University of Southern California Wrigley Institute for Environmental Studies

Boating Safety Manual

November 2019
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1.1 PURPOSE

The purpose of this manual is to facilitate safe boating under the auspices of the University of Southern California/Wrigley Institute for Environmental Studies (USC/WIES). These policies and procedures are set forth with an intention to promote research boating activities in a safe, prudent, efficient manner, and to familiarize participants with the basic procedures that affect their safety as well as the safety of their fellow users.

All personnel designated as USC/WIES small boat operators are required to observe the provisions of this manual.

1.2 CONTENTS

The Boating Safety Manual includes:

1. Policy and procedures that pertain to vessels engaged in scientific boating operations under the auspices of USC/WIES.
2. Requirements for obtaining and maintaining operator certification.
3. Administrative procedures for conducting the USC/WIES boating program.
4. Vessel equipment and maintenance procedures.
5. Regulations for compliance with applicable Federal and State laws and USC/WIES rules.

1.3 AUSPICES

The provisions of this manual apply whenever personnel are using a small boat for scientific or other purposes under USC/WIES auspices, whether or not the institution owns the boat.

Specific examples of boat operations under USC/WIES auspices include but are not limited to: persons engaged in research; employees acting within the scope of their employment; students engaged in any research operation including those receiving boat operation instruction or involved in boat
checkouts; and boat operations conducted during educational programs sponsored by USC/WIES.

For the purpose of this program, a small boat is **any vessel less than 26 feet in length** (United States Coast Guard (USCG) Class 1 or Smaller). In order to be approved for use by USC/WIES personnel, a small boat must be numbered in accordance with the regulations of the State of California or in accordance with applicable Federal Law or with a federally approved numbering system of another state.

Small boats used under USC/WIES auspices fall into five categories:

1. Boats owned and operated by USC/WIES.
2. Boats owned by individual USC programs.
3. Privately owned boats used for USC/WIES research.
4. Boats chartered by USC/WIES personnel for the purpose of conducting research, education or training.
5. Boats from visiting institutions or entities operating from the USC/WIES facility known as the Wrigley Marine Science Center (WMSC) for USC/WIES research.

Boat operations conducted in accordance with University policies from recreational or other university programs not under the auspices of USC/WIES are exempt from this manual. It is recommended that these programs have their own boating safety procedures and manuals.
SECTION 2

RESPONSIBILITY

2.1 DEAN, USC DORNSIFE COLLEGE OF LETTERS, ARTS AND SCIENCES

The Dean of the College has the ultimate authority for the small boat program and its related activities. The Dean is responsible for overseeing the administration of the program.

2.2 BOATING CONTROL BOARD

The USC Boating Control Board (BCB) is responsible for recommending changes to the Boating Safety Manual and general oversight of small boat operations at USC/WIES. This includes: reviews of accidents involving injury, loss of life, or damage to equipment, disciplinary action for unsafe practices, act as board of appeal, review Boating Safety Officer’s performance and program, and approval of exceptions to this manual.

The Boating Control Board will consist of:

1. Boating Safety Officer--- He/she has the ultimate responsibility for the boating program and its related activities.
2. WIES Director of Operations
3. The Marine Operations Manager (MOM)
4. USC/WIES Diving Safety Officer (DSO)
5. Board Members--- Board Members should consist of a majority of persons who are involved and knowledgeable with boating operations and WIES administration.

2.3 BOATING SAFETY OFFICER

The Boating Safety Officer (BSO) is responsible to the Dean and Boating Control Board for the conduct of the Boating Safety Program. Routine operational authority for the USC/WIES Boating Safety Program, including certification of operators, approval of boat request forms/float plans, maintenance of boats, and ensuring compliance with this manual by all operators under the auspices of USC/WIES rests with the BSO.
With approval from the BCB, the BSO may permit portions of this program to be carried out by a qualified delegate, although the BSO may not delegate responsibility for the safe conduct of the USC/WIES Boating Safety Program.

The BSO shall suspend boating operations that are considered unsafe. He or she will ensure that all boats are in compliance with USCG requirements, with respect to equipment and safety procedures.

The BSO is responsible for explaining procedures to be used by USC personnel who wish to charter a non-institutional boat. The procedures are to be consistent with USC/WIES and USCG guidelines. Boats operated by USC/WIES or other visiting personnel that are not owned by USC/WIES will be inspected not less than yearly with respect to safety equipment. The BSO or designee shall conduct these inspections.

2.4 PRINCIPAL INVESTIGATOR

Principal Investigators are personally responsible for assuring that all boat operations conducted at the WMSC which are part of a program under their direction are conducted in accordance with this manual. Principal Investigators who operate boats that are either owned by individual USC programs, privately owned, or USCG registered boats used for USC/WIES research purposes are required to meet the same safety standards as USC/WIES boats. All vessels must have on board the required safety equipment as outlined in the USC/WIES boating safety manual (see APPENDIX VII).

2.5 BOAT OPERATOR

Only authorized USC/WIES boat operators may operate small boats under USC/WIES auspices, whether or not the boat is owned by USC/WIES. Exceptions may be granted by the BSO for vessels operated by non-USC/WIES owner/operators.

In US waters, non-USC/WIES owner/operators must comply with USCG, State, and local regulations covering chartered vessels. In foreign waters, the responsible USC/WIES representative shall ensure the vessel meets the equipment requirements of this manual (see APPENDIX VII).

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:

1. Safety of the vessel and all persons on board.
2. The safe operation of all equipment, either handling of the vessel or in the collection of data.
3. Safe transport of the vessel to and from the launch site.
4. Ensuring that all required operational and safety equipment is on board before getting underway, and properly cleaned and stowed upon return (see APPENDIX VII).
5. Operators are responsible to cancel the trip if in their opinion weather conditions have become unsafe or the proper required equipment is not onboard.

Failure to comply with the provisions of this Boating Safety Manual may be cause for the revocation or restriction of the operator’s certification by the BSO or BCB. 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, major environmental damage, or damage to the vessel. A written report of such actions must be submitted within 24 hours to the BSO explaining the circumstances and justifications.
SECTION 3

ADMINISTRATIVE PROCEDURES

3.10 GENERAL

The regulations in this manual must be observed whenever small boat operations are carried out under the auspices of USC/WIES. All operators must follow the provisions of this manual and all equipment used must conform to USCG requirements.

All administrative procedures must be followed to the specifications of this manual and maintained in accordance by the BSO.

3.20 AUTHORIZATION OF BOAT OPERATORS

To become a USC/WIES authorized boat operator, one must demonstrate proficiency in safe boat operations, knowledge of the “Rules of the Road” and a familiarity with the operation of safety equipment. USC/WIES maintains two authorized levels of boat operators dependent upon each individual’s qualifications (See 3.21 OPERATOR LEVEL). All operators are required to:

1. Complete a National Association of State Boating Law Administrators (NASBLA) approved boating safety course and provide proof of documentation to the BSO.


3. Complete a shore-based Small Boat Orientation which covers filing of float plans, familiarization with boating procedures, as well as the locations and proper use of required boating equipment by the BSO or other approved USC/WIES personnel (See APPENDIX I).

4. Complete a Small Boat Operator Training which demonstrates proficiency in the safe operation of small boats through hands-on boat handling exercises while accompanied by the BSO or other approved USC/WIES personnel (See APPENDIX II).

3.21 OPERATOR LEVEL

Small boat operators are classified into two distinctions:

1. **Trainee**: Meets all the above listed requirements. **Trainees** are limited to USC/WIES designated “Small Vessels” which are from 11 to 21 feet in length tiller driven vessels which possess no greater than 50 horsepower motors. **Trainee boating**
activities shall all be conducted entirely within the Small Boat Boundary (SBB) (see APPENDIX III). Voyages outside the SBB must be approved by the BSO or other BSO appointed USC/WIES personnel on an as needed basis.

2. **Motorboat Operator**: In addition to the above listed requirements for *Trainee, Motorboat Operators* must complete one of the following:

   1. Maintain a USCG Operator of Uninspected Passenger Vessel (OUPV)/6-Pack Captain’s license or greater.
   3. Complete a SBSA MOTC at another SBSA approved institution and provide proof of completion to the USC/WIES BSO.
   4. Apply for an exemption to the above requirements to become a USC/WIES Motorboat Operator based off boating experience. Application and status shall be determined by the BSO. Applications will require completion of all *Trainee* requirements in addition to logged sea-time of at least 50 days on the water and description of boating experience.

*Motorboat Operators* are able to conduct boating activities in USC/WIES designated “Large Vessels” which are from 16 to 23 feet in length and possess 60 to 150 horsepower engines. Boating activities for *Motorboat Operators* may be conducted outside of the SBB, but are limited to the front/leeward side of Catalina Island and within 1 nautical mile from shore between the Western tip of the island to Seal Rocks on the Eastern end of the island. Voyages outside of this demarcated area must be approved by the BSO or other BSO appointed USC/WIES personnel on an as needed basis.

### 3.22 VISITING BOAT OPERATOR

Visiting boat operators must provide proof of practical experience in boat operations though either:

i. Verification of Training letter (VOT) from the home institutions Boating Safety Officer or equivalent, SBSA Motorboat Operators Training Course Certificate, or other equivalent information to be evaluated and approved by the USC/WIES BSO.

ii. Maintain a CA Boaters Card during all voyages on USC/WIES vessels.
iii. Complete applicable portions of the USC/WIES Small Boat Orientation (See APPENDIX I).
iv. Complete applicable portions of the USC/WIES Small Boat Operator Training (See APPENDIX II).

3.23 MAINTAINING AUTHORIZATION

Boat operators are required to maintain authorization by correctly following all USC/WIES Boating Safety Manual procedures and regulations while completing at least 5 voyages in a calendar year. Operators not reaching this quota will be required to review boating activities with the BSO or approved USC/WIES personnel prior to the continuation of boating activities. Practical training may be required at the discretion of the BSO or another approved designee.

3.24 REVOCATION OF AUTHORIZATION

A boat operators’ authorization may be revoked for any action deemed unsafe, unlawful or for not meeting the procedural requirements of USC/WIES. Revocation will be determined by the BSO.

3.26 REAUTHORIZATION

If a boat operator’s authorization is revoked, he/she may re-qualify after the operator complies with conditions the BSO may impose. The operator shall be given the opportunity to present his/her case to the BCB before conditions for re-authorization are stipulated.

3.30 BOAT RESERVATIONS

Boat Reservations will be approved by the BSO on a first come, first serve basis. The BSO reserves the right to modify any boating reservation. All boat reservations must be received at least 24 hours prior to date of the scheduled voyage. Same day requests may or may not be approved on an as available basis.

3.40 FLOAT PLAN – (SEE APPENDIX IV)

All boat operators conducting boat operations under the auspices of USC/WIES are required to file a Float Plan with the BSO or delegate prior to departure. All Float Plans must be filled out in their entirety in order to comply with the USC Boating Manual.

Float Plans will be used as an invoice for billing purposes, (see APPENDIX IV), as well as documentation of sea-time.
Float Plans must be closed out upon termination of boating activities; failure to fulfill these requirements may result in disciplinary action by the BSO or BCB.

Failure to completely fill out the time information on the Float Plan upon termination of boating activities may result in the operator being charged a Full Day vessel use fee.

### 3.50 RECORD KEEPING

#### 3.51 ROUTINE RECORDS

The BSO or designee shall keep a file for use of all boats, including a log of scheduled and unscheduled maintenance for each boat.

#### 3.52 BILLING (SEE APPENDIX V)

The BSO or designee shall be responsible for collecting Float Plans for billing purposes on a no less than monthly basis.

#### 3.53 ANNUAL REPORT

The BSO shall be responsible for the annual statistics report of boat use to be submitted to the BCB and SBSA.

#### 3.54 ACCIDENT REPORTING— (SEE APPENDIX VI)

All accidents and incidents involving boats must be reported to the Boating Safety Officer within 24 hours.

**Accidents vs. Incidents Defined**

**Incidents** are defined as events that result in minor injuries (cuts and scrapes) or “cosmetic” damage to vessels (dents and scratches that don’t affect the operations of the vessel). Incidents also include “close calls” in which a situation occurred that could have led to an accident.

**Accidents** are defined as events in which serious injury requiring medical attention beyond basic first aid, or serious damage to property estimated at a value of over $200 occurred.

The BSO shall review all accidents and incidents and will circulate a report concerning all accidents to the BCB, MOM, WIES Director and USC Environmental Health and Safety.

Accident reports shall be held by BSO for five years.
Any accident causing loss of life, loss of the vessel, damage over $2,000, or requiring medical treatment beyond first aid must be reported to the USCG.

**Reporting Resources and Guidelines:**

1. Any accident or incident must be reported on the USC/WIES Boating Accident Report Form, (see *APPENDIX VI*).

2. Any accident resulting in a serious injury or damage to property must be reported to:

   **Boating Safety Officer:** Office (310)---510---4022, Cell (213)---447-5396, toudin@usc.edu
   
   **USCG Sector Los Angeles:** (310)---521---3815
   
   **USC Environmental Health and Safety:** (323)--- 442---2200
SECTION 4

OPERATIONAL PROCEDURES

4.10 BOATS AND EQUIPMENT

All boats and equipment used by USC/WIES authorized operators in U.S. waters, regardless of ownership, will, at a minimum, conform to USCG, state, and local standards set forth in this manual.

All boats operated outside of USCG jurisdiction shall at a minimum comply with USCG regulations in addition to any applicable local requirements and to the set of standards set forth in this manual.

4.11 VESSEL DISTINCTION

The USC/WIES vessels are separated into two groups for designated use. These consist of:

**Small Boats:** Tiller driven vessels under 21 ft. of length and maximum of 50 horsepower that are restricted to use inside of the Small Boat Boundary (SBB) unless prior approval of the Float Plan has granted by the BSO or USC/WIES designated personnel to exit the SBB.

**Large Boats:** Center console driven vessels from 16 to 23 ft. in length (or any other vessel approved by the BSO) and up to 150 horsepower that are permitted to exit the SBB including waters surrounding Santa Catalina Island within one nautical mile from shore. Prior approval of Float Plans by the BSO or USC/WIES designated personnel is required before exiting the SBB.

4.12 STABILITY

All motorboats used by USC/WIES approved personnel shall follow the number of passengers allowed and weight capacity allowed as designated on the additional information reference page posted (see *APPENDIX VII*) by the BSO near the vessel sign---out area. It is the responsibility of the operator to stay within the limits and to have all weight distributed so that the boat will trim properly.

4.13 SAFETY EQUIPMENT--- (SEE *APPENDIX VII*)

The operator shall be familiar in the use and function of all equipment and shall inspect all emergency equipment prior to departure. The
operator shall notify the BSO in the event that any equipment was damaged or malfunctioned during operation.

All required safety equipment will be introduced and a demonstration of function explained during the Small Boat Orientation by the BSO or approved USC/WIES personnel (see APPENDIX I).

USCG approved Personal Float Devices must be worn at all times by each person participating in trips conducted on vessels operating under USC/WIES auspices; unless the person is currently wearing thermal protective flotation wear such as: Wetsuits, Drysuits, Float Coats, etc.

4.20 EMERGENCY PROCEDURES

Emergencies on board a vessel are unforeseen in nature and can be life-threatening, thus it is the responsibility of every lead operator to ensure that all crew know what actions are needed in order to react to emergencies at sea. All crew must be briefed with emergency procedures so that they are comfortable enough to effectively receive help or remove the vessel from a dangerous situation.

At the first indication of trouble or developing emergency, always call for assistance. Assistance can be from the nearest US Coast Guard Station, local authorities, another vessel or shore support by VHF radio, cell phone or voice. All persons on board should don PFDs if not already being worn.

4.21 FOUL WEATHER

The BSO or other authorized USC/WIES personnel shall suspend all boating activities when the National Weather Service forecasts marine forecasts reach Gale Force level. Marine forecasts for Small Craft Advisories shall be determined by the BSO whether or not conditions are safe enough to allow boating activities to continue.

In the event that wind or waves start to build to dangerous levels or are forecast to become hazardous, the operator in charge shall:

1. Have all passengers don life jackets.
2. Cancel all research activities, suspend voyage and begin travel back to port.
3. Call for help if you foresee losing control of the vessel.
4. If the engine fails, immediately deploy anchor or any other object that can create drag and make fast to the bow in order to hold the bow into to the waves and avoid broaching.
5. In the event that travel back to the homeport is not possible due to weather conditions, locate the nearest safe harbor, head for that location, secure the vessel and stay there until weather subsides or help arrives.
4.22 CAPSIZE

Most capsized small boats will still float even with the outboard motor(s) attached. In case of vessel capsizing:

1. Don life jackets
2. Call for help
3. Stay with the boat. It is easier to be seen by rescue personnel than if separated from the boat and the vessel also provides flotation.
4. Right the boat if possible. Get in and bail it out or use paddles and/or hands to get closer to shore and safety.

4.23 FIRE

Fire is one of the most dangerous situations on board a vessel. In case of fire:

1. Call for help.
2. Throw burning materials overboard if possible.
3. Slow the boat to idle and change heading to keep fire and smoke downwind.
4. Don life jackets ASAP.
5. Turn off electricity if fire is deemed electrical.
6. Shut off fuel supply, close all hatches, doors, ports and ventilators that will confine fire to the smallest place and reduce its oxygen supply. Only open doors if fire extinguisher is ready to trigger and point, discharge fixed system if available. Direct hand fire extinguisher at base of flames and sweep side to side.
7. Jettison any materials likely to catch fire in order to reduce potential further fuel for fire.
8. Use buckets of water only on burning wood, fiberglass or other non-petroleum based materials; never use water on fuel, oil or grease or electrical fires.

4.24 SUBMERGED OBJECT STRUCK

If the boat operator strikes a submerged object it is important to take the following steps to keep the vessel from sinking:

1. Stop the engines instantly, drift and/or set anchor.
2. Inspect vessel throughout for incoming water.
3. If vessel is taking on water immediately hail USCG on VHF Ch. 16.
4. Determine the source of incoming water and take steps to stem water flow by either closing valves, clogging hole(s) with objects on hand or any other means to keep vessel afloat.
5. Engage manual bilge pump, hand pump, or hand bail with buckets.
If there is no serious leak, or it is under control, slowly try to get underway to nearest harbor with haul---out facilities.

### 4.25 GROUNDED

If the vessel were to become grounded:

1. Stop the engine.
2. Check tide, bottom composition, direction and proximity to deep water.
3. Determine what part of boat is aground and whether there are any leaks. If leaking, refer to section 4.24 SUBMERGED OBJECT STRUCK.
4. To refloat a small boat, do not start the engine, try shifting weight in the boat and pushing off with oars.
5. The anchor can be used to pull vessel to deeper water if it can be set out in deeper water.
6. If all steps fail standby for the next incoming tide to float vessel.

### 4.26 ABANDONING SHIP

Before abandoning ship due to fire, swamping, capsizing or another emergency:

1. Call for help and give your location.
2. Don life jackets, immersion suits or other thermal protection (wet or dry suits) if available.
3. Use any available signaling devices to attract the attention of potential help that is seen, whether it is, flares, sound making devices, mirrors or waving of hands.
4. Retain any potential lifesaving equipment and place in dry bag if possible.
5. Stay with the vessel if it is still afloat and remain in one group.

### 4.27 SINKING

If the vessel is taking on water that bilge pumps, hand pumps, or hand bailing cannot keep up with:

1. Call for help by hailing the closest authorities. Lifeguard boats, harbor patrol or US Coast Guard vessels usually carry portable engine driven high-volume pumps to keep vessels afloat.
2. Make way toward the nearest accessible land or docking location in order to prevent vessel from sinking.
3. Most small boats usually maintain enough buoyancy within the hull so that they will not sink completely.
4.30 NON--EMERGENCY ASSISTANCE

In any instance in which a vessel is disabled and there is no immediate threat to life or safety of the vessel and deemed “non--emergency”, attempt to make contact for assistance in the order listed below:

1. BSO or USC/WIES Waterfront Personnel (VHF Channel 9 or 16) or Phone (310) 510--4024, BSO Cell (213) 447-5396
2. Two Harbors Harbor Patrol (VHF Channel 9)
3. Boat U.S. Vessel Assist (VHF Channel 16, card and account information located inside Boat Box)
4. Baywatch Isthmus (VHF Channel 16)
5. US Coast Guard (VHF Channel 16)

4.40 COMMUNICATION

Small boat operators must communicate with the BSO or other USC/WIES authorized personnel at an agreed upon frequency during their voyage. To initiate any changes to the approved Float Plan the BSO or designee must be notified by either VHF radio or cell phone and changes confirmed. If the boat operator is unable to notify the BSO or designee of change, the float plan must be adhered to. Failure to follow procedures may be the cause for suspension or revocation of operator’s authorization.

4.50 WEATHER

Prior to all boating activities the vessel operator must review the National Weather Service’s (http://www.weather.gov) marine forecast for the period of the proposed trip. Use of any boat is always contingent upon weather conditions, SEE 4.21 FOUL WEATHER. When the NWS forecasts for Gale Force Winds are issued for the waters of the proposed trip, operations shall be postponed until conditions become more favorable or special permission to operate has been granted by the BSO. Small craft advisories shall be reviewed by the BSO to determine whether or not boating activities may continue on a case--by---case basis.

4.60 SCUBA DIVING

Any persons diving from USC/WIES boats are required to adhere to any and all provisions of the USC Diving Safety Manual. The DSO must approve all dives conducted under the auspices of USC. The designated lead diver will be in charge of all dive operations. See Diving Safety Manual for requirements on boat diving operations.
4.70 TRAILERING

The trailering of vessels shall be conducted solely by USC/WIES staff or personnel approved to conduct such activities by the BSO.

4.80 SPECIAL OPERATION

Special operations such as night operations, equipment deployment, live boating, operations in foreign waters or other activities not described in this manual shall be reviewed and conducted only with the consent of the BSO.
APPENDIX I

USC/WIES Small Boat Orientation

Vessel Sign-out Area:

☐ **Sign-out Board** - Quick glance information to see:
  - Which boats are available
  - Who has which vessel
  - Where they are boating
  - Number of individuals participating
  - Date, time of departure, and estimated return time
  - General Notes- Notes from BSO, future boat requests, weather updates, etc.

☐ **Float Plans**
  - Operator fills out float plan
  - Operator’s affiliation (USC, CSU, etc.), Status (Faculty, Undergrad, etc.)
  - Vessel- (Explain which boats can be used per “Operator Level”)
  - Date of request (For future trips, also place note on Sign-out board)
  - Date of Trip
  - Cell Phone #- (Explain cell coverage)
  - Radio- (Location and Use to be shown next)
  - Destination or route (A to B to C)
  - Departure time (When filling out float plan)
  - Estimated time of return (Don’t underestimate time, realistic return times)
  - Actual time of return (Close float plan and erase Sign-out board)
  - Times provided above are used for billing purposes
  - Purpose of trip (Circle all applicable, Define- Undergrads=Instruction/Diving=SCUBA, etc.)
  - Crew- (All additional participants: Affiliation/Status/Boat Checkout/Diving?)

☐ **Read Statement** and explain
  - Fuel (Make sure there is enough)
  - Weather (Check NWS online before boating)
  - Required equipment (See list on additional info page)
  - Participants signed USC liability waiver (Location of Waivers)
  - Operator signature and date (Agreeing to rules/terms)

☐ **Approval by waterfront staff for trips conducted outside SBB** (See Map- Appendix I) and nighttime boating activities

☐ **Additional Information Reference Page**- FAQs info

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**Required Equipment:**

☐ **Radio Location** - Show location of charger station (Return DRY!!!)
  - Turn on radio to make sure it is charged and take outside to explain use
  - On/Off, Volume, Squelch
  - Channel 16- Hailing and Distress (Coast Guard, Baywatch)
• Channels 9/12- (Two Harbors & Avalon Harbor Departments)
• WX
• Lock Mechanism (Explain what the key symbol means)
• Laminated card of channels (Located under lid in Boat Box)
• Keep radio Off if not being used to save battery for emergency

Use:
• Hailing vs. Emergencies on Channel 16
• Emergency: Mayday-Mayday-Mayday, this is Boat Name, I am Located________, state nature of emergency, wait for instructions from Coast Guard or Baywatch
• Hail on 16, then switch to a working channel (69)
• Listen before using (No stepping on others communication)
• Repeat 3x
• Release key after speaking
• Line of sight for use
• Setting up a relay

☐ Equipment Shed- Show location and contents
  • PFDs (Type I if wearing thermal protective floatation “wetsuit”, Type V “vest” if working without thermal protective wear)
  • Type IV (Minimum of 1 per vessel)
  • Other equipment- Bilge pumps, dive flags, ladders

☐ Boat Box- Locations and contents
  • Flares (How to use)
  • Fire Extinguisher (How to use)
  • Storm Whistle (Example or not….)
  • First Aid Kit (Call for help if serious injury, return to WMSC)
  • Radio slot (Where to keep radio when not in use, return to charger when finished!!!)
  • Documents under lid (Vessel registration, emergency info card, BoatUS Vessel Assist account info)

☐ Extras- Anchor and rode, dock lines, paddle (located in boat), Fuel!!!

☐ Fuel Shed- Show location and explain how to swap tanks


Print Name:____________________________________________________________

Signature:_________________________________________ Date:____________________
APPENDIX II
USC/WIES Small Boat Operator Training

Dock:

Marlinspike Seamanship
- Boating Terminology- Review (Bow, Stern, Fore, Aft, Port, Starboard, Gunwale, Transom, Freeboard, Draft, Tiller, Throttle, etc.)
- Lines- Anchor, bow, stern
- Knots- Cleat hitch, bowline
- Weight capacity and distribution (Demonstrate)

Dock skiff
- Never leaves cove (Only out for a few minutes)
- Used to get out to other vessels
- Always wear PFD
- How to secure (Loops)
- Intro to tilt/engine start
- Retrieve small boat (Waterfront Staff)
- How to tow back to dock
- Explain how to return back to moored position (No-mans land)

Boat:

Fuel
- Fuel- Check quantity
- Check connections
- Show fuel filter (Explain fluids)
- Prime fuel line using vacuum bulb
- Air vent (Explain)

Motor
- Tilt Switch
- Kill Switch in place (Wear on wrist)
- Shifter (Neutral to start, won’t start in Forward or Reverse)
- Start Motor (Electric start button vs. pull start)
- Stop Motor (Kill switch vs. key switch)
- Throttle- Always use left hand (Explain)
- Steering- Counterintuitive (Explain)

Other Equipment- (Check to make sure its present)
- Bilge pump
- Paddle
- Anchor
- Diving related gear (Dive Flag, O2, Dive Ladder, etc.)

Safety Concerns
- Docking (Slow vs. Fast approach)
- Traffic
- Divers, Swimmers, Meaning of the Dive Flag
- Conditions
On water Training:

☐ Getting Underway
- Load vessel (Check for all required equipment and load evenly)
- Engine on (Never untied w/o engine on)
- Area clear to maneuver
- Conditions check (Reading wind, untie using wind to help rather than hurt)
- Communicate with deckhands
- Line handling (Don’t throw lines)
- Proceed away from dock
- Get comfortable with boat operations in open water

☐ Boat Handling Circuit
- Serpentine mooring (Steering control)
- Pickup regular mooring (Bow out, Stopping on location)
- Docking (Pulling up to and pulling away)
- Mooring (Pickup and pull away)
- PFD overboard (MOB simulation)
- Anchoring (Drop, Set, Scope, Raise)

☐ Discussion Topics
- Kelp and Lines (How to untangle prop)
- Waves (Such as Boat Wakes- approach head on)
- Traffic (Steer clear)
- Weather (Normal prevailing conditions)
- Stay off rail/gunwale while underway (CA law)
- No full throttle
- 5 mph zones (Inside mooring fields)
- Emergency procedures (Get EMS started)

Print Name: ________________________________________________________
Signature: __________________________ Date: ________________________
APPENDIX III SMALL BOAT BOUNDARY MAP

Red Zone = USC/WMSC Small Boat Boundary

Yellow Zone = No Anchoring Zone of Blue Cavern SMCA
APPENDIX IV FLOT PLAN

Small Boat Request - Float Plan – Manifest
University of Southern California - Wrigley Marine Science Center

Complete this form for each day (Multiple out & back in one day with the same participants is one trip.)

Please print clearly

Operator: ___________________________ Affiliation: Faculty Staff Grad Undergrad Other
Vessel: ___________________________ Date of request: __________ Date of trip: __________
Cell Phone Number: ___________________________ Radio: ___________________________
Destination/Route: __________________________________________________________________
Departure Time 1: __________ Estimated Time of Return 1: __________ Actual Time of Return 1: __________
Departure Time 2: __________ Estimated Time of Return 2: __________ Actual Time of Return 2: __________

Purpose of trip: (circle all applicable)
Research Collecting Diving Instruction Training Other: __________

Vessel Checkout/Diving Crew (Last, First): Affiliation Status (circle one) (Y/N) (Y/N)

Faculty Staff Grad Undergrad Other /
Faculty Staff Grad Undergrad Other /
Faculty Staff Grad Undergrad Other /
Faculty Staff Grad Undergrad Other /
Faculty Staff Grad Undergrad Other /
Faculty Staff Grad Undergrad Other /
Faculty Staff Grad Undergrad Other /
Faculty Staff Grad Undergrad Other /

In signing this form I agree to have correctly followed all Federal, State and USC/WMSC rules and protocols including, but not limited to; Ensuring there is sufficient fuel, Observing the weather forecast, Obtaining all required equipment, Ensuring all participants have signed the USC “Release of Liability” Form, Cleaning any mess made and de-watering boat, and Receiving approval from the waterfront staff for trips conducted outside the Small Boat Boundary or trips during nighttime hours. Furthermore, I accept all fees for small boat use based on the hours I provided above.

Operator Signature: ___________________________ Date: __________

Trips beyond the Small Boat Boundary or operating at night require waterfront staff approval.

Approval: ___________________________ Date: __________

Waterfront Staff
APPENDIX V USC RATE SHEET

USC Wrigley Marine Science Center
Rates for USC and Non-Profit Groups

For more information about our facility and offerings, please visit: wrigley.usc.edu
All accommodations are subject to availability. Rates subject to change without notice.

<table>
<thead>
<tr>
<th>HOUSING:</th>
<th>Daily</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Residence Hall, Dorm</td>
<td>$58</td>
<td></td>
</tr>
<tr>
<td>Residence Hall, 1 BR Apartment</td>
<td>$85</td>
<td></td>
</tr>
<tr>
<td>Residence Hall, 2 BR Apartment</td>
<td>$125</td>
<td></td>
</tr>
<tr>
<td>Peregrine and Cortney Dorm Cottage (301, 303)</td>
<td>$68</td>
<td></td>
</tr>
<tr>
<td>Rose Hills and Aoun Cottage, Boone (305, 307)</td>
<td>$210</td>
<td></td>
</tr>
<tr>
<td>Gold Apartment / Residence Hall (101–105)</td>
<td>$95</td>
<td></td>
</tr>
<tr>
<td>Boone Center, 1 BR Boone Center</td>
<td>$160</td>
<td></td>
</tr>
<tr>
<td>Boone Center, 2 BR Boone Center</td>
<td>$210</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MEALS:</th>
<th>Daily</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakfast</td>
<td>$8</td>
<td></td>
</tr>
<tr>
<td>Lunch</td>
<td>$10</td>
<td></td>
</tr>
<tr>
<td>Dinner</td>
<td>$15</td>
<td></td>
</tr>
<tr>
<td>Appetizers</td>
<td>$10</td>
<td></td>
</tr>
<tr>
<td>Coffee Breaks — $5 per person</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ADDITIONAL SERVICES:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff Time</td>
<td>$50 per hour</td>
<td></td>
</tr>
<tr>
<td>Private Tour ($50 for up to 10 people, $5.00 per person for each additional person)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCMI facility support – Crane use</td>
<td>$154.50 per hour</td>
<td></td>
</tr>
<tr>
<td>SCMI facility support – Forklift use</td>
<td>$51.50 per hour</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STAND ALONE FEES:</th>
<th>Daily</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Day Trip Fee</td>
<td>$5</td>
<td></td>
</tr>
<tr>
<td>Snorkel / Wetsuit / Kayak Fee</td>
<td>$15</td>
<td></td>
</tr>
<tr>
<td>Scuba Fee (LOR Required)</td>
<td>$12</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LAB SPACE:</th>
<th>Half Day</th>
<th>Full Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cubicle</td>
<td>–</td>
<td>$20</td>
</tr>
<tr>
<td>Large Teaching Lab</td>
<td>$100</td>
<td>$185</td>
</tr>
<tr>
<td>Small Teaching Lab</td>
<td>$80</td>
<td>$145</td>
</tr>
<tr>
<td>Outdoor Education Center</td>
<td>–</td>
<td>$25</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LECTURE SPACE:</th>
<th>Half Day</th>
<th>Full Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture Hall, 88 people</td>
<td>$95</td>
<td>$185</td>
</tr>
<tr>
<td>Library, 24 people</td>
<td>$50</td>
<td>$100</td>
</tr>
<tr>
<td>Computer Lab, 14 people</td>
<td>$30</td>
<td>$50</td>
</tr>
<tr>
<td>Conference Room, 10 people</td>
<td>$15</td>
<td>$25</td>
</tr>
<tr>
<td>Amphitheatre</td>
<td>–</td>
<td>$50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VEHICLES:</th>
<th>Hourly</th>
<th>Half Day</th>
<th>Full Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Van, 10 people</td>
<td>$18</td>
<td>$45</td>
<td>$85</td>
</tr>
<tr>
<td>EV, up to 4 people</td>
<td>$10</td>
<td>$21</td>
<td>$42</td>
</tr>
<tr>
<td>(staff driver $50 per hour)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BOATS:</th>
<th>Hourly</th>
<th>Half Day</th>
<th>Full Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Boat (12’–15’)</td>
<td>$12</td>
<td>$32</td>
<td>$58</td>
</tr>
<tr>
<td>Large Boat (17’–21’)</td>
<td>$20</td>
<td>$58</td>
<td>$105</td>
</tr>
<tr>
<td>Vibrio (25’)</td>
<td>$175</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>(staff boat captain $50 per hour)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TRANSPORTATION:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Miss Christi Crossing Charter</td>
<td>$750 each way</td>
<td>(limited to availability)</td>
</tr>
</tbody>
</table>

Exceptions / Circumstances
1. All reservations are subject to an 8% administrative fee.
2. USC Dornsife-funded groups will not be charged instructional staff time, lecture space, or administrative fees.
3. Stays of five nights or more will receive a 15% discount on housing and lecture/conference spaces.
   For stays exceeding two weeks, a 20% housing discount will be applied.

To reserve space for your group, please contact Karen Erickson at klericks@usc.edu or (310) 510-4016.
For more information on Conference Groups, please contact Katie Chvostal at chvostal@usc.edu or (310) 510-4015.

Updated 2019-01-15
BOATING ACCIDENT REPORT FORM

(To be returned to BSO Trevor Oudin, toudin@usc.edu)

Date of Accident: ____________________________________________________________

Your Name: _________________________________________________________________

How can we contact you? ____________________________________________________

Vessel: ____________________________________________________________________

Location of Accident: _______________________________________________________

The USC Wrigley Institute for Environmental Studies is very interested in the well-being of all
boat operators using USC vessels. Please inform us of any malfunction, difficulty, scary situation,
incident or accident that occurred while conducting boating activities under USC auspices. Please,
in detail, describe the incident to the best of your knowledge. Don’t be afraid to let us know if
something was broken or you think it may have been broken as this will help to ensure the safety
of our marine operations and improve our service.

Please provide detail of the Accident here:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
APPENDIX VII SAFETY EQUIPMENT

All USC motorboats operating under the auspices of USC shall carry at least the following equipment:

- **Type I, II, III or V Personal Floatation Device** for each person on board.
- **Type IV Throw able Personal Floatation Device**—1 per vessel.

**LOCATED INSIDE BOAT BOX:**
- **Signal Flares**—At least 3 day/night pyrotechnic flares.
- **Fire Extinguisher(s)**—will meet or exceed those required by law.
- **Audible Signaling Device**—Horn, Storm Whistle, Bell, etc.
- **Registration** or documentation for vessel.
- **Vessel Assist Account Card**—Located under lid.
- **Emergency Contact Information Card**—Located under lid.

- **VHF Radio**—At least one per vessel.
- **Paddle**—At least 1 per vessel.
- **Anchor and Rode**—To be kept attached to each vessel.
- **Hand Bilge Pump**—At least 1 per vessel.
- **First Aid Kit**—At least 1 per vessel.
- **Dock lines**—To be kept attached to each vessel.

**Additional Equipment for Diving:**

- **Dive Flag**—At least 1 per vessel.
- **Oxygen Kit**—If required by USC Diving Safety Officer.
- **Ladder**—or other means to re-enter vessel.

**Suggested additional equipment as appropriate for vessel and operations:**

- **Cell Phone**
- **Water**
- **Extra Food Rations**
- **Emergency Repair Kit and Tools**
- **GPS**
- **Compass**
- **EPIRB**
- **Running Lights**
- **Boat Hook**
- **Spare Fuel or Oil if needed**
- **Spare Parts including prop, nut, etc.**
APPENDIX VIII ADDITIONAL INFORMATION
REFERENCE PAGE

Small boat limits: (including operator)

<table>
<thead>
<tr>
<th>Vessel</th>
<th>Dive gear</th>
<th>No dive gear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loper</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Torpedo</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Triakis</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Chromis</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Navanax</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Nautilus</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Cetacea*</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Mercury*</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Beagle*</td>
<td>4</td>
<td>6</td>
</tr>
</tbody>
</table>

Required Equipment

1 PFD for each person aboard
1 throwable PFD (ring or cushion)

Boat Box Containing:
- Flares kit *
- Fire Extinguisher *
- First Aid Kit *
- Storm Whistle *
- Vessel Registration *
- Emergency Information card *
- VHF Radio (cabinet in dive office)
- Anchor and Rode
- Paddle

Additional Equipment for Diving
- Dive Flag
- Oxygen kit (if leaving small boat area)
- Means to re----enter boat (ladder)

Limits are for good weather/protected waters.
Reduce load in high wind/waves
Use common sense, don’t overload!

USC/WMSC boats are permitted shoreward of a line drawn from Lions Head to Bird Rock (including adjacent reef) to Blue Cavern Point. Trips outside this area require BSO approval.

USC/WIES Small Boat Boundary