Identity (MMSI) number (go to [www.boatus.com/mmsi](http://www.boatus.com/mmsi)). The MMSI number must be manually entered into your radio, per manual instructions. Finally, test the radio's operation and MMSI number delivery by making a routine test call to another equally equipped radio. If your radio has the "test" mode feature, you can call the U.S. Coast Guard Recue 21 system using the 003669999 MMSI and get an automatic acknowledgment.

## VHF Radios

There are two types of very high frequency (VHF) radios: those equipped with DSC and those without. Those with DSC can transmit much further than those without.

- GPS: Most radios today have GPS built in, but if they do not, they should be hard-wired to the boat's GPS system
- Registration: Not required, but recommended; you will get a Maritime Mobile Service Identity (MMSI), which will help identify your location in an emergency
- Two-way communication: Yes
- Homing signal: Some, but not all
- Range: Limited due to the curvature of the earth, mountains, and weather; most have



a range between a three and 12 mile radius

- Power mode: Dashboard-mounted radios are connected to the boat's electrical system, so have backup communications on board or carry a handheld radio in case of engine/power failure
- Ideal for: Boaters in an area with other boat traffic; other boats within line-of-sight should be able to communicate with you on their radios

## HF Radios

There are two types of high-frequency (HF) radios: HAM radios and Marine Single Sideband (SSB) radios. Both can be equipped with DSC. Because of the nature of DSC (a microburst digital transmission and not a voice transmission), DSC transmissions tend to transmit farther than a voice transmission. DSC distress transmissions can be automatically relayed from ship station to ship station until acknowledged as a distress. HAM radios are a specialty radio option not applicable to most recreational boaters.

- GPS: Most radios today have GPS built in, but if they do not, they should be hard-wired to the boat's GPS system
- Registration: Required; Marine SSB radio systems require two FCC licenses: a Ship Station License and a Commercial Operators License; with a Ship Station License you will receive a 9-digit Maritime Mobile Service Identity (MMSI), which will help in the event of an emergency
- Two-way communication: Yes, and broadcast
- Range: Farther than VHF radios; it can be hundreds of miles and even across oceans
- Power mode: Require extensive battery life, so have backup in case the boat's battery dies

### KEEP IT WITH YOU

Alaskan boaters should always carry communication and signaling devices on their person.

Communication devices include handheld waterproof VHF radios, satellite phones, and satellite messenger devices.

Signaling devices include whistles, signal mirrors, flares, and white LED lights.

Carrying a combination of both types of devices on your person will help ensure that search and rescue personnel can locate you in an emergency.

- Ideal for: Boaters who will routinely be out of cellphone and VHF range

## Phones

There are two types of phones to choose from when choosing emergency communication tools: satellite phones and cell phones. Unlike cell phones, satellite phones use orbiting satellites for connections.

### Satellite Phones

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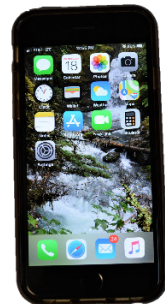
- GPS: Yes
- Registration: Yes
- Two-way communication: Yes
- Range: Satellite phones communicate with the closest satellite and must have line of site to reach it, which can be difficult in deep canyons or under dense tree canopies.
- Power mode: Satellite phones require batteries for use and can last about 30 hours; some can be recharged electronically
- Ideal for: Boaters who will routinely be out of cell phone and VHF radio range



### Cell Phones

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- GPS: Yes
- Registration: A monthly cell phone plan must be subscribed to
- Two-way communication: Yes
- Range: Cell range varies from location to location, depending upon the provider's network
- Power mode: Rechargeable
- Ideal for: Users who will be in cell service range, know their service provider's coverage area, and are familiar with their surroundings



## **DEVICE ADVICE:** *Choose the right communications for your boating needs*

### **Consider issues:**

- How long does the battery last? Is it rechargeable?
- Does it fit in your pocket or on your life jacket? If not, how likely are you to always have it on you?
- Is it waterproof? Does it need a case? Is it on a lanyard so it can be kept close?
- Does it float?
- Is it manually or automatically activated?
- Does it offer broad reach for communication with nearby boaters?
- What is the coverage? Is it limited by distance or geography?
- How long will it transmit an emergency signal?

### **Understand how satellite communications work:**

- Before buying any satellite communications device, make sure its satellite coverage area is dependable and includes your intended destinations.
- Understand how your device communicates with rescue personnel and learn its limitations.
- Familiarize yourself with the device and its features well before heading out.

### **Register your device:**

- Register devices so your vessel information is always available. Many DSC VHF radios in use are not connected to GPS, do not have an MMSI number assigned, and have not been properly registered. This greatly diminishes its reach and hinders SAR personnel's ability to find you quickly in an emergency.
- EPIRBs and PLBs are required to be registered online. You will receive a 15-character Unique Identifying Number (UIN). When activated, your device transmits the UIN to COSPAS-SARSAT satellites.

### **Prepare for potential problems:**

- Before leaving shore, make sure everyone knows how to operate the emergency communications and distress signaling devices.
- Always carry a backup communication device.
- Make sure all devices are operational, charged, and properly secured on your person (if applicable).
- If using a cellphone or satellite phone, pre-program the numbers of local emergency services (such as the U.S. Coast Guard) beforehand.

### *Specialty communications*

Automatic Identification System Man Overboard (AIS MOB) devices are best used in areas of commercial boating traffic. When a MOB device is deployed, the person is depicted as a man overboard on computer screens in the wheelhouses of commercial vessels. The AIS is like a PLB, but is more suited to boating when others are relatively close by. These devices should be worn on your person. Most deploy automatically. Some are equipped with digital selective calling (DSC) for better coverage area.

AIS A and B transceivers are becoming more popular among recreational boaters as well as large vessel operators. Not only do these transceivers help a vessel's navigation, but they also let other vessels with AIS A or B transceivers know where they are, and, consequently, the U.S. Coast Guard, which monitors AIS vessel traffic in Alaska.

## OTHER BOATING LAWS

### *Prohibited Operation*

A person may not operate a boat on state waters for a recreational purpose or another purpose, or tow water skis, a surfboard, or a similar device, in a reckless or negligent manner so as to endanger the life or property of another person; or that is not equipped as required under state law (Alaska Statute 05.25.060).

### *Owner's Civil Liability*

Except as provided under AS 09.65.112 and AS 09.65.290, the owner of a boat is liable for injury or damage caused by the negligent operation of the owner's boat, whether the negligence consists of a violation of a state statute or the failure to exercise ordinary care in the operation of the boat as the rules of the common law require. The owner is not liable, however, unless the boat is used with the owner's express or implied consent. It is presumed that the boat is being operated with the knowledge and consent of the owner if, at the time of the injury or damage, it is under the control of the owner's spouse, father, mother, brother, sister, son, daughter or other member of the owner's immediate family. This statute does not relieve any other person from a liability the person would otherwise incur and does not authorize or permit recovery in excess of injury or damage actually incurred (AS 05.25.040).

### *Impaired Boating*

Boating under the influence includes consuming alcohol or illicit or



## BE RESCUE READY: *A checklist for success*

Besides having the proper emergency communication devices on hand, here are some other ways to become Rescue Ready:

- Wear a life jacket when on an open boat or on deck.
- Carry emergency communication and distress signaling devices on your person.
- Attach the engine cut-off device when underway.
- Equip the boat with at least one means of reboarding.
- Complete a pre-departure checklist.
- File a float plan.
- Brief all passengers on the location and operation of emergency communication devices, and how to stop, start, and steer the boat.
- Check and monitor the weather often.
- Never boat under the influence of alcohol or drugs.



prescription drugs. Alcohol use is involved, on average, in over one third of Alaska's boating fatalities. Alaska's laws that define driving under the influence, and the penalties for conviction, also apply to boat operators. The Alaska Office of Boating Safety strongly encourages boaters and passengers to refrain from consuming alcohol or drugs when boating. Alcohol use:

- **Decreases balance.** Most alcohol-related boating deaths involve a fall overboard.
- **Affects vision.** Alcohol can seriously affect peripheral vision, night vision, and ability to focus.
- **Affects judgment.** Operators under the influence are more likely to take risks and are more likely to make bad decisions in a life-threatening situation.
- **Impairs reaction time.** In an emergency, sharp reflexes and quick, appropriate action are imperative. Even without alcohol, a boater's reaction time is affected by exposure to constant

motion, sun, wind, and noise. Adding alcohol or drugs multiplies these effects.

### ***Littering and Pollution Laws***

It is unlawful to litter in either state or federal waters.

It is a violation of federal law to discharge raw sewage within three miles of the shoreline. Federal law requires an operable U.S. Coast Guard certified Marine Sanitation Device (MSD) be installed on boats with toilets when on U.S. navigable waters. MSDs must be locked when boating within the three mile proximity to the coastline.

The Federal Water Pollution Control Act prohibits the discharge of oil or hazardous or toxic substances in U.S. navigable waters. Under both Alaska and federal law, any release of oil into the water must be reported as soon as the person has knowledge of the discharge. Spills may be reported by contacting the nearest Department of Environmental



Conservation Area Response Team and the U.S. Coast Guard.

Federal law also requires that boats 26 feet and longer on U.S. navigable waters post an oil pollution placard in the machinery space or bilge area and a garbage placard in a visible location.

### ***Boating Accidents***

The operator of a boat involved in a collision, accident, or casualty shall render assistance as is practicable and necessary to save other persons from danger or to minimize the danger to other persons to the extent that the operator can do so without serious danger to the operator's boat, crew, and passengers (AS 05.25.030).

The operator must also give his or her name, address, and identification number of the boat in writing to each person injured in the collision, accident, or casualty and to the owner of property damaged in the collision, accident, or casualty.

### **Accident Reporting**

For the purpose of gathering boating accident statistics, the boat operator or owner is required by law (AS 05.25.030) to file a written report if a boating accident occurs and results in:

- Loss of life
- Disappearance
- Injury requiring medical treatment beyond first aid
- Property damage over \$500

Please submit the accident report to the Alaska Office of Boating Safety by mail, fax, or email:

Alaska Office of Boating Safety  
550 W. Seventh Ave., Suite 1380  
Anchorage, AK 99501

Email: [officeofboatingsafety@alaska.gov](mailto:officeofboatingsafety@alaska.gov)

Accident report forms can be obtained from the back of this book, the Alaska Department of Public Safety, the U.S. Coast Guard, or online at [www.alaskaboatingsafety.org](http://www.alaskaboatingsafety.org).

## **MARINE LAW ENFORCEMENT**

Boating regulations can be local, state, or federal and boaters are encouraged to check with area managers for the rules that apply. Jurisdictions can often overlap. State peace officers, including Alaska State Troopers and State Park Rangers, enforce state boating laws. U.S. Coast Guard boarding officers enforce federal boating laws.

Whenever approached by an officer, boaters must stop, or slow to a speed sufficient for safe steerage only, and permit the officer to come alongside to check for registration and safety equipment.

## **PRE-DEPARTURE CHECK**

Along with skillful boat handling, thorough preparation is what distinguishes the best skippers from other boaters. This is especially

true in Alaska. Boaters are often a long way from help and must be as self sufficient as possible. Develop a pre-departure checklist specific to the boat and the way it is used.

The following is an example of a pre-departure checklist for a powerboat that incorporates both federal and Alaska requirements and some additional equipment and procedures. Keep in mind that while some of these items might only need to be checked periodically or before each season, others should be checked before each trip. An abbreviated, one-page example of this checklist can be found on page 16. Take a photo of it and keep it with you at all times for your pre-departure preparation. Other pre-departure checklists can be found at [www.pledgetoliveak.org](http://www.pledgetoliveak.org).

## GETTING READY:

*Prepare your own personal survival kit:*

- Communication and signaling devices (see box on page 25)
- Shelter aids (such as an emergency blanket or large garbage bag)
- Personal health needs
- Fire starter (waterproof matches, lighter, starter material)

Contents will depend on each individual. Items should be multipurpose and regularly inspected.

### **Personal Flotation Devices (PFDs)**

- U.S. Coast Guard-approved wearable life jacket for each person: properly sized, in serviceable condition, and worn and properly fastened when in an open boat or on an open deck.
- U.S. Coast Guard approved Type IV throwable PFD (seat cushion or throw ring): readily accessible, equipped with 1/4" (minimum) diameter floating line, and marked with boat registration number or vessel name.
- Survival (immersion) suits: carefully inspected, zippers waxed, and suits unzipped for putting on quickly.

### **Signals/Communication**

- Sound signals: operational, capable of a four second blast, and audible for half of a mile. If using a hand-held air horn, bring a spare can of air.
- Visual distress signals: easily accessible and clearly marked. Pyrotechnic devices, such as flares, should be current.
- Emergency locator beacon: working, battery charged, and

readily accessible.

- VHF marine radio(s): working properly, spare batteries packed.
- Cell phone: fully charged and in a waterproof bag or case.



### Fire Extinguishers

Make sure all fire extinguishers onboard are:

- Fully charged (use the gauge to check)
- Corrosion free with clear nozzles.
- Securely mounted in a readily accessible location, but not where fire is likely to occur.
- Updated with current inspection tags (if required).

### Fuel and Oil

- There is enough fuel for the boat's fuel consumption and the trip plan: 1/3 tank for the trip out, 1/3 for the trip back, and 1/3 to spare.
- Tank valves are in proper position.
- Portable fuel tanks are placed in open, well-ventilated areas.
- Vents are closed for storage and transport, opened for use, and caps are vapor tight and leak proof.
- Fuel lines and all fuel fittings are carefully inspected for leaks, kinks, cracks, or clogs.
- Fuel filters are checked for water/dirt contamination.
- Engine oil is checked and proper fuel/oil mixture is checked.
- Tanks larger than seven gallons are properly grounded and vented.

### Hull

- Drain plug(s) are installed.
- Hull bottom and drive train are inspected for damage before launch. Hull bottom is clean.
- Registration numbers/validation decals or documented vessel name/port is properly displayed and legible.
- General inspection is complete.

- Galley and heating systems are secure, tanks properly installed, fuel lines secure, and connectors secure. No flammable material is stored near stoves and heaters.
- Marine sanitation devices are checked and working properly.
- Generator, stove, and engine exhaust ports are clear and unobstructed.
- Capacity plate and hull identification number (HIN) are visible and legible.
- A rope ladder, step, or other reboarding device is attached to the boat and deployable in the event of capsizing or a fall overboard.

### *Bilge/Engine Compartments*

- Ventilation ducts are clear and functional. Connections are secure for all closed compartments with potential for explosive vapors and potential ignition sources.
- Bilge area is clean and reasonably dry.
- Oil or waste is cleaned up to prevent an illegal discharge.
- Bilge pumps start, run, and shut off properly.
- “Sniff test” completed around the engine and bilge areas for fuel leaks or vapors before ventilating. If a fuel scent is detected, stop and search for the source.
- Engine compartment is ventilated for four minutes. Before starting engines, do the sniff test again. If an odor is detected after ventilating, stop and search for source before starting engine.



*Wrangell, Alaska*

### *Main and Auxiliary Engines*

- Propellers and drive units are inspected.
- Belts, hoses, and fittings are checked.
- Backfire flame arrestor is tight, clean, and in good condition (inboard gas engines).
- Seawater strainers are clean and in good condition.

- All fluid levels are checked.
- Water pump is operational when engine is running and the water stream is observed (outboard).
- Engine(s) are secured on transom and clamps and/or bolts are tightened and secure (outboard).
- Exhaust hoses are inspected and each of the metallic exhaust components checked for cracks, leaking, rusting, or other deterioration. Replace if necessary.
- Engines, forward and reverse gears, steering, and engine cut-off switches are tested.
- Fuel and cooling system are inspected for leaks

### **Electrical/Electronics**

- Spark plugs have a bright and visible spark and show no fouling or corrosion. Wires and plugs are in good condition and firmly seated.
- Battery switches are operational.
- Volt meters are working. Confirm proper charging voltage.
- Batteries are fully charged with proper electrolyte level.
- Battery terminal connections are secure and corrosion free. Batteries encased in plastic boxes with terminals are covered and secured with a strap.
- Jumper cables are in good condition.
- Hand-held electronic devices (cellphone, marine radio, flashlight, emergency locator beacon, etc.) are tested and have spare batteries.
- Installed devices (depth finder, radio, GPS, bilge pump, horn, navigation lights, radar, gauges) are tested.

### **Ground Tackle and Dock Lines**

- Main and lightweight “lunch hook” anchors are present, each with shackles, chain, and line. At least one anchor system is attached to the boat and at the ready.
- Anchors are selected for the size of the boat, bottom type, depth, weather, and water conditions.
- Sea anchor with 200 feet of line is onboard.
- Dock lines and spares are inspected for chafing and wear,

stowed, and secured.

- Two or more docking fenders are readily accessible with line attached.

### *Other Items*

- Manual bailing device (even if the boat has an electric bilge pump)
- Knife
- Sunglasses or goggles
- Hearing protection
- Foot pump and fabric repair materials (inflatables)
- First aid kit
- Watch or small clock
- Binoculars
- Means of manual propulsion (oars, paddles)
- Compass with headings list
- Radar reflector
- Depth soundings marked on oar, sounding pole or a line
- Plenty of water and food, tarp or tent, fire-making materials, and spare clothing in a waterproof bag
- Survival raft, small inflatable boat, or dinghy
- Brimmed hat and sunscreen
- Warm hat and gloves
- Portable AM/FM radio
- Fuel additive for water contamination
- Push pole (river boats)
- Tools—anchor shackle key or rigging knife, fuel cap key, fuel and oil filter wrenches, assorted adjustable wrenches, screw drivers, open-end wrench set, pliers (slip joint, needle nose, locking), wire cutters, spark plug wrench, electrical repair kit, socket set and prop nut wrench
- Spare parts—right size propeller, prop nut and thrust washer, propeller shear pin or cotter pin, spark plugs, various sized hose clamps, starter rope, fuses, fuel filter cartridge, belts, drain



plugs, light bulbs, ignition and lock keys, water pump kit, starter solenoid, duct tape, bailing wire, hull repair materials

### **Documents and Placards**

- Boat registration/Certificate of Number or current certificate of documentation; proof of title on qualifying vessels
- Federally required certificate of compliance label (boats under 20 feet with inboard engines, manufactured after October 31, 1972) and pollution and garbage placards (boats over 26 feet)
- Other licenses and permits (moorage, fishing licenses, etc.)

### **Reference Materials**

- Navigation Rules
- Owner's manuals
- Charts
- Maps
- Tide book
- Waterway guides
- Vessel log book
- Equipment repair manuals
- Alaska Boater's Handbook or supplement

## **PREVENTIVE MAINTENANCE**

Mechanical breakdown is the most common powerboating problem. Insufficient or contaminated fuel, a poorly maintained electrical/ignition system, fouled spark plugs, a damaged propeller, or a bad water pump are just a few of the culprits. To help prevent these problems, keep the boat clean, organized, and well maintained. Follow the maintenance recommendations in the owner's manual. Keep the boat, engine, and trailer maintenance records up to date and organized.

Fuel contamination due to condensation is an ever-present problem in Alaska, especially in coastal areas. Installing a water separator/fuel filter between the fuel tank and engine will go a long way in preventing fuel contamination and engine damage.

The leading causes of fires aboard vessels include wiring problems, engine and transmission overheating, and fuel leaks. Consider these

potential problem areas when inspecting and maintaining a boat.

## WEATHER AND TIDES

Alaska's weather can be harsh and can turn an enjoyable boating experience into a life-threatening situation very quickly. Always check the local weather forecast and current weather and water conditions before leaving the house and before getting on the water. Never try to outrun a bad weather forecast. It is always better, however inconvenient and disappointing, to wait until conditions improve. Be alert to weather changes, especially the build up of dark, heavy clouds, which indicates wet weather ahead.



For detailed weather information, try the following sources:

- National Weather Service VHF/FM frequencies of 162.400, 162.425, 162.475 and 162.550 MHz in areas where available
- National Weather Service's website: [www.arh.noaa.gov](http://www.arh.noaa.gov)
- Alaska Weather Information Hotline
  - Anchorage: 266-5145
  - Fairbanks: 458-3745
  - Juneau: 790-6850
  - Anywhere else in Alaska: 1-800-472-0391
  - Outside of Alaska: 1-907-266-5145

If boating on saltwater, always carry and use a tide book. Tidal currents can be very strong in some areas of Alaska and can cause dangerous rip currents (also known as an undertow) or standing waves, especially when the current is in opposition to the wind. In those areas, it is usually better to wait for the "slack," which occurs when the tide is changing directions. Remember that current and wind can greatly affect fuel consumption.

## FUELING

Most boat fires, explosions, and fuel spills happen during or just after fueling. To help prevent this:

- Fuel before dark.
- Secure and cover batteries to prevent terminals from shorting and sparking fuel vapors.
- Do not smoke or strike matches.
- Shut off motors.
- Turn off all battery switches and electrical equipment.
- Close all cabin windows and doors.
- Make sure all tank vents are unobstructed.
- Ensure the boat's stability. Ask passengers to step on shore when fueling.
- Take portable tanks out of the boat to fill them.
- Know how much the fuel tanks can hold and do not overfill them. Avoid topping off tanks.
- Keep the fuel nozzle in contact with the tank while filling to prevent static discharge.
- Fuel slowly.
- Do not rely on automatic nozzle shutoffs.
- Catch drips and wipe up any spilled gasoline with oil absorbent pads. Discard on shore in a safe and environmentally responsible manner.
- Before starting the engine, ventilate the engine compartment for at least four minutes, and sniff around to make sure there is no odor of gasoline anywhere in the boat.
- Keep bilges clean to avoid the risk of a fire.



## FLOAT PLAN

Like the flight plans filed by pilots, boaters use float plans to provide critical information to those who will try to assist them in case of trouble. A sample float plan is provided on page 45. Some factors to consider when filing a float plan:

1. **Assess the risk before you go.** Consider the condition of the boat and equipment and gather information about local boating hazards and the weather. Consult charts, local boaters, and tide tables and check both the weather forecast and existing conditions one last time. The operator’s skill and ability should always be considered in relation to the prevailing conditions.
2. **Based on your risk assessment, make a go/no go decision.** It is always better to be on shore wishing you were on the water than to be on the water wishing you were on shore. Consider the passengers’ comfort levels as well as your own.
3. **Prepare the float plan.** If you decide to go, provide trip information to someone who can be relied upon. The plan should include a description of the boat and equipment, boat registration, the names of everyone on the boat, the planned destination and route, expected return time, and when and who to call for help. If the float plan cannot be left with someone, place it in a window of your vehicle so others can read it. Notify the same person(s) if plans change and immediately upon return.

## BOAT CAPACITY, LOADING, AND STABILITY

Attention to capacity and proper loading is critical to safe boat operation. Overloading or imbalanced and shifting loads can seriously affect boat stability, which is dangerous even on calm water.

To help prevent overloading, a U.S. Coast Guard boat capacity plate is required to be installed by the manufacturer. The plate lists the maximum number of persons, total weight of passengers, and the maximum total weight of the passengers, gear, and motor. If the boat is designed to be equipped with an outboard engine, the plate will also display the maximum horsepower. Never exceed a boat’s recommended capacity. If a capacity plate is not installed, use the formula below to estimate the number of persons the boat will safely carry in calm conditions. This formula only applies to powerboats less than 20 feet. The result gives the number of persons (150 lb/person average) that can be put aboard in calm weather conditions.

$$\frac{\text{Boat Length (ft)} \times \text{Boat Width (ft)}}{15} = \text{Number of People}$$

## ALASKA FLOAT PLAN

**I. If Overdue, Contact:** \_\_\_\_\_  
**Phone:** \_\_\_\_\_  
**On (date):** \_\_\_\_\_

**II. Vessel Information: Vessel Name:** \_\_\_\_\_  
**Boat Registration (or USCG documentation) Number:** \_\_\_\_\_

- |   |   |  |
|---|---|--|
| <b>Vessel type:</b><br><input type="checkbox"/> Kayak<br><input type="checkbox"/> Canoe<br><input type="checkbox"/> River raft<br><input type="checkbox"/> Row boat<br><input type="checkbox"/> Personal Water Craft<br><input type="checkbox"/> Center console / skiff<br><input type="checkbox"/> Runabout / bow rider<br><input type="checkbox"/> Cabin Cruiser / overnighter<br><input type="checkbox"/> Sailboat | <b>Hull type:</b><br><input type="checkbox"/> Canvas / skin<br><input type="checkbox"/> Plastic<br><input type="checkbox"/> Fiberglass<br><input type="checkbox"/> Wood<br><input type="checkbox"/> Aluminum<br><input type="checkbox"/> Inflatable<br><input type="checkbox"/> Rigid hull inflatable<br><input type="checkbox"/> Other _____ | <b>Communication/Signals: Survival Equipment:</b><br><input type="checkbox"/> Installed Marine VHF<br><input type="checkbox"/> Handheld Marine VHF<br><input type="checkbox"/> Single Side Band<br><input type="checkbox"/> EPIRB<br><input type="checkbox"/> Flares<br><input type="checkbox"/> Mirror<br><input type="checkbox"/> Cell # _____<br><input type="checkbox"/> Other Signals _____ |
| <b>Survival Equipment:</b><br><input type="checkbox"/> Personal survival kits<br><input type="checkbox"/> Tender/Raft/Dinghy<br><input type="checkbox"/> Water<br><input type="checkbox"/> Spare Food<br><input type="checkbox"/> Spare clothing<br><input type="checkbox"/> Shelter (tent, tarp)<br><input type="checkbox"/> Matches/Lighter<br><input type="checkbox"/> Other _____                                 |   |  |

Length: \_\_\_\_\_ Engine(s) make \_\_\_\_\_ hp \_\_\_\_\_ Hull color: \_\_\_\_\_ Cabin/top color: \_\_\_\_\_

**III. Vehicle Information:**  
 License # \_\_\_\_\_ Make: \_\_\_\_\_ Model: \_\_\_\_\_ Year: \_\_\_\_\_ Color: \_\_\_\_\_  
 Location vehicle is parked: \_\_\_\_\_

**IV. Boat Trailer Information:**  
 License # \_\_\_\_\_ Make: \_\_\_\_\_ Model: \_\_\_\_\_ Year: \_\_\_\_\_ Color: \_\_\_\_\_  
 Location trailer is parked: \_\_\_\_\_

**V. All Persons Onboard (POB):**

| Names / ages: | Phone: | Can Operate Boat? (Y/N) |
|---------------|--------|-------------------------|
| - Skipper     |        | yes                     |
|               |        |                         |
|               |        |                         |
|               |        |                         |
|               |        |                         |
|               |        |                         |

**VI. Trip Plan:**

| Depart From: | Departure Date/Time: | To: | Arrive Date/Time: |
|--------------|----------------------|-----|-------------------|
|              |                      |     |                   |
|              |                      |     |                   |
|              |                      |     |                   |
|              |                      |     |                   |

Revised 01/2010

Also consider the following:

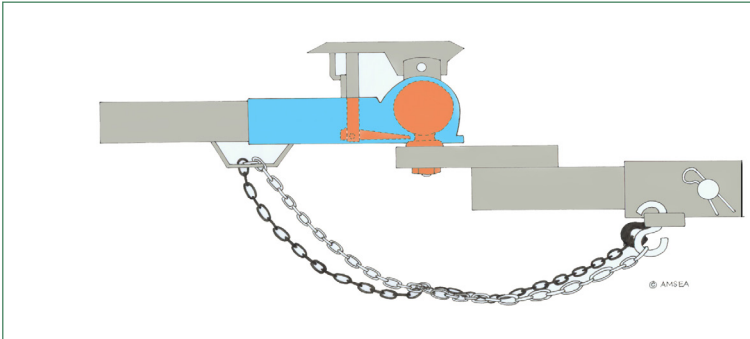
- Always use great care when loading and handing gear to a person already in the boat.
- Carefully secure heavy items from shifting.
- Properly position items and passengers evenly, and adjust as necessary for safety and optimal boat performance.
- Proper trim (lateral, fore, and aft) aids in boat handling, especially in smaller boats or when approaching the capacity limits.
- Instruct passengers in small boats to remain seated unless otherwise instructed.
- Do not stand while operating unless the boat is rigged for it and equipped with an emergency cut off cable.
- Keep shoulders inside gunwales.
- When retrieving an object outside the boat, either pull it toward the boat with a paddle or maneuver the boat alongside the object, then reach straight down for it without shifting weight or leaning over the side.

## BOAT TRAILERING

Trailers are not often on the minds of boaters when preparing for a trip, except when something goes wrong. With a little planning and attention, trailer problems can be prevented. According to BoatUS, the top five reasons for trailer breakdowns are flat tires, bearing problems, axle problems, suspension problems, and tongue problems.

- Alaska law requires boat trailers to be registered.
- Boat trailers are subject to the lighting requirements of Title 13 of the Alaska Administrative Code.
- The driver of the towing vehicle must be able to safely stop in a reasonable distance. Check the function of the brakes on flat ground. Allow more time and distance for braking while towing. Booster brakes are best with heavy boats.
- Carefully follow the trailer manufacturer's recommendations for maintenance. Inspect and lubricate all moving parts frequently, especially wheel bearings.
- The tow vehicle should have adequate power, transmission capable of towing, and adequate cooling systems installed.

- Make sure the trailer is not overloaded. Check these capacities before hauling:
  - Gross vehicle weight rating
  - Gross vehicle axle weight rating
  - Trailer tongue weight
  - Trailer capacity
- Adequate tie-downs are necessary at both bow and stern. The bow should be secured with the winch cable, winch post safety chain, and the boat's bow line. The stern should be secured with transom tie-downs.



*Ball and coupler proper fit, chains crossed in X pattern*

- Hitches should be welded or bolted to the frame of the towing vehicle. Bumper hitches are not recommended.
- The tow ball and ball coupler must be the same size. Secure the ball coupler with a pin or lock after it has been placed onto the ball and closed.
- Two safety chains, crossed under the coupler, help prevent the trailer tongue from dropping to the ground in the event the coupling device fails. The chains must have a tensile strength at least equal to the weight of the trailer and be long enough to permit the turning of the vehicle. To prevent the chain hooks from bouncing out, it is usually best to face the open end of the hooks toward the boat, rather than toward the vehicle.
- Before departure, check overhead, side, and engine drive unit clearances.
- Place all overhead antennas in the down position.
- Check and tighten all adjustable trailer components and bolt-on parts.

- Secure all loose items in the boat and tie boat covers down securely.
- Check wheel bolts for proper torque, test brakes, tighten winch cable and transom straps, check that ball and hitch are tight and locked, test lights, and check electrical connections.

Tire failures top the list of boat trailer breakdowns.

- Check all tires and spares (trailer and tow vehicle) for wear and proper inflation while cold.
- Carry a wheel jack, some flares and reflectors, a spare tire (with proper inflation), proper size jack and lug nut wrench, a set of wheel bearings, a seal and cup set, and some wheel bearing grease when on the road.
- Stop periodically during each trip to check wheel hubs and bearings for overheating.

### *Launching*

Be courteous. Avoid blocking ramps and docks when others are waiting to use the facility. Practice backing a trailer until proficient; the less time spent on the ramp, the better.

#### **At ramp staging area:**

- Check for any engine or hull damage sustained during the drive.
- Remove any covers and raise antennas.
- Load and secure any gear going into the boat.
- Check that drain plug(s) are in place and secure.
- Check blower, lights, bilge pump, and electronics.
- Remove any transom and side tie-down straps that are securing the boat to the trailer.
- Tilt engines/outdrives up, disengage travel bracket or transom saver(s).
- Check that the ball hitch and safety chains are secure.
- Unplug trailer lights.
- Check that winch line and bow safety chain are secure and the winch ratchet stop engaged.
- Keep wheel chocks easily accessible.





### At the ramp:

- 1) All passengers should exit the vehicle.
- 2) Unlock vehicle doors and roll down driver's window.
- 3) Unfasten seat belt.
- 4) Scan the ramp for hazards or obstructions before backing.
- 5) While backing down the ramp, one person should act as lookout and be ready with wheel chocks.
- 6) Back down ramp until the boat floats or can be pushed off trailer. Do not immerse rear wheels of vehicle unless absolutely necessary.
- 7) Put vehicle in first gear (or park), shut off vehicle, put on parking brake and place chocks behind tires.
- 8) Hand the bow line to an assistant, and remove the bow safety chain and winch line hook.
- 9) Use the bow line to guide boat off trailer and secure it to the dock or shore, away from the launch area.
- 10) Promptly move vehicle and trailer away from the ramp area.

### Retrieving

- 1) Raise outdrive/outboard motor.
- 2) Be cautious while winching the boat onto the trailer. Make sure the winch ratchet click-stop is properly engaged to prevent the handle from spinning in reverse. Watch for signs of a worn or damaged winch cable.
- 3) Once the boat is on the trailer, move the boat and trailer well away from the launch ramp.

- 4) Rinse trailer with fresh water following saltwater immersion.
- 5) Remove drain plugs and make sure the boat is de-watered before getting on the road.
- 6) Secure all tie-downs and straps.

### *Passenger Briefing*

All passengers should know the rules while onboard and the basic functions of the boat in case something happens to the operator. Passengers should be aware of:

- The float plan and the alternate plan in case of problems or delays
- How to start, shift gears, steer, and stop the boat
- Stability rules: remain seated and refrain from sudden movement or reaching overboard for objects
- The location of life jackets, communication and signaling devices, survival kits, first aid kits, survival suits, and life rafts
- How to use distress signals, such as whistles, mirrors, flares, and white lights
- How to use radios, battery switches, fuel valves, fire extinguishers, and emergency communication devices



## THEFT PREVENTION

Nationwide, boat theft has become a large problem. To help prevent theft, consider the following:

- Take keys and valuables out and lock the boat and all hatches and storage compartments.
- Lock portable outboard motors to the boat.
- Engrave or permanently mark property with a driver's license number (include "AK" before the number and "DL" after the number) or boat registration number.
- Record property on an inventory list (include brand names and model numbers) and store in a safe place.
- Photograph or videotape the boat's exterior, interior, and property. Prepare notes to accompany photos.

- Install an audible alarm.
- Make sure the registration certificate is current and on the boat and keep a copy in a safe place at home.
- Secure small boats by chaining and locking them to a secure object or storing them in a locked garage, shed, or a location where others cannot easily see them. Make sure powerboat engines are disabled.
- Secure trailers by using a hitch lock (even when on the tow vehicle), immobilizing the trailer with a wheel lock, removing a trailer wheel or blocking up the frame, or placing a vehicle or other large object in front of it.



## UNDERWAY

### ENVIRONMENTAL ETHICS

- Federal law prohibits the discharge of plastic trash into U.S. navigable waters. Polystyrene cups, plastic bags, bait packages, and monofilament line can kill or injure birds, fish, and marine mammals. Reduce the amount of packaging and plastic taken aboard. Keep a sturdy garbage container on board and use it. Retrieve any trash that falls overboard.
- No human-generated waste, no matter how small, should be thrown overboard. Use restrooms on shore before departure and carry a portable toilet. Federal law requires that all boats with installed toilets also have a U.S. Coast Guard-approved Marine Sanitation Device (MSD).
- The Federal Water Pollution Act prohibits the discharge of oil or oily waste into U.S. waters. Never discharge fuel, oil, chemicals, or contaminated bilge water into the water. Do not use soap or detergent to get rid of spilled oil. This practice does not dissolve the oil; it just breaks it down into smaller particles and forces it deeper into the water column where it can kill zooplankton and larval forms of fish, crab, and shellfish.
- Encounters with marine mammals are always exciting. However, federal law protects many marine mammal species. Boaters should stay at least 300 feet away from marine mammals, or more if animals appear to change their behavior. Time spent viewing particular animals should be kept to less than 30 minutes. Never try to pursue animals, restrict their path, or encircle them. Always leave them a clear escape route. If a marine mammal approaches, put the engine in neutral and let the animal pass. If an animal displays erratic behavior or appears disturbed, cautiously leave the area. Never handle or feed animals.
- Many shoreline areas are sensitive habitats. Always practice Leave No Trace principles.
- Avoid getting too close to bird rookeries. If you are too close, birds' behavior will be disrupted, causing unnecessary stress.



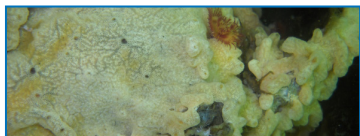
- Alaska has many special protected areas. When boating in a new area, first contact local resource management agencies or landowners to obtain guidelines.
- Keep your boat bottom clean and the engine tuned for optimal performance and reduced emissions.
- Do heavy boat cleaning and maintenance away from the water. Routinely scrub decks with fresh water and a brush to reduce the need for heavy cleaners.
- Recycle used zincs.
- Do not idle engine(s) unnecessarily.

### ***Aquatic Invasive Species***

Aquatic invasive species (AIS) are nonindigenous species that invade local water bodies and can threaten native species, ecological stability, traditional human activities, our economy, and even human health. According to the Alaska Department of Fish and Game, Alaska is vulnerable to invasive species introduction through many pathways, including contaminated boats and fishing gear brought to our waterways. We can help prevent the spread of AIS by following these simple steps:

**To report an invasive species, please call 1-877-INVASIV.**

- Thoroughly clean and dry boats and equipment before transporting to other water bodies. Remove any visible mud, plants, fish, or animals from the hull, trailer, or other parts of your gear.
- Completely de-water boats and equipment, including any areas where water can be held, before transporting. Dump bait buckets, coolers, etc. on land.
- State regulations prohibit releasing plants, fish, or animals into a body of water unless they came out of that body of water.



*Didemnum Vexillum* is a saltwater sea squirt that can destroy native vegetation and even shellfish populations.



*Elodea* is the first invasive aquatic plant known in Alaska. It can impact freshwater resources and fish habitat.

## U.S. AIDS TO NAVIGATION SYSTEM

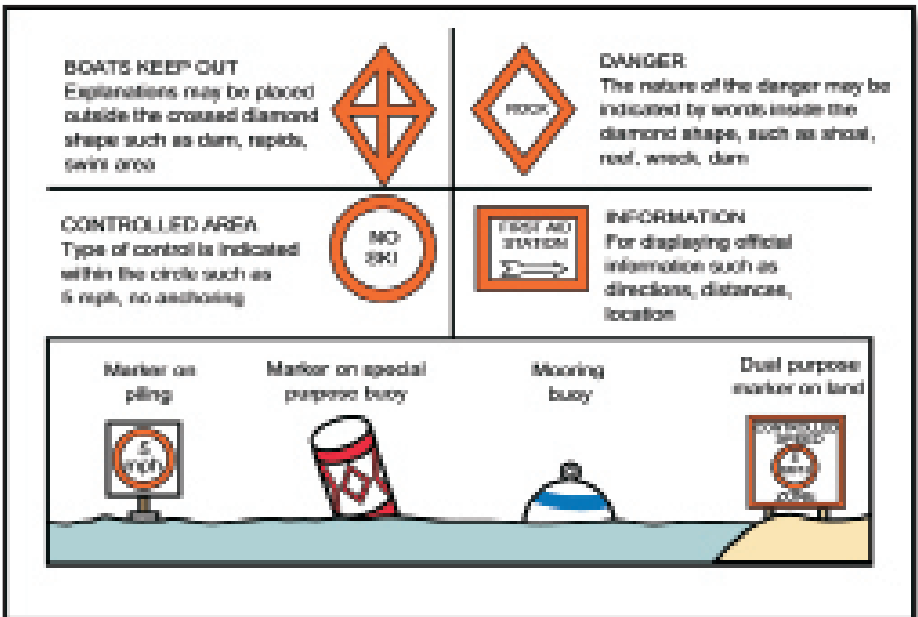
The U.S. Aids to Navigation System (ATONS) is a system of signs, buoys, day beacons, and other structures that incorporate specific shapes, colors, numbers, and lights to assist mariners with safe navigation.

Some types mark areas with restrictions, such as speed limits or no-wake zones, waters closed to boats, such as swim beaches, or waters with obstructions or other dangers. Others are placed to help boaters locate their position or safely navigate channels.

Although technically not aids to navigation, mooring buoys are assigned a distinctive marking scheme under the aids to navigation system in order to promote easy identification and to avoid confusing them with other aids to navigation.

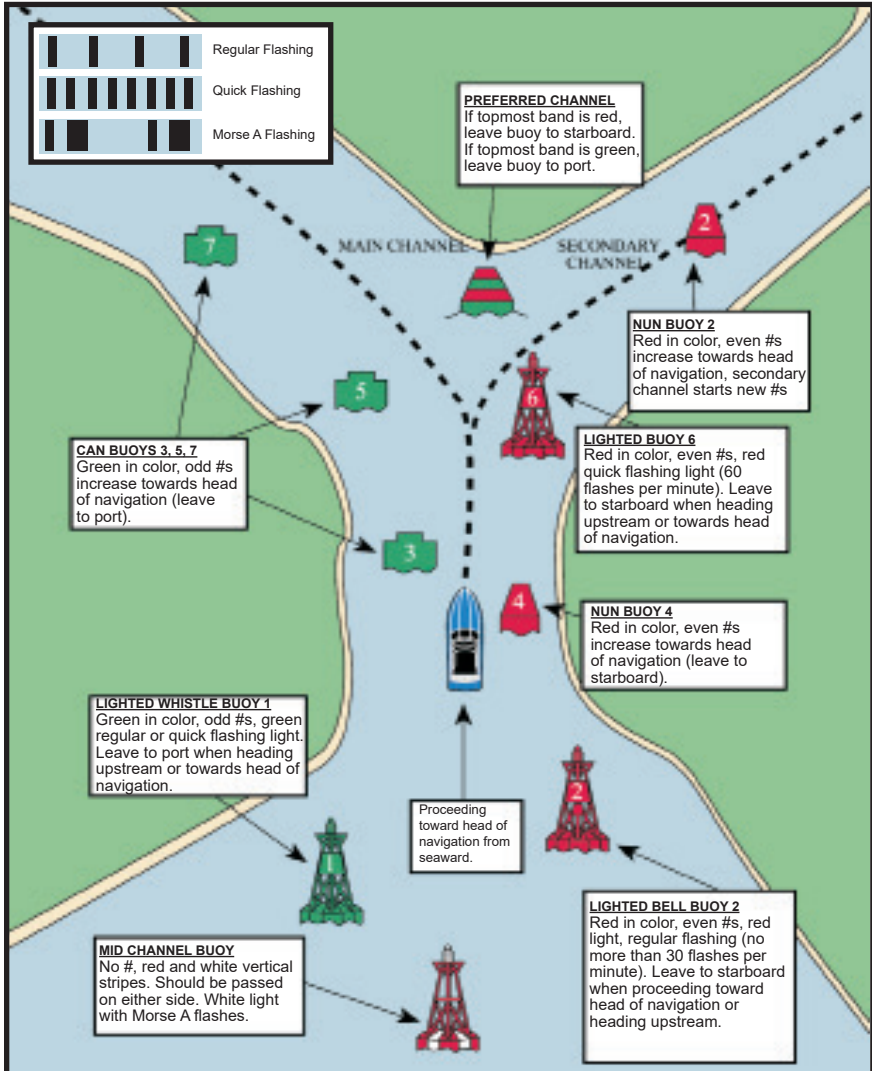
Other than a mooring buoy, it is a criminal offense to moor to, damage, or interfere with aids to navigation. If you collide with or damage an aid to navigation, report it immediately to the U.S. Coast Guard or a local law enforcement officer.

### Information and Regulatory Markers and Mooring Buoys



## Lateral Aids (Channel Markers)

Channel markers assist vessels in navigating safe courses. Because they are numbered and depicted on nautical charts, they can also help boaters determine position. An easy way to remember how to steer the proper course, relative to channel markers, is the phrase “red, right, returning.” Red channel markers should be on the boat’s right (starboard) side and green markers on the left (port) when proceeding north, upstream, or returning from open water to a harbor.



## NAVIGATION RULES—STEERING AND SAILING

The International Regulations for Avoiding Collisions at Sea 1972 (72 COLREGS) are also known as the International Navigation Rules or simply “the Rules.” Adopted under federal law, the Rules address navigation light requirements, sound signals, day shapes, and emergency signals and contain the International Navigation Rules on Steering and Sailing (Rules 1-19, Part A) to help vessels stay clear of each other.

In Alaska, the International Rules apply to all boats on all U.S. navigable waters where the U.S. Coast Guard has jurisdiction.

Keep in mind that the Rules assign tasks but never confer entitlements. For example, although vessels in certain situations should keep out of the way of other vessels, the Rules never grant any vessel the right of way. Also keep in mind that the ordinary practice of seamanship requires precaution and prudent action by all boaters, at all times, under all circumstances. Knowing the Rules is important, but boaters must also be constantly vigilant of the circumstances and be prepared to depart from the Rules if necessary to avoid a collision.

Boaters should obtain and become familiar with the complete Rules, available from a link on the Alaska Office of Boating Safety website [www.alaskaboatingsafety.org](http://www.alaskaboatingsafety.org) or downloadable from the U.S. Coast Guard's site: [www.navcen.uscg.gov/?pageName=navRuleChanges](http://www.navcen.uscg.gov/?pageName=navRuleChanges).

Following is a summary of some of the International Navigation Rules:

### **Responsibility (Rule 2)**

- None of the Rules shall excuse anyone from the consequences of any neglect to comply with these Rules or of the neglect of any precaution required by the ordinary practice of seamen or by the special circumstances of the case.
- In using these Rules, be aware of all dangers of navigation and collision and any special circumstances, including the limits of the boats involved, which may require a departure from these Rules necessary to avoid immediate danger.

### **General Definitions [Selected] (Rule 3)**

- **Vessel:** every description of watercraft, including non-displacement craft and seaplanes, used or capable of being used as a means of transportation on the water
- **Power-driven vessel:** any vessel propelled by machinery



- **Sailing vessel:** any vessel under sail except if under mechanical power
- **Vessel engaged in fishing:** any vessel fishing with nets, lines, trawls, or other fishing apparatus which restricts maneuverability, but does not include a vessel fishing with trolling lines or other fishing apparatus that does not restrict maneuverability
- **Vessel not under command:** a vessel, which through some exceptional circumstance, is unable to maneuver as required by the Rules and is therefore unable to keep out of the way of another vessel
- **Vessel restricted in ability to maneuver:** a vessel, which from the nature of its work is restricted in the ability to maneuver as required by the Rules and is therefore unable to keep out of the way of another vessel
- **Vessel constrained by draft:** a power-driven vessel that, because of its draft in relation to the available depth of the water, is severely restricted in the ability to deviate from its course
- **Underway:** a vessel is not at anchor, made fast to the shore or aground
- **Length and breadth:** a vessel's length overall and her greatest breadth (width)
- **Restricted visibility:** any condition in which visibility is restricted by fog, mist, falling snow, heavy rain, sand, or other similar causes

### **Look-out (Rule 5)**

Every vessel shall at all times maintain a proper lookout 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 the risk of collision.

### **Safe Speed (Rule 6)**

Every vessel shall at all times proceed at a safe speed so she can take proper and effective action to avoid collision and be stopped within a distance appropriate to the prevailing circumstances and conditions. In determining a safe speed the following factors shall be among those taken into account:

- The state of visibility
- The traffic density, including concentrations of other vessels
- The manageability of the vessel with special reference to stopping distance and turning ability in the prevailing conditions
- At night, the presence of background light such as from shore lights or from back scatter from her own lights
- The state of wind, sea, and current, and the proximity of navigational hazards
- The draft in relation to the available depth of water

### ***Risk of Collision (Rule 7)***

Every vessel shall use all available means appropriate to the prevailing circumstances and conditions to determine if risk of collision exists. If there is any doubt, such risk shall be deemed to exist.

### ***Action to Avoid Collision (Rule 8)***

(a) Any action shall be taken in accordance with the Rules of this Part and, if the circumstances of the case admit, be positive, made in ample time and with due regard to the observance of good seamanship.

(b) Any alteration of course and/or speed to avoid collision shall, if the circumstances of the case admit, be large enough to be readily apparent to another vessel observing visually or by radar; a succession of small alterations of course and/or speed should be avoided.

(c) If there is sufficient sea room, alteration of course alone may be the most effective action to avoid a close-quarters situation provided that it is made in good time, is substantial, and does not result in another close-quarters situation.

(d) Action taken to avoid collision with another vessel shall be such as to result in passing at a safe distance. The effectiveness of the action shall be carefully checked until the other vessel is finally past and clear.

(e) If necessary to avoid collision or allow more time to assess the situation, a vessel may slacken her speed or take all way off by stopping or reversing her means of propulsion.

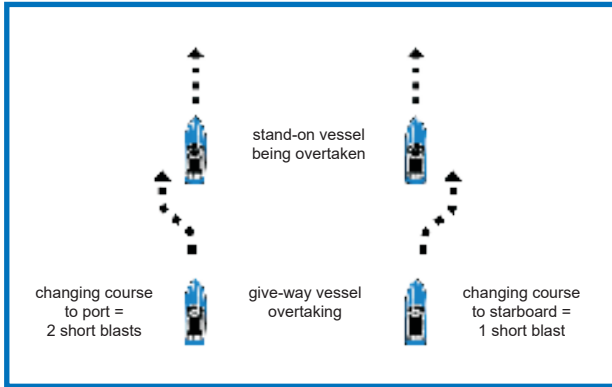
### ***Narrow Channels (Rule 9)***

When traveling along a narrow channel, keep as near to the outer limit of the channel or fairway, which lies to the boat's starboard side, as is safe and practical.

### Overtaking (Rule 13)

The vessel overtaking any other shall keep out of the way of the vessel being overtaken. Be prepared to use a sound signal to indicate intentions.

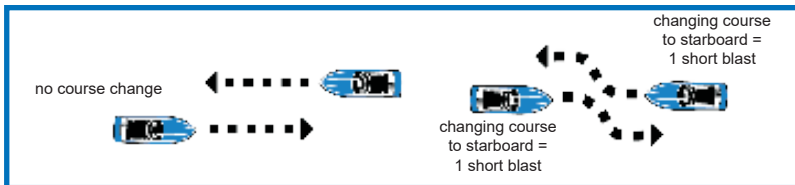
The following illustrates the proper maneuver and includes the appropriate (Rule 34) sound signals.



### Head-On Situation (Rule 14)

Unless otherwise agreed, when two power-driven vessels are meeting on reciprocal or nearly reciprocal courses so as to involve risk of collision, each shall alter her course to starboard so that each shall pass on the port side of the other.

The following illustrates the proper maneuver and includes the appropriate (Rule 34) sound signal.



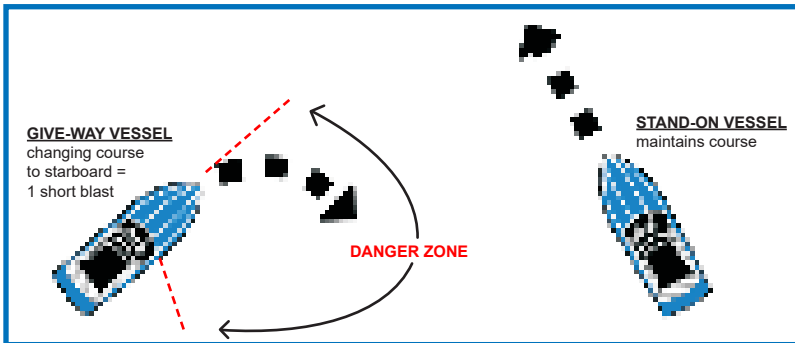
### Crossing Situation (Rule 15)

When two power-driven vessels are crossing so as to involve risk of collision, the vessel which has the other on her own starboard side shall keep out of the way and shall, if the circumstances of the case admit, avoid crossing ahead of the other vessel.

A power-driven vessel crossing a river shall keep out of the way of a

power-driven vessel ascending or descending the river.

The following illustrates the proper maneuver and includes the appropriate (Rule 34) sound signal.



### **Action by Give-Way Vessel (Rule 16)**

Every vessel which is directed to keep out of the way of another vessel shall, so far as possible, take early and substantial action to keep well clear.

### **Action by Stand-On Vessel (Rule 17)**

Where one of two vessels is to keep out of the way, the other shall keep her course and speed.

The latter vessel should, however, take action to avoid collision by her maneuver alone, as soon as it becomes apparent to her that the vessel required to keep out of the way is not taking appropriate action in compliance with these Rules.

When, from any cause, the vessel required to keep her course and speed finds herself so close that collision cannot be avoided by the action of the give-way vessel alone, she shall take such action as will best aid to avoid collision.

### **Responsibilities Between Vessels (Rule 18)**

Except where Rules 9, 10 (compliance with official traffic separation schemes), and 13 otherwise require, the higher-listed vessels should give way to the lower-listed vessels:

- (a) Power-driven vessel
- (b) Sailing vessel

- (c) Vessel engaged in fishing
- (d) Vessel restricted in ability to maneuver
- (e) Vessel not under command

Note: The determination that a vessel is “restricted in its ability to maneuver” is made by the vessel’s master. If that determination is made, the vessel shall also display the lights and shapes prescribed in Rule 27 accordingly.

### **Conduct of Vessels in Restricted Visibility (Rule 19)**

When vessels are not in sight of each other when operating in or near an area with restricted visibility, every vessel shall proceed at a safe speed adapted to the prevailing circumstances and conditions of restricted visibility. A power-driven vessel must have its engines ready for immediate maneuver.

Every vessel shall have due regard to the prevailing circumstances and conditions of restricted visibility when complying with Rules 4 through 10.

Except where it has been determined that a risk of collision does not exist, every vessel that hears, apparently forward of her beam, the fog signal of another vessel, shall reduce speed to the minimum at which course can still be kept. The vessel shall, if necessary, take all way off and, in any event navigate with extreme caution until danger of collision is over.

### **Rendering Assistance**

Under federal law, the master or person in charge of a vessel is obligated to provide assistance that can be safely provided to any individual in danger at sea. The master or person in charge is subject to a fine and/or imprisonment for failure to do so.

## **HOMELAND SECURITY**

Since the events of September 11, 2001, boaters have an important role in helping to keep our nation’s waterways safe and secure.

Please follow these guidelines:

- Keep well clear of all military vessels, cruise-liners, tankers, and other commercial ships.
- Slow to minimum speed when within 500 yards of any U.S. naval vessel and proceed as directed by the Commanding

Officer of the naval or escort vessel.

- Do not approach within 100 yards of naval vessels. If you must enter this zone in order to ensure safe passage in accordance with the navigation rules, you must first contact the naval vessel or its escort on marine VHF channel 16 to seek direction.
- Violators of a Naval Vessel Protection Zone can face up to six years in prison and a \$250,000 fine, not to mention a quick and severe response.
- Approaching certain other commercial vessels may also result in an immediate boarding.
- Observe and avoid all marked or designated security zones and other restricted areas.
- Avoid commercial port operation areas, especially those that involve military, cruise-line, or petroleum facilities.
- Do not stop or anchor beneath bridges.



Keep a look out for anything that appears to be out of the ordinary. Depending on the circumstances, suspicious activity may include:

- Persons renting or attempting to procure or borrow watercraft or offering cash on the spot for a vessel
- Persons asking suspicious questions concerning the boat, such as how to start the engines or how much weight the boat can carry
- Persons loitering around or photographing or creating diagrams of such things as the underside of bridges, established security zones, oil refineries or transfer facilities, military bases, military or government vessels, or the waterfront areas near those facilities or vessels
- Vessels attempting to sell/deliver merchandise or drop off packages in waterfront areas
- Persons who are throwing or retrieving unusual objects in or out of the water

If encountering a situation that feels suspicious, report it immediately to local law enforcement, the U.S. Coast Guard, port security, or the

National Response Center at 877-24 WATCH.

Do not approach or challenge suspects. Make some notes on the person's appearance, clothing, vehicle license plate, and type of boat.

By actively demonstrating a commitment to boating safety, we can help reduce the demand on limited law enforcement and rescue resources and show support for homeland security efforts.

For more information, visit America's Waterway Watch at <http://americaswaterwaywatch.uscg.mil>.



## POWERBOATING

Any boat powered by a motor is considered a powerboat. Generally, a powerboat has a high power-to-weight ratio and a hull design that allows for easy planing, which allows for higher speed and improved handling. In Alaska, three out of four boating fatalities happens in a powerboat, and most of them occur in recreational boats, not commercial vessels. It is vitally important for powerboaters to educate themselves on safe operation and planning to avoid problems while out on the water. Here are some tips:

### General

- When underway and operating a vessel, keep the engine cut-off device attached to ensure the engine will stop if the operator is separated from the helm. This is especially important for solo operators.
- Do not run at full throttle, but maintain enough speed to keep the hull on step. This is easier on the engine, greatly improves fuel economy, and increases reaction time.
- Maintain a clear, unobstructed forward view at all times. Constantly scan the water back and forth for hazards. Avoid tunnel vision. Visually recognize and continually assess boat motion (momentum) or lack of motion.
- The boat operator must be aware of boat speed, rate of turning, and progress toward or away from the objects nearby

that are restricting operating room.

- When operating in an area where there are divers, be on the lookout for diving flags displayed on the boats or in the water. Boaters must stay at least 100 feet away from the flag unless they are operating in a no-wake zone (see more on diving on page 82).
- For waterskiing, boat operators should keep a minimum of a 200-foot wide “ski corridor” (100 feet on either side) to protect the skier from other boats and obstacles. A designated lookout or rear view mirror should also be used.
- Operate well within the limits of your skill and respect the capabilities of the boat.
- Develop proficiency with basic boater’s knots (bowline, figure eight, cleat hitch, anchor bend).
- Exercise caution when around commercial traffic. Give these vessels a wide berth. Do not get caught between a tow boat and a barge. Slow down and keep a sharp eye for hazards in the water; tow lines and fishing gear are not always clearly visible.
- Control boat wake when operating near moored boats or structures (docks, floating homes, launch ramps, etc.).
- Be considerate around small or slow moving boats, swimmers, and water skiers. Maintain a distance of at least 100 feet from a boat towing a water skier.



*Control boat wake when operating near moored boats or structures such as docks, floating homes, and launch ramps.*



## Handling Rough Open Water

If rough weather is coming and cannot be avoided, a number of things can be done to prepare, including:

- Put on a life jacket if not already on.
- Place passengers and loads low and along the centerline. Secure all items to prevent shifting and make sure passengers maintain three points of contact.
- Prepare bailing devices.
- Consider donning immersion suits, at least to the waist.
- Establish radio contact with nearby boaters.
- Have a spare fuel filter and wrench handy, because rough conditions can stir up tank sediment.
- Brief passengers and assign tasks as necessary. Proceed to the nearest protected area.
- Avoid the middle of inlets, rounding a point of land, and the mouth of bays where wind, current, and seas collide.



### When running into the waves:

- Tack back and forth at a 45-degree angle to the waves.
- Slow down to allow the bow to lift with oncoming waves instead of digging in.

### When running in the same direction as the waves:

- Throttle and steering adjustments must be made constantly to avoid a “pitch pole” (stern over bow) down the wave face, a broach sideways, or taking a breaking wave over the stern.
- Avoid sudden stops or backing down into following seas.

In the event of an engine failure, use oars or a sea anchor (a plastic bucket with a hole in the bottom attached to the bow) to keep the bow into the waves.

## Anchoring

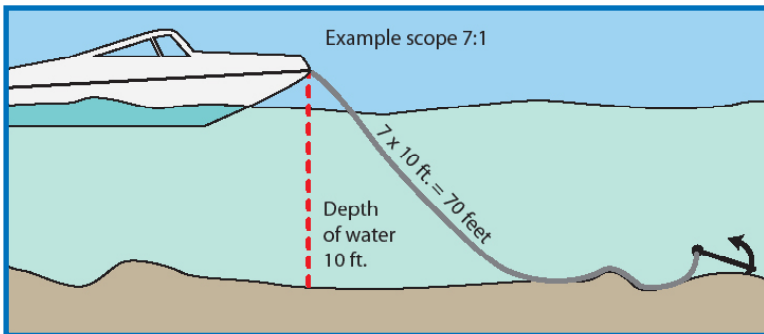
To anchor a boat, first select the appropriate type and size of anchor and the appropriate diameter and length of rode (anchor line and chain). Consider the size of the boat, the bottom type, the water conditions, and the depth of the water (measured from the bow to the bottom). The length of the rode should be five to ten times longer than the depth of the water, depending on the weather conditions, the current, and the size of the boat. Do not forget to account for tidal fluctuation.

Prepare the anchor and rode in advance and firmly attach the anchor line to a secure point at the bow. Secure anchor and rode while underway to avoid accidental deployment.

- Bring the bow into the wind or current. When in areas with no current, put the engine in neutral and wait for the boat to stop moving forward.
- Slowly lower (do not throw) the anchor over the bow.

**RODE:** line and chain attached to anchor

**SCOPE:** ratio of rode length to depth of the water



- Back up slowly to straighten the anchor line and “set” the anchor.
- If an outboard or inboard with outdrive, raise the drive unit out of the water to prevent fouling the anchor line.
- Avoid anchoring from the stern. This squares the boat's flat transom directly into the wind, waves, or current and can cause the boat to swamp, capsize, or sink.
- Never leave an anchored boat unattended. Tides, current, wind, and wave conditions may change and can cause an

- anchor to foul or drag. Maintain an anchor watch.
- If the boat is small, consider taking it up onto shore (beyond the high water line) and securing it. Other options include using designated mooring buoys or setting up a “running line” (with a safety line) from the boat to the shore.
  - Take communication devices and survival gear ashore in case you get separated from the boat.

### **River Boating**

Whether by jetboat, airboat, inboard, or outboard, powerboating on Alaska’s interior rivers is both an exhilarating recreational activity and an important means of access to places that might otherwise be out of reach. However, the power of moving water is relentless and should never be underestimated.

Exercising good judgment and applying the right mix of skill, ability, and caution are never more important than when boating on rivers. Here are some important points to consider:

- Always wear a life jacket. Rivers contain many hazards and fast water; emergencies can develop quickly. River boats tend to be small and fast, capable of throwing passengers overboard without much warning. Currents and eddies can make self-rescue difficult.
- Carry communication devices suitable for the area on your



person. For example, cell phones are appropriate in some areas, but a VHF radio or satellite device may be a better choice in remote areas.

- Reading the water is a necessary skill while boating on rivers. This takes time and practice to develop.
- Match the boat design to the intended use. Do your research, work with the boat dealer, and, if possible, test drive boats under similar conditions before purchase.
- Knowledge of the river is key. Always research and scout out new areas. Learn from the locals.
- Be aware of river hazards such as sweepers (overhanging trees), log jams, gravel bars, submerged objects, animals, wind, sun, and other boaters.
- If new to river boating, practice skills in safe areas first. River boaters should be skilled in turning with and against current, launching, landing and beaching, anchoring, and basic troubleshooting and repairs.
- It is best to stay in the deeper water typically found closer to the outside bank, while still keeping as far to the right as possible, allowing room for a boat coming from the other direction.
- Be particularly vigilant in narrow channels. Slow to the minimum speed needed when rounding tight river bends and blind corners. Consider using your sound-producing device to signal your presence.
- Learn the locations of popular bank fishing spots and be considerate of bank anglers.
- Before launching, make sure to have an alternate propulsion source (oars, paddle, another engine) and anchor at the ready for immediate use. It is a good idea to warm up your engine before pushing away from the bank.
- When beaching, try to find places where the boat can be placed facing into the current. Otherwise, look for a slow channel or calm backwater pool. Always secure the boat to the shore.
- Follow the Navigation Rules and slow down when passing other boats on the river. When passing, make sure other boat operators see you and understand your intentions.

## Personal Watercraft (PWC)

If new to operating a Personal Watercraft (PWC), take basic boating safety and PWC-specific courses and develop skills under the instruction of an experienced operator. Read the owner's manual carefully; it provides important information specific to the model, such as safety warnings and recommendations, load capacity, and maintenance schedule.



PWCs are boats, and operators have the same responsibilities as other boaters. However, there are some important differences:

- PWCs handle differently than other boats. The water jet drive and shorter overall length make the PWC extremely responsive to even a small movement of the handlebars.
- PWCs are steered by directing the water jet steering nozzle while powering forward. Throttle must be applied for forward movement. When the operator releases the throttle, the ability to steer is eliminated and the vessel will coast to a stop. However, on newer models, various off-throttle steering features may exist. Please refer to your specific craft to know what your craft operational needs are.
- Start, ride, and stop the watercraft using the manufacturer's recommended water depth, and keep away from any underwater hazards or obstructions.
- Know your watercraft minimum stopping distances, which may vary depending on the type of PWC and vehicle load and water conditions.
- There are both older two-stroke and modern four-stroke engine types, which require different maintenance and operational considerations. PWCs come in different hull types and styles:
  1. Stand Up (1 person on board)
  2. Sport (1-2 person/s on board)
  3. Runabout (1-3 person/s on board)
- Weight load capacities range from one to three persons on board. Know your PWC and its requirements (one style of craft

held up to four persons, but these are no longer produced). Do not exceed the recommended weight load capacity.

- There are newer four-stroke sit-down models that may offer the following: off-throttle steering features, braking units, reverse, and neutral. Some use a brake unit and some use natural water drag to effect a stop. It is important to understand the features of the various functions. Remember, reverse features are not a brake.
- Attach the engine shut-off device to the wrist of the operator, taking care that it does not wrap around the handlebars, thus impeding its ability to properly engage the engine shut-off in the event the operator falls off. The wrist lanyard should always be worn when underway. A PWC has no directional control when stopped.
- Remove the lanyard from the boat when the PWC is unattended. On some PWC models there is a variety of different start controls, such as remote control fob keys, ignition keys, or digitally coded engine shut-off cord keys for the ignition feature to be regulated or to start the craft.
- Most PWC fatalities are a result of collision. Constantly scan the water left and right and check both sides and behind you before turning. Throttle down before approaching your intended stopping area while performing a safety scan.

### ***Guidelines for PWC Operation:***

- Know and follow the boating laws and rules.
- Read and follow the owner's manual of your model and year of PWC.
- Read all manufacturer warning labels. If any labels are missing contact your dealership and order replacements for your PWC.
- When transporting a PWC with a trailer, be sure to observe trailer laws and regulations. Make sure the trailer matches the craft's weight and hull design. Securely fasten the watercraft to prevent movement between the trailer and the craft.
- Carry on board all state and federally required equipment.
- If renting a PWC, research the boating rules that apply to the type of PWC you are renting before you depart.
- Ride within your limits and those of your passenger(s). Avoid

- aggressive maneuvers to reduce risk of loss of control, ejection, or collision.
- When re-fueling, pull the lanyard key off the start button and make sure you are in a well-ventilated area free from any source of flame or sparks (including pilot lights).
  - Prior to starting the engine, ventilate the engine cover or open the seats to vent the engine compartment.
  - Do not start the craft in enclosed areas. Exhaust gas contains carbon monoxide, a colorless, odorless poisonous gas. Inhaling carbon monoxide can cause serious brain injury or death. Operate in a well ventilated area.
  - Conduct a pre-launch inspection of the craft to ensure all features are secure and functional. Use the proper safety protective equipment.
  - Ensure your bilge plugs are in place.
  - Practice skills in a safe area with an experienced operator.
  - Check the water and weather conditions and monitor the NOAA weather channel.
  - Operate the PWC at safe speeds for the conditions.
  - To help prevent passengers from falling overboard, avoid making quick turns and sudden accelerations. Advise passengers to hold on at all times. Look before making a turn.
  - Operators must have the skill and ability to reboard the boat in deep water. Even the best method of deep water reboarding, from the rear of the boat can be difficult in rough water or if the operator is tired.
  - Stand-up type watercraft have different operational needs. Refer to the owner's manual and abide by the manufacturer's recommendations.
  - To avoid being stranded, refer to the manufacturer's recommendations on re-righting the particular model of PWC you are operating prior to driving. Watercraft do not self-right. When righting a capsized watercraft, reference the decal located astern on the watercraft. Failure to properly right a capsized PWC can possibly damage the engine from water in the exhaust system entering the engine.



- Never loan a PWC to an inexperienced person. Many PWC accidents involve operators who did not own the boat.
- Wear the appropriate personal protective gear. Wear a U.S. Coast Guard-approved life jacket that is the proper size, fitted tightly, and designed for PWC use. Inflatable life jackets are not appropriate for PWCs.
- Refer to the manufacturer's recommendations and the current weather. In cool weather, use a dry suit or a wet suit that matches the conditions you operate in. Wear foot protection and gloves.
- A helmet protects your head but could contribute to neck injuries or loss of peripheral vision, depending upon what kind of helmet you wear.
- Slow to 10 mph when within 100 feet of other boats.
- Slow to no-wake speed when within 100 feet of anchored boats or paddlecraft, or when within 200 feet of the shoreline, a swimmer, diver's flag, dock, or launch ramp.
- Obey regulatory markers such as "No Wake" zones and posted speed limit signs.
- Do not exceed the manufacturer's load capacity.
- File a float plan before launching.



- Never ride after consuming drugs or alcohol.
- Do not operate in shallow water due to possible environmental impact and/or damage to the water jet pump, hull, or water cooling system.
- Keep away from intake grate when the engine is on. Keep long hair or clothing, life jacket straps, and lines clear; these can become entangled in moving parts, resulting in severe injury or drowning.
- Avoid boat wakes, waves, or swell jumping and sharp turns. These maneuvers can increase the risk of injury, accidents or loss of your watercraft.
- Avoid operating in the same area for extended periods.
- PWC operation may be restricted or prohibited on some waterways, so check with local land managers.
- Do not board a PWC if the operator is applying throttle; shut the engine off or keep at idle.
- PWC manufacturers advise against operation after dark. Navigation lights are required between sunset and sunrise or in conditions of reduced visibility.
- Stay current with any recall notices that may apply to your particular watercraft.
- Severe internal injuries can occur if water is forced into body cavities as a result of falling into water or being near the jet thrust nozzle. Wear a long wetsuit bottom or clothing that provides adequate protection.

### **PWC SAFETY:**

Avoid boat wakes, waves, and swell jumping. As fun as it sounds, these maneuvers increase the risk of injury.

## **PADDLE SPORTS**

Paddling is one of the fastest growing recreational activities in the United States, and as this trend grows, so does the number of incidents. In Alaska, paddling fatalities account for up to a quarter of all boating deaths each year. Nationally, statistics show that three out of four of the paddlers who died in boating accidents were not wearing a life jacket, and almost a third of those incidents were alcohol related.

### **Safe Paddling Tips**

- All paddlers should know how to swim.



- Take hands-on training and gather information specific to the sport. Look for courses offered by instructors certified by the American Canoe Association and Alaska paddling organizations.
- A paddler without a life jacket is a sign of inexperience, regardless of swimming ability. Choose a style that has high visibility and a snug fit, without impeding mobility.
- Carry emergency communication and signaling devices on your person.
- Practice re-boarding in a safe environment, both self and assisted rescues.
- Avoid paddling alone. In the event of a capsize, self-rescue can be very difficult.
- Like other sports, paddling requires the right gear. Purchase quality equipment.
- Be prepared to get wet and dress appropriately; consider wearing a dry suit, especially when paddling in rough water.
- Avoid standing up or moving around in a canoe or kayak as it greatly increases the chance of capsizing. If you must move, maintain three points of contact at all times.
- Load the boat properly. Keep weight centered both from side to side and bow to stern. The lower and closer the load is to the boat's centerline, generally the more stable the boat will

be, assuming there is adequate freeboard.

- When retrieving something from the water, reach with a paddle or guide the boat close to the object so you can grab the item from the water without leaning your shoulders over the gunwales.
- Plan ahead. Check weather and water conditions, and conduct thorough pre-departure checks before each trip. Avoid extreme conditions including weather, distance from shore, water conditions, and fast current beyond skill level.
- Always file a float plan and stick to it as much as possible.
- Trips should be planned in consideration of the least experienced group member. Make sure skill levels are adequate for the situation.

## Canoeing

The majority of paddling fatalities are attributable to capsized canoes. Comply with the manufacturer's load recommendations. Canoes are generally not recommended for coastal waters unless they are decked, have extra flotation, and the paddler has extensive experience.

The American Canoe Association recommends all paddlers be proficient in:

- Keeping a boat balanced under a variety of conditions and maneuvers
- Proper boarding (entries and exits)
- Maintaining a straight course when going forward, backward, and stopping
- Turning a boat in any direction quickly and efficiently
- Performing self-rescues and assisted rescues

## Coastal Kayaking

Alaska offers some of the most amazing sea kayaking opportunities in the world. But before venturing out into the gorgeous waters around the

### **SAFETY TIP:** *Help rescuers locate you*

Always wear emergency communication and signaling devices on your person, so in the event of an emergency rescuers can find your exact location. Mirrors, whistles, and especially items like personal locator beacons can give rescuers the information they need to find you.

state, begin with proper instruction and practice. Both on-land and on-water instruction (in protected areas) are highly recommended.

- Wear a life jacket.
- Carry emergency communication and signaling devices on your person.
- Obtain and maintain essential skills in reboarding a capsized boat in open water, by yourself and assisting others.
- Avoid powerboat traffic lanes. Strive for high visibility when around powerboats. Especially under conditions of limited visibility, rough water, or strong backlighting from the sun, groups of boats are more easily seen than single boats. Wave paddles to attract the attention of approaching boats if necessary.
- When on the beach, move the boat well above the high tide line and tie it securely.
- Check the weather forecast before every departure and never try to outrun a bad weather forecast. Get frequent weather updates via VHF radio.
- Keep a lookout for large boat wakes and wave rebound off the shoreline, rocks, and coastal cliff faces.
- Stay close to the shore and avoid paddling in strong winds or heavy chop. Cross open water where the distance is the shortest. Perform “SECURITE” communication via radio before crossing heavy traffic lanes (see page 97).



### **Swiftwater Paddling**

Some examples of boats used in rivers, streams, and other moving water include whitewater kayaks, rafts, and packrafts. Paddling in swiftwater requires an entirely different skillset than flat or calm water paddling. The paddler needs to be extremely familiar with each kind of paddle stroke and able to quickly respond to changing conditions with the correct stroke. It is highly recommended to take paddling courses, swiftwater rescue training, and practice with more experienced paddlers.

- Learn and practice the universal river signals. Make sure other party members know them as well.
- Match skill and experience to the difficulty of the river. Before a trip, carefully review maps and determine the current and anticipated water levels and any possible evacuation routes.
- Rivers contain many hazards including waterfalls, rocks, strainers and sweepers, hydraulics or holes, and challenging rapids. If in doubt, walk around.
- Always scout down river from the shore. Rivers are constantly changing; do not rely on what it looked like last season.
- Learn and be proficient in first aid and basic swiftwater rescue techniques. Carry throw bags and other appropriate rescue gear.
- If the boat is not designed with closed decks and bulkheads to displace water, install devices such as float bags. This is especially important for open canoes.
- Be alert on rivers used by powerboaters. Listen carefully, keep to the right side (especially around river bends), and be prepared to handle boat wakes. Carry a sound-producing device, as required by state law.
- If in a group, assign the most experienced paddlers to the lead and sweep (last) boats. All other boaters should stay in between. If you lose sight of the boat behind you, pull over and wait.
- It is strongly advised to wear a dry suit while paddling swiftwater in Alaska.



### **Packrafting**

The American Packrafting Association, like the Alaska Office of Boating Safety, reiterates this vitally important message: gain knowledge, acquire the abilities, and practice the skills for your particular boating activity.

Packrafting is a subcategory of swiftwater paddling that is growing exponentially in popularity, especially in Alaska, where the remoteness of so many of its rivers and streams necessitates on-foot backcountry travel. A packraft is light, ideally less than five pounds, and inflatable, yet still durable enough to do the job of a larger, heavier boat designed for the same purposes.

The APA's Safety Code is detailed (see <https://packraft.org/education/safety/>) and encourages rafters to know self-rescue, never travel alone, be in control of their boats, understand and be able to read water conditions, and, above all, wear a U.S. Coast Guard-approved life jacket appropriate for the activity and carry your emergency communication and signaling devices on your person.

Other things to consider:

- Review trip plans prior to departing and retain the ability to abort a trip in case of poor conditions or unsafe water.
- Keep the least skilled person in mind when choosing route locations.
- Packrafts in any moving water with waves should have a spraydeck or whitewater deck,



## Paddler's Checklist

- A properly fitted life jacket
- Emergency communication and signaling devices carried on your person, such as a whistle, light, mirror, PLB, cellphone, or radio, depending on where you are paddling
- De-watering device, such as bilge pump, bailing bucket, sponge
- Repair kits for boat
- Maps, compass, GPS, nautical charts
- River knife carried on your person
- Rescue devices: throw bag, paddle float, slings, ropes
- Dry bag with appropriate clothing, rain gear, and extra layers
- First aid kit and personal medications
- Emergency shelter and sleeping bag
- Water and food
- Fire starting material (or stove and fuel)
- Helmet, paddling jacket and pants or a dry suit, spray skirt, and neoprene gloves
- Sunscreen, proper footwear, and eye protection

or if the boat is open without one, the boater should wear a drysuit or wetsuit. Cold water immersion, even in Alaska's nonglacial waters, is dangerous. A drysuit is especially recommended when using self-bailing packrafts.

- Packrafts require special care to prevent punctures and other damage, so carry them inside your pack when traveling on foot, and even in a stuffsack within your pack to avoid abrasion holes caused by rubbing against other items within the pack.
- If using a packraft and carrying more than 30 pounds, consider using boats that incorporate gear storage inside the air tubes, to offer boat stability and keep gear dry. This requires carefully packing the boat without any metal or sharp plastic objects making contact with the tubes.
- Equip packrafts with stern and bowlines to assist with reboarding if necessary.
- Know how to get back into a flipped packraft, especially a loaded one, while holding your paddle. Know how to help others get into their boats.

### **Stand Up Paddleboarding**

Although stand up paddleboarding may look easy, life-threatening incidents can happen at any time and can happen quickly. It is critical to learn how to avoid emergencies and how to respond to them if they happen. Stand up paddleboard (SUP) incidents and drowning deaths occur when paddlers fall off the board and are unable to successfully self-rescue or be rescued by others. Such falls become life-threatening when paddlers are without a leash or life

### **Paddling and the law**

- ❑ Canoes, kayaks, stand up paddleboards, and packrafts are all considered vessels and are subject to Alaska boating regulation.
- ❑ Nonmotorized paddlecraft do not need to be registered or titled under Alaska Statute, but doing so can help in the event of theft or loss.
- ❑ Anyone under the age of 13 must wear a U.S. Coast Guard-approved life jacket suitable to the activity. There must be one U.S. Coast Guard-approved life jacket per adult on board.
- ❑ Helmets are not required by Alaska law but are recommended for some forms of paddlesports, especially in rivers.
- ❑ It is unlawful to operate a boat while under the influence of drugs or alcohol.
- ❑ It is against federal law to operate your vessel too close to federally protected mammal species.

jacket, are paddling alone, or a combination. Paddling in Alaska's cold water adds the additional threat of cold water immersion.

Prior to paddling for the first time, beginner paddlers should learn how to hold the paddle, stroke, turn, and brace, how to read and respond to adverse weather conditions, particularly wind and tides, and how to prevent and respond to rescue situations. These tips and techniques can be learned in basic SUP paddling classes on flat water. Once paddlers have



gained enough flat water experience and confidence, they may consider trying other SUP activities like yoga, whitewater, or paddling in surf. There are specialized courses available in these disciplines to help you prepare. Only paddlers with a strong surfing background should try SUP surfing at Alaska shore breaks and bore tides. Without adequate surf knowledge and experience, paddlers can be a danger to themselves and others in the surf break lineup.

Other points to consider:

- Carry emergency communication and signaling devices on your person.
- Wear a life jacket, leash, and a whistle.
- All SUP paddlers, including children, should be able to swim proficiently and be able to self-rescue.
- Children on SUPs should not be left unsupervised. SUPs are boats, not toys, and can easily drift away.
- If you fall off, the best flotation device beyond your life jacket is the paddleboard; every attempt should be made to reboard the paddleboard as quickly as possible. A leash will ensure the board does not drift away rapidly.

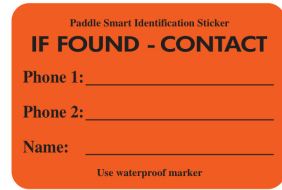


- Choose appropriate paddling attire, such as a drysuit or wetsuit, and learn about the different leashes for different paddling activities (coiled or straight and ankle, calf, or waist attached).
- File a float plan and leave it with your vehicle or a trusted person. Write your name, phone number, and an emergency contact name and phone number on the paddleboard itself. The same information should be located on your person. Should you be separated from your board, this information may prove life-saving.
- SUPs should include webbing to hold emergency gear, such as a first aid kit, matches, and signaling devices, and additional gear, such as a water bottle, high-calorie snacks, sunglasses, rain gear, and extra layers.
- Carry a tow line or throw bag, especially when paddling with less experienced paddlers.
- Be aware of wind and tidal conditions and stay along the coast within swimming distance to the shore or just outside the surf break. If possible, always start upwind and paddle downwind. A GPS tracking device will help keep track of your progress, particularly in changing weather conditions.
- If you plan on performing fitness activities on the paddleboard, use an anchor to stabilize the paddleboard and prevent the board from drifting away should you fall. Make sure that the



line on the anchor is long enough to secure the anchor.

- If you choose to wear a waist belt life jacket to allow for freedom in your movement (particularly during a fitness class), consider also carrying an extra life jacket secured to the paddleboard.
- Inflatable paddleboards should be fully inflated to the recommended PSI per the instruction manual.
- Solo paddlers should understand that they are taking a risk when paddling alone and take every preventative measure to ensure their own safety.



*Affix a Paddle Smart "If Found" sticker on your board to reconnect you to your boat and would-be rescuers.*

## OTHER WATER ACTIVITIES

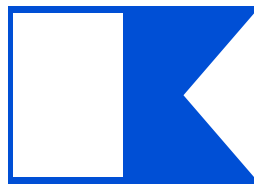
Recreational boaters must share waterways with various other crafts and users. When underway, always maintain a proper lookout. Scan the water back and forth constantly for hazards such as logs, submerged and exposed rocks, shallow areas, paddlecraft, and other boats. This becomes especially important in situations with reduced visibility, such as facing into the sun, in fog, in conditions with rough water, when rounding points, or when navigating narrow winding passages. Boat operators should understand the unique characteristics of other watercraft operation and regulations in order to boat safely and legally.

### Diving

Diving is a popular activity in Alaska. Boat operators need to be aware of divers in the water and be able to recognize diving flags.



*Diver Down Flag*



*Alpha Flag*

- Alaska law recognizes that a red flag with a white diagonal stripe (a diver's flag) indicates a person is engaged in diving in the immediate area. Displaying the diver's flag is not required by law and does not in itself restrict the use of the water.
- International Navigation Rules also require a blue and white

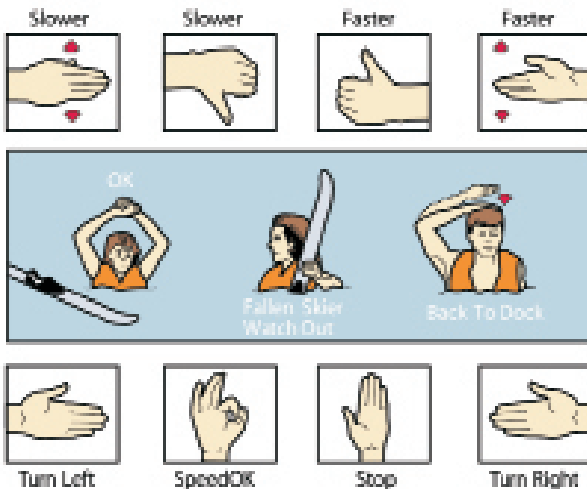
Alpha flag be displayed on boats engaged in diving operations.

- When operating in an area where a diving flag is displayed, boaters must stay at least 100 feet away from the flag unless they are operating at no-wake speed.

### Water Skiing

To make water skiing safer and more enjoyable, boat operators and skiers should observe the following:

- Operate only between sunrise and sunset.
- Boat operators must either have another person (12 years of age or older) on board as a lookout or have a rear view mirror installed on the boat.
- The boat operator should keep a minimum of a 200-foot wide ski corridor (100 feet on either side) to protect the skier from other boats and/or obstacles.
- A boat operator may not tow a person on water skis, a surfboard, or a similar device in a reckless or negligent manner so as to endanger the life or property of another person (AS 05.25.060 (1)).
- Skiers should wear a life jacket that is approved by the U.S. Coast Guard for the activity. Anyone under the age of 13 is required by law to wear a life jacket when being towed.



*Boat operator and skier should agree on recognized hand signals prior to departure.*

## HUNTING AND FISHING

Nationwide, hunters and anglers account for one in three boating fatalities. According to the National Rifle Association, more hunters die from drowning than from gunshot wounds. Records show the average sportsman who dies on the water is an adult male in a small open motorboat, on relatively calm water, on a sunny day. Most were not wearing a life jacket and died by drowning, not hypothermia.

- Unless a boat is designed for it, avoid hauling heavy fishing pots and nets over the stern.
- Avoid standing up or moving about when casting or shooting (especially in a canoe). Shoot or cast from a well balanced or seated position.



- When retrieving objects from the water (such as fish, decoys, or dogs), either move the boat to the object or draw it toward the boat with a paddle and keep your shoulders inside the gunwales.

- Hunters who boat are also boaters and should carry all required and recommended equipment and take a boating course.

- Never boat or hunt under the influence of drugs or alcohol.

- File a float plan and stick to it as much as possible.

- Hunters and anglers should always wear a life jacket when in a boat. Many new styles of life jackets are comfortable and do not restrict movement.

## EMERGENCIES

### SURVIVING COLD WATER

Cold water immersion plays a significant role in a majority of Alaska's boating fatalities. Generally accepted by researchers to be water temperatures below 70 degrees Fahrenheit, cold water is virtually all water in Alaska.

#### *Causes of Cold Water Immersion*

The following are the leading causes of cold water immersion:

**Swamping/capsizing:** due to overloading, poorly secured or shifting loads, improper boat handling in rough water, loss of power or steerage, anchoring from the stern, wrapping an anchor, mooring or pot line around a drive unit, or taking a wave over the transom during a sudden stop.

**Ejection:** primarily caused by improper lookout, resulting in a collision with another boat, hitting a submerged object, or running aground. The risk of ejection increases when operating a boat in restricted visibility, such as fog and diminishing daylight.



**Falling overboard:** most commonly due to slipping, loss of balance while standing or moving around the boat, or reaching for objects overboard.

#### *Effects of Cold Water Immersion*

Most of Alaska's boating fatalities involve cold water immersion that, according to research, has three distinct stages:

#### **1. INITIAL REACTION — COLD SHOCK RESPONSE**

- Within the first 1-3 minutes
- Involuntary gasping and hyperventilation can result in water inhalation
- Increased heart rate or blood pressure, panic, and vertigo may occur
- Higher risk of drowning if not wearing a life jacket

#### **2. SHORT TERM IMMERSION — COLD INCAPACITATION**

- Within 10-30 minutes of immersion

- Localized cooling of extremities affects muscles and nerves, impairing their function
- Arms and legs become stiff and unresponsive; activities such as swimming, re-boarding a boat, using a radio or distress signal, or holding on to a floating object becomes difficult or impossible
- Higher risk of drowning if not wearing a life jacket

### 3. LONG TERM IMMERSION — IMMERSION HYPOTHERMIA

- After at least 30 minutes of immersion, body temperature will begin to drop.
- Gradual cooling of the body core will occur at a rate dependent upon factors including water temperature, clothing worn, body type, physical condition
- As core body temperature falls, hypothermia symptoms will range from mild to severe, eventually leading to unconsciousness
- Higher risk of drowning if not wearing a life jacket

#### *Prepare for Cold Water Immersion*

Most immersion events happen quickly and unexpectedly, so it is important to be prepared. Taking these simple steps will help ensure the best possible outcome:

- Always wear a life jacket when in an open boat or on an open deck. Trying to put your life jacket on in cold water is extremely difficult and costs precious time and energy.
- Carry emergency communication and distress signaling devices on your person. Such items as an emergency locator beacon, a small handheld VHF radio or cellphone, a whistle, and some visual distress signals may save the day.
- Unless the boat is designed so a person in the water can



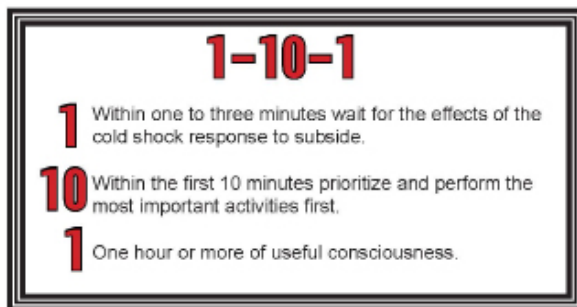
easily get back into the boat unassisted, equip the boat with a re-boarding device, such as a rope ladder, foot sling, or a swim platform.

- Carry survival suits when boating offshore. Make sure they are well maintained and readily accessible.
- Practice re-boarding your boat, donning immersion suits quickly, signaling, transmitting MAYDAY calls, rescuing a person overboard, and other cold water survival techniques described in this section. Drills are fun and build skill and confidence. See what kind of cold water survival classes are available at [www.alaskaboatingsafety.org](http://www.alaskaboatingsafety.org).

### **Surviving Cold Water Immersion**

Surviving cold water immersion depends on adequate flotation to prevent drowning and timely self-rescue or rescue by others. Wearing a life jacket, carrying a communication and distress signaling device, the ability to swim, a controlled entry into the water, surface conditions, length of time in the water, associated injuries or medical conditions, and alcohol use can all influence the outcome.

The phrase “1-10-1” is an easy way to remember what to do in the event of a sudden cold water immersion (Giesbrecht). This information does



not apply to all persons in all cases, but it does give a general idea of how long you have to rescue yourself, and reminds you not to panic. While time may be of the essence, you still can remain calm and take command of your rescue.

## **1 Minute**

The initial reaction, or cold shock response, usually passes within the first few minutes. Wait for the effects of cold shock to subside. According to Michael Tipton, an expert in the field of cold water immersion, resist the urge to fight the water. A life jacket is designed to float a person in the water on their back at a 45 degree angle. Float on your back and wait for

gasping and hyperventilation to subside. Understanding that this stage will soon pass may help reduce panic.

## 10 Minutes

Once breathing is under control, most people have at least 10 minutes to take the actions necessary for self-rescue or for obtaining rescue before incapacitation occurs. Do not waste time and energy removing shoes or clothing. Even small amounts of air trapped in clothing will provide some buoyancy and thermal protection. Perform the most important functions first:

- If not already worn, attempt to don life jackets or survival suits, and then assist others in doing so.
- Account for any other members of the party. Check around and under the boat.
- If not already deployed (and depending on the circumstances), activate an emergency communication or distress signaling device such as an emergency locator beacon, transmit a MAYDAY on a VHF marine radio, call 911, or call the U.S. Coast Guard by dialing \*24 on a phone. If in range of others, activate visual and sound distress signals.
- Get all persons as much out of the water as possible. Water transfers heat faster than air of the same temperature. For example, if the boat is not overturned, use the boat's reboarding devices and practiced techniques to get back in. If overturned, climb on top of the hull. If separated from the boat use any other available objects to get as much of your body out of the water as possible, even if it feels colder.

### The Swim/Don't Swim Decision

Staying with or near a floating boat may be the best choice, especially if the event was witnessed or emergency communication was successful. Even if capsized or swamped, a boat may offer supplemental flotation and is far easier for potential rescuers to spot than a person in the water. Swimming in cold water can reduce survival time, and the average person will lose more heat faster by swimming than by remaining still. Distances can be deceiving when on the water, and safety can look closer than it really is. According to Professor Dr. Michel B. Ducharme, situational factors should be considered when making the swim/don't swim decision:

- Whether or not a life jacket or survival suit is worn
- Whether a place of safety is close (less than 800 yards away or 45 minutes swimming time based on fitness level and



swimming ability

- The likelihood of rescue by others; i.e., the event was witnessed or others are aware of and responding to the emergency
- The ability to get in or on top of the boat or other object to get some or all of your body out of the water
- Whether you would be abandoning a place of relative safety to try to swim
- Whether calm or moving water (e.g. a river)
- Physical ability and medical condition of the party members



*The “huddle” position helps preserve heat, keeps you together to better be spotted by rescuers, and can be a way to aid an injured person in the water.*

### Swimming in open water:

Use a “head out” breaststroke or modified backstroke, using just forearms and lower legs. Keep upper arms and elbows close to the sides of chest, upper legs close together and knees slightly bent. Move in an even and sustained pace and conserve energy.

### Swimming in rivers or other moving water:

- Point feet downstream with knees bent slightly and feet up to avoid foot entrapment.
- Maintain body at a 45-degree angle to the current, with head pointing to the bank you are trying to reach. The force of the current on the upstream side of your body will help to ferry you toward that bank.
- Use a modified backstroke. Use your feet, arms, and legs to fend off rocks and other objects.
- If necessary, be prepared to quickly flip onto your stomach and into a head-first position to scramble over strainers or other obstacles to keep from becoming pinned against them by the current.

## 1 Hour

Even in very cold water, a person may have 30 minutes or more before their core body temperature begins to drop. If unable to self-rescue, the priority may now become slowing the rate of heat loss to extend useful

consciousness and survival time. Keep movement to a minimum. Protect areas of high heat loss (e.g., head, neck, armpits, groin, sides of the torso) as much as possible.

If in open water, some life jacket designs will allow a person to use the “Heat Escape Lessening Position” (H.E.L.P.). Grasp the shoulders of your life jacket by crossing your arms, or place hands in arm pits and cross lower legs and raise your knees as close to your chest as possible while still maintaining position in the water.

Small groups can form a tight huddle by intertwining arms so bodies work together to possibly slow heat loss. Small children and injured or unconscious persons can be placed in the center of the huddle to be supported by the group.

In any case, be prepared to activate visual and sound distress signals when potential rescuers are in range.

### **Person Overboard Response**

1. Have everyone put on a life jacket (if they are not already worn).
2. Keep eyes on the victim at all times. If possible, assign a person on the boat to serve as the lookout.
3. Immediately throw supplemental flotation (i.e. life ring, seat cushion, horseshoe buoy), ideally with attached floating line, to the overboard person.
4. Approach the person from downwind or downstream if possible. To avoid the risk of striking the victim with the boat, when close enough to reach for the person, use an oar, paddle, or other item to pull them to the boat. Or, use a throw ring or cushion with a line attached to pull the person to the boat.
5. Do not go into the water for the victim, except as a last resort.
6. Direct passengers as necessary to assist and to balance the boat, then assist the person in getting out of the water. All engines should be stopped if pulling a victim in over the stern.



*Designate a lookout while launching a rescue effort, so they can keep eyes on any victim falling overboard while the boat driver maneuvers closer.*

7. Treat the victim to your level of training.

### **Treating Immersion Hypothermia**

The goals for treating immersion hypothermia patients are:

- Handle gently because cold heart muscle and vasculature of severely hypothermic patients are vulnerable to physical exertion, jarring, or moving from a horizontal to vertical position too quickly.
- Provide basic life support as necessary.
- Prevent further heat loss by removing wet clothing, drying victims off, and putting them in dry clothes and a sleeping bag or blankets and vapor barrier. Shivering is good.
- Secure transport to medical care for moderately to severely hypothermic patients.

A person found unconscious in cold water, even if they appear dead, may still have a chance for survival. If the victim was known to be submerged for an hour or less (or if the time of submersion is unknown), providing basic life support to your level of training and obtaining medical help quickly could save a life.



*Approach victims in the water carefully. Use caution transferring them into the boat to avoid further injury or capsize.*

## **CARBON MONOXIDE POISONING**

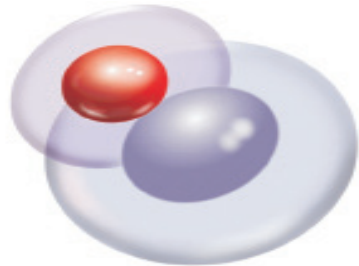
Carbon monoxide (CO) poisoning, the leading cause of accidental poisoning death in America, has been identified recently as a serious

problem on our nation's waters. CO is an odorless, colorless, tasteless gas, formed by the incomplete combustion of hydrocarbon fuel, which can cause seizures, unconsciousness, and death. CO binds to red blood cells 240 times more aggressively than oxygen, displacing oxygen and causing metabolic asphyxiation (suffocation). Depending on the concentration, CO poisoning can happen very quickly, sometimes with just a few breaths.

Boaters should be aware of improperly vented or malfunctioning cabin heating systems, grills and propane appliances, and exhaust gases produced by generators and engines.

Exhaust fumes and CO can accumulate in areas such as enclosed cabin spaces and under swim platforms. Prevent CO poisoning aboard your vessel by taking these precautions:

- Avoid running the engine or boat's generator continuously when the boat is closed up in cold or bad weather, particularly when the boat is not in motion.
- Do not use small, portable gas generators on boats.
- Be alert to any indication that exhaust fumes are present and ventilate accordingly.
- Install and maintain CO detectors in enclosed areas.
- Keep well clear of engine and generator exhaust ports that are running.
- If there is a need to be around swim platforms or exhaust ports for any reason, first shut the engines down and then allow sufficient time for fumes to dissipate.
- Be mindful of the wind direction if idling the motor; even if you are in a boat with a three-sided canopy, do not assume



*Carbon monoxide binds to red blood cells displacing oxygen*

## DID YOU KNOW?

Carbon monoxide (CO) poisoning can happen very quickly, but on a boat can sometimes be mistaken for seasickness. If you begin to feel ill, consider your surroundings and the possibility of exposure to too much CO.

enough fresh air is flowing to disperse the exhaust.

- Be sure to have your engine and generator exhaust systems regularly inspected by a professional. If you notice a change in the sound or appearance of the exhaust system, shut the unit down and have it inspected and repaired by a mechanic.

Because CO is difficult to detect by sight or smell and poisoning can happen so quickly, there is often little warning. CO poisoning is difficult to diagnose because it often is mistaken for seasickness and has a wide range of vague symptoms, including:

- Fatigue and headache (most common)
- Symptoms of dizziness, vomiting, muscular twitching, weakness, and sleepiness
- Gray or ashen appearance

If someone feels dizzy or loses consciousness while onboard, consider the possibility of CO poisoning. If you suspect someone could be suffering from CO poisoning, remove them from the suspected source and into fresh air immediately. Be prepared to provide basic life support to your level of training, and call for medical assistance.

## FIRE

The key to putting out a fire on a powerboat is eliminating any of the fire's three ingredients: fuel, oxygen, or heat. Fire extinguishers use agents that either cool or smother the fire, such as water, carbon dioxide, halon, dry chemical, or dry powder.

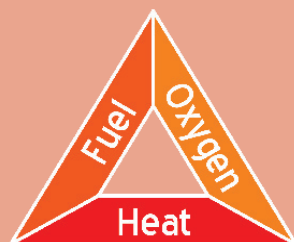
If a fire breaks out:

1. Alert passengers. Direct them to put on life jackets (if not already worn), gather survival gear, and prepare to go into the water if necessary.
2. Keep the fire downwind; turn the boat so flames and smoke blow away from the craft, rather than over it.
3. Cut off oxygen to the area of the fire.
4. Use the P.A.S.S. system to extinguish the fire:

### STOP THE FLAMES

*Use the P.A.S.S. system to extinguish a fire:*

- Pull the pin.
- Aim the extinguisher nozzle at the source (at base of flames).
- Squeeze the handle.
- Sweep back and forth.



- P: Pull the pin.
  - A: Aim the extinguisher nozzle at the source (at base of flames).
  - S: Squeeze the handle.
  - S: Sweep back and forth.
5. Do not try to save some of the charge for a re-flash; a 5-B (B-I) extinguisher empties in less than 10 seconds. Instead, carry a spare extinguisher.
  6. Transmit a MAYDAY if necessary.
  7. As a last resort, abandon ship. Stay together and use cold water survival techniques.

## TAKING ON WATER

1. Direct passengers to put on their life jackets (if not already worn) and gather survival gear.
2. Re-distribute weight to balance the boat.
3. Secure doors and hatches.
4. Pump and bail. Start bilge pumps and get manual de-watering devices in use.
5. Locate leak source and take measures to stop or reduce leak. If unsuccessful and near shore, consider beaching the boat.
6. Shut off engines if the leak is from the cooling system.
7. If hull is breached, an inboard engine can act as a bilge pump. Shut off engine, close sea cock, disconnect cooling water intake hose, restart engine, and use the water intake hose to pump out the boat.
8. Transmit MAYDAY if necessary.
9. As a last resort, abandon ship, but stay with the boat if it is floating. Stay together and use cold water survival techniques.



## RUNNING AGROUND

Besides causing expensive damage to the boat and engine, striking underwater objects or the bottom can cause passengers to be suddenly

thrown forward, often resulting in injury and ejection into the cold water. Running aground is usually caused by inattention. This can be avoided by taking these simple steps:

- Carefully study charts of the area before a trip to identify shallow areas, rocks, and other hazards.
- Be aware of the tide cycle or changes in river volume.
- Always maintain a close watch while underway, constantly scanning the water.
- In shallow water, proceed slowly and use charts, a depth finder, and an observer.

If you do run aground, first ensure the safety of passengers. Next:

- Assess the situation.
- Check for hull damage.
- If the boat is not firmly grounded, consider lightening the load and, if safe, rocking the boat back and forth to free it. If the tide is coming in, and the hull is not damaged, it may be possible to wait a few minutes to regain flotation.
- Another method is to use an anchor or sea anchor to pull the boat into deeper water.
- If the boat can not be freed, stabilize it and secure fuel tanks and vents.
- Prepare signaling devices and consider calling for help.



## MECHANICAL BREAKDOWN

Mechanical breakdown is the most common powerboating problem. If you encounter problems on the water, consult owner's manuals and try some of the following before calling for help:

### **Problem: Engine turns over but will not start**

- Check if engine cut-off device is disconnected.
- Check if fuel is getting to the engine (fuel line not primed, kinked, bad connection, tank vent closed).

- Check if engine is flooded.
- Check for spark.

**Problem: Engine does not turn over or the solenoid clicks but starter does not engage**

- Check that the gear shift is in the neutral position.
- Check that the battery switch is in the “on” position.
- Check that battery terminals, cables, and connections are clean and secure.
- Check all ignition system fuses, including under engine cowling (outboards).
- Check starter solenoid.
- Check connections at starter motor.

**Problem: Engine runs poorly**

- Check if fuel line priming bulb is full of fuel and firm
- Check if fuel tank vent is closed.
- Check fuel lines and connections for kinks, pinches, obstructions and poor connections, and check fuel filters for contamination (water or other agents).
- Check fuel and fluid levels.
- Check for overheating.

**Problem: Engine stops suddenly**

- Check if engine cut-off device became disconnected or the ignition key was turned off.
- Check fuel and oil levels.
- Check if fuel tank vent is closed.
- Check fuel line connections.
- Check for engine overheating.
- Check for propeller fouling.





### Problem: Engine overheats

- Shut down immediately until the problem is solved.
- Check oil levels.
- Check water intakes and cooling system for fouling, obstructions, or leaks.
- Check water pump operation.
- Check engine trim to make sure water intake is below the water line.

## EMERGENCY COMMUNICATIONS

### *Emergency Radio Procedures*

There are three types of emergency radio messages:

**SECURITE** (pronounced *say-cure-eh-tay*): to notify others of bad weather or other hazards.

**PAN-PAN** (pronounced *pon-pon*): to notify others of an urgent situation regarding vessel or personal safety. In a Pan-Pan, the situation is urgent, but for the time being does not pose an immediate danger to anyone's life or to the vessel itself.

**MAYDAY**: to notify others when experiencing an immediate threat to life or vessel.

**EMERGENCY RADIO CALL PROCEDURES**

1. MAKE SURE RADIO IS ON
2. SELECT CHANNEL 16
3. PRESS & HOLD TRANSMIT BUTTON
4. CLEARLY SAY: **MAYDAY, MAYDAY, MAYDAY**
5. ALSO GIVE:
  - VESSEL NAME & DESCRIPTION
  - POSITION/LOCATION
  - NATURE OF EMERGENCY
  - NUMBER OF PEOPLE ON BOARD
6. RELEASE TRANSMIT BUTTON
7. WAIT 10 SECONDS — IF NO RESPONSE, REPEAT





**CONFIRM ALL PERSONS WEARING LIFE JACKETS!**

[www.alaskaboatingsafety.org](http://www.alaskaboatingsafety.org)

If you get a response, be prepared to give the following information:

- Vessel description: length, color, propulsion type, registration number
- On-scene weather: wind speed, wind direction, sea height, swell direction, visibility, ceiling
- Communication and survival equipment on board
- Radio frequencies available
- Operator's name and phone number
- Owner's name and phone number
- Home port

Here are examples of calls that would fall under each of the emergency radio message categories:

- SECURITE: A group of paddlers is crossing in a heavy traffic zone.
- PAN-PAN: A boat is experiencing engine trouble and is requesting non-emergency assistance
- MAYDAY: A boat is taking on water and the occupants are in need of immediate help.

### ***Digital Selective Calling***

In addition to sending a distress call, or MAYDAY, boaters should also consider activating the red digital selective calling (DSC) emergency button on their MMSI-equipped and registered radio to alert all stations.

- A distinctive red distress button is located on the face of a DSC radio and some handheld radios.
- Manufacturers are required to install DSC on any marine VHF radio model developed after June 1999 (except handheld models).
- DSC radios automatically send a distress alert (once activated) to those in the immediate area who are also equipped with a DSC radio, without having to use the usual voice calling or distress channels.
- DSC radios automatically and silently maintain a listening watch on the appropriate DSC channel (VHF 70, or 2187.5 kHz).
- The benefits of DSC are greatly enhanced when the radio is

connected to the boat's GPS unit.

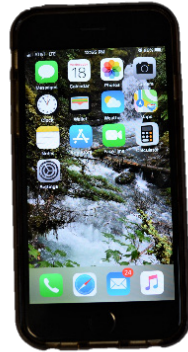
To be able to use the DISTRESS alert function, boaters must first obtain a Maritime Mobile Service Identity (MMSI) number. This nine-digit number electronically identifies a specific boat and must be programmed into the radio. MMSI numbers may be obtained from 1-800-563-1536, 1-800-4SEATOW, [www.boatus.com/mmsi/](http://www.boatus.com/mmsi/), [www.usps.org](http://www.usps.org), or [www.shinemicrom.com](http://www.shinemicrom.com).

The U.S. Coast Guard's Rescue 21 Digital Selective Calling emergency contact system is operational in some parts of Alaska; in addition, those in the immediate area with DSC can receive the distress signal for relay purposes. For more information on where Rescue 21 is operational, contact the U.S. Coast Guard at (907) 428-4200.

### **Emergency Cellular Procedures**

Where there is cell phone coverage, it is possible to call the U.S. Coast Guard directly by dialing \*CG (\*24). Alaska is the only state where \*CG is still operational. First give your phone number in case you are disconnected.

- Give your name and a boat description.
- Give your location.
- Explain the nature of your problem.
- Give the number of people on board.
- Repeat your cell phone number before ending your call.
- Keep calm and speak slowly and clearly so you can be understood.



### **Single Side Band (SSB)**

The U.S. Coast Guard can be reached by HF/SSB radio on 4125 MHz.

### **Emergency Locator Beacons**

Emergency locator beacons are highly effective tracking transmitters that aid in the detection and location of boats, aircraft, and people in distress. When activated, these radio beacons interface on the 406MHz frequency with COSPAS-SARSAT, an international satellite-based search and rescue alert detection and information distribution system.

When selecting an emergency locator beacon, consider ease of activation under a variety of conditions and the length of time the unit will operate following activation.

The emergency locator beacon must be registered (and the information updated every year) so rescuers can access the vessel's or beacon owner's emergency contact information. Registration is available online at [www.beaconregistration.noaa.gov](http://www.beaconregistration.noaa.gov).

Once communication has been established, be prepared to deploy signaling devices when search and rescue is nearby.

### ***If You See a Flare:***

To improve an emergency responder's ability to quickly locate a mariner in distress, a technique known as the "Fist Method" has been developed to assist in accurately determining the position of the flare in relation to yourself, the reporting source.

**The Fist Method:** To estimate the distance of a flare from your position, you need to determine the height of the flare above the horizon. To do this, hold your arm straight out in front of you and make a closed fist. Hold the bottom of your fist on the horizon with the thumb side pointing up. Picture the flare you saw, compare the height of the flare at its peak to your fist. By using this method, responders can estimate how far away the flare is from you.



## CONTACTS

### *Boating Education*

- Alaska Office of Boating Safety (907) 269-6041  
[www.alaskaboatingsafety.org](http://www.alaskaboatingsafety.org)
- Alaska Water Wise courses (907) 269-6041  
[www.alaskaboatingsafety.org](http://www.alaskaboatingsafety.org)
- Alaska Marine Safety Education Association (907) 747-3287  
[www.amsea.org](http://www.amsea.org)
- American Canoe Association, [www.americancanoe.org](http://www.americancanoe.org)
- BoatUS Foundation, [www.boatus.com](http://www.boatus.com)
- Fairbanks Paddlers, [www.fairbankspaddlers.org](http://www.fairbankspaddlers.org)
- *Kids Don't Float* Education Program (907) 269-8705
- Knik Canoers and Kayakers, [www.kck.org](http://www.kck.org)
- National Association of State Boating Law Administrators,  
[www.nasbla.org](http://www.nasbla.org)
- USCG Auxiliary courses, [www.cgaux.org](http://www.cgaux.org)
- USCG Boating Safety Division, [www.uscgboating.org](http://www.uscgboating.org)

### *Accident Reporting*

**Mail to:**

Alaska Office of Boating Safety  
550 W. 7th Ave., Suite 1380  
Anchorage, AK 99501

**Fax to:**

(907) 269-8907

**Email to:**

[officeofboatingsafety@alaska.gov](mailto:officeofboatingsafety@alaska.gov)

### *Reporting Oil Spills*

Both state and federal agencies must be contacted in the event of an oil spill.

**State:**

Department of Environmental Conservation

- Southeast Area (907) 465-5340
- Northern Area (907) 451-2121
- Central Area (907) 269-3063

- 1-800-478-9300 (after normal business hours)

**Federal:**

- U.S. Coast Guard National Response Center 24-hour Hotline 1-800-424-8802

**Ports and Harbors**

- Anchorage (907) 343-6200
- Bristol Bay (907) 246-6168
- Cordova (907) 424-6400
- Dillingham (907) 842-1069 (seasonal number)
- Haines (907) 766-2448
- Homer (907) 235-3160
- Juneau (907) 586-5255
- Kenai (907) 283-7535
- Ketchikan (907) 228-5632
- Kodiak (907) 486-8080
- Petersburg (907) 772-4688
- Sand Point (907) 383-2331
- Seldovia (907) 234-7886
- Seward (907) 224-3138
- Sitka (907) 747-3439
- Skagway (907) 983-2628
- Valdez (907) 835-4981
- Whittier (907) 472-2330
- Wrangell (907) 874-3736

**Other**

- Alaska Weather Information Hotline
  - Anchorage: 266-5145
  - Fairbanks: 458-3745
  - Juneau: 790-6850
  - Anywhere else in Alaska: 1-800-472-0391
  - Outside of Alaska: 1-907-266-5145
- Cook Inlet Keepers (for a bilge pillow), [www.inletkeeper.org](http://www.inletkeeper.org)

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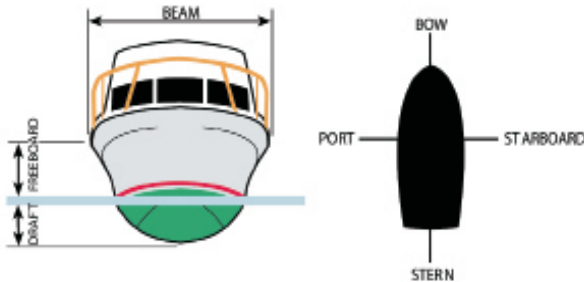
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## BOATING TERMS

- **Amidships**—Center of boat with reference to its length or width
- **Aft**—Toward the stern of a boat
- **Beam**—The boat's maximum width
- **Bilge**—Lower internal part of a boat's hull
- **Boat**—Every description of watercraft used or capable of being used as a means of transportation on the water
- **Bow**—Forward part of a boat
- **Bulkhead**—A vertical partition separating compartments
- **Draft**—The depth of water a boat draws
- **Fathom**—Six feet
- **Fore**—To or at the front of the boat
- **Freeboard**—Height of boat from the waterline to the deck or gunwale
- **Gunwale**—Top, outer edge of boat's hull
- **Helm**—The wheel or tiller controlling the rudder
- **Hull**—Body of a boat
- **Motorboat**—Any boat propelled by machinery, including any sailboat under power
- **Port**—Side of boat to the left when facing forward
- **Starboard**—Side of boat to the right when facing forward
- **Stern**—Back end of a boat
- **Transom**—Flat planking across the stern of a boat
- **Trim**—Fore and aft balance of a boat
- **Underway**—Boat in motion. Technically, a boat is underway when not moored, at anchor or aground





# Notes

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*This publication is dedicated to Mr. Jeff Johnson, Alaska's first Boating Law Administrator, and state employee for more than 30 years.*

# RESCUE READY



Always wear a life jacket when in an open boat or on an open deck.



Carry emergency communication and distress signaling devices on your person.



Attach the engine cut-off device when underway.



Equip the boat with at least one means of reboarding.



File a float plan and find more information at [PledgeToLive.com](http://PledgeToLive.com).

For classes, presentations, and educational resources visit [AlaskaBoatingSafety.org](http://AlaskaBoatingSafety.org).

