



# **University of Canterbury Canoe Club**

## **Standard Operating Procedure**

Compiled on behalf of UCCC (Andrew Yates) with the assistance of Auckland University Canoe Club (James Rae) and Otago University Canoe Club (Rob Hunter) – 2010.

Last Reviewed: 13<sup>th</sup> July, 2011



## Table of Contents

1.	Definitions	2
2.	Trip Planning	3
2.1	Trip Organiser Responsibilities	3
2.2	Trip Leader Responsibilities	3
2.3	Trip Organisation	3
2.4	Time Management	3
2.5	Trip Participants	3
2.6	Trip Sign Ups	4
2.7	Trip Equipment	4
3.	At the River	6
3.1	Safety Briefings	6
3.2	Shuttle Briefing	6
3.3	Advising of Trip Intentions	6
4.	On the River	8
4.1	River Signals	8
4.2	Lead and End Paddlers	8
4.3	Kayaking Party Management	8
5.	Off the River	9
5.1	Confirming Trip Completion	9
5.2	Logbook	9
5.3	Accident Reporting	9
5.4	Gear Maintenance	9
6.	Rafting	10
6.1	Raft Leader Responsibilities	10
6.2	Raft Trip Organiser	10
6.3	Raft Trip Equipment	11
6.4	Safety Briefings	12
6.5	Raft Party Management	12
7.	Review	14
Appendix 1: Instructor Skills List		145
Appendix 2: Assistant Instructor Skills List		17
Appendix 3: Raft Guide Skills List		18
Appendix 4: River Signals		20



## 1.0 Definitions

UCCC – University of Canterbury Canoe Club, henceforth referred to as ‘the club’.

Instructor – a member of the club with instruction, rescue skills and experience to manage a group of kayakers. *Appendix 1*

Assistant Instructor – a member of the club who has some instruction and rescue skills to assist an Instructor and is capable of managing a group down a Grade 2 section. *Appendix 2*

Seconder – a member of the club who has been on a number of club trips and has some white water skills and experience, is capable of looking after themselves on the water and may be able to assist an Instructor or Assistant Instructor.

Beginner – a member of the club who is new to kayaking as a sport and has little or no white water skills. This title may also be given to participants who are not registered members of the club

Club trip – any pre-organised trip involving any combination of beginners and instructors as members of the UCCC with the possible inclusion of non-club members.

Raft Guide – a member of the club who has instruction, rescue skills and experience to manage a group of rafters. *Appendix 3*

Safety kayaker – any Instructor or Assistant Instructor who is accompanying the raft on a guided river trip and is proficient in performing swimmer rescues.



## 2. Trip Planning

### 2.1 Trip Organiser Responsibilities

For each UCCC club trip, the Trip Organiser will coordinate arrangements for the trip and appoint a Trip Leader.

### 2.2 Trip Leader Responsibilities

The Trip Leader will be appointed before members sign up to the trip and will accept responsibility for trip management and safety.

The Trip Leader must be an experienced kayaker.

The Trip Leader will be appointed by the Trip Organiser or someone in a suitable position to appoint this person. This responsibility may be declined.

All trip attendees should know who the Trip Leader is.

If rafts are to be used on the trip, the Trip Leader will appoint a Raft Leader.

They shall be experienced in a raft and have received instruction on raft guiding.

### 2.3 Trip Organisation

The Trip Leader must ensure that the following tasks are completed.

- Seek information from guidebooks, logbook of previous trip reports, maps and other kayakers.
- Know the escape routes in case anyone has to walk out.
- Know the access routes in and out of the river, ensure that shuttle drivers know exactly where to go and have a map of the river and road maps.
- Seek permission from land owners if private land needs to be crossed.
- Obtain the weather forecast.
- Check the water level if appropriate.

### 2.4 Time Management

It is the Trip Leader's responsibility to ensure that the trip is planned and implemented to ensure that there is sufficient daylight hours to cope with the unexpected.

For example: consideration should be made for the season, collection of gear and paddlers, late arrivals, food stops, unfamiliar get ins, shuttles, briefings, group size, river instruction, experience of paddlers, playing, scouting, portaging, swimmers, rescues, boat recovery/extraction, hypothermia or accidents.

### 2.5 Trip Participants

The Trip Leader will assess the skills of participants to ensure that:

- All people in the trip are capable of their roles as defined in the Appendices 1, 2 and 3.



- There are sufficient Instructors and Assistant Instructors for the number of trip participants. A ratio of four Beginners to one Instructor must not be exceeded. This 'golden ratio' is what is adhered to when dealing with people who have little or no river experience.
- There are sufficient Guides and safety kayakers for the number of rafters.
- All members of the trip have a skill level sufficient to cope with the conditions likely to be encountered. Factors to be considered include; proven skill level (are they likely to wet exit in given circumstances), recent paddling experience and familiarity with the particular river.
- The Trip Leader and/or Organiser may exclude a member from a trip if it is likely that that particular member would put the group at an undue level of risk.

### **Requirements for a Grade 2 and 3 environment:**

There will be at least one Instructor in every group. Additionally there will be another Assistant Instructor or Secunder in each group.

At all times there will be no more than four beginners for every one Instructor or Assistant Instructor in a group. Seconders included in a group do not affect these ratios.

There should be a minimum ratio of no less than two safety kayakers per raft. Safety kayakers must be competent on the grade being rafted.

#### **2.6 Trip Sign Ups**

An email will be sent to club members for a trip containing:

- All details of the trip, the rivers to be paddled, expected conditions and accommodation.
- Required equipment – on and off water clothing including footwear.
- Trip schedule – estimated times.
- Information on paddling ability and equipment availability from trip participants.

#### **2.7 Trip Equipment**

##### **Individual Kayaking Equipment**

- Buoyancy aid that is a good fit and secured at waist
- Helmet: firm fit, comes well down over the forehead
- Spray skirt with pull tag
- Shoes (wetsuit booties, sandals, or trainers) are encouraged
- Appropriate warm clothing for the anticipated conditions
- Boat and paddle suitable for the river. Boats must have grab loops (attachment points) bow and stern

##### **Kayaking Trip Safety Equipment**

The ration stated in parentheses is the amount of gear required per number of instructors.



- Split paddles (1:5 – one split paddle per five instructors)
- Throw bags (3:5)
- River Knife (2:5)
- Whistle (3:5)
- First aid kits (1:1)
- Spare clothing (poly pros) (1:3)
- Emergency blankets (1:5)
- Spare food
- Duct tape

Due consideration should also be given to carrying a saw.

### **Communication Equipment**

On multi day trips appropriate external communication equipment must be carried. For example, this includes EPIRB's and/or PLB's which are available for hire from Canterbury University Tramping Club (CUTC), or Mountain Radio. If cell phone coverage is in excess of one hour by vehicle, it is strongly recommended that any of the following be carried by the group as a whole: EPIRB, PLB and/or Mountain Radio.



## 3.0 At the River

### 3.1 Safety Briefings

#### **Instructors and Assistant Instructors Briefing**

A discussion between the Instructors, Assistant Instructors and Trip Leader must occur for the kayaking group. This should include gear being carried by kayakers, group communications and signals, group running orders, rapids and hazards of note and anything else appropriate.

#### **Kayaking Safety Briefing**

A safety briefing must be completed for all trips. All members of the party must hear this regardless of whether they have kayaked before.

The briefing must include:

- Medical issues – including but not limited to seizures, allergies, asthma.
- Medication (e.g.: Asthma Inhaler) – If medication needs to be taken on the river this should be carried in duplicate, where possible, with one set with the person and an extra set given to an instructor.
- Whitewater swimming position
- Throw bagging
- Expected hazards on the river.
- UCCC River signals in use.
- Correct wearing of gear and proper use of this gear (this will be checked before getting on the water).
- Always listen to instructors and directly obey instructions promptly.
- Boat based rescues:
  - o T-rescue or barrel roll
  - o Stern deck rescue
- Do not leave an eddy unless signalled to by an instructor.

### 3.2 Shuttle Briefing

It is the Trip Leader's responsibility to ensure that an appropriate shuttle is completed.

Drivers on the shuttle need to be made aware of exactly where they need to go.

At least one car at the take-out will have a cell phone in a position that the Trip Leader is aware of. Where appropriate, cars will be located at mid trip extraction points in case of incident.

### 3.3 Advising of Trip Intentions

The Trip Leader will notify someone not on the trip of the trip plan if the trip is significantly remote such that the area is likely to be inaccessible in extreme weather conditions. This person



will be contacted as soon as cell phone reception allows after the trip to confirm safe completion.

If they are not contacted by a pre-arranged time, they will endeavour to contact members of the trip. If not successful, they will alert authorities. This person should have contact details for several people in the party and have an approximate gauge of the number of people on the trip.





## 4.0 On the River

### 4.1 River Signals

UCCC operates with the set of standard river signals which are widely accepted internationally. These are displayed in the UCCC Gear Shed and Appendix 4.

### 4.2 Lead and End Paddlers

The Trip Leader is to appoint experienced paddlers to the front and rear of the kayaking group before getting on the river. Here, 'group' refers to all trip participants on the water, not smaller subsets of this group.

**The Lead Paddler** has the following responsibilities:

- Choosing a safe line
- Identifying and avoiding hazards
- Deciding when to scout
- Removing the group from the water well above any portages
- The Lead Paddler must move at a speed that makes them visible to paddlers behind. They are to avoid small eddies which would hold only their boat, possibly leaving an inexperienced paddler to cope alone.
- No one passes the lead boat.
- It is recommended on easier/suitable sections of the river that other paddlers have a turn out front as part of their paddling development.

#### **End Paddlers:**

The End Paddlers need to be very experienced and equipped to deal with rescues of all kinds. Two people are to take on this role, frequently changing places as back marker. The End Paddlers are to be the last down at all times and must carry suitable extraction gear and a first aid kit.

### 4.3 Kayaking Party Management

The Trip Leader has responsibility for the management of the entire party.

- Emergency situations.
- Running order of paddlers and groups.
- Protection for rapids, throw bags and Instructors assisting beginners.



## 5.0 Off the River

### 5.1 Confirming Trip Completion

The Trip Leader will contact the external person to advise of safe completion of the trip.

### 5.2 Logbook

The Trip Leader will ensure that the details of each trip are entered into a log book to record any hazards/incidents and useful information.

### 5.3 Accident Reporting

In the event of any accident resulting in serious harm/injury the Trip Leader shall ensure that the correct procedure for reporting these events is followed. The necessary forms and information on the reporting process can be found at this address:

<http://www.maritimenz.govt.nz/Commercial/Accidents-and-investigations/Accidents-and-investigations.asp>

In the event that the Trip Leader is unable to complete the necessary requirements the President of UCCC will ensure that reporting requirements are met.

### 5.4 Gear Maintenance

UCCC maintains a policy that any Trip Leader or Instructor reports maintenance issues with gear returned from trips directly to the Gear Officer.

Damaged equipment is to be clearly identified and stored in a separate location in the gear shed, awaiting replacement or repair.



## 6. Rafting

### 6.1 Raft Leader Responsibilities

The Raft Leader will be appointed before members sign up to the trip and will accept responsibility for the management and safety of the rafters.

The Raft Leader must be familiar with the river and obtain current information on the river for the planning stages of the trip.

### 6.2 Raft Trip Organisation

The Raft Trip Leader must ensure that the following tasks are completed.

- Seek information from guidebooks, logbook of previous trip reports, maps and other kayakers.
- Know the escape routes in case anyone has to walk out.
- Know the access routes in and out of the river, ensure that shuttle drivers know exactly where to go and have a map of the river and road maps.
- Seek permission from land owners if private land needs to be crossed.
- Obtain the weather forecast.
- Check the water level if appropriate.

No trip shall occur where a raft guide is not provided. The guide provided must be suitably qualified or experienced on the grade of water being rafted. If the guide is not a club member, a copy of this Standard Operating Procedure should be made available such that the guide can familiarise themselves with the clubs safety procedures.

#### **The Raft Leader must ensure that the following tasks are completed:**

- Ensure that all rafters are appropriately outfitted, clothing and footwear, for the conditions expected on the river. Care must be taken to inform rafters of the advantages of polypropylene and wetsuits and to avoid cotton based clothing.
- Ensure that the equipment to be distributed to the rafters is able to be adjusted for an accurate fit and is in a safe and working condition.
- The rafters buoyancy aid and helmet must be visually checked before getting on the river.
- All necessary rafting equipment, guides' safety equipment and safety equipment for the party is brought to the river.
- A rafters safety briefing occurs.
- A safety kayakers, Guides and kayaking Instructors briefing occurs.

### 6.3 Raft Trip Equipment

#### **Individual Rafting Equipment**



- Buoyancy aid that is a good fit and secured at waist
- Helmet: firm fit, comes well down over the forehead
- Shoes (wetsuit booties, sandals, or trainers)
- Appropriate warm clothing for the anticipated conditions

### **Safety Kayaker Equipment**

All safety kayakers must carry at a minimum:

- Throw bag
- Two carabiners
- Sling
- Knife and whistle

### **Rafting Trip Safety Equipment**

Sufficient safety gear for each raft and the rafting party as a whole is present on the trip.

**Each raft must have:**

- 20m+ throw bag
- Bow and Stern lines each of at least 5m attached to the raft

**Additionally each Guide must have:**

- Sling or flip line of at least 3m length
- An extra throw bag to be carried on their person or attached to the raft of any length
- A minimum of two Carabiners
- A minimum of two Prussiks
- A knife
- A whistle

**In addition the rafting party (rafters and safety boaters inclusive) as a whole must have:**

- 2+ first aid kits
- 2 thermal blankets (as part of 1st aid kits)
- A pump
- Additional spare warm, dry gear
- A raft repair kit containing: duct tape, alcohol wipes, adhesive, gloves, fume mask, patch, rags, spare valve.
- A raft wrap kit to be carried by the (last) raft in the party containing: 5 carabiners (at least 2 locking), two pulleys, a 10m length of webbing, 2 extra prussiks (1m+ loop) and a strong long static, abrasion resistant rope.
- High energy food
- At least one saw



Any of these items can be carried by the safety kayakers with the exception of the rafting wrap kit.

The rafts and the rafting gear to be used must be checked before being put on the river. Gear needs to be checked for defects and rejected for the trip if it is in a damaged condition.

#### 6.4 Safety Briefings

##### **Safety Kayakers' Briefing**

A discussion between the safety kayakers, raft guides and the Trip Leader must occur for the rafting party. The Trip Leader is to discuss with all kayakers the risk of being around the raft on the water and how they should act.

There will always be safety kayakers at the very front and back of the rafting party. The safety kayakers are to liaise with the Raft Leader in determining positions for safety boats and protection during rapids and during the trip.

##### **Rafters' Safety Briefing**

In addition to the Kayaking Safety Briefing, the Rafters' Briefing will include:

- Flipping process
- Rafting calls in use
- Always listen to Guides
- Rafting technique (extra time must be allocated for each Guide and crew to practice before the raft leaves the get in area)
- Safety kayaker talk including:
  - Always listen to kayakers
  - Don't grab skirts or person – hold only where and when they say
  - Hold on and kick
  - If they tip, let go

#### 6.5 Raft Party Management

The Raft Leader has responsibility for the management of the rafting party within the management of the entire group.

- Scouting: the decision of when to scout a rapid taking into account difficulty and familiarity of rapid for all guides in the party.
- Emergency situations involving the rafts. Decisions will be made by the Trip Leader in consultation with the Raft Leader, or the Raft Leader if the Trip Leader is not available. (e.g. Trip Leader is further downstream).
- Running order of rafts
- Protection for rapids, throw bags and safety kayakers.
- When a rapid should be portaged.



## 7.0 Review

Each trip shall be reviewed by the Trip Organiser and the UCCC executive committee to enable recommendations to be made for the amendment and updating of the Safe Operational Plan. The trip log will be reviewed, all incidents discussed and risk mitigation carried out. The Safe Operational Plan will be reviewed annually by the UCCC executive committee.

UCCC will hold a copy of the Safe Operational Plan in the UCCC Gear Shed and online on the UCCC website <http://uccc.org.nz>



## Appendix 1: Instructor Skills List

Instructors must be able to meet all criteria for an Assistant Instructor and additionally:

### Off water skills:

- Have an awareness of the importance of Instructor/Assistant Instructor/Secunder/Beginner ratios.

### On river skills:

- Competently paddle Grade 4 rivers, within a team.
- Be able to manage groups on the water
- Have at least 90% rolling accuracy in a Grade 3 environment
- Teaching skills (be able to demonstrate and teach):
  - o Basic paddling strokes
  - o T-rescue
  - o Ferry gliding
  - o Eddie turns (entering and exiting)
  - o Draw strokes (hanging, draw and sculling draw)
- Be able to instruct rolling:
  - o Any method including Eskimo, Screw or C2C
  - o Barrel rolling
- Emphasis should be on safety
- Method should be progressive
- Instruction should include a confidence routine

### Rescue skills:

- Should have completed a Level 1 River Rescue course
- Should have completed a first aid course
- Competently stern deck rescue
- Be able to ferry boats across a river, with or without tow lines
- Be able to 'raft up' beginners down Grade 2 rapids
- Have an understanding of rope based rescues:
  - o Strong swimmer rescue
  - o Z drags (3 to 1 advantage)
  - o Vector pulls (perpendicular pull to centre of rope)
  - o V lowering (throw bag attached to rescuer from each side of river)
- Should be able to throw 3 out of 5 throw bags over outstretched arms at 10m
- Have an understanding of the dangers associated with rescue techniques

### Instructors must carry:

- Rescue Lifejacket



- Sling or Cows tail for towing boats
- Whistle
- Throw bag
- Knife

***It is strongly recommended that Instructors carry:***

- Both a Sling and a Cows tail
- Spare Carabiners
- Airbags in boat

***It is recommended that Instructors carry:***

- Prussic
- Pulleys
- Split Paddle/Hand Paddles
- Emergency Blanket
- Spare Polypro in Dry bag
- First Aid Kit





## Appendix 2: Assistant Instructor Skills List

### An Assistant Instructor should be able to:

- Hold a pre trip briefing including:
  - o Basic paddling strokes (forward, reverse, turning, low brace, stopping)
  - o Sitting in the boat properly
  - o Holding a paddle correctly
  - o Gear is fitted appropriately and in usable condition (helmet, life jacket, spray skirt, boat)
  - o Describe and demonstrate a wet exit
  - o The importance of sun-screen
  - o Swimming (armchair, feet up, do NOT turn the boat upright or get on the boat, hold on to gear if possible)
  - o Dangers on the river (trees, holes, rocks)
- Check for medical conditions

### On river skills:

- Is competent to paddle at Grade 3 level
- Must be able to demonstrate:
  - o Basic paddling strokes
  - o Barrel rolling
  - o Rescue
  - o Ferry gliding
  - o Eddie turns (entering and exiting)
- Have a 75% accuracy with rolling in a Grade 3 environment
- Can choose an appropriate line down Grade 2 (river reading)
- Have knowledge and ability to perform a stern deck rescue
- Have appropriate knowledge of towing (via cows tail or sling)
- Appropriate knowledge of how to tie on a boat (with rope and tie downs)
- Knowledge of how to run a successful shuttle.

### It is strongly recommended that Assistant Instructors carry:

- Sling or Cows tail for towing boats
- Whistle
- Airbags in boat

### It is recommended that Assistant Instructors carry:

- Rescue Lifejacket
- Throw bag
- Knife



## Appendix 3: Raft Guide Skills List

### Grade 2 Raft Guide:

#### **Will have general river skills:**

- An understanding of the types of rivers commonly rafted by UCCC and the river features or hazards likely to be encountered. Features can include eddies, waves, holes and boils. Hazards such as strainers, undercuts and sieves will be readily identified and potential danger assessed.
- Identify and know the dangers of flooded water.
- Be aware of and considerate of other river users, especially beginners and Grade 2 paddlers.
- Have an awareness of the river grading system.
- Be able to move easily and efficiently in and around Grade 2 white water.
- Know how to use and maintain rafting equipment.
- Ability to undertake basic repairs.
- An understanding of basic raft construction and materials.
- Know how to use all rafting safety equipment.
- Have knowledge of raft storage, transportation and preparation.
- Have General river guiding and crew control skills:
- Know the UCCC river signals.
- Demonstrate guiding strokes such as forward, back, draw, prys and sweeps.
- Maintain an appropriate position with respect to other rafts, safety kayakers and all members of the kayaking party.
- Be able to safely raft Grade 2 with or without a crew.
- Be able to pick lines and successfully run them.
- Be able to conduct all safety briefings.
- Appropriately place crew in raft.
- Be able to use crew to avoid hazards on the river – especially wraps.
- Know basic rescue techniques.
- Demonstrate strong swimmer and live bait rescues.
- Be aware of proper throw bagging technique (including pendulum trajectory and stable belay). Be able to hit a moving target with both a throw bag and re-coil.
- Know common knots used by rafters and kayakers.
- Have knowledge of different types of ropes and how they are used in mechanical advantage systems.
- Know how to correctly tie and use prussiks.
- Flip and swimmer recoveries.
- Be able to dislodge stuck rafts either directly or with the application of ropes.
- Be aware of the contents of the UCCC Safe Operating Plan.



Grade 3 Raft Guide:

- Be competent in all aspects of Grade 2 at a Grade 3 level.

**Additionally Grade 3 guides must:**

- Know how to deal with an entrapment situation possibly utilizing a rescue lower or tethered raft system.
- Must have knowledge of first aid.
- Be able to deal with passengers during and after an emergency situation.
- Be able to teach a Grade 2 raft guide where appropriate

Grade 4 Raft Guide:

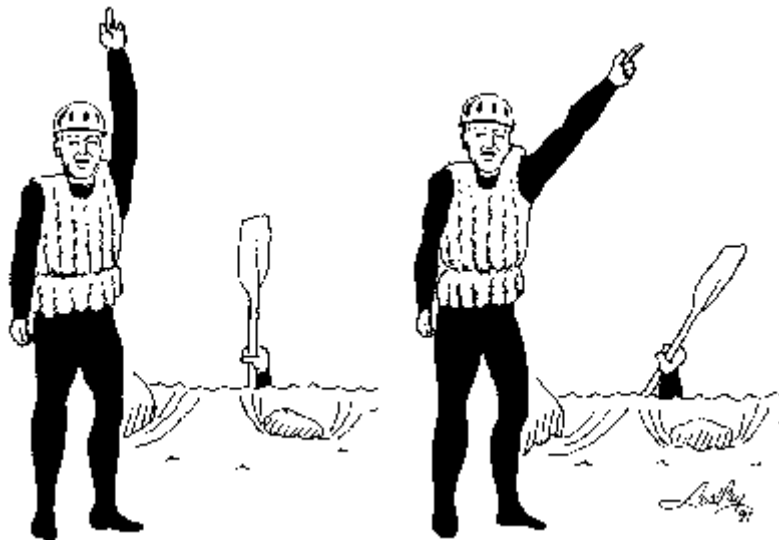
- Be competent in all aspects of Grade 3 at a Grade 4 level.
- Must have completed at least 6 trips down the Grade 4 section or river, at least 2 of which in a raft and be able to describe the rafting lines by memory on all Grade 4 plus rapids.
- Be able to teach a Grade 3 raft guide where appropriate

## Appendix 4: River Signals

**Stop:** Potential Hazard Ahead. Wait for “all clear” signal before proceeding, or scout ahead. Form a horizontal bar with outstretched arms or a paddle. Those seeing the signal should pass it back to others in the party. Two blows on a whistle.



**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. One blow on a whistle.



**Help/Emergency:** Assist the signaller as quickly as possible. Give three long blasts on a whistle while waving a paddle over your head. If a whistle is not available, use the visual signal alone.



**I'm okay:** I'm okay and not hurt. While holding the elbow outward toward the side, repeatedly pat the top of your head. The signal is both a question and a response.



**Eddy Out:** Circle finger above head then point at an eddy. Meaning break out in the eddy indicated.

**Walk:** After a stop sign, mime walking with fingers. Meaning get out and walk to inspect or portage.