

Being prepared for Kayaking on Lake Superior

By Sam Raymond, owner of the *Keweenaw Adventure Company*

The many moods of Lake Superior can change in short order. Paddlers must be aware of the risks, be prepared with the proper equipment, know their personal abilities and limitations and keep a keen eye on the current marine forecast and changing weather conditions to ensure for a fun and safe time while on the BIG Lake.

The number one hazard of sea kayaking on Lake Superior is cold-water immersion and hypothermia. Even on a hot summer day, paddlers need to prepare for the possibility of a capsized by being dressed appropriately, as the body's core temperature cools at a significantly faster rate when immersed in cold water. Depending on the water temperature, there is a useful window of time before the affects of hypothermia sets in causing one to lose coordination, good decision making and ultimately consciousness. A useful chart is as follows:

Water Temperature	Useful Work	Unconscious
32.5° F (0.3° C)	Less than 5 minutes	Less than 15 minutes
40° F (4.5° C)	7.5 minutes	30 minutes
50° F (10° C)	15 minutes	60 minutes
60° F (15° C)	30 minutes	2 hours
70° F (20° C)	45 minutes	3 hours

The Effect of Water Temperature on the Body (Adapted from the findings of A.F. Davidson, *American Whitewater*, 1966)

When considering whether or not to venture out on to Lake Superior, there is the “100-degree rule” to keep in mind – if the water temperature plus air temperature do not equal 100°F, conditions are questionable and special precautions should be taken.

Even if you're an experienced paddler, it's always a good rule of thumb to dress for immersion. It is recommended that paddlers wear a wetsuit 2-3 millimeters thick during the summer months – a sleeveless “Farmer John” or “Farmer Jane” works great and are available in full length (to the ankles) and cut-off, “shortie” designs. A long sleeve nylon, Gore-tex or fleece jacket may be slipped over the wetsuit for extra warmth when needed. Kayakers paddling in the early Spring season or late Fall should go a step further by wearing a dry-suit or a wetsuit that is 5-6 millimeters thick. It is also important to wear a *synthetic* base layer(s) such as polyester, polypropylene, capaliene or fleece under a wet or dry-suit as these materials all have an insulating value, even if wet. Cotton should be avoided as wet cotton clothing actually pulls heat away from the body and accelerates the affects of hypothermia – remember, “Cotton Kills.” The effects of hypothermia can be slowed by being properly dressed, allowing more useable time in the water if immersed.

Kayaks should be equipped with front and rear floatation in the event of a capsized. Many sea kayaks are equipped with front and rear hatches with bulkheads that essentially create an air pocket and provide floatation even when capsized. Other recreational-type kayaks may require aftermarket float-bags be added in the bow and stern to ensure they float in the event of a capsized. It is also a good idea for kayaks to be equipped with a rudder or a skeg to assist in tracking in waves, especially for beam (side) wind or following sea conditions. Paddlers are required by the U.S. Coast Guard to wear a Personal Floatation Device (PFD) at all times. A *paddle-float* is an essential safety device paddlers should always have accessible if a self-rescue is required.

Paddlers also need to be aware of their personal paddling abilities and limitations. It is essential to be familiar with the “wet exit” and assisted and self-rescue methods, and paddlers should regularly practice these procedures to minimize time spent in cold water in the event of a capsized. It's always good to paddle with a buddy and going solo should be avoided.

Wind and Waves are another consideration when planning an outing on Lake Superior. Wind direction, wind velocity and projected wave heights must be taken into consideration with where you plan to paddle and it's always a good idea to have a current marine forecast. Keep in mind that a 2-foot wave is essentially eye-level when sitting in a kayak. It's good for paddlers to be aware of wind speeds and what characteristics are associated with each level to help one to better identify the current conditions.

A good resource is the *Beaufort Wind Scale* as follows:

Force	Wind Speed (knots)	Wind Description	Water Description	Land Description
0	< 1	Calm	Flat calm and mirror-like	Calm, nothing stirring
1	1-3	Light Air	Ripples	Smoke drift indicates wind direction, still wind vanes
2	4-6	Light Breeze	Small wavelets	Wind felt on face, leaves rustle, vanes begin to move
3	7-10	Gentle Breeze	Scattered whitecaps & large wavelets	Leaves and small twigs in motion
4	11-16	Moderate Breeze	Lots of whitecaps; small waves lengthen	Dust and leaves lifted, small tree branches move
5	17-21	Fresh Breeze	Mostly whitecaps with spray; moderate waves	Flag ripple, small trees begin to sway
6	22-27	Strong Breeze	Whitecaps everywhere; more spray	Larger tree branches moving, whistling in wires
7	28-33	Near Gale	Foam from waves begins blowing in streaks; sea heaps up	Whole trees moving, resistance felt walking
8	34-40	Gale	Foam is blown in well-defined streaks; crests begin breaking	Twigs break off trees, trouble making headway on foot
9	41-47	Strong Gale	Dense streaks of foam; spray may reduce visibility	Slight structural damage occurs, shingles blows off roofs
10	48-55	Storm/Whole Gale	Sea begins to roll and look white; visibility poor	Trees broken or uprooted, structural damage to buildings
11	56-63	Violent Storm	Sea Covered with white foam patches; large waves	Widespread damage
12	64+	Hurricane	Air filled with foam and spray, almost no visibility	Major, widespread damage

Developed in 1805 by Sir Francis Beaufort, U.K. Royal Navy

Paddlers need to be aware of thunderstorms that can brew up on short order and should get off the water at the first indication of any thunder or lightning – lightning can be a killer, especially when out on the water.

Nautical charts should be referenced and local knowledge consulted when paddling in unfamiliar areas, as there are many segments all around the Lake with cliffs, bedrock and limited landing areas, where reaching terra-firma can be difficult, if not impossible during windy conditions.

Kayakers on the BIG Lake should also be prepared with proper signaling devices. There are a wide range of audible and visual signals ranging from simple to complex in a variety of price ranges that are appropriate for a variety of distances, day or night. The USGC requires each vessel have an audible signal on board...a safety whistle meets this requirement for kayakers. It is recommended that each group carry a VHF/Marine radio capable of two-way emergency communication with other boaters. Cell phones are good, although paddlers need to be aware of many areas in the UP with no coverage. Leaving a “Float Plan” with a trusted person not going with you on the water is a good idea so that someone knows a description of your group, kayaks, safety equipment, an idea of when you expect to be where and can call for help if you do not return by an agreed upon time.

The scenery while kayaking on Lake Superior is world-class and such an excursion is sure to provide a memorable experience. Being aware of the risks and being properly prepared can be the difference between a fun time and a bad, even life and death situation. Novice paddlers should seek professional instruction from an ACA (*American Canoe Association*) *Certified Instructor* or join a guided tour with a professional outfitter. A classic saying that holds to be true when presented with marginal conditions or marine forecast: “If in doubt, wait it out”!