

# SF | SANTA FE COLLEGE

Office of Safety & Risk Management

## Standard Operating Procedures & Risk Assessment Guide Department of Natural Sciences Canoe

**Safety takes priority in all College activities.** This guide outlines practices for assessing and minimizing risks associated with canoe use. All faculty, staff, and students who wish to use a canoe during authorized College field trips or research outings must review this guide prior to the trip. Risk management is a dynamic process which responds to ever-changing circumstances in order to ensure the highest safety standard for everyone involved. All trip participants are responsible for safety awareness and risk management.

### Standard Operating Procedures (SOPs)

Risk assessment and management processes are known as Standard Operating Procedures (SOPs). The following SOP areas are covered in this guide. Each SOP must be thoroughly reviewed prior to canoe use.

1. **Safety Policy**
2. **Supervisor Competency & Training**
3. **Supervision & Number of Participants**
4. **Arrangements for Minors & Students**
5. **First Aid & Emergency Procedures**
6. **Equipment Maintenance**
7. **Activity Risk Assessment**
8. **Appendices**

# 1. Safety Policy

Overall safety responsibility resides with the trip supervisor. These responsibilities include:

- Completing required training described in Section 2
- Ensuring all required trip documentation is in order
- Conducting activity risk assessments described in Section 7
- Completing a Canoe Safety Checklist prior to the trip to ensure all necessary equipment and supplies are present on the canoe
- Reviewing first aid and emergency procedures with all participants prior to launching the canoe
- Conducting inspection, in accordance with manufacturer guidelines, of canoe and all equipment (including life-saving equipment) before and after every trip; report any defects immediately
- Reporting any safety concerns to the department chair and Safety Coordinator as soon as possible
- Reporting any accidents/incidents as soon as possible in accordance with procedures on the SF Safety website

**Life-Saving Equipment:** All individuals must put on a life jacket while still on dry land, before approaching the dock or entering the canoe. Life jackets must be worn at all times while in the canoe, and must not be removed until back on dry land.

⇒ For more information on general canoe safety see Appendix A, *Top 10 Canoe Safety Tips*

## 2. Supervisor Competency & Training

Trip supervisors must be adequately trained for each activity associated with canoe use and competent to instruct trip participants on the use of all equipment, including life-saving equipment such as life-jackets. The department must provide supervisors and participants with all the necessary equipment. All participants must be capable of wearing/using the equipment according to manufacturer guidelines.

### Required Training for Trip Supervisors

- First Aid & CPR/AED Course - [www.redcross.org](http://www.redcross.org)
- Small Craft Safety Canoeing and Kayaking Online Course - [www.redcross.org](http://www.redcross.org)
- Capsize/Tip-Over: review Appendix B, *What to Do When You Flip a Canoe*
- Emergency Rescue: review Appendix C, *River Paddler's Guide to Rescue*

Training documentation must be retained by the Department of Natural Sciences for at least 3 years.

### Additional Canoe Safety & First Aid Training Resources

- American Canoe Association - [www.americancanoe.org](http://www.americancanoe.org)
- [www.canoeingbasics.com](http://www.canoeingbasics.com)
- [www.canoeing.com](http://www.canoeing.com) - Beginner's Guide
- National Safety Council - [www.nsc.org](http://www.nsc.org)
- NOLS: Wilderness First Aid - [www.nols.edu](http://www.nols.edu)
- Wilderness & Remote First Aid Course - [www.redcross.org](http://www.redcross.org)

### 3. Supervision & Number of Participants

**Supervision:** At least one trip supervisor (as described above) must always be present inside the canoe whenever the canoe is in the water.

**Maximum participants:** The maximum number of participants (i.e. the most people allowed in one canoe at one time) is determined by the canoe manufacturer's guidelines for maximum weight. Keep in mind that all equipment that will be carried on the canoe must be taken into account when calculating the total weight.

### 4. Arrangements for Minors & Students

The trip supervisor is responsible for ensuring that all College Travel rules are followed with regard to students and minors, and that all documentation is in order. Refer to College Rule 7.34 and the SF Travel Manual for student travel regulations.

### 5. First Aid & Emergency Procedures

#### **Itinerary/Trip Information**

The trip supervisor must leave a detailed itinerary with the department chair including all of the following:

- Emergency contact information for all trip participants
- Time and place of departure and estimated return time
- Activity location (including contact numbers) and launch point
- Details of all vehicles involved, including make and registration

**In the event of any emergency, dial 911 immediately and notify the SFPD as soon as possible.**

#### **Emergency Equipment & Supplies**

The trip supervisor must have ready access to the following at all times while in the canoe:

- Mobile Phone with Waterproof Case
- Emergency Phone Numbers
  - SFPD Emergency Line: 352-395-5555
  - SFPD Non-Emergency Line: 352-395-5519
  - Emergency Medical Services: 911
- Paddles + Extra Paddle
- Emergency Whistle
- Paddler Medical Kit
- Brightly Colored Rope
- Canoe Repair Kit
- Duct Tape
- River Knife
- Throw Bag

⇒ See Appendix G, *Canoe Safety Checklist*, for additional equipment and information.

## 6. Equipment Maintenance

All canoes, equipment, and gear must be in good repair and optimal working condition at all times. Follow all manufacturer guidelines and safety regulations. A preventative maintenance log must be kept for all equipment. See the Safety website for a downloadable maintenance log template:

⇒ **Preventative Maintenance Log (PDF):** [sfcollege.edu/Assets/sf/safety/Maintenance%20Schedule.pdf](https://sfcollege.edu/Assets/sf/safety/Maintenance%20Schedule.pdf)

## 7. Activity Risk Assessment

Activity risk assessment involves three components:

1. Pre-Activity Analysis
2. Activity-Related Guidelines
3. Post-Activity Guidelines

### Pre-Activity Analysis

It is essential to consider the experience level of the group and all possible hazards (natural and manmade), including but not limited to:

- Slips, trips, and falls
- Capsizing and tip-over
- Entrapment under water
- Strong currents, rip-currents
- Cold water temperature
- Heat exposure (sunburn, sunstroke, dehydration)
- Unexpected weather conditions
- Wildlife (alligators, snakes, insects, etc.)
- Inadequate/dangerous clothing or shoes

### Familiarization Training & General Risk Assessment

All supervisors must be aware of their responsibilities and familiar with the location and activities of the trip before the trip begins. This includes awareness of possible dangers including weather, wildlife, and various emergency situations. The table on the next page provides guidance on areas to be covered, but it is not all-inclusive.

## General Risk Assessment Table

Hazard	Preventative Measures	✓	Date	Supervisor
Working Alone	-----not allowed-----			
Slips/Trips/Falls	-Requirement of proper footwear -Situational awareness			
Handling Canoe and Equipment	-Training on safe canoe handling and proper procedures for lifting canoe and equipment -Requirement of 2 persons to move the canoe			
Capsizing	-Stay low in canoe, walk across center line only -Review Appendix B, <i>Canoe Flip</i>			
Heat Exposure	-Proper clothing (including hat) & sunscreen use -Proper hydration -Review Appendix D, <i>Heatstroke Facts</i>			
Weather	-Check weather forecast prior to trip -Closely monitor weather conditions -Thunder, lightning, or heavy rain requires all participants to leave the water immediately and seek shelter			
Wildlife	-Situational awareness & knowledge of the area -No feeding or interacting with any wildlife			

### Activity-Related Guidelines (Safety Brief)

A safety brief must be given to all participants before launching the canoe. The list below includes some general activity-related guidelines that should be included in the brief. Remember to take into consideration the specific circumstances of the trip, the location/area, and the participants involved.

1. Introduction - provide name of trip supervisor and details of experience
2. Background - give a short background of the activity, including the plan for the day
3. Area - describe the trip location, including maps and routes, and highlighting any possible dangers
4. Equipment - examine, check, and explain all equipment; ensure each participant has all required equipment and that all life-saving equipment is properly fitted.
5. Canoe Transport - explain proper procedures for off-loading and launching canoe, including vehicle safety (Note: see Appendix E, *Transport, Entering, Exiting, & Paddling Canoes*)
6. Boarding - explain proper procedures for safely entering and exiting the canoe (see Appendix E)
7. Paddling - explain proper procedures for paddling canoe (see Appendix E)
8. Review first aid and emergency procedures; ensure participants know what to do in an emergency

### Post-Activity Guidelines

1. Report any accidents/incidents to the Safety Coordinator immediately after returning from trip.
2. Promptly clean, inspect, and store canoe and all equipment according to the manufacturers' guidelines and Department of Natural Sciences' procedures.

## 8. APPENDICES

### Appendix A: Top 10 Canoe Safety Tips

From the American Canoe Association:

1. Take an ACA on-water course
2. Wear your lifejacket
3. Practice cold water safety
4. Know the rules of the road
5. Perform safety checks
6. Learn canoeing etiquette
7. Know your limits
8. Read the *River Paddler's Guide to Rescue* (see Appendix C)
9. Read *Best Practices for Paddlers*
10. Read *Trip Preparation & Planning*

⇒ **Full information including links for each tip:** [www.americancanoe.org/?page=Top\\_10](http://www.americancanoe.org/?page=Top_10)

### Appendix B: Canoe Flip

From CanoeingBasics.com:

Near shore, use the Swim It! Method – Hang onto the boat and swim it to shore. Tuck your paddles under the seats and/or thwarts so they stay with the boat and keep your hands free. This could be challenging if the current is very strong. Try to work with the current as much as possible. Once you reach shore, turn your boat on its side and drag it up onto the bank so all the water pours out. Then flip your boat upright and get back out there paddling.

Far from shore, use the Flip It! Method – Tuck your paddles under the seats or thwarts so your hands are free. Then you and your partner get at either end of the canoe and try to lift/roll it over so it dumps out at least some of the water and you trap some air underneath. Then both of you swim under the boat and with your head up in the air pocket. Get a firm grip on the gunwales and lift the boat up and flip it over. Then you can take turns climbing back in.

⇒ **Full information & pictures:** [canoeingbasics.com/canoeing-101/what-to-do-when-you-flip-a-canoe](http://canoeingbasics.com/canoeing-101/what-to-do-when-you-flip-a-canoe)

## Appendix C: River Paddler's Guide to Rescue

### From the American Canoe Association

- Wear Your Lifejacket
- Be Properly Clothed & Equipped
- File a Float Plan (Itinerary)
- Learn & Practice Essential Rescue Skills
- Carry a Throw Bag and Practice Regularly
- Seek out ACA-certified Instructors
- Paddle Safe & Paddle Often

An experienced paddler never takes safety for granted. Every paddler should practice and be competent at self-rescue, and be able to help others with simple assisted rescue techniques. Seek out training, and learn quick uncomplicated methods for helping your paddling buddies, as well as how to use a few simple pieces of safety gear. All paddlers should wear a USCG approved, properly fitted life jacket, wear appropriate protective clothing including secure footwear, and have a throw rope, knife, and sounding device. Bright lights should be carried for low visibility conditions.

⇒ **Download the full ACA River Paddler's Guide (2 pages, PDF):**

[http://c.ymcdn.com/sites/www.americancanoe.org/resource/resmgr/sei-educational\\_resources/brochure\\_river\\_paddlers\\_guid.pdf](http://c.ymcdn.com/sites/www.americancanoe.org/resource/resmgr/sei-educational_resources/brochure_river_paddlers_guid.pdf)

## Appendix D: Heatstroke Facts

From OSHA.gov

### Risk Factors for Heat Illness

- High temperature & humidity, direct sun exposure, no breeze or wind
- Low fluid intake
- Heavy physical labor
- Heavy or nonporous clothing
- Unused to hot conditions

### Symptoms of Heat Exhaustion

- Headache, dizziness
- Weakness, fainting
- Irritability, confusion
- Thirst, nausea, vomiting

### Symptoms of Heat Stroke

- Confusion, disorientation
- May stop sweating
- Collapse, loss of consciousness, seizures

### How to Protect Yourself and Others

- Know signs/symptoms of heat illness. Monitor yourself and use a buddy system.
- Provide lots of cool water (at least 1 pint per hour)
- Block out direct sun and other heat sources
- Modify schedules and arrange frequent rest periods with water breaks
- Routinely check individuals who are susceptible to heat stress
- Drink plenty of fluids. Drink often and BEFORE you are thirsty. Drink every 15 minutes.
- Avoid beverages containing alcohol or caffeine.
- Wear lightweight, light-colored, loose-fitting clothes.

### What to Do When Someone is Ill from Heat

- Call a supervisor for help. If the supervisor is not available, call 911.
- Have someone stay with the person until help arrives.
- Move the person to a cooler/shaded area. Remove outer clothing.
- Fan and mist with water; apply ice (ice bags or ice towels).
- Provide cool drinking water, if person is able to drink.

⇒ **Download the OSHA Heat Stress Flyer (PDF):** <https://www.osha.gov/Publications/osh3154.pdf>



## Appendix E: Transport, Entering, Exiting, & Paddling Canoes

### Transport (from CanoeingBasics.com)

You will need a roof rack to safely transport your canoe. If your vehicle does not have built in roof racks, purchase racks that will easily attach/detach to your roof. Once you have roof racks on your vehicle, you need tie down straps. Tie down straps will likely be sold anywhere roof racks are sold and cost about \$20.

Load a canoe with at least two people. Bring the boat alongside the vehicle, lift together, flip it upside down, and place carefully on your roof racks so that it is centered on your roof. Eyeball the canoe from the front to make sure it is in line and won't catch the wind and pull you around on the road. Your boat should be centered from side to side and front to rear. Now carefully tie down your canoe. You should be able to grab the gunwales and yank without the canoe moving much, if at all. Anchor your bow and stern so the boat won't slip out from under your straps during a sudden stop. Attach rope securely to each end of the canoe, then tie to the frame of your vehicle just below the bumper. Make sure to tie off any excess rope.

### Entering & Exiting (from Paddling.com)

When entering or leaving a canoe, keep your weight as close to the centerline as possible. When getting in, put your foot down right over the keel, and bring the second foot beside it. When getting out, keep your trailing foot centered until your other foot is securely planted on the beach, dock, or bottom. And if you stand under way, keep your belly-button over your boat's centerline all the time. Always keep your weight as low as possible. When entering or leaving any canoe, keep your weight down. Plant one foot on the keel. Next, reach across the boat with the corresponding hand. Grab both gunwales, one in one hand, one in the other. Now swing the other foot in. Settle down in your seat, or drop down into a kneel.

### Paddling (from CanoeingBasics.com)

Learn the three most basic canoe strokes: the **Forward Stroke**, the **Draw**, and the **Back Sweep**. There are other techniques you can learn later, but knowing these three strokes is essential to paddling a canoe.

#### ⇒ Full links including images and additional resources

- <http://www.canoeingbasics.com/canoeing-101/canoe-transport>
- <https://paddling.com/learn/getting-into-and-out-of-your-canoe>
- <http://www.canoeingbasics.com/canoe-strokes>

Appendix F: Canoe Check-Out Form

**SF** | SANTA FE COLLEGE  
**Canoe & Equipment Check-Out Form**  
**Department of Natural Sciences**

Dr. Vertigo Moody, Chair | vertigo.moody@sfcollge.edu

Name: \_\_\_\_\_

Equipment Requested: \_\_\_\_\_  
\_\_\_\_\_

Pick-Up Date & Time: \_\_\_\_\_

Drop-Off Date & Time: \_\_\_\_\_

Describe any pre-existing damage or wear/tear to the equipment (if none, write "none") \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*I have reviewed and agree to the standard operating procedures and safety training resources for canoe use.*

Signature: \_\_\_\_\_

Date: \_\_\_\_\_ Staff Signature: \_\_\_\_\_

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*For Office Use Only*

Return Date: \_\_\_\_\_ Staff Signature: \_\_\_\_\_

All required documentation has been received from trip supervisor

Observed damages upon return: \_\_\_\_\_

## Appendix G: Canoe Safety Checklist

### From the American Canoe Association:

- Be a swimmer
- File a Float Plan
- Wear your lifejacket
- Assess your boat's flotation needs
- Spare paddle
- Always wear appropriate clothing
- Dress for immersion in cold water (wetsuits/drysuits)
- Wear a hat or helmet
- Compass and chart or map
- Whistle or sound signaling device
- Throw bags and other rescue gear
- River knife
- Bilge pump and/or bailer
- Self-rescue devices (paddle float, sling, tow rope)
- Sunscreen
- Drinking water & snacks
- Light/signal (for low light conditions)
- Proper footwear
- UV eye protection
- Drybag with extra clothing
- Paddler Medical Kit
- Small repair kit with duct tape
- VHF radio and GPS locator

⇒ **Download the ACA Paddler's Safety Checklist (2 pages, PDF):**

[http://c.ymcdn.com/sites/www.americancanoe.org/resource/resmgr/sei-educational\\_resources/paddler's\\_safety\\_checklist.pdf](http://c.ymcdn.com/sites/www.americancanoe.org/resource/resmgr/sei-educational_resources/paddler's_safety_checklist.pdf)