

ORGT Kayak Touring Coastal Kayaking Class Notes

Considerations for Sand and Salt Water

- 1 gallon fresh water per day
- First 2-4 gallons can be gallon sized milk jugs. Thereafter you'll need 2 liter water bottles or Gatorade bottles
- Sand and salt may damage / corrode your stove, your 'biners, your pocket knife, headlamp and especially your camera!
- Ensolite pads are better than Thermarests

Nautical Rules of the Road

- Vessels under power yield to vessels under sail, which yield to vessels under manual power
- Vessels keep to the right in narrow passages
- Vessels limited to a channel may not be hampered by a "privileged" vessel
- When meeting at an angle, the vessel to starboard has the right of way (assuming vessels are of the same class)
- Coastal law required you to have a life jacket, and to display a light at night.

Implications

- Despite the fact that we have right of way over freighters, we seldom use it! They are moving faster than you think, they may not be able to see you, and they are slow to respond. You need to stay out of their way!
- In a shipping channel, you **do not** have the right of way, since the larger vessel cannot swerve out of the channel to miss you.
- Smaller pleasure boats under power may present a greater hazard to sea kayakers; Since they are not limited to shipping channels, their movements are less predictable. They are traveling at high speeds, and they may be "partying".
- Cross perpendicular to a shipping channel whenever possible.
- If you need to travel along a channel, stay to one side, in shallow water if possible.
- Take steps to make yourself visible (bright colored boats, gear).
- Be polite to power boaters. You may need their help someday!
- If a vessel shows itself to be on the same bearing in relation to yours over time, you are on a collision course!

Wind

- Wind is named for the direction from which it comes.
- Exception: onshore / offshore wind
- Along coast in fair weather, mornings are often calm. Sea breeze (onshore wind) picks up in afternoon.

Wind and Water

- Wind, or local weather, creates seas (as opposed to swells, which are "old" or distant).
- Seas are affected by velocity of wind, duration of wind, and distance of wind over water (fetch).
- Wind opposing a current creates chop.
- Wind opposing swells creates bigger, steeper waves.

Waves

- Waves break when they reach a depth of about half their height. This can happen at shore, on sandbars, or on submerged rocks.
- Breakers create a chaotic release of energy which can be a hazard to boaters! Sea kayakers should learn to read water and stay clear of surf zones. We should practice launching and landing in surf.

- Waves reflect off cliffs and headlands.
- Waves refract around islands and points.
- Reflected and refracted waves cause chaotic wave conditions called clapotis.
- Clapotis, combined with weird wind and current changes, create tricky and deceptive conditions off headlands or points.

Paddling Tips

- When a wave approaches from the side, tilt your boat slightly toward the wave, and place your paddle in the wave for more stability.
- When being side-surfed by a breaker, “lean” into it and high brace in the froth. This is one way to land on a beach.
- Most paddlers are more comfortable paddling into the oncoming waves, since you can paddle over or through them. Unfortunately, this may not be the direction you need to go!
- When you can, head directly into a big wave or breaker. Be aggressive. Lean forward and reach into the wave with your paddle. Do not hold your paddle (or your body) up to face the wave. This creates more surface area for the wave to push against.
- Another approach to paddling through a breaker (assuming you can roll) is simply to flip and allow it to wash over you. This may be useful in a surf launch.
- A “following” sea is uncomfortable because you can’t see the waves coming and they may surf you. Strive to get practice under benign conditions before you have to paddle in a following sea.

Tides

- Tides are caused by the effect of the moon’s (and the sun’s) gravitational pull on the earth, which creates “bulges” of water. As the earth spins through these bulges, the corresponding locations on her surface experience a high tide.
- There are 2 high tides and 2 low tides per day, about 6 hours apart. The cycle lags by about 50 minutes each day, due to the moon’s “schedule”.
- The “Georgia bight” experiences relatively large tides (5-9 feet). Since the marshes drain vast amounts of water with each cycle, there are strong currents involved.
- Tide charts work! Learn to use them!
- Tidal currents are not always predictable (to us) around marsh rivers and barrier islands. Local knowledge and tidal current charts may help.
- Rule of twelves: During the first hour after high tide, 1/12 of the tidal water volume will drain. Second hour = 2/12. Third and fourth hour = 3/12 each. Fifth hour = 2/12. Sixth hour = 1/12.
- If you are paddling at 2 knots against a 1 knot current, you will progress at 1 knot: This would double your travel time!

Charts

- Charts are made for big boat navigation. They are accurate for channels and aids to navigation. They may not be accurate in places a sea kayak would go.
- Large scale charts show more detail, but may not the distant lighthouse you are using as your landmark!
- USGA topo maps help with land features, but will not be accurate with respect to water depth. They show no aids to navigation.
- One degree of latitude = 60 minutes. One minute of latitude = 1 nautical mile (not the case w longitude)

Things to Identify on Charts

- Compass Rose
- Dry land (brown)
- Marsh (green)
- Tidal zones (dotted line: could be beach or muck!)
- Sandbars / breakers
- Towers and tanks
- Aids to navigation (nuns, cans, buoys, lights)
- Docks

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Reference: Fundamentals of Coastal Kayaking Manual for Instructors, American Canoe Association
National Coastal Kayaking Committee, Ed. Brian Price, May 1991