

A GUIDE TO BOATING on the MINNESOTA SIDE of LAKE SUPERIOR

Lake Superior Boating Guide



BOATING SAFETY TIPS

SMALL CRAFT HARBOR INFORMATION

PUBLIC ACCESS INFORMATION



Lake Superior Boating Guide

A guide to boating on the
Minnesota side of Lake Superior



While not an approved safety course,
this publication is recognized by the
National Association of State Boating Law
Administrators to benefit boating safety - 2006.



About this guide

The Minnesota Department of Natural Resources 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 busy international seaport and awesome 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

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

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.



• 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.



The weather can and does change suddenly on Lake Superior and



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

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.

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.

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” 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.



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 for purchase from the National Ocean Survey, NOAA Distribution Division (C44), Riverdale, MD 20840, or locally through many marine dealers listed on the Web at **www.naco.faa.gov/agents.asp** or call (301) 713-2724 ext. 123.



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.

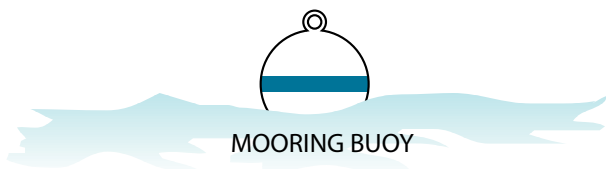
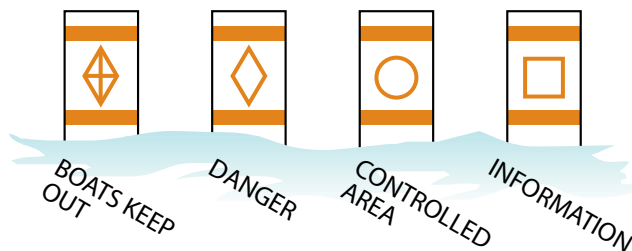
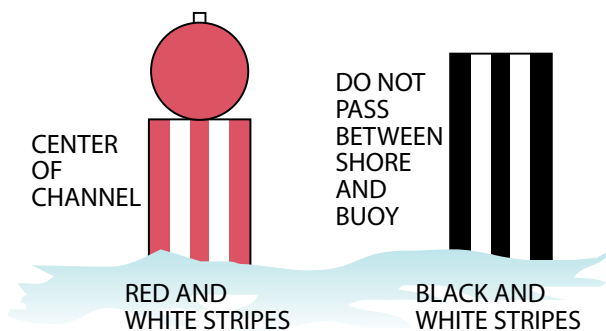
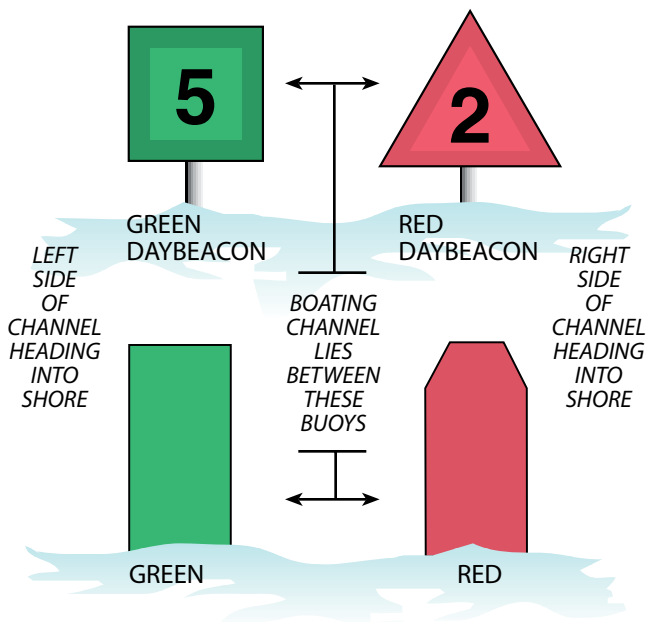


Always carry a compass and chart and know how to use them. A good marine compass is a must and you should be familiar with its use. However, compass deviation is common at certain locations on Lake Superior due to local iron ore deposits. You should inquire locally before heading out to determine if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



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

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

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.

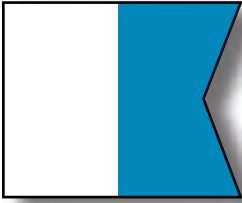




DIVERS' FLAG

and divers must stay within 50 feet (measured horizontally) from the red and white divers' 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.



ALFA FLAG

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 divers' flag.

Staying out of Trouble

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 stay clear of trouble once you get on the lake.

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

- **"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 high 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 (remember the climactic scene in “A Perfect Storm”?).

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





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.

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.

• **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.

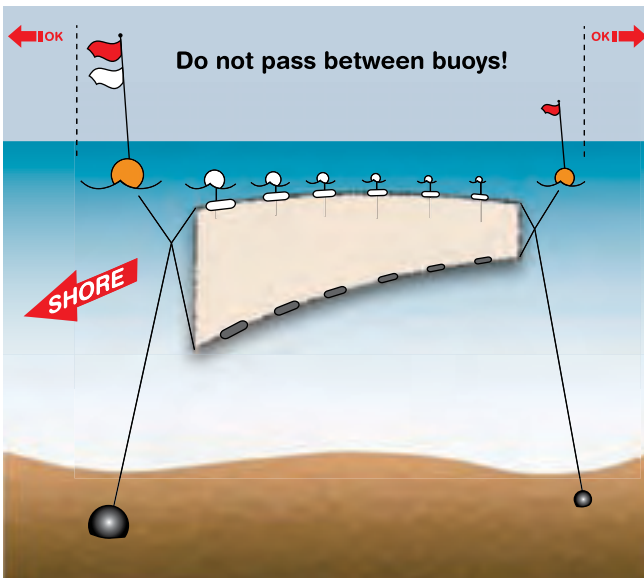


- **Commercial Fishing Nets**

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 600-900 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.)

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

• Engine Breakdown

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. Researchers have found that cold water saps body heat about 25 times faster than air of the same temperature so keep as much of your body out of the water as possible.

- **Hypothermia**

Hypothermia is an ever-present danger on Lake Superior. It is a lowering of the body's core temperature caused by immersion in cold water (less than 70 degrees F.) or, out of the water, by a combination of wet, cold and windy weather. If your inner core temperature drops more than 20 degrees F., death will soon follow.

Except for shallow bays and beaches, the water

temperature in the lake seldom reaches 55 degrees F., even during the hottest summer weather. Should you fall in, even at this temperature, your survival time without a personal flotation device (PFD or life vest) would be, on average, less than two hours.

THE EFFECTS OF HYPOTHERMIA CAN BE SLOWED BY ASSUMING THE HEAT ESCAPE LESSENING POSITION OR "H.E.L.P."



There are certain steps you can take to increase survival time, however.

Wear a U.S. Coast Guard approved PFD when you are on the lake. We can't overemphasize that wearing a PFD will give you a better chance of survival after an accident. (PFDs are now designed to be practical and stylish, some as fishing vests and full-sleeved float coats.) If you do fall in, they 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 PFDs. Yellow and orange are much easier to spot from the air or from a distance on the surface than more muted colors.

Wear a U.S. Coast Guard approved personal flotation device (PFD or life vest) when you are on the lake. We can't overemphasize that wearing a PFD will give you a better chance of survival after an accident.

If you do enter the water, try to climb back in 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 much more quickly than air. 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 PFD, 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 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 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 hypothermia 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.

Re-warm the victim by utilizing body-to-body contact in a sleeping bag with several people to alternate as "re-warmers." If using body-to-body re-warming, there should be two re-warmers, making a "sandwich" with the victim as the middle. A good place to re-warm is a heated room, boat cabin or, if

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



possible, a warm (not hot) 105 degree-110 degree F. 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 hypothermia.

RE-WARM THE VICTIM BY THE BEST POSSIBLE METHOD, UTILIZING BODY-TO-BODY CONTACT IN A SLEEPING BAG WITH SEVERAL PEOPLE TO ALTERNATE AS "RE-WARMERS."

Storms

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

- **Put on your PFD (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, PFD, 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 PFDs 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 54.)** 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 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.

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

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.



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 (around 2009 in the Great Lakes) 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?**

You must have a Ship Station License for your radio before operation. An Operator's Permit is only required if you dock in a foreign port. To obtain forms and additional information contact the FCC at (202) 418-3676.

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.

Thanks to the U.S. Coast Guard for providing much of the marine radio information above.

- **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.



- **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.

WARNING!

Do not approach within 100 yards of any U.S. naval vessel. If you need to pass within 100 yards of a U.S. naval vessel in order to ensure a safe passage in accordance with the Navigation Rules, you must contact the U.S. naval vessel or the Coast Guard escort vessel on VHF-FM channel 16.

OPERATE AT MINIMUM SPEED

You must operate at minimum speed within 500 yards of any U.S. naval vessel and proceed as directed by the Commanding Officer or the official patrol.

Violations of the Naval Vessel Protection Zone are a felony offense, punishable by up to 6 years in prison and/or up to \$250,000 in fines



Equipment List

• Required by Law for Motorboats

- There isn't enough space in this booklet for a complete listing of state and federal boating regulations. Please obtain the Minnesota Boating Guide, available from the MN DNR at 1-888-MINNDNR and the U.S. Coast Guard's Federal Requirements for Recreational Boats, by calling (800) 368-5647 for a more complete list.

- **Personal Flotation Devices (PFD).** One wearable PFD (life vest) 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 throwable Type IV flotation device immediately available. PFDs should be assigned and fitted to specific users. (Experts recommend float coats and survival suits during colder months to provide hypothermia protection.)
- **Children under ten are required to wear a PFD** 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 PFD.
- **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.)**



• 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**



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	76.6
Tofte	82.6
Grand Marais	108.8
Horseshoe Bay	129.7
Grand Portage	145.9



Rice's Point

Developed in the early 1980s, and upgraded in 1988 and 1999, this access facility is located within the Duluth Superior Harbor, under the Blatnik Bridge. This DNR facility was developed in cooperation with the City of Duluth. The city provides the daily maintenance, the DNR provides oversight and capital improvements.

Location:

Within Duluth/Superior Harbor.

Amenities:

- **4 ramps**
- **2 boarding docks, 2 courtesy docks**
- **Paved parking to accommodate approximately 80 car/trailers**
- **Portable restrooms including one ADA accessible unit**
- **No public phone**
- **Fishing pier adjacent**
- **Launch protection is unnecessary due to the location within the harbor**





McQuade Protected Public Access

When completed this facility will provide a public boat access and a protected safe harbor. The facility is being developed in cooperation with St. Louis County, Duluth and Lakewood Townships, the City of Duluth, and the U.S. Army Corps of Engineers.

Location:

10.5 miles from the Duluth Harbor entry.

Amenities: (opening 2007)

- **3 ramps**
- **2 docks**
- **Paved parking for 69 car/trailers**
- **Public restrooms**
- **Fish cleaning station**
- **Public phone**
- **Information kiosk**
- **Shore fishing**
- **Picnic area**
- **3 acre calm water basin provided by low berm-style breakwalls**
- **Lodging and restaurants in vicinity**





APPROXIMATE GPS COORDINATES: LAT 46° 52.77 LON 91° 55.15



ARTIST'S RENDERING OF PROPOSED CONSTRUCTION

A NOTE ABOUT THE GPS COORDINATES:
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Knife River Harbor & Marina

This facility was developed in the early 1970s. Previously operated as a private marina under Lake County ownership, the DNR acquired the property in 2001 to assure public access to the lake and continue as a link in the North Shore harbor system. This 100 slip, full-service marina with a public boat access is operated by a concessionaire. Future improvements and redevelopment plans are being discussed in cooperation with the Knife River Marina Advisory Board, and the U.S. Army Corps of Engineers.

Location:

18.5 miles from the Duluth Harbor entry.

Contact Information:

(218) 834-6076

info@knife-river-marina.com

www.knife-river-marina.com

Amenities:

- **Double ramp**
- **2 docks: 1 fuel dock and 1 roll-in**
- **Paved and gravel parking for 25 car/trailers**
- **Portable restrooms**
- **Public beach adjacent to harbor**
- **Full service marina including: fuel, boat pump-out, public phone, transient slips, boat repair, haul out, and winter storage**
- **Launch area is within the 4.5 acre basin**





APPROXIMATE GPS COORDINATES: LAT 46° 56.65 LON 91° 46.66



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Two Harbors

This DNR facility is located in the City of Two Harbors on Agate Bay, within the commercial shipping harbor, approximately 26 miles from the Duluth entry. It was constructed in the early 1980s in cooperation with the City of Two Harbors. The city provides daily maintenance.

Future plans call for a crib dock to provide additional protection for the launch area. Other plans include a 7+ acre marina facility and safe harbor, adjacent to the launch area.

Location:

25.3 miles from the Duluth Harbor entry.

Amenities:

- **3 ramps**
- **2 docks**
- **Paved parking for 60+ car/trailers**
- **Portable restrooms**
- **No public phone on site**
- **Area trails, attractions, walking distance to downtown, shore fishing**





APPROXIMATE GPS COORDINATES: LAT 47° 0.61 LON 91° 40.41



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Twin Points

This DNR facility is about halfway between Two Harbors and Silver Bay. Construction was completed in 2002; it is located adjacent to a scientific and natural area, providing an exceptional scenic experience on the shore of Lake Superior.

Location:

41.6 miles from the Duluth Harbor entry.

Amenities:

- **2 ramps**
- **Paved parking for 20+ car/trailers**
- **Portable restrooms**
- **No public phone**
- **Area trails, walking paths, shore fishing**
- **150' crib dock provides protection for the launch ramp**





APPROXIMATE GPS COORDINATES: LAT 47° 9.81 LON 91° 25.52



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Silver Bay

This safe harbor and marina facility, completed in 1999, includes a marina, a public access and a day use park. It was built in cooperation with the City of Silver Bay and the U.S. Army Corps of Engineers. The City of Silver Bay operates the facility, the DNR provides operational oversight and capital improvements.

The marina has 108 slips, 68 seasonal and 40 for transients or guest dockers. The marina has gas and diesel fuel, pumpouts, restrooms, shower and laundry facilities, food and beverage services, a deck and gazebo overlooking the lake are available for use by the public and marina users.

Location:

52.1 miles from the Duluth Harbor entry.

Contact Information:

(218) 226-3121

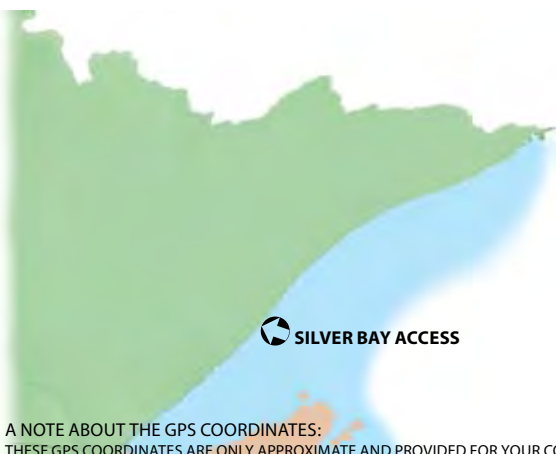
Amenities:

- **2 ramps**
- **3 docks**
- **Dock boxes**
- **Paved parking for 20+ car/trailers at the access**
- **Parking areas for marina and park users**
- **Permanent restrooms**
- **Public phone, vending machines, and food service**
- **Picnic area with additional restrooms**
- **Scuba divers' access, fish cleaning station, day use picnic area**
- **Protected launch ramps within 7 acre safe harbor**
- **110 and 220 volt power**
- **Potable water**
- **Protected launch ramps within a 7 acre safe harbor**





APPROXIMATE GPS COORDINATES: LAT 47° 15.99 LON 91° 16.49



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Taconite Harbor

Is located adjacent to the former Cliff's Erie Taconite loading facility, just south of Schroeder. Taconite Harbor was developed in 2001 to provide a protected public access and safe harbor.

Location:

76.6 miles from the Duluth Harbor entry.

Amenities:

- **2 ramps**
- **2 docks**
- **Paved access area, 5 car/trailers, gravel, 35 car/trailers**
- **Portable restrooms**
- **Shore fishing**
- **No public phone**
- **Protected launch ramps**
- **3 emergency mooring buoys**
- **1.7 acre safe harbor protection**
- **Lodging, restaurants within 2 miles**





APPROXIMATE GPS COORDINATES: LAT 47° 31.15 LON 90° 55.43



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Tofte Access

The DNR provided improvements in 1997 in cooperation with the Tofte Township. Improvements included an 85 foot breakwater to protect the launch area, a new launch ramp and improved parking. It is owned and operated by the Town of Tofte.

Location:

82.6 miles from the Duluth Harbor entry.

Amenities:

- **1 ramp**
- **1 concrete crib dock**
- **Paved parking for about 5 car/trailers**
- **Walking distance to public phones, local business**
- **Picnic area adjacent in Tofte Town Park**
- **Shore fishing**
- **Semi-protected by an 85 foot breakwater**





APPROXIMATE GPS COORDINATES: LAT 47° 34.21 LON 90° 50.19



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Grand Marais

This DNR facility is located within the City of Grand Marais, in the commercial harbor. It was developed in the early 1980s in cooperation with the City of Grand Marais. The city operates a small marina within the harbor and provides some mooring for transient boats.

The DNR is providing technical assistance to the Grand Marais Safe Harbor and Marina Advisory Committee as it investigates the development of a safe harbor and possible new or expanded marina.

Location:

108.8 miles from the Duluth Harbor entry.

Amenities:

- **2 ramps**
- **2 docks**
- **Paved parking, approximately 40 spaces car/trailers**
- **Portable restrooms**
- **Walking distance to local attractions, parks, downtown business, and public phone**
- **Lodging and restaurants**
- **Shore fishing**
- **Fuel**





APPROXIMATE GPS COORDINATES: LAT 47° 44.60 LON 90° 20.28



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Horseshoe Bay

This primitive DNR public access is located approximately 130 miles from the Duluth entry. Proposed future improvements include the addition of a crib dock to provide protection for the launch area, and a new ramp.

Location:

129.7 miles from the Duluth Harbor entry.

Amenities:

- **1 ramp**
- **1 dock**
- **Gravel parking for 10 car/trailers**
- **Restrooms**
- **No public phone**
- **Beautiful natural / scenic surroundings**
- **Unprotected ramp**





APPROXIMATE GPS COORDINATES: LAT 47° 50.90 LON 89° 56.04



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Grand Portage

The Grand Portage Band of the Chippewa own and operate this marina and access which is located approximately 146 miles from the Duluth entry. The marina has approximately 22 slips, it is located within the Grand Portage Bay which provides some protection for boaters, although the bay itself is shallow and in spots may impede deeper draft boat navigation. The Grand Portage Band also operates the Voyager Marina across Grand Portage Bay, it has a boat launch and parking. There is a charge for daily launching and parking at both facilities.

Location:

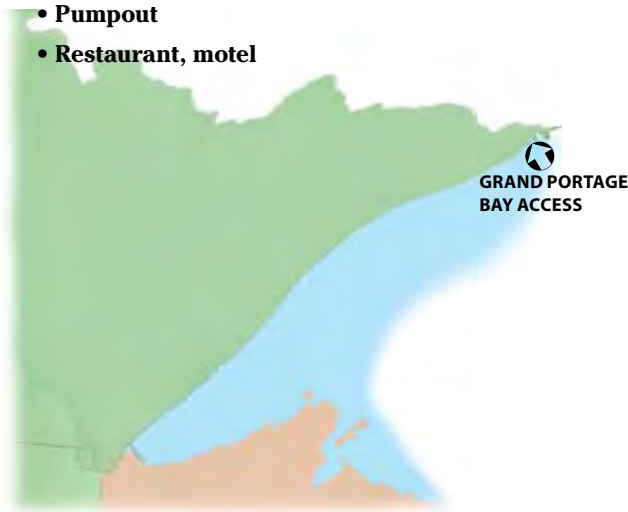
145.9 miles from the Duluth Harbor entry.

Contact Information:

(218) 475-2476

Amenities:

- **Launch ramp and docking**
- **Gravel parking for 40+ car/trailers**
- **Restroom facilities**
- **Fuel, repair, other marina amenities**
- **Public phone**
- **RV campground, convenience store**
- **Pumpout**
- **Restaurant, motel**





APPROXIMATE GPS COORDINATES: LAT 47° 57.19 LON 89° 38.89



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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; pager; 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.

CONTACT INFORMATION

MN DNR Information Center

500 Lafayette Road
St. Paul, MN 55155-4040
(651) 296-6157
1-888-MINNDNR (646-6367)
Telecommunications Device for the Deaf
(651) 296-5484 1-800-657-3929
info@dnr.state.mn.us
www.dnr.state.mn.us

MN DNR Trails & Waterways Harbors Program

Two Harbors, MN (218) 834-6644

Boating Safety Information

Minnesota DNR – www.dnr.state.mn.us/boating
U.S. Coast Guard – www.uscgboating.org
U.S. Coast Guard – boating safety recalls, report
boat defects (800) 368-5647

Classroom Boating Courses and Vessel Safety Checks

U.S. Coast Guard Auxiliary - www.cgaux.org
U.S. Power Squadrons - www.usps.org
Boating safety classroom course location info line
(800) 336-2628

Emergency Contacts:

U.S. Coast Guard Station Duluth

(218) 720-5412 (extension “0” for distress calls)
VHF-FM marine radio channel 16 for distress calls

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

(218) 387-2574
VHF-FM marine radio channel 16 for distress calls



CONTACT INFORMATION continued

St. Louis County Sheriff's Office

(218) 726-2340

Lake County Sheriff's Office

(218) 834-8386

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.



CREDITS:

Written by Tim Smalley and Kim Elverum – MN DNR
Boat and Water Safety

Public access information: Peter Hark – MN DNR
Trails and Waterways

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Layout and Design: Steve Seefeldt

Thanks to the U.S. Coast Guard for providing most of
the marine radio information on pages 23-26.

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assistance, sexual orientation, age or disability.
Discrimination inquires should be sent to MN DNR,
500 Lafayette Rd., St. Paul, MN 55155-4031 or the
Office of Civil Rights, U.S. Coast Guard, 2100 2nd St.
SW, Washington D.C. 20593-0001.



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This information is available in alternative formats by
contacting the MN DNR.

Information in this guide was compiled in 2005





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**