

# Boating Tips for Hunters and Anglers

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The Sportsman's  
Forum



The Sportsman's Forum is part of a U.S. Coast Guard grant conducted in partnership with the NRA, B.A.S.S., Ducks Unlimited, Cabela's, The North American Hunting and Fishing Clubs, NASBLA, and the BoatU.S. Foundation.



# Boating Tips for Hunters and Anglers

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## About the Sportsman's Forum Who We Are and What We Do

In 1999, concerned about the unusually high number of boating fatalities in hunter and angler populations, the U.S. Coast Guard put out a call for programs that would focus on angler and hunter boating safety. Answering that call, we at the BoatU.S. Foundation began to look more deeply at sportsmen's boating statistics, and were alarmed by what we found. For instance, we discovered that 91% of sportsmen who died in boating related accidents were not wearing life jackets. We also found that over 25% of all boating fatalities involved boaters who were actively fishing or hunting—yet less than 10% of boaters say fishing or hunting is their primary boating activity. It became clear to us that sportsmen were more at risk for boating fatalities than the general boating population, and were in dire need of boating safety education.

The BoatU.S. Foundation, a long-time leader in boating safety education and research, assembled a handful of powerful national partners representing anglers, waterfowl hunters, outdoors retailers, and state safety organizations. The National Rifle Association, B.A.S.S., Ducks Unlimited, Cabela's, the North American Hunting and Fishing Clubs, the National Association of State Boating Law Administrators, and the BoatU.S. Foundation came together to become the Sportsman's Forum.

Since forming, we've conducted two focus groups to gauge the attitudes of sportsmen toward boating safety. We have filmed public service messages for ESPN, conducted educational presentations, and spent a quarter of a million dollars toward targeting advertising and outdoor sports sponsorship.

### About This Guide

We've also developed this press kit to provide you, the members of the media, with practical information about using boats in the pursuit of outdoors sports. Feel free to treat this guide like a press release, and use any information found within its pages. If you have questions, or you'd like to obtain images found in this guide, or if need to schedule an interview with us or any of our partners, please give us a call. We would be glad to help.



Photo courtesy of Sospenders

For more information, you can also visit our website at [www.boatus.com/foundation/sportsman](http://www.boatus.com/foundation/sportsman).

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## Fast Facts

### Sportsmen and Boating Fatalities

*Why is boating education for hunters and anglers so important? Consider these statistics:*

➤ One out of three people who died on the water died while fishing, hunting or on the way to fish and hunt.

➤ While overall boating fatalities dropped from 1995 to 2000, sporting fatalities remained fairly consistent. The percentage of sporting deaths to total boating deaths increased almost every year, reaching nearly 36% in 2000.

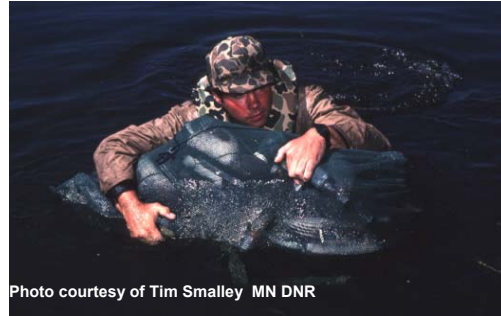


Photo courtesy of Tim Smalley MN DNR

#### Fishing Facts

##### **Did you know?**

- 25% of boating fatalities happened while boaters were fishing?
- 27% of deaths happened when passengers fell overboard?
- 30% occurred when the boat capsized?
- 49% of fatalities happened on a lake, pond, or reservoir— not in the ocean and on rivers?

fatality population, in which 77% were not wearing a life jacket, sportsmen were far more likely to have not worn a life jacket than all other boaters—a difference that might have saved their lives.

➤ According to the National Rifle Association, more hunters die each year from water-related accidents than from gunshot wounds.

➤ About 27% of boating fatalities involve alcohol.

➤ 88% of sportsmen who die on the water die from drowning, mainly as a result of their boat capsizing or from falling overboard.

➤ You might think that younger inexperienced sportsmen are most at risk, or that older, less agile sportsmen may be at the highest risk. In actuality, the highest rate of fatalities is among sportsmen who are 30-50 years old.

➤ 91% of sportsmen who died in boating accidents between 1995-2000 were not wearing a life jacket. Compared with the general boating

#### Hunting Facts

##### **Did you know?**

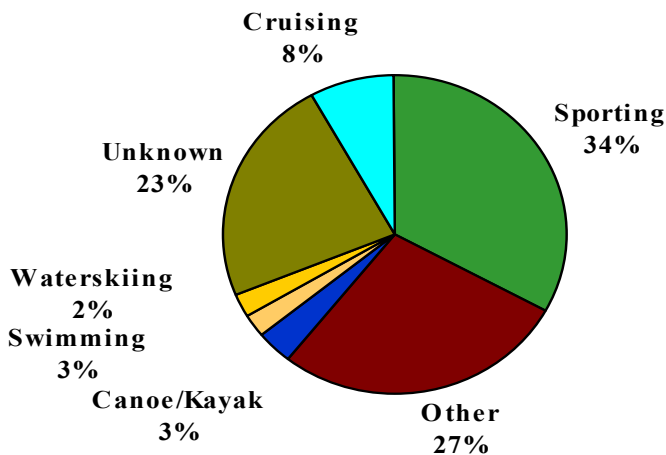
- 70% of hunters who died in boating accidents fell overboard as a result of their boat being improperly loaded, or due to moving around the boat unsafely?
- 86% of hunters who died were not wearing life jackets?
- Hunters are far more likely to die from drowning than from an accidental gunshot wound?
- 47% did not even have a life jacket on board?!?

**When is a hunter or angler most likely to die?** You might be surprised. Statistics show that most sportsmen die on days that seem like the perfect day to be on the water.

- The weather is usually clear, calm, and sunny.
- Water conditions are seemingly mild. Few accidents are caused by rough water--though cold water and fast currents are killers!
- Sportsmen generally die at lunch time or after supper during the week, or at any time on the weekend.



## Yearly Fatalities of Boaters, 1995-2000



### What's the typical sportsman boating fatality?

- 88% fatalities are from drowning.
- 40% of fatalities come from vessel capsizing.
- Cold water and strong current were reported in a high percentage of accidents.
- Most accidents happen in open motorboats 16 feet or less.
- Men ages 30-50 were the most common fatalities.

#### TYPICAL SPORTSMAN ACCIDENT REPORT

*"Boat one left the shoreline and immediately flooded. After flooding, the boat rolled to port, ejecting all occupants in the water. The three occupants began an attempt to swim to shore. All were wearing heavy waterfowl hunting clothing, including waders. Operator and one passenger drowned prior to reaching shore. No PFDs [life jackets] were present or used."*

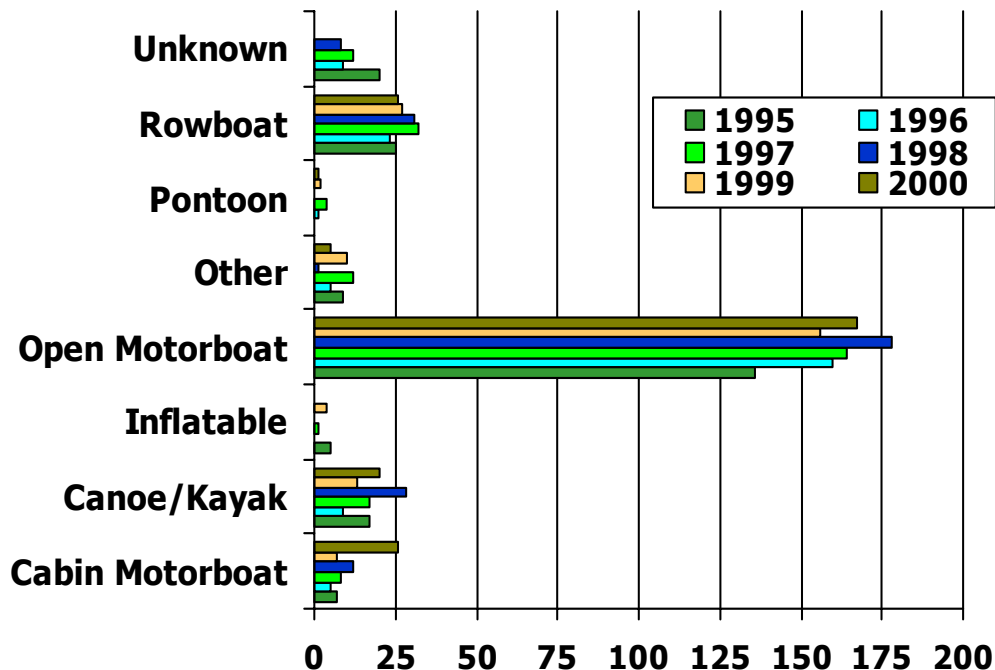
-- 1997 State Accident Report

## Boat Smarts

### Practical Tips for Sportsmen on the Water

Most hunting and angling takes place on boats that are less than 16 feet long, the length of boat that has the dubious distinction of being involved in the lion's share of boating fatalities. Boats under 16 feet often have flat bottoms or semi-v hulls and are known for their instability. It's no surprise then that the primary causes of hunting and fishing accidents on the water are capsizing, falls overboard and flooding or swamping. "The high rate of boating fatalities among sportsmen is not only a reflection on the types of boats being used for outdoor sports," says Chris Edmonston of the BoatU.S. Foundation, "but also on improper boating techniques like landing fish and waterfowl, retrieving decoys, and moving around a small boat."

### Hunting & Fishing Fatalities by Vessel Type



This isn't to say hunters and anglers should stop using small boats. What it says is that they should take precautions in small boats, precautions like correctly loading the boat and using caution while moving about the boat and landing fish or fowl. Above all, a sportsman should wear his life jacket.

## Loading the Boat

Correctly loading a small boat starts from your very first step onboard. First of all, **step gently** into the center of boat; avoid stepping on the sides (called gunnels) or the seats, or jumping onboard. Secondly, if you have a lot of gear, **hand the gear to someone on the boat**, or leave it on the pier and reach for it from the boat. Boarding a boat with a handful of equipment gives you extra weight and instability, and leaves you without a hand to steady yourself. Also, it is important to **hold on** to something whenever boarding or moving around the boat, even if you feel you are stable. You never know when another boat's wake, someone else in the boat losing their balance, or your dog's sudden movement can cause a chain of events that might leave you in the water, or in the bottom of the boat with an injury.

When loading gear, it is important to **distribute the weight evenly** around the boat, making sure not to overload. Take special care not to load too much in the back (stern), since once the boat picks up speed, the stern will go lower in the water and is prone to swamping. Additionally, it is important to keep the **center of gravity low in the boat**. Piling gear high can raise the center of gravity and can cause the boat to tip over unexpectedly. This same rule goes for the people in the boat, which is why you should **avoid standing** in small boats. Make sure your anchor and dock lines are properly stowed to avoid tripping. And as you are loading, be sure you have brought along a life jacket for each person aboard—it's the law. Better yet, have everyone in your group put on the life jackets before even leaving the dock.

*"You never know what can happen. I was by myself last week and ...my anchor [line] got caught on my foot and I almost tilted over the boat...It could have knocked me out, but the PFD would have kept me floating."*

*-- Angler in Greensboro, NC*

To avoid overloading the boat, check the vessel's **capacity plate**. The capacity plate states the total amount of weight (including people, gear and motor) the boat is made to hold. If your boat does not have a capacity plate, the U.S. Coast Guard suggests the following basic guide. Be sure to take into consideration the weight of the gear you've brought along.

Boat Length	Number of People (Approx. 150 lbs each)
6 feet	1 Person
8 feet	2 People
10 feet	2 People
12 feet	3 People
14 feet	4 People
16 feet	5 People
18 feet	6 People
20 feet	7 People

### **Moving About the Boat**

Once in the boat, it's a good idea for all passengers to avoid standing. Small boats can easily become unstable, and when a number of people and/or dogs are sharing the space, the danger of capsizing increases.

**Hunters** should stay seated while shooting so they can brace themselves for the gun's recoil. Standing up in an unstable boat will raise the center of gravity and only make the boat less predictable. When setting decoys, be careful not to lean too far over the sides of the boat. **Anglers** should stay in a seated position during casting so as not to lose their balance. The jonboat below is a good example of a boat that is not made for standing. Some boats, like bass boats, are specially designed and weighted for standing, just be sure to keep your legs spread for stability, lean against a seat where possible, and wear a life jacket.

### **Landing Fish or Fowl**

One of the most critical moments in your boat is when you try to retrieve your fish or waterfowl. Your blood is pumping, your heart is racing, and everyone in the boat is leaning over to see what you've got. That's the moment that the weight of the boat can change suddenly, and before you know it, you're all wet.



The first thing to remember is just common sense: keep your weight in the center of the boat. If you're reeling in a fish, try to do it in a seated position and use a landing net to get the fish into the boat. Hunters can also use a landing net or boat hook to avoid leaning too far over the side of the boat to retrieve birds and decoys.

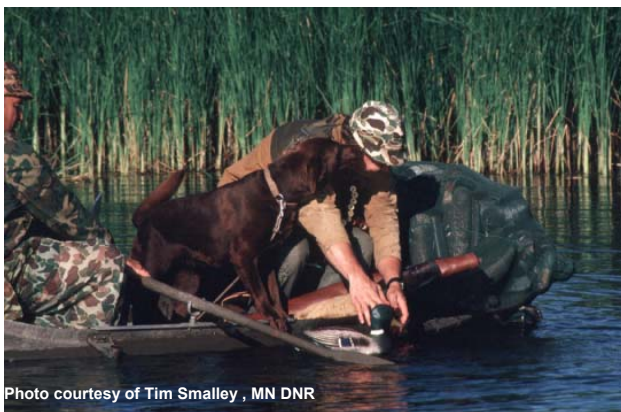


Photo courtesy of Tim Smalley, MN DNR

If the boat should capsize, stay with the boat unless the shore is very close. Land may look easy to reach, but often cold water and currents make the trip a killer. Wearing a life jacket will increase your chances of survival considerably.



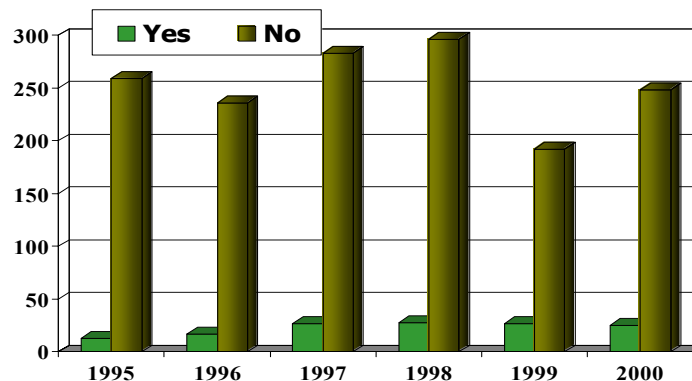
## Life Jackets

### New Styles for Sportsman Make Safety a Lot Simpler

Research shows that anglers and hunters who use boats in pursuit of their sport usually do not consider themselves boaters. A boat is something they use “to get from point A to point B” said one hunter in a boating safety focus group, or it’s “just another tool” of the sport, said another. When sportsmen go out on a boat to hunt or fish, their minds are often on the safety of hunting or fishing, not boating. A case in point is the NRA statistic which states that more hunters die from drowning each year than by gunshot wounds.

This casual attitude toward boating safety, as common as it may be, may be contributing to the high number of fatalities among sportsmen who use boats. In particular, the attitude toward life jackets (also called Personal Flotation Devices, or PFDs) has had an especially devastating effect on the sportsmen population. From 1995-2000, 91% of sportsmen who died in boating accidents were not wearing life jackets. Looking at all boating fatalities, only 77% of those who died weren’t wearing a jacket. That tells us that sportsmen are being affected even more than the general population by their decision not to wear life jackets.

### Hunting & Fishing Fatalities and Life Jacket Use



Hunters and anglers pursue their sports in different conditions, in different seasons, while wearing and carrying different gear. In the pages that follow, different types and styles of life jackets—for both anglers and hunters—will be discussed. These jackets can be found at sporting good stores such as Cabela’s, marine stores like BoatU.S., and on-line at [www.suspenders.com](http://www.suspenders.com) and [www.stearns.com](http://www.stearns.com).

*“Wearing a life jacket can keep a fisherman around to see his kids and grandkids grow up. It’s just that simple,” says Steve Pennaz, Executive Director of the North American Fishing Club.*

## Life Jackets: What's Your Type?

The weather, water conditions, water temperature, and what you plan to do on your boat all play a part in the kind of life jacket you will need. There are five types of life jackets approved by the U.S. Coast Guard, each rated for the conditions they are expected to withstand. Types I-III are most common. Most of the jackets previously discussed are rated Type III or Type V.

- **Type I** is for the more challenging situations. It is designed with a collar in the back to help the person in the water keep their head face up and afloat. It's best for situations when the water could get rough, like on whitewater rivers, in water with strong currents, or offshore. It's also recommended for situations where a person might not be rescued right away. These jackets are inherently buoyant (meaning they don't need air to float) and provide about 22 lbs of buoyancy.



- **Type II** is generally used for inland waters. These jackets are characterized by their square shape and large collar, which keeps one's head afloat. Although their ability to hold up a person's head gives them a good safety rating, these inexpensive jackets compromise comfort for safety. They provide about 15 pounds of buoyancy.



- **Type III** is also for inland and protected waters. These tend to be vest-style jackets, designed mainly for sports and situations where the wearer will be removed from the water in a short amount of time, since they will not keep an unconscious victim's head afloat. Many of the jackets we've discussed are Type III. These jackets provide about 15 pounds of buoyancy.



- **Inflatables** are rated differently than inherently buoyant life jackets. When inflated, most provide the neck collar of a Type I, but their compact size before inflation makes them comfortable for many sports. Inflated, these jackets provide between 25-35 lbs of buoyancy.



Life jacket photos courtesy of Stearns

## Anglers and Life Jackets

Many anglers say the reason they don't wear life jackets is because they restrict movement while fishing. In response to this concern, life jacket manufacturers have come up with different varieties of PFDs, or personal floatation devices, designed just for anglers. Most life jackets can be bought for about the same price as an average bait casting reel.

### Vests

One style is a vest that uses netting around the shoulders, back and upper chest to give the angler as much freedom of movement as possible. This style often comes with pockets and pouches for stashing lures. Another style is a full vest (no netting) which has large arm holes for good movement and pockets for storing lures and small equipment. Vests like these come in "outdoor colors" such as green, camo and tan, as well as "nautical colors" like blue and red. Some even have collars and look like regular vests from the outside, making them a far cry from the bright orange vests we wore as kids.



Photo courtesy of Sospenders

### Inflatables

Another style that is becoming more popular is the inflatable. This small PFD hardly looks like a vest at all until it is automatically inflated with a small CO2 cartridge. The front of the vest has two nearly flat panels with several straps running across the back. One version will inflate automatically when it comes into contact with water or when a cord is pulled. Another is only inflated by pulling the cord, for situations like wading when an angler might get a little wet. This style also comes in models just for anglers with spaces for lures or a small tackle box on the front.



Photo courtesy of Sospenders

There is even a less-constricting inflatable. This one is worn in a small pouch around the boater's waist. When the wearer pulls a cord, the jacket will inflate and the boater can slip the jacket over his or her head.



Photo courtesy of Stearns

## Hunters and Life Jackets

Like anglers, hunters also want a life jacket that doesn't restrict their movement. Since hunting weather is often cold, hunters are already wearing several layers of restricting clothing and the last thing they want to do is add more. At the same time, the cold water temperature, coupled with all those layers, is going to make the hunter even more vulnerable to drowning should he fall overboard. Life jacket designers are taking these factors into account and have developed some jackets to help keep hunters afloat. Most jackets can be bought for about the same price as a couple of boxes of shells.

### Inflatables

Several styles stand out as being minimally bulky but highly effective. One is the inflatable (same style as recommended for anglers), which has very little bulk until you pull the cord, or it hits the water and becomes inflated by a small CO2 cartridge (right). This vest has two narrow panels down the front and webbing in back, and comes in dark colors, tan, and camo patterns like



Photo courtesy of SOSpenders

“Shadow Grass,” “Wetlands” and others. An even less noticeable life saving device is another inflatable vest; this one is worn stashed in a small pouch around the hunter's waist (above). If the hunter needs the vest, he can pull a tab and the jacket will automatically inflate, then he can then slip the jacket over his head. The pouch also comes in dark and camo colors so it does not stand out against clothing.



Photos courtesy of Sospenders

### Vests and Coats

Some life jackets provide warmth as well as flotation. There are hunting jackets, sometimes called “float coats,” that have inflatable life jackets built into them (photo at right), so no additional life jacket is necessary, and the jacket will not inflate



Photo courtesy of Stearns

until you need it. Additionally, many of the vest styles, which come in camouflage, tan, and green, are thick enough to provide some warmth. Some have side pockets for warming hands and zipper pouches for ammo or other small gear. Another vest style, similar to a popular fishing style, uses netting around the shoulders, back and upper chest to give the hunter as much freedom of movement as possible (photo on left).



Photo courtesy of Tim Smalley, MN DNR

## TLC For Your PFD

1. Examine life jackets at the beginning of each boating season.
2. Make sure that all hardware and straps are in working order.
3. Check for leaks, mildew, lumpy or hardened buoyancy material, and oil saturations in the fabric.
4. Don't use harsh chemicals or gasoline to clean.
5. Drying it in a dryer, in front of a radiator, or other heat source can damage its buoyancy.
6. Store in an area with good ventilation.
7. If wet, allow to air-dry thoroughly before stowing, especially in salt water.

Regulations require that there should be one wearable life jacket on board for each passenger. On boats larger than 16 feet, a Type IV or V throwable device, like a floatable cushion, is also required.

### *Special Inflatable Tips:*

1. Check the status of the inflator to make certain the cartridge is properly installed.
2. Check for leaks every season; inflate life jacket orally and leave it overnight to check for leaks.
3. Immediately replace any spent CO2 cartridges with new ones.
4. Frequent users of inflatables should check them often, especially if used around sharp equipment like fishing gear.



*"One time a gentleman got caught in a line a few years ago and he went overboard [and he died]... It was a horrible experience. The captain didn't realize what was happening... You just think, anybody could fall off a boat, and it might be a while before someone comes back to get you. It just makes you realize anything can happen on a boat."*

*--Angler in Greensboro, NC*

## Hypothermia

### Don't Get Left Out in the Cold

One of the most dangerous aspects of boating, particularly for sportsmen who thrive on cold weather adventure, is the risk of hypothermia. Hypothermia happens when the body loses heat faster than it can produce it. It can occur as a result of prolonged exposure to cold air, or more dramatically, when a person is suddenly immersed in cold water. If a sportsman does fall into very cold water, there is only a limited time before he begins to lose his thinking capability and the use of his limbs. Most experts say that half of all drowning victims do not actually die from water filling their lungs, but instead from the fatal effects of cold water.

#### Hypothermia and Hunters

Waterfowl hunters use boats on some of the coldest days of the year. Not only is the water deathly cold on these days, but the hunter is likely wearing enough layers to make himself heavy and clumsy. If he goes in the water, he's in serious trouble. Here is where a life jacket or a "float coat" can mean the difference between life and death. Without some flotation device, your chances of survival simply aren't that good.

*"Hunters don't usually see themselves as at risk for hypothermia. The fact of the matter is that anyone—hunter or angler—who finds himself stranded in the water for an extended period of time is going to learn that the body simply has a hard time staying warm in the water," says Montey Embrey of the NRA. "Knowing what to do if you get stranded could save your life."*

#### Hypothermia and Anglers

Water does not have to be icy to be cold enough to bring on hypothermia, it just has to be colder than you. Cold water is considered to be water under 70 degrees, but imagine, even 80 degree water is still almost 20 degrees colder than your body temperature. Given time, your body's core temperature will drop as you lose heat to the water.

### SPLASH!-- NOW WHAT?

If you see yourself about to fall in, if possible, **cover your face with your hands**. This may sound strange, but quickly becoming immersed in icy water can cause "Torso Reflex," or a sudden involuntary intake of breath. Covering your mouth is an attempt to avoid gulping water into your lungs when this happens.



Try to **hold onto something that floats**. If you are wearing a life preserver, great. If there are more floating in the water, grab those too to use as floats. Even decoys can be used, one under each arm, to keep you floating. Try to hold onto

your boat, or even right the boat and climb inside (some boats are inherently buoyant and float even when filled with water). The idea is to get as much of your body out of the water as possible, so there is less area that can lose heat.

**Conserve what heat you can.** Tighten up your jacket, vest, shoes, whatever you are wearing. The water trapped inside your layers of clothes will warm up from your body heat and act as a wetsuit. *Do not remove clothing!*

**Do not try to swim** unless it is to reach a nearby boat, another person, or a floating object on which you can climb or use for floatation. Swimming pumps out the warm water trapped between your skin and your clothes and brings in colder water. Swimming can also cause debilitating cramps. Furthermore, the movement pumps warm blood to your extremities, where it cools quickly. Swimming can reduce your survival time by almost 50%.

**Stay as still as possible**, no matter how painful. Intense shivering and severe pain in cold water are natural reflexes that will not kill you, but cold water can. Getting into the “H.E.L.P.” position (explained below) may help you keep your cold arms and legs still.

## BE PREPARED TO TAKE THE PLUNGE

If the worst happens, why not be prepared? Here are some things you can do in advance to give yourself a better chance for survival if you do end up in the water. First of all, **dress for the water temperature**, not for the air temperature. Having lots of layers on will help you survive if you do end up in the water. Secondly, **wear a hat**. When in the water, 50% percent of your heat could be lost through your head—the hat will help slow heat loss down. **Eat high energy foods** and carry a candy bar in your pocket; if you fall in, you’ll be glad to have the extra energy. **Bring extra clothes** in a dry bag or garbage bag and keep them in the boat just in case someone in your party gets wet.

## SURVIVAL POSITIONS

### H.E.L.P.

This position, the Heat Escape Lessening Position, or H.E.L.P., aims to protect some of the areas of your body most prone to heat loss: the head, neck, sides of the chest cavity and the groin area, and if you are wearing a life jacket, it can be very effective. To reach this position, you should bring your knees up as close as possible to your chest and grasp your hands together over your calves. If this is too difficult, or too unstable, cross your calves, bend your knees and pull your legs close to your body. Cross your arms and tuck your hands flat under your armpits.

## FLOATING IN WADERS

If you find yourself floating in the water with waders still on, try to use them to your advantage. Allow some air inside them so they float on the surface, then hold your hands together behind your knees or your neck and float until help arrives. This is most effective if you are wearing a life jacket, otherwise you'll have to use your arms to tread water, or float on your back with your head in the water, which will make you lose heat more quickly.

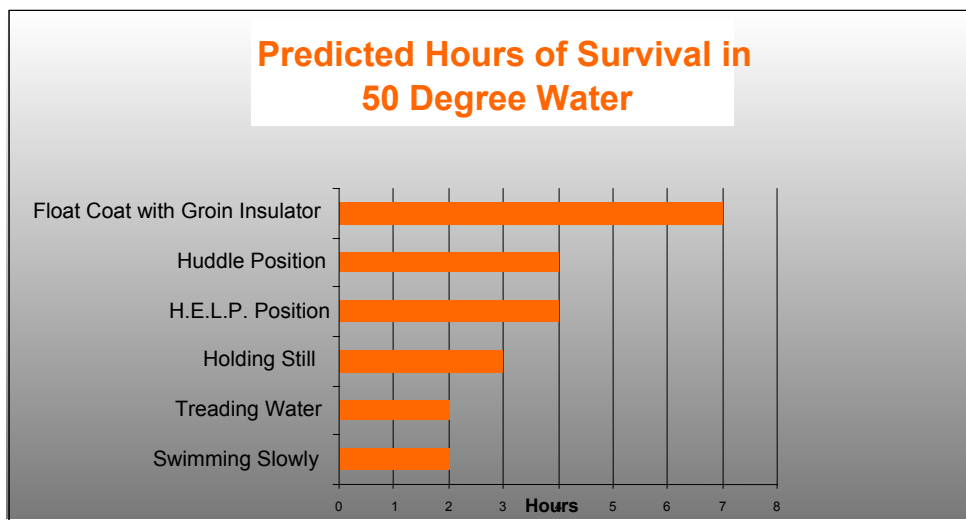
## H.U.D.D.L.E.

When several people are stranded in the water, they should form a huddle. Facing inward, they should link their arms over each other's shoulders or under each other's arms to get as close as possible, to share as much heat as possible. If there are children or seniors along, they should go in the center of the huddle so they can receive warmth front and back. Two or more people huddled together can increase survival time by 50%.



Photo courtesy of Tim Smalley, MN DNR

These survival positions are most effective when the person in the water is wearing a life jacket. If the person is not wearing a PFD and is forced to swim, they should do so as slowly as possible. Anything that can be used for flotation—logs, parts of the boat, gas cans, whatever—should be utilized for flotation. The swimmer can also try breathing into his clothing to put air—and hopefully some flotation—into his torso area.





## FIRST AID FOR HYPOTHERMIA

Any victim pulled from cold water should be treated for hypothermia. Symptoms may include intense shivering, loss of coordination, mental confusion, cold and blue (cyanotic) skin, weak pulse, irregular heartbeat, and enlarged pupils. Once shivering stops, core body temperature begins to drop critically. Try to prevent body cooling and get the victim to a medical facility immediately.

### While waiting for help to arrive:

- Gently move the victim to a warm shelter.
- Check for breathing and a heartbeat. Start CPR if necessary.
- If you have dry clothes or a blanket, remove the victim's wet clothes. Use a minimum of body movement, since rough handling can cause cardiac arrest. Cut the clothes off, if necessary.
- Lay the victim in a level face-up position with a blanket or some other insulation underneath.
- Wrap the victim in a dry blanket or dry clothes. If possible, warm the clothes first. If a stocking cap is available, put it on the victim's head since a great deal of heat is lost from the head.
- If the person is awake and coherent, give them warm (not hot) liquids. *Warm* hot tea with sugar or honey or slightly-cooled hot chocolate are good since sugars can still be absorbed even if the stomach has shut down.
- Never give a hypothermic person alcohol. Alcohol dilates (opens) your veins, which will make you lose body heat more rapidly.

*"Hypothermia is a very real risk for hunters who are in boats in the prime of duck season. Knowing what to do in the case of the unthinkable could save someone's life," says Eric Keszler of Ducks Unlimited.*

### If there's no help available:

- Apply heating pads or hot water bottles under the blanket to the head, neck, chest, and groin. Be careful not to burn the victim's skin.
- If these are unavailable, use your own body warmth to warm the victim. Wrap yourself in a blanket together and use as much body to body contact as possible.
- Do not apply heat to the arms and legs. This forces cold blood from the arms and legs back toward the heart, lungs and brain, lowering core body temperature and causing "after drop" which can be fatal.
- Do not massage the victim or give the victim a hot bath. Cardiac arrest is a frequent result of hypothermia, and moving the victim roughly can be a catalyst for this condition.
- Do not give food or drink to unconscious victims.

## Weather to Go Boating

### When the Clouds Roll In, Sportsmen Need to Roll Out

Weather: it's that one overarching factor that can make or break a hunting and fishing trip. Sometimes a little bad weather can be a good thing, but a lot of bad weather can be dangerous when you're practicing your sport from a boat. Check the weather before you leave and keep an eye on it while you're out.



#### **Know Before You Go: Get a Forecast**

Most commercial radio and television stations give marine weather broadcasts during the boating season, with updates several times each day. Make a habit of listening to your local broadcast beginning the night before you plan to go boating, then get the most current forecast just before you set out. Or, you may want to purchase a small, inexpensive battery-operated weather radio or VHF radio. The National Oceanic and Atmospheric Administration, or NOAA, provides continuous weather programming, called NOAA Weather Radio, for most boating areas.

#### **Thunderstorms and Lightning**

You can determine the distance of an approaching thunderstorm by counting the number of seconds between the lightning flash and thunderclap, and then divide by five. That will give you the approximate number of miles you are from the storm.

*For information on lightning protection, call the Coast Guard Boating Safety Hotline at 1-800-368-5647.*

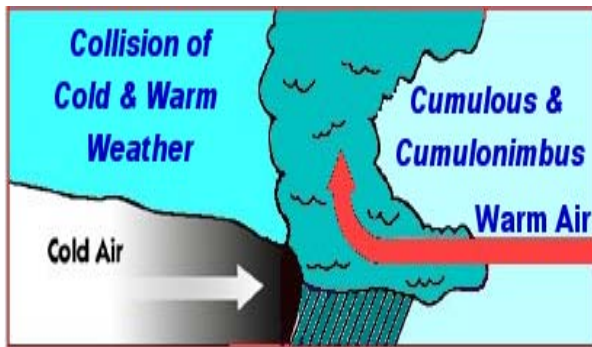
The best protection against lightning is avoidance. Keep a weather eye out for the coppery haze and building cumulonimbus clouds that signal thunderstorms and head into shore well ahead of the turbulence. Lightning can lash out for miles in front of a storm, and it can strike after a storm seems to have passed.

## Weather Fronts

Fronts form when air masses of different temperatures collide. When a cold air mass catches up with warm air, the heavier cold air pushes under the warm air mass and lifts it, causing stormy weather. In a warm front, the warm air rides up and over the cold, generally producing less severe storms than a cold front. By knowing the normal sequence of weather as a front passes through, you can predict the weather conditions fairly accurately.

*"Monitoring the weather before a fishing or hunting trip in a boat should be one of the basic preparations a hunter or angler makes," says Captain Scott Evans of the U.S. Coast Guard. "Many times, getting stuck in a storm and getting into serious trouble is something the sportsmen we see could have avoided."*

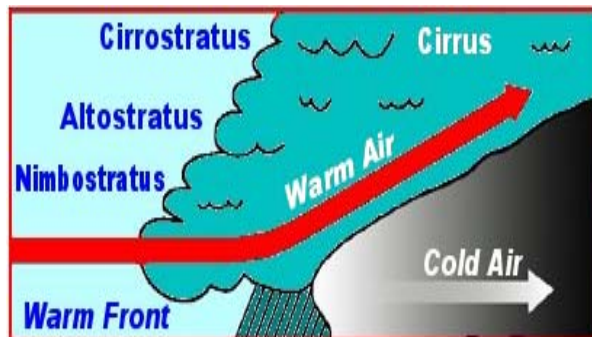
Cold fronts move at speeds of 10 to 50 knots. In winter they are 2 or 3 times faster than in summer. A fast-moving cold front may be preceded by a squall line, a roll of black threatening clouds with violent storms. Wind shifts suddenly along the front and wind velocities increase dramatically. Behind the squall line are heavy rains, then clearing, and gusty winds, usually followed by several days of clear, cool weather.



Warm fronts are quite different. The high, thin cirrus clouds that form when the warm air climbs up and over the retreating cold air mass can extend as far as 1,000 miles ahead

of the front. These clouds thicken and lower as the front advances, and winds increase steadily. As the clouds lower, rain or snow begins to fall, continuing until after the front passes. The winds shift clockwise and decrease. The temperature begins to rise and visibility becomes poor.

Behind the warm front are thick, low stratus clouds and possibly more rain. Once the front passes, the skies clear and wind normally blows from the southwest. Since cold fronts frequently follow a passing warm front, the duration of good weather many be short.



## **Tell A Friend**

Letting others know where you plan to be is imperative when going out in a boat, even if you aren't heading into bad weather. Let others know where you'll be by leaving a note or a "**float plan**." Leaving a float plan with a friend or family member will ensure that someone will know if you are overdue. At a minimum, a float plan should include where you are going and when you'll be back, who is on board, a description of your boat and its registration numbers, and who to contact if you don't return. As a final and less desirable option, if you did not get a chance to file a plan with someone you know, leave a note under your windshield wiper and the authorities will probably find it if you don't return. Be sure to let the person with your float plan know that you returned, or else a needless search could be started.

### **What if I get caught in a thunderstorm?**

- First, make sure everyone aboard is wearing a life jacket.
- Determine your location and best course back to shelter.
- Keep a sharp lookout for other boats and obstructions.
- Try to take the heaviest gusts of wind on the bow, not from the side so the boat isn't blown side to side.
- In heavy winds, even lakes and rivers can have waves. Approach waves at a 45 degree angle. This will keep the propeller underwater, reduce pounding and the boat getting rocked from side to side which could pitch passengers out.
- Stay low. Don't make yourself the tallest target for lightning.
- Try not to hold onto any metal with your bare hand.
- Unplug all un-used electronic devices such as your fish-finder.
- If feasible, pull the boat to a protected bank and wait out the storm.
- If you have to anchor, NEVER anchor from the back the back of the boat.

## Quick Tips for Trailering For the Sportsman on the Move

Since most anglers and hunters use boats under 16 feet, trailering is a huge part of the sportsman's experience. Each spring, fisherman can hardly wait to grab their gear and get back out on the water, but often their boat's trailer is the last thing on their minds. Likewise, in the fall, duck hunters can be so eager to get out to their favorite blind on the marsh that checking the condition of their towing vehicle isn't a priority.

Having your towing vehicle, your trailer, and your boat in the best shape possible at the start of hunting or fishing season is one of the most basic things a sportsman can do for the safety of himself and his passengers. To make sure trailering is the least exciting part of a hunting or fishing trip, here are three checklists, one for your truck, one for your trailer, and one for your boat. Each will help make preparing for this hunting or fishing season safe and simple.

*"There's nothing worse than spending the first day of fishing season on the side of the road waiting for a tow truck," says Chris Edmonston, Director of Safety for the BoatU.S. Foundation.*

### TEN QUICK TIPS FOR YOUR TOW VEHICLE

#### ① **Wiring**

Check the wiring harness on the tow vehicle.

#### ② **Bulbs, Connections, etc.**

Check all the lights to make sure they are in working order.

#### ③ **Hitch**

Inspect hitch brackets and bolts for corrosion. Use Grade 8 bolts only. You won't find them at the local hardware store. If you launch in salt water, plan on replacing the hitch every three years. If you launch in freshwater some hitches will last the lifetime of the truck, but be sure to inspect them every year.

#### ④ **Trailer Connection**

Check the receiver and slider.

Separate, clean and lubricate with good quality grease (axle grease works fine). Remember, salt water can make these two pieces inseparable if this isn't done once a year.

#### ⑤ **Brakes**

Pull the rear wheels and check brakes and seals.

#### ⑥ **Parking Brake**

Activate the parking brake and lubricate. Crawl underneath and spray the brake line with water repellent lubricant and engage the brake a few times.

#### ⑦ **Transmission**

Service the rear end transmission. If you aren't due to have this done for a couple thousand miles but intend to

begin towing again, go to the shop now.

#### ⑧ **Under the Hood**

Inspect the engine as needed.

#### ⑨ **Under the Vehicle**

On four-wheel drives, check the CV joints and transfer case.

#### ⑩ **Two or Four?**

On four-wheel drives, check the four-wheel drive shift mechanism. This is what activates and switches between two- and four-wheel drive. This is a common problem of people who don't have regular service performed on their tow vehicle. You don't want to attempt pulling a loaded trailer up the ramp and not be able to engage four wheel-drive when you need it.

## TEN QUICK TIPS FOR YOUR TRAILER

### ① Tires

Inflate tires to the proper PSI and inspect for spider web cracks on the sidewall. If present, then it's time to replace them. Look at the tread and measure its depth. If less than 2/32<sup>nd</sup>s of an inch, the tread is considered worn. Also inspect the spare. If you don't have a spare, get one. If your trailer tires sat outside with your trailer, consider removing them and putting the trailer on blocks next year. Remember that most trailer tires need replacing not because of use, but because the trailer tends to sit for long periods of time.

### ② Frame

Get on your back and crawl under the trailer to look for corrosion and rust. Keep in mind that once an area begins to corrode, it is only going to get worse until sanding removes it. And when it comes to removing rust, there is no time like the present.

### ③ Lights

Plug the trailer into the tow vehicle's electrical system and turn the vehicle on. Put the lights on and inspect if any bulbs or lenses need replacing. You're going to need a second person to tell you if the trailer brake lights come on when the tow vehicle's brakes are applied, and if backup lights come on when the tow vehicle is placed in reverse. Make sure you have the appropriate bulbs in your tool kit for replacement should it become necessary on the road.

### ④ Bunks and Rollers

Inspect the bunks for wear on the carpeting or on the rubber padding that is beneath the carpet. Some trailer boats spray a silicon coating on the bunks to make the surface easier to slide the boat on and off. Rollers should be turned individually to determine if any have locked. Inspect the rollers for wear

and remember when it comes to rollers that are worn, there is no time like the present to

replace them. Ply rollers last a lot longer than their rubber counterparts.

### ⑤ Safety Chains

Inspect for wear and check the S hooks for possible bending. It is a good idea to replace the S hooks with screw pin shackles that have a wire running through the pin eye. It provides a connection that is considerably more reliable and solid than S hooks.

### ⑥ Bearings

Inspect the grease in the hubs. Replace the grease periodically, especially if the trailer has spent a winter outside in dampness. Inspect the grease seal and if you (or the shop) decide it needs to be replaced, make sure a double lip seal is installed. Inspect the bottom of the boat or the inside of the trailer tires for grease. If it's present, the bearings are in need of attention now.

### ⑦ Brakes

As in the case with bearings, if you aren't sure about what to do, take the trailer to the shop and let an expert handle it. Pull the wheel and inspect the disc/drum to see if new pads/shoes are required.

### ⑧ Tool Kit

Go through your tool kit and make sure the proper wrenches and screwdrivers are packed. Make sure you have a trailer jack that fits your trailer as well as blocks that can be used to support your vehicle's rear wheels.

### ⑨ Winch

Inspect the cable, looking for broken wires or worn areas. Clean and lubricate the winch. Make sure you have a strong tie down for the bow as well as the stern of the boat and that both are properly secured to the trailer.

### ⑩ Hitch

Apply Grease to the ball and inspect the hitch locking mechanism.

## TEN QUICK TIPS FOR YOUR BOAT

### ① Cleaning

The first cleaning of the season is the most important cleaning. Use a cleaner that is designed for what you want to do. If your boat is new, a one-step cleaning product will work fine. Just remember not to let it dry on the surface of the hull.

### ② Battery

Proper maintenance dictates taking the batteries out of the boat during the off season. Wire brush the terminals and fill cells with distilled water. Studs, nuts, and washers should be copper—not aluminum or steel. After charging the batteries, check the lights, radio, GPS, and other electronic gear that is onboard to make sure all are in good working order. Also inspect the fuse box and make sure extra fuses are onboard.

### ③ Fire Extinguisher

Make sure it is charged and securely stowed in a visible place onboard. Inspect distress signal flares for an expiration date.

### ④ Bottom Paint

If you trailer your boat and never leave it in a slip for long periods of time, you may not require bottom paint unless the boat is operated in salt water. If the paint is beginning to chip away, it's best to repaint immediately.

### ⑤ Bilge

Inspect the bilge blower hose for leaks.

**⑥ Thru-Hulls and Drain Plugs** Thru-hulls and drain plugs need to be inspected. During storage they should have been left open, so make sure they can be closed prior to launch.

### ⑦ Engine

This is the time to take the outboard to a reputable shop for service. Inspect fuel hoses and lines. If gas additive was not added to the fuel tank, drain and replace with fresh gas. The zinc fitting on I/O's and outboards should be checked and, if worn, replaced. With a dry rag, inspect fuel connections for snugness. If they aren't secure, your nose will tell you if the rag doesn't. Cooling system hoses should be checked for stiffness and rot. They should be double clamped.



### ⑧ Prop

Inspect the blades for dings and pitting and any other surface disturbance that can cause excessive vibration. Inspect cotter pins. Grip the prop and try to turn the shaft. If it is loose, you are in the market for new cutlass bearings.

### ⑨ Cables

Control cable outer jacket should have no cracks or swelling. If it does, the cable is corroded and needs replacement.

### ⑩ Steering

Check the power steering and power trim oil levels.

## Aquatic Nuisance Species: Hitching a Ride on Sportsmen's Boats

You wouldn't think that an invasive aquatic species like the lowly zebra mussel would be savvy enough to use public highways as a means of spreading its species, but in fact, that is one way it has made its way across mid-America. As one of America's Aquatic Nuisance Species (ANS), the zebra mussel has spread cross-country by hitch-hiking in ballasts, live wells and other damp pockets on boats, traveling with sportsmen and boaters who go from lake to lake and river to river, inadvertently taking these hardy and prolific pests along for the ride.



Zebra mussels are not the only aquatic hitch-hikers. There are a number of detrimental foreign invaders making new homes in our inland waters—some fish, some plant, and some disease—that all can be spread by trailerable boats. For instance, the **round goby**, the **ruffe**, and a number of other fish and crustaceans are becoming dominant in fresh water around the U.S., especially in the Great Lakes. **Purple loosestrife**, **Eurasian watermillfoil**, **hydrilla**, and **water**

**hyacinth** are prolific non-native water plants that can clog waterways and drive out native flora and fauna. Collectively these species are known as aquatic nuisance species, or ANS, and as a boater, you can help keep them under control.

### So it's a new species—is that so bad?

About 12 years ago, zebra mussels were accidentally introduced into the Great Lakes from an Eastern European freighter that released its ballast water into Lake St. Clair near Detroit. Since then, the zebra mussel has been making its way down the Mississippi, Ohio, Illinois, Tennessee and other rivers and lakes, taking over the habitat of native mussels and reproducing in large quantities. Along

the way, these mussels have clogged everything from small boat intakes to large commercial pipes, they have clustered on propellers and sunk navigational marks, and they've nudged out native mussels and damaged the industries built around them.

*Just two years after the zebra mussel was introduced into Lake St. Clair, Detroit was spending \$800,000 a year to keep the city's water intake pipes clear of the prolific mussels.*



Furthermore, because the mussels feed on more than their fair share of phytoplankton, many larval and juvenile **game fish** find it harder to find food when zebra mussels are present. Zebra mussels can even affect the **waterfowl population** which feed on the mollusks. Some research shows that zebra mussels can rapidly accumulate organic pollutants within their tissues. When waterfowl and fish eat them, those pollutants are passed along. And finally, because zebra mussels excessively filter water, more light is let into the water, and aquatic plants that normally would stay in check begin to flourish.

Simply put, the zebra mussel, like other aquatic nuisance species, changes everything about the areas in which it is introduced—and not for the better.

#### ***What do ANS mean to sportsmen?***

*Because the mussels feed on more than their fair share of phytoplankton, many larval and juvenile **game fish** find it harder to find food when zebra mussels are present. Furthermore, zebra mussels can even affect the **waterfowl population** which feed on the mollusks. Some research shows that zebra mussels can rapidly accumulate organic pollutants within their tissues and pass them on to the waterfowl and fish that eat them.*

## **Other Aquatic Invaders**

In addition to the zebra mussel, other species are making themselves at home in our waters. As a result of overpopulation by the round goby in the Great Lakes region, darter and sculpin populations have been reduced, which feed smallmouth bass and walleye. These foreign fish have also taken over prime spawning sites, thus reducing native fish populations. Another invasive fish species **targeting game fish** is the sea lamprey, an eel-like fish found in the Great Lakes that attaches itself to native fish and sucks their blood and body fluids. Additionally, the white perch, a coastal fish that invaded inland rivers, has negatively impacted the game fish population of the walleye and white bass by eating their eggs.

Nuisance plants like water hyacinth and hydrilla reduce oxygen levels in the water which can cause stress to fish or even cause fish kills. Purple loosestrife is another aquatic plant that does its damage by taking over the habitat of native wetland plants, nosing out the plants that marine animals depend on. Aside from damaging the fish themselves, these prolific water plants can make coveted fishing holes impassible and can clog the water intakes on motors, causing them to overheat and become ruined.

And finally, a harmful disease invader that is directly affecting trout and salmon in 22 states is Whirling Disease, the result of a parasite that attaches itself to trout and salmon and penetrates their heads and spinal cartilage, causing fish to swim erratically and have trouble feeding and avoiding predators.

## What Can Be Done?

Much of the burden to help stop the spread of ANS rests on sportsman and boaters and their willingness to be vigilant about not transporting species.

Check points have been set up on some roads to and from lakes, and some boat ramps are supplying power washers or free inspections for vessels launching. If you're visiting a location that has signs posted about zebra mussels or other invasive species, chances are you're in a spot that has a problem or is in danger of developing one.

### AT THE LAUNCH RAMP

Check on your boat for mussels, grasses attached to your motor, and even mud clinging to the hull or trailer, and wash them off while at the water.

Eliminate all water from your boat and equipment while still at the dock.

If you are going directly to a new body of water, or will soon, wash and dry anything—from your boat, to your dog, to your fishing gear—that will come into contact with the water.

Show patience at the launch ramp if inspections or cleanings are going on.

## ONCE OUT OF THE WATER

■ Feel the hull for rough areas. That could be young mussels or another ANS (aquatic nuisance species). If you can't power-wash, wipe with a paper towel and throw the towel in the trash when done.

■ Empty bilges, live wells, and bait buckets but don't throw the bait in the water.

■ Allow the boat and trailer to dry at least five days before the next trip.

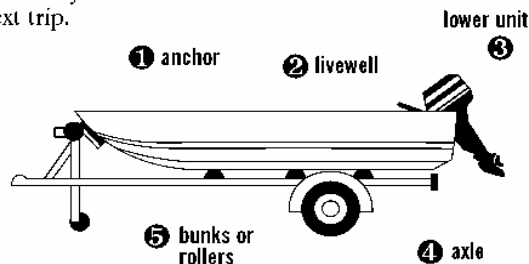
❶ Spray anchor lines and dock lines or soak in hot salt-water (1/2-cup salt/gallon) to remove hidden ANS.

❷ Empty live well on land. Avoid putting bait back into the water.

❸ ANS can live in a cooling system. Use a motor flusher on lower unit of motor and outboards. A hot water flush (135 degrees) is lethal to ANS (zebra mussels).

❹ Spray trailer axles (zebra mussels, hydrilla).

❺ Inspect and spray trailer bunks/rollers to remove vegetation (hydrilla, milfoil).



Here's a brief checklist to help hunters and anglers who trailer their boats keep ANS from moving from lake to lake and river to river around the country.

## Anchoring: How Sportsmen Can Hold Their Ground

As you swing your rifle to take a shot, the last thing you want to be worrying about is if you're drifting from your spot. Fiddling around endlessly to try to keep your place in the water is not only going to keep the birds or fish away, but it will keep you from enjoying hunting, fishing, or whatever on the water sport you enjoy. That's why having the proper gear, the right anchor for your sea bottom, and good anchoring skills can help you get down to business with your sport, and relax when it comes to setting your hook.



### Anchoring Terms

First of all, you need to have the right equipment. The general name for all of the equipment you need to anchor your boat is **ground tackle**. This includes an anchor, chain, line and connecting elements. The anchor line, including chain, is called the **anchor rode**. Depending on the size and type of your boat, your choices are an all-rope anchor rode, combination rope/chain rode, or all chain.

**Rope** should be nylon, either three-strand or braided. Nylon rope is elastic, making it a great shock absorber for sudden loads caused by wind and waves. When stowed wet, nylon rope will not rot. You can buy this kind of rope at marine stores like BoatU.S.

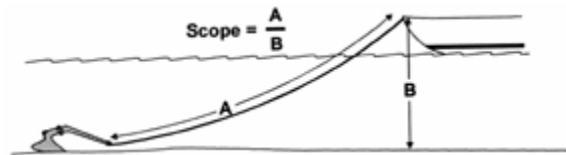
**Chain**, used in combination with rope, can really make anchoring easier. Chain weights the part of your anchor rode near your anchor, and helps the line stay more horizontal and thus set and hold more effectively. Also, it's unaffected by chafe from rocks or sharp surfaces on the bottom, its weight forms a curve that absorbs shock loads in heavy weather, and, in the case of all-chain rode, requires much less scope (see below) -- roughly half-- for the same holding power as rope.

Deciding how much rode to let out with your anchor does not have to be guesswork; in fact there is a formula to help you determine that length, called **scope**. Scope is the amount of anchor rode paid out and it is determined by a formula that takes into account the following a) the type of rode you're using, b) the water depth, c) the distance from your vessel to the water and d) the weather conditions.

## Determining Scope

First, what kind of rode do you have—rope or chain? With chain you only need about half as much rode out, so your scope (**A**) will be less.

Second, know the depth of the water and how far the top of your boat is from the water. The sum of both is your **vertical distance (B)** from the bottom.



Then consider the weather. Is the water calm, choppy, or are you anchoring up to take cover for a storm? How calm or rough the water is will determine the amount of scope you will need. For instance, average conditions (and a rope-only rode) usually mean a scope of seven times the length of your vertical distance (a 7:1 ratio). For really flat water and an all-rope-rode, 5:1 is fine, but for heavy weather or adverse anchoring use at least 10:1. For an all-chain rode, you can use half as much.

**EXAMPLE:** If the water is 10 feet deep, and the bow of your boat is 3 feet above the water then the vertical distance will be 13 (10+3=13). Then take vertical distance X 7 to get 91 feet of anchor rode.

### Rule of Scope:

Depth of Water + Distance to water=  
Vertical Distance  
Vertical Distance X 7= Normal Rode  
Length

## Anchoring Basics

### Choosing an Anchor

These days anchors are not just weights holding you boat in place; each anchor is carefully designed to suit a variety of sea bottoms. Below you'll find a number of anchors designed to suit many different sea bottoms.

### Setting the Anchor

For a firm set, follow the guidelines to the right. Remember that boats of different sizes may swing to a different scope than yours, so give other boats as wide a berth as possible.

### Retrieving the Anchor

Break out your anchor by powering up to it slowly, taking in the rode as you go. Once over the anchor you should be able to lift it vertically. If it resists, cleat the line to the bow and power forward slowly.

### The ABCs of Anchoring

- a) Make sure you have the right kind of anchor for the sea bottom where you are boating.
- b) Find an area that is out of the channel, away from boat traffic, and protected from wind and current.
- c) Have your anchor prepared with enough nylon rope and chain. (see "Scope" section to determine how much you'll need)
- d) Make sure the anchor line is attached to the bow of the boat and never anchor from the stern!
- e) Bring the vessel's bow into the wind or current and put the boat in neutral.
- f) Slowly lower the anchor into the water. Tossing it may cause it to become tangled in the line.
- g) When all the scope has been released, put the boat in reverse and gently back down to set the anchor.

## Anchors: Which one's for me?

Your choice of anchor depends on the size and type of your boat, and the weather and anchoring conditions you generally encounter. Below is a guide to help you judge what kind of anchor is best for the bottom where you boat.

### Fluke or Light-weight Anchor



Fluke Anchor

This popular anchor works by burying its wide, sharp flukes. It is often called a Danforth after a common manufacturer. Its excellent holding power-to-weight ratio means it can be lighter than other types of anchors used for the same conditions. These fluke-type anchors hold very well in soft bottoms like mud and sand, but tend to slide on grass and skip on rocks. The projecting flukes can catch on seaweed, shells, etc., preventing anchor set. The Fortress brand fluke anchor also offers variable fluke angles that can be set for either mud or sand. These anchors come in all weights, from small sizes for johnboats and large sizes for huge cruising vessels.

## **Plow**

This efficient anchor has a single fluke which buries itself deeper under horizontal strain. Two popular brands are the Bruce anchor and the CQR®. The Bruce is a simple plow shape and works well in grasses, weeds, sand, mud, and rocks. The CQR is also a plow shape but features a single swivel at the shank base which prevents it from breaking out when the direction of pull changes. Its shape makes it somewhat awkward and hard to stow. Delta brand anchors have a similar design, with the added benefit of single-piece construction. The Delta's more streamlined shape also affords deeper penetration and prevents rolling.



Plow Anchor

## **Grapnel**



Grapnel Anchor

The grapnel has four or five arms which curve out in each direction. It is inexpensive and works well for small boats moored in rocks, but provides poor holding in sand and mud. Some models are made of bent re-bar; others are made of galvanized metal and have folding flukes. The grapnel is also good for recovering items on the bottom.

## **Mushroom**

"Mushroom" anchors get their name from, as you might imagine, their rounded, mushroom shape. The shape works best in soft muddy bottoms, where it can create a suction that can be difficult to break and is effective with small boats in calm conditions. It is also easily stowed on a small boat. Mushroom anchors are used extensively for moorings, and can weigh several thousand pounds for this use.



Mushroom Anchor

## **Claw**



Claw Anchor

This anchor is a relative newcomer featuring a three-claw scoop design, which is effective in mud and sand. It sets quickly and reliably in most conditions, including gravel. The stabilized, single-piece design rolls over rather than breaking out when the angle of pull shifts. Its one-piece construction is easy to handle, although it is not easily stowed.

*All anchors can be purchased in marine stores like BoatU.S. and many can be found in general outdoors stores.*

## Gas Up and Go! Safe Fueling Techniques for Hunters and Anglers

It's easy to forget that fueling is a potentially dangerous part of boating, but when dealing with explosive gasoline fumes, you can never be too careful. The U.S. Coast Guard says that most fires and explosions on boats happen during or after fueling. For this reason, it's a good idea to take as much care as possible when at the pump.

### Outboard Awareness

Since most small boats used for hunting and fishing have outboards, it's good to know some particular safety tips around this type of engine. First of all, since outboards use gasoline, their fuel is more flammable than, say, a diesel inboard engine. This makes it particularly important that no open flames or lit cigarettes be nearby during fueling, and for the boater to take care not to let any kind of a spark or open flame occur. It should go without saying that the engine should be off during fueling. Also, keep the metal of the pump to the metal opening of the fuel opening. This will help prevent static electricity sparks, as well as ensure that fuel isn't spilled into the water or back into your boat.

If you are fueling portable tanks under six gallons, always fill them on the dock and always use a designated gas can, which is made for safe fueling and transportation. Having gasoline spill in your boat can only mean headaches. First, it is extremely dangerous and must be dealt with *immediately*, second there's the time it takes to clean up (since fuel cannot be simply washed into the water—it's illegal) and third, the literal headache of the everlasting smell and flammability of gasoline in your gear, your life jackets, and clothes.

When fueling up your boat, it's also a good idea to have your passengers get off, just in case there is an emergency. There is no reason to take chances when just a couple of extra minutes could help save lives in the case of an onboard fire.

### Fuel Systems

A properly maintained fuel system can help prevent the spills that can lead to the build-up of gas or fumes. In larger boats, some aluminum tanks are located in foam insulation where they can become corroded and the damage is difficult to see, so check out any persistent gas smells, and check the tank often. Use only approved fuel line tubing for marine use, and check that fittings are snug and dry and connections are tight.

#### The Nose Always Knows

*Can you smell gas in certain areas of your boat? Then find the source! Fumes indicate a leak somewhere in your fuel system and leaks lead to fumes and DANGER!*

## Avoid Over-Fueling

Leaving your vessel unattended while fueling or topping off can cause dangerous spills into your boat, or spills into the water which can lead to stiff fines. To avoid over fueling, always keep your hand on the fuel nozzle, and listen for sounds that

### **FUELING CHECKLIST**

- ☑ Secure boat to the dock.
- ☑ Switch off engine(s).
- ☑ Extinguish all open flames.
- ☑ Do not use electrical switches.
- ☑ Do not smoke.
- ☑ Ports, hatches, and doors should be closed.
- ☑ Make certain all passengers are ashore.
- ☑ Determine quantity of fuel required and make sure it is the proper type of fuel.
- ☑ Hold hose nozzle firmly against fill pipe opening.
- ☑ Do not overfill.
- ☑ Wipe up all spillage.
- ☑ Open ports, hatches, and doors to ventilate.
- ☑ Turn blower on for four minutes minimum, if you have one.
- ☑ Sniff for fumes.
- ☑ Do not start engines until all fumes are gone.
- ☑ Re-board passengers.
- ☑ Untie from dock and cast off.

*“When out of a hunting trip, fueling up can seem unimportant compared to all the other things a sportsman has on his mind,” says Monty Embrey of the NRA. “But with all those shells on board, not to mention expensive guns, your pals, and your dog, who wants to risk an explosion started by careless fueling?”*

from the fuel vent that indicate it is

almost full. Know the size of your fuel tank and aim to fill it no more than 95% full. On hot days, the fuel will expand and if the tank is already filled to 100%, fuel will leak out.

## Fumes Can Kill

One of the most dangerous parts of fueling—particularly on larger boats with enclosed cabins—is the collection of gas fumes in certain areas of your boat. Gas fumes are much heavier than air and always go to the lowest part of your boat. These fumes can accumulate in your bilge and lead to an explosion. That’s why it is recommended that while fueling a larger boat all the cabin doors and hatches should be closed to avoid letting fumes inside. After fueling, be sure to run your blower for at least four or five minutes and make sure you cannot smell gas before starting your engine.

Follow the steps on the checklist to the left to avoid letting fumes accumulate in your boat. Furthermore, make sure you have a fire extinguisher on board where you can reach it in a fueling emergency.

## How much fuel should I bring?

A common rule suggested by the U.S. Coast Guard Auxiliary is the one-thirds rule. Be sure to have enough fuel on board so that one third will get you to your destination, one third will get you back and one third is available for emergencies. Often one leg of the trip will require more fuel, due to currents, winds or weather.



## Alcohol and Boating Sportsmen Need to Keep a Clear Head

Everyone knows that drinking and driving a car is a bad idea, but drinking and driving a boat? What can a few beers hurt? Being in a boat, however, means being surrounded by all kinds of potential hazards: falling overboard and drowning, making sure your passengers are safe, and watching for navigational hazards like other boats and obstructions in the water. In fact, just the jarring factors of boating —like long exposure to engine noise and vibration, the glare of the sun, and the motion of the water—only add to the effects of alcohol and can severely impair the reaction time and judgment of boaters.

### Feeling Fuzzy?

Even a sober person will start to feel fatigue after being on the water for a long period of time. The long exposure to the vibration and noise of the engine, the squinting and dehydration that can come from time in the sun, and the rocking of the boat all can cause a boater to become lethargic and less alert. The rolling of waves or even the repetitive movement of rocking can cause even the most seasoned boater to get green around the gills once in a while. Add to that a few drinks and the results can ruin a good fishing or hunting trip.

### A little nip to warm you up?

Gotta love that warm glow you get after a sip of some whiskey, right? Wrong. That glow is your blood vessels dilating near the surface of the skin, which in fact, reduces your body's ability to hold in heat.

## Alcohol's Effects on the Body

Balance is one of the first things to go when a person is drinking, and maintaining balance is one of the most important things a sportsman needs, especially when standing up to cast, reel in a fish, take aim while hunting, or retrieve fish or fowl. One false move and a sportsman could end up the water, which could lead to hypothermia or even drowning.

Alcohol also inhibits a person's decision-making abilities which are critical when on foreign terrain like water. A boat operator needs to stay alert and aware in case of a change in weather, a passenger falling overboard, or the sudden need for CPR, first aid, or hypothermia treatment. Reduced reason may cause the boat operator to take unnecessary risks, like boating too close to a dam, venturing into rough waters, or staying out after dark.

Furthermore, it takes information longer to be processed for a person who is drinking, so judging speed and tracking moving objects can be impaired, as can reaction time in the case of a man overboard situation, or any sudden problem.

## Boating Under the Influence

Many states are stepping up their Boating Under the Influence laws, making fines and penalties stiffer. That's because of some surprising statistics. In 2000, it's estimated that nearly a third of all boating accidents had alcohol involved.

In most states, it is illegal to operate a boat with a blood alcohol content of .10% or higher, but many states are lowering it to .08%. The U.S. Coast Guard estimates that boat operators with a blood alcohol of .10% or more were estimated to be 10 times more likely to be killed in a boating accident than boat operators with zero blood alcohol concentration.

### **Boating Under the Influence (BUI) is Illegal Nationwide**

*"It is unlawful in every state to operate a boat while under the influence of alcohol or drugs. In addition to State BUI laws, there is also a Federal law, enforced by the Coast Guard, prohibiting BUI. This law applies to all boats, including foreign vessels, in U.S. waters and U.S. vessels on the high seas."*

--U.S. Coast Guard

### ***How do you stay alert and avoid hazards on the water?***

- ☞ Be aware of the effects of alcohol, both on and in the water.
- ☞ Remember that boating stress factors alone will reduce your performance on the water, and that alcohol further impairs your ability to function.
- ☞ Drinking while using guns is a dangerous proposition. Here's a situation when one slow reaction time or bad judgment could have devastating effects.
- ☞ Always eat before you drink, and sip your drinks.
- ☞ Limit your alcohol consumption to one drink or less per hour.
- ☞ If you expect to have more than one or two drinks per two-hour period, allow a non-drinker to operate the boat. Better yet, don't go boating. A responsible boater will refuse to allow an intoxicated person to drive the boat.
- ☞ Operating the boat while intoxicated is a federal offense, subject to a \$1,000 fine. Criminal penalties are as high as \$5,000. Many states are toughening up their Boating Under the Influence laws by stiffening penalties and boosting law enforcement efforts.
- ☞ Banning alcohol from boats is not practical. But moderation and common sense on the water are very practical. When you operate a boat, you accept responsibility for the boat, for the safety of your passengers and crew, and for the others out enjoying the water.
- ☞ Alcohol isn't the sport. Hunting and angling are the sports. Enjoy them safely.

## Sportsman's Forum Partners

### **Bass Anglers Sportsman Society**

The Bass Anglers Sportsman Society (B.A.S.S.) is headquartered in Montgomery, Alabama. The company employs over 150 people who are organized into over 40 departments, including the non-profit environmental arm of B.A.S.S. –the Anglers for Clean Water. B.A.S.S. currently has over 600,000 members organized into 2,700 clubs across America. B.A.S.S. has many influential media outlets, including BASSMASTER Magazine (Circ. 600,000) and SOUTHERN OUTDOORS Magazine (Circ. 200,000). B.A.S.S. produces The *BASSMASTERS* TV series that reaches over one million households, and also produces *SOUTHERN OUTDOORS* TV. B.A.S.S. also hosts the five million dollar BASSMASTER Tournament Trail pro fishing circuit, a series of fishing tournaments that culminates in the B.A.S.S. Masters Classic World Championship and Classic Outdoor Show that annually draws over 100,000 fishing fans. With B.A.S.S. being recently purchased by ESPN, new advertising and partnership opportunities will be made available to the Forum as they become available.

### **Cabela's**

Cabela's, headquartered in Sydney, Nebraska, is self-described as “the world's foremost outfitters.” Cabela's maintains seven retail stores, and annually ships more than 60 million catalogs to customers in over 120 countries. Cabela's publishes the magazine *OUTFITTERS JOURNAL*, and produces *CABELA'S SPORTSMAN'S QUEST* for TV and radio broadcast. Cabela's is one of America's premier retailers that cater to hunters and anglers.

### **Ducks Unlimited**

Ducks Unlimited, headquartered in Memphis, Tennessee, is the world's largest private waterfowl and wetlands conservation organization, with a membership of 757,000. DU is a grassroots, volunteer-based organization. Its members are conservationists and lovers of the outdoors who live throughout the United States, Canada, and Mexico. DU's founders were all concerned hunters who realized the value of conservation work to the future of hunting. Through conservation programs, DU has helped to conserve nearly ten million acres of wetlands in North America. DU reaches sportsmen through its magazine, *DUCKS UNLIMITED MAGAZINE*, and through its radio and TV show, *THE WORLD OF DUCKS UNLIMITED*.

### **The National Rifle Association**

The National Rifle Association (NRA) is headquartered in Fairfax, Virginia. The NRA is governed by a 76-member board of directors who oversee 300 headquarters employees, a nationwide group of field representatives, and over 35,000 certified shooting instructors. The NRA has over 4.5 million members, and has a tremendous reputation among hunters. The NRA also provides educational materials and instruction in hunting safety through every state wildlife agency. The NRA produces and

distributes thousands of educational pamphlets, and produces three magazines—THE AMERICAN RIFLEMAN, THE AMERICAN HUNTER, and THE AMERICAN GUARDIAN with a combined circulation of over 4.5 million.

### **NASBLA**

NASBLA is the acronym for the National Association of State Boating Law Administrators. The association represents the boating authorities of all 50 states and the U.S. territories.

NASBLA is an association dedicated to reducing boating accidents, saving lives and helping to make safe and enjoyable boating a reality on our nation's waterways.

NASBLA is working to achieve seamless uniformity for boating laws from state-to-state, and our goal is to assure enjoyment of the waters for all boaters. We do this by encouraging reciprocity of boating laws, and by establishing standards for boating safety education and boating law enforcement practices.

### **The North American Hunting and Fishing Clubs**

The North American Hunting Club (NAHC) and the North American Fishing Club (NAFC), owned by the North American Outdoor Group (NOAG), are headquartered in Minnetonka, Minnesota. The Hunting Club has over 750,000 members, and is a leader in multi-specie hunting and conservation efforts. The Club has the second largest multi-specie-hunting magazine in the country, THE NORTH AMERICAN HUNTER. The Fishing Club has over 500,000 members, and is a leader in multi-specie fishing advocacy and aquatic conservation efforts. The Club reaches out to all types of fishermen through its club magazine, THE NORTH AMERICAN FISHERMAN. Both clubs are represented through the television shows *NORTH AMERICAN OUTDOORS*, *NORTH AMERICAN FISHERMAN*, and *NORTH AMERICAN HUNTER*, which are aired on ESPN2 and which will air Forum safety messages in 2002.

### **Responsive Management**

Responsive Management has conducted more than 300 telephone, mail and in-person surveys and focus groups on fisheries, wildlife, natural resource, outdoor recreation and environmental issues. Responsive Management develops marketing, needs assessments, outreach, evaluation, public relations, communications and organizational plans based upon extensive research and data bases. Clients include most of the federal and state fish and wildlife and natural resource agencies, and most of the major private conservation organizations.

Responsive Management maintains a full-service computer-assisted telephone and mail survey center with 30 professional interviewers who conduct surveys only on outdoor recreation, fish and wildlife, natural resource and environmental issues. Responsive Management will assist with the measurement of the grant impact, primarily through focus groups.

## **United States Coast Guard**

Founded in the 1790's as part of the Department of Treasury, the United States Coast Guard is now part of the Department of Transportation, protecting U.S. interests at home and around the world. In peacetime and during war, the Coast Guard is at work around the clock, 365 days a year, patrolling shores, saving lives, protecting property and enhancing the flow of commerce. From helping the victims of floods and storms, to keeping millions of dollars worth of illegal drugs from flooding American communities, to teaching boating safety and cleaning up oil spills, the Coast Guard is, like its motto, Semper Paratus, Always Ready.

## **About the BoatU.S. Foundation**

The BoatU.S. Foundation for Boating Safety and Clean Water is a non-profit organization dedicated to promoting safe and environmentally-sensitive boating, with the purpose of reducing accidents and fatalities while increasing stewardship of our water resources. In addition to its leadership role in the Sportsman's Forum, the BoatU.S. Foundation also tackles boating safety and clean water issues in many other ways, such as its On-line Boating Safety Course, by awarding grass-roots grants to community organizations, and through its fish tag program.

The BoatU.S. Foundation is a non-profit arm of Boat Owners Association of the United States, or BoatU.S., which was founded in 1966, and today is made up of 530,000 members nationwide, and covers everything from boat insurance to boating safety. BoatU.S. operates over 60 retail boating equipment stores around the country and maintains a corporate headquarters in Alexandria, Virginia. BoatU.S. is a single source of savings and value for boat insurance, boat financing, emergency towing services and everything in between! For more information, go to [www.boatus.com](http://www.boatus.com).