



# **SOUTH LAKE SIMCOE DISTRICT MANUAL FOR WATER ACTIVITIES**

March 2002



## Revisions

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### **Appendices:**

- Canadian Coast Guard Attachments
- Scouts Canada Outdoor Guide - Outdoor Activity Form

## **Introduction:**

South Lake Simcoe District provides this Manual as both a general guideline, and as the main workbook for its **Water Activity Training Course**. This is in following with a belief in the value of proper training and experience for those taking Youth On the Water.

Although this Manual is heavily oriented towards Canoe Tripping, it is a good safety and planning resource for all **"On the Water"** activities.

Electronic copies of this Manual are available at <http://www.sls.swr.scouts.ca>

## **Safe Swimming:**

Setting up a Safe Swimming Area at any Camp happens as a result of good planning. The best recommendations come directly from Scouts Canada - By-Law Policies & Procedures....

When Scout Councils provide swimming programs / activities, it is their responsibility to ensure that the person(s) in charge are competent to operate a swimming program / activity in the waters to be used, and to ensure that the regulations that follow and any local Scouting regulations are observed.

When sections provide swimming programs / activities, it is the responsibility of the Group Committee to ensure that the person(s) in charge is competent to operate a swimming program activity on the waters to be used, and to ensure that the regulations that follow are observed.

### **Regulations:**

During any swim period (except in public regulated pools) the following must be met:

- (a) Beginning a swim period, the safety of swim area shall be established.
- (b) At least one water activity supervisor for every ten (10) swimmers must be on duty.
- (c) The minimum qualification for youth members who are acting as water activity supervisors is the Gold Life Saving Achievement badge or equivalent (Eg. Bronze Medallion).
- (d) Water activity supervisors should be identified to the swimmers prior to the commencement of swimming activities, and suitable attire is to be worn by the supervisors when on duty.
- (e) Suitable rescue and reaching aids must be available at all times.
- (f) All swim groups must be organized under the paired "Buddy System".
- (g) The physical condition and swimming ability of each member should be known by the Scouter before the activity / program begins.
- (h) Water Activity Supervisors are to be positioned within easy reach of swimmers.
- (i) No member shall be permitted to swim unless under responsible supervision.
- (j) Each swim period shall be under the SUPERVISION OF A QUALIFIED PERSON to whom the water activity supervisor is responsible.

## Trip Planning:

### **\*\* PLAN YOUR TRIP AND TRIP YOUR PLAN \*\***

Important considerations in Trip Planning are ...

<b>SKILLS:</b>	Does the group currently have the necessary skills for the types of outing being considered? It would be very dangerous indeed if an adult leader felt that based on his skills alone that a trip could be safely conducted. You must consider the overall skill level of the section(s).
<b>EQUIPMENT:</b>	Is the necessary equipment available and in good serviceable shape? Are the watercraft seaworthy and certified by district? Conducting a outing with substandard equipment in just inviting trouble.
<b>ASSISTANCE:</b>	Is there sufficient adult assistance available as per B.P.&P. Remember there are set ratios of adult to youth members that must be adhered to. Trying to conduct a water activity with "just enough" adult assistance leaves little or no room to react to unexpected situations that might crop up. An entire trip might have to be scrubbed at the last minute (after expenditures) due to illness etc.
<b>LOCATION:</b>	Does the area which you initially pick for your outing meet the skill level which you and your group possess.
<b>TIME:</b>	Is there sufficient time to plan, train and prepare for this outing? As you will see later in Section 11 there are many procedures, forms and details that must be completed for safety of all the members of your group as well as trying to ensure that you stand any chance of conducting a good camp. Are there special requirements (needs) that might be out of the ordinary that will require a longer than normal lead time to achieve.
<b>COST:</b>	Are there sufficient funds available to conduct a successful trip ?

Canoeing is a different way of life. If you are planning a trip, now is the time to prepare for it. It will be much more enjoyable if you are physically prepared. Some exercise before your trip may mean the difference between a relaxed holiday and a struggle. When planning a trip you should know your own capabilities and choose a route which is within those limits.

Canoe trips are of two basic types - the loop or circuit trip, which conveniently brings the paddler back to the starting point, or the straight route where special pick-up arrangements must be made to get the traveler back to his or her point of origin. If planning a canoe trip allow up to 20 - 30 kilometers per day of traveling. Again this would vary in areas where there were many difficult portages or lining of rapids. Weather conditions can also cause delays and stop over days of perhaps one day per week should be worked into your schedule.

#### **Specific planning requirements:**

- a) TRIP PLAN
- b) Preparation Checklist (use as a planning guide)
- c) Good leadership for party size
- d) Swimming Requirement
- e) Shakedown Cruise
- f) Rescue Instruction and Practice
- g) Permission Forms
- h) Adequate equipment for the trip
- i) Proper menu for the trip

### **Three Factors of Planning:** Length, Ability and Research

Length: It must be determined how long the trip will take.

- a) allow 10/15 miles per day
- b) allow ½ day off for each 3 days paddling for repairs, weather, breaks.
- c) remember longer tripping = more cost

Ability: Always underestimate both your stamina and your canoeing skills.

Expect the worst and plan for it.

Research: Sources of Canoe Route info may include ...

- 1) People who have done the route before.
- 2) The library (particularly for historical notes).
- 3) Route Brochures where still available.
- 4) Route Books.
- 5) The District Water Activity Committee.
- 6) Various Canoe Associations.

### **No Trace Camping:**

**TAKE ONLY PHOTOGRAPHS, LEAVE ONLY FOOTPRINTS AND THANKS!!  
IT IS THE SCOUTERS AIM TO LEAVE A CAMPSITE BETTER THAN HE FOUND IT !!**

The above two statements are just an example of the philosophy that as Scouter we want to instill in our youth. We best do this by example than any other means at our disposal. Here are just a few hints which you as a leader can help nurture this important aspect of scouting.

- Fires:
- a) fires must be kept small and in control
  - b) light fires in an open area with no overhanging branches or undergrowth
  - c) use existing fire pits if possible
  - d) have a container of water at the ready for extinguishing the fire.
  - e) as cold ashes are bio-degradable they can be spread around to get rid of them
- Human Waste:
- a) use existing outhouses
  - b) bury waste in a shallow hold about 15 to 20 cm deep and least 35 meters from the shoreline (save the soil)
  - c) after use, fill hole and tramp firmly
- Other Waste:
- a) you brought it in, you bring it out !!!
  - b) sometimes you can burn some of the garbage
  - c) DO NOT BURN aerosol cans, batteries, empty propane cylinders, glass, cans.
- Dish Water:
- a) wash & rinse dishes in a basin, NOT in the lake
  - b) use bio-degradable soap
  - c) dump waste water as you would with human waste

***Clean Up After Others: In the spirit of leaving a campsite better than you found it.***

### ***Trip Plan Forms:***

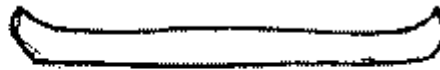
Numerous versions of ***Trip Plan*** or ***Float Plan*** forms have existed over the years. It is recommended that you use the **Camping and Outdoor Activity Application** form from the Scouts Canada - Outdoor Guide (available from <http://www.scouts.ca>). This form is to be filled out and turned in to your Group Committee or whatever Council is responsible for the Activity. Use attachments such as maps, detailed Trip info, menu plans, lists of attendees, etc. freely.

## Canoes:

- Length:** 11' to 24'. Usual tripping canoe is 15' to 18' in length. As the ends tend to be similar the extra length of a longer canoe goes in the middle, hence the mid-section of a 18' canoe is much roomier than a 15'. Along with the extra length there is a much greater capacity. There is a price to be paid for the additional capacity that a larger canoe affords and that is maneuverability. The loss of maneuverability is countered somewhat by "rocker". (i.e. the bottom is pulled up at the ends) Generally, a 17' canoe is preferred for any serious trip. It will have the capacity to give lots of freeboard and yet not be too heavy to carry.
- Beam:** 34" to 39". The wider a canoe is the harder the canoe will be to paddle. Beam also affects the "fineness" of the ends. A canoe is wedge-like, sharp angles are easier to drive. Many canoes tend to be "tubby" because this supposedly adds to stability. Stability is far more complex than that; a wide flat canoe may be "stiffer" initially, but will tend to suddenly reach a point where it will become unstable and capsize. A narrower, rounder canoe will have a relatively greater resistance to tipping.
- Depth:** 12" minimum, 14"/15" common for a 17' canoe. The higher the sides (freeboard) is the less water will find its way into the canoe making this a very important consideration when selecting a canoe. Wide flat canoes (wide beam) require far less depth midships.
- Shape:** Rocker is the fore to aft curve of the bottom of the canoe. The more curve the more maneuverable the canoe will be. However there is a price to be paid with a canoe with large rocker. It tends to be much harder to keep in to course.



**Rocker**



**Little or no Rocker**

- Ends:** A canoe with "fine" ends is much easier to paddle. A "fine" end means that it has a very sharp wedge shape. The "finer" the end the easier the canoe will be to keep in a straight course, The drawback to a canoe with this type of end is that it tends to cut through the waves and deposits the water into your lap. A "full" end on a canoe eliminates the splashing effect of a "fine" end by deflecting the water away from the canoe. Again there is a drawback to be considered here too. The "full" end canoe is harder to paddle due to the increase in water resistance of the broader end and is significantly harder to maintain course and direction. Most true white-water canoes have this type of construction combined with a lot of rocker.



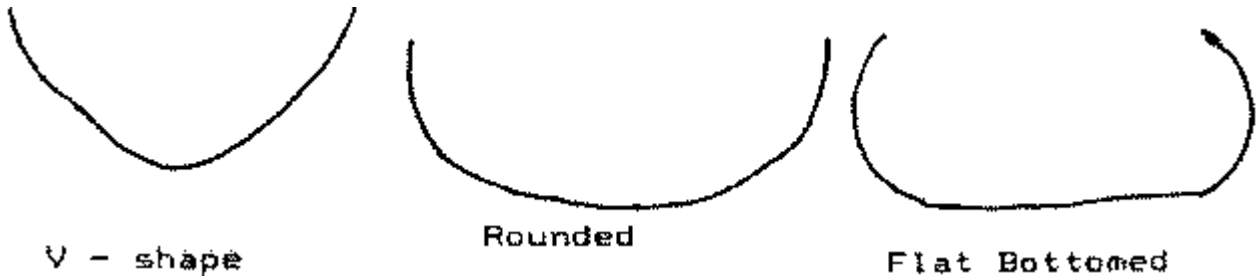
**"FINE END"**



**"FULL END"**

## Mid-Sections:

- V - Shape:** This shape is used for flat water racing. Paddles very straight. It may require as much as 6" of water to float. Not recommended for tripping.
- Rounded:** This shape offers the easiest paddling characteristics of any. Has very good maneuverability as well as good critical stability.
- Flat:** The vast majority of canoes are constructed in this manner, mainly because it is the easiest to build. As mentioned before very stable in flat water however it is much less easy to maneuver and loses stability very rapidly in less than perfect conditions. Somewhat barge like to paddle.



## CANOE CONSTRUCTION:

- WOOD / CANVAS:** This is the classic form of canoe construction. There are many different designs available combining beam, length, rocker etc.. Cedar planks are placed over a wood frame then a waterproof cover of canvas is applied. It is then filled and painted. These canoes will leak at first until the planks have time to swell with water. Because of this swelling these canoes have a tendency to gain weight over time. They as a rule have very good strength with excellent stiffness. The canvas also tends to slide off obstacles. These types of canoes tend also to be higher priced because of the labour required in the construction. These canoes also require a fair amount of maintenance and upkeep not required by many of the other types of constructions.
- FIBERGLASS:** Fiberglass is strands of glass made into strands or cloths, then laminated with a binder (resin). It should be mentioned that when looking for a canoe be sure to avoid the "chopped strand" construction used by some manufacturers. It is obvious to tell by the short lengths of fiber going every which way. This type of construction leads to poor strength with heavy weight. Not the type of characteristics one would be looking for in a canoe. Also be aware enough to look for obvious puddles of resin on the canoe. This only serves to add weight with no strength advantage. The buyer should also look for bubbles within the fiberglass. They tend to show up as whitish patches (very bad).
- Features:
- a) wood gunwales
  - b) flotation (unless corded)
  - c) seats set well below gunwales
  - d) good flexibility
  - e) strength, generally good except for above
  - f) good stiffness
  - g) tends to slide off obstacles
  - h) cost is reasonable but avoid cheapies
- KEVLAR:** This uses much the same type of construction as fiberglass except for the fiber. KEVLAR is the same material that bullet proof vests are made of.
- Features:
- a) strength, very strong (air plane story)
  - b) stiffness, almost tends to be too flexible
  - c) slides well off obstacles
  - d) cost - very expensive from \$1600.00 and up

**ALUMINUM:**

There are relatively few designs to choose from mainly due to the expensive tooling costs involved in this type of construction. These canoes tend to be very strong and survive scrapes well. They do however have a bad habit of sticking on rocks, etc.

- Features:
- a) secure thwarts
  - b) dropped seats
  - c) reasonable bottom stiffness
  - d) no welding, reduces strength
  - e) adequate floatation
  - f) strength, second only to KEVLAR
  - g) cost, midrange

**ABS Plastic:**

ABS plastic is made up of sheets of laminated foam, therefore floatation is built right in (check to ensure that there is enough). These canoes for the most part are very strong, very flexible and very slippery (slips off obstacles very well). If an ABS canoe does not slip off an obstacle the material will abrade and is not easily repaired. It is quite often advisable to glue inner tube material to the inside of the canoe to keep from slipping around.

- Features:
- a) strength, excellent
  - b) stiffness, opinion is that these are too flexible.
  - c) slides well off obstacles
  - d) cost, low to midrange

**CANOE REPAIR KITS:**

On every canoe trip one hopes that there will be no unexpected problems but at the same time one must be prepared for the possibility of the canoe becoming damaged. A repair kit suitable for the type of construction is a must on any trip. As a stop gap, duct tape applied to the exterior of the canoe will temporarily repair a minor rip in most types of canoes until a more permanent repair can be done.

- Contents:
- a) duct tape
  - b) rivets & rivet gun
  - c) sheet aluminum
  - d) caulking
  - e) fiberglass repair kit incl. resin & hardener
  - f) 5 min. epoxy & seam sealer
  - g) canvas cloth
  - h) wire and cord for repair lashing
  - i) nails, screws, bolts, nuts, safety pins
  - j) adhesive



## **Canoe Transport and Trailing:**

Getting canoes to a Trip is a task to be handled with safety as the top priority.

### ***Car-Top:***

Using proper roof-racks or foam clip-ons to protect the vehicles roof, a canoe may be secured using ropes or straps. The canoe must be secured tightly, and should also be tied with safety lines to the front and rear of the vehicle. If you are uncertain how to secure a canoe to your vehicle, the best idea is to have another Scouter who does know, show you how !!

### ***Trailing:***

Canoes may be secured using ropes or straps. The canoes must be secured tightly, and should also be tied with safety lines to the front and rear of the trailer. If you are uncertain how to secure canoes to your trailer, the best idea is to have another Scouter who does know, show you how !!

When a motor vehicle is hauling a trailer, things to remember...

- Make sure that all trailer running lights, brake lights, signal lights, four way flashers, and license plate lights are working. Remember to check your trailer lights frequently.
- Make sure that the safety chains are crossed under the trailer tongue and are attached to the hitch of your motor vehicle with safety hook devices. The chains are crossed under the tongue of the trailer so that if the tongue becomes dislodged from the hitch, the tongue will not hit the pavement, and you will have some moveability to attempt to stop the trailer in safety.
- Make sure that when the trailer tongue is attached to the ball on the hitch receiver , that the tongue is locked with a safety pin through the hole on the tongue so it will not release.
- Make sure that the hitch of your motor vehicle is the proper class for the trailer that you are pulling, the ball is the correct weight restraint for the trailer, and that the ball is also the correct size for the tongue.

**Note:** The South lake Simcoe District Canoe Trailers require a 2" Ball and a Class 2 Hitch.  
NO EXCEPTIONS.

- Remember to carry a true copy of the trailer ownership. It is a vehicle under The Highway Traffic Act of Ontario, and you must produce this with the pink Insurance Certificate to a Police Officer upon demand. There is no grace time to produce either of these documents. Also it is the responsibility of the Registered Owner of the Motor Vehicle and Trailer to have them insured. The Registered Owner must supply the user of the trailer with the appropriate documents.
- Remember to make sure that the load on the trailer is properly secured. If the load becomes dislodged the operator may be charged with an insecure load. When ever you stop get into the habit of checking your tires, lights, and the security of your load.
- Remember to check your trailer tires; they should be about 32 psi (pounds per square inch). If in doubt check the side wall of the tires for the recommended psi. Also check your motor vehicle tire pressure.
- Remember to check the wheel bearings on the trailer axle. If the trailer has been sitting idle for any length of time, they should be replaced with new bearings and greased. While on a road trip, grease bearings regularly.
- Note: Most trailer manufacturers recommend that the wheel bearings be replaced and repacked with grease annually.
- If you have never driven a motor vehicle hauling a trailer, do not wait until the day you head out on a trip; take some lessons from somebody with experience.
- Learn to back up the trailer before a trip. Backing up is tricky!! Remember the shorter the tongue, the harder it is to back up the trailer!!
- Remember to have appropriate outside mirrors so that you can see most of the rear of the trailer at all times.

- Remember when hauling a trailer that you need to have all operating lights to the most rear of the trailer. The four way flashers will not get you out of a ticket.
- Please remember when you are hauling a trailer that you need to watch your speed and distance. You have to stop two vehicles now, not one!! and you will not stop on a dime. Also, when passing, changing lanes, or turning onto a side road, make sure that you have sufficient room.

**Spare items to Carry:**

- 1 A spare tire in good condition; no side wall cracks, and tread deeper than 5mm.
- 2 A spare tire jack and wheel lug wrench for trailer tires.
- 3 A couple of spare wheel nuts.
- 4 A grease gun with wheel grease.
- 5 Spare light bulbs.
- 6 Spare locking pin for the trailer tongue.
- 7 Electrical tape.
- 8 Spare running light connector and wire.
- 9 Spare heavy duty signal flasher.

Also refer to the **Ontario - Highway Traffic Act**, Chapters H.8, other sections relating to Trailers, and the **Compulsory Automobile Insurance Act**.

## **SAFE DRIVING AND SAFE TRAILERING**

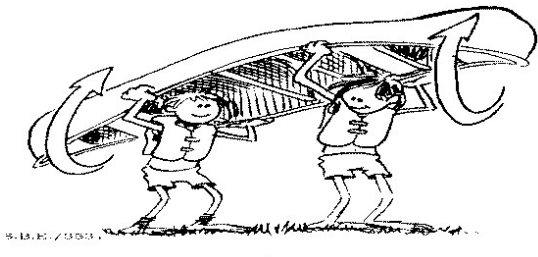
## Canoeing and Paddling Techniques:

Before getting On The Water it is important to go over some basics. Before even getting into a canoe on the water, you need to know how to handle it on land. One man canoe carries should only be taught by in-person instruction. Two man is simpler and generally safer (although not nearly as efficient for portaging).

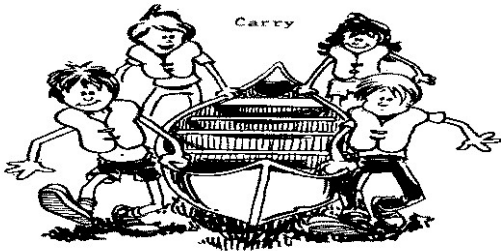


Both paddlers are on the same side of the canoe, and lift it from the nearest gunwale ; balancing it on their knees. Being sure they are facing the same way, they each reach one arm over to the other gunwale.

With one smooth motion, the canoe is lifted up onto each paddlers shoulders. Your PFD or other padding eases the pressure. Paddles can often be tucked above your head, lashed to the seats. When putting the canoe back down, the motion is reversed.



For smaller Youth, a similar carry method is to have the canoe overturned while one paddler lifts one end. The other paddler can step underneath into position and grab the gunwales. The first paddler can then turn around and they adjust to the two man carry position.



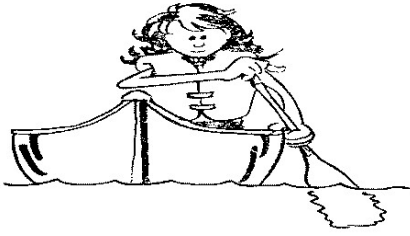
Yet another method, sometimes called "American Portaging", involves carrying the canoe in the upright position. This is not recommended for only two paddlers, nor for any serious distance, nor if there is any gear in the canoe.

Once your canoe is launched, and you are ready to get in and paddle, there are several general guidelines that are very useful and important ...

**ALWAYS LET YOUR PARTNER KNOW WHAT YOU ARE DOING !!**  
**NEVER STAND IN A CANOE !!**  
**WEAR YOUR PFD AT ALL TIMES ON THE WATER !!**

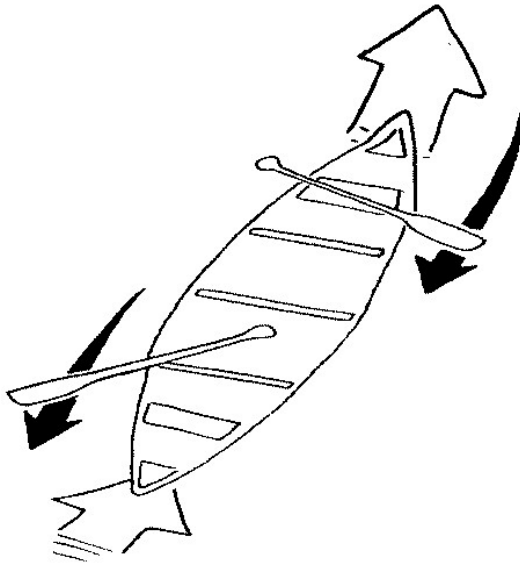
- Get in and out of your canoe safely, being aware of both your, and the canoe's balance. One person should get in or out at a time.
- Normally the bowman (the guy in front) and sterns man (the guy in back) paddle on opposite sides of the canoe; do not change side without talking to your paddling partner. In general, the bowman sets the paddling pace (after all, the sterns man can see the bowman, but not the other way around), while the sterns man has most (but not all) of the steering control.
- Canoe seats are for resting your behind against, not for actually sitting on. You should be down on at least one, and preferably both knees.

## **Paddle Strokes:**



In general paddle strokes involve the entire upper body, not just the arms. The hand on the paddle side holds the shaft somewhere above the blade, while the other hand is on the handle. Most strokes, except sweeps, have the shaft as straight up and down as possible for most of their motion. Strokes should be even and smooth, with the paddle as close as possible to the canoe (other than sweep strokes), without actually touching it.

## **Forward Strokes:**



This is both a bow and stern stroke. In order to maneuver your boat, you have to go either faster or slower than the current, and it's more fun to go faster. The forward stroke gives you this maneuverability. To start, rotate the right side of your upper body forward, starting with the hip and going all the way up through the chest and shoulders (which should be almost parallel to the center line of the boat). Your right hand should extend forward so that your right arm is straight. Your paddle should almost be vertical and your left hand at about forehead level, like you were reading a watch. While still wound up, plant the right blade into the water near your right foot. It's important to get the paddle in the water before you unwind-otherwise you lose power. When you plant your paddle at the beginning of your stroke, think about pulling your hips up to your paddle. If you are doing this correctly you should feel the muscles under your arm pit, back, and stomach doing the work.

Once the paddle is in the water, propel the boat forward without bending your elbow. This means you have to untwist your upper body. When your paddle blade gets to your knees, you can start to bend your elbow in preparation for taking your paddle out of the water. The blade should come out of the water before it gets to your hip. If the left-hand blade crosses over the center line of the boat, you have not pulled out soon enough. This is a lot to think about, so just try it on one side, letting yourself go in circles for awhile. After you get the feel of it on one side, teach the other side the stroke, then put the two together and cruise.

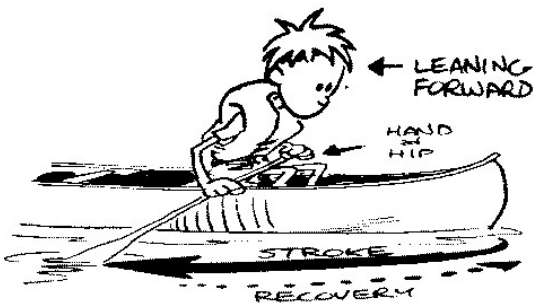
### J-Stroke:



This is a stern-only stroke. To compensate for undesired turning from simple forward strokes, you need to pull the stern back in line with the bow. Twist your upper body to your right, looking over your right shoulder towards the stern. Both hands should be over the water with the front hand at shoulder height. If you drop your paddle it should hit the water and not your boat. Put a little more weight on your left butt cheek to compensate for having both hands on one side of the boat. Keeping your back paddle blade parallel to the boat, place the right blade in the water a couple feet from your stern. If you arch back slightly and raise your left hand to

about chin level, you will be in good position to cover your right blade fully in the water. Now pull your stern to your paddle by bending your right elbow ninety degrees as you rotate your upper body around further toward the stern. It's a short, powerful stroke. Just before the boat touches the paddle, lift the left blade out of the water. In the finished position, you should be able to drop your right elbow down and touch the center line of the boat.

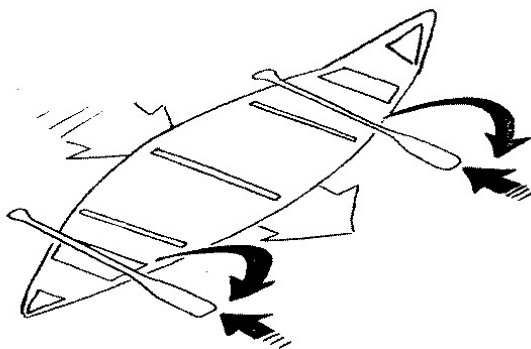
### Sweep Strokes:



Forward and Reverse Sweeps can be used from both the bow and stern as required. Unlike most other strokes, sweeps are broad and the paddler must reach far out from the side of the canoe. The forward sweep is used to initiate a turn while maintaining momentum. To turn left, begin in the same position as in the forward stroke. Rotate the right side of your upper body forward, keeping the paddle more horizontal than vertical. Now push your feet to the left, away from your paddle, as you rotate your upper body around to the right. Your right elbow should be slightly bent as the paddle makes a semi-circle around the pivot point. Your left hand will travel across the front of the boat and end up on

the same side as your right hand. The reverse sweep slows speed and reduces maneuverability, yet in certain situations can be quite handy, especially when you get spun upstream by a wave or eddy line and want to turn your boat back around to avoid going backwards.

### Draw Stroke:



The Draw may be used from both the bow and stern as required. This stroke slides the boat sideways. It is very convenient for moving over in an eddy or to position your boat for a ferry or peel out. It can also be used as a steering stroke with care. Rotate your torso to the right and place your paddle in a vertical position, right hand near your hip, left hand positioned directly above your right and in a position as if you were reading your watch. Your shoulders should be in line with the boat and "box in" the vertical paddle. Both hands should be over the water. Now rotate your right wrist forward so that your paddle blade is perpendicular to the side of the boat. Slice the blade away from the boat. Straighten your right wrist so the paddle blade

is now parallel to the side of the boat. Pull the boat and your hip to the paddle. As you do, lean your boat slightly away from your paddle so that the water goes under the boat rather than piling up on the side. When the paddle gets next to the boat, rotate your right wrist forward again and slice the paddle out to start another draw. If you find your kayak is turning a bit instead of sliding sideways, you may need to slide your paddle a little forward or back to compensate. Make sure the paddle blade is parallel to the boat before you begin.

## **Other Equipment:**

### ***Personal Flotation Devices (PFD's):***

All Canadian boats are required, by law to carry a Department of Transportation (DOT) approved life jacket or personal flotation device (PFD) for each person in the boat. There are four basic types of buoyancy devices: the standard life jacket, the small vessel life jacket, the multi-purpose flotation device and the lifesaving cushion. These approved flotation aids are available on the commercial market. You should select the one best suited for your needs and wear it when you go out in a boat. It could save your life or the lives of your group.

The approved standard life jacket is approved for use in all boats in Canadian waters. Keyhole standard LIFE JACKETS have the highest buoyancy value of all LIFE JACKETS or PFD's. These LIFE JACKETS will turn the body on its back and keep the head clear of the water even when the wearer is unconscious. Thus the term "life jacket".

Approved personal flotation devices (PFD's) are more often used by active boaters such as canoeists and kayakers because they provide more freedom of movement. They are intended for constant wear and are more comfortable for activities such as paddling, water skiing and fishing.

A PFD is not a substitute for a life jacket and will not function like a life jacket. It does not have as much buoyancy and will not necessarily turn an unconscious person to a face up position. PFD's are only aids to assist you to keep afloat. They have varying degrees of effectiveness depending on your body size and type. PFD's increase the chances of survival, however. WEAR THEM !

There are certain areas of the body where more heat is lost than others. You can help reduce heat loss from these critical regions by wearing a life jacket or PFD while in cold water !

#### **CHOOSING YOUR LIFE JACKET OR PFD:**

Choose your life jacket or PFD carefully. It should be suitable for your body type and size and the type of water activity you intend to use it for. Make sure it is DOT approved. Ensure that LIFE JACKETS and PFD's fit children properly. If they are too big they tend to ride up and over the child's head. Straps which go between the legs are one means of preventing this. Be sure all zippers and ties are properly done up and remain that way while the children are wearing them.

#### **GENERAL CARE:**

Take proper care of your life jacket or PFD and it will last indefinitely. Use it only for the purpose for which it was designed. NEVER use it as a kneeling pad. NEVER use harsh detergents or gasoline to clean it. Avoid direct heat and unnecessary exposure to sunlight. Always dry it well in open air after use. DO NOT DRY CLEAN !

#### **PFD TYPES:**

Look for DOT APPROVAL ! Do Not use as a pillow! !

##### **LIFE PRESERVER**

- up to 30 lbs. floatation
- designed to preserve life
- bulky

##### **PERSONAL FLOATATION DEVICES (PFD's)**

- about 13 lbs. floatation
- designed to assist a conscious swimmer

##### **KAPOK**

- used in older LIFE JACKETS
- not very good - it's sealed in plastic pockets and if punctured it will soak up water

**OTHER PERSONAL BUOYANCY DEVICE TYPES:**

- Ski Belts - never!
- Horse Collar - Kapok - therefore watch out!
- shapes not too had for paddling in
- Steamship - worse than bad!
- can not paddle in it, swim in it, sit on it or use it as a pillow and it's made of Kapok to boot!
- Keyhole - impossible to paddle in!!
- Cushion - great cushion / terrible life jacket!!
- PFD - BEST OF ALL for canoeing.
- generally jacket type
- warm, easy to paddle in
- will not float unconscious victim face up
- two types 1) closed cell foam
- 2) sealed air tubes (can rupture)
- Wet Suit - offers 6 to 8 lbs. floatation and excellent hypothermia protection
- not DOT approved
- Float Coat PFD - excellent warmth
- can be used as a regular coat
- a little awkward to paddle in
- when equipped with a beaver tail second only to wet suit for protection against hypothermia yet still has full PFD floatation as well as being DOT approved.

## Paddle Types, Shapes, Styles And Care:

Be sure that the paddle is free of knots and has a straight grain. Beware of painted finish as this may be used to hide flaws in the paddle construction. Most paddles are finished with a polyurethane varnish or oiled. Hardwood should have "whip" when pressure is applied to them. Softwood doesn't. Look for a raised portion running from the shaft to the blade.

### Hardwood

vs

### Softwood

- heavier
- very durable, lasts for years
- shaft will not splinter from prying on gunwale of canoe
- has good whip
- much stronger, good for white-water and tripping

- very light
- better have spares
- will not withstand abuse well
- very little "whip"

### Length:

There are several methods for determining the proper length of a paddle however, with most canoeists it become a matter of personal preference. This can only be obtained through experience.

- Some like a paddle that comes to their chin.
- Others determine the proper length by extending their arms to the sides and have the paddle run from hand to hand.
- For maximum efficiency and comfort in paddling, it is the length of the shaft that is more important than the overall length of the paddle. To determine the proper shaft length, stand with the upper arms outstretched to the side and the forearms pointing up. The angle between the upper and lower arms should be approximately 90 degrees. If greater or less than 90 degrees, efficiency and comfort are lost.

### Whip:

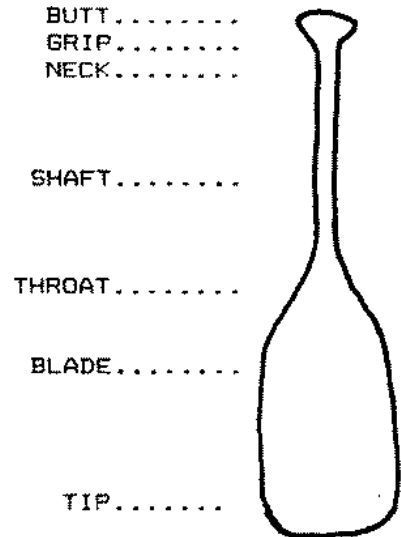
Some paddles are stiff, some have bend or "Whip" in them. An experienced canoeist when selecting a paddle will often place the tip of the blade on the floor at a 45 degree angle and press down on the shaft of the paddle to see if it gives. His intention is not to see how strong the paddle is. A paddle that has some Whip is less tiresome to use than a stiff, unbending paddle. This whip at the end of the stroke absorbs some of the strain that would normally be transferred completely to the arm muscles by a stiff spined paddle. When you consider 40 strokes a minute, that's 2400 strokes/hour the less wear and tear on the muscles the better.

### Grain:

Grain in wood often determines its strength. A straight grain up and down the length of the paddle is what you're looking for. A grain not parallel to the paddle length may tend to separate and lift away, causing splinters and a weakness in the paddle's strength.

### One Piece:

For overall strength and durability, a paddle made up of one piece of wood from grip to blade tip should be your choice. The blade can be made up of laminations, as long as they are joined to the length of wood making up the length of the paddle.





**Paddle Types:**

**Beaver Tail**



Suitable for bow or middle person.

**Sterning**



Suitable for all positions in the canoe.

**Otter Tail  
(hardwood)**



Suitable for all positions in the canoe.  
Probably the best type for tripping.  
Most expensive.

**T Grip**



Suitable for all positions.  
This type of grip is a personal preference.  
Some are made with an aluminum shaft with a fiberglass grip and blade.  
Very durable and inexpensive.

**Bent Shaft**



Mainly for racing or a lot of power.  
Not suitable for all stern strokes.  
Very expensive.

## Paddle Summary:

- Length:
- a) approximately nose height or
  - b) outstretched hands or
  - c) hands on throat and butt with arms above head, elbows bent at 90 degrees.

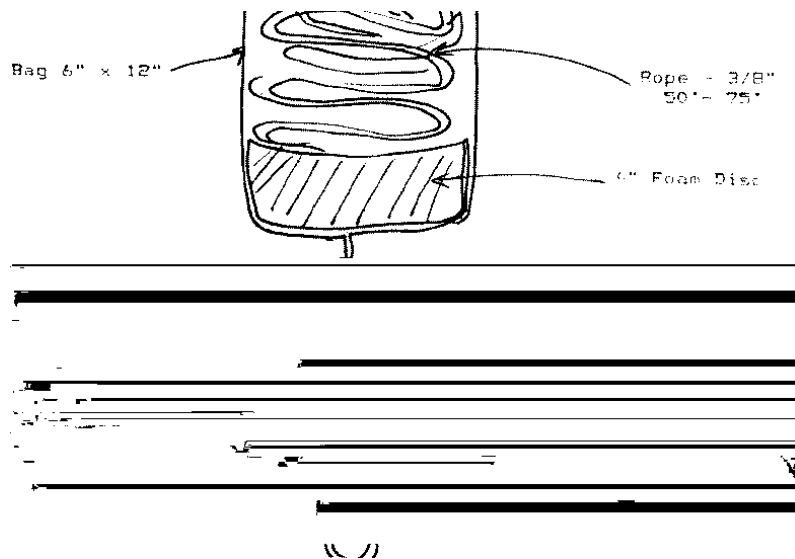
Note: You might feel comfortable with something quite different.

- Materials
- a) softwood, around poor
  - b) hardwood, greater strength, less abrasion in rocks, more flexible
  - c) fibreglass, excellent strength, make sure it floats, shaft cold
  - d) aluminum or plastic, as above

- Area
- a) about 130 sq inches for adults, smaller for children
  - b) more for white-water due to the increased power required

## Throw Lines:

The throw-bag idea is so beautiful and the actual use is trouble free that eventually it might become the only way to keep 75' of rescue rope ready for throwing at any time. It virtually eliminates tangling of the rope while being transported, readied for use or just stored. Making your own throw bag is easy and inexpensive. The 6" X 12' bag is of medium to light weight cloth (canvas or nylon is best). A 1" thick, 6" wide disc of Styrofoam or cork is in the bottom of the bag. The disc serves two purposes: keeping the bag afloat and shaping it for storing the rope. A Drawstring at the top of the bag partially closes it and prevents the rope from accidentally coming out en masse. The rope itself should be 3/8" thick, 50' to 75' long and made of a buoyant material such as polypropylene. Tie an overhand knot 18" from one end and pass that end through the hole in the disc and the hole in the bottom of the bag. Make a grab loop in that end of the line by splicing in a eye or tying a bowline. The other end of the rope should have a grab loop as well. This is for the rescuer and makes retaining the rope much easier. The device is now complete and ready for use. Stuff the rope into the bag from the open end and permit it to coil or collect naturally in the bag. Close the bag loosely with the drawstring and tie off. You are now ready for your first practice throw.



## **First Aid Kit:**

Commercial First Aid Kits are available from St. John Ambulance, the Canadian Red Cross Society, and many commercial organizations. The one selected should either be in a waterproof case, or transferred into one. A kit can be made from scratch, or a prepared kit may be supplemented from the following list ...

Waterproof Band-Aids	Sterile Gauze Squares (several sizes)
Gauze Rolls ("Kling" type)	Pressure Dressings (several sizes)
Adhesive Tape Rolls	Triangular Bandages
Moleskin	Cotton Balls
Q-Tips	Latex or Vinyl Gloves
Eye Pads	Antiseptic Soap or Lotion
Sun Screen	Sunburn Ointment
Lip Balm	Vaseline
Non-Medicated Eye Drops	Space Blankets
Scissors	Tongue Depressors (as finger splints)
Thermometer	Safety Pins
Unbreakable Mirror	Tweezers
Flashlight	Notepad and Pen

***Remember that a fully stocked First Aid Kit is only of full use if used by a Trained First Aider !!***

## **Packs:**

Pack-board	-	useful for tying on duffel bag
	-	get the front zipper types
Frame Type	-	check for solid frame
	-	generally the bigger the sack the easier to waterproof
	-	very comfortable to carry
	-	very awkward to load in a canoe
Canoe Pack	-	one glorious sack
	-	pack "group items" in separate waterproofings
	-	soft items against back
	-	check construction
	-	fits canoe well
	-	painful to carry
Internal Frame	-	like the frame pack but uses sophisticated techniques to avoid the frame and still be easy to carry
	-	no frame, therefore easier to fit in canoe
	-	best possible pack
	-	most expensive

## **Waterproofing:**

Pack everything in the heaviest plastic bags you can find. (3 mil is nice). Double wrap things like your sleeping bag. Take along extras, also tape to patch small holes. Better yet are waterproof packs / sacks.

## **General Equipment Lists:**

### **PERSONAL GEAR:**

- Boots: a) full tongue  
b) higher less water  
c) unlace in canoe  
d) good on portages
- Water Boots a) Goretex Boots, or old running shoes for use on wet rocks, etc.
- Moccasins: a) great evening wear
- Socks: a) wool, wool, Wool !!!  
b) heavy, expensive, hard to get, scratchy  
c) only two nice things  
1) warm when they're dry  
2) warm when they're wet
- Pants: d) get long enough to tuck into pants - BUGS  
a) wool again, especially in spring and fall  
b) get a tight weave otherwise they catch  
c) cotton or blend in the summer loose fitting  
d) shorts  
e) many people like nylon swimsuit for underwear because it dries quickly
- Shirts: a) heavy cotton  
b) long sleeve, long tail  
c) wear open in day, tuck in a night
- Kerchief: a) soak in bug oil
- Hat: a) beats the bugs and sunstroke
- Rain-gear: a) plastic poor choice, it acts like a sauna  
b) ponchos, sweat less but water runs up your arm when paddling  
c) Cagoule - rain shirt - comes to below the knees and has sleeves, gives much better ventilation, doubles as a jacket
- Sleeping Bag: a) down is warmest when dry however mats terribly when wet therefore no insulation (also smells like a dead duck)  
b) polyester 60% of downs warmth when dry but much better when wet  
c) Hollofill, Polarguard, or Thinsulite.
- Hygiene: a) soap, towel, facecloth, toothpaste, toothbrush, bug spray, sunscreen, etc.  
b) waterproofed matches, compass, whistle  
c) glasses, sunglasses, glasses strap  
d) necessary changes of clothing inside and out
- Utensils: a) Mess kit and utensils (plate, cup, bowl, knife, fork, -spoon - plastic, it keeps the food warm longer)

### **COMMON GEAR:**

- a) Axe - necessary to start fire in the rain. If you're uncomfortable with one, don't experiment 400 miles from a hospital
- b) Saw - folding, great
- c) Stoves - Optimus or Primus (Note propane does not work in cold weather)
- d) Tarps - 4 mil plastic
- e) Candles - super desperation fire starter
- f) Tents - 5 to 7 lb. waterproof floor & fly
- g) Spare Line

## Menu Planning:

You will probably require 4,000 calories per day. Many good reference books are available.

- a) protein or carbohydrate 1800 cal./ pound
- b) fat = 4,000 cal./pound

A diet over 40% fat is not healthy except in polar climes. Fat is easy to carry so save the grease from bacon, and use lots of cooking oil, etc.

For MENU PLANNING the basic concept is Simplicity !!

- Breakfast (2 types):
  - a) Fast = granola
  - b) Slow = (rainy day)
- Lunch:
  - a) Cold and Fast = Dried Fruit
  - b) Low moisture = Cheese
  - c) peanut butter
  - d) hardtack
  - e) lots of calories
- Dinner:
  - a) on a long trip, 4 or 5 basic meals

Buying food can become both an art form, and an exercise in good economics ...

- Short Trip:
  - a) everything from grocery store. Frozen meat will keep for 1 to 2 days
- Long Trip:
  - a) freeze dried meats required
  - b) some smoked deli type meats, no fridge req'd
  - c) minimize cans and bottles
  - d) pack things in plastic bags
  - e) also throw away cardboard (but keep instructions)
  - f) clearly mark all bags
  - g) lots of sweet drinks
  - h) rye bread does not crush as easily as white
  - i) rice and spaghetti, keeps well, lots of bulk
  - j) always carry enough food to last a couple of day longer than planned just in case. Fishing is nice but highly unreliable
  - k) beware of twist ties - they poke holes in almost everything

## Drinking Water:

There are several major risks in obtaining Drinking Water while on a Trip ...

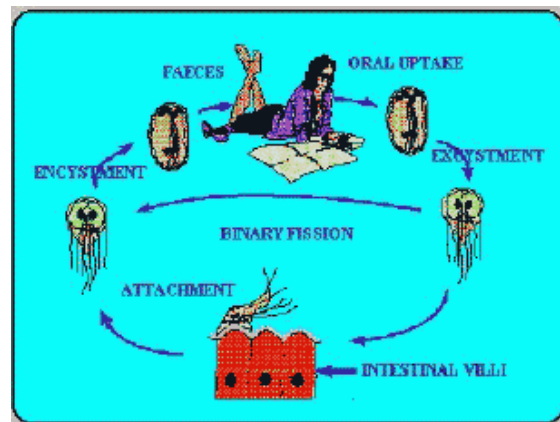
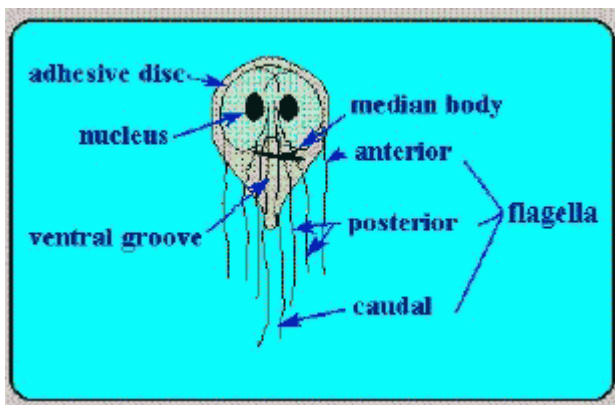
- 1) Protozoa Contamination: primarily Giardia and CryptoSporidium.
- 2) Bacterial Contamination.
- 3) Viral Contamination.
- 4) Particulate Contamination.
- 5) Chemical Contamination.

Of these, there is usually little that can be done on a Trip about Chemical Contamination other than avoidance. Do not take water near a chemical plant, factory, sewage outlet, etc. Particulate Contamination, by itself, is usually more a matter of taste; i.e.: sand, bark, etc. in the drinking water.

Viral and Bacterial Contamination is rare but possible. The biggest risk is Protozoa. The two most common forms are ...

### **Giardia:**

This protozoan is regarded as the most common flagellate in the human digestive tract and is highly contagious. It has been found in water supplies ranging from swamps to supposedly-clean mountain springs.



The Protozoan has a characteristic tear-drop shape and measures 10-15  $\mu\text{m}$  in length. They swim free and rapidly in a spiral motion in the human intestine, but also attach to the intestinal wall. They reproduce by binary fission and attachment to a surface is required for this to occur. The main food source, glucose is obtained by a process of diffusion. Like amoebae, they require a reducing environment.

Giardia have a simple direct life cycle. Cysts are taken in orally, usually via contaminated drinking water. Cysts then pass out with the feces.

The disease in Canada gained some notoriety a few years ago when there was an outbreak of Giardiasis in Banff National Park and the symptoms of the disease became known as Beaver Fever, so named because the untreated drinking water fed by mountain streams was thought to be contaminated by beavers infected with a human strain of Giardia. Patients harbouring this protozoan may exhibit all or some of the following symptoms: diarrhea, dehydration, abdominal pain and weight loss. There is no blood loss associated with the diarrhea. This disease is not generally fatal.

**CryptoSporidium:**

This is a waterborne parasite. Unknown in humans before 1976, CryptoSporidium outbreaks are becoming increasingly common. It is a tiny protozoan that usually lives in the intestines of animals, wild and livestock. However, it can also infect humans and their pets. It enters its hosts as tiny, protective capsules, similar to eggs, but only a micron in diameter. The eggs break open inside the host's intestines, allowing the parasite to grow and spread. During their spread, they irritate the surfaces of the small intestine, which causes diarrhea. Eventually the form more eggs which are transmitted through feces into the water and to other hosts. CryptoSporidium can also be passed from human-to-human, or human-to-pet orally; through contaminated lakes and swimming pools.

In most people, infection leads to an `explosive' attack of watery diarrhea within four to six days, and lasts five to 11 days. Most healthy people with normal immune systems don't suffer more than diarrhea and related symptoms: only people with immune deficiencies, elderly ill or very young infants face serious health risks. Although first described in 1907, it wasn't until 1976 that the first case in a human was identified. Outbreaks of the parasite have been relatively rare until the last decade, but may have been diagnosed as other illnesses or infections. In many cases, CryptoSporidium has been found in company with Giardia.

**Water Sources:**

One way of reducing the risk of Water Contamination can be reduced is by careful choice of the Source of the Water ...

- 1) Moving Water is usually safer than Still or Stagnant Water.
- 2) The center of a body of water is usually safer than near shore.
- 3) Avoid water near Animal Dens, Beaver Dams, etc.

***But this is NOT a sure way to avoid contamination.***

**Water Treatment:**

Chemical treatments may have limited effect. Chlorine based tablets or chlorine bleach (Javex) may be effective against Giardia but has little effect on CryptoSporidium. Iodine tablets are more effective against both, but still not 100%. The two recommended treatments are ...

**Boiling:** This is the most effective against all life-form contamination, but usually the least convenient. Relying upon boiling alone may result in a mid-day situation where trippers run out of Drinking Water and just "take a chance". Water to be purified should be brought to a full boil, and left boiling for ten minutes.

**Filtration:** Many types of Water Filters are available. Some use disposable filter cartridges others are cleanable. Some are relatively inexpensive, others very expensive. All tend to be slow to use, but they may be used anywhere, even in the middle of a lake. Filters will also remove Particulate Contamination. For a Filter to be effective against Protozoa they must be "sub-micron" in filter cartridge "aperture size". Note that Filters are not effective against viruses and many bacteria. It is best to shop around, compare, check specifications, and best yet to talk to other trippers who have used different Filters. To be extra safe you can use iodine or chlorine treatments before using the filter, to destroy most bacteria and viruses as well.

**When in Doubt --- BOIL !!!**

## Maps, Compasses, and Charts:

There are ...

- a) specialized maps for particular routes or parks
- b) topographic maps 1:250,000 & 1:50,000 (1 mile = 1/4" and 1 mile = 1 1/4")  
These are very detailed maps whose greatest feature is the contours of the land. You can also get copies of the original aerial photos the maps were made from, also from Energy, Mines and Resources. These are useful in very rough country on the 1:250,000 maps which tend to show far less detail than the larger scale maps. Maps can tell you what is impossible to run on a river but can not tell you what you can run.
- c) other sources of information include previous experience, local information sources, other travelers.

Things to look for on a map:

- a) check for marked portages - look at gradient (i.e. contours)
- b) check for river gradient - 10' to 40' per mile possible, anything greater is impossible
- c) look for waterfalls, dams and rapids



From a canoe's eye view you cannot tell if what appears to be an island is actually an island or a point of land or just a very large bay. If you were parachuted here you would not have a clue. This is known as the straight line test. Therefore you must navigate from a known point and make it a continuous affair - thus keeping constant track on where you are is without question the best method for ensuring that you don't get lost.

**COMPASS BEARINGS:** - use on big lake crossings.

- a) Place compass on the map with the "direction of travel" arrow aligned on the direction you wish to go.
- b) Rotate the compass ring so that it is pointing True North.
- c) Correct for declination (about 6 degrees in SLS) by rotating ring from map to field add western declinations subtract eastern declinations.
- d) Rotate compass and chart till the needle points at 360 degrees and then follow the "direction of travel" arrow.

**DEAD-END BAYS:**

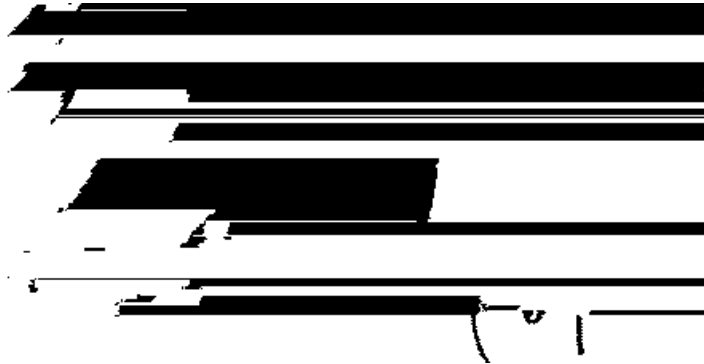
Either count the bays from your starting point (don't accidentally add two together) or be careful about maintaining your compass heading. Use the straight line test. If it looks open check the topographic map to see what the passage you are looking for would look like from the water.



**SENSE OF SCALE:**

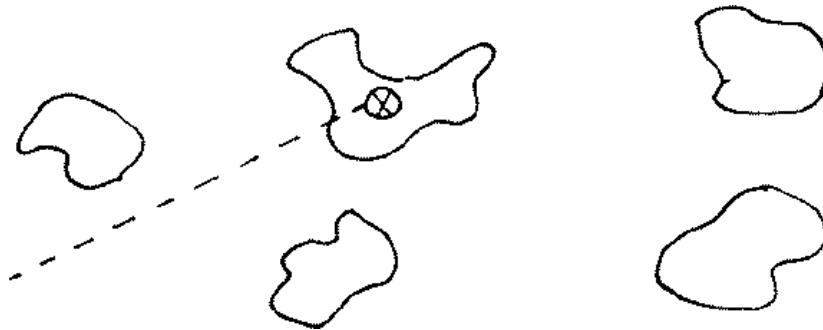
Make note of the size of the islands and bays you pass on the "known" section of the trip that you can develop an idea as the size of some of the features that you intend to encounter on your planned route.

**DIRECTIONAL CHANGES: BE AWARE !!!**



**TRIANGULATION:**

When you finally get lost you'll have to find yourself. The easiest way is to pick a prominent landmark, i.e., mountain, and take a bearing on it. Add 180 degrees to the bearing; correct for declination and roughly plot a line on the map. You are on that line!



**GPS SYSTEMS:**

The GPS or Global Positioning System is based upon a series of many low-earth-orbit satellites put up by the United States government, and made available for international general public use. With a GPS Receiver you can know your exact position to within a few meters. Receivers may be an inexpensive variety (a few hundred dollars) that will only tell you your latitude and longitude, or more expensive units that have displays showing detailed maps.

While extremely useful when tripping, you should not rely solely on a GPS Receiver; if it is damaged or the batteries fail, it is useless. Technology should supplement, not replace, good orienteering skills.

## **Weather:**

The two greatest killers due to weather in Canada are the cold and lightning. Therefore be prepared. The best sources of information are the current weather forecast and your own eyes. Storms in the Great Lakes region generally come from the southwest. In addition during the summer severe weather tends to peak in the evening and is not always associated with organized storm systems.

### **Visual Weather Indicators:**

The two major indicators you should always watch are the wind and clouds. The popcorn clouds (cumulus) are an indicator of fair weather. But when they develop into towering cumulus which looks like a cauliflower then check for the weather forecast. Further development of this type of cloud produces the anvil shaped cloud (cumulonimbus) called thunder clouds. Take immediate action since these clouds can produce heavy rain, lightning, strong gusty winds and on occasion hail. Note that surface winds do not tell you which way the storm system is moving. Gusty winds sometimes precede storms. Wind direction changes are also good indicators since they indicate a changing air mass and hence temperature and humidity changes. Easterly winds often indicate precipitation whereas westerly winds indicate clearing.

### **Weather Signs:**

1. There is a possibility of adverse weather within six hours if thunderclouds start to form, clouds darken on a summer afternoon, and clouds at different levels move in different directions
2. If you see clouds coming from the southwest a storm may be on the way particularly if the clouds continue to thicken.
3. A ring around the sun or moon followed by thicker clouds is often a sign of a more distant weather system approaching.
4. Warming after dark is an indication of rain to come.

### **Weather Forecasts:**

Forecasting the weather is difficult because of the complex and chaotic nature of the atmosphere. Temperature forecasts are generally quite good for up to three days. Precipitation forecasts are about 80% accurate for the first day and about 70% accurate the second day. The forecasters are professionals and have at their disposal thousands of hourly weather observation, satellite images, radar and complex weather simulation models. They can often see systems coming days ahead. As well as they are experienced in the forecasting of local changes in the weather. Make good use of these professionally produced forecasts. The public weather forecasts are issued four times per day. For more than an overnight trip a new forecast is necessary and that can only be obtained from a local radio station. Carry an inexpensive AM radio with fresh batteries and keep it dry. Also the static on the radio comes from nearby thunderstorms in the summer. Weather Radio, where available, is the best source of forecasts.

### **Words of Caution:**

Winds drop off at night so that it is better to cross large bodies of water early in the morning or late in the evening. During lightning storms keep away from hills and flat areas such as lakes. In very clear weather the temperature may drop as much as 25 degrees Celsius overnight. Do not camp in depressions.

### **Check List:**

1. Check the latest weather forecast
2. Notify someone of your departure, route, and time of arrival
3. Check that your equipment will protect you against the weather for the time of the year and location.
4. Check the visual weather signs: You are there the weatherman is not
5. Check weather forecast on route: The weatherman can see the major systems before they arrive.

## Hypothermia:

***The material presented here may change from time to time, and the best reference is the material from your most recent Standard First Aid Course.***

Hypothermia is the abnormal lowering of the core body temperature so that heat loss exceeds heat gain. Our muscles make up 50% of our body weight and produce 73% of our heat during exercise, thus shivering is our first defense against cold. This is limited by the amount of carbohydrates in our muscles, as well as the amount of water and oxygen. Warm blood flowing to the surface of our skin reduces our natural insulation and increases heat loss. Warm flush skin disposes heat through radiation (transfer of infrared or heat radiation i.e. cloudy winter nights are warmer. 35 - 50% of heat loss is radiated via the head. Heat loss may be through, convection (movement through air i.e. wind chill factor, moving water), conduction (transfer of heat from a hot to a cold object) and evaporation (20% heat loss through evaporation of perspiration and breathing).

***Remember that Hypothermia can strike anytime! Even on Hot Summer Days!***

The signs and symptoms of Hypothermia may include ...

<b>*EARLY*</b>	Slowing down Fatigue Confusion	Feeling cold Inability to form words	Shivering Muscle spasms
<b>*LATE*</b>	Lack of judgment Skin colour bluish Semi-conscious	Lack of coordination Disorientation	Loss of memory Pulse becomes slow

Mental functions deteriorate first followed by muscular functions and biochemical processes which become slow and deficient as the body cools. First signs can be tiredness and not feeling well. Being chilled to the bone is also a common feeling. Uncontrolled shivering is a critical indication as well as being in a catatonic state.

**BE PREPARED** for the unexpected, especially where weather is concerned. You do not actually have to fall into a lake to be a prime candidate for hypothermia. Sweat or rain, a cool day, a good wind and no shelter will lower your body temperature below the 37C which it functions best.

People take a needless risk when they refuse to believe the 'getting a little cold" can become a serious personal risk. This is especially true with your Scouts (Cubs, Beavers, Venturers etc.) who may lack the knowledge of what is happening to them and the equipment to do something about it. Check your Group's equipment before departing, and talk to them en route to see how they are doing. If you're a little cold, you can bet some of them are. Remember, you are responsible for the whole group.

The potential hypothermia victim simply feels cold at first, and has to exercise to keep warm. This may be accompanied by numbness to the extremities and a slight shivering. NOW is the time to take measures to limit exposure to the cold. NOW - before HYPOTHERMIA sets in. Get dry, put on a windbreaker, stop and light a fire and get warm, have a snack or hot drink.

Continued exposure leads to more intense and uncontrolled shivering. This stage is critical to recognize because measures must be taken now to limit exposure, especially if you are alone. Past this point victims may not be able to think clearly and may not be able to exercise good judgment. The victim now begins to lose limb coordination, thinking becomes sluggish and the mind now starts to wander.

The victim may not be aware of what is happening to himself and may deny being in trouble. BELIEVE THE SYMPTOMS, not the victim.

Without treatment the hypothermia victim will continue to deteriorate as the body core cooling process becomes more severe. Even though the victim may try to carry on, their appreciation of the seriousness of the situation may escape them. Collapse is close. Soon the victim becomes irrational and drifts into a deepening stupor.

Shivering stops. Pulse and respiration are slowed. If hypothermia continues, unconsciousness will follow. Most reflexes cease, the heartbeat may become erratic. Death by heart failure occurs about 28C.

The above described process may take just a few hours - or less. In cold weather the process is greatly accelerated. It all starts with an imbalance - the body losing heat faster than it can produce it.

#### **PREPARE FOR EXPOSURE:**

- 1) Take appropriate clothing for the worst weather you expect not the best you hope for.
- 2) Stay dry! Moisture reduces insulation's value drastically. Take a dry change of clothing, packed to stay dry if you capsize. If you have to use it, take additional care not to get it wet also.
- 3) Wear your PFD. It insulates well.
- 4) Make a shelter
- 5) PROTECT YOUR GROUP! Anticipate conditions. Rest and snack often. Check them for signs of hypothermia. On the first signs start taking appropriate action

#### **TREATMENT:**

The best treatment is not to let it happen. The second best is to catch it and treat it as early as possible.

- a) Get the Victim out of the Cold!
- b) Get Into a Shelter!
- c) Get a Fire Going!
- d) Give Victim Warm (Non-alcoholic) Drink
- e) Get into Dry Clothes!
- f) Give High Energy Foods Such as Chocolate or Honey Bars. If They Can Keep That Down, Then in a Couple of Hours Give a High Carbohydrate Meal.
- g) Check Other Members of Your Group!
- h) Make Camp Before Exhaustion Sets in - You May Not Get Another Chance!

#### **MORE SEVERE CASES:** - (Uncontrollable shivering, semiconscious)

- a) You must apply heat to the victim's body. Remove wet clothing, place in a warmed sleeping bag with another person (two are better). Keep victim awake! Give warm foods if possible.
- b) Check breathing - give artificial respiration if required
- c) Obviously - GET HELP AND REMOVE TO DOCTOR'S CARE AS SOON AS POSSIBLE

***Refer to the Video - "Cold Water, the Silent Killer"***

## Water Rescue:

Much of this material is based upon that from the **LIFESAVING SOCIETY**. Whom so ever you see in distress, recognize in him a fellow man. Remember the basic Goals of First Aid ...

- 1) Preserve Life
- 2) Prevent Further Injury
- 3) Promote Recovery

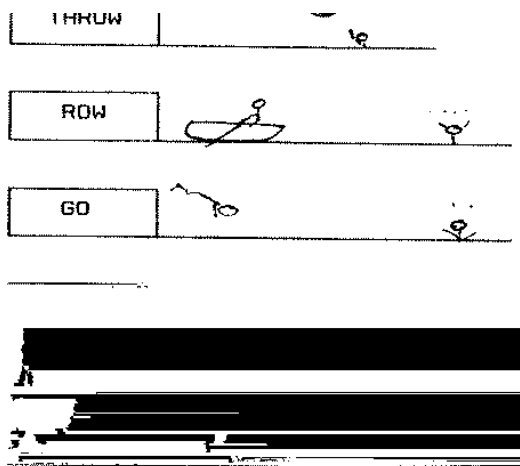
And the Assessment Steps ...

- 1) Danger to yourself / Danger of further injury
- 2) Level of Consciousness
- 3) Airway, Breathing, & Circulation

### **BASICS OF WATER RESCUE:**

A person is drowning - what do you do? The only way adequately to evaluate this situation is through possessing the **KNOWLEDGE** of procedures available, the **SKILL** and the **ABILITY** to perform the techniques chosen and the physical fitness to perform the skills at the time they are needed. **GOOD JUDGEMENT** is the criteria through which the skills and knowledge must be applied. Some techniques you have to know very well; these are the skills which you use in an emergency where you have to act immediately and exactly. In order to **APPLY** knowledge in an emergency a person must have practiced and be confident that he is capable to complete a rescue. Life saving candidates and instructors are therefore obligated to maintain their skills, knowledge and fitness should rescue be necessary. To be a rescuer implies an unselfish willingness to go to the assistance of a person in danger. A rescuer who endangers his own life through poor judgment or lack of preparation, also risks the life of the person who is drowning. An unprepared rescuer thus does not live up to his/her responsibilities.

The question which logically follows the discussion of the basic principles is, to what extent should a rescuer endanger himself in a rescue attempt? The answer has often been considered by many who must constantly satisfy themselves that the safety of the rescuer is insured by the training he has received. The content of the water rescue program is based upon a low risk to the rescuer in the lower levels of training and increasing in degree with the high level of training the rescuer receives. Both trainer and trainee **MUST** understand this concept. The higher degree of risk is not based upon taking more chances, but upon the principle that the increased skill, maturity and knowledge a person may, through the use of good judgment, perform effectively in diverse situations.



## THE STEPS INVOLVED IN A WATER RESCUE:

Every type of water environment may be found in Canada: lakes, rivers, canals, ponds, sloughs and streams exist in each province with surf conditions on both coasts. In addition to these natural waterways, there are thousands of swimming pools where swimmers may get into danger and risk drowning. To meet such emergencies, the trained rescuer must exercise good judgment, yet act at once.

RECOGNITION:	Every second counts; the rescuer notes signs which indicate a person is in danger of drowning. The victim close to shore will show fear in his facial expression; a swimmer heading for shore without making significant progress usually indicates that he requires assistance. A PERSON IN DIFFICULTY WILL NOT NECESSARILY CALL FOR HELP.
ASSESSMENT:	Decide the steps needed to rescue the subject. What are the water conditions and what equipment and help are available? Judgment must be considered; take only the necessary risks.
ACTION:	If possible, the first step is to shout reassurance to the subject. Proceed to carry out the steps in the rescue. Reach throw or go with a boat is the first choices, extend your reach with any object available rather than contacting the subject directly.
FOLLOW-UP:	Following the removal of the subject to safety, be certain that additional steps are taken. The person should receive medical attention where necessary and be removed to warm restful conditions.
EVALUATION:	Be critical of your actions: was this the best possible solution? Take steps necessary to ensure that such an emergency will not recur. Determine how and why the accident was caused and accept to educate the person's involved.

## THE RESCUER'S CHECKLIST:

In an emergency, even the most prepared rescuer is inclined to panic for a moment. A checklist of the steps which require a decision in any rescue should help the rescuer to choose wisely. Each of the steps is discussed fully through this section but it is important to first establish the basis upon which decisions are to be made.

AIDS:	Buoyant aids are superior but any object is better than no object.
ENTRY:	The best way to enter the water if you must, depends upon the depth and condition of the water, the aid being taken and condition of the subject.
APPROACH:	Where the subject is able to hear, shout encouragement. If it is necessary to swim, use a breast stroke or modified crawl stroke, being certain to make frequent visual observation of the subject.
REVERSE & READY:	Upon arriving close to the subject (6-10 ft. away) reverse and take a ready position. Talk to the subject and re-evaluate the situation while pushing the aid to him.
TOW OR CARRY:	Decide upon the method which best suits the condition of the subject and the water conditions. Only make contact if the subject is unconscious or not able to hold onto the towing aid.
FOLLOW-UP:	Secure the subject at shore and institute any procedure necessary. Attempt to obtain assistance, removing the subject to medical aid or warm conditions.

The possible steps involved in a Water Rescue, in order of increasing risk to the rescuer, are ...

REACH OR THROW:	Remain at a position of safety (e.g. shore, shallow water, boat, dock) if possible. Entry into the water exposes a rescuer to an additional risk. Extend your reach by some object which will make a successful rescue both easier and safer for the rescuer. A buoyant object thrown to a subject will permit him to stay afloat while he is pulled or kicks his way to shore.
ROW:	If a boat is available nearby it is safer to go to the subject with the boat rather than attempt a swim. The extension of an assist is then made from the boat.
GO:	Where reaching, throwing or rowing are impossible due to the conditions, lack of equipment or distance from the subject, it will be necessary to enter the water and go to the subject with a towing aid. Use the most readily available and most buoyant object. Learn to select the most suitable object whether it be a ring buoy, flutter board or some

other buoyant assist. With the support of the aid of the subject may be able to kick his way to shore.

TOW: Should the subject be unable to swim, the rescuer will proceed to tow the subject by means of the object.

Emphasis is placed upon the need to AVOID contact with a subject. After learning the principles involved the rescuer will begin to understand that the procedure involving the least risk to himself is the procedure to use first

There is a time lapse involved following the instant at which a rescuer is made aware of an emergency and the instant at which he commences to act. A rescuer unaware of the correct procedures may act quickly but his actions may not be the most appropriate of the safest actions. The time between the sighting of an emergency and intelligent action is reduced through practice sessions using mock emergency situations.

### **SELF RESCUE:**

The biggest dangers are Hypothermia and Drowning ...

Q: What do I do if I am immersed in cold water and I have no life jacket or other form of flotation ?

A: a) Tread Water: Loss of body heat 34% faster than remaining still with a PFD.  
b) Drown proofing: Less tiring than treading water but only in warm water situations as the head is allowed to enter the water (heat loss 82%. faster than remaining still in a PFD).

Q: What do I do if I am immersed in cold water and I have a life jacket or some other form of flotation ?

A: a) HELP (Heat Escape Lessening Posture)  
This technique involves holding the inner side of the arms tight against the side of the chest over the "Hot Region". The thighs are pressed together and raised to close off the groin region. This body position gives a 50% increase in predicted survival time.  
b) HUDDLE  
'Common sense' would predict longer survival time with huddling. Studies showed that if the huddle is formed so that the sides of the chest of different persons are held close together, again a 50% increase in predicted survival time.  
c) A NOTE ABOUT CHILDREN  
It should be noted that because children are smaller with less body fat they suffer the effects of cold water much faster than adults. Do not be fooled by their apparent ability to stay in the water forever. Playing in and around water is not the same as immersion.

### **QUESTIONS:**

Q: What should I do if my boat/canoe capsizes ?

A: Always stay with the boat/canoe and try to get as much of yourself out of the water. Remember that water is a very good at lowering the body temperature. Also remember that distances appear much shorter when looking over water so that a distance that appears to be swimmable might very well be beyond your ability.

Q: What should I do if the canoe/boat that I'm in sinks completely and I don't have a life jacket or PFD on ?

A: This would indeed be a serious situation. It is a good practice to wear your PFD at all times so you do not get into this situation in the first place. However it is very unlikely that everything has sunk with your boat/canoe so it would be a good idea to look around for any debris that might offer you some sort of additional buoyancy. If there is nothing in sight a pair of pants, shirt or sweater can be tied in such a manner to temporarily hold air and can be used in self rescue.

Q: I've made it to shore after my canoe has capsized and after assessing the situation I and my party need emergency help. If the canoe is damaged beyond repair or there is a medical emergency, what should I do?

A: First and foremost STAY PUT !! The international signal for help is an audio or visual signal done in threes. Ideally three fires preferably in a triangle (smoky during the day) is best. However three loud whistles, three marks on a beach, three flashes from a flashlight etc. This was derived from the SOS which is three dots, three dashes and three more dots in Morse code. Gunfire 1 round per minute.

## **Scouting Rules & Regulations:**

### ***From Scouts Canada - By-Law Policies & Procedures:***

#### **FIRST AID:**

First Aid Equipment appropriate to the activity must be provided, and personnel familiar with its use must be available.

#### **WATERCRAFT:**

When Scout Councils provide watercraft programs / activities, it is their responsibility to ensure that the person(s) in charge is competent to operate a watercraft program activity on the waters to be used, and to ensure that the regulations that follow are observed.

When sections provide watercraft programs / activities, it is the responsibility of the Group Committee to ensure that the person(s) in charge is competent to operate a watercraft program activity on the waters to be used, and to ensure that the regulations that follow are observed.

#### **Regulations:**

- (1) Watercraft, used for Scouting purposes, must meet Transport Canada / Coast Guard and local Scouting regulations. In addition to the regulations of Transport Canada / Coast Guard, watercraft for Scouting purposes must :
  - a) Be equipped with painters or end loops;
  - b) If equipped with drain holes, carry a spare plug.
- (2) Each small watercraft, if full of water, must be capable of remaining afloat supporting its occupants (this may necessitate the addition of buoyancy materials).
- (3) When travel at night is necessary, watercraft not required by law to carry navigation lights must be equipped with a flashlight or lantern in order to make their presence known.
- (4) Youth and adults participating in small craft (6 metres or less) boating activities involving powered and non powered boats must wear Transport Canada approved, properly fitted, Personal Floatation Devices (PFD's) life jackets at all times. Canoes exceeding the 6 metre standard will also be included in this policy. (Transport Canada / Coast Guard and Scouts Canada recommends that approved PFD's be worn at all times while participating in watercraft activities.)
- (5) Members taking part in watercraft activities must have a knowledge of hypothermia; its symptoms and treatment.

#### **SWIMMING:**

When Scout Councils provide swimming programs / activities, it is their responsibility to ensure that the person(s) in charge are competent to operate a swimming program / activity in the waters to be used, and to ensure that the regulations that follow and any local Scouting regulations are observed.

When sections provide swimming programs / activities, it is the responsibility of the Group Committee to ensure that the person(s) in charge is competent to operate a swimming program activity on the waters to be used, and to ensure that the regulations that follow are observed.

#### **Regulations:**

During any swim period (except in public regulated pools) the following must be met:

- (a) Beginning a swim period, the safety of swim area shall be established.
- (b) At least one water activity supervisor for every ten (10) swimmers must be on duty.
- (c) The minimum qualification for youth members who are acting as water activity supervisors is the Gold Life Saving Achievement badge or equivalent (Eg. Bronze Medallion).
- (d) Water activity supervisors should be identified to the swimmers prior to the commencement of swimming activities, and suitable attire is to be worn by the supervisors when on duty.
- (e) Suitable rescue and reaching aids must be available at all times.
- (f) All swim groups must be organized under the paired "Buddy System".
- (g) The physical condition and swimming ability of each member should be known by the Scouter before the activity / program begins.



- (h) Water Activity Supervisors are to be positioned within easy reach of swimmers.
- (l) No member shall be permitted to swim unless under responsible supervision.
- (j) Each swim period shall be under the SUPERVISION OF A QUALIFIED PERSON to whom the water activity supervisor is responsible.

The following agencies are formally recognized by Scouts Canada as the authority in their respective fields:

- |     |                            |               |
|-----|----------------------------|---------------|
| (a) | Canadian Red Cross Society | (Swimming)    |
| (b) | Royal Life Saving Society  | (Life Saving) |
| (c) | St. John Ambulance         | (First Aid)   |

### ***From Scouts Canada - Outdoor Guide:***

This entire Guide is an excellent resource. In particular review the following sections...

- |                     |  |
|---------------------|--|
| Section 4 Part 14 - | <b><i>Expeditions and Remote Wilderness Travel</i></b> |
| Section 4 Part 15 - | Flat Water Canoeing and Kayaking                       |

The Guide is available online from <http://www.scouts.ca>

## **South Lake Simcoe District Recommendations:**

- 1) As per BP&P "First Aid Equipment appropriate to the activity must be provided, and personnel familiar with its use must be available". In addition, the **Water Activity Leader should hold a current Standard First Aid and Heartsaver CPR certification.**
- 2) As per BP&P, **PFD's must be worn at all times during Canoeing / Kayaking Trips.**
- 3) The Water Activity Leader should ensure compliance with all local regulations and be aware of, recognize, and take appropriate action on any warnings given by competent persons in respect to the water and weather.
- 4) The Water Activity Leader should ensure that all members taking part in water activities have a basic knowledge of hypothermia, it's symptoms and treatment, and cold water survival consistent with their age.
- 5) Water Activity Leader should ensure that **ALL BOATS are in serviceable condition**, are not over-loaded and are equipped with the following: painters and bailer(s); spare oars or paddles; boat hooks (except in the case of canoes or kayaks); at least one life preserver of a type approved by the Ministry of Transportation and in serviceable condition for each person aboard.
- 6) The Water Activity Leader should ensure that the number of non-swimmers be limited and paired with strong swimmers where feasible.
- 7) The Water Activity Leader shall **register a Trip Plan with their Group Committee or District Council for a District event.** A sample is attached.
- 8) It is recommended that for safety, and as a courtesy, that where possible a copy of the Trip Plan be forwarded to whatever Scout Council (District or Region) exists in the geographic area where an activity is to take place.
- 9) Recommendations for Leader / Youth Ratios :
  - a) Beaver 1 to 1.
  - b) Cub 1 to 3. Cubs to have a minimum of 1 adult per watercraft.
  - c) Scout 1 to 10. Scouts to have a minimum of two (2) adults per trip or cruise, including one (1) adult for every five (5) watercraft used.
- 10) For **Ice Activities**, The Leader in Charge of an activity which will involve crossing the ice, should insure that the ice is safe for the participants from their scouting section/group to go on the ice. This can be done through a number of ways :
  - a) **COMMERCIAL OR ORGANIZED EVENT**
    - 1) Check with a commercial operator of the activity (ie. Ice Fishing Hut Operator) to make sure the ice conditions are safe in the area you plan to use.
    - 2) Check with the organizer of the activity to insure they have checked the ice conditions and you are satisfied the ice is safe.
  - b) **ALL OTHER SITUATIONS**
    - 1) Use the criteria used by the Construction Safety Association and Ontario Hydro, which is: Walking, Skating, Skiing or Snowshoeing: Ice Thickness 10 cm. (4 inches) and spacing of 3 meters (3 yards/10 feet) between people.
    - 2) Snowmobiling: Ice Thickness 18 cm. (7 inches).

# Water Activity Training Course Outline:

## LEVELS:

- Swimming -** Intended for Leaders planning to run **Swim Times** as part of a camp or outing, in an otherwise unsupervised swim area. This includes basic water safety, regulations, hypothermia, and rescue techniques.  
*Requires **Classroom and Pool Sessions.***
- Canoe Basic -** Intended for Leaders planning to take youth out in **Canoes for Day Activities** only; not overnight or on extended distances. This includes basic water safety, regulations, hypothermia, rescue techniques, trip planning, environment, canoe rescue skills, and basic canoe skills.  
*Requires **Classroom, Pool, and Pond Sessions.***
- Canoe Tripping -** Intended for Leaders planning to take youth on **Canoe Trips of 3 Nights or Less Duration.** This includes basic water safety, regulations, hypothermia, rescue techniques, trip planning, environment, canoe rescue skills, and canoe skills.  
*Requires **Classroom, Pool, and Trip Sessions.***
- Canoe Wilderness -** Intended for Leaders planning to take youth on **Canoe Trips of 4 Nights or Longer Duration.** Please note that it is necessary to get a **Provincial Council Camp Permit** for a "Long Term Camp" for a trip of this length. This level is achieved by special evaluation of those with extensive Canoe Tripping experience.

## COURSE PRE-REQUISITES:

- 1) A valid St. John Ambulance (or equivalent) Standard First Aid and CPR Heart Saver certificates are highly recommended.
- 2) A responsible and cautious approach must be demonstrated.
- 3) Knowledge of the Water Activity Leader's responsibilities must be demonstrated.

## COURSE SYLLABUS:

### Classroom:

- |                                 |                           |
|---------------------------------|---------------------------|
| - Introduction and registration | - Overview of Regulations |
| - Leadership                    | - Hypothermia             |
| - Environment                   | - Risk Management         |
| - Canoes and Equipment          | - PFD's and Life Jackets  |
| - Trip Planning                 | - Take-Home EXAM          |

### Pool Session:

- |  |                             |
|--|-----------------------------|
| - HELP position  | - HUDDLE position           |
| - SELF rescue  | - Tread water               |
| - Swim 25 meters, any style                                | - Swim 25 meters, legs only |
| - Demonstrate rescue assists (reaching, throwing & towing) |                             |
| - Rescue an unconscious and non-breathing victim           |                             |
| - Enter and Exit a Canoe                                   | - Canoe over Canoe Rescue   |

### Pond Session:

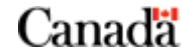
- |                          |                                   |
|--------------------------|-----------------------------------|
| - Carrying a Canoe       | - Getting a Canoe in/out of water |
| - Enter and Exit a Canoe | - Paddling techniques             |

### Trip Session:

- One weekend, overnight trip including canoeing, portaging, camping, etc.



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## WELCOME TO THE OFFICE OF BOATING SAFETY

### Minimum Required Safety Equipment

Canoes, Kayaks, Rowboats and Rowing Shells  
(not over 6 M in length)



Safe Boating Guide  
Course Providers  
New Regulations  
Publications



#### Personal protection equipment



- 1 one Canadian-approved personal flotation device or lifejacket of appropriate size for each person on board
- 2 one buoyant heaving line of not less than 15 m in length

#### Boat safety equipment



- 3 one manual propelling device  
OR  
an anchor with not less than 15 m of cable, rope or chain in any combination
- 4 one bailer or one manual water pump fitted with or accompanied by sufficient hose to enable a person using the pump to pump water from the bilge of the vessel over the side of the vessel

#### Navigation equipment



**5** a sound-signalling device or a sound-signalling appliance



**6** navigation lights that meet the applicable standards set out in the Collision Regulations if the pleasure craft is operated after sunset and before sunrise or in periods of restricted visibility

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## WELCOME TO THE OFFICE OF BOATING SAFETY

### Personal protection equipment

#### Personal flotation devices (PFDs) and lifejackets



Safe Boating Guide  
Course Providers  
New Regulations  
Publications



The law requires boats to be equipped with a **Canadian-approved** PFD or lifejacket of an **appropriate size** for each person on board (except for any infant who weighs less than 9 kg or any person whose chest size exceeds 140 cm).



#### Tip: It won't work if you don't wear it!

The Coast Guard is working towards improving the usage and wearability of Personal Flotation Devices (PFDs). Now more than ever, a wider range of approved types and colours of PFDs are available to boaters. Manufacturers now have the flexibility to respond to consumers' demand for comfort and fashion. PFDs now come in a variety of colours and various inflatable configurations. When shopping keep in mind your need for visibility on or in the water.

**Open the PFD and look at the label -- check for the Canadian Coast Guard, Department of Fisheries and Oceans or Department of Transport approval.**

Lifesaving cushions are no longer accepted as approved PFDs.



In order for an inflatable PFD to meet this requirement, it must be:

- worn while in an open boat, or
- worn while on deck or in the cockpit or be readily available to persons below deck of vessels with cabins.

Inflatable PFDs are **NOT** approved for use by persons less than 16 years of age or weighing less than 36.3 kg.

Inflatable PFDs are **NOT** approved for use on PWCs and inflatable PFDs fitted with an automatic inflator are not permitted for sailboarding (automatic inflator causes the PFD to inflate the instant it is immersed in water. However, no products are approved at the time of publishing this Guide).

Pouch type PFDs are only permitted for rowing and paddling activities but NO inflatable is approved for use for white water activities.

Lifejackets come in only orange, red or yellow, offering greater buoyancy and the ability to turn an unconscious person face-up in the water.

Choose a flotation device that meets your specific needs. Wear it.



#### **Proper care of your flotation device**

Take good care of your lifejacket or PFD. Flotation devices that are ripped or in poor condition are not considered approved. Flotation gear should not be used for kneeling, sitting or as a fender for your boat. Check its buoyancy regularly by wading out until the water is waist deep; bend your knees and see how well you float.

You should allow your flotation gear to dry in the open air, not close to a direct heat source. It should be kept in a dry, well-ventilated, easily accessible place.

Clean with a mild soap and running water. Strong detergents or gasoline should never be used. Do not dry clean.

#### **Parents take note**

A lifejacket or PFD is no substitute for adult supervision.

Children should be encouraged to wear their lifejacket or PFD at all times. They should learn how to put them on in the water. Some lifejacket and PFDs are designed specially for children; select the one that best suits your child's size and weight. Because of the way their body weight is distributed, children do not float well in a face up position and tend to panic easily. Diapers, when wet, will adversely affect the performance of flotation devices. **Children under 16 years of age cannot wear inflatable PFDs.**

**TIP: If you are in a low freeboard craft, remember that you will be more difficult to see for other boaters. Choosing a brightly coloured PFD will help make you mre**





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**WELCOME TO THE OFFICE OF BOATING SAFETY**

**Personal protection equipment**



**Safe Boating Guide  
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Publications**

**Boat Equipment**

**Buoyant Heaving Lines**

Buoyant heaving lines of not less than 15 m in length are required on most boats.



**Lifebuoys**

When buying a lifebuoy, look for the Transport Canada approval sticker. Store this piece of equipment so that it is readily accessible in the event someone goes overboard. **Note:** the 508 mm diameter lifebuoys do not meet the requirement for having a lifebuoy.



**Note:** In Canada, horseshoes do not meet the requirement for having a lifebuoy.

**Lifting harness and appropriate rigging**

This is a requirement for vessels over 20m. When purchasing a harness and rigging, consider how you would recover an injured or unconscious person using the device.



**Reboarding device**

All boats over 12 m and boats 6–12m with freeboard exceeding 0.5m require a reboarding device. If your vessel is equipped with transom ladders or swim platform ladders it already meets this requirement.



**Manual propelling device**

A "manual propelling device" means one of the following:

- a set of oars;
- a paddle;
- any other apparatus that can be used manually by a person to propel a vessel, including pumping the rudder on small open sailboats.



**Bailers and manual water pumps**





Bailers must be of at least 750mL with opening minimum 65 cm<sup>2</sup> and constructed of plastic or metal. If you choose to have a manual pump, the pump and hose must be able to reach the bilge and discharge over the side of the vessel.

A bailer or manual water pump is not required for any multi-hull vessel that has subdivided multiple-sealed hull construction (**common example: pontoon boat**) or any sailboat fitted with a recess-type cockpit that cannot contain a sufficient quantity of water to capsize the vessel.

**TIP:** Making a bailer out of a 4 litre bleach bottle (useful for small open boats)

**Step1:** Secure lid

**Step2:** cut off bottom

**Step3:** Cut along side with handle



#### Fire extinguishers

To describe the types of fire extinguishers required by various sizes of vessels, the **Small Vessel Regulations** now use the same terminology you will find marked on extinguishers: Class A, B, C. Class A means the extinguisher is designed for fires of combustible, solid materials (wood, paper, etc.), B for combustible liquids (gas, oil, etc.) and C for electrical. The number before the letter rates the extinguisher's relative firefighting effectiveness, so that a 3A device will put out a larger fire than a 2A device. (Note that there are no numbers before the C on Class C extinguishers.) Although the regulations specify only class BC, look for an extinguisher with an additional class A rating when purchasing.



The type of fire extinguishers you choose must be approved by the:

- Board of Steamship Inspection (Transport Canada);
- Underwriters Laboratories of Canada;
- British Board of Trade for Marine Use; or
- United States Coast Guard (for marine use).

A marine type fire extinguisher is highly recommended because of its resistance to corrosion. Obviously, dead fire extinguishers are useless. Check them frequently for proper pressure and be sure that everyone on board knows how to operate them. With chemical type devices, take them out of their bracket and shake them vigorously in the upside down position (about once a month) to prevent the extinguishing agent from caking and hardening at the bottom.

With CO<sub>2</sub> types, weigh them annually and have them recharged if they contain less than 90% of their rated capacity. If you use the Halon 1211 types, have them inspected regularly. CO<sub>2</sub> and Halon extinguishers both discharge a colourless, odourless gas that displaces oxygen. Exercise caution when storing or using them in accommodation spaces.

The **Small Vessel Regulations** do not address the automatic extinguishing systems that some vessels may have. Even if your vessel has this type of system, you must carry the portable extinguishers indicated in the Minimum Required Equipment section of this Guide.

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## WELCOME TO THE OFFICE OF BOATING SAFETY

### Protecting the aquatic environment — Your responsibility

Catch the  
new  
**WAVE**  
in boating!

**Safe Boating Guide**  
**Course Providers**  
**New Regulations**  
**Publications**

We all enjoy Canada's lakes, rivers and coastal waters. To keep them healthy and productive we need to follow good environmental boating practices. There are rules that ensure the protection of our aquatic environment. Boaters should know that it is an offence to put oil, garbage or other pollutants into the water — either accidentally or with wilful intent — and not report it immediately to the Canadian Coast Guard (see the [pollution reporting numbers](#)).



In some areas of Canada, sewage — or blackwater — is prohibited from being pumped overboard. The following are a list of areas in which boats are required to have holding tanks and cannot pump sewage overboard:

- Ontario: All waters
- Manitoba: the Assiniboine River in the City of Winnipeg, the Red River and Shoal Lake
- British Columbia: There are several restricted areas, a list may found on our Web site or by calling our Information line at 1-800-267-6687.

No matter where you boat, it is a good environmental practice and a courtesy to others who use the same waterways to dispose of your blackwater at a pump-out facility. Check with local authorities if any "no-dump" zones exist when planning your trip.

#### **TIP:** Top 10 Green Boating Tips

1. Keep your bilge clean... don't pump oily water overboard.
2. Use bilge sorbents in place of detergents.
3. Don't pump your sewage in confined waters.... use a holding tank.
4. Observe local and federal sewage regulations.
5. Bring your garbage home... don't litter.
6. Use detergents sparingly... even "biodegradable" cleansers are hard on the aquatic environment.

7. When fueling, don't top off tanks. Clean up any spilled fuel.
8. Use only paints approved for marine use.
9. Avoid shoreline erosion... watch your wake and propeller wash.
10. If fishing, practice catch and release.

**Report pollution when you see it!**

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Note: See also "Protecting The Aquatic Environment - A Boaters Guide"



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# The 1999 Safe Boating Guide

## Wearing your personal flotation device (PFD) and hypothermia



Approximately 90 percent of all persons who drown in recreational boating incidents were not wearing a flotation device.

A personal flotation device (PFD) is the best insurance you can have. Wear it.

Boaters, in Canada's typically cold waters, should be aware of the risk of hypothermia from prolonged exposure to cold weather, particularly in water-soaked clothing, or from direct immersion. Hypothermia is a drop in body temperature below the normal level. At

this lower temperature a person's muscle and mental functions are affected. A person exposed to cold water, and becoming hypothermic, can exhibit certain progressive signs and symptoms:

1. shivering and slurred speech, conscious but withdrawn at the early stage;
2. slow and weak pulse, slow respiration, lacks coordination, irrational, confused and sleepy at intermediate stage; and finally
3. weak, irregular or absent pulse or respiration, loss of consciousness at final stage.

If you do end up in the water, it is important to do everything you can to conserve energy and body heat. You may extend your survival time if you:

1. Wear your PFD or lifejacket. Valuable energy will be lost keeping your head above water if you are not wearing it.
2. Climb onto a nearby floating object to get as much of the body out of or above the water, if possible.
3. Adopt a "heat escape lessening position" (H.E.L.P.) by crossing arms tightly against the chest and by drawing the knees up close to the chest, if alone.
4. "Huddle" with other persons by getting the sides of everyone's chest close together with arms around mid to lower back and legs intertwined.



Boaters can protect themselves by wearing their PFD or lifejacket with multiple light layers of dry clothing and a water or wind-proof outer layer. Other pieces of equipment that may provide additional protection from hypothermia include:

1. a floater suit — a full nose-to-toes PFD
2. an anti-exposure worksuit — a PFD with a thermal protection rating
3. a dry suit — to be used in conjunction with a flotation device and a thermal liner
4. a wet suit — traps and heats water against your body
5. an immersion suit — to be used in extreme conditions upon abandoning vessel (usually for off-shore use)





# Scouts Canada

## Camping and Outdoor Activity Application

### Instructions:

1. This application is ***To be completed by the Group Committee*** on behalf of any section planning to undertake any Camping or Outdoor Activity.
2. A separate form is to be used for each outing.
3. When the application and checklist have been completed and the Group Committee approves the event they sign their approval on the bottom of this form.
4. Upon approval a signed copy is forwarded along with the Camping/Outing plan (provided by the leader) to the next senior council.

NOTE: For international camps, complete and include Scouts Canada's Tour Permit.

### Application for the *Camp or Outdoor Activity* is made on behalf of the:

Colony     
  Pack     
  Troop     
  Company     
  Crew

Group: \_\_\_\_\_ Area/District: \_\_\_\_\_ Region: \_\_\_\_\_

Camp/Outing Date/Dates: \_\_\_\_\_ Duration of Outing: \_\_\_\_\_

Expected Attendance: Beavers: \_\_\_\_\_ Cubs: \_\_\_\_\_ Scouts: \_\_\_\_\_ Venturers: \_\_\_\_\_ Rovers: \_\_\_\_\_ Adults: \_\_\_\_\_

Scouter in Charge: \_\_\_\_\_ Phone: (Home) \_\_\_\_\_ (Work) \_\_\_\_\_

Home Address: \_\_\_\_\_ Postal Code: \_\_\_\_\_

### Other adults in camp: (Attach List if Insufficient Space)

Name: \_\_\_\_\_ Address: \_\_\_\_\_ Phone: \_\_\_\_\_ Role: \_\_\_\_\_

Name: \_\_\_\_\_ Address: \_\_\_\_\_ Phone: \_\_\_\_\_ Role: \_\_\_\_\_

Name: \_\_\_\_\_ Address: \_\_\_\_\_ Phone: \_\_\_\_\_ Role: \_\_\_\_\_

### Location of Camp or Outing:

Facility Name: \_\_\_\_\_ Address: \_\_\_\_\_ Phone: \_\_\_\_\_

### Description of Program:

\_\_\_\_\_

\_\_\_\_\_

### Route Plan Including Campsites:(if applicable)

\_\_\_\_\_

\_\_\_\_\_

Mode of Transportation:  Vehicle  Bus  Train  Plane  Boat/Canoe  Bicycle  Hiking  Other: \_\_\_\_\_

Distance to Travel: \_\_\_\_\_

Proof of valid drivers license for each driver has been obtained: Yes  No

Proof of valid insurance for each vehicle has been obtained: Yes  No

(Note Scouts Canada advises all parents and volunteers who carry Scouting members as passengers in their vehicles to maintain their liability insurance coverage to a minimum of \$1,000,000.

### Description of Vehicle/Vehicles:

Make: \_\_\_\_\_ Model: \_\_\_\_\_ License Number: \_\_\_\_\_ Colour: \_\_\_\_\_

Make: \_\_\_\_\_ Model: \_\_\_\_\_ License Number: \_\_\_\_\_ Colour: \_\_\_\_\_

Make: \_\_\_\_\_ Model: \_\_\_\_\_ License Number: \_\_\_\_\_ Colour: \_\_\_\_\_

Group Committee Approval: \_\_\_\_\_ Date: \_\_\_\_\_

Camp Permit # \_\_\_\_\_