

# Sea kayaking safety guide



Fédération  
québécoise  
du canot  
et du kayak



Fisheries and Oceans  
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Saguenay–St. Lawrence  
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# 1 INTRODUCTION

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**S**ea kayaking has undergone a major boom in Quebec over the past decade. This sudden surge in popularity hasn't been without its share of problems, most of them due to a lack of preparation and information. Every season, a number of kayakers find themselves in deep water!

The goal of this brochure is to provide the **basic information** you need to enjoy sea kayaking safely wherever you are, and especially here in Quebec. It is the result of a joint effort by a number of partners to help develop the sport in a structured manner. We trust that this document will answer most of your questions. But remember, nothing can replace suitable training or guidance from an experienced kayaker or outfitter.



PARKS CANADA / JEAN AUDET

Sea kayaking has been officially supported by the Fédération québécoise du canot et du kayak since November 1998. The Federation is committed to developing recreational kayaking through a structured approach to training and public education, as it has been doing for canoeing since 1969.

## HISTORY

The history of sea kayaking is closely linked to the arrival of man in the ice-covered reaches of the Arctic some 4,000 years ago.

In order to travel and hunt, the Inuit created an indispensable survival tool—the kayak. Inuit kayakers were made of sealskin stretched over a wood frame with a closed deck that kept out waves and spray. With their low tapered profile, the fast and silent kayakers were perfectly designed for their main use—hunting marine mammals, waterfowl, and caribou. Inuit hunters generally maneuvered their kayakers using a double-blade paddle.

Kayakers were first seen by Europeans at the time of Jacques Cartier, but no one showed much interest in them until 1865. After that, kayakers slowly grew in popularity in Europe, where they



J.P. TREMBLAY

were mainly used on rivers. Then in the 1960s, the appearance of fiberglass revolutionized the sport, making it possible to design shapes for specific uses (touring, racing, whitewater).

In the early '80s, plastics made it possible to manufacture more affordable boats and led to spectacular growth in sea kayaking in Quebec. For over a decade now, outdoor enthusiasts have been discovering kayaking as a new way to explore our beautiful natural environment.

Depending on the model, sea kayakers can be used for activities ranging from day outings on small lakes and rivers to week-long expeditions along the St. Lawrence River.

## 2 KAYAKS, EQUIPMENT, AND CLOTHING

### KAYAKS

The sea kayak has the same general tapered appearance as its Inuit ancestor as well as its main qualities: speed and stability. But, that's where the comparison ends because this former hunting tool is now used for leisure activities.

Apart from certain foldable models, the internal structure has completely disappeared. Modern kayakers have a rigid, one-piece

molded hull and deck. This makes it possible to build kayaks long enough to seat two.

Although sea kayakers are available in models ranging from 3.5 to 6.7 meters (11' 6" to 22'), a **minimum of 4 meters (13')** is recommended for better handling in swells as well as superior tracking control.

Two types of material are used: polyethylene (plastic) and

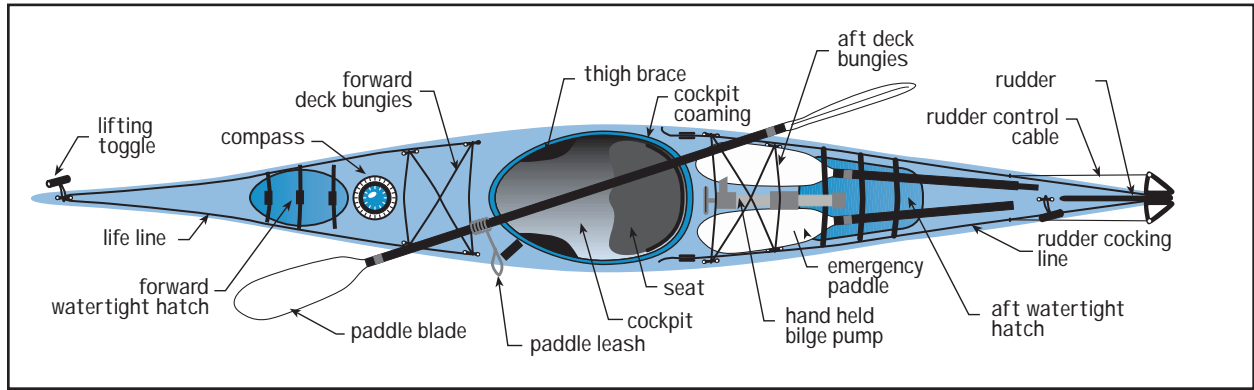


ILLUSTRATION : DANIEL CYR

composites (fiberglass, Kevlar®, and carbon fiber).

Moderately priced polyethylene provides excellent impact resistance and average glide, but is quite heavy and has a low rigidity rating.

Composite materials, on the other hand, provide relatively good impact resistance and good glide, are average in weight, and are very rigid. The high rigidity allows for the construction of more sophisticated models. Composite materials cost more, however, and the price increases when high tech materials and techniques are used.

Choose a kayak suited to the bodies of water you expect to use it on.

Kayaks are made unsinkable using **watertight flotation compartments** or specially designed airbags. Watertight deck hatches provide access to the compartments, which can be used to store and protect your gear. This ingenious system makes it possible to bring along all the gear and equipment you need for day outings or multi-day expeditions.

Many sea kayaks are equipped with a **rudder**. This provides beginners with good tracking control and allows more experienced paddlers to correct drift caused by wind or waves. The rudder can retract upward onto the deck in shallow water or when transporting the kayak. Rudders are controlled by the feet using a system of pedals and cables.

Sea kayaks generally have a **tapered nose** for good cruising speed and a fairly high bow to prevent plowing into waves. The bow and stern are equipped with **lifting toggles**. Basic equipment generally includes **bungee cords** to keep safety equipment and maps close at hand. Kayaks may also be equipped with a lifeline around the edge of the deck. For ocean expeditions, it is important to add a deck-mounted compass and to know how to use it.

Kayak stability is directly linked to three things: the center of gravity, the cross-section, and the width or beam.

- Since the seat almost touches the bottom of the kayak, the **center of gravity is very low**, which ensures excellent stability. The weight of baggage stowed in the watertight compartments increases stability.

- Generally speaking, the wider the kayak the more stable it is. The cross-section or shape of the sides and bottom affects kayak stability and speed. Given the wide variety of models on the market, the only way to choose one that suits you is to try them out and to ask for advice from a specialist.



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## COMPULSORY EQUIPMENT

Sea kayaks are subject to **Canadian Coast Guard Small Vessel Regulations**. Sea kayaks are covered by two categories: boats 6 meters long and less and boats between 6 and 8 meters long.

**To be in compliance with the Regulations, you must have the following on board.**

**Boats 6 meters long and less (19' 8"):**

1. **Personal flotation devices (PFD) or lifejackets approved for use in Canada and of a suitable size for each person on board.** PFDs must be comfortable and functional enough to be worn at all times. Highly visible, short models with pockets for distress flares, radio, and whistle are preferable.
2. **A buoyant heaving line at least 15 meters long** (floating throwline or throwbag).
3. **A manual propulsion device. The paddle** is the propulsion device and must be carefully selected. It may be made of wood, aluminum, plastic, or composite materials. The blades may be unfeathered or feathered. Two-piece take-apart paddles are also available in all

three materials and are good emergency paddles. There are models for every budget and taste, so try them before buying.

4. **A bailer or hand pump for removing water.** A pump is more efficient. A large sponge can be used to remove remaining water. Don't forget to tie them down.
5. **A sound-signaling device.** You can use a whistle or mouth-blow or compressed air foghorn. Be careful with objects containing iron; they can disrupt compass readings if stored too close.
6. **Navigation lights.** Between sundown and sunrise or when visibility is reduced, a white light visible over 360° is preferable, but a watertight flashlight is acceptable.

**Note:** It is **strongly recommended** that you bring along three Type A, B or C distress signals when you venture out on large bodies of water. Even if you plan on staying close to the shore, **the wind and currents can quickly push you out** to sea where sound-signaling devices are useless. See **Chapter 6 (Safety, Specific Dangers, and Communications)**.

#### **Boats between 6 and 8 meters long (26' 3''):**

1. All of the above
2. **A waterproof flashlight**
3. **Six Type A, B or C distress signals. See Chapter 6 (Safety, Specific Dangers, and Communications).**

**Note:** Boats are not required to be equipped with distress signals if they are used on rivers, canals or lakes **where they can never be more than one mile** from shore.

### ESSENTIAL ACCESSORIES

**The sprayskirt** provides a watertight seal around the kayaker, preventing water from getting in the kayak. Sprayskirts are made out of coated nylon and/or neoprene and must be well fitted on the cockpit rim and around your waist. Certain models come with a mesh storage pocket.

**A paddle bladder or float** is a **very important** piece of safety equipment. After a capsize, it enables you to get back into your kayak without help. The floater has a bladder that fits over a paddle blade. By resting the other blade on the deck, the kayaker can use the paddle as a



brace to climb back into the cockpit. **This maneuver is fairly straightforward but requires some practice** (see page 11).

**A spare paddle.** A two-piece take-apart paddle is perfect. Store it on deck for easy access. Make sure you have at least one spare paddle for your group (1 for every 4 people). (See illustration on page 4).

**A chart or topographic map** of the area being visited is your most reliable guide. Learn how to read and orient it. A transparent, watertight chart case will let you consult it easily. Select a model with eyeholes so it can be attached to the deck bungee cords.

**A chart ruler** can be used as a course protractor with the map. Use it to determine a heading or bearing when planning your trip or en route.

**A first aid kit** suitable for the group should be brought along and stored in a waterproof container.

## RECOMMENDED ACCESSORIES

**Waterproof gear bags** provide additional protection in the event water gets into a compartment. They are made of soft, vinyl-coated nylon so as to fit into any of the various compartments of a kayak.

**Rigid, waterproof barrels** and cases are well suited for storing fragile items (camera equipment, binoculars, etc.).

**Binoculars** are extremely useful. Waterproof 7 x 50 models are a popular choice for water sports.

**A spherical glass marine compass** is more suitable for navigating than a conventional hiker's compass. The compass rose is equipped with a magnet and floats freely in a sphere and a lubber line lets you keep track of your heading at all times.

If the kayak is not equipped with a spherical compass, a conventional hiker's compass can be helpful if you stay close to shore.

**A VHF radio** is one of the best ways of communicating with other ships and Canadian Coast Guard stations. Kayak models have a range of several kilometers and also receive weather channels. Choose a waterproof model. VHF radio operators must hold a restricted marine radiotelephony operator's certificate (lifetime certificate). See Chapter 10, Regulations.

**Cellular phones are not an adequate substitute** for VHF radios. Even though they may work near large urban centers, you have to know the local emergency number (911, \*16, etc.). On large lakes and remote reservoirs as well as in the far North (Zone 4), use a radio satellite link or emergency beacon in place of a VHF radio.

**Radar reflectors.** Since kayaks (nonmetallic) are invisible to radar, a radar reflector is required to avoid collisions in foggy weather or when there is heavy shipping traffic. Effective lightweight models are available in plastic covered with an aluminum film. To be detected, the reflector must be installed as high as possible (1.8 m or more). You can use a guyed tent pole as a mast.

MIKE BEEDELL



**A GPS (Global Positioning System)** will give your position to within 100 meters or so at all times. Despite its usefulness, it is a complex electronic device that can break down. **It cannot replace your map or compass,** but can be a very handy piece of additional equipment.

On sunny days, flashes from an **emergency mirror** are visible for several kilometers.

**A smoke canister** will produce a thick cloud of orange smoke for several minutes. A container of fluorescein dye will

produce a fluorescent green spot. These two signaling devices must only be used when rescuers are in sight to help them spot you.

## CLOTHING

### Should you choose clothing based on air or water temperature?

A compromise between the two is best. Take into consideration weather conditions, your skill level, and the type of kayak and determine the consequences of a capsize (time spent in water, proximity to the shore, outside help, etc.) when making your choice.

Kayakers often get wet (waves, spray, splashing). Cotton clothing, which does not retain heat and dries slowly, should be avoided. Instead, opt for **synthetic** fibers (polyester, polypropylene), which dry quickly, or wool, which retains heat even when wet. In cold temperatures, a wetsuit is strongly recommended. Opt for slim fitting models that hug the chest and hips.

Dressing appropriately for sea kayaking requires constant adjustment. **Multiple layers** of thin clothing give you the flexibility you need to confront wide variations in temperature and weather. A **waterproof anorak** or a good windbreaker should always be part of your gear. Don't forget to **cover your head**, whether to protect yourself from the sun or to keep yourself warm.

**Always wear your PFD.** It will also help keep you warm. Sunglasses are often indispensable. Use a cord so you won't forget or lose them.

You should always bring along a **change of dry clothing**.

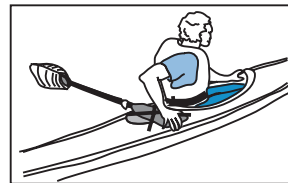
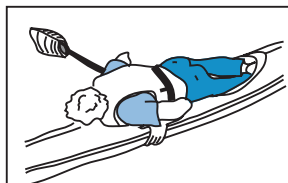
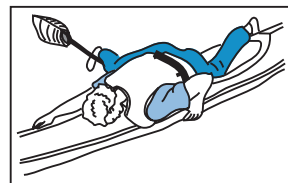
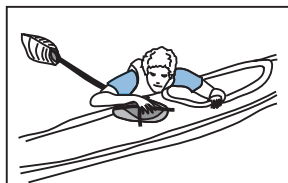
### 3 BASIC TECHNIQUES AND COURSES

**B**eginners tend to look at sea kayaking as a very enjoyable activity that requires no special technical training.

Indeed, it is a lot of fun. But, it requires a minimum of knowledge and skills to be enjoyed safely.

CAUTION, THIS CHAPTER IS NOT A SUBSTITUTE FOR A COURSE

Begin by adjusting the rudder pedals to the length of your legs. **When you are comfortably seated** with a straight back, your feet on the pedals and knees braced under the deck, you become one with the kayak. Beginners often have the uncomfortable **sensation of being "trapped"** in the kayak. The first step is to get in and out of the kayak several times (on the water) to see how easy it is to get out in the event of a capsize. If conditions allow, **try capsizing** with the assistance of someone who can help you if need be. This exercise should always be done at least once with the sprayskirt in place. You will see how easy it is to get out of a capsized kayak.



The next step involves getting back into the kayak on your own. **Get used to using the paddle bladder** or float (see Chapter 2: Kayak, Equipment, and Clothing). Practicing this technique will help you better understand the consequences of capsizing far from shore and being in cold water for extended periods of time. It is also a reflection of reality—**you must learn how to get back into your kayak without assistance.**

Once you have practiced these techniques, you are ready to go. However, getting to know a **few other simple techniques will save you a lot of energy and greatly increase your enjoyment**. The main techniques you should be familiar with are forward strokes, sweep strokes, draw strokes, paddle bracing, Eskimo rolls, and rescue techniques.

Remember, nothing can replace a course given by a qualified individual or accredited organization. However a number of excellent technical manuals are available for reference purposes.

## COURSES

**The Fédération québécoise du canot et du kayak has adopted a sea kayak training grid** for kayakers, teachers, and guides with different skill levels. If you take a course, make sure the person providing the training is qualified and the course has recognized standing.

For more information, contact the Fédération québécoise du canot et du kayak (see Chapter 15: Resources and References).



PIERRE TRUDEL

## 4 BODIES OF WATER IN QUEBEC

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In Quebec, sea kayaking can be enjoyed in a variety of settings—major rivers, small and large inland lakes, and reservoirs and also in coastal waters. **The following guidelines are suggested to provide Quebec kayakers with a common reference:**

- **Water bodies are divided into 4 categories or zones, each with certain common features.**
- **Routes in all 4 zones are classified into 4 degrees of difficulty.** Winds and currents are always important factors to be considered.

### BODIES OF WATER (ZONES)

**Zone 1.** Inland bodies of water where water temperature is not a safety concern. Protected waters with little or no wind or current. Ready access to supplies, communications, and emergency assistance. Very easy to put ashore.

**Zone 2.** Partially protected with minimum to moderate exposure to wind and currents. Possible presence of tides. Cold water. Radio

required but emergency assistance available. Lakes and reservoirs may be remotely located. Coastal areas sparsely inhabited. Usually easy to put ashore.

**Zone 3.** Large bodies of water often exposed to strong winds. Large swells and strong surf may make it difficult to get ashore. Ocean currents complicated by tides. Water is very cold all year long and survival may be a concern in the event of a capsizing. Emergency assistance may be long in coming even if radio communications are no problem. Coastal regions are relatively uninhabited.

**Zone 4.** Rough seas with the possibility of very strong currents. Zone conducive to very strong winds, which can cause heavy swells and surf, making it difficult to get ashore. Water temperature is a major risk factor aggravated by the possible presence of ice. Satellite links provide the only reliable means of communications. Search & rescue resources are almost nonexistent. Coast is uninhabited and very rugged. All of Quebec north of the 51st parallel is Zone 4 territory.

## LOCATION

**Small bodies of water** (Zone 1) can be found throughout the province and are also used for other activities like canoeing, hunting, fishing, and pleasure boating.

**Certain rivers** (Zone 1) are very popular for pleasure boating. Currents are generally weak and rapids nonexistent. Winds can pick up and become fairly strong. The shoreline is often privately owned and the presence of pleasure boaters requires compliance with boating rules to avoid collisions. The water is warm in summer.

*The Ottawa, Richelieu, and Saint-Maurice Rivers are good examples of Zone 1 bodies of water.*

**Large inland bodies of water** (Zones 2 and 3) include lakes and artificial reservoirs. They can be found throughout Quebec and access may be regulated (park, reserve, Z.E.C. etc.) or private. The **largest offer great potential** but are largely underused by sea kayakers. The absence of tides and currents, the warmer water in summer, and the presence of numerous islands make them a **very attractive choice** for kayaking.

**Caution:** Large water surfaces or fetches mean that winds can pick up very quickly, creating enormous waves in a few minutes and pushing you well away from shore.

Examples of large inland bodies of water include the Gouin and Cabonga reservoirs and lakes Champlain, Memphrémagog, and Saint-Jean (Zone 2), as well as the reservoirs of the Manicouagan-Outardes Complex and Mistassini Lake (Zone 3).

**Coastal waters** (Zones 2, 3 and 4), which include the St. Lawrence River downstream from the Québec Bridge, as well as the Saguenay and the Gulf of St. Lawrence, represent the largest—and potentially the most challenging—bodies of water accessible for sea kayaking in Quebec. The Gulf of St. Lawrence is known worldwide for its harsh climate and difficult navigation. Cold currents and tides and warm and cold weather fronts can clash and cause **storms as sudden as they are violent**. Fog can surprise you at any time and **shipping traffic** is very heavy. The apparent proximity of the coast often gives a false sense of security. An unexpected dunk in the icy water or the surprise onset of heavy seas will quickly remind you that this is no place for beginners. The large water surface or fetch means that winds can pick up very quickly,

creating towering waves in a few minutes and pushing you well away from the shoreline.

*Zone 2: The St. Lawrence River between Quebec City and La Malbaie–Matane as well as Chaleur Bay and the Saguenay Fjord*

*Zone 3: From Zone 2 to Natashquan and Chaleur Bay*

*Zone 4: The Lower North Shore from Natashquan onward, James Bay, Hudson's Bay and all areas above the 51st parallel*

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**Note:** The above examples are based on summer conditions. In other seasons, classifications must be adjusted upwards.



## CLASSIFICATION OF ROUTES

To help you plan outings based on the desired level of difficulty and your skills, routes have been classified according to 4 degrees of difficulty applicable to all 4 zones.

**Easy (E):** Few special skills required. Under 6 nautical miles or 3 hours a day. Numerous sheltered areas for resting and putting ashore.



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**Moderate (M):** Knowledge of basic maneuvers required. From 6 to 10 nautical miles or 3 to 5 hours a day. Some sheltered areas for resting and putting ashore.

**Difficult (D):** Familiarity with paddling, recovery, and navigation techniques required. From 10 to 15 nautical miles or 5 to 6 hours a day. Few sheltered areas for resting and putting ashore.

**Very Difficult (VD):** Solid mastery of kayaking and navigation techniques required. Over 15 nautical miles or 6 hours a day. Few if any sheltered areas and very limited possibilities for putting ashore.

**Note:** Levels of difficulty may change dramatically depending on weather (wind, fog, etc.) and/or sea (tides, waves, etc.) conditions. Take actual conditions into account and listen to the marine weather forecast before setting out.

## 5 PLANNING AND PREPARING AN EXCURSION

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Sea kayaking is the ideal sport for getting off the beaten track. However, your choice of destination could take you to a remote location exposed to high winds, rapidly changing weather conditions or water that stays icy cold all year round. In such areas, the consequences of an oversight or accident can be compounded tenfold. So whether you are just going out for a short paddle or off on an expedition that will last many days, careful planning and preparation is essential. It could make all the difference in ensuring an enjoyable and memorable trip.

### THREE-STEP PLANNING

#### 1: **Assessing Your Needs and Deciding on a Destination**

- What are your requirements?
  - Experience and number of kayakers—skill level of least experienced member of groupType of route agreeable to everyone in the group (lake, river, large body of water, coastal waters, environment, length, duration) and taking the least experienced into account. An average of 10 nautical

miles per day is reasonable for a group

- Rental of required equipment
- Transportation required
- Choosing a destination
- Time of year
- Remoteness
- Specific tourist region
- Service center (parks, reserves, rentals, transportation)

#### 2: **Finding Information and Resources**

- What documents and information do you need?
  - Charts, topographical maps, indexed maps
  - Tide table and sailing directions
  - Service center business hours
  - Required authorizations, reservations, and/or contracts
  - Camping and accommodations
  - Equipment and gear needed
  - Personal gear (individual and group)

- Rental equipment and gear
- How much food and water do you need?
  - Drawing up a menu (food allergies, vegetarians)
  - Nutritional value per weight and volume
  - Carrying and keeping food
- Do you need to be accompanied?
  - Finding a qualified guide or outfitter

### 3: Putting It All Together

- Plan a route and possible alternatives
- Draw up a contingency plan
- Select a group leader
- Draw up a list of equipment required
- Draw up a list of equipment available
- Assign tasks

## PREPARATION REQUIRES CLEARLY IDENTIFIED TASKS

- Food: purchase, divide up, wrap and protect, label. Don't forget drinking water

- Group gear and equipment: equipment available, equipment required (purchase or rental), check condition of equipment
- Personal gear: as per checklist
- Kayaks and accessories: equipment available, load capacity, rental equipment, check condition of equipment
- Navigation and safety equipment: maps, spherical or conventional compass, tide and current table, chart ruler, radio, flares, foghorn, first aid kit, repair kit, GPS
- Transportation, authorizations, contracts: transporting a kayak measuring 6 meters (19' 8") or longer requires certain equipment and preparation. Entry fees and/or reservations are required in parks and wildlife reserves. If you are dealing with a third party (guide or outfitter), check the guide's qualifications, the services offered, and the insurance coverage provided
- Information specific to the chosen location: local weather, direction and strength of prevailing winds, currents and tides, coastal geography, shipping traffic, distance between possible put-ins, availability of drinking water, campsites, and applicable regulations

## 6 SAFETY, SPECIFIC DANGERS, AND COMMUNICATIONS

Unlike other activities involving an element of risk (whitewater kayaking, rock climbing, etc.), **beginners view sea kayaking as a safe and easy way to get away** from the rat race. This perception is understandable on a small lake, **but it can be deceptive—even dangerous—on a larger body of water or the open sea.** If you go kayaking you should always be accompanied by a least one other kayak. Kayakers planning longer expeditions should have a good grasp of meteorology, navigation, radio communications, and emergency procedures, as well as orientation techniques.

Just like other outdoor activities, **sea kayak accident prevention is made easier by identifying the dangers** inherent to the activity. What dangers are paddlers exposed to?

- **Cold water** early and late in the season and all year round in the Gulf of St. Lawrence.

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Immersion in icy water can cause hypothermia within minutes, sometimes with tragic consequences (see Table on page 23).

- **Currents** are often invisible when you're on the water. River currents always flow in the same direction, but marine currents reverse with the tide and may pull you far off course or slow you down.
- **The wind should always be an important factor in planning your day.** It can pick up very suddenly, generating strong waves and occasionally breakers, as well as pushing you off course. Cold winds can also cause a rapid drop in temperature.
- **Storms** can also occur over bodies of water. A sudden squall can cause heavy seas in a few minutes. **Lightning** over a body of water always strikes the highest point. Never stay in open water with a storm approaching.
- **Fog** generally dissipates quickly on lakes, but in coastal areas it can roll in very quickly and last for days.
- **Shipping** is very heavy on the St. Lawrence Seaway. Cargo ships are restricted to a specific channel. They are incapable of maneuvering to avoid you, so it is up to you to stay out of their way. Their crews can't detect kayaks on radar and can only see you when you are within two nautical miles on a clear day. They lose sight of you if you are less than half a mile in front of the ship's bow.
- **Other pleasure boaters** also have rights and obligations. To avoid collisions, stay alert and **make sure others can see or hear you easily.** The color of your kayak and PFD can be important. Yellow, orange, bright red, and white are the most visible colors on water. Signaling devices must always be within easy reach.
- Never take **nature** for granted. Camping conditions, wild animals, rugged territory, and remoteness are all elements that could transform a run-of-the-mill incident into a disaster.
- **Weather conditions** over water are often very different and generally worse than over land. Make sure you know and understand the differences and know how to react—and always prepare for the worst.

**When planning your route, make allowances for potential dangers and make sure you have the necessary skills and equipment to deal with them. Prevention is always your best ally.**

## CALLING FOR HELP

**Radio:** Frequency 156.8 MHz-channel 16. Signal: Mayday (3 times) indicating your name and position, the nature of the problem, and the type of assistance required

**Cell phone:** \*16

**Distress flares** can be **Type A (parachute rocket)**, **Type B (multi-star rocket)**, and **Type C (hand-held)**. They burn from several seconds to a minute and can be seen for several miles, both day and night. It is strongly recommended that you bring along at least three flares. They are compulsory (at least 6) for kayaks over 6 meters (See Chapter 2, Kayaks, Equipment, and Clothing). Check the manufacture date and make sure they meet approved distress signal standards.

A piece of orange canvas with either a black square or circle. The canvas is very compact and provides a continuous distress signal. Several sizes are available. Any setup featuring a square flag with a ball above or below serves the same purpose.

**Morse code sound or light signaling device.** A one second signal equals a dot and a 4 to 6 second signal equals a dash.

Signal	Morse	Meaning
•••••	5	Attention
–	T	Warning (and answer) during reduced visibility
•••– – –•••	S O S	Distress signal (Mayday)

**Approach signals.** Although less visible, they help draw the attention of approaching rescuers. **Smoke canisters (Type D) and fluorescein dye** (see Chapter 2) are examples of such signaling devices. You can also slowly wave your outstretched arms by simultaneously and repeatedly raising and lowering them to shoulder height.

## 7 HYPOTHERMIA

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**H**ypothermia is your **worst enemy**, especially in **Quebec's extremely cold coastal waters**. It occurs when your body loses more heat than it can produce. If not treated quickly, **hypothermia can be fatal**. **Even in July**, a dunking in the waters of the Gulf of St. Lawrence can lead to a total loss of manual dexterity within 5 minutes and death within 15 to 20.



Immersion in cold water isn't the only cause of hypothermia. Although less obvious, the combination of factors such as fatigue, dehydration, hunger, wind, rain, and air temperature can also be dangerous.

Acute hypothermia: Uncontrollable shivering, loss of manual dexterity, generalized numbness

Chronic hypothermia: Shivering stops, difficulty speaking, confusion, loss of balance, sleepiness then unconsciousness

**You should take hypothermia very seriously.** Take steps to protect yourself by wearing appropriate clothing and doing all you can to help your body fight the cold (rest, drink water, eat properly).

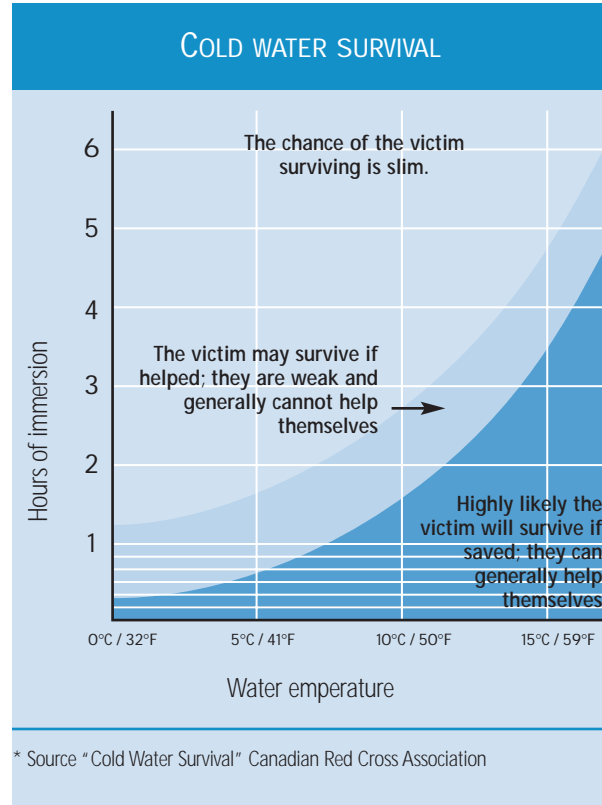
### TREATING HYPOTHERMIA

As soon as uncontrollable shivering and trembling (acute hypothermia) begins, take immediate action:

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1. **Protect** the victim from the elements (get victim out of water, shelter from wind or rain).
2. Strip off wet clothing and replace with dry clothing. Cover head and neck (wool cap, sweater).
3. A warm sweet drink (**no alcohol or caffeine**) will help the victim warm up from the inside out. A flask of warm water under the arms will have a similar effect.
4. With mild hypothermia, exercise will help warm the victim. If the hypothermia is severe, place the person in a sleeping bag.
5. When body temperature returns to normal, give the victim food rich in carbohydrates and sugar (dehydrated fruit, cereal bar, honey).
6. Rest as long as necessary before setting off again.

After the first four steps of treatment, **victims with chronic hypothermia must be evacuated** to a hospital as quickly as possible.





## 8 WEATHER

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**M**odern life has left us out of touch with the weather. We no longer pay it proper respect or know how to read its signs. Yet respecting and understanding weather is essential for outdoor activities, **especially sea kayaking**. Large bodies of water are susceptible to highly variable weather conditions that can have a considerable and rapid impact on boating conditions (wind, waves, tides, lightning, fog, etc.).

There are several ways to get a good idea of upcoming weather conditions. None of them are infallible, but in combination you should get fairly reliable information.

### WEATHER FORECASTS

Forecasts issued by mainstream media outlets cover large areas and only give a general idea of weather conditions over land. For marine forecasts, you should listen to the weather reports broadcast on Weatheradio covering the southern part of the province. They are updated four times a day and can be received

using low-cost, pre-tuned receivers, VHF radios or scanners (see Chapter 15 for radio frequencies).

The **Canadian Coast Guard** also broadcasts continuous weather reports on the VHF band featuring general forecasts, forecasts for coastal areas, and notices to mariners.

### BASIC KNOWLEDGE

It only takes a basic grasp of meteorological knowledge to interpret forecasts **and adapt them to local conditions**. **Caution: Weather conditions over water can be very different from those on land.** Listen to **marine weather forecasts regularly** (see **Chapter 15, Resources, and References**).

Since the terminology used in forecasts is standardized, you should know your basic terms: units used for wind speed (km/h, knots, Beaufort), pressure (millibars or hectoPascals [hPa]), and wind direction. If you understand the forecast you'll be in a better

position to anticipate potential problems.

The arrival of a warm front generally means a progressive change (24 to 48 hours) that brings widespread rain. Cold fronts move rapidly and are accompanied by strong winds, storms, and squalls. Squalls are characterized by violent and sudden gusts of wind causing heavy swell. They can last up to 15 minutes and are a major danger for kayakers.

PARKS CANADA / D. ROSSET



Weather conditions on the water can be very different to those on land.

## STAY ALERT

A good sense of observation will help you keep track of changes in local weather conditions over the short term: changes in cloud cover, sharp variations in temperature, lay of the land, and local prevailing winds.

Wind speed, for example, can double in narrows, creating strong waves. In encased valleys, wind may blow from an unexpected

direction and increase in intensity. Wind can also whip up the seas at the base of cliffs because of localized turbulence.

## 9 NAVIGATING

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**DURING PREPARATIONS**, use your maps to draw up a route plan. It should include your departure and arrival points as well as stop-over points en route. It should also include a **contingency plan** that allows you to cut short your trip in the event of bad weather or for medical reasons. Plan on **one extra day** for every four days of traveling. You can use the extra days to rest, explore a particular site or to make up for delays. **Leave a copy of your detailed route plan with a family member or friend** and keep them advised of delays and route changes. If you are overdue, this person will be able to provide valuable information for organizing a search & rescue operation.

A **standard route plan** should include the following: description of group; number, color, and type of kayaks (solo, double); safety equipment carried; dates of calls to confirm positions; date and place of arrival; contingency plan, etc.

**It is very important to notify the person who has your route plan of your safe arrival.** This will avoid costly and unnecessary searches by search & rescue organizations.

**ONCE ON THE WATER**, a good map will be your most reliable tool if you know how to use it (orientation course). While it's true that most navigation is generally done visually, **the map will be your main source of information** (direction, currents, landmarks, local phenomena) and your primary reference for what you see. Keep it in a watertight, transparent case on the deck for **easy consultation**. Copies of your maps should be kept in another kayak. Experience in map reading takes practice. Get into the habit of checking your position regularly. You should **know your position at all times** or you run the risk of getting lost. Get used to locating coastal features, points of reference (landmarks), and navigational aids (buoys, lighthouses) to keep track of your progress. That way you'll move from one point of reference to the next.

**In the event of reduced visibility, you should put ashore.** In these conditions, you need a radar reflector and good knowledge of navigating with a compass. A spherical glass marine compass is more useful than a conventional compass. Don't take any risks. Stay as close as possible to shore.



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If tides are a factor on your route, make sure you know their schedule, amplitude, and consequences (currents). Tide tables will provide all this information.

If you must absolutely cross a shipping lane, do so quickly and by the shortest possible route.

Because of their shallow draft, kayaks are the best way to get to certain sites. Enjoy these sites without abusing them—respect private property as well as plants and wildlife. **Chapter 11 on the environment** gives useful advice on this subject.

For your safety and that of other users, learn the strict regulations governing commercial ships and pleasure craft. Only by complying with these regulations will sea kayakers earn the respect of the marine community (see **Chapter 10, Regulations**).

# 10 REGULATIONS

**A**lthough sea kayaking is a perfect way to get away from it all, it is also governed by certain laws and regulations that you must know and observe:

- Small Vessel Regulations
- Collision Regulations
- VHF Radiotelephony Practices and Procedures Regulations



MIKE BEEDELL

In general, Fisheries and Oceans Canada (DFO) is responsible for regulations governing pleasure craft. DFO has put the Canadian Coast Guard in charge of enforcing the Small Vessel Regulations (see Chapter 2, **Kayaks, Equipment, and Clothing**).

**The Collision Regulations** are part of the Canada Shipping Act, which is under the jurisdiction of Transports Canada and **also applies to sea kayaks**. It is important to follow the law to the letter when kayaking in areas used by other pleasure craft or commercial shipping.

The Collision Regulations state that "every vessel shall use all available means to avoid collisions." They describe passing procedures, distances to respect, maximum speeds, and the use of light and sound-signaling devices.

Various types of navigational aids (buoys) are used to help get your bearings and identify channels, isolated dangers, and special areas (diving sites, anchorage, swimming areas, etc.). It is thus essential that you be able to recognize them.

## WHEN SEA KAYAKING, PUT YOURSELF IN THE POSITION OF OTHER USERS

Remember, for example, that even in bright, calm conditions a kayak isn't visible more than two nautical miles away, the distance a large vessel covers in four minutes.

Keep in mind that powerboat operators and the crews of cargo vessels riding high on the water can't see anything on the water less than half a mile in front of them because their view is obstructed by the bow of the boat.

Understand that even though a sea kayak allows you to maneuver and change direction quickly, other users can't be expected to anticipate your actions or know how skilled you are.

**Complying with the Collision Regulations is like complying with the Highway Code. It's a win-win situation. Kayakers will be able to enjoy their sport in safety while earning the respect of the marine community.**



PARKS CANADA/M. BOULIANNE

**The Radiotelephony Regulations** are administered by Industry Canada. All radio operators must hold an operator's certificate (lifetime issue). If you go kayaking in coastal waters on a regular basis, a radiotelephone should be part of your basic equipment.

## 11 ENVIRONMENT

**T**he main appeal of sea kayaks is their ability to bring people into close contact with nature. With their shallow draft, kayaks move through the water quickly and quietly, enabling you to blend into the environment and making it easier to observe wildlife. Their carrying capacity also makes it possible to travel long distances, providing access to countless offshore islands.

While generally well-intentioned, kayakers may unknowingly have a severe negative impact on the environment. Certain sectors in parks and wildlife reserves classified as conservation or exclusion areas may be subject to specific regulations and/or codes of ethics. Find out what they are.

If you get too close to animals, you may disturb them. Repeated disturbances upset

animals and may cause them to leave their habitats. This creates a stress to which pregnant females and young animals are particularly sensitive and may even lead them to abandon what may be one of the few suitable habitats available to them. **Don't get any closer than 200 meters.**



PARKS CANADA / M. ST-AMOUR

It is best to keep your distance and use a good pair of waterproof binoculars. **Try to avoid abrupt changes in direction, shouting, and other noises.** Don't forget that kayaks move silently, which many animals interpret as the sign of a predator.

Make sure the animals can see you.

**The St. Lawrence BELUGAS are in danger of extinction. Never chase them or seek them out.** If you run into some by chance, keep your distance. Go

around them if they stay put or calmly continue on your way if they are moving.

### The St. Lawrence HARBOR SEAL is also at risk.

**Wetlands, riverbanks, and shorelines** are often very fragile ecosystems. The wide variety of aquatic plants in marshes provides a perfect environment for a diverse animal population where larva, amphibians, fish, and waterfowl all have vital roles to play. Repeated visits by watercraft can very quickly upset the delicate balance.

**Islands** are often perceived as miniature oases far from civilization and thus undisturbed. This image, while very poetic, hides a little known truth—**small islands are very fragile**. Colonies of seabirds occasionally nest on them and **nesting areas are especially sensitive to disturbances**. Observe them from a distance and then continue on.

When **camping**, always treat the environment with the utmost respect. Since wastewater and latrine pits must be at least 30 meters from a water source, **islands under 60 meters in diameter are unsuitable for camping**. Sloped

river banks and shorelines are also fragile. Repeat visits can destroy the vegetation, create a depression and leave the ground bare. In heavy rain, water will run down the depression, causing severe erosion.

In coastal areas, tides can rise over five meters. Make sure your **campsite is above the high-water mark**. For the same reason, your kayaks should be hauled out of the water and tied

Fin whales  
in the  
St. Lawrence  
estuary

PARKS CANADA / JEAN AUDET





Repeated disturbances disrupt animals, forcing them to retreat from their habitat



PARKS CANADA / M. BOULIANNE

up above the high-water mark. To protect the environment, you are strongly encouraged to **use a camping stove** rather than an open fire. If you must light a fire, try to do so in the intertidal zone. That way, there is no risk of the fire smoldering in the ground. The incoming tide will douse it and remove all traces. Never leave a fire unattended and **thoroughly douse it with water** (not sand) before leaving. In order to diminish the environmental impact, try to avoid staying more than one night at the same site. Only serviced campsites or less sensitive areas like beaches and rocks can endure repeated use. Cover latrine and wastewater pits. Pack out all your garbage so that you leave nothing behind but your footprints, and ripples.

## 12 BEFORE SETTING OUT

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**W**hether you are setting out for a few hours or a few days or more, **preparation is essential**. It can make all the difference between an enjoyable trip and a perilous exercise in survival. **Chapter 5 (Planning and Preparing an Excursion)** lists the steps for planning and preparing an excursion.

On a **longer trip**, you often need to be completely self-sufficient. Make sure you haven't forgotten anything **before setting out**. Mother Nature can be very unpredictable!

**The checklist (13)** should help you avoid forgetting anything important.

**The following list** will help you ensure that everything is in good working order.

- Check the following before setting out:
  - Kayak: Watertightness of hull and compartments. Watertightness of compartment hatches. Lifting toggles at bow and stern. Throwbag and/or floating throwline at least 15 meters long. Rudder or center board in good condition. Screws and bolts tight. Sprayskirt and pedals adjusted. PFD WORN  
Pump well attached
  - Spare paddle in good condition (it's like a spare tire for your group)
  - Paddle float functional and within easy reach
  - Compass well attached (removable models)
  - Map and watertight case within easy reach and well attached
  - Foghorn in good condition (new gas cartridge and/or spare cartridge if necessary)
  - Small watertight sack with extra clothing and paddle food within easy reach
  - Radio in good working order (new and/or spare batteries)



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- Distress flares in good working order (check expiry date) within easy reach
- Working watertight flashlight with spare batteries
- First aid kit suitable for the number of people and length of the excursion
- Tide and current table
- Camping stove with appropriate fuel
- Drinking water
- Make sure you leave a copy of your route plan and contingency plan with a third party (see Chapter 9)
- Listen to the latest weather and marine forecasts
- Make sure everyone knows their safety precautions
- Establish a clear operating framework for group members (group leader, last paddler, etc.). If you are not sure of your abilities, call on professional guides or outfitters.

# 13 CHECKLIST

	Day Outings On Lakes and Rivers	For Excursions in Coastal Waters ADD	Overnight Excursions and Longer Add
<u>MATERIAL</u>	<ul style="list-style-type: none"> <li>• Sea kayak</li> <li>• Paddle</li> <li>• Sprayskirt</li> <li>• One appropriately sized PFD per person</li> <li>• Whistle or foghorn</li> <li>• Throwline or throwbag (15 m or 50 ft.)</li> <li>• Paddle floater</li> <li>• Pump or bailer</li> <li>• Small watertight bag</li> <li>• Drinking water</li> </ul>	<ul style="list-style-type: none"> <li>• Kayak at least 4 meters or 13 feet long</li> <li>• Two-piece take-apart emergency paddle</li> <li>• Distress flares</li> <li>• Compass</li> <li>• Binoculars</li> </ul>	<ul style="list-style-type: none"> <li>• Tent</li> <li>• Ground sheet</li> <li>• Sleeping bag</li> <li>• Camp stove and fuel</li> <li>• Pots and pans</li> <li>• Plates, cups, and utensils</li> <li>• Kitchen kit (salt, pepper, tongs, biodegradable soap, matches, can opener, etc.)</li> <li>• Food</li> <li>• Toilet paper</li> <li>• Small shovel</li> <li>• Tarp</li> </ul>
<u>CLOTHING</u>	<ul style="list-style-type: none"> <li>• Shoes or sandals</li> <li>• Wool socks</li> <li>• Shorts or pants</li> <li>• Polyester T-shirt</li> <li>• Long-sleeved synthetic fiber jacket</li> <li>• Wool or polar fleece sweater</li> <li>• Hat or cap with chin strap</li> <li>• Raingear</li> <li>• Change of clothing in watertight bag</li> <li>• Cycling gloves</li> </ul> <p><b>Beginning and end of season:</b></p> <ul style="list-style-type: none"> <li>• Wetsuit</li> <li>• Neoprene boots and gloves</li> <li>• Tuque or balaclava</li> </ul>	<p>Basic list, as well as warm clothing</p> <p>Even in the summer, the water is colder and weather conditions can change without warning.</p>	<p><b>Extra Clothing</b></p> <ul style="list-style-type: none"> <li>• Underwear</li> <li>• Warm socks</li> <li>• Pants</li> <li>• T-shirt</li> <li>• Shirt</li> <li>• Sweater</li> <li>• Shoes</li> <li>• Extra tuque</li> <li>• Towel</li> <li>• Rain pants</li> </ul>
<u>SAFETY</u>	<ul style="list-style-type: none"> <li>• Sunglasses with cord</li> <li>• Sunscreen</li> <li>• Water bottle or thermos</li> <li>• Topographical map or guide in watertight case</li> <li>• First aid kit</li> <li>• Watertight flashlight and batteries</li> <li>• Insect repellent or mosquito net</li> <li>• Rations (e.g., dehydrated fruit)</li> <li>• Knife</li> </ul>	<ul style="list-style-type: none"> <li>• Weather or VHF radio</li> <li>• Marine chart</li> <li>• Tide table</li> <li>• Marine weather forecast</li> <li>• Extra drinking water</li> </ul>	<ul style="list-style-type: none"> <li>• Personal medication</li> <li>• Extra pair of glasses or contact lenses</li> <li>• Emergency rations</li> <li>• Extra copies of maps</li> <li>• Repair kit</li> <li>• Sewing kit</li> <li>• Water filter or extra drinking water</li> <li>• Narrow line 3 mm x 20 m (</li> <li>• Extra batteries and candle</li> <li>• Waterproof bags</li> </ul>

## 14 ETHICAL CODE

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- You are the best person to ensure your safety. Plan your trips carefully.
- Remain courteous at all times and respect other users. Offer assistance to anyone who appears to be in trouble.
- Find out about applicable regulations and follow them. Respect private property.
- Avoid abrupt changes in direction. They can disturb wildlife and may surprise other boaters near you.
- Never camp on islands that are under 60 meters in diameter or that may be home to colonies of birds or seals. On land, avoid nesting areas and seal haulouts.
- Never go within 200 meters of wild animals.
- Cut noise and speed near animals. Never circle or chase them.
- Move away if you see signs of nervousness or panic in wild animals you are observing. You are too close!
- Never wash anything directly in a river or lake. Do all washing (dishes, clothing, and yourself!) on land using biodegradable soap. This ensures the ground will fulfill its role as a filter.
- Use a camp stove rather than an open fire for preparing meals.
- Pack out all your garbage and make sure you don't leave any trace of your passage behind.
- Make sure everyone knows and complies with this code of ethics.

HAPPY KAYAKING!

# 15 RESOURCES AND REFERENCES

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## Canadian Coast Guard

Information	Phone 1 800 267-6687
Emergencies	Phone 1 800 463-4393
Radio:	16 VHF (156.8)
Cell phone:	*16
Website	<a href="http://www.ccg-gcc.gc.ca">http://www.ccg-gcc.gc.ca</a>

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## Parks Canada

Saguenay–St. Lawrence Marine Park	Phone (418) 235-4703
Mingan Archipelago National Park Reserve	Phone (418) 538-3285 or 3331 (off season.)
Forillon National Park	Phone (418) 368-5505
La Mauricie National Park	Phone (819) 536-2638
General Information	Phone (800) 463-6769
Website	<a href="http://www.parksCanada.pch.gc.ca">http://www.parksCanada.pch.gc.ca</a>

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## Environment Canada (Canadian Wildlife Service)

Website	<a href="http://www.ec.gc.ca">http://www.ec.gc.ca</a>
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## Environment Canada (weather)

Weatheradio (162.475 Mhz, 162.55 Mhz or 162.40Mhz)	
VHF Radio	Channel 21B (161.65 Mhz), Channel 83B (161.775 Mhz) and Channel 25B (161.85 Mhz)
Website	<a href="http://www.wul.gc.ec.gc.ca/meteo/index_a.html">www.wul.gc.ec.gc.ca/meteo/index_a.html</a>

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## Prerecorded Weather Forecasts (free service)

Region	Telephone Number
Baie-Comeau	418-589-6911
Carleton	418-364-6383
Chicoutimi	418-545-6642
Gaspé	418-368-5378
Mont-Joli	418-775-7205
Montréal	514-283-3010
Port Cartier	418-766-7151
Québec	418-648-7766
Rimouski	418-722-3081
Sept-Îles	418-962-5339
Tadoussac *	418-235-4771
Trois-Rivières	819-371-5200

\* *Marine weather forecasts from June 1 to September 30 only.*

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## Sépaq (Parks and Wildlife Reserves of Québec)

Information	Phone 1 800 665-6527
Website	<a href="http://www.sepaq.com">http://www.sepaq.com</a>

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## Fédération québécoise du canot et du kayak

Information	Phone (514) 252-3001
Website	<a href="http://www.canot-kayak.qc.ca">http://www.canot-kayak.qc.ca</a>

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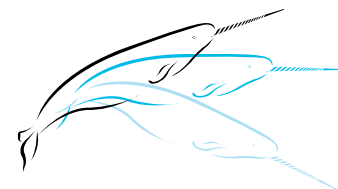
## Québec Kayak

Sea kayaking and long sea excursions	
Website disseminating information on sea kayaking	
	<a href="http://www.cam.org/~cyrd/kayak/index.html">http://www.cam.org/~cyrd/kayak/index.html</a>

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[www.kayacano.ca](http://www.kayacano.ca)



[www.kayakqua.com](http://www.kayakqua.com)