# LAKE SUPERIOR BOATING GUIDE

A guide to boating on the Minnesota side of Lake Superior





BOATING SAFETY TIPS
SMALL CRAFT HARBOR INFORMATION
PUBLIC ACCESS INFORMATION

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# Lake Superior **Boating Guide**

#### A guide to boating on the Minnesota side of Lake Superior

This booklet summarizes both state and federal boating regulations in an easy to read form. It does not contain a complete list of laws and regulations. For more information, visit mndnr.gov/boating.





## **About this guide**

The Minnesota Department of Natural Resources (DNR) has prepared this booklet in response to the results of the study of Lake Superior recreational boaters conducted by the DNR during the summer of 2002. That study was designed to answer a wide variety of questions, from questions about the amount and origin of boating, boaters' activities, equipment, to information about boaters' future needs.

One of the study's many findings was that a large percentage of Lake Superior boaters wanted more safety information. We hope that the Lake Superior Boating Guide, other DNR publications and new safety information signs installed at Lake Superior safe harbors and other boat accesses, will help fill this need for those wishing to be safer on "The Big Lake." For more information on boating safety and Minnesota's trails and waterways, contact us at the address at the end of this guide.

We strongly advise that boaters who venture out on Lake Superior take a boating course. The U.S. Coast Guard Auxiliary and the U.S. Power Squadrons provide valuable training for the big water boater. Both organizations also offer free Vessel Safety Checks. The Vessel Safety Check is a voluntary inspection of your boat conducted by members of the Auxiliary or Power Squadrons, confirming that it meets both federal and state requirements for safety. No citations are issued and the results of the safety check are not reported to any enforcement agency, but a decal is awarded to display if the vessel has passed the examination.

To find out more, see the contact information at the end of this booklet.

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# **Boating on Lake Superior**

As more people turn to the waters of Lake Superior for fishing and boating, the importance of boating safety can't be overemphasized.

Lake Superior, the Twin Ports harbor and lower St. Louis River offer a variety of boating experiences not found elsewhere on Minnesota waters. Yet, this exciting contrast of quiet backwaters, the international seaport and inland sea requires a mastery of small boat seamanship, a thorough knowledge of piloting rules and equipment regulations, a sharp eye for the weather and the lifelong habit of safe boating practices.

#### **Hazards**

#### **Commercial Shipping**

One of the many fascinating aspects of Lake Superior is the large vessels that ply the lake with cargoes of taconite heading to the steel mills down the lake or grain heading to foreign ports around the world. While they can be interesting to watch, we can't overemphasize that large commercial vessels deserve every bit of respect you can give them. These 20-60,000 ton ships are difficult to maneuver, require a long distance to stop, and produce a wake large enough to capsize smaller craft that venture too close. Tugs and other smaller commercial vessels also deserve the respect of the small boat operator.

KEEP YOUR
DISTANCE
FROM LARGE
COMMERCIAL
VESSELS.
REMEMBER, YOU
CAN MANEUVER
MORE EASILY AND
QUICKLY THAN
THEY CAN.



#### The Weather

Veteran users of the lake will tell you that when the weather turns for the worse, Lake Superior can become extremely hazardous for vessels of any size. Even in moderate weather, the lake is no place for an inexperienced or unprepared boater.



BAD WEATHER ON LAKE SUPERIOR OFTEN COMES UP SUDDENLY.
BE ESPECIALLY WATCHFUL AND LISTEN FOR BROADCAST WEATHER WARNINGS ON THE MARNINE RADIO.



The weather can and does change suddenly on Lake Superior and it's no place for any vessel during a storm. Even skippers of ocean-going freighters have learned to respect Lake Superior storms. If you suspect bad weather is coming, head back to the nearest protected harbor.

Here are some points to remember regarding weather:

Check the forecast before you head out and periodically during your cruise. At the very minimum you should have a portable AM radio aboard for forecast purposes. Even if you can't receive a station, the static that comes with an approaching storm will serve as a warning. Ideally, you should have a VHF-FM two-way marine radio, as there are continuous weather broadcasts on its weather channels. The Coast Guard also broadcasts specific storm warnings over marine radio. A cell phone can help in a pinch, but cellular reception is spotty or non-existent along portions of the North Shore.

Not all weatherrelated boating hazards come with storms. Watch for lightning in addition to rough water. Remember, your boat will be the tallest point in the immediate area and could easily be hit. Sailboats are even more vulnerable.

Not all weather-related boating hazards come with storms. Fog can be a silent threat to boaters and is not uncommon on the lake. (June is a particularly foggy month on Lake Superior.) Never set out in a heavy fog. If you are ever trapped in fog, however, it's important to have a good compass and charts on board and know how to use them.

Another problem with reduced visibility is not being "seen"

A RADAR REFLECTOR, AVAILABLE AT ALMOST ANY MARINE STORE.



by the radar of larger vessels and avoiding a collision. To be seen, a small boat should use a radar reflector, available at almost any marine store.

#### **Navigation**

Navigating from one point on the lake to another need not be complicated. Here are some simple tips:

Obtain the National Oceanic and Atmospheric Administration (NOAA) charts of the area you'll be using and learn how to use them. They are available on the web at nauticalcharts.noaa.gov.

GPS (Global Positioning Satellite) units have come down in price to the point where nearly everyone can afford one. But don't make the mistake of putting all your navigational eggs in one basket. Batteries go dead and electronics and satellite coverage can fail.

Always carry a compass and chart and know how to use them. A good marine compass is a must and you should be familiar with its use. However, compass variation is common at certain locations on Lake Superior due to local iron ore deposits. You should inquire locally before heading out to determine if the area you will be using has such disturbances.

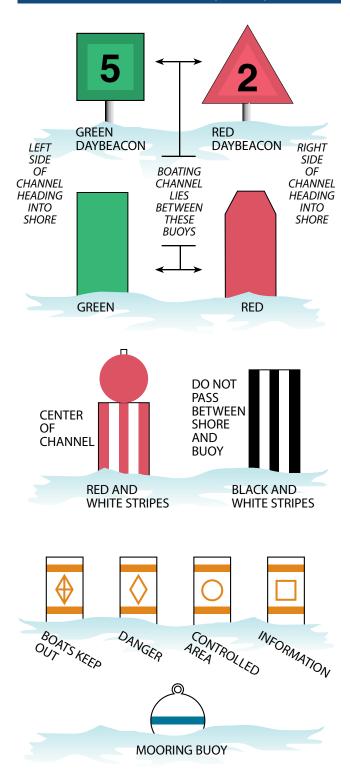


GPS UNITS ARE POPULAR
BECAUSE OF THEIR EASE
OF USE, SMALL SIZE AND
LOW COST. HOWEVER,
SINCE BATTERIES AND
ELECTRONICS CAN AND DO
FAIL, THE SMART BOATER
ALSO KEEPS A CHART AND
COMPASS HANDY AND
KNOWS HOW TO USE THEM.



A RED AND WHITE
VERTICALLY-STRIPED
MARKER WITH THE RED
BALL ON TOP INDICATES THE
CENTER OF THE CHANNEL
AND SAFE WATER.

#### AIDS TO NAVIGATION (ATONS)



#### Aids to Navigation (ATON)

Navigational aids are signposts to guide the boater. They generally consist of buoys (lighted and unlighted) and fixed lights. You should consult other sources for complete information on all aids to navigation, but here are a few general rules.

Channels are often marked with red and green "companion" buoys or daymarks. They are called companion buoys because they are usually seen together. Red buoys and markers are always kept to your starboard (right) side when returning to shore or moving upstream (generally to the west on Lake Superior); and if numbered use even numbers. Green buoys and daymarks are kept on the port (left) and display odd numbers. You should always stay between the red and green buoys. The numbers on the marker will also be on navigational charts so you can easily double check your position.

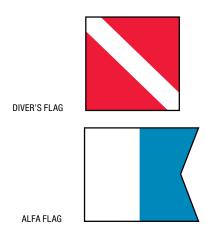
A red and white striped buoy topped with a red ball marks the center of a channel and should be passed closely on the right side.

#### **Scuba Divers**



LAKE SUPERIOR IS A
POPULAR DESTINATION
FOR SCUBA DIVING
ENTHUSIASTS. MINNESOTA
LAW REQUIRES THAT BOATS
NOT INVOLVED IN THE DIVE
OPERATION STAY AT LEAST
150 FEET AWAY FROM THE
RED AND WHITE "DIVER
DOWN" FLAG. DIVE BOATS
ON LAKE SUPERIOR ALSO
DISPLAY THE BLUE AND
WHITE FEDERAL ALFA FLAG.

The crystal-clear waters of Lake Superior make it a prime destination for scuba divers from all over the world. Divers are required to use the warning flags prescribed by law. Boats not involved in the diving operation are required to keep 150 feet away and divers must stay within 50 feet (measured horizontally) from the red and white diver's flag required by state law.



On Lake Superior, a rigid replica of the federally required international code "Alfa" flag, not less than 1 meter in height (3.3 feet) must also be displayed from the diver's boat. The Alfa flag must be visible 360 degrees around the vessel and it indicates that your boat is restricted in maneuverability - it doesn't pertain to the diver. If the divers have entered the water from

shore, they won't be displaying the Alfa flag, just the red and white state diver's flag.

#### **Staying out of Trouble**

Simply having the proper equipment may not be enough to keep you out of trouble on Lake Superior.

Simply having the proper equipment may not be enough to keep you out of trouble on Lake Superior. Of course you want to check the weather report before heading out on Lake Superior, but there are also some things you can do to say clear of trouble once you get on the lake.

#### "Head Seas"; Meeting Waves Head On

Most larger boats have a bow designed to take waves and as long as the trim and speed are properly set, they can be handled by an experienced operator in moderate to semi-severe conditions. However, open-bow boats, sometimes called "bow-riders," are at greater risk to scoop up water while meeting waves than closed-bow boats.

In heavy weather, the passengers and heavy objects like gas cans and coolers should be moved towards the centerline and as low in the boat as possible to help lower the boat's center of gravity.

By zig-zagging or "tacking" through heavy waves at 15 to 45 degrees, you can lessen some of the pitching (bow

and stern moving up and down) to rolling (side to side motion) which will make the ride a little more comfortable and let you run at slightly higher speed. Too much rolling can induce sea sickness (yes, it is possible to suffer sea sickness on Lake Superior!) so you'll have to use your own common sense and good judgment as to what angle to take into the waves.

Too much pitching in high waves can lead to "pitch-poling." This is where the bow rides so steeply up or down a wave that the boat actually tumbles end-for-end.

If you tack when the waves are coming from behind you, the zig-zag course will keep the waves at your stern quarter and lessen their effects.

#### **Heaving-To**

When the waves get so bad that you and your boat are taking too much of a beating and can not make headway, you should consider "heaving-to." This is a maneuver where you head right into the waves or at a very slight angle with just enough speed to keep your ability to steer (called "maintaining steerage").

#### Fog

Conditions of reduced visibility are one of the greatest challenges you can face on Lake Superior. Fog, rain, snow or haze make it essential for you to be seen and heard and to see and hear other boats around you. Here are some tips to help you make it back home though "thick conditions."

If conditions allow it, consider anchoring until visibility improves. Put up your radar reflectors, be sure your anchor lights are on and have at least one person watching and listening for other boats that might not see you.

THIS IS A PHOTO OF A RADAR SCREEN ON A BOAT JUST OUTSIDE GRAND MARAIS HARBOR. RADAR CAN BE A HANDY SAFETY ITEM FOR THE BOATER WHO GETS CAUGHT IN ONE OF THE BIG LAKE'S DENSE FOGS.



#### **Avoiding Collisions**

You need to be traveling at slow enough speed where you can stop or maneuver in time to avoid other boats, rocks, floating hazards and structures. It is best if you can assign one or more of your passengers to keep a steady lookout forward. Be sure to tell them what they are looking for and to sound off nice and loud if they see — or even think they see — a hazard in your path. By stopping occasionally to listen, and running the engine at low RPMs the rest of the time, you may also be able to hear fog signals, waves breaking, other boat engines and so on.

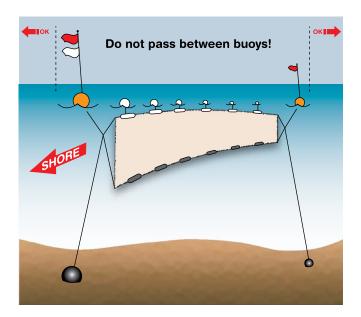
Radar is a great tool that should be used in reduced visibility conditions. However, it is not a replacement for keeping a sharp lookout. Put up radar reflectors as high as possible to enable other recreational boats and commercial vessels to see you as far away as possible.

#### **Commercial Fishing Nets**

You might see commercial fishing nets while angling or boating on Lake Superior. The ends are marked with a fluorescent orange or red buoy with a fluorescent orange or red flag on a five foot pole. The shoreward marker has a white flag below the orange or red one. Note that tribal or commercial nets in other waters may be marked differently.

The nets between the two flags may be relatively shallow or set as deeply as 600 to 900 feet. They can also drift or "billow" a good distance away from the marker flags so you are best advised to stay a good distance away, especially if you are fishing with downriggers. A cannonball weight tangled on a net 90 feet down or a propeller wound up in a tough net line can be an expensive, embarrassing and sometimes dangerous proposition!

To avoid crossing over a net, go around the buoys, giving them a wide berth. Pass to the west of the shoreward flag or to the east of the lakeward flag.



#### **Emergencies**

In time of emergency, a good marine band, VHF-FM two-way radio is worth every penny of your investment. But if you don't own a radio, there are several accepted methods for seeking help such as shooting off emergency flares (see Visual Distress Signals page 20) or blowing rapid blasts of a horn or whistle. Another method is to stand in the bow of the boat, stretch your arms out to the sides and raise and lower them as if flapping. (Don't just wave; you may only get a friendly wave in return.)

#### **Engine Breakdown**

ONE OF THE MOST COMMON EMERGENCIES IS ENGINE FAILURE AND MOST BREAKDOWNS RESULT FROM LACK OF PROPER PREVENTIVE MAINTENANCE.



One of the most common emergencies is engine failure and most breakdowns result from lack of proper preventive maintenance. Attempt to make repairs yourself or seek assistance from craft around you. After exhausting these possibilities, signal for help.

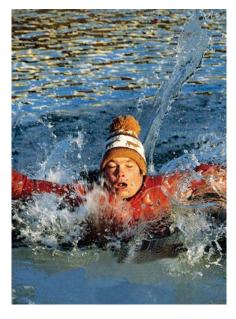
#### **Boat Sinking**

If your boat swamps or springs a leak, in most cases it will still float even when full of water, so stay with it. (You should know your boat's flotation capabilities before venturing out; check with the manufacturer or dealer.)

First, find out where the water is coming from. Attempt to plug leaks with anything handy – a towel, shirt or cushion – and begin to pump or bail. If this fails, signal for help. Most boats today have built-in flotation, so staying with it makes sense. You will be easier to spot by search teams and will be able to keep more of your body out of the cold water. Staying out of the water as much as possible also helps prevent or slow the onset of hypothermia, which occurs much more quickly when the body is in the water.

#### **Cold Water Shock and Hypothermia**

Cold water is an ever-present danger during the Lake Superior boating season. Except for shallow bays and beaches, the lake's temperature seldom reaches 55 degrees F., even during the hottest summer weather. Medical research tells us that water that cold can kill in several ways:



THE COLD WATER SHOCK-INDUCED GASP REFLEX CAN CAUSE YOU TO INHALE WATER AND DROWN IF YOU'RE NOT WEARING A LIFE JACKET.

1) Cold water shock causes the "gasp reflex" which means you involuntarily inhale water when you fall in; with drowning as the probable outcome. Cold water shock can also cause a sudden increase in blood pressure resulting in heart failure within three minutes of entering the water.

- 2) Swimming failure can happen from three to 30 minutes. Cold water stiffens your muscles, making swimming to stay afloat, zipping on a life vest, or reboarding a boat, nearly impossible!
- 3) Hypothermia. After 30 minutes your core temperature begins to fall, which can eventually lead to unconsciousness and death.

Wear a U.S. Coast Guard -approved life jacket when you are on the lake. We can't overemphasize that wearing a life iacket will give you a better chance of survival after an accident.

4) Post-immersion collapse happens during or immediately after you are rescued from cold water. As your body begins to rewarm, cold blood that was trapped in your arms and legs rushes back to the heart, possibly leading to heart failure. Also, water that was inhaled can damage the heart and lungs.

There are certain steps you can take to increase survival time if you do fall in.

Wear a U.S. Coast Guard-approved life jacket when you are on the lake. We can't overemphasize that wearing a life jacket will give you a better chance of survival after an accident. Life jackets are now designed to be practical and stylish (some are fishing vests and full-sleeved float coats). If you do fall in, a life jacket will not only float you, but will help retain body heat, particularly the vest and full sleeved models using polyvinyl foam for flotation. And it's not a bad idea to have brightly colored life jackets. Yellow and orange are much easier to spot from the air or from a distance on the surface than more muted colors.

If you do enter the water, try to climb back into or on top of your craft. The more of your body you can get out of the water the better off you are since water saps body heat 25 times faster than air of the same temperature. In addition, you will be easier to spot by anyone searching for you if you are on a large object floating in the water.

If you can't climb back in and you are wearing a life jacket, curl your body by tucking your knees and keeping your arms closer to your sides. This will decrease loss from the three highest heat loss areas of the body, the head, ribcage and groin, and double your survival time.

We really don't recommend swimming unless there is no hope of help arriving and you are less than a mile from shore. The average swimmer wearing a life vest isn't capable of swimming much more than a mile in 50 degree water before succumbing to hypothermia.

#### **Treatment for Hypothermia**



IF THE HYPOTHERMIA VICTIM IS CONSCIOUS, GIVE HOT, SWEET DRINKS, BUT UNDER NO CIRCUMSTANCES SHOULD YOU GIVE ALCOHOL.

If you rescue someone who has been in the water for any length of time, use care in rescue to avoid being pulled in yourself. Seek medical treatment for them immediately unless they have only been in the water for a few minutes. Replace their wet clothing with dry.

If the victim is conscious, give hot, sweet drinks. Under no circumstances should alcohol be used, since it speeds up the heat loss of the body.

If semi-conscious or worse, try to keep the victim awake. If there is difficulty in breathing, insure an open air passage. Administer mouth-to-mouth resuscitation if breathing stops altogether. Treat cold water victims gently. Research reveals that rough handling can cause ventricular fibrillation, a condition in which the heart's ventricles contract in rapid and unsynchronized rhythms and cannot pump blood into the body, leading to death.

A good place to rewarm is a heated room, boat cabin or, if possible, a warm (not hot) 105 degree to 110 degree bath, leaving the limbs out. The idea is to rewarm only the torso of the victim first. If the arms and legs are rewarmed at the same time, cold blood trapped in the extremities can rush back to the heart causing ventricular fibrillation. Seek immediate medical attention for all but the most minor cases of cold water shock and hypothermia.

#### **Storms**

If a storm hits and you are unable to reach shore, some emergency procedures to remember are:

- Put on your life jacket (you should really wear it all the time).
- Head for the closest shore, or better yet, a protected harbor.
- The bow of the boat is designed to take waves, so head into them at an angle.
- Reduce your speed to keep headway and lessen the pounding on the boat.
- Seat all passengers as low and as close to the centerline of the boat as possible.
- Keep the boat free from water by bailing or using a bilge pump.
- If your motor fails, trail a sea anchor on a line from the bow to keep it headed into the waves. A bucket or a shirt with neck and sleeves knotted together will do in an emergency.

#### Rescue

Use simple rescue techniques to avoid endangering yourself. Often a line, life jacket, oar or the boat itself (be careful of the propeller) can be used to easily rescue someone who has fallen overboard. Only as a last resort should you enter the water to retrieve a victim and then only when wearing a life jacket.

#### **Fire**

First put on your life jackets if you don't have them on already. Keep the fire downwind. If the fire is aft (to the rear), head the boat into the wind. If the fire is forward, put the stern or back of the boat into the wind. This keeps the fire from spreading. Act promptly to extinguish the flames. Aim the extinguisher at the base of the fire, while sweeping back and forth.



IN CASE OF A BOAT FIRE, SLOW DOWN, TURN THE CRAFT TO KEEP THE SMOKE DOWNWIND AND AIM THE EXTINGUISHER AT THE BASE OF THE FLAMES.

#### Float Plan

This plan for boaters is similar to the flight plan filed by airplane pilots. It need not be formal or lengthy, but should contain such items as name, boat number, whether you have a radio on board, where you're going and when you'll return. (A blank float plan is included in this guide on page 31.) It is designed to help the Coast Guard or other search-and-rescue units locate you if you're overdue. Leave the plan with the marina operator, or relative or friend and tell them who to call if and when you are either overdue or an emergency arises.

Considering the number of persons involved and the fairly low rate of accidents, boating and fishing on the Great Lakes are basically safe pastimes. But that doesn't mean that you couldn't have an accident through your own or someone else's ignorance of these basic safety rules. As a boater or fisherman, you have an obligation to yourself, your passengers and other boaters to increase your basic knowledge through boating classes and other publications and programs.

# Visual Distress Signals – Federal Requirement

Lake
Superior
is the only
body of
water in
Minnesota
that requires
Coast Guard
-approved
Visual
Distress
Signals
(VDS).

Lake Superior is the only body of water in Minnesota where federal regulations require Coast Guard-approved Visual Distress Signals (VDS). There are a number of different types of VDS including pyrotechnics (smoke, hand-held flares, aerial flares and parachute flares), electronic (flashing light that automatically signals "SOS") and flags.

Pyrotechnic devices must be Coast Guard-approved, in serviceable condition and readily accessible. They are marked with an expiration date. After that date they may still be carried as extra equipment, but they are no longer counted toward meeting the visual distress signal requirement since they may be unreliable. Pyrotechnics are acceptable for both day and night use, and a minimum of three is required.

Non-pyrotechnic devices must be in serviceable condition, readily accessible and certified by the manufacturer as complying with Coast Guard requirements. They include:

Electronic devices, which are acceptable for night use only, are basically a strobe light that automatically flashes the international distress signal of "SOS" (. . . - - - . . . ) and the orange distress flag which is good for day use only.

#### **VDS Requirement by Boat Size and Type:**

Manually propelled boats regardless of length:

- Day Use none required
- Night Use three required

#### Boats less than 16 feet:

- Day Use none required
- Night Use three required

#### Open sailboats less than 26 feet with no motor:

- Day Use none required
- Night Use three required

Boats 16 feet or longer – needs both day and night even if only using boat during daylight hours:

- Day Use three required
- Night Use three required

#### **Requirements Satisfied With:**

#### Day Use

Any combination of:

- Three or more pyrotechnic or
- One orange distress flag (at least 3' x 3' with a black square and ball on an orange background) or
- Three orange floating and/or hand-held smoke distress signals.

#### Night Use

• One USCG-approved electric distress light.

#### **Meets Both Day and Night Requirement**

(any combination adding up to three):

- Three red hand-held distress signals or
- Three red parachute flare distress signals or
- Three red hand-held rocket-propelled flare distress signals or
- Three red aerial pyrotechnic flare distress signals (gun-type).

# The Emergency Position Indicating Rescue Beacon (EPIRB)



The EPIRB is generally found on larger boats on the east and west coasts or the Great Lakes. When activated, a 406 MHz **EPIRB** broadcasts a unique repeating SOS signal that can be detected by satellite from virtually any point on earth. When properly

registered, the signal includes a description of the boat and its location. This critical information is routed directly to rescue units on the ground reducing response time dramatically.

#### **Personal Locator Beacon (PLB)**

A PLB can be used anywhere in the world to send out a distress signal. Signals go to the International Satellite System for Search and Rescue. They do not provide specific information about the boat.

#### **Marine Radio**

Investing in a good Very High Frequency FM (VHF FM) radio is a wise purchase. A VHF radio has some advantages over cell phones and CB radios, such as:

- · Good quality transmission.
- Strong signal.
- · Channels reserved for distress calls.
- Continuously monitored frequencies.



Cell phone coverage along the North Shore is spotty at best so save that for making dinner reservations. Citizens Band (CB) radios are not recommended as primary communications devices either, due to weak signals and overcrowded frequencies. In addition, the Coast Guard does not routinely monitor CB channels.

The most common VHF FM marine channels and their purpose are listed below:

**Channel 16** This is the most important channel on the VHF band. This is the distress, safety and calling frequency that the Coast Guard monitors continuously. All vessels equipped with VHF radios must keep their radios tuned to channel 16 so they can assist if an emergency is near.

Vessels may initiate contact with each other but must shift to a working frequency to carry on a conversation (e.g., *Motor vessel Albatross, this is sailing vessel Mother Goose, MN-1234-AB, on Channel 16, switch and answer Channel 68*).

**Channel 22A** This channel is the primary working channel of the Coast Guard. It is used for communications between the Coast Guard and the maritime public, both recreational and commercial. Severe weather warnings, hazards to navigation, and other maritime safety warnings are broadcast on Channel 22A.

**Channel 13** This channel is the bridge-to-bridge or "piloting" channel, used for communicating navigation information between ships. Strictly used for navigational purposes by commercial, military, and recreational vessels at locks, bridges and harbors.

**Channel 6** This channel is the ship-to-ship frequency used for safety related communications. This channel is not used for ordinary operational navigation or personal communications.

#### What Do Certain Words I Hear on the Radio Mean?

**MAYDAY** is a request for immediate assistance. LISTEN! DO NOT TRANSMIT!! Determine if you're in a position to help. If not, maintain radio silence. "MAYDAY" identifies an imminent. life-threatening emergency.

**PAN-PAN** (pronounced pahn-pahn) is used when the safety of a boat or person is in jeopardy. Man-overboard messages are sent with the PAN-PAN signal.

**SECURITE** (pronounced say-cure-e-tay) is used to pass navigation information or weather warnings.

# What if I Hear Someone Saying MAYDAY on Channel 16?

If you have a radio and you are underway, you are required to monitor Channel 16. MAYDAY takes precedence over all other transmissions. If you hear a MAYDAY, remain silent and listen. Take down the information being passed. If the Coast Guard or other rescue authority responds, maintain silence and listen, but do not respond.

However, if there is no response, take action. Try raising the distressed vessel over the radio. Gather more information, especially the position. Attempt to raise the Coast Guard while traveling toward the vessel. Sometimes the Coast Guard may not hear the distressed vessel's transmissions, but can hear another vessel near the scene; therefore, call the Coast Guard again, just in case. If you raise them, give them the information you have and follow their instructions. If you cannot contact the Coast Guard, attempt to assist the other vessel to the best of your ability without placing yourself in danger.

#### What If I Need Help?

If you have an imminent life-threatening emergency, transmit on Channel 16:

- 1 MAYDAY, MAYDAY, MAYDAY!
- 2 This is (name of boat three times, call letters once).
- 3 Repeat once more, "MAYDAY," (your boat's name).
- 4 Now report your position (be as specific as possible).
- 5 Report the nature of emergency.
- 6 Report the kind of assistance desired.
- 7 Report number of people on board and condition of any injured.
- 8 Description of the boat and seaworthiness.

  Then wait for a response. If there is none, repeat the message.

#### **Digital Selective Calling**

New fixed (as opposed to portable) VHF FM models are required to have Digital Selective Calling (DSC) capability. Eventually, one press of a button will automatically alert rescue facilities on shore as to your identification and position.

#### **Do I Need A Radio License or Operator's Permit?**

Most recreational boaters may have and use a VHF marine radio, EPIRB and marine radar without having an FCC ship station license or operator's permit. However, boaters traveling on international voyages (such as to Canada), must still carry those documents. Contact the FCC at 888-225-5322 or search the Internet for "FCC marine radio" for more information or restrictions.

Transmission of a false (hoax) distress or emergency message or using obscene or profane language is illegal. If search and rescue units are sent out, the perpetrator is responsible for their costs in addition to the fine. Courts upheld costs nearing \$500,000 in one case.

#### **Homeland Security**

Due to heightened national security, please note the following:

On some occasions, U.S. Navy ships may be encountered on Lake Superior or in the Duluth-Superior harbor. You must stay 100 yards away from these vessels, and operate at a slow no-wake speed within 500 yards.

Avoid all commercial ships (foreign and domestic) and commercial port areas on Lake Superior.



Observe restricted areas near power plants, dams and bridges anywhere in the state. When possible, avoid anchoring near these areas.

Report any suspicious activity by using your cell phone to call 911, or marine radio to contact the U.S. Coast Guard, state or local enforcement officials.

#### **Equipment List**

#### **Required by Law for Motorboats**

- Life jacket. One wearable life jacket for each person on board – USCG-approved, in good condition, and readily accessible. For boats 16 feet and longer (except canoes and kayaks), there must also be one USCG-approved throwable (Type IV) flotation device immediately available. Life jackets should be assigned and fitted to specific users. (Experts recommend float coats and survival suits during colder months to provide hypothermia protection.)
- Children under 10 are required to wear a life jacket when the boat is underway (not moored or tied to a dock).
   The only exceptions are for children who are below the top deck or in an enclosed cabin, or aboard passenger vessels being operated by a licensed captain. Children engaged in swimming or diving from an anchored boat are also not required to wear a life jacket.
- Fire extinguisher correct number, size, and class for boat. Fully charged, not corroded, clear nozzle, bracketed, readily accessible.
- Sound-producing device horn or whistle appropriate for size of boat.
- Visual distress signals current dates on flares, proper number, fresh batteries if strobe-lights.
- Boat registration (current year) or USCG documentation if a documented vessel.
- Navigation lights (between sunset and sunrise) tested and operable. Note: spare bulbs recommended.
- Pollution placard (for boats 26 feet and longer.)

#### The Head

The proper term for a toilet on a watercraft is "head" or Marine Sanitation Device (MSD). Porta-potty type heads are allowable so long as they are installed to prevent waste from spilling or being dumped into the lake.

#### **Optional Equipment**

#### Recommended, but not required by law

- Weather radio or VHF marine radio equipped with weather channels
- Compass and charts Note: mineral deposits on the North Shore of Lake Superior can throw off compass readings.
- Anchors and line adequate anchor for size of boat, sufficient line for water depth. Include a drogue or "sea anchor."
- Bilge dewatering device hand or power operated bilge pump, alternative bailer (ice cream bucket, coffee can).
- Searchlight or bright flashlight with fresh batteries.
- Engine starting batteries fully charged, encased in plastic boxes or terminals covered, securely fastened down.
- Alternate propulsion paddle or oars "kicker" trolling motor with spare fuel tank.
- First aid kit.
- Wrist watch or clock
- Tool kit spare outboard prop and lock nut; spare spark plugs, propeller and shear pin (if so equipped).
- Sunscreen.
- GPS with waypoint coordinates stored for return trip.
- Raingear and extra set of dry clothes.



Aquatic invasive species (AIS) cannot move across the land without help, but when given a lift they can spread almost anywhere. It's up to everyone who recreates in Minnesota's lakes and rivers to help prevent the introduction and spread of AIS.

#### **Required Actions - It's the law!**

- Clean all visible aquatic plants, zebra mussels, and other invasive species from your boat, trailer and other water-related equipment before leaving a water access or shoreland property. It's illegal to transport aquatic plants or animals whether dead or alive.
- ✓ Drain water-related equipment (boat, ballast tanks, portable bait container, motor) and drain bilge, livewell and baitwell by removing drain plugs before leaving a water access. Keep drain plugs out and water-draining devices open while transporting watercraft.
- **Dispose** of unwanted bait in the trash. It's illegal to release live bait into the water or to release worms on the ground.

#### **Recommended Actions - Protect our waters.**

- ✓ Spray, rinse, or dry boats and recreational equipment before going to another water body, especially if your boat has been in the water or moored for more than 24 hours. Do one or more of the following:
  - Spray with high-pressure water;
  - Rinse with very hot water over 120°F;
  - Dry for at least 5 days.

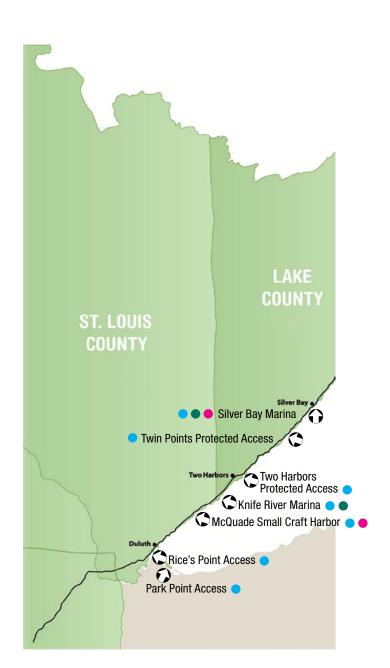
**To report new AIS sightings** contact Minnesota DNR Invasive Species Program at 888-646-6367 or 651-259-5100 or visit mndnr.gov/AIS. To report a violation, contact a local conservation officer. See page 59 for contact information.

# **Operator Float Plan**

# **Description of boat** Size Color Make **Boat's registration number** MN-Names and addresses of all persons on board Trip plan Departure date and time \_\_\_\_\_\_ Destination \_\_\_\_\_ Expected date & time of return \_\_\_\_\_ Location where my vehicle is parked Vehicle description and license number I can be contacted by (radio call letters; cell phone; destination contact; etc.) If not returned by (date & time) call the following: County Sheriff at (\_\_\_\_)\_\_\_\_ U.S. Coast Guard at

DON'T FORGET TO CANCEL YOUR FLOAT PLAN WHEN YOU GET HOME.

# Small Craft Harbors and Protected Accesses Along Lake Superior's North Shore



#### **Distances in Miles from Duluth by Water**

Duluth Entry	0.0
McQuade Road	10.5
Knife River	18.5
Two Harbors	25.5
Twin Points	41.6
Silver Bay	52.1
Taconite Harbor	<b>76.6</b>
Tofte	82.6
Grand Marais	108.8
Horseshoe Bay	129.7
Grand Portage	145.9



#### **Symbol Key**

- Unprotected Access
- Protected Access
- Marina
- Safe Harbor

# **Rice's Point Access**

Developed in the early 1980s, Rice's Point Access was upgraded and redeveloped in 1988 and 1999. The facility is located within the Duluth-Superior Harbor, under the Blatnik Bridge. It was developed by the Minnesota DNR in cooperation with the City of Duluth, Minnesota Power, MNDOT and the Duluth Seaway Port Authority.

#### Location:

Within Duluth-Superior Harbor.

#### **Amenities:**

- Two protected launch ramps (caution: power loading holes at ramp ends).
- Two boarding docks.
- Paved lot will accommodate approximately 75 car/trailers.
- Portable restrooms.
- Adjacent fishing, boat and harbor viewing pier.
- Opportunity to view great lakes and ocean going vessels.
- St. Louis River and Duluth-Superior Harbor access.





APPROXIMATE GPS COORDINATES: LAT 46.45.06 LON 92.06.05 Note: This is the preferred side for most boats.



**Note:** This is a very shallow area and is recommended for smaller boats only. Stay between red and green markers.

#### **Park Point Access**

City of Duluth owned and managed; located within Duluth-Superior Harbor near the end of Park Point.

#### **Location:**

Within Duluth/Superior Harbor.

- Paved parking for 12 car/trailers.
- Concrete ramps.
- Adjacent to large city park/recreation area.
- Permanent restrooms.
- Protected ramp area.
- Access to the Duluth-Superior Harbor and the St. Louis River.
- Shallow draft.





APPROXIMATE GPS COORDINATES: LAT 46.43.55 LON 92.03.21 Note: Keep green markers to your left when approaching access.



#### McQuade Small Craft Harbor

This accessible facility provides both a public boat access location and a small craft harbor. The Minnesota DNR developed the facility in partnership with the U.S. Army Corps of Engineers and in cooperation with St. Louis County, the City of Duluth and Duluth and Lakewood Townships.

#### **Location:**

10.5 miles from the Duluth Harbor Entry and 8 miles southwest of Knife River.

- Four ramps: 50 x 14 feet with 5 foot minimum depth at ramp ends.
- Four docks: two in the ramp area and two staging/ emergency mooring docks.
- Kavak launch in southwest corner.
- Paved parking for 60 car/trailers.
- Public restrooms (seasonal). Portable restrooms available year around.
- Three acre small craft harbor basin— behind breakwaters.
   Basin depth: 8 foot minimum entry and main basin: 5 foot depth at dock and ramp ends.
- Interpretive kiosk.
- Accessible pedestrian tunnel under the highway.
- · Accessible shore fishing from the east breakwall.
- · Accessible breakwater walk and viewing area.
- Red navigation light on east breakwater light # 16492.
- Restaurant and lodging in the vicinity.





APPROXIMATE GPS COORDINATES: LAT 46.52.48 LON 91.55.12



#### **Knife River Marina and Access**

Knife River was built in the early 1970s and operated as a private marina under Lake County ownership until the Minnesota DNR took over in 2001. The marina and access were acquired to assure continued public access to Lake Superior, provide a safe harbor and needed services to enhance the Lake Superior Small Craft Harbor System.

This 100 slip full-service marina is operated for the DNR by a concessionaire.

Caution: storms can create large waves in the harbor entrance.

#### **Location:**

18.5 miles northeast of the Duluth Harbor Entry, 8 miles northeast of McQuade and 7 miles southwest of Two Harbors.

#### **Contact Information:**

218-834-6076 info@knife-river-marina.com knife-river-marina.com

- Double launch ramp.
- One roll-in ramp dock and an adjacent fuel dock.
- Paved and gravel parking for 25 car/trailers (follow directional signs for parking).
- Portable restroom.
- Diesel and premium gas available.
- Full service marina, with seasonal and transient slips, pump-out, boat haul-out and repair, winter storage, yacht club and ship store.
- Entrance navigation light #16495.
- Restaurant and shops in vicinity.





APPROXIMATE GPS COORDINATES: LAT 46.56.37 LON 91.46.44



# Two Harbors Protected Access

The Two Harbors Protected Access is located along the Two Harbors downtown waterfront on Agate Bay— within the commercial shipping harbor. The original facility was built in 1981 and reconstructed in 2011. The facility is operated by the Minnesota DNR with daily maintenance provided by the City of Two Harbors.

#### **Location:**

25.5 miles northeast of the Duluth Harbor Entry, 7 miles northeast of Knife River, 16.1 miles southwest of Twin Points

- Three ramps.
- 150 foot crib dock that provides some protection for the ramps.
- Two boarding docks.
- Paved parking for 54 car/trailers and 30 cars.
- · Vault toilets.
- U.S. Army Corps breakwater.
- Walking distance to waterfront trails, downtown shops, restaurants and museums.
- Opportunity to view the iron ore loading docks with freighters of up to 1000 feet visiting the loading facility.
- Red navigation beacon on the end of the crib dock.
- Accessible kayak launch and dock.
- Accessible parking for three car/trailers at ramp area.
- Walking trail along waterfront.





APPROXIMATE GPS COORDINATES: LAT 47.00.54 LON 91.39.56



#### **Twin Points Protected Access**

This boat launch constructed in 2002 is located approximately midway between Two Harbors and Silver Bay. It was developed by the DNR on an old resort site, after considerable cleanup and site preparation the facility was completed. Immediately adjacent to the site is the lona's Beach Scientific and Natural Area.

#### **Location:**

41.6 miles northeast of the Duluth Harbor Entry, 16.1 miles northeast of Two Harbors and 10.5 miles southwest of Silver Bay.

- Two ramps (shallow bay and ramp area).
- 150 foot crib dock, provides some launch ramp protection and is accessible.
- Red navigation light on the end of the crib dock.
- Paved parking for 20 car/trailers with overflow in the adjacent lot.
- Adjacent to Scientific and Natural Area and the Gitchi Gami State Trail.
- Shore fishing along the points.





APPROXIMATE GPS COORDINATES: LAT 47.9.54 LON 91.25.30



**Note:** Boats with a deep draft may hit bottom at this ramp.

#### **Silver Bay**

This fully accessible Small Craft Harbor; was developed in 1999 in cooperation with the US Army Corps of Engineers, is owned by the Minnesota DNR and is operated and maintained by the City of Silver Bay.

The site includes a deck and gazebo, an interpretive overlook of the facility, lake and ships serving the adjacent North Shore Mining facility. A city park and picnic area are adjacent. The Hesper ship wreck is near the east breakwater. Nearby services and amenities include: restaurants, golf, lodging, groceries, hiking trails and other recreational facilities.

#### **Location:**

52.1 miles northeast of the Duluth Harbor Entry, 10.5 miles northeast of Twin Points, and 24.5 miles southwest of Taconite Harbor.

#### **Contact Information:**

218-226-3121

#### **Amenities:**

#### Access

- Two ramps within small craft harbor with 5 foot minimum depth at ramp ends.
- Three make ready docks, one primarily for divers.
- Paved parking for 20 car/trailers.
- Vault toilets.
- Fish cleaning station.

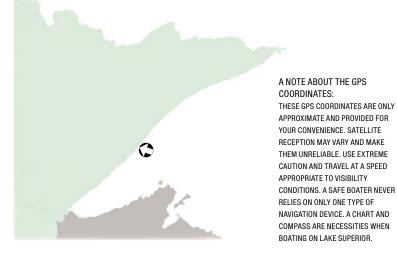
#### Marina

- 108 slips: 68 seasonal 25 to 110 feet; 40 transient 25 to 110 feet.
- · Seven acre calm-water basin.
- Premium gas and diesel.
- Pumpout.
- Slips include: 110 and 240 volt power, potable water and dock boxes.
- Restrooms, showers and laundry.
- Vending machines, limited ship store.
- Lighted buoys marking the marina entrance.



APPROXIMATE GPS COORDINATES: LAT 47.16.10 LON 91.16.28





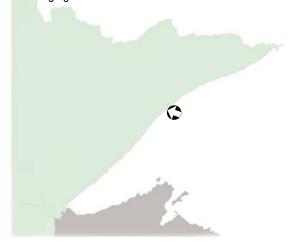
#### Taconite Harbor: Small Craft Harbor

This small craft harbor is located adjacent to the former Cliff's Erie Taconite loading facility just south of the small town of Schroeder. Taconite Harbor was developed in 2001 as another of the Lake Superior small craft harbor facilities. At one time, the Town of Taconite Harbor was located immediately southwest of the upper parking lot— all of the houses have been removed —there are still portions of paved streets, a basketball hoop and a few street lights remaining.

#### **Location:**

76.6 miles northeast of the Duluth Harbor Entry, 24.5 miles northeast of Silver Bay and 6 miles southwest of Tofte.

- Two concrete ramps (5 foot minimum depth at ramp end).
- Two docks— one is accessible.
- Paved lower lot and ramp staging area (five car/trailers).
- Gravel upper lot (35 car/trailers).
- 1.7 acre small craft harbor basin.
- Two mooring buoys (emergency or transient day use only, sizes marked on the buoys 30 to 65 feet).
- Basin depth 10 foot minimum.
- Portable restrooms.
- 1.7 acre safe harbor protection.
- Lodging within 3 miles.





APPROXIMATE GPS COORDINATES: LAT 47.31.16 LON 90.55.23



#### **Tofte Access**

This township owned site is provided in cooperation with Tofte Township and the Minnesota DNR. In 1997, the DNR constructed an 85 foot breakwall and replaced the ramp. Other upgrades and improvements were completed in 2010. The township manages the site and the local community park.

#### **Location:**

82.6 miles northeast of the Duluth Harbor Entry, 6 miles northeast of Taconite Harbor, and 26.2 miles southwest of Grand Marias.

- One steel mesh over rock and concrete ramp.
- · Historic concrete crib dock.
- Paved parking for five car/trailers.
- Partially sheltered ramp (85 foot breakwater).
- Public park adjacent to the launch area.
- Walking distance to restaurants, local businesses and lodging.





APPROXIMATE GPS COORDINATES: LAT 47.34.13 LON 90.50.22



#### **Grand Marais Access**

This launch ramp is located within the City of Grand Marais, on the east side of the commercial harbor. It was developed by the DNR— in cooperation with the City of Grand Marias— in the early 1980s. The city operates a small marina on the southwest corner of the commercial harbor. Fuel and pumpouts are available at the city marina, as well as some slips and mooring buoys.

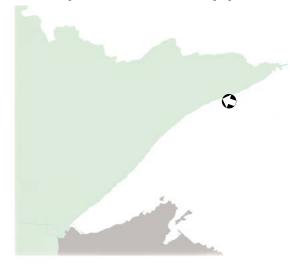
#### **Future plans:**

The DNR is working with the City of Grand Marais on relocating the access to the west end of the harbor where a small unimproved access currently exists.

#### **Location:**

108.8 miles northeast of the Duluth Harbor Entry, 26.2 miles northeast of Tofte, and 20.9 miles southwest of Horseshoe Bay.

- Two concrete ramps (caution: power loading holes at ramp ends).
- · Two docks.
- Paved parking for 40 car/trailers (during community events parking can be difficult).
- Portable restrooms.
- Walking distance to restaurants, lodging and downtown.





APPROXIMATE GPS COORDINATES: LAT 47.44.40 LON 90.20.20



**Note:** Avoid backing your trailer in too far. This is a short ramp with a drop-off at the end caused by power loading.

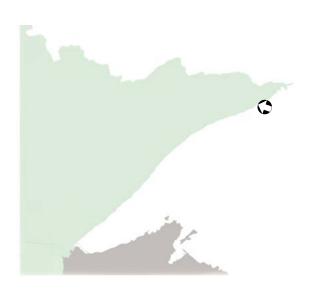
#### Horseshoe Bay Protected Access

This remote site was completely redeveloped by the DNR in 2009. The redevelopment included improvement to the access road and parking lot, relocation of the ramp and adding a crib dock.

#### **Location:**

129.7 miles northeast of the Duluth Harbor Entry, 20.9 miles northeast of Grand Marais and 16.2 miles southwest of Grand Portage.

- Large concrete ramp.
- "L" shaped crib dock, provides some wave protection (may be shallow near the end of the dock area).
- Paved parking for 10 car/trailers.
- Portable restroom.
- · Beautiful scenic bay.





APPROXIMATE GPS COORDINATES: LAT 47.51.02 LON 89.56.09



#### **Grand Portage Marina**

The Grand Portage Marina and launch ramp are owned and operated by the Grand Portage Band of the Chippewa. The 30 slip marina receives some protection from its location within Grand Portage Bay, but the bay itself is shallow and in spots may impede deeper draft boats. The Band also operates Voyageur Marina on the northeast corner of the bay.

#### **Location:**

145.9 miles northeast of the Duluth Harbor Entry, 16.2 miles northeast of Horseshoe Bay, 23 miles southwest of Isle Royale, and 43 miles southwest of Thunder Bay, Ontario.

#### **Contact Information:**

218-475-2476

- Protected launch ramp within the marina basin.
- Gravel parking for 45 car/trailers.
- · Restroom facilities.
- 30 slips (up to 30 feet).
- Convenience store.
- Fuel and pumpout.
- 29 full service RV sites and 10 tent sites adjacent to the marina.
- Food and lodging nearby.
- Isle Royale Ferry operates out of the Voyageur Marina.





APPROXIMATE GPS COORDINATES: LAT 47.57.21 LON 89.41.21



#### **Contact Information**

#### **MN DNR Information Center**

500 Lafayette Road

St. Paul, MN 55155-4040

651-296-6157

888-646-6367

Telecommunications Device for the Deaf

651-296-5484

800-657-3929

info.dnr@state.mn.us

mndnr.gov/boating

## MN DNR Parks and Trails Harbors and Water Trails Programs

Two Harbors, MN 218-834-1430 mndnr.gov/smallcraftharbors mndnr.gov/watertrails

#### **Boating Safety Information**

Minnesota DNR – mndnr.gov/boatingsafety

U.S. Coast Guard - uscgboating.org

## **Classroom Boating Courses and Vessel Safety Checks**

U.S. Coast Guard Auxiliary - cgaux.org

U.S. Power Squadrons - usps.org

Boating safety classroom course location info line 800-336-2628

#### **Emergency contacts:**

#### **U.S. Coast Guard Station Duluth**

218-529-3100

218-529-3108 (extension "0" for distress calls)

VHF-FM marine radio Channel 16 for distress calls

#### **U.S. Coast Guard Sector Sault Ste Marie**

906-632-0967

#### **Contact Information continued**

#### U.S. Coast Guard Search & Rescue Detachment North Superior – Grand Marais

[staffed Memorial Weekend through Labor Day Weekend]

General: 218-720-5412

Search and Rescue: 218-387-2574

VHF-FM marine radio Channel 16 for distress calls

#### St. Louis County Sheriff's Office

218-726-2340

#### **Lake County Sheriff's Office**

218-834-8385

#### **Cook County Sheriff's Office**

218-387-3030

#### Telephone - 911

Cellular coverage can be very spotty along the North Shore. You should never rely on a cell phone as your primary means of calling for help.



#### Wear your life jacket.

Minnesota Department of Natural Resources

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# LAKE SUPERIOR BOATING SAFETY CHECKLIST

- Wear your life jacket
- Avoid alcohol when boating
- **▼** Be especially careful around cold water
- Switch your navigation lights on after sunset
- Carry a fire extinguisher aboard at all times
- If bad weather threatens, head for home
- Keep constant lookout for other boats and navigational hazards
- Take a safe boating course and have a Vessel Safety Check

# STAY ALERT STAY ALIVE!