

DRI Paddling Safety Checklist

A Guideline for using Kayaks on Flat Water¹ For Field Research Projects

The following information is provided as a guideline to DRI personnel who use a kayak as part of their fieldwork. A decision to use a kayak for DRI field projects should only be made after an appropriate safety assessment has been completed by the project PI/field team that indicates this is the most appropriate water vehicle for the job/tasks to be performed. In addition, each individual who uses a kayak on a research project must be cognizant of their own capabilities and limitations. S/he must have additional training/practice in kayaking in a controlled environment in order to bolster skills and knowledge necessary to do the job safely and with confidence.

- Make sure somebody knows where you are and when you will return. Filing a written float plan or utilizing the DEFEND (DRI Employee Field trip Emergency Notification Delivery) system is the preferred method. This step needs to be done even if you have a personal locator beacon (PLB), Emergency Positioning Indicating Radio Beacon (EPIRB), satellite or cell phone or other electronic notification device.
- In areas frequented by commercial boats and larger yachts, a waterproof, floating VHF two-way communication device is the best first choice to use for rescue options because most of the time, another boater is far closer to you than the Search and Rescue group, and can provide immediate assistance if you can contact them.
- Check weather (and tide conditions, if applicable) and plan accordingly. Ensure you have the correct kayak for the expected conditions. Sea kayaks with spray skirts are safer where winds and waves are a potential and are mandatory when operating a kayak in conditions when high winds or big waves are likely. (Note: even a passing boat can create waves that can top a kayak's rim and result in significant water in the cockpit). Be sure the spray skirt fits you and the kayak. Skirts are standard mandatory equipment on non-SOT (sit on top) kayaks. A skirt is also essential for pumping out a fully swamped boat in any kind of wave conditions because a bailer will not work when waves are coming over the cockpit.
- Operators must have specialized training in the use of the kayak employed. . Make sure you know how to pop off the spray skirt and wet exit the kayak. Learn re-entry techniques (including deep water re-entry) BEFORE they are needed, including knowing how to re-enter your craft yourself and how to assist others back into their craft. Practice self-rescue techniques for the type of kayak you are using and the area where you will be working. (John Lull's "Sea Kayaking Safety and Rescue" is a good reference for kayaking self- and small group rescue information.)
- Inspect the kayak before launching. Float bags for both the bow and stern are mandatory. Verify that your buoyancy devices are functional and clipped or tied into place so they can't float out if you swamp the boat.
- Kayaks are notoriously tippy. When loading, make sure the load is balanced and the craft is not overloaded or top heavy. Know the best way to enter a kayak to avoid flipping it. Do not stand or lean over in a kayak because it could cause you to capsize. Keep your weight low and balanced in the center of the craft.
- If you find yourself in the water by your swamped boat, stay with it; because you are more visible that way. Be aware that winds can easily separate you from your boat. Hang on to your boat unless doing so would expose you to a potential crushing injury (e.g., surf zone).

¹ The information presented in the guideline is geared toward flat water kayaking. Kayaking on moving water will require additional safety practices to be employed.

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- Always paddle with a buddy. (Separate kayaks are preferable since two people in the same kayak would both be affected if the kayak swamps or is otherwise adversely impacted.)
- Restrict research on water to only individuals who are competent swimmers (must be able to handle themselves underwater and in moving water, surf or current). At least two field researchers on every trip should be trained in first aid and CPR.
- Wear appropriate clothing for expected weather and proper footwear (preferably closed-toed shoes). Assume other boaters will have difficulty seeing you so ensure your clothing and life jacket are brightly colored. Be sure you dress for the water, not the air temperature. Cold water kills and cold shock can happen with sudden immersion in cold water, even at temperatures above 50°F. Standard recommendations for how to dress for kayaking are difficult to devise because there is no single solution for every situation and person. Some general guideline to consider when selecting clothing for your trip include:
 - Clothing requirements should be assessed for each trip based on expected weather, water and air temperatures.
 - Children, thinner people and people with infirmities need more protection
 - Dress in layers using a 3 layer system: base (thin wicking) layer, insulation (non-water absorbent) layer and outer layer (of material designed to help prevent convection of fluids and conduction of heat).
 - Avoid wearing cotton in cool weather.
 - When water temperatures are below 70°F, insulating clothing must be considered. Anytime the water temperature is less than 60°F, wear specialized insulating clothing (wetsuit or drysuit) capable of protecting you while in the water. A Farmer John/Jane wet suit topped with a paddle jacket will likely suffice for most research projects involving water temperatures between 55° and 70°F.
 - Be sure you have extra clothing in a dry bag.
 - Don't forget protection for your hands, feet and head. (An uncovered head, while making up only about 9% of your body's surface area will radiate almost 50% of your body's heat.)
- Gloves will help keep hands warm and will help prevent tendonitis, but not all styles allow for finger dexterity, so carry several pairs of neoprene fingered gloves for times when full use of the hands is needed. On the other hand, pogies, neoprene sheathes attached directly to the paddle, allow you to have bare hands directly on the paddle shaft, thus enabling maximum dexterity when you have to remove your hand from the shaft (although some people find them restrictive).
- A Personal Flotation Device (PFD) equipped with a clip-on emergency (flashing) water-resistant light and small dry bag with waterproof matches, fire starter, mirror, whistle or other signaling devices must be worn at all times. Ensure your sound alerting device can be heard for at least 4-6 seconds for a distance of ½ mile.
- Additional equipment **required** includes
 - Bilge pump and bailer.
 - Compass and/or GPS and a good map (critical if on a river).

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- Spare paddle and self-rescue devices, such as paddle float, slings, tow ropes, a couple of carabineer clips, throw bag and ropes.
- Duct tape/small repair kit and multipurpose repair tool.
- A river (rescue) knife clipped to belt or PRF.
- Sunscreen, UV eye protection (i.e. good quality sunglasses on a strap to keep them on) and a wide-brim hat. Helmets must be worn instead of a hat if moving water (rivers, surf zone, strong tide) is expected.
- First aid kit. Include any personal prescription medications that might be needed if an unexpected delay in returning occurs. Water purifying tablets may also come in handy.
- Lots of drinking water and high energy snacks. More food may be required depending on the expected length of the trip. A thermos containing hot drink or soup should be considered when the weather is cold.
- Dry bag to keep emergency supplies, extra clothing, electronics, etc. dry during your trip
- Ropes or bungee cords to tie dry bag, coolers, etc. to craft.

Note: A VHF marine weather radio is recommended for use in keeping track of weather conditions.

- Monitor the behavior of your project co-workers and be aware of any pre-existing medical conditions they may have. Know the signs and symptoms of dehydration, heat stress (onset of both is common when the weather is warm), hypothermia and high altitude sickness and know how to treat these in the field. (More information on these topics, is available on the DRI field safety web page.)
- When on the water, keep a lookout for hazards (floating logs, bridge pilings, other watercraft, change in weather or current conditions, etc.). Get off the water as quickly as possible if a thunder storm rolls in. (More information on lightning safety is posted on the [DRI field safety web page.](#))
- Be aware of the wind patterns in the area you are paddling. It is much more difficult to paddle against a head wind, so try to avoid getting far down-wind of your home port. Try to put in at a location which is likely to be down-wind of your work area when you are ready to home.
- Be aware that topography plays a role in wind and water conditions, especially in shallows, beach surf, headlands, cliffs and river mouths. Large lakes pose the same hazards (except for tides) as the sea, having steeper waves that are more likely to break. In addition, winds heading in the opposite direction of a tide always create steeper, choppier water conditions.
- Take care when traveling with your small boat on your vehicle. Use the right racks for your vehicle and secure the boat properly

For more general kayaking safety information, see the American Canoeing Associations Top Ten Safety Tips, http://www.americancanoe.org/?page=top_10.

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