

# UC GUMP STATION'S SMALL BOAT OPERATION MANUAL



UC Enterprise Dive and Boat Safety Program  
Version Jan 2024

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## SECTION 1.00 OVERVIEW

### Gump Station, Moorea

This Small Boat Operation Manual applies to all boating operations out of the Gump Station, regardless of their program affiliation or home institution. This includes any personnel operating Gump Station boats, MCR associated boats, and all “other” boats operated out of the station. This policy also applies to any person who is using any Gump waterfront infrastructure including docks, moorings, tag lines, and/or boats.

#### Accessibility of boats:

Each vessel at the Gump Station is under the direction of the Launch Lead, and its home institution’s boating policies.

The following are additional policies and procedures to the ones outlined in sections 1-5 of the UCSB Small Boating Operation Manual. The information, including all forms, waivers, and appendices can be found online at the Gump Waterfront website.

## SECTION 2.00 RESPONSIBILITY

### 2.10 SMALL BOAT COMMITTEE

#### Duties and Responsibilities

1. Review small boat procedures at least once a year, and at any other times as required by complaints or operational problems or changes in the operating conditions.
2. Grant permission for boat use to individuals under the provisions of Section II. This group may also pass judgment on requests for waiver of requirements in Section II, and approve such requests if the person has had equivalent experience.
3. Be notified of all new authorizations for boat use and any changes made to the boating regulations.

### 2.20 LAUNCH LEAD

The Waterfront Safety Manager and Marine Mechanic will serve as Launch Lead, and hereby be referred to as such. The Launch Lead will be in control of day-to-day operations originating at the Gump Research Station.

#### Duties and Responsibilities

1. Evaluate prospective boat operators as specified in Section II and maintain records of the training.
2. Have the authority to cancel trips if he/she deems conditions are unsafe.
3. Have the authority to suspend, until reviewed by the Small Boat Committee, boat use privileges of individuals who disregard these regulations or if the Launch Lead otherwise strongly suspects an individual of unsafe boating practices.
4. Oversee scheduled inspection of safety equipment and maintain records.
5. Oversee scheduled maintenance inspections of the vessels and maintain records (Section 5.80).
6. Have the authority to authorize boat use beyond the designated geographical constraints with the approval of the Small Boat Committee.

### 2.30 BOATING SAFETY OFFICER

The Boating Safety Officer (BSO) serves as a member of the Small Boat Committee.

#### Duties and Responsibilities:

1. Reports to Small Boat Committee or designee, for the conduct of the boating program. The BSO is the operational authority for this program and may permit portions of this program to be carried out by a qualified delegate(s).
2. Shall have the ability to suspend boating operations considered to be unsafe or unwise.

## **2.40 DEPARTMENT, PRINCIPAL INVESTIGATORS, and ADMINISTRATIVE OFFICERS**

Responsibilities of the departments, principal investigators and administrative officers operating small boats are the following:

1. Develop and maintain procedures for the safe operation of all small boats under their jurisdiction.
2. Establish procedures to assure proper qualification of small boat operators as described in section 3.10 of this manual.
3. Ensure compliance with all departmental procedures, and procedures in this manual, for small boat operators.
4. Provide secure storage for all small boats sufficient to prevent their unauthorized use.
5. Forward all accident reports to the Small Boats Operations Committee.

## **2.50 BOAT OPERATOR**

1. Only authorized Gump boat operators may operate small boats under Gump auspices, whether or not the boat is owned by the Gump station. Exceptions may be granted by the Small Boat Operation Committee for vessels run by non-UCSB owner/operators.
2. The following metrics should be used when designating a boat operator:
  - a. Experience and history within the Boating Safety Program.
  - b. Familiarity with the boat, related equipment, project and boating environment.
  - c. Communication skills of the candidate (Operator to Crew, BSO and Launch Lead).
  - d. A history of demonstrating good judgement.
  - e. Boating experience and appropriate training as determined by the Launch Lead
3. The designated boat operator is responsible for all aspects of boating operations, regardless of any senior personnel present on 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 Launch Lead.
4. Failure to comply with provisions of the Small Boat Operations 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 should provide emergency assistance that can be safely provided to any individual in danger at sea, as required by USCG.

## **SECTION 3.00**

### **BOAT OPERATOR AUTHORIZATION AND RESPONSIBILITIES**

#### **3.10 AUTHORIZATION OF BOAT OPERATORS**

Only authorized Gump boat operators may operate small boats under Gump auspices, whether or not the boat is owned by the Gump station.

An authorized boat operator shall complete the following:

1. Boating safety course from the Coast Guard Auxiliary, Power Squadron, California Department of Boating and Waterways, Department of Interior's Motorboat Operator

- Certification Course (MOCC) or equivalent, or approved international equivalent. Proof of completion (boater card, etc.) should be carried onboard when operating a boat.
2. Provide documentation of, and/or acquire, practical experience in operating a boat.
  3. Demonstrate proficiency in the safe operation of the proposed type of boat in local conditions.
  4. Demonstrate proficiency, to the BSO or Launch Lead, in the operation of any specialty equipment and procedures specific to the boat.
  5. Have current training in CPR and First Aid (strongly recommended)

The Small Boat Committee will be notified of all new boat use authorizations and any changes made to the boating regulations.

### **3.20 TRAILERING**

To be qualified to tow a boat and trailer, the operator should demonstrate to the Launch Lead the proper procedures for towing the boat and trailer over the road, if applicable, as well as launching and retrieving the boat from the trailer to the water.

### **3.30 ZONES OF OPERATION**

Boat operators should demonstrate to the Launch Lead proficiency in the safe operation of the proposed type of boat, in each of the following zones:

- a. Within the lagoon on the north shore
- b. Within the lagoon around all of Moorea
- c. Outside of the barrier reef (the fore reef) on the north shore
- d. Outside of the barrier reef (the fore reef) around all of Moorea

#### **Lagoon Authorization**

The following are minimum operator qualifications for boat lagoon use:

1. Demonstrated knowledge of local regulations, site orientation, and aids to navigation.
2. At a minimum, demonstrate to the Launch Lead proficiency in the safe operation of the proposed type of boat:
  - a. Prepare the boat for use.
  - b. Safely drive and back a vehicle which is trailering a boat, if trailering is required.
  - c. Launch and retrieve the boat, operate the boat effectively in local conditions (in close quarters, choppy seas, coral bommies, through designated lagoon boat channels and other conditions determined by the Launch Lead)
  - d. Proficient use of support equipment: compass, communication device (cell phone, radio), GPS, emergency gear, and other support equipment
  - e. Anchoring the boat
  - f. Perform other minor safety-related maintenance on the type of vessel that is to be used, as determined by the Launch Lead.
  - g. Demonstrate how to tow another boat, if required.
  - h. Demonstrate proficiency in the operation of any specialty equipment and procedures specific to the boat.
  - i. Demonstrate an understanding of basic boat traffic regulations.
  - j. Possesses knowledge of the local weather conditions that warrant canceling or aborting a boat trip.
3. Conduct a minimum of a guided site orientation and four trips as primary operator, while under the direct supervision of an approved boat operator.

#### **Fore Reef Authorization**

To operate outside the barrier reef, additional checkouts and authorization will be required.

1. Be authorized by the Launch Lead for use of the larger boats intended primarily for the fore reef.
2. Operator should have been proficient in past Gump boat operations.
3. Demonstrate to the Launch Lead proficiency in the safe operation of the proposed type of boat:
  - a. Prepare the boat for use.

- b. Safely drive and back a vehicle which is trailering a boat, if trailering is required.
  - c. Launch and retrieve the boat, operate the boat effectively in local conditions (in close quarters, choppy seas, through designated passes associated with the authorization area, familiarity with the coastline of Moorea, and other conditions determined by the Launch Lead)
  - d. Proficient use of support equipment: compass, communication device (cell phone, radio), GPS, emergency gear and other support equipment
  - e. Anchoring or mooring the boat. Inspecting the tag line to ensure the tag line and mooring are secure and do not show signs of wear, if applicable.
  - f. Perform other minor safety-related maintenance on the type of vessel that is to be used, as determined by the Launch Lead.
  - g. Demonstrate how to tow another boat, if required.
  - h. Demonstrate proficiency in the operation of any specialty equipment and procedures specific to the boat.
  - i. Demonstrate an understanding of basic boat traffic regulations.
  - j. Possesses knowledge of the local weather conditions that warrant canceling or aborting a boat trip.
  - k. Possess familiarity with safe anchorages near the authorization area.
  - l. Can secure and handle the boat for rough seas.
4. Must have completed a minimum of a guided site orientation and four trips as primary operator, while under the direct supervision of an approved boat operator.

### **3.40 SOLO BOATING**

A minimum of two people should be on board for all trips. The Launch Lead may grant an exception to give permission for solo boating. Granting of exceptions may be restricted or denied due to one or more factors including weather, staffing, or resource availability. Previous exceptions do not guarantee the granting of exceptions in the future. Those wishing to gain a solo boating exception must submit a written request to the Launch Lead (See Appendix 6).

An authorized solo boater must:

- 1. Whenever possible, seek to have a minimum of two people on board, including other researchers or a Launch Lead.
- 2. Complete a site assessment for all areas of planned operation, with another crew member or with a Launch Lead, before they begin solo boating in these areas.
- 3. Submit a daily Float Plan to the Launch Lead, which includes their route, equipment they are using, communication device they are bringing, and weather forecasts for the day.
- 4. Establish a communications schedule for checking in with both their shore contact and the Launch Lead at additional points throughout their outing.

Additional safety equipment requirements for solo boaters include:

- 1. A PFD must be worn at all times while the boat is underway.
- 2. A waterproof phone case must be worn on the operator's person while boat is underway. If the operator falls off the boat or if the shore contact needs to reach the operator, the phone should be easily accessible.
- 3. The vessel kill switch lanyard must be worn if available.

All requests for an exception to permit solo boating should include information on:

- 1. The logistical reason for the request
- 2. All areas of planned operation
- 3. A brief description of the research activities to be conducted, and
- 4. Any additional safety precautions that will be taken to minimize risk
- 5. The request should be project-based, but does need to be confirmed with the Launch Lead for each day's operations. The project's principal investigator must acknowledge and approve the request.

**Standing exceptions** will be granted for vessel maintenance and inspections while operating in the immediate vicinity of the station, for fueling operations, and for transits between the dock and station moorings. The requirement for PFD and kill switch use, and communications are still applicable. A shore contact and expected return time must be established for **ALL** operations.

## **SECTION 4.00 ADMINISTRATIVE PROCEDURES AND RECORD KEEPING**

### **4.10 FLOAT PLAN**

All boat operators conducting boat operations under the auspices of Gump shall file a float plan with a responsible party (shore contact person) prior to departure. The float plan shall include the passenger manifest, destination and time of return, shore contact, equipment check and the latest weather forecast for the area(s) to be visited.

### **4.20 MAINTENANCE OF RECORDS**

1. Operator records to be kept shall include training, time underway, location, vessel and any other pertinent information.
2. Other records kept shall include an up-to-date record of vessel activity, engine time and maintenance/ repairs for the vessel and for its trailer if applicable.
3. Records shall be maintained for a period deemed appropriate by the Launch Lead.

### **4.30 ACCIDENT AND INCIDENT REPORTING**

1. All accidents must be reported to the Launch Lead and Boating Safety Officer within 24 hours of the incident.
2. Any accident causing the loss of the vessel, damage over \$2,000, requiring medical treatment beyond first aid, or loss of life should be reported to the US Coast Guard and applicable local regulators.
3. The Small Boat Committee shall investigate and document the accident as described in 2 above and related personal injury and/or property damage and prepare a report as outlined by the USCG.
4. Accident reports shall be held for 5 years.

## **SECTION 5.00 OPERATIONAL PROCEDURES**

All boats and equipment used by Gump authorized operators in and outside of US Coast Guard jurisdiction shall at minimum conform to US Coast Guard regulations, in addition to any applicable local requirements and to the standards set forth in this manual.

### **5.10 EQUIPMENT**

The operator is responsible for the equipment and the safety of all persons on board and shall comply with all rules and regulations set forth by this manual.

1. The operator shall be proficient with the operation of the equipment and shall inspect all emergency equipment prior to departure.
2. The operator and/or crew member shall notify the Launch Lead of any malfunctioning equipment.
3. The nature of specific operations may require vessels and boating equipment to meet higher standards as determined by the Launch Lead and/or the Small Boat Committee.

The following safety gear will be carried aboard all power boats:

1. All vessel operators are required to wear, or have attached to their person, an emergency cut-off switch and lanyard, i.e. "kill switch"



2. Proof of completion of a boating safety course (California Boater Card, or approved international equivalent)
3. A US Coast Guard approved Type I, II, or III PFD for each person on board
4. Boats 16ft or larger: An immediately accessible Type IV throwable PFD
5. An Oar
6. A boat box containing:
  - a. a sound producing device (i.e. air horn, whistle)
  - b. a visual distress signaling device (i.e. signaling mirror, flares)
  - c. a compass
7. A cellular phone, or other communication device, containing Emergency Contact numbers
8. A Trauma Kit containing standard first aid kit materials, as well as hemostatic gel impregnated gauze and a tourniquet.
9. An International "Alpha" or Diver-Down dive flag, if SCUBA diving or snorkeling operations are to be conducted from the boat

The following additional safety gear must be carried on board all boats if operating outside of the North Shore lagoons between Opunohu Bay and Ava Iti. This includes the fore reef and all other lagoons.

1. GPS unit
2. Oxygen kit if SCUBA diving

#### **5.20 STABILITY**

The operator shall observe the posted maximum boat load limits set by the Launch Lead (See Appendix 3). No person may operate a vessel loaded in a way that would jeopardize the safety of the operator or crew.

#### **5.30 SPECIAL OPERATIONS**

The Launch Lead shall establish guidelines for special operations, such as; scuba diving, trawls, live boating, night operations, equipment deployment, etc.

#### **5.40 SAFETY CHECKS**

Prior to departure the boat operator shall:

1. Perform a functional inspection of the boat, trailer and equipment, including communications.
2. Assess all environmental conditions- weather, water conditions, etc.
3. Complete a float plan on the Gump Boat App or equivalent hardcopy (See Appendix 5). This itinerary should be communicated to and easily accessed by the responsible shore contact. Additionally, users may also fill in the required information on the Boat Whiteboard located outside the Gump cylinder room.
4. Establish a shore contact and verify that the shore contact is aware of all procedures to be followed and persons to contact if the boat fails to return at the designated time.
5. Give all new crew on board a briefing including, at a minimum, emergency procedures, location of PFDs, fire extinguishers, person overboard procedures, and methods of seeking assistance.

All crew on board a vessel should know how to start the engine and have a basic understanding of how to maneuver the vessel; recall snorkelers and scuba divers, if applicable; and how to use communication devices to communicate with the shore contact.

During boat use:

1. The boat operator shall observe the following geographical constraints during boat use:
  - a. The Gump boats will fall into two categories: smaller boats intended primarily for use within the lagoon; and larger boats, intended primarily for the fore reef (See Appendix 3).
  - b. No boat shall be operated more than 2 miles offshore of the barrier reef.
  - c. The Launch Lead may grant permission for use of boats beyond geographical limits.
2. It is the boat operator's responsibility to notify a shore contact person of launch plans, return time, and any changes that occur during transit or to the plan.

3. The lead diver or operator shall inspect the anchor to ensure it is secure, unless the anchor is beyond the diver's authorized depth. When attaching the boat to a mooring line, the lead diver or operator shall inspect the attachment of the tag line to the mooring, to ensure it is secure. The lead diver or operator shall also inspect the mooring cable to look for signs of excessive wear.
4. Recreational activities (e.g., surfing, water skiing, etc.) from boats are prohibited at all times. Violators will be suspended from all boating activities until a review by the Small Boat Committee.
5. Crew on vessels is limited to those approved by the Launch Lead and the Small Boat Committee.

After returning:

1. Upon return, the operator will check-in on the Gump Boat App (or equivalent hard copy), erase their information from the Boat Whiteboard, and contact their shore contact.
2. Notify the Launch Lead of any problems with the boat or equipment that occurred during the cruise.

#### **5.50 SHORE CONTACT DUTIES**

The designated shore contact shall comply with the following duties:

1. Record the vessel float plan before departure
2. Stay on shore and within cell service at all times during operation. The shore contact may be transferred to a different person if:
  - a. the Gump Boat App shore contact information is updated;
  - b. the operator is notified; and
  - c. the new shore contact is provided with all vessel float plan information.
3. If the shore contact is notified that the vessel is delayed, or plans are changed, the shore contact must update the Gump Boat App and the Boat Whiteboard with the new ETA.
4. If the vessel has not returned by the vessel's planned return time:
  - a. The shore contact must attempt to contact the vessel within 15 minutes of the original ETA. If it is the end of the day, the shore contact must notify the Launch Lead immediately.
  - b. Within 30 minutes past the planned time of return: the shore contact must notify the Launch Lead. If the shore contact is unable to contact the Launch Lead, they should notify Emergencies at Sea: 16 or +689 40 54 16 16)

#### **5.60 WEATHER**

The operator shall comply with the following rules regarding weather:

##### **Wind**

Boating for that day shall be canceled if the wind speed or seas are at a hazardous state and/or:

1. Sustained winds >20 knots (Small Craft Advisories), frequent whitecaps with spray, and/or a 1m wind chop are apparent at the launching or sample site, then discuss with Launch Lead and reevaluate trip conditions.
2. If the Launch Lead determines that the conditions are potentially dangerous.

If the wind or wave conditions worsen to a dangerous state while away from the station, the boat should be returned to the station or the nearest safe harbor as soon as it is safe to do so.

##### **Thunderstorms**

All thunderstorms produce lightning, and lightning strikes can be catastrophic to boaters and divers. If a thunderstorm is forecasted for the area of operation, the guidelines are as follows:

1. Sources of information: [Meteo France French Polynesia](#)
  - a. Yellow: Boating is not recommended
  - b. Orange: Boating is not permitted
  - c. Red: Boating is not permitted

2. If a vessel is already underway and thunderstorm conditions arise nearby, the operator should head to port or seek the closest safe shelter.
3. If a boat has a cabin, all crew members should wear a PFD, stay inside, and avoid touching metal or electrical devices.
4. If a boat does not have a cabin, all crew members should wear a PFD, and stay as low as possible in the boat.

#### **5.70 HOURS OF OPERATION**

Vessel use is restricted to daylight hours unless pre-approved by the Launch Lead.

1. For North Shore lagoons between Opunohu Bay and Ava Iti: Boats must return 30 minutes before sunset or earlier.
2. For all other locations, including the fore reef and all other lagoons: Boats must return 60 minutes before sunset or earlier. (approximately 16:30 in June-August and 17:30 in January-February)
3. Return times will be posted on the Boat Whiteboard. Return times will be strictly enforced and there will be no 30-minute grace period at the end of the day.

#### **5.80 MAINTENANCE**

In addition to regular boat and engine maintenance, the Marine Mechanic, or their designate, will perform and log checks of the following on all boats when the boat is removed from the water; before a boat is placed in the water; and every two weeks during periods of high use.

1. Boat:
  - a. General Appearance
  - b. Battery
  - c. Start
  - d. Trim
  - e. Cables: Gear Shift, Throttle, and Steering
  - f. Engine Oil
  - g. Fuel Filter
  - h. Propeller
  - i. Impeller
  - j. Anchor, Anchor Chains, Lines, and Connections
  - k. Inspect Hull for Damage
  - l. Scuppers
2. Trailer:
  - a. General Condition
  - b. Tire Pressure
  - c. Bearings
  - d. Shock Absorbers
  - e. Bow Strap and Safety Chains

The Launch Lead, or their designate, will perform and log checks of the following safety equipment at a minimum of once each month.

- a. PFDs
- b. Fire Extinguishers
- c. Engine Cut-Off Switches and Lanyards
- d. Check that the boat box and safety kits contain what they should and that their contents are operational
- e. Check that the oxygen kit is operational: oxygen cylinders are full and all components are operational and dry.

# **Gump Diving & Boating Safety Information**

**Diving & Boating Safety Phone: 87 71 71 09 / 00-1-805-450-3680**

## **Contacts**

### Gump Station Contacts:

**Guillaume Iwankow, Waterfront Safety:** 87 71 71 09  
**Tony Yousing, Marine Mechanic:** 89 72 92 33  
**Gump Station's Reception:** 40 56 13 74

### Additional Dive & Boat Safety Contacts:

**Jim Hayward, Gump:** 00-1-805-450-3680  
**Andy Brooks, UCSB:** 00-1-805-570-3453  
**Eric Hessel, UCSB:** 00-1-805-451-5099  
**Carly Haack, UCSB:** 00-1-805-451-9067  
**Mike Anghera, UCLA:** 00-1-805-698-1004

### Station's Location:

UC Berkeley Gump Station, PK -11.5(CCW), Moorea

Emergency! *Urgence!*    Ambulance: *Ambulance*  
Help! *Au secours!*      Police: *Gendarme*  
Fire! *Au feu!*              Firefighter: *Pompier*

### Medical

**Local EMS/ Ambulance:** Dial 15  
**Emergency at Sea:** Dial 16 or 40 54 16 16  
**Police:** Dial 17 or 40 55 25 05  
**Fire:** Dial 18

**Hospital in Afareaitu, Moorea:** 40 55 22 22  
Emergency Room: 40 55 22 26  
**Hospital in Papeete, Tahiti:** 40 48 62 62

### Hyperbaric Chamber in Papeete

**Taaone Hospital:** 40 42 01 01  
Emergency: 40 48 59 06  
**Divers Alert Network Emergency Hotline:**  
00-1-919-684-9111

## **Do you have a Dive & Boat Safety Question? Is something not working?**

Contact the Waterfront staff right away by scanning the QR code:



## **Procedures**

- 1. Rescue victim and/or position so the proper procedures may be initiated.**
- 2. Establish (A)irway, (B)reathing and (C)irculation as required.**
- 3. Administer 100% oxygen, if appropriate or suspected DCI.**
- 4. Activate the local EMS for transport to the nearest appropriate medical facility.**  
*Insurance/ Chamber/ Hospital Info:*  
-If you are a UC employee (i.e. on payroll), contact your workers' compensation unit.  
-If you are not a UCSB employee (i.e. student/intern), then provide your own medical insurance card.
- 5. Contact if further evaluation or possible evacuation is necessary:**  
-Divers Alert Network: Emergency 00-1-919-684-9111 / Non-Emergency 00-1-919-684-2948
- 6. Contact Diving & Boating Safety Officer and patient's Emergency Contact Person**  
-Gump Diving & Boating Safety Officer: 00-1-805-450-3680
- 7. Within 24hrs submit a Workers' Comp Incident Report Form to your University**

# Diving First Aid

Diving & Boating Safety Phone: 87 71 71 09 / 00-1-805-450-3680

## CPR

- **Assess the scene**
- **Check responsiveness: “Are you okay?”**
- **Alert EMS: Call 911**
- **Control any severe bleeding with direct pressure**

**A-B-C** sequence is recommended for potential drowning scenarios

**C-A-B** or **Compression-Only CPR** are recommended for non-drowning scenarios

### 1. LOOK FOR SIGNS OF CIRCULATION:

Look, listen, feel (5-10 seconds).  
If the victim is not breathing, perform the following:

### 2. AIRWAY:

Head tilt, chin lift

### 3. BREATHING:

Quickly look in the mouth for airway obstruction. Give 2 normal breaths until the chest rises.  
Clear airway if necessary.

### 4. COMPRESSION:

Provide 30 compressions, and then 2 breaths.

**Continue to repeat until there are signs of movement/ EMS arrives.**

### 5. AED:

Deliver 1 shock as prompted by the AED.  
Immediately follow with CPR.

**CPR: 30 Compressions/ 2 Breaths**  
(100-120 compressions per minute/  
beat of Stayin’ Alive)

## DIVING ACCIDENT MANAGEMENT

1. Rescue victim and perform primary assessment
2. Alert local EMS as detailed in dive plan
3. CPR and/or administer First Aid including 100% oxygen
4. Secure victim’s dive computer and scuba equipment
5. Contact Diving & Boating Safety phone
6. Submit accident report

### Phone Numbers

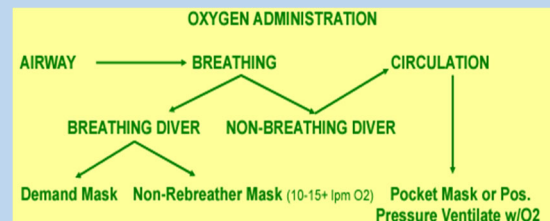
Gump’s Waterfront Safety Manager, Guillaume Iwankow:

87 71 71 09

Gump’s Diving & Boating Safety Officer, Jim Hayward:  
00-1-805-450-3680

DAN Emergency Hotline: 00-1-919-684-9111

Non-Emergency/ Info-Only: 00-1-919-684-2948



## FIELD NEURO EXAM

**Perform if you suspect patient is experiencing DCI symptoms.**

1. **Orientation:** name, location, day/month/year, and recent activity?
2. **Eyes:** number of fingers held up, eye movement, peripheral vision, and pupil size
3. **Face:** sensation – check while patient’s eyes are closed, smile, clench jaw, clear and correct speech
4. **Hearing:** hearing equal on both sides, and normal for the diver
5. **Swallow:** watch the Adam’s apple
6. **Shoulders:** shrug resistance
7. **Arms and Hands:** sensation, grip strength, push strength/ resistance
8. **Legs:** balance check, leg strength, and resistance
9. **Additional Things to Note**

**Repeat Assessment as Directed By EMS**

APPENDIX 2 SUMMARY OF FEDERAL EQUIPMENT REQUIREMENTS FOR GUMP BOATS

Equipment	U.S. Federal Motorboat Requirements as of 2022	Vessel Length (in feet)			
		<16	16<26	26<40	40<65
<b>Certificate of Number (State Registration)</b>	All undocumented vessels equipped with propulsion machinery must be state registered. Certificate of Number must be on board when the vessel is in use. Note that some states require all vessels to be registered.	X	X	X	X
<b>State Numbering</b>	(a) Plain block letters/numbers, not less than 3 inches in height, must be affixed on each side of the forward half of the vessel, in a contrasting color to the background, and read from left to right.	X	X	X	X
	(b) State validation sticker(s) must be affixed within 6 inches of the registration number. Note: check with your local boating agency for specific state requirements.	X	X	X	X
<b>Personal Flotation Devices (PFD)</b>	(a) One Type I, II, III, or V* wearable life jacket for each person on board. Must be U.S. Coast Guard-approved.	X	X	X	X
	*If using a Type V, it must be worn at all times and used for the activity specified on the label. (b) In addition, must carry one Type IV throwable device.		X	X	X
<b>Visual Distress Signals (VDS)</b>	(a) One electric distress light, or three combination day/night red flares. Note: only required to be carried on board when the vessel is operating between sunset and sunrise.	X			
	(b) Three combination day/night red flares – hand-held, meteor, or parachute-type or one orange distress flag, or one electric distress light, or three hand-held or floating orange smoke signals and one electric distress light.		X	X	X
<b>Fire Extinguishers</b>	If your boat is less than 26' feet in length, uses an outboard engine, fuel is in a portable fuel tank, and there are no areas within the boat where fuel vapors can be trapped, the boat is not required to have a fire extinguisher.				
	(a) One 5-B or One 10-B. Note: fixed system equals one 5-B or one 10-B.	X	X		
	(b) Two 5-B, or two 10-B, or one 20-B. Note: fixed system equals one 5-B or one 10-B.			X	
	(c) Three 5-B, or three 10-B, or one 20-B and one 5-B or one 10-B. Note: fixed system equals one 5-B or one 10-B. *B-I and B-II extinguishers are acceptable if boat model is 1953-2017, and extinguisher is <12 years old.				X
<b>Engine Cut-Off Switch</b>	Required to be worn anytime the motorboat is operating on plane or greater than displacement speed. Vessels whose main helms are inside an enclosed cabin are exempt.	X	X		
<b>Sound Producing Devices</b>	(a) A vessel of less than 39.4 feet (12 meters) must, at a minimum, have some means of making an efficient sound signal – i.e. handheld air horn or athletic whistle. A human voice/sound is not acceptable.	X	X	X	X
	(b) A vessel 39.4 feet (12 meters) or greater, must have a sound-signaling appliance capable of producing an efficient sound signal, audible for 1/2 mile, with a 4- to 6-second duration.			X	X
<b>Navigational Lights</b>	Required to be displayed from sunset to sunrise and in areas of restricted visibility.	X	X	X	X

APPENDIX 3 BOAT LOAD LIMITS

Boats Available at Gump Station						
	3.89	5.09	6.09	6.59	Safe Boat	Ninamu
<b>Manufacturer</b>	Stabicraft	Stabicraft	Stabicraft	Stabicraft	Stabicraft	Marinalu
<b>Length (m)/(ft)</b>	3.89 / 13	5.09 / 17	6.09 / 19	6.59 / 22	7.2 / 24	7.8 / 26
<b>Number of engine(s)</b>	1	1	1	1	1	2
<b>Number of fuel tank</b>	1	1	2	2	1	1
<b>On-board fuel volume (L)</b>	20	20	90	90	180	180
<b>Engine power (Horse Power)</b>	30	40	150	150	250	2x150
<b>Lagoon</b>	x	x	x	x	x	x
<b>Limited Fore Reef*</b>		x				
<b>Fore Reef</b>			x	x	x	x
<b>Max Number of Persons** (snorkeling)</b>	4	6	8	8	6	13
<b>Max Number of Divers** (using 1 tank)</b>	2	3	5	5	4	8
<b>Max Number of Divers** (using 2 tanks)</b>	2	3	4	4	3	6

\*Limited Fore Reef: The 5.09 may operate in LTER Zones 2, 3, and 5 only if it is on a mooring, a Launch Lead is present at the station (cannot just be on call), and the weather is good (waves <1m or 3ft; and winds < 15 km/h or 9 mi/hr). If diving in the fore reef from the 5.09, someone must remain topside on the boat.

\*\*The operator must be counted towards the Max Number of Persons/ Divers

The Launch Lead may grant permission for use of small boats outside the barrier reef depending on weather, sea conditions and skill level of the operator.

Gump boat users must be checked out to operate in each of the following zones:

- Within the lagoon on the north shore
- Within the lagoon around all of Moorea
- Outside of the barrier reef (the fore reef) on the north shore
- Outside of the barrier reef (the fore reef) around all of Moorea

## APPENDIX 4 WATERFRONT SAFETY GUIDANCE

### WATER SAFETY

1. BE SURE THE BOAT IS IN GOOD CONDITION AND HAS ENOUGH FUEL AND OIL
2. LEARN AND OBSERVE NAVIGATION RULES
3. WEAR THE KILL SWITCH. CAST OFF AND LEAVE GUMP'S DOCK SLOWLY AND SAFELY.
4. PAY ATTENTION TO NAVIGATIONAL AIDS: CHANNEL MARKERS, BUOYS *ETC.*
5. MAINTAIN SAFE SPEED TO AVOID COLLISIONS
6. KEEP A SHARP LOOK OUT AND NEVER MAKE SUDDEN OR DANGEROUS MOVES
7. LEARN HOW TO DEAL WITH WAVES IN ORDER TO AVOID CAPSIZES
8. REPORT ANY ACCIDENT OR INCIDENT TO WSM\*
9. RESPECT ENVIRONMENT, NAVIGATE SLOWLY THROUGH CORALS. IF NEEDED DRIVE IN REVERSE
10. SLOW DOWN AS YOU APPROACH GUMP AND BEFORE DOCKING. TURN OFF & RAISE ENGINES

### PERSONAL SAFETY

1. MAKE SURE THE WEATHER IS APPROPRIATE FOR YOUR WORK AND TRAVEL
2. ALWAYS CHECK-IN & OUT FOR EACH TRIP
3. ALWAYS BRING FIRST AID & EMERGENCY KITS AND LIFE JACKETS
4. ALWAYS HAVE A CELL PHONE TO ASK FOR HELP ON SHORE IF NEEDED
5. WEAR SUN PROTECTION (SUNGLASSES, HATS, SUN SHIRTS...)
6. WEAR A WET SUIT TO AVOID SUN BURNS & COLD DUE TO LONG WATER IMMERSION
7. USE CORAL FRIENDLY SUNSCREEN AND STAY HYDRATED
8. AVOID SOLO FIELDWORK AS MUCH AS POSSIBLE. ASK WSM\* IF YOU NEED ANY HELP
9. IF YOU HAVE ANY QUESTIONS OR WORRIES, ASK WATERFRONT SAFETY MANAGER
10. FOLLOW YOUR PLAN. IF IT IS NOT POSSIBLE CALL SHORE CONTACT OR/AND WSM\*

\*WSM : Waterfront Safety Manager



APPENDIX 5 FLOAT PLAN

<b>Operator First &amp; Last Name:</b>		<b>Boat Name:</b>	
<b>Crew Last Names:</b>			
<b>Location:</b>			
<b>Check-Out Date &amp; Time:</b>		<b>Expected Return Time:</b>	
<b>Check Weather Forecast</b>	<b>Check Fuel</b>		<b>Check Engine Oil</b>
Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	
<b>Safety Equipment:</b>			
Life Jackets <input type="checkbox"/> (one per person)	Emergency Cut-Off Switch and Lanyard <input type="checkbox"/>		Boat Phone <input type="checkbox"/>
Throwable PFD <input type="checkbox"/>	Trauma Kit <input type="checkbox"/>		Oar <input type="checkbox"/>
Whistle/ Horn <input type="checkbox"/>	Signaling Mirror/ Flares <input type="checkbox"/>		Compass <input type="checkbox"/>
GPS <input type="checkbox"/>	Dive Flag <input type="checkbox"/>		Oxygen <input type="checkbox"/>
<b>Operator</b>	<b>Boat Phone</b>	<b>Shore Contact</b>	<b>Shore Contact Phone</b>
<b>Operator First &amp; Last Name:</b>		<b>Boat Name:</b>	
<b>Crew Last Names:</b>			
<b>Location:</b>			
<b>Check-Out Date &amp; Time:</b>		<b>Expected Return Time:</b>	
<b>Check Weather Forecast</b>	<b>Check Fuel</b>		<b>Check Engine Oil</b>
Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	
<b>Safety Equipment:</b>			
Life Jackets <input type="checkbox"/> (one per person)	Emergency Cut-Off Switch and Lanyard <input type="checkbox"/>		Boat Phone <input type="checkbox"/>
Throwable PFD <input type="checkbox"/>	Trauma Kit <input type="checkbox"/>		Oar <input type="checkbox"/>
Whistle/ Horn <input type="checkbox"/>	Signaling Mirror/ Flares <input type="checkbox"/>		Compass <input type="checkbox"/>
GPS <input type="checkbox"/>	Dive Flag <input type="checkbox"/>		Oxygen <input type="checkbox"/>
<b>Operator</b>	<b>Boat Phone</b>	<b>Shore Contact</b>	<b>Shore Contact Phone</b>

APPENDIX 6 SOLO BOATING EXCEPTION FORM (page 1 of 2)

A minimum of two people must be on board for all boating activities, unless the Launch Lead grants an exception. Those wishing to gain a solo boating exception must submit the following to the Launch Lead:

<b>Project Title:</b>		<b>Operator's Name:</b>	
<b>Project start/ end date:</b>		<b>Principal Investigator:</b>	
<b>Project Description:</b>			
<b>Describe the Work Planned Onboard and In Water:</b>			
<b>Operator</b>	<b>Cell</b>	<b>Affiliation</b>	<b>Emergency Contact Cell</b>
<p><b>Operator Responsibilities:</b>                  The operator must send both the shore contact and the Launch Lead the float plan prior to each boat trip. If the vessel is delayed, or plans are changed, the operator must immediately notify both the shore contact and the Launch Lead.</p> <p><b>Shore Contact Responsibilities:</b>                  If the shore contact is notified that the vessel is delayed, or plans are changed, the shore contact must contact the Launch Lead, as well as update the Gump Boat App and the Boat Whiteboard with the new ETA.</p> <p>If the vessel has not returned by the planned return time:</p> <ul style="list-style-type: none"> <li>• The shore contact must attempt to contact the vessel within 15 minutes of the original ETA. If the vessel cannot be reached, they must notify the Launch Lead immediately.</li> <li>• Within 30 minutes past the planned time of return: the shore contact must notify the Launch Lead. If the shore contact is unable to contact the Launch Lead, they should notify Emergencies at Sea: 16 or +689 40 54 16 16)</li> </ul>			
<b>Project Site(s) and Launch Location(s). Attach map.</b>			
<b>Vessels Used:</b>		<b>Do you need to trailer a boat?</b>	
		Yes <input type="checkbox"/> No <input type="checkbox"/>	
<b>Safety Equipment:</b>			
*Must be worn at all times during solo boat operation			
<b>Life Jacket * <input type="checkbox"/></b>	<b>Emergency Cut-Off Switch and Lanyard * <input type="checkbox"/></b>	<b>Communication Device with Waterproof Case * <input type="checkbox"/></b>	
<b>Throwable PFD <input type="checkbox"/></b>	<b>Trauma Kit <input type="checkbox"/></b>	<b>Oar <input type="checkbox"/></b>	
<b>Whistle/ Horn <input type="checkbox"/></b>	<b>Signaling Mirror/ Flares <input type="checkbox"/></b>	<b>Compass <input type="checkbox"/></b>	
<b>GPS <input type="checkbox"/></b>	<b>Dive Flag <input type="checkbox"/></b>	<b>Oxygen <input type="checkbox"/></b>	

<b>Additional Safety Equipment:</b>	
<b>Emergency Contacts and Local Emergency Resources:</b>	
<b>Nearest Medical Facility (Name, Number, Transportation Method, Transportation Time):</b>	
<b>Anticipated Hazards:</b>	<b>Mitigations:</b>
<b>Weather Guidelines for Operation:</b>	
<b>Other Considerations/ Comments:</b>	

- Whenever possible, approved solo boaters should seek to have a minimum of two people on board, including other researchers or a Launch Lead.
- To solo boat after the expiration date, the operator must submit a new solo boating exception form.
- For solo boating requirements, refer to the Gump Small Boat Operations Manual

\*Disclaimer:

I understand that solo boating is a hazardous activity with inherent risks and dangers including, but not limited to, risks associated with hazardous animals, equipment failure, perils of the sea, as well as acts of fellow boaters which could result in my serious injury or death.

**PI Signature for approval:** \_\_\_\_\_

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*Information below to be filled out by Launch Lead:*

**Comments**

**Status approved**

**Expiration Date** \_\_\_\_\_

## APPENDIX 7 RECREATIONAL PADDLECRRAFT (SUP and KAYAK) GUIDELINES

The following are guidelines for recreational use of paddlecrafts at Gump Station. If planning on using a paddlecraft for academic operations, you will need to submit a Project Approval Form to the Boat Safety Officer. The paddlecraft operator is responsible for complying with all standards set forth by the US Coast Guard and in this document.

### Minimum Operational Standards

1. Prior to operation, check that paddlecraft equipment is safe and in good operational condition.
2. Send a Float Plan to your shore contact, and verify that the shore contact is aware of all procedures to be followed and persons to contact if the boat fails to return at the designated time.

The float plan should include the:

- Names of all passengers; Destination; Estimated time of return; The latest weather forecast

#### Shore Contact Duties

If the vessel has not returned by the planned return time:

- Attempt to contact or visually locate the vessel within 15 minutes of the original ETA. If the vessel cannot be reached or seen, notify the Launch Lead immediately.
- Within 30 minutes past the planned time of return: If unable to contact the Launch Lead, notify Emergencies at Sea: 16 or +689 40 54 16 16).

3. Upon return, notify your shore contact.
4. Notify the Launch Lead of any problems with the boat or equipment that occurred during the paddling.
5. Rinse and put away all used equipment.

### Minimum Equipment

#### Required Safety Equipment:

- Paddlecraft and Paddle
- Type III PFD for each person (either worn at all times or readily accessible on-board if proficient swimmer)
- Safety Whistle
- Visual Signaling Device
- Compass
- If using a SUP, the board leash must be worn at all times

Manufacturer's maximum occupancy and weight rating shall not be exceeded.

#### Recommended Additional Equipment:

- Communication device with Shore Contact and Launch Leads' phone numbers
  - Guillaume Iwankow +689 87 71 71 09
  - Tony Youising +689 89 72 92 33
- Waterproof bag or means of keeping communication devices and equipment dry
- First aid kit in waterproof case or dry bag
- Folding anchor with 100' of anchor line
- Flashlight or lantern

### Minimum Weather Guidelines

- a) Paddlecraft activities will be limited to when visibility is ¼ mile or greater.
- b) Paddlecraft activities will be cancelled when winds greater than 15 knots are predicted for the area of operation or during other adverse weather conditions.
- c) Paddlecraft activities will be cancelled if thunderstorms are predicted for the area of operation.
- d) Paddlecraft operation is limited to daylight hours, between sunrise and sunset

In addition to regular boat and engine maintenance, the Marine Mechanic, or their designate, will perform and log checks of the following on all boats when the boat is removed from the water; before a boat is placed in the water; and every two weeks during periods of high use.

### **Boat**

- General Appearance
- Battery
- Start
- Trim
- Cables: Gear Shift, Throttle, and Steering
- Engine Oil
- Fuel Filter
- Propeller
- Impeller
- Anchor, Anchor Chains, Lines, and Connections
- Inspect Hull for Damage
- Scuppers

### **Trailer**

- General Condition
- Tire Pressure
- Bearings
- Shock absorbers
- Bow Strap and Safety Chains

The Launch Lead, or their designate, will perform and log checks of the following safety equipment at a minimum of once each month.

### **Safety Equipment**

- PFDs
- Fire Extinguishers
- Engine Cut-Off Switches and Lanyards
- Check that the boat box and safety kits contain what they should and that their contents are operational
- Check that the oxygen kit is operational: oxygen cylinders are full and all components are operational and dry.

APPENDIX 9 ANNUAL TRAILER INSPECTION SHEET

Personnel Information:				Trailer Information:	
Owner/Operator Name:				Manufacturer/Model:	
Location of Inspection:				Registration Number (VIN):	
	Yes	No	N/A	Capacity:	
Operators have Institution Boating Authorization:				Length/Width:	
Trailer Info Form on File:				Type: Bunk, Roller, Float-On	
				Axels: Single, Tandem	

Boat Trailer:			
	Yes	No	N/A
1. Boat trailer registered?			
2. Hitch correct size and non-binding?			
3. Safety chains and hooks adequate for weight?			
4. Safety chains adequate length to cradle tongue?			
5. Are all lights operational?			
6. Are tires in good condition (adequate tread, free of dry rot, inflation, date codes)			
7. Wheel bearings lubricated and proper torque on wheel nut?			
8. Bearing caps properly installed and functional?			
9. Bearing seals watertight?			
10. Are brakes working properly?			
11. Master cylinder checked for proper fluid level, any leaks in lines?			
12. Trailer tongue weight proper for boat?			
13. Rollers and/or bunks in good condition?			
14. Is the boat secured at the bow and stern?			
15. Proper suspension system for boat and load?			
16. Has a transom saver been installed?			

Tow Vehicle:			
	Yes	No	N/A
17. Adequate weight and power to tow trailer and load?			
18. Is the hitch properly rated for weight of boat?			
19. Is the hitch properly secured to the frame (not bumper)?			
20. Is the remote breaking mechanism properly adjusted?			
21. Does tow vehicle have adequate mirrors for size of load?			

Notes: