

CAL POLY



Center for Coastal Marine Sciences

Boating Safety Manual

California Polytechnic State University San Luis Obispo

Center for Coastal Marine Science

Approved: January, 2010

TABLE OF CONTENTS

Section	Page
1.00 OVERVIEW	1
1.10 PURPOSE.....	1
1.20 CONTENTS.....	1
1.30 APPLICABILITY.....	1
2.00 RESPONSIBILITY.....	2
2.10 BOATING SAFETY COMMITTEE MEMBERSHIP.....	2
2.20 BOATING SAFETY COMMITTEE RESPONSIBILITY.....	2
2.30 BOATING SAFETY OFFICER.....	2
2.40 PRINCIPAL INVESTIGATORS	3
2.50 BOAT OPERATOR	3
3.00 ADMINISTRATIVE PROCEDURES & TRAINING REQUIREMENTS	4
3.10 AUTHORIZATION OF BOAT OPERATORS	4
3.20 MAINTAINING AUTHORIZATION	4
3.30 REVOCATION OF AUTHORIZATION.....	4
3.40 RE-AUTHORIZATION	4
3.50 TRAILERING	4
3.60 LAUNCHING AND RETRIEVING	4
4.00 ADMINISTRATIVE PROCEDURES & RECORD KEEPING	5
4.10 FLOAT PLANS.....	5
4.20 MAINTENANCE OF RECORDS.....	5
4.30 ACCIDENT REPORTING.....	5
5.00 OPERATIONAL PROCEDURES.....	5
5.10 STABILITY	5
5.20 EQUIPMENT	5
5.30 COMMUNICATIONS	6
5.40 WEATHER.....	6
5.50 SPECIAL OPERATIONS	6
5.60 SAFETY CHECKS.....	6
 APPENDICES	
1 Float Plan.....	11
2 Required Equipment.....	13
3 Boat Davit Launching Procedures.....	14
4 Kayak & Self Propelled Vessels.....	16
5 Marine VHF Guidelines.....	19
6 Emergency Contact List.....	22
7 Boating Accident Form.....	24
8 Boat Operator Application Form	25

Cal Poly
Center for Coastal Marine Sciences
Boating Safety Manual
SECTION 1.00
OVERVIEW

1.10 PURPOSE

The purpose of these boating standards is to ensure that all boating is conducted in a manner that will maximize safety and to set forth standards for training and certification that will allow a working reciprocity between organizational members.

1.20 CONTENTS

The Scientific Boating Safety Association (SBSA) Boating Manual establishes minimum guidelines for the operation of all non-UNOLS boats by Organization Members (OM).

Cal Poly's SBSA Boat Manual shall include:

- 1 Policy that pertains to all vessels operating under the auspices of the Cal Poly.
- 2 Guidelines for obtaining and maintaining boat operator authorization.
- 3 Administrative procedures.
- 4 Equipment standards.

1.30 APPLICABILITY

The provisions of this manual apply whenever Cal Poly personnel are using a boat under Cal Poly auspices, regardless of ownership of the boat.

Specific examples of boat operations under Cal Poly auspices include: persons engaged in research, earning academic credit, employees acting within the scope of their employment; students engaged in any research operation including those receiving or providing boat operation instruction or involved in boat checkouts.

Boats used under Cal Poly auspices include:

- 1 Boats owned, supported, or administered by Cal Poly, regardless of ownership.
- 2 Privately owned boats used by Cal Poly for scientific or educational purposes.
- 3 Any other vessels used by Cal Poly for scientific or educational purposes.
- 4 In case of joint operations, the lead institution will ensure that all applicable safety standards are being met.

**SECTION 2.00
RESPONSIBILITY**

2.10 BOATING SAFETY COMMITTEE MEMBERSHIP

Boat Safety Committee membership should consist of:

1. Chief Administrative Officer
The CAO has the ultimate responsibility for the boat program and its related activities.
2. Other Members
Should consist of a majority of persons who are knowledgeable about boating operations.
3. Boat Safety Officer (BSO)

2.20 BOATING SAFETY COMMITTEE RESPONSIBILITY

The Cal Poly BSC:

- 1 Has autonomous and absolute authority over the boating program's operation.
- 2 Shall review and revise the boating safety manual.
- 3 Shall assure compliance with the boating safety manual.
- 4 Shall take disciplinary action for unsafe practices, and act as a board of appeal.
- 5 Shall recommend the issue, reissue, or the revocation of boating authorizations.
- 6 Shall establish and/or approve training programs through which the applicant can satisfy the requirements of the organizational member's boating safety manual.
- 7 Shall suspend boating operations that are considered to be unsafe or unwise.
- 8 Shall periodically review the Boating Safety Officer's performance and program.
- 9 Shall sit as a board of investigation to inquire into the nature and cause of boating accidents or violations of Cal Poly's boating safety manual.
- 10 May grant exceptions to this manual.

2.30 BOATING SAFETY OFFICER (BSO)

The Boating Safety Officer (BSO) serves as a member of the Boating Safety Committee (BSC). This person should have broad experience in boating.

Duties and Responsibilities

- 1 Shall be responsible, through the BSC, to the responsible administrative officer or designee, for the conduct of the boating program of Cal Poly. The routine operational authority for this program, including the conduct of training and authorization, and ensuring compliance with this standard and all relevant regulations of the membership organization, rests with the Boating Safety Officer.
- 2 May permit portions of this program to be carried out by a qualified delegate(s), although the Boating Safety Officer may not delegate responsibility for the safe conduct of the Cal Poly boating program.

- 3 Shall suspend boating operations considered to be unsafe or unwise.

2.40 PRINCIPAL INVESTIGATORS AND ADMINISTRATIVE OFFICERS

- 1 Principal Investigators and Administrative Officers are responsible for assuring that all boat operations that are part of a program under their direction are conducted in accordance with this manual.
- 2 Principal Investigators and Administrative Officers must determine that all individuals assigned to boat operations related to their projects are properly authorized as described in section 3.10 of this manual.

2.50 BOAT OPERATOR

- 1 Only authorized Cal Poly boat operators may operate small boats under Cal Poly auspices, whether or not the boat is owned by Cal Poly. Exceptions may be granted by the BSO for vessels not run by Cal Poly.
- 2 In US waters non-Cal Poly owner/operators must comply with USCG, state, and local regulations covering chartered vessels. In foreign waters, the responsible Cal Poly person shall ensure the vessel meets the equipment requirements of this manual.
- 3 The designated boat operator is responsible for all aspects of boating operations, regardless of any senior personnel present in the boat. These responsibilities include, but are not limited to:
 - a) Safety of the vessel and all persons on board.
 - b) Operation of the vessel in compliance with federal, state, and local regulations and this manual.
 - c) Safe transport of the vessel to and from the launch site, if applicable
 - d) The safe operation of all equipment.
 - e) Ensuring that all required operational and safety equipment is on board and that crew and passengers know the location and how to operate safety/survival equipment.
 - f) Report all accidents, incidents, boardings, citations, safety concerns, and issues to the BSO.
- 4 Failure to comply with provisions of the Boating Safety Manual may be cause for the revocation or restriction of the operator's authorization. However, any operator may deviate from the requirements of this manual to the extent necessary to prevent or minimize a situation that is likely to cause death, serious physical harm, damage to the vessel, or major environmental damage.
- 5 The operator or person in charge of a vessel is obligated by law to provide emergency assistance that can be safely provided to any individual in danger at sea. The operator or person in charge is subject to a fine and/or imprisonment for failure to do so.

SECTION 3.00
ADMINISTRATIVE PROCEDURES AND TRAINING REQUIREMENTS

3.10 AUTHORIZATION AND TRAINING OF BOAT OPERATORS

3.11. Prerequisites

- a. Vessel Operator candidates must submit a Cal Poly Scientific Boater Application Form to the BSO or designee (see Appendix 8)
- b. Complete California State Boating Safety Course (<http://www.dbw.ca.gov/BoatSafeCourse.asp>) or USCG Auxiliary Course (http://nws.cgaux.org/visitors/pe_visitor/index.html)
- c. Vessel Operator candidates must have at least 10 hours as a crew member on a Cal Poly vessel or comparable experience.

3.12. Qualification Levels

- a. Basic: *May operate small boats in Port San Luis and in Morro Bay Harbor.* Perspective operators must attend a demonstration session with the BSO or designee covering topics such as, but not limited to: equipment, safety gear, communication, rules of the road, vessel launching and recovery, and vessel operation. Perspective operators must be able to demonstrate to the BSO or designee familiarity with check-out procedures, equipment, vessel operation and local knowledge.
- b. Nearshore: *May operate small boats offshore, but within two nm of a harbor entrance.* Perspective operators must demonstrate to the BSO or designee a level of competence in operating the boats considered adequate for working outside the harbor, including the added dangers of working offshore and knowledge of local conditions such as wind, swell and fog. A minimum of 40 hours boating experience is required.
- c. Offshore: *May operate small boats greater than two nm from harbor entrances.* Perspective operators must demonstrate to the BSO or designee their capability and experience to operate in the area proposed. A minimum of 50 hours boating experience is required. This qualification is on a case-by-case basis and requires specific approval from the BSO or designee.

Perspective operators with evidence of their ability to safely operate small boats such as a USCG license or other certificate may have all or sections of this process waived by the BSO.

3.13. Check-out Procedures

CCMS vessels can be reserved via the Marine Operations website calendar system (<http://www.marine.calpoly.edu/marineops/calendar>). You must receive approval for your specific cruise from the BSO or designee before you may use the vessel.

3.20 MAINTAINING AUTHORIZATION

Cal Poly small boat operators may be subject to re-authorization every five years. For operators that have logged a sufficient number of cruises in that time period re-authorization may be a simple demonstration of knowledge and skills. For operators that have not been actively boating during that time period, additional training may be required.

3.30 REVOCATION OF AUTHORIZATION

A boat operators' authorization may be revoked for any action deemed unsafe or unlawful or for not meeting the procedural requirements of Cal Poly.

3.40 RE-AUTHORIZATION

If a boat operator's authorization is revoked, they may be re-qualified after the operator complies with such conditions as the Boating Safety Officer may impose. The operator shall be given the opportunity to present his/her case to the BSC before conditions for re-authorization are stipulated.

3.50 TRAILERING

To become qualified to tow a boat and trailer, the operator or designated driver must demonstrate to the Boating Safety Officer or his/her designee the proper procedures for towing the boat and trailer over the road, as well as launching and retrieving the boat from the trailer to the water. Potential trailer qualified operators must be a Cal Poly approved driver and be familiar with the towing vehicle. Operators must also demonstrate knowledge of the area in which the vessel will be used. A nearshore qualification (see section 3.12.b) is a prerequisite.

3.60 CAL POLY PIER CRANE LAUNCHING AND RETRIEVING

- 3.61. At a minimum, two people, of which one must be a Cal Poly authorized boater and have been previously trained by the BSO or designee in the use of the Cal Poly Pier crane, are required to launch a vessel from the Cal Poly Pier.
- 3.62. Specific training on vessel launching using the Cal Poly Pier crane should be included in the basic vessel operator training (see section 3.12.a), as deemed necessary by the BSO or designee. See appendix 3 for complete vessel launching procedures using the Cal Poly Pier crane.

SECTION 4
ADMINISTRATIVE PROCEDURES AND RECORD KEEPING

4.10 FLOAT PLAN

All boat operators conducting boat operations under the auspices of Cal Poly should file a float plan with a responsible party prior to departure. For a complete Float Plan form see appendix 1.

4.20 MAINTENANCE OF RECORDS

- 1 A file of usage for all boats, including a log of scheduled and unscheduled maintenance for each boat and boat trailer shall be maintained.
- 2 Records shall be maintained for a minimum of three years, except when an accident has occurred (see section 4.30).

4.30 ACCIDENT AND INCIDENT REPORTING

- 1 All accidents must be reported to the Boating Safety Officer within 24 hours of the incident.
- 2 Incidents and near accidents, breakdowns or other unsafe events whether on land or at sea must be reported to the Boating Safety Officer within a time period specified by the OM.
- 3 Any accident causing loss of the vessel, damage over \$2,000, requiring medical treatment beyond first aid, or loss of life must be reported to the U.S. Coast Guard.
- 4 The Boating Safety Committee shall investigate and document the accident as described in 3 above and related personal injury and/or property damage and prepare a report.
- 5 Accident reports shall be held for five years.

SECTION 5.00 OPERATIONAL PROCEDURES

- All boats and equipment used by Cal Poly authorized operators in US waters, regardless of ownership, will, at a minimum, conform to U.S. Coast Guard, state, and local requirements and to the standards set forth in this manual.
- All boats operated outside of U.S. Coast Guard jurisdiction shall at a minimum comply with U.S. Coast Guard regulations in addition to any applicable local requirements and to the standards set forth in this manual.

5.10 STABILITY

No person may operate a vessel loaded in a manner that will jeopardize the safety of the operator or crew.

5.20 EQUIPMENT

- 1 The operator shall be familiar with the operation of the equipment and shall inspect all emergency equipment prior to departure.
- 2 The operator and/or crewmember shall notify the responsible person of any malfunctioning equipment.
- 3 The nature of specific operations may require vessels and boating equipment to meet higher standards as determined by the Boating Safety Officer or the Boating Safety Committee.

5.30 COMMUNICATIONS

5.31. Marine VHF Radio.

All vessels working under the auspices of Cal Poly, must have at least two, a primary and backup, marine VHF radios. In vessels equipped with a fixed-mount radio, a handheld radio may serve as the backup. Otherwise, two handheld radios are required. For marine VHF radio use guidelines and procedures see appendix 5.

5.32. Cellular

It is recommended that at least one cellular phone is onboard during vessel operations conducted under the auspices of Cal Poly. Marine VHF radio communication has several limitations (not private, line of sight, etc.) and a cell phone can be a useful augmentation to vessel communications.

5.40 WEATHER

5.41 General

Weather on the California central coast can be highly variable. Basic training for any potential Cal Poly vessel operator should include local weather forecast information. In general, vessels should not be operated if conditions exceeding Beaufort Scale 4 and/or a wind speed of 25 knots and/or a wave height of 3 meters is present or is forecast. It is the vessel operator's responsibility to determine if weather conditions permit the safe operation of a Cal Poly vessel.

5.42 Fog

Vessels not equipped with a radar, suitable for navigation, must not be operated in fog and/or other conditions that reduce visibility to under one mile.

5.50 SPECIAL OPERATIONS

The BSO and/or designee may require additional training for vessel operators needing to conduct special operations such as; foreign waters, SCUBA diving, trawls, live boating, night operations, equipment deployment, etc.

5.60 SAFETY CHECKS

Prior to Departure Boat Operator Shall:

1. Perform a functional inspection of the boat and equipment, including communications.
2. Assess all environmental conditions – weather, water conditions, etc.
3. Give a briefing to all on board including, at a minimum, emergency procedures, location of PFDs, fire extinguishers, man overboard, and methods of seeking assistance.

After Returning:

1. Upon return the operator will close the float plan as agreed upon before departure.
2. Notify within 24 hours, the responsible person, of any problems with the boat or equipment that occurred during the cruise.

APPENDIX 1 – FLOAT PLAN

A search for an overdue vessel can be greatly enhanced if the Coast Guard and other rescue agencies have certain facts. For your own safety, complete this form and leave it (preferably via fax) with a responsible party, who will notify authorities if necessary.

Operator:		
	<i>Name</i>	<i>Cell Phone Number (keep cell phone in waterproof pouch on board vessel)</i>

Shore Contact:		
	<i>Name</i>	<i>Phone Number(s)</i>

If Overdue, Contact:		
	<i>Name of rescue agency near point of departure</i>	<i>Phone Number</i>

PI in Charge:		Grant Name:	
----------------------	--	--------------------	--

Purpose of Trip:

Vessel Information:

Name:		Hull Color:	
CF #:		Engine HP:	
Length:		Range (est 3 mi/gal):	
Type/Style:		Average Speed:	

Navigation Equipment Onboard (check): **GPS** **Chart** **Compass** **ePlotter**

Departure Information:

Location:		Towing Vehicle License #:	
Time:		Trailer License #:	
Date:		Location Parked:	

Destination Information:

Destination	GPS Coordinates (Lat/Long)	Description (i.e. Avila Rock, 1nm @ 75°M from Cal Poly Pier)
1		
2		
3		

Expected Return Time:		Date:	
------------------------------	--	--------------	--

Additional Crew Information:

Name	Cell Phone #	Affiliation

Note: Operator must also complete the *Post Cruise Report* on next page.

Post Cruise Report

Vessel Log Entry Completed

Departure Time:		Return Time:	
Distance Traveled:		Fuel Used:	
Engine Hours:			

Describe any changes to cruise plan:

Describe any mechanical or vessel maintenance problems:

Recommendations/suggestions for improving the CCMS boating program:

Important: Do Not Forget to Close Float Plan When You Return.

APPENDIX 2
BOATING CHECKLIST AND REQUIRED EQUIPMENT

- 1) Check wind, swell/surf conditions and visibility.
- 2) File Float Plan
- 3) Check boat for:
 - Vessel condition
 - One Lifejacket per person
 - One Type 4 throw-able cushion/ring
 - Drain plugs
 - One in place One extra
 - Anchor and line
 - Emergency starter rope
 - Boat hook
 - Drinking Water
 - Tool kit, electrical and duct tape
 - First aid kit
 - Visual distress signal (flares/flashlight)
 - Sound signaling device (whistle/foghorn)
 - Gloves
 - Bucket and/or sponge
 - Hand operated bilge pump
 - Compass and chart
 - Check battery charge
 - Bow, stern and towing lines
 - Spare ropes/straps for tie down
 - Fire extinguisher
 - Do lights and horn work?
 - Sea Anchor
 - Manual for Outboard motor(s)
 - Fuel: Bring twice the amount you anticipate using. Figure on two miles per gallon with calm sea and a lightly loaded boat.
 - Oil (10W-40?)
 - Spare propeller
 - Emergency safety kit (Cell phone in water proof case, VHF Radio, handheld GPS, Compass, Strobes, mirror, etc.)
- 4) Trailer
 - Bow winch strap and safety strap
 - Safety chains to vehicle
 - Emergency Break to vehicle
 - Lights
 - Transom strap
 - Engine tilt

APPENDIX 3 Boat Davit Launching Procedures

General conditions to be met prior to launch

- ❑ A Float Plan has been filed (see Float Plan procedures).
- ❑ Weather predictions allow for safe launch AND retrieval conditions.
- ❑ All persons involved with launching will wear a life jacket or work vest at all times.
- ❑ Persons not involved should stay clear of the area.
- ❑ The person assigned to disconnect the sling from the boat will wear a hard hat.
- ❑ Two people (minimum) are required, one of which must be a Cal Poly certified boat operator

Launching Procedures

1) Prepare boat for launching

- A) Complete boat checklist and file float plan.
- B) Remove boat cover and wheel covers.
- C) Unlock trailer from grating.
- D) Attach lifting harness to boat.

19' Zodiac

- Short slings go to shackles on transom
- Mid-length slings attach to D-rings amidships
- Long slings attach to next forward D-rings

16' Bayrunner

- Long line goes to bow
- Short lines go to stern corners

- E) Attach bow and stern (port side) tag lines.
- F) Put boat plugs in.
- G) Move trailer to davit area.
- H) With engine level, remove cowling and check oil. Vent fuel can, hook up fuel line and squeeze bulb pump. Hook up H₂O hose attachment 'ear muffs' to engine, turn H₂O on full force and start engine. On the Bayrunner, use the choke briefly if engine is cold. Let engine run for one minute to confirm function, then shut off.

2) Hoisting boat.

- A) Align boat on grating with bow facing north (toward the base of the pier). The blue marks on grating indicate trailer placement.
- B) Get 2 boathooks from boating cargo container.
- C) Power on *Boat Davit* breaker in main electrical room.
- D) Unlock and power on breaker at boat davit.
- E) Unlock pennant box. Remove pennant and turn power on.
- F) Remove boat davit guidelines from cleats.
- G) Bring lifting block up and swing over boat.
- H) Clip hook into harness. WEAR HARDHAT. DO NOT TOUCH CABLE.
- I) Raise hook enough to verify that harness is secure and cable is centered over boat. Davit cable should not be twisted. This is to ensure that the boat rises vertically off trailer. Double-check all connections.
- J) Undo and remove chain railing.
- K) Raise boat off trailer.
- L) Swing boat out over the water stern first, use davit guidelines, davit push bar, and boat tag lines to position boat safely away from pier. Bow should now be facing away south (seaward).

- 3) Lowering and releasing boat. CAUTION: This step has an increased likelihood of injury depending on sea conditions
 - A) Lower boat using boat tag lines, boathook, and davit guidelines to fend boat off pier.
 - B) As boat nears water, drop taglines to people on the landing below.
 - C) When the boat is in the water pass one or both of the taglines (now bow/stern lines) to the pier (do not tie off to pier).
 - D) Watch rise and fall of the swell, adjust slack in taglines accordingly. Do not leave vessel unattended.
 - E) Winch operator should keep tension in the cable until the boat operator is in the boat and ready to disconnect harness.
 - F) With boat operator in position at the stern, winch operator should slack off just enough to allow boat operator to release stern harness clips.
 - G) With both clips removed winch operator should take up slack as boat operator moves to the bow.
 - H) The boat operator should keep block from swinging by maintaining control of the stern harness lines.
 - I) Boat operator unclips the bow clip.
 - J) Leaving the harness attached to the hook, winch operator raises harness from the boat.
 - K) Raise hook and harness.
 - L) Secure davit guidelines so davit cannot swing.
 - M) Put chain railing back up.

- 4) Leaving the pier
 - A) With the boat attached to the pier load any additional persons and or equipment (use the boat davit for heavy equipment)
 - B) Following engine starting procedures start the engine and let idle for a couple minutes while loading
 - C) When not loading try to fend boat away from pier --- IMPORTANT: the boat operator's primary job at this point is to fend the boat away from the pier. Depending on tide and sea condition there is a possibility of flipping the boat by trapping the gunwales under a portion of the pier on a rising swell.
 - D) When all supplies and people are loaded, untie the boat from pier

- 5) Retrieving boat
 - A) Reverse steps in 3, 4 above to retrieve boat.
 - B) Important: After sling is connected, lift boat just clear of the water and confirm that all water drains from both pontoon gutters on the hull. It may be necessary to stand on the transom to tip the water out. The boat should rest in the sling with the bow slightly elevated.
 - C) If the bow is down and the water will not drain, lower a tag line from the pier deck, attach line to the bow eye, raise the boat several feet and secure tag line to cleat, then lower boat to just above the water. This procedure should tip the bow up and drain the water.

APPENDIX 4
OPERATOR RESPONSIBILITIES FOR NON-POWER VESSELS INCLUDING BUT NOT LIMITED TO KAYAKS, ROW BOATS, ETC.

The operator is responsible for the equipment and the safety of the persons on board and shall comply with all the rules and regulations appropriate for area of use.

A. Operators must have completed the California Boating and Waterways Course and provide a copy of the Certification of Completion to the Cal Poly Boating Safety Officer. Operators must be checked out by the Boating Safety Officer (BSO) prior to boating.

B. Before the trip, the operator will complete a Float Plan.

C. Personal Floatation Devices (PFD's) are to be worn at all times.

D. The operator will observe the following geographical constraints for non-power boat use.

1. Non-power boats shall be used within protected waters only.
 - Morro Bay Estuary to breakwater.
 - San Luis Obispo Bay, no more than 1 mile from the nearest shoreline. For reference, the Cal Poly pier is 0.6 miles long.
2. The Cal Poly Boating Safety Officer may grant permission for use of boats beyond geographical limits. Operators shall demonstrate the need for such use and knowledge of the coastline and problems which may be encountered in that area.

D. The non-powered vessel will carry all the required USCG required safety equipment (see below).

E. In the event of an accident, it is the operator's responsibility to notify the BSO as soon as possible and complete a Boating Accident Form, submitting it to the BSO within 24 hours.

G. The following safety gear will be carried aboard all non-power boats:

For the Boat:

- Oars or paddle(s).
- Deck mounted or hand held compass (with lanyard)
- 15' line for tie off
- Dry bag
- Drinking water
- First Aid kit
- Local Marine Chart (Fish-n-Map Co. available at Port Side Marine, Port San Luis or Virg's Sportfishin', Morro Bay)

For the Operator:

- One PFD for each person on board. These must be USCG approved Type III, correctly sized for each operator, and comfortable. PFD's designed specifically for paddling are recommended for kayaking.
- Hand held VHF radio (water proof design and/or in a water proof pouch)
note: training in use of radio required.
- Light sticks (3) or water proof flash light or strobe

- Knife
- Whistle or Horn (manual).
- Clothing needs to be appropriate for water contact - no cotton.
- Wet suit (surf suit) or paddle jacket and pants
- Hat/stocking cap
- Gloves
- Cell phone in water proof pouch (optional)
- Small anchor or sea anchor and line (optional)

H. The operator will comply with the following rules regarding weather.

1. Sources of information.
 - a. National Weather Service broadcasts (162.52 MHz)
 - b. U.S. Coast Guard, Harbormaster, local broadcasts, private weather services
2. When winds greater than 15 knots are predicted for the area of operation, extra caution in the form of frequent reevaluation of trip conditions shall be exercised. Trips shall be canceled due to weather if:
 - a. winds greater than 15 knots and wind chop greater than 2 feet are predicted for the area to be visited. Primary source of information will be Coast Guard and local broadcasts (such as the forecasts provided by PG&E meteorologist John Lindsey).
 - b. small craft advisories are posted for the area to be visited.
3. Beware of off-shore winds that make it difficult to return to shore. When paddling in a new area, check with the locals regarding currents, shoreline conditions and weather patterns. Plan an "escape" route - an alternative place to get off the water should environmental conditions dictate it.
4. The operator will return to shore if frequent whitecaps and wind chops greater than 2 feet are encountered during a passage. If such conditions develop while on station or if conditions rapidly deteriorate, work will cease and the operator will return to shore. If the return trip is unsafe, the operator should seek the closest safe anchorage or refuge.
5. In instances of fog, at least a half mile of visibility is required for operation. This is not only for the operator's ability to navigate and avoid obstacles, but for others to avoid you.

I. Kayaking Skills

1. Proper fit and donning of PFD. Wear your life jacket. Wearing your lifejacket will help keep your head above water and add insulation to your body, keeping you warmer in cold water.
2. Strokes: forward, reverse, low brace, high brace skull/draw

To find your hand placement on your paddle, start with your hands about shoulder width apart and centered. If you place the center of the paddle on the top of your head, your elbows should form slightly less than a 90 degree angle. There should be an equal amount of paddle shaft and blade beyond both of your hands.

Some paddles may have the blades offset, or feathered. A feathered paddle presents less surface area for the wind to catch. However, a special technique must be used to get both blades in the water. If the paddle is a right hand control, (when the right blade is held vertical, the left blade "scoop" is up) the right hand will stay tight and your left hand loose. To learn the process, hold the paddle tight in your right hand and

loose in your left. Using the right hand, rotate the paddle blade back and forth; it should slide through your left hand. Now take a stroke on your right, cock your right wrist back (left hand staying loose and somewhat open) and take a stroke on your left, and so forth. If using a left hand control paddle, reverse the process: the left hand stays tight and the right loose.

The basic paddle stroke is a forward power stroke. Place the paddle blade in the water near your toes. Pull the paddle blade back alongside the boat to approximately your hip. Lift the paddle blade and take a stroke on the other side.

If the paddle blade drifts out to the side in an arc, it will force the bow of the boat to swing away from the paddle blade. This is called a sweep stroke and is used to turn the boat.

3. Re-entering A Sit-On-Top kayak:

There are a variety of ways to get back on a sit on top kayaks. One process seems to be particularly easy for most people and is called Bellybutton, Backside, Feet or BBF.

It is not necessary to recover the oar immediately. First swim to boat. If the boat is upside down, it will need to be turned over. To do this, reach across the bottom of the boat and grab the scupper holes.

Bring your knees up and onto the bottom of the boat. Lean back and the boat will roll over.

Then, position yourself so your head is near the cockpit area of the boat and you are facing the boat. Let your feet float to the surface of the water by floating on your bellybutton.

Reach across the boat to the far edge and then swim up and onto the boat, so your bellybutton is across the centerline of the boat. (Your belly should be between the foot wells and the seat.)

Next, roll over onto your backside which should end up in the seat. Sit up, swing your feet into the foot wells and you're ready to go.

APPENDIX 5 MARINE VHF RADIO GUIDELINES

VHF

(Very High Frequency)

Marine Radios

An introduction to communications on the water

FCC Regulations

- Channel frequencies assigned by FCC
 - Over 90 – You have 4 or 5 to use.
- Radio call signs also assigned by FCC
- No operator license is required unless you have a base station on shore
- The operator by law, must be familiar with and adhere to the provisions of the Federal Communications Commission
 - FCC does monitor & have fined for misuse.
- Marine Radio is not Citizens Band (CB), Phrases such as "Hey Good Buddy," "I Copy," and "That's a Big 10-4" are illegal.
- Never use profanity or obscene language
- Always use FCC call signals (or vessel reg #) at the beginning and the end of all transmissions.
- Maintain radio watch on Channel 16, and use it only for emergency and hailing purposes.

VHF Requirements & Recommendations

At a minimum, you should:

- Choose the correct channel when calling
- Limit the preliminary call to 30 seconds
 - If there is no answer, wait 1 minute before repeating
- Limit ship to ship calls to 3 minutes & to ship's business
 - Radio checks are prohibited on Channel 16.
 - Use Channel 9 for radio checks & boat to boat comms
- Use low power (1 watt) whenever possible

Advantages of VHF

- USCG & most other boats have one
- Monitored 24/7
- Often better range than a cell phone
- Inexpensive
- Weather channels
- Does not require special permit

Limitations of VHF

- Line of sight - ~ 25 miles under best conditions
- Radio "holes"
- Not everybody has one
- Electronics & water not a good mix
- No "private" conversations
- Except with DSC

VHF Calling Procedures

- Choose the correct channel - Adjust squelch
 - 9 = Informal calls to another boat, radio check
 - 16 = "Hailing" frequency. Distress
 - 68, 69, 71, 72, 78 – Working channels
- Wait until nobody else is talking
- Push the 'Transmit' button, pause, speak
- Speak slowly & enunciate clearly
 - Yelling makes it worse

To call: (In less than 30 seconds)

- "<Name of boat you are calling>", Repeat 3 times
- "This is <Your boat name & call sign>" "Over"
- Pause, release 'Transmit' button & listen
- If no answer, wait 2 minutes, repeat
- Boat calling will answer with
- "<Your boat's name>"
- "This is <the other boat's name>"
- "Switch to <working channel>" "Over"
- End transmission with "This is <boat name> Out"

Distress & Safety Calls

Channel 16 – Wait for a break in traffic

- Imminent loss of life or vessel only
 - **"MAYDAY, MAYDAY, MAYDAY"**
 - Give as much information as possible quickly
 - Boat name, description, location, problem, # on board, action being taken
 - "Over"
 - Follow USCG instructions

Distress Calls

If you hear a Mayday call:

- If USCG answers –
 - Allow them to handle it. You may offer assistance to CG.
- If nobody answers
 - Acknowledge the call, record information
 - Pass info along to USCG or another boat
 - Provide assistance as required and is safe

Distress & Safety Calls

Channel 16 – Wait for a break in traffic

- Urgency signal -- Safety of person or vessel in jeopardy
- **"PAN PAN, PAN PAN, PAN PAN"**
- Safety signal – Concern for safety of navigation, meteorological info
- **"SECURITE, SECURITE, SECURITE"**

VHF Hints

- You can't hear when the "Transmit" button is pushed
- Pause before speaking
- Be clear & concise
- Everybody can hear what you say
- Know & use phonetic alphabet
- Know your call sign & vessel registration numbers
- **"Over and Out"**. "Over" means that you expect a reply. "Out" means you are finished and do not expect a reply.
- Read the owner's manual
- The VHF radio is safety equipment
- Think before speaking

Phonetic Alphabet

A	alpha	J	juliette	S	sierra
B	bravo	K	kilo	T	tango
C	charlie	L	lima	U	uniform
D	delta	M	mike	V	victor
E	echo	N	november	W	whiskey
F	foxtrot	O	oscar	X	xray
G	golf	P	papa	Y	yankee
H	hotel	Q	quebec	Z	zulu
I	india	R	romeo		

**APPENDIX 6
EMERGENCY CONTACT LIST**

Boat Descriptions:

- CP1 CF 9032 XS Aluminum hull Bayrunner, 16 foot, center console, 30 HP outboard
Capacity: 800 lbs, 4 people
- CP2 CF 9033 XS Aluminum hull, Munson, 21 foot, twin 70 HP outboards, center console
Capacity: 1200 lbs (6 people)
- CP3 CF 9252 XS Zodiac, 19 foot inflatable, 90 HP engine, tiller,
Capacity: 5000 lbs, (10 people)
- CP4 CF 1074 XS Whaler, 13 foot, 9.9 HP outboard, tiller
Capacity: 600 lbs, 3 people

VHF Marine Radio Channels

- Channel 16 Monitored by:
US Coast Guard Station Morro Bay
Port San Luis Harbor Patrol, also on Channel 12
Morro Bay Harbor Patrol

CCMS Phones

- Tom Moylan, Pier Facility Operations Manager
Campus Office (805) 756-0225
Cell (805) 440-9302
- Jason Felton, Pier Technician/Diving Safety Officer
Pier Phone (805) 595-2868
Cell (805) 441-9654
- CCMS Pier Facility (805) 595-2868
Location: 3725 Avila Beach Drive, Avila Beach CA

Harbor Departments

- Port San Luis Harbor Dist. office (805) 595-5400
Harbor Patrol (805) 595-5435
Emergency Cell (805) 458-7520
Morro Bay Harbor Patrol (805) 772-6254

Emergency Phone Numbers

Emergency Medical System (EMS)

911

- U.S. Coast Guard
USCG Long Beach Rescue Coordination Center (800) 221-8724
USGC Morro Bay (805) 772-2167 and
772-4620

Other San Luis Area Phone Numbers

Hospitals

French Hospital Medical Center 1911 Johnson Av SLO, CA	(805) 543-5353
Sierra Vista Regional Medical Center 1010 Murray Av, SLO, CA	(805) 546-7600

National Response Center

For oil and hazardous materials spill	(800) 424-8802
---------------------------------------	----------------

Marine Mammal Center

For injured or sick marine mammal	(415) 289 -SEAL 7325
-----------------------------------	-------------------------

Dept. Fish and Game

For reporting poaching/polluting	(888) DFG-CALTIP 334-2258
----------------------------------	------------------------------

Weather

Diablo Canyon – best local marine forecast	(805) 545-3768
National Weather Service/ Port San Luis	(805) 595-2841

Water Taxi - Port San Luis Boatyard You may hail the water taxi on VHF radio channel 12	(805) 595-7895
---	----------------

The following emergency numbers are for reference purposes only regarding a diving-related problem. No diving or snorkeling is allowed from CCMS vessels.

U.S. Coast Guard Rescue Coordination Center, Long Beach Emergency Only	1 (800) 221-8724
Emergency Frequency on VHF radio	Channel 16

Divers Alert Network Emergency number	(919) 684-4326
Non-emergency number	(919) 684-2948

**APPENDIX 7
BOATING ACCIDENT REPORT**

Date: _____ Time: _____

Name of person completing this form: _____ Phone #: _____

Signature: _____

Location of accident: _____

Weather conditions: _____

Name of boat: _____ CF#: _____

Point of entry: _____

Name of project _____

Vessel Operator: _____ Phone # _____

Names of crew: _____

Names & phone # of witness other than Cal Poly
personnel: _____

Was anyone injured? _____ Describe _____

Was there any property damage? _____ Describe _____

Please thoroughly describe the events of the incident (use additional sheets if needed):

BOAT OPERATOR APPLICATION & VERIFICATION

Boat Operator Contact Information:

Name:			
Phone:		Email:	
Address:			
	<i>Street</i>	<i>City</i>	<i>State</i> <i>Zip Code</i>

Emergency Contact Information:

Name:			
Phone:		Relationship:	
Address:			
	<i>Street</i>	<i>City</i>	<i>State</i> <i>Zip Code</i>

Anticipated Need: *You want to go where to do what on which boat?*

Prior Boating Experience:

Faculty Approval:

--	--	--

Name Signature

For Staff Only

Knowledge and Skills Proficiency

	<i>Operator has demonstrated:</i>	Date:
	Cal Boating & Waterways	
	Knowledge of working area	
	VHF Radio Use	
	Vessel outfitting and launching	
	Vessel operation & maneuvering	
	Vessel breakdown & stowage	

Qualification Levels:

Date:

Basic – Confined Water	
Nearshore < 2 nm	
Offshore > 2 nm	
Davit Launching	
Trailing	
14' Whaler	
16' Bayrunner	
19' Zodiac	
21' Munson	