

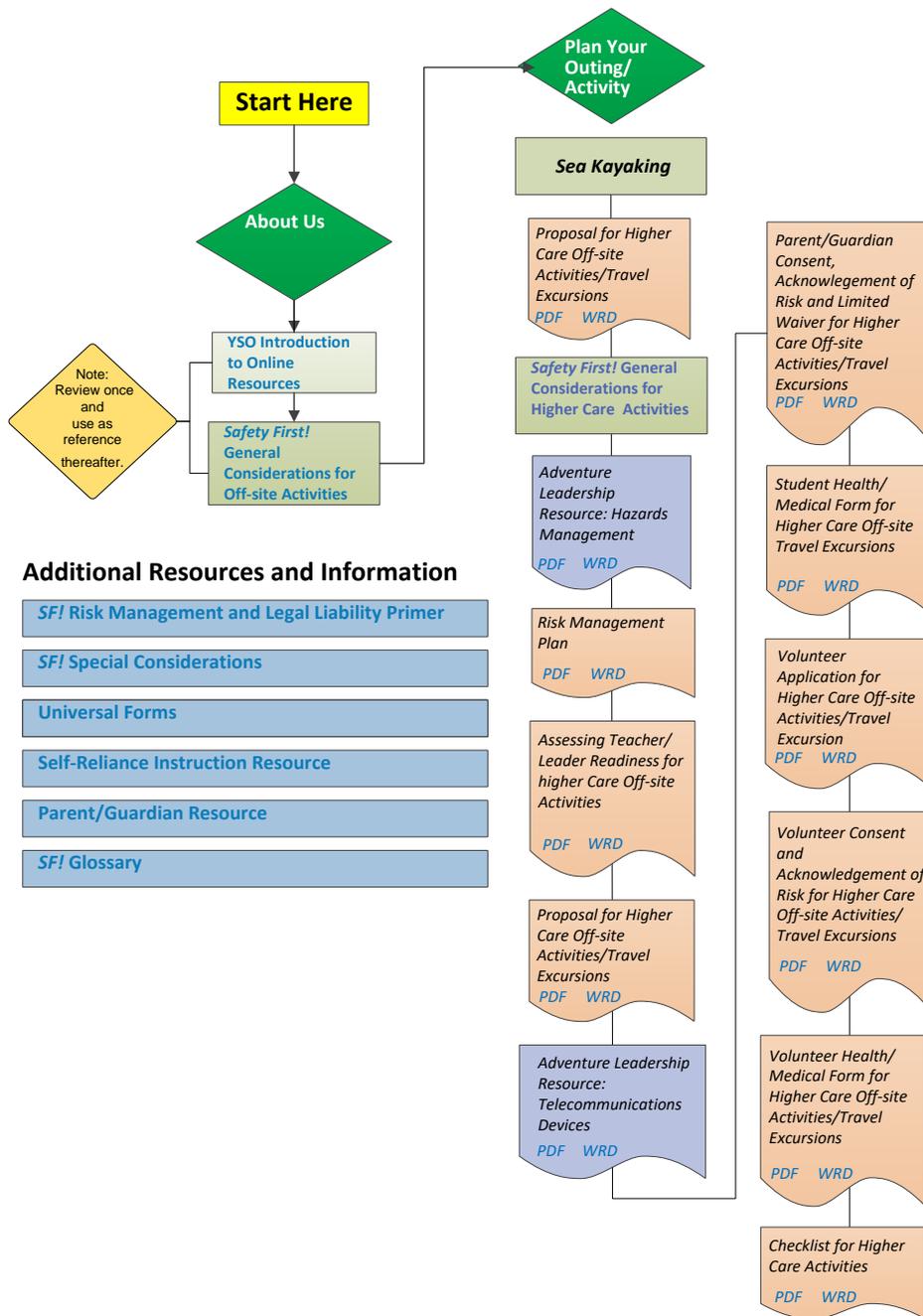
# Sea Kayaking (Higher Risk)

## Flow Chart, Steps to Success, and Safety Guidelines

Day Tripping (Higher Care) Grade 7+  
 Overnight Tripping Grade 8+  
 Extended Tripping Grade 9+

Click on the hyperlink at the bottom of the column that best describes the context of the activity that you are planning.

Sea Kayaking (Low Risk)	Sea Kayaking (Higher Care)
<p><b>Criteria:</b></p> <ul style="list-style-type: none"> <li>• Local, confined venue (e.g., pond, small lake or confined bay)</li> <li>• Generally of short duration (less than 3 hours)</li> <li>• Low inherent risk in the activity</li> <li>• Clear boundaries for activity</li> <li>• Near support services: e.g., buildings or vehicles accessible;</li> <li>• Close to emergency services: less than 20 minutes from EMS arrival on-site;</li> <li>• Teachers/leaders do not need significant specialized training to implement the guidelines</li> <li>• Minimal preparation of students required; less than an hour</li> </ul>	<p><b>Criteria:</b></p> <ul style="list-style-type: none"> <li>• Substantial body of water (e.g., open ocean)</li> <li>• Semi-remote to remote location: out of the community</li> <li>• Higher inherent risk in the activity;</li> <li>• Lack of clear boundaries for activity</li> <li>• Potentially far from support services: buildings and/or vehicles not immediately accessible</li> <li>• Not close to emergency services: more than 20 minutes from EMS arrival on-site</li> <li>• Teachers/leaders need specific training in the activity to conduct it safely</li> <li>• Students need significant preparation; more than an hour</li> </ul>



# Safety Guidelines

## Kayaking Higher Risk

British Columbia is in quite a unique position in Western Canada to expose students to sea kayaking. Travel on the open ocean comes with risks that require a high level of preparation. A higher care venture in this activity should be preceded with formal instruction of the students and a low risk day trip experience.

### ***Known Potential Risks***

- Injuries related to motor vehicle incidents en route to and from activity area;
- Becoming lost or separated from the group or the group becoming split up;
- Injuries related to slips, trips, and falls in the program area or en-route to/from it;
- Injuries related to capsizing of craft or falling out of craft;
- Injuries related to collisions with movable (e.g., other boats or paddles) or immovable (e.g., rock) objects;
- Injuries related to equipment (poor fit, improper adjustment, malfunction, or becoming tangled in apparatus; e.g., foot snag in bailer cord);
- Injuries related to lifting, carrying, walking with, or putting down the craft and/or packs;
- Other injuries (e.g., blisters, sprains, strains; acute or overuse injuries/conditions);
- Drowning or near drowning;
- Injuries related to the physical demands of the activity and/or lack of activity skill;
- Weather changes creating adverse conditions (e.g., cold, wind, precipitation);
- Hypothermia due to remaining in cool/cold water too long or due to insufficient clothing;
- Loss of manual dexterity in hands during cold and wet weather;
- Hyperthermia (e.g., overheating) due to insufficient hydration, overdressing and/or overexertion;
- Illness related to poor personal hygiene, or failure to purify drinking water;
- Allergic reactions to natural substances (e.g., wasp or bee stings or jelly fish stings in ocean);
- Injuries related to encounters with animals and plants in the environment;
- Psychological injury due to anxiety or embarrassment (e.g., re: lack of skill, body image);
- Complications of an injury/illness related to remoteness and time to emergency services; and
- Other risks normally associated with participation in the activity

## Common Risk Mitigation Strategies

### Sea Kayaking Day Tripping (Higher Care)

#### Teacher/Leader Readiness

- The teacher/leader must be competent to organize the sea kayaking activity; to demonstrate, instruct and supervise it; and to effect rescue and emergency procedures as necessary or contract out a service provider with this capacity. The longer or more remote the activity, the higher the more knowledge, skill, fitness and experience the leader must have.
- The teacher/leader and assistant leaders must be capable swimmers, able to manage themselves confidently in the water in the selected environment while wearing a PFD. At a minimum they should be able to successfully complete a survival swim test (roll into the water, tread 1 min., swim 50 m. any style while wearing a PFD and no goggles).
- If sea kayaking on the ocean, the teacher/leader must have knowledge, skill and experience related to:
  - understanding waves, tides, river outflows, rip currents and sandbanks, beach hazards, and how these affect ocean travel,
  - understanding and avoiding sea traffic hazards (e.g., shipping lanes, ferries, float planes),
  - reading tide/current tables and nautical charts,
  - reading local winds and weather and making accurate short term forecasts,
  - navigating on and along coastal areas, including shallows, points, reefs, dealing with reduced visibility, etc.,
  - taking off and landing in manageable surf,
  - reading warning signs and flags, and dealing with ships and wakes,
  - understanding relevant ocean flora and fauna and how to minimize negative interactions with such,
  - executing rescues of self (e.g., kayak roll, paddle float rescue) and others (e.g., towing rescue, T-rescue), and
  - using the external communications system to secure weather information, make distress calls and/or engage in other important communications
- If craft are to be transported by trailer to and from the water, the individual driving the tow vehicle must have sufficient experience and skill to manage these tasks safely.
- Teachers/leaders should secure training and/or certification from the Sea Kayak Guides Alliance of BC, Association of Canadian Sea Kayaking Guides, Paddle Canada and/or other appropriate sources.
- The leader should be familiar with Transport Canada regulations for the vessel(s) in use with regard to operator certification. Such certifications depend upon whether the craft in use is designated a commercial or pleasure craft. Refer to [www.boatingsafety.ca](http://www.boatingsafety.ca)

- All assistant leaders must be capable paddlers, able to manage their own craft and render assistance to others who may require support
- At least one supervisor must have first aid training, the level dependent on the time and distance to Emergency Medical Services (See *First Aid in General Considerations for Higher Care Activities*).

## Location

- Guidelines related to travel by bus or walking to/from a site are covered in *Travel to/from Off-site Destinations* in the *General Considerations*. If travelling by a means other than bus or walking see *Transportation in Special Considerations*.
- Identify a safe, allowable way to transport equipment considering the safety of the students and minimal potential for damage to the equipment (e.g., kayak paddles that are not collapsible may not be permitted in the cabin of a school bus and need to be transported in a lower luggage hold - which not all buses have). Address any such issues when booking.
- Kayaks must be transported safely, either on trailers or on vehicle tops (see below).
- Be particularly cautious in open areas with off-shore winds and/or subject to the effects of incoming or outgoing tides.
- Secure district approval and informed parental/guardian consent for all paddling in Class 2 ocean environments. In all cases, high energy coastline/minimal refuge travel (Class 3) should be avoided with school groups.
- When selecting an appropriate teaching/skill review site/trip route for a boating activity, consider:
  - the temperature of air (including wind chills) and water,
  - length of time a participant(s) may spend in the water if a boat is upset,
  - rate at which the water is moving (if a river, stream, or ocean current),
  - ease of access to/egress from site or watercourse, and
  - the skill/experience level of the students.
- Consider potential implications if the water is subject to sudden and/or significant fluctuations in water level (e.g., impact of tidal variations or a storm or dam-affected river).
- Water temperature is a critical factor in risk level calculation. It is important that all leaders and students are sufficiently prepared and skilled to get out of the water quickly if it is cold (e.g. within 10 minutes). Cold water is debilitating. Most individuals have difficulty rescuing themselves out of frigid waters, let alone another person(s), and children are incapacitated far more quickly. The ocean, lakes and rivers in B.C. can be very cold, even in summer.
- Consider the frequency/length and terrain (e.g., steep, potentially muddy) of any access, egress or portage expected (impacting packing methods for hauling gear and timelines).
- Postpone paddling if there are indications of dangerous weather (e.g., lightning, storm activity, high wave conditions, or a strong off-shore or very gusty wind - particularly on shallow lakes, wide rivers or the sea).

- Open crossings of large bodies of water are discouraged; groups should generally be kept within 100 meters of a shoreline.
- All paddling in diminished conditions should be done near shore unless doing so would increase risk (e.g., strong on-shore winds with a rocky (high energy) shoreline).
- Retreat to the first safe site along the shore if a major storm blows in, particularly if it is accompanied by lightning.
- At the end of each trip, and upon changing watercourses, wash any mud, algae or plant fragments from boats, paddles and feet to avoid transmitting any plant or animal pest species to previously uninfected places.

## Equipment

- Sea (touring) kayaks are assumed for this activity.
- Sea kayaks come in singles (one seat) and doubles (two seats). A school group may be best operated with everyone in doubles boats. A mixed fleet, with some in each craft, is challenging because doubles boats can go faster (two paddlers vs. one), so can get more space opening up between the boats. That said, if there is an odd number, someone will end up in a single and a fit, capable paddler should be selected.
- Have watertight bulkheads (or adequate floatation) to prevent craft from filling and sinking.
- The following equipment suggestions meet or exceed the Transport Canada, Office of Boating Safety minimum standards and recommendations. Standards and regulations change periodically and it is the responsibility of vessel operators to comply with current standards. It would be prudent to consult the office or website for current information before planning any boating activities. Go to [www.boatingsafety.ca](http://www.boatingsafety.ca)
  - Craft should be checked for leaks, broken seats, etc. and paddles for cracks and splinters.
  - If transporting boats to and from usage site, ensure that they are properly secured on a trailer (with safety chain in place and functioning lights) or well-lashed on a secure rooftop carrier.
  - Do not exceed the weight load or capacity for the craft used.
  - Correct fitting, Transport Canada/Canadian Coast Guard/Fisheries and Oceans Canada (or any combination of the above) approved PFDs must be worn properly and done up at all times by all group members while on/in the water.
  - Students under 36.3 kg (80 lbs.) should wear PFDs that include a large collar for head support, buckled waist belt or elastic gathering, a buckled crotch strap that prevents the PFD from slipping over the student's head, and reflective tape.
  - PFDs should be pre-use checked to ensure they are in appropriate condition (e.g., buoyant, straps/buckles/zippers work, straps well-attached).
  - Be aware that inflatable PFDs are not approved for anyone under 16 years of age or under 36.3 kg (80 lbs.), on a personal watercraft or for whitewater paddling activities.

- A sound-signalling device is required equipment onboard each craft. Attaching a pea-less whistle to each participant's PFD will meet this requirement.
- If on the ocean and/or if paddling anywhere at dawn or dusk, a watertight flashlight or navigation lights are strongly recommended and required in a craft over 6 m long.
- An extra paddle needs to be available per six solo kayaks or three doubles.
- Teachers/leaders should each have a knife attached to their PFD in the event someone gets tangled in ropes or cords or for other applications as needed.
- There must be 15 m (minimum) length of buoyant rope (single piece vs. several shorter pieces tied together) in good condition attached to and accessible in the craft or (very preferably bagged, but at least coiled and held together with an elastic/bungee, so it is easily deployed and doesn't pose a foot entrapment hazard).
- If paddling in cold moving water, clothing appropriate for the water temperature should be considered, expecting one or more paddlers to tip at some point in the session. A wetsuit, drysuit or appropriate clothing layers, including a dry change(s) (packed in waterproof bag/container) and good rain gear (tops and bottoms) should be worn or carried by all leaders and students traveling in small craft. Wetsuits or drysuits should be considered when the combined air and water temperatures are less than 15° Celsius. Youth have a larger surface area/volume ratio and smaller overall mass than adults and, therefore, are more susceptible to hypothermia.
- Appropriate lightweight and securely fastened footwear (e.g., runners, neoprene booties) should be worn to protect the feet from barnacles and sharp rocks. Rubber boots are not suitable in kayaks.
- Glasses should be strapped/tied on or have a float attached.
- Sea kayaks have waterproof hatches in the ends in which spare clothing, food and other items can be stored.
- There should be a sponge in each kayak to remove excess water.

## Instruction

### Water Safety and Rescue Skills

- Rescue of self and others should be discussed and, weather and water conditions permitting, actually practised.
- Review wet exits with sprayskirts and have the students practise them if any doubts about their confidence doing them.
- Where paddlers are in tandem kayaks, they should practise wet exits as a pair to avoid collisions with each other.
- Students should be taught/review appropriate self-rescue (e.g., kayak roll, paddle float use) and assisted rescue skills (e.g., towing rescue, T-rescue, stirrup re-entry) for the type of craft and water to be paddled. However, novices shouldn't be expected to master these techniques and be able to apply them in tripping situations; secondary rescue systems must be in place.

- Students must be informed about the potential hazards likely to be encountered on the route and safety procedures to minimize the risks.
- Students should be taught about hazards associated with ocean flora and fauna and how to minimize the impact of these.

### Sea Kayaking Skills

- If/as appropriate, review and practise basic skills that are appropriate to safe participation in the sea kayaking activity. These skills may include:
  - proper adjustment of foot braces and back rest for good fit in boat,
  - lifting, carrying and launching kayak,
  - emptying the kayak (beach and dock) and while on the water (e.g., bilge pump, bailer, sponge),
  - getting in and out,
  - body position and balance,
  - braces, strokes, steering, maneuvers, and
  - taking off and landing in waves or surf.
- Paddlers in tandem kayaks must practise their respective roles and stroke synchronization. Bow paddler sets the pace, provides power and keeps an eye out for obstructions in front of the craft. Stern paddler paddles in synchro with the bow paddler and steers the craft.
- Students should be instructed on how to handle anticipatable wind, wave and current conditions if paddling anything not completely protected.

### Supervision

Ensure students are appropriately supervised (considering age, maturity and context). In addition to the guidelines in *Supervision* in the *General Considerations*, apply the following as appropriate:

- In the area supervision; on-site with less experienced students.
- Recognize risk of inexperienced kayakers panicking when they tip over and failing to properly extricate themselves from their boat. The instructors must know they can assist students quickly in the event more than one has this problem at once.
- Where the physical fitness and/or technical sea kayaking skills of the students vary, each boat should be heterogenous (i.e., less capable paddlers partnered with more capable ones).
- Consider *Supervision* in *General Considerations for Higher Care Activities* when determining the supervision ratio. Generally, common ratios are as follows: one capable adult paddler to 4–5 students if in solo boats, 1: 6–8 if in double kayaks, unless in an extremely protected watercourse.
- Have a plan and practice strategies for keeping the group together in deteriorating conditions (e.g., lead-sweep, buddy system, counting off).

## ***Sea Kayaking Overnight/Extended Tripping: All of Day Tripping (Higher Care), plus:***

### **Location**

- Paddling in Class 2 ocean environments requires significant preparation; high energy coastline/minimal refuge travel (Class 3) should be avoided with school groups.
- Avoid routes that place the group on open, exposed areas of the sea for extended periods of time where rising winds can increase wave action substantially in a short period of time. Group management and support becomes very difficult in large waves, especially with loaded boats. Keep crossings manageable (i.e., well within the capacity of the weakest paddler in the group in the worst conditions anticipatable).
- Where an open water crossing is unavoidable, consider providing or securing an escort support boat (e.g., powerboat, zodiac).
- Avoid paddling in shipping lanes and other major boat routes. If unavoidable, keep the boats close together and consider carrying a radar reflector to increase visibility to large boats (a boat's radar equipment won't pick up a signal from a plastic or fibreglass kayak, but it will from a metal reflector rod if one is affixed to the kayak).
- Avoid surf landings whenever possible with groups of relatively inexperienced students, especially with loaded boats. Plan the trip so each day's paddle begins and ends in protected water.
- Be particularly cautious in open areas with off-shore winds and/or subject to the effects of incoming or outgoing tides.
- If paddling in areas with icebergs, ensure all paddlers give them a wide berth. Icebergs can roll and crush a paddler or calve off heavy pieces of ice.
- On multi-day trips, consider the impact of loaded boats (e.g., slower, less maneuverable) when selecting paddling routes.

### **Equipment**

- Store clothing and gear in waterproof compartments in the boats and seal these properly.
- Ensure students are aware of how to pack their kayak for appropriate weight distribution (e.g., keeping weight low and with the bow slightly higher than the stern to facilitate steering).
- Keep small items needed over the day in a waterproof dry bag and/or clipped to attachment points/lines on the top deck; things that should be kept dry will be dry and nothing should get lost if the boat tips.
- Recognizing the potential for motion sickness when paddling on large open bodies of water like large lakes or the sea, motion sickness medication should be carried. Parents should provide consent for their child to be administered such medication if it is indicated.
- A satellite phone, PLB - GPS, marine VHF radio, cell phone, or other appropriate, reliable means of securing current weather forecasts and/or timely assistance in an emergency is required.

## Instruction

- Students should be taught how to conduct routine checks on their boats.
- All students must know and have practiced emergency procedures for one or more loaded overturned boats, their own and/or others.

## Supervision

- In-the-area supervision.
- Have a lead and sweep with competent paddlers capable of carrying out a rescue.
- In situations where rescuers will need to be highly efficient and effective, the teachers/leaders should avoid paddling with particularly weak paddlers in the group.
- Ratio as per above. Generally, as two leaders will be assumed with school groups, recommended ratios for Class 1 or 2 water are about 2:8-10 (doubles), 2:5-7 (singles) and 2:6-8 (mixed).

See *Camping* for other considerations.

## Notes

1. If, when reviewing the guidelines above, terms and concepts presented are unfamiliar, this is a strong indicator that additional personal leadership preparation (e.g., a training course, reading) or contracting a qualified service provider is advisable.
2. This document is not intended as an instructional guide. The teacher will need to use other references to learn how to teach students the skills (e.g., how to brake when inline skating, how to do a diagonal stride when cross-country skiing).