

Small Boat Safety Manual

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[this is a living document, updated frequently, and reviewed annually]

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SECTION 1 - OVERVIEW

Purpose

Small boat operations involve certain risks that must be addressed prior to beginning any fieldwork. Knowing what equipment is required to be on the boat, the rules of the road, understanding the weather and its effects on the marine environment, and even the variations in operating one type of boat compared to another are all obstacles that must be overcome to minimize the risks to those on board, as well as maximizing efficiency in data collection.

The purpose of this manual is to establish good boating practices under the auspices of the Gump Station; to ensure that all boating under Gump Station auspices is conducted in a safe and efficient manner; and to familiarize participants with the basic procedures that affect their own safety and the safety of their fellow user.

Any small boat operator at the Gump Station is required to observe the provisions of this guide and to acknowledge this in writing along with signing the waiver each time they check in at the Gump Station.

Contents

The Small Boat Manual contains policies and procedures for all boating operations. The Gump Station Small Boat Safety Manual includes:

1. Policies and procedures that pertain to all Gump Station boating operations.
2. Administrative procedures for conducting the Gump Station small boat program.
3. Equipment and maintenance recommendations.

Applicability

The provisions of this manual apply whenever Gump Station personnel and users are using small powerboats under Gump Station auspices, whether the boat is owned by the Gump Station or not.

Gump Station Fleet

See inventory of [Gump Station boats](#).

Specific examples of boat operations under Gump Station 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 or providing boat operation instruction or involved in boat checkouts; and boat operations conducted in educational and recreational programs sponsored by Gump Station.

For the purposes of this program, a small boat is any boat less than 26 feet in length (US Coast Guard Class 1 and smaller).

- Small boats used under Gump Station auspices fall into four categories:
- Boats launched from Gump Station properties.
- Boats owned by individual Gump Station programs.
- Privately owned boats used for Gump Station research.
- Boats chartered by Gump Station personnel for conducting research, education, or training.

SECTION 2 - RESPONSIBILITY

UCB Vice Chancellor for Research

The Vice Chancellor for Research has the ultimate authority for the Small Boat Safety Program and its related activities. The Vice Chancellor for Research is responsible for approving changes to the Gump Station Small Boat Safety Manual.

UCB Scientific Diving and Small Boat Safety Board

The Scientific Diving and Small Boat Safety Board (SDSBSB) at UCB is responsible for recommending changes to this Gump Station Small Boat Safety Manual and for general oversight of the small boat policy at Gump Station, including reviews of accidents involving injury, or loss / damage to equipment.

Gump Station Executive Director

The Executive Director of the Gump Station oversees implementation of the small boat policy, with the Associate Director acting as the Boating Administrator, managing day to day operations.

Boating Administrator

The Boating Administrator designates Gump staff members, or suitably qualified external experts, as Boating Examiners to conduct check outs and evaluate those applying to operate Gump Station boats.

Boating Examiners

Appointed by the Boating Administrator, the Examiners are experienced boat operators who decide who is able to operate Gump Station boats and what level of authorization is appropriate given the applicant's experience and demonstrated knowledge and capability.

Principal Investigators and Lead Professors

Principal Investigators (including research, class, and other group leaders) will assure that all small boat operations that are part of a program under their direction are conducted in accordance with this manual. It is required that Principal Investigators who operate boats that are either owned by individual Gump Station programs or privately owned boats used for their research based at the Gump Station meet the same safety standards as Gump Station boats and to have on board the required safety equipment as outlined in Appendix I.

Boat Operator

In all boat operations, one Gump Station individual (employee or registered user) shall be designated as the boat operator. Exceptions may be granted for commercially operated charter vessels, which comply with French Polynesia Affaires Maritime regulations concerning charter vessels. The designated boat operator is responsible for all aspects of boating operations, regardless of the presence of any senior staff or faculty in the boat. These responsibilities include, but are not limited to:

- The safe navigation of the vessel to and from the site(s) of operation.
- The safe operation of all equipment, either in the collection of data, or the handling of the vessel.
- Safe transport of the vessel to and from the launch site.
- Ensuring that all required operational and safety equipment is on board before getting underway and properly stowed upon return.

Non-compliance with this manual is to be reported to the Principal Investigator and the Gump Station's Executive Director for review. The Scientific Diving and Small Boat Safety Board is available to assist with any reviews as requested.

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, or major environmental damage. A written report of such actions must be submitted within 24-hours to the Boating Safety Officer explaining the circumstances and justifications.

SECTION 3 - ADMINISTRATIVE PROCEDURES

General

The regulations in this manual must be observed wherever small boat operations are carried out under the auspices of the Gump Station. All operators must follow the provisions of the manual and all equipment used should conform to French Polynesia Affaires Maritime (Marine Affairs Department) or US Coast Guard requirements, whichever is the more conservative.

Operating Areas

The regulations herein shall be observed at all locations where boating operations are

conducted under the auspices of the Gump Station Small Boat Program. Areas of operation belong to one of three classifications:

1. **Lagoon Waters:** Shoreward (inside) of the barrier reef. This includes both Cook's and Opunohu Bays.
2. **Coastal Waters:** This includes coastal waters up to 5 miles (NM) from a port (off-shore from a pass in the barrier reef).
3. **Offshore:** This includes all coastal and offshore waters.

The operating area for each operator and/or boat within the Small Boat Program will be clearly identified by the Boating Administrator. Boats/operators will remain within their designated areas or in areas that provide greater protection.

Boat Operator Competency

Boat operators are expected to have basic knowledge and competencies for handling the vessel they intend to use, in the expected environment and conditions for their fieldwork. Theoretical knowledge and an understanding of the "Rules of the Road" can be gained through any of several formal boating courses. The California Department of Boating & Waterways, the U.S. Coast Guard Auxiliary, and the U.S. Power Squadron offer courses that are acceptable for this purpose, however, all boat operators must be familiar with the FRENCH POLYNESIAN system (which is different from the system used in the US). Boat operating experience is invaluable, and there is no substitute for time at the wheel on the water.

Boat Operator Application and Check outs

All Gump Station boat operators must complete the [Small Boat Operator Application form](#). They must also pass the exams set by the Gump Station Boating Administrator to obtain a Gump Boating Authorization (see [Boating Authorizations log](#)). The exams include oral and/or written questions as well as a practical check out with a designated Gump Station boating examiner. The decision of the Examiner is final, but users who do not meet requirements may re-apply when they believe they have improved their knowledge and experience sufficiently.

French Boating License

For users of boats >50HP and those operating in areas 2 or 3, the Gump Station requests that users obtain the French boating license ("permis cotier"). Similarly, long-term users (those staying for several weeks and/or returning to the Station frequently) are also generally required to obtain this license.

Categories of Boating Authorization

There are three categories of GBA corresponding to the Areas described above:

- A. Operation of boats with 50hp or smaller engines within Area 1
- B. Operation of boats with engines larger than 50hp Areas 1, and 2.
- C. Operation of boats with engines larger than 50hp Area 3.

Principal Investigators may set additional (more restrictive) requirements for the use of vessels in their programs.

Boats and Equipment

All boats and equipment used by authorized Gump Station operators, regardless of ownership, will conform to French Polynesia Affaires Maritimes (Marine Affairs Department) requirements and to the standards set forth in this manual.

Stability

All boats used by Gump Station personnel have a maximum number of people and weight capacity per the manufacturer's specifications. It is the responsibility of the boat operator to stay within these limits and to have all weight evenly distributed so that the boat will be trimmed properly. If the manufacturer's specifications have been altered or if a platform was designed and constructed for specific research the trim and stability modifications may be comprised. It is the responsibility of the Principal Investigator to verify the stability of any modification with the Boating Officer.

Equipment

The operator shall be familiar with the operation of the equipment and shall inspect all emergency equipment prior to departure. Special attention should be given to Personal Flotation Devices (PFD's) and communication equipment (radios and/or cell phones). He / She shall notify the Boating Officer or the principal investigator of any malfunctioning equipment used during their operation.

Safety Checks

Prior to Departure, the boat operator shall:

- Designate short contact and complete float plan
- Perform a functional inspection of the boat and all equipment.
- Assess all environmental risks weather conditions, sea conditions.
- Inform all passengers of emergency procedures man-overboard, fire, and abandonment and methods for seeking assistance.
- Inform all passengers of the location of emergency equipment
- Inform all passengers of additional hazards and appropriate precautions for the environment, weather and objectives of the operation.

After Returning, the boat operator shall:

- Check in with shore contact person.
- Note any problems with the boat or equipment that occurred and inform the Boating Officer within 24-hours.

Float Plan and Sign Out Sheet

All Operators of boats should fill out the online [boat checkout form](#) before each use of a boat from Gump Station.

All operators must leave a float plan with some responsible party on shore (someone who will take appropriate steps and notify Station staff or emergency services in event of a problem). The minimum requirements for a float plan are:

1. The boat being used;
2. The planned date, time and place of departure;
3. The planned date, time and place of return;
4. The site(s) of operation;
5. The Principal Investigator;
6. The names and affiliation of people on board.
7. Communication schedule, i.e., cellular telephone number and/or VHF working frequency.

See also the [sign out, float plan, and safety check sheet](#) before leaving shore.

Communications

Scheduled cell phone or radio communications with agreed upon frequency shall be maintained with a responsible person. To initiate any change in an approved schedule, the shore contact or assigned alternate must be notified and changes confirmed. If the boat operator, or their designee, is unable to notify the shore contact or assigned alternate, the filed plan must be adhered to. Failure to maintain scheduled radio communications (within one-half hour) may cause initiation of Coast Guard Search and Rescue procedures.

The shore contact or the agreed upon alternate shall be notified by phone or in person upon completion of work. Notice of return is required within two hours after the scheduled time of return. If shore-based or radio contact is not made, procedures for Coast Guard action may be initiated. Vessel operators and shore contacts shall take into account the limited VHF radio and cell phone coverage in coastal waters.

Weather

Use of any boat is always contingent upon weather conditions. Responsibility for monitoring weather conditions prior to departure and during operations resides with the operator. When small craft advisories are issued for the waters of a planned operation or experiment, boats that are scheduled for operations within that area should postpone their operations until more favorable conditions prevail.

Record Keeping and Accident Reporting

Routine Records

The Boating Officer shall keep a file of usage for all boats, including a log of scheduled and unscheduled maintenance for each boat, boat trailer and outboard engine. A log will be maintained online where boat operators can report any problems with boats or related equipment and facilities.

Accident Reporting

All accidents and incidents involving boats must be reported to the Boating Officer. The Boating Officer will report the accident to the Executive Director of the Gump Station and the SDSBSB for review. The Small Boat Safety Board shall investigate and document the accident and related personal injury and/or property damage and prepare a report for the Vice Chancellor for Research.

Definitions

- **Incidents** are defined as events that result in minor injuries (cuts and scrapes) or “cosmetic” damage to vehicles or vessels (dents and scratches that don’t affect the operation of the vehicle or vessel.) Incidents also include near misses, such as when a situation occurred that could have led to an accident, which should be reported as well.
- **Accidents** are defined as events in which a serious injury requiring medical attention beyond basic first aid occurred.

Reporting guidelines and resources

- Any accident must be reported to the DSO ucbdiver@berkeley.edu and or EH & S office, within 24 hours, at 510.642.3073
- Any accident resulting in a fatality must be reported as soon as possible to EH & S, or, if after normal business hours, to the UCPD at 510.642.6760.
- Any accident resulting in damage to a University owned vehicle, vessel, or property must be reported to the Boating Administrator (Gump Station Associate Director).

SCUBA Diving

Any persons SCUBA diving from a Gump Station boat are required to observe the provisions of the University of California, Berkeley [Diving Safety Manual](#). All dive plans must be approved by the Gump Station Scientific Diving and Small Boat Safety Board (SDSBSB).

What constitutes diving under Gump Station auspices? Diving by resident users of the Gump Station (students, and faculty) and by Gump Station staff, or with Gump Station equipment, as a necessary part of their employment, research, or training, and by other authorized divers under the supervision of the Gump Station dive program as a necessary part of research, or training.

The designated lead diver will oversee all diving operations. A Gump Station boat operator

should remain aboard at all times during diving operations for all dives outside the reef (Area 2 or 3) and those deeper than 30 meters (99').