

Appalachian Mountain Club Delaware Valley Chapter General Paddling & Leadership Policy

Purpose

The purpose of this document is to establish a General Paddling Policy for the Delaware Valley Chapter of the Appalachian Mountain Club. This policy sets standards for trips, leader, participants and equipment on all Chapter paddling trips except for those specifically covered by the Sea Kayaking Policy, including all trips on rivers and lakes.

Scope

This document supplements all existing standards established by the AMC, the Delaware Valley Chapter and the Canoe Committee and commonly practiced and understood leadership, paddling, safety and outdoor skills. It should in no way be construed to replace or diminish any other applicable standards.

Leader Rating

Trip leaders shall be rated on the basis of not only their paddling skills, but also their general leadership skills and their ability to run safe trips in accordance with the rules and traditions of the AMC, the Delaware Valley Chapter and the Canoe Committee. Ratings shall be made by the paddling committee each year at the annual committee meeting, and at other times as deemed necessary by the Canoeing Chair.

Skill evaluation and demonstration for leader rating will normally be made on club trips. Trips often have a skill practice set aside. If necessary, other arrangements may be made for skill demonstration and practice.

Paddlers who wish to lead trips must demonstrate their paddling skills to equal to or better than the level of the trips they intend to lead. In addition, all new leaders must demonstrate that they can safely wet exit their boat and retain their paddle. They must demonstrate that they can retain or regain a grasp on their boat and maneuver to the nearest grab loop or handle.

The wet exit involves capsizing the boat with the paddler remaining inside. The paddler must stay submerged long enough to raise a hand to the surface, or otherwise demonstrate that he or she is calm and in control. The paddler must then release the spray skirt (if applicable) and tumble forward and swim to the surface.

The prospective leader may use the type of craft he or she normally paddles, canoe or kayak, open or decked. If it is a decked craft that is normally or occasionally paddled with a spray skirt, that should be used in the demonstration.

The boat must be fully inverted. Quick exits in which the paddler's head is not fully submerged do not count. The use of helmets and nose plugs are suggested for practice.

Leader candidates must co-lead at least two trips prior to receiving a full leader rating. Their co-leader should have a full leader rating for the proposed trip, and should act as a mentor, advisor and observer of the new leader. The new leader should perform the majority of the pre-trip and post-trip work, and act as the leader-

in-charge on the water. Safety training is highly recommended for all leaders.

This two trip co-lead requirement may be waived by the Canoeing Chair in the case of paddlers with suitable, acceptable and verifiable leadership experience with other AMC chapters or other paddling organizations. The Canoe Committee must still approve and rate the leader candidate prior to that person leading trips.

Trip Scheduling

Only rated leaders may propose trips, and only within their rating. All proposed trips must be sent to the Scheduling Coordinator as far in advance as practical for inclusion in AMC publications.

All scheduled trips are subject to approval of the Canoe Chair prior to submission to *Footnotes* or *AMC Outdoors* for publication.

Trips not scheduled in time for publication may be listed on the club web site (paddlenow.com) or arranged by telephone. These must be approved by one of the following: the Canoe Chair, the Canoe Vice-chair or a member of the Canoe Committee. If not so approved, it is not an official AMC trip.

Trip viability, safety and difficulty evaluation are the responsibility of the leader proposing the trip. It is advisable that leaders paddle the trip in advance of proposing a club trip, or at least have good, recent information from reliable guide books and other paddling clubs.

Trip Classification

River ratings, Flatwater through Class VI, are as defined by the Safety Code of American Whitewater, attached as Appendix A. Our chapter combines flatwater and Class I trips into a single class; they are called Class I for scheduling and listing purposes. Leaders of this class must have Class I paddling skills.

Note that trips may be rated in a range (e.g., Class II-III) or with modifiers (Class III+). In addition, the difficulty rating of trips may be increased by the leader due to weather, remoteness and other conditions.

Skills

River paddling skills are rated as follows. Note that a paddler might have different skill levels for different kinds of boat, e.g., Class II for kayak and Class III for open canoe.

Class I

1. Paddling: Able to pick out and paddle route competently in Class I rapid - can go straight, turn left and right.
2. Safety/rescue: Knows river signals and demonstrates group awareness. Can recognize and avoid obvious river hazards: rocks, strainers, dams.
3. Self-rescue: Can wet exit, swim safely holding paddle, and swim to shore. When swimming knows how to be towed to safety by another boat or throw bag.

Class II

1. Can do above competently in Class II rapid, skillfully in Class I rapid.
2. Paddling: Can do eddy turns, peel outs, ferries competently in Class II rapid.
3. Safety/rescue: Recognizes and understands dynamics of eddies, waves, and holes. Knows what to do if boat broaches.
4. Self-rescue: When swimming, knows when to let go of own boat and rescue boat.

Class III

1. Can do above competently in Class III rapid and skillfully in Class II rapid, with use of eddies and occasional use of waves and holes to help get boat where paddler wants to go.
2. Paddling: Able to select a route while scouting a rapid.
3. Safety/rescue: From shore, able to use throw bag for rescue, including proper set-up and placement; from boat, able to rescue others and help recover equipment in Class II rapid.
4. Self-rescue: Can self-rescue in rapid. K, C-1: roll, OC: swim boat and self to shore, get back in boat or roll.

Class IV

Can perform above paddling skills, self-rescue, throw bag rescue competently in Class IV rapid, skillfully in Class III rapid. Can do boat-based rescue of others and help recover equipment in Class III rapid. Able to skillfully use eddies, waves, and holes to help get boat where paddler wants to go.

Participants' responsibilities

Participants must:

1. Be truthful and honest with themselves and the trip leader, especially when representing their physical condition, skills and equipment.
2. Be in good physical condition. Be ready for the demands of the trip.
3. Have the proper equipment, and have it in good working order.
4. Tell the trip leader of any special conditions that might impact the trip. For example: a medical condition, your first time out in a new and unfamiliar boat, etc.
5. Dress properly for the conditions (both air & water). Bring sufficient food, water and spare clothing.
6. Take responsibility for your own safety. Portage around any rapid you are uncomfortable paddling. Ask to scout. Stay with

the group. If any problems let the leader know as soon as possible.

7. Take responsibility for the safety of the group. Keep the paddler behind you in sight. Promptly signal for help, when needed. Keep the trip leader informed of problems. Follow the directives of the trip leader.
8. Keep alert and mentally fit. The use of alcohol or any other intoxicating substances prior to or while on the trip is strictly forbidden.
9. Be considerate of others. Pack out all trash and litter. Do not disturb people fishing.

Equipment for participants

1. Life jackets (personal flotation devices) **MUST** be worn at all times while on the water. They must fit properly and fully secured as intended by the manufacturer. They must be of a type and construction appropriate to paddling.
2. Helmets of a suitable design for whitewater **MUST** be worn at all times when running Class II or greater rapids when paddling decked boats, or Class III or greater rapids when paddling open boats.
3. Wet or dry suits may be required at the discretion of the leader. Participants should have some food and water accessible while paddling. All must carry a dry bag with extra clothing and food, and must carry drinking water. They must carry any personally required medication. Eyeglass straps are required for prescription glasses.

Boats and Outfitting

1. Boats must be of design, construction and condition suitable for the intended trip. The trip leader may determine that a particular boat is not suitable for use on a trip.
2. Extra flotation is required for all boats on Class II or higher trips. This flotation may consist of air bags, closed cell foam or other buoyant materials. In the case of low volume boats, efforts should be made by the paddler to maximize flotation as much as possible. On overnight or extended trips, gear in dry bags secured to the boat may be used as extra flotation.
3. Grab loops or grab handles of sufficient diameter not to entrap a hand are required on all boats on Class II water or higher. Painters not exceeding the length of the boat are recommended for open boats. Painters should be secured to

- the boat but be easily accessible. Touring kayaks should have deck lines and grab handles per the Sea Kayaking Policy.
4. Spray decks may be required for decked boats due to their design and the nature of the trip. The trip leader may enforce this requirement as needed.
 5. All outfitting must be of a type and design that allows the paddler to quickly and safely exit the boat.

Equipment for leaders

Leaders must carry a first aid kit (see Appendix B), a waterproof flash light and a loud whistle. Other safety and rescue equipment, such as ropes, throw bags, caribiners, webbing, and emergency food, shelter and clothing should be carried based on the leader's judgement and experience. This equipment may be distributed among the various trip participants.

Leaders' responsibilities

1. Assure that the location is suitable for the trip. Pre-trip or research as necessary.
2. Submit the trip to the Scheduling Coordinator or other designated person in time for publication. Trips of opportunity (after heavy rain) may be arranged via phone or e-mail and should be posted on our web site, if possible. Any member of the Canoe Committee may be notified to make the trip official.
3. Screen trip participants for appropriate skills and equipment. Show-and-go trip listings are not permitted.
4. Obtain current water level and weather information prior to the start of the trip.
5. If water levels, weather or other conditions force cancelation of the trip, notify participants. If the leader cannot contact them prior to the scheduled start of the trip, it is the leader's responsibility to go to the put-in or other meeting place to inform them.
6. At the meeting place, observe that all paddlers appear in good health and are properly dressed for conditions. Observe that all equipment is safe and suitable for the trip.
7. This pre trip talk should be given to all participants. It is available on laminated pocket cards.
 - Introduction of new paddlers to group.
 - Identify paddlers not familiar with river.
 - Review AMC release agreement – everyone should have read and be familiar with it.
 - I take responsibility for having appropriate skills, physical conditioning, equipment & supplies for this

activity.

- I assume & accept full responsibility for the inherent & other risks of this activity (both known & unknown) and for injury, damage, death or other loss suffered by me, resulting from those risks.
 - I agree to release & not to sue the AMC including claims caused or alleged to be caused by the negligence of AMC.
- Review safety – include river hazards
 - Call out the total number of boats in the group
 - Who has first aid kit (if only one, near sweep)
 - Assign lead and sweep
 - Consider teaming up anyone new needing assistance
 - Review individual responsibilities: Must be dressed properly for the conditions (air & water). Portage around any rapid you are uncomfortable paddling. Ask to scout. Responsible for staying with the group. Communicate concerns and problems with the leader.
 - Review group responsibilities: Each person shall stay within sight of the person behind them. Be alert and aware of others. Position yourself to aid in rescues within your capabilities.
 - AMC news, upcoming events, etc. Anyone interested in planning, leading or co-leading any future activities? Upcoming events of interest.
8. Have participants sign the release form and sign-up sheet. Make sure that they list a valid emergency contact phone number, certainly not their own number if they live alone. This is a serious matter. If a participant is injured, it is the leader's responsibility to contact the family. Collect trip fees and rentals.
 9. Run a safe and orderly trip. If anyone has to leave the trip before it is completed, they must inform the leader, who should, in turn inform all other paddlers. It is the leader's responsibility to insist on safe behavior. The trip leader may designate assistants during the trip, as needed.
 10. The trip leader is responsible for the safe conclusion of the trip. The trip is not over until all the participants are off the water and the shuttle organized.
 11. The trip leader is responsible for completing and returning trip reports to the Canoe Chair and fees and receipts to the Canoe Treasurer.

Appendix A

American Whitewater Safety Code

I. Personal preparedness and responsibility

1. **Be a competent swimmer**, with the ability to handle yourself underwater.
2. **Wear a life jacket**. A snugly-fitting vest-type life preserver offers back and shoulder protection as well as the flotation needed to swim safely in whitewater.
3. **Wear a solid, correctly-fitted helmet** when upsets are likely. This is essential in kayaks or covered canoes, and recommended for open canoeists using thigh straps and rafters running steep drops.
4. **Do not boat out of control**. Your skills should be sufficient to stop or reach shore before reaching danger. Do not enter a rapid unless you are reasonably sure that you can run it safely or swim it without injury.
5. **Whitewater rivers contain many hazards which are not always easily recognized. The following are the most frequent killers.**
 - a. **High water**. The river's speed and power increase tremendously as the flow increases, raising the difficulty of most rapids. Rescue becomes progressively harder as the water rises, adding to the danger. Floating debris and strainers make even an easy rapid quite hazardous. It is often misleading to judge the river level at the put in, since a small rise in a wide, shallow place will be multiplied many times where the river narrows. Use reliable gauge information whenever possible, and be aware that sun on snow pack, hard rain, and upstream dam releases may greatly increase the flow.
 - b. **Cold**. Cold drains your strength and robs you of the ability to make sound decisions on matters affecting your survival. Cold water immersion, because of the initial shock and the rapid heat loss which follows, is especially dangerous. Dress appropriately for bad weather or sudden immersion in the water. When the water temperature is less than 50 degree F, a wetsuit or drysuit is essential for protection if you swim. Next best is wool or pile clothing under a waterproof shell. In this case, you should also carry waterproof matches and a change of clothing in a waterproof bag. If, after prolonged exposure, a person experiences

uncontrollable shaking, loss of coordination, or difficulty speaking, he or she is hypothermic, and needs your assistance.

- c. **Strainers.** Brush, fallen trees, bridge pilings, undercut rocks or anything else which allows river current to sweep through can pin boats and boaters against the obstacle. Water pressure on anything trapped this way can be overwhelming. Rescue is often extremely difficult. Pinning may occur in fast current, with little or no whitewater to warn of the danger.
 - d. **Dams, weirs, ledges, reversals, holes, and hydraulics.** When water drops over a obstacle, it curls back on itself, forming a strong upstream current which may be capable of holding a boat or swimmer. Some holes make for excellent sport. Others are proven killers. Paddlers who cannot recognize the difference should avoid all but the smallest holes. Hydraulics around man-made dams must be treated with utmost respect regardless of their height or the level of the river. Despite their seemingly benign appearance, they can create an almost escape-proof trap. The swimmers only exit from the “drowning machine” is to dive below the surface where the downstream current is flowing beneath the reversal.
 - e. **Broaching.** When a boat is pushed sideways against a rock by strong current, it may collapse and wrap. This is especially dangerous to kayak and decked canoe paddlers; these boats will collapse and the combination of indestructible hulls and tight outfitting may create a deadly trap. Even without entrapment, releasing pinned boats can be extremely time-consuming and dangerous. To avoid pinning, throw your weight downstream towards the rock. This allows the current to slide harmlessly underneath the hull.
6. **Boating alone is discouraged.** The minimum party is three people or two craft.
 7. **Have a frank knowledge of your boating ability,** and don't attempt rivers or rapids which lie beyond that ability.
 - a. Develop the paddling skills and teamwork required to match the river you plan to boat. Most good paddlers develop skills gradually, and attempts to advance too quickly will compromise your safety and enjoyment.
 - b. Be in good physical and mental condition, consistent with the difficulties which may be expected. Make adjustments for loss of skills due to age, health, fitness. Any health limi-

tations must be explained to your fellow paddlers prior to starting the trip.

8. Be practiced in self-rescue, including escape from an overturned craft. The Eskimo roll is strongly recommended for decked boaters who run rapids class IV or greater, or who paddle in cold environmental conditions.
9. Be trained in rescue skills, CPR, and first aid with special emphasis on recognizing and treating hypothermia. It may save your friend's life.
10. Carry equipment needed for unexpected emergencies, including foot wear which will protect your feet when walking out, a throw rope, knife, whistle, and waterproof matches. If you wear eyeglasses, tie them on and carry a spare pair on long trips. Bring cloth repair tape on short runs, and a full repair kit on isolated rivers. Do not wear bulky jackets, ponchos, heavy boots, or anything else which could reduce your ability to survive a swim.
11. Despite the mutually supportive group structure described in this code, individual paddlers are ultimately responsible for their own safety, and must assume sole responsibility for the following decisions:
 - a. The decision to participate on any trip. This includes an evaluation of the expected difficulty of the rapids under the conditions existing at the time of the put-in.
 - b. The selection of appropriate equipment, including a boat design suited to their skills and the appropriate rescue and survival gear.
 - c. The decision to scout any rapid, and to run or portage according to their best judgment. Other members of the group may offer advice, but paddlers should resist pressure from anyone to paddle beyond their skills. It is also their responsibility to decide whether to pass up any walk-out or take-out opportunity.
 - c. All trip participants should consistently evaluate their own and their group's safety, voicing their concerns when appropriate and following what they believe to be the best course of action. Paddlers are encouraged to speak with anyone whose actions on the water are dangerous, whether they are a part of your group or not.

II. Boat and equipment preparedness

1. Test new and different equipment under familiar conditions before relying on it for difficult runs. This is especially true when adopting a new boat design or outfitting system. Low volume craft may present additional hazards to inexperienced

- or poorly conditioned paddlers.
2. Be sure your boat and gear are in good repair before starting a trip. The more isolated and difficult the run, the more rigorous this inspection should be.
 3. Install flotation bags in non-inflatable craft, securely fixed in each end, designed to displace as much water as possible. Inflatable boats should have multiple air chambers and be test inflated before launching.
 4. Have strong, properly sized paddles or oars for controlling your craft. Carry sufficient spares for the length and difficulty of the trip.
 5. Outfit your boat safely. The ability to exit your boat quickly is an essential component of safety in rapids. It is your responsibility to see that there is absolutely nothing to cause entrapment when coming free of an upset craft. This includes:
 - a. Spray covers which won't release reliably or which release prematurely.
 - b. Boat outfitting too tight to allow a fast exit, especially in low volume kayaks or decked canoes. This includes low hung thwarts in canoes lacking adequate clearance for your feet and kayak footbraces which fail or allow your feet to become wedged under them.
 - c. Inadequately supported decks which collapse on a paddler's legs when a decked boat is pinned by water pressure. Inadequate clearance with the deck because of your size or build.
 - d. Loose ropes which cause entanglement. Beware of any length of loose line attached to a whitewater boat. All items must be tied tightly and excess line eliminated; painters, throw lines, and safety rope systems must be completely and effectively stored. Do not knot the end of a rope, as it can get caught in cracks between rocks.
 6. Provide ropes which permit you to hold on to your craft so that it may be rescued. The following methods are recommended:
 - a. Kayaks and covered canoes should have grab loops of 1/4" + rope or equivalent webbing sized to admit a normal sized hand. Stern painters are permissible if properly secured.
 - b. Open canoes should have securely anchored bow and stern painters consisting of 8 - 10 feet of 1/4" + line. These must be secured in such a way that they are readily accessible, but cannot come loose accidentally. Grab loops are acceptable, but are more difficult to reach after an upset.

- c. Rafts and dories may have taut perimeter lines threaded through the loops provided. Footholds should be designed so that a paddler's feet cannot be forced through them, causing entrapment. Flip lines should be carefully and reliably stowed.
7. Know your craft's carrying capacity, and how added loads affect boat handling in whitewater. Most rafts have a minimum crew size which can be added to on day trips or in easy rapids. Carrying more than two paddlers in an open canoe when running rapids is not recommended.
8. Car top racks must be strong and attach positively to the vehicle. Lash your boat to each crossbar, then tie the ends of the boats directly to the bumpers for added security. This arrangement should survive all but the most violent vehicle accident.

III. Group preparedness and responsibility

1. Organization. A river trip should be regarded as a common adventure by all participants, except on instructional or commercially guided trips as defined below. Participants share the responsibility for the conduct of the trip, and each participant is individually responsible for judging his or her own capabilities and for his or her own safety as the trip progresses. Participants are encouraged (but are not obligated) to offer advice and guidance for the independent consideration and judgment of others.
2. River conditions. The group should have a reasonable knowledge of the difficulty of the run. Participants should evaluate this information and adjust their plans accordingly. If the run is exploratory or no one is familiar with the river, maps and guidebooks, if available, should be examined. The group should secure accurate flow information; the more difficult the run, the more important this will be. Be aware of possible changes in river level and how this will affect the difficulty of the run. If the trip involves tidal stretches, secure appropriate information on tides.
3. Group equipment should be suited to the difficulty of the river. The group should always have a throw line available, and one line per boat is recommended on difficult runs. The list may include: carbiners, prussick loops, first aid kit, flashlight, folding saw, fire starter, guidebooks, maps, food, extra clothing, and any other rescue or survival items suggested by conditions. Each item is not required on every run, and this list is not meant to be a substitute for good judgment.

4. Keep the group compact, but maintain sufficient spacing to avoid collisions. If the group is large, consider dividing into smaller groups or using the “buddy system” as an additional safeguard. Space yourselves closely enough to permit good communication, but not so close as to interfere with one another in rapids.
 - a. A point paddler sets the pace. When in front, do not get in over your head. Never run drops when you cannot see a clear route to the bottom or, for advanced paddlers, a sure route to the next eddy. When in doubt, stop and scout.
 - b. Keep track of all group members. Each boat keeps the one behind it in sight, stopping if necessary. Know how many people are in your group and take head counts regularly. No one should paddle ahead or walk out without first informing the group. Paddlers requiring additional support should stay at the center of a group, and not allow themselves to lag behind in the more difficult rapids. If the group is large and contains a wide range of abilities, a “sweep boat” may be designated to bring up the rear.
 - c. Courtesy. On heavily used rivers, do not cut in front of a boater running a drop. Always look upstream before leaving eddies to run or play. Never enter a crowded drop or eddy when no room for you exists. Passing other groups in a rapid may be hazardous: it’s often safer to wait upstream until the group ahead has passed.
5. Float plan. If the trip is into a wilderness area or for an extended period, plans should be filed with a responsible person who will contact the authorities if you are overdue. It may be wise to establish checkpoints along the way where civilization could be contacted if necessary. Knowing the location of possible help and preplanning escape routes can speed rescue.
6. Drugs. The use of alcohol or mind altering drugs before or during river trips is not recommended. It dulls reflexes, reduces decision making ability, and may interfere with important survival reflexes.
7. Instructional or commercially guided trips. In contrast to the common adventure trip format, in these trip formats, a boating instructor or commercial guide assumes some of the responsibilities normally exercised by the group as a whole, as appropriate under the circumstances. These formats recognize that instructional or commercially guided trips may involve participants who lack significant experience in whitewater. However, as a participant acquires experience in whitewater, he or she takes on increasing responsibility

for his or her own safety, in accordance with what he or she knows or should know as a result of that increased experience. Also, as in all trip formats, every participant must realize and assume the risks associated with the serious hazards of whitewater rivers. It is advisable for instructors and commercial guides or their employers to acquire trip or personal liability insurance:

- a. An “instructional trip” is characterized by a clear teacher/pupil relationship, where the primary purpose of the trip is to teach boating skills, and which is conducted for a fee.
- b. A “commercially guided trip” is characterized by a licensed, professional guide conducting trips for a fee.

IV. Guidelines for river rescue

1. Recover from an upset with an Eskimo roll whenever possible. Evacuate your boat immediately if there is imminent danger of being trapped against rocks, brush, or any other kind of strainer.
2. If you swim, hold on to your boat. It has much flotation and is easy for rescuers to spot. Get to the upstream end so that you cannot be crushed between a rock and your boat by the force of the current. Persons with good balance may be able to climb on top of a swamped kayak or flipped raft and paddle to shore.
3. Release your craft if this will improve your chances, especially if the water is cold or dangerous rapids lie ahead. Actively attempt self-rescue whenever possible by swimming for safety. Be prepared to assist others who may come to your aid.
 - a. When swimming in shallow or obstructed rapids, lie on your back with feet held high and pointed downstream. Do not attempt to stand in fast moving water; if your foot wedges on the bottom, fast water will push you under and keep you there. Get to slow or very shallow water before attempting to stand or walk. Look ahead! Avoid possible pinning situations including undercut rocks, strainers, downed trees, holes, and other dangers by swimming away from them.
 - b. If the rapids are deep and powerful, roll over onto your stomach and swim aggressively for shore. Watch for eddies and slackwater and use them to get out of the current. Strong swimmers can effect a powerful upstream ferry and get to shore fast. If the shores are obstructed with strainers or under cut rocks, however, it is safer to “ride the rapid out” until a safer escape can be found.

4. If others spill and swim, go after the boaters first. Rescue boats and equipment only if this can be done safely. While participants are encouraged (but not obligated) to assist one another to the best of their ability, they should do so only if they can, in their judgment, do so safely. The first duty of a rescuer is not to compound the problem by becoming another victim.
5. The use of rescue lines requires training; uninformed use may cause injury. Never tie yourself into either end of a line without a reliable quick-release system. Have a knife handy to deal with unexpected entanglement. Learn to place set lines effectively, to throw accurately, to belay effectively, and to properly handle a rope thrown to you.
6. When reviving a drowning victim, be aware that cold water may greatly extend survival time underwater. Victims of hypothermia may have depressed vital signs so they look and feel dead. Don't give up; continue CPR for as long as possible without compromising safety.

V. Universal river signals

These signals may be substituted with an alternate set of signals agreed upon by the group.



Stop: Potential hazard ahead. Wait for "all clear" signal before proceeding, or scout ahead. Form a horizontal bar with your outstretched arms. Those seeing the signal should pass it back to others in the party. -



Help/emergency: Assist the signaler as quickly as possible. Give three long blasts on a police whistle while waving a paddle, helmet or life vest over your head. If a whistle is not available, use the visual signal alone. A whistle is best carried on a lanyard attached to your life vest.



All clear: Come ahead (in the absence of other directions proceed down the center). Form a vertical bar with your paddle or one arm held high above your head. Paddle blade should be turned flat for maximum visibility. To signal direction or a preferred course through a rapid around obstruction, lower the previously vertical "all clear" by 45 degrees toward the side of the river with the preferred route. Never point toward the obstacle you wish to avoid.



I'm OK: I'm OK and not hurt. While holding the elbow outward toward the side, repeatedly pat the top of your head.

VI. International scale of river difficulty

This is the American version of a rating system used to compare river difficulty throughout the world. This system is not exact; rivers do not always fit easily into one category, and regional or individual interpretations may cause misunderstandings. It is no substitute for a guidebook or accurate first-hand descriptions of a run.

Paddlers attempting difficult runs in an unfamiliar area should act cautiously until they get a feel for the way the scale is interpreted locally. River difficulty may change each year due to fluctuations in water level, downed trees, recent floods, geological disturbances, or bad weather. Stay alert for unexpected problems!

As river difficulty increases, the danger to swimming paddlers becomes more severe. As rapids become longer and more continuous, the challenge increases. There is a difference between running an occasional class IV rapid and dealing with an entire river of this category. Allow an extra margin of safety between skills and river ratings when the water is cold or if the river itself is remote and inaccessible.

Examples of commonly run rapids that fit each of the classifications are presented in the attached document "international scale of river difficulty - standard rated rapids". Rapids of a difficulty similar to a rapids on this list are rated the same. Rivers are also rated using this scale. A river rating should take into account many factors including the difficulty of individual rapids, remoteness, hazards, etc.

The six difficulty classes:

Class I: Easy. Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.

Class II: Novice. Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneu-

vering may be required, but rocks and medium sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful, is seldom needed. Rapids that are at the upper end of this difficulty range are designated "class II+."

Class III: Intermediate. Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims. Rapids that are at the lower or upper end of this difficulty range are designated "Class III-" or "Class III+" respectively.

Class IV: Advanced. Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require "must" moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong Eskimo roll is highly recommended. Rapids that are at the upper end of this difficulty range are designated "class IV-" or "class IV+" respectively.

Class 5: Expert. Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex, demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult. Swims are dangerous, and rescue is often difficult even for experts. A very reliable Eskimo roll, proper equipment, extensive experience, and practiced rescue skills are

essential. Because of the large range of difficulty that exists beyond class iv, class 5 is an open ended, multiple level scale designated by class 5.0, 5.1, 5.2, etc... each of these levels is an order of magnitude more difficult than the last. Example: increasing difficulty from class 5.0 to class 5.1 is a similar order of magnitude as increasing from class iv to class 5.0.

Class VI: extreme and exploratory. These runs have almost never been attempted and often exemplify the extremes of difficulty, unpredictably and danger. The consequences of errors are very severe and rescue may be impossible. For teams of experts only, at favorable water levels, after close personal inspection and taking all precautions. After a class VI rapids has been run many times, it's rating may be changed to an appropriate class 5.x rating.

Appendix B

A Suggested Basic First Aid Kit

Remember, as a leader, you can make medication such as pain pills available, but may not direct someone to take them.

These are the recommendations made in *Medicine for the Back Country* by Buck Tilton and Frank Hubble, ISBN 0-934802-61-0. This is the book used in the SOLO wilderness first aid courses. This is an excellent book, get it, read it and use it!

THE FIVE COMMANDMENTS OF FIRST AID KITS

NUMBER ONE: Thou shalt find it impossible to put together the perfect first aid kit.

Go ahead and try, but eventually, if you spend enough time in the backcountry, you will one day wish for something that is not there. It is possible to create a kit to meet your every need—almost! But don't ever try to convince someone else that your choice of first aid items is better than theirs. Accept the fact that these kits are very personal. You may get by for years on a small piece of moleskin because your feet are tough. Your partner may need a mile of the stuff for an overnight hike. Not following this principle, here is a list of items for the "almost perfect" first aid kit.

Start with a smallish Zip-loc bag because 1) they're cheap, and 2) they're lightweight, and 3) they're see-through so you don't have to dump everything out on the ground to find what you need. What you might be dumping in the dirt should include:

...About a half-dozen band-aids. The ones that are somewhat resistant to water last longer, and the ones about 1 x 3 inches work in most situations. Remember they go on after a wound has been thoroughly cleaned to protect it and keep the dirt out.

...A couple of sterile gauze pads, around 4 x 4 inches. They'll cover larger ouchies, and can be cut down for smaller wounds, and doubled up for bigger ones. They can be used to scrub out dirtier injuries, or molded into a covering for an irritated eye.

...A roll of athletic tape, 1 inch x 10 yards. It holds down the gauze, prevents blisters when applied to sensitive spots at the start of a trip, and repairs injured equipment for short periods of time. Athletic tape shapes itself more easily to the strange designs of human extremities, and can be used to supportively wrap ankles if you know how.

...A small bottle of tincture of benzoin. When the benzoin is rubbed on skin before tape is applied, the tape sticks better.

...A couple of butterfly band-aids or steri-strips. These are for pulling together the sides of a clean wound that gapes open, until a doctor can be found.

...An individually wrapped sanitary napkin. This lightweight, inexpensive item makes a wonderful compress for badly bleeding injuries.

...A tube of povidone-iodine ointment. It can be used directly from the tube to disinfect wounds, or dissolved in water to make a solution for washing or soaking injuries. A dab of the jelly-like substance dissolved in a liter of water creates a dis-

infected drink if other means of cleaning up water are not available. It will work for short periods of time as a lubricant on abraded areas of a body. It also temporarily turns skin orange.

Moleskin, a piece 4 x 4 inches or so. It works great to prevent blisters if applied before the damage is done, and can be cut into "donuts" to treat blisters so a trip can continue in more comfort after a bubble has developed.

...A few tablets of a painkiller. This medication can bring a bit of relief after you have grown a headache, a muscle or joint ache, a fever, or just about anything that causes painful discomfort.

... A six-inch wide elastic wrap. Ace makes the most popular brand. The bandage can be used to compress strains and sprains for a little added comfort, or used to hold a possible broken bone to a splint, or used as a constricting band in the treatment of poisonous snakebite, or used to hold the compress on a bad bleed, or used in any other creative way you can think of.

...A couple of safety pins. They can secure the elastic wrap, be sterilized and puncture a blister to drain it, repair rips in clothing, or whatever.

...A few mild antihistamine tablets. Benadryl is probably the best for most people. Their sedative effect helps relieve the itch of allergies and insect bites, helps you get to sleep (so don't take one and continue a high-risk outdoor activity), and helps ease the symptoms of a cold (but antihistamines do not cure a runny nose, and possibly extend the cold's life by causing your body to forget to fight off the infection).

...A couple of tablets of Pepto-Bismol will come in handy if something upsets your stomach.

...A small set of scissors and tweezers are things you'll find yourself using on a daily basis in the backcountry. They can be a part of your pocketknife, which is the friendliest way to keep them ready for use.

Throw in other items depending on the time of year and the part of the country you're traveling through. Things like a dab of meat tenderizer to rub on serious insect bites, sunscreen, alcohol to soften attached ticks before removal, lip balm, more potent medications for specific problems, and the phone numbers of the closest emergency aid in case something really bad happens and you have to hurry out for help.

You have most likely already thought of things that should have been left out or included. Fine! Put them all in a bag, and carry it whenever you travel outdoors. A first aid kit is only useful if it's with you.

NUMBERTWO: Thou shalt choose things for your first aid kit that are versatile rather than specific. You do not need to carry on your back a variety of different sizes of band-aids, several widths of tape, three brands of painkillers (in their original bottles), and a wide range of thicknesses of gauze. Pack a few of the most commonly used shapes and sizes of the most commonly used items, and make do if a odd-shaped boo-boo occurs.

NUMBERTHREE: Thou shalt not carry anything in your first aid kit that you are not familiar with.

What's the point of packing along something you don't know how to use? Why carry a suture kit or prescription drugs unless you fully understand their uses? Besides, it could be dangerous for the person who needs first aid if you try to sew up

a gaping wound, or give them some medications they can't tolerate.

NUMBER FOUR: Thou shalt re-pack your first aid kit at least seasonally.

For one thing, there are expiration dates on many of those containers of medicinal supplies. And for another thing, moisture or heat or cold can creep in and destroy the efficacy of some of your items, and you'll never know it until you reach for them. Finally, lazy kit-checkers find they're carrying insect repellent on a winter trip where it is useless. Or rubbing alcohol on an ski excursion where it can be dangerous. What you include in your kit may also change when you explore a new geographic location.

NUMBER FIVE: Thou shalt not forget that the first aid kit that saves lives is not made of items stuffed in a Zip-loc bag but skills carried in the human brain.

Kits are for the little trivial injuries that would probably be OK whether you interfere or not. Your ministrations can ease pain and speed healing, but it is knowledge and the ability to use that knowledge that makes the difference between life and death in a critical situation. Learn what to do for the seriously hurt or sick person, and carry that information with you at all times.

End of authors' text.

Note: This is only a suggestion, a place to start. For day trip paddling, you can skip the moleskin. Duct tape is great for securing bandages, splinting, repairing equipment and almost everything else. If you don't already carry a roll, wind some on a match stick. Then you can skip the athletic tape.

