

UC SAFETY SPOTLIGHT

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Industrial Safety/
Hazardous Operations

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UC's Dive Safety Programs

SCUBA diving is a high risk activity and the UC Dive Safety Programs oversee scientific diving operations in the open water and educational aquariums.

Each of the UC Dive Safety Programs enable UC to meet the comprehensive diving standards of the Occupational Safety and Health Administration (OSHA) and the American Academy of Underwater Sciences (AAUS) by providing the training, dive planning and logistical support required for working underwater.

The primary mission of the UC Dive Safety Officers is to train, support and oversee all employees and students conducting scientific diving in their unique environments using an array of highly specialized SCUBA techniques while ensuring that all diving activities occur in a safe and effective manner.... [\(Read More\)](#)

POSTER OF THE MONTH

MONTHLY UC SAFETY SPOTLIGHT
Poster of the Month
FEBRUARY 2017

Portable Ladder SAFETY

Falls from portable ladders (step, straight, combination and extension) are one of the leading causes of occupational fatalities and injuries.

- Read and follow** all labels/markings on the ladder.
- Avoid Electrical Hazards!** Look for overhead power lines. Always maintain a 3-point contact on the ladder when climbing. Keep your body near the middle of the step and always face the ladder when climbing.
- Never use a metal ladder** near power lines or exposed electrical equipment.
- Always inspect the ladder** prior to use. If the ladder is damaged, remove it from service and tag it as "Damaged - DO NOT USE" until repaired or discarded.
- Only use ladders and appropriate accessories** (such as levelers, pads or blocks) for their designed purpose.
- Ladders must be free** of any slippery substances (oil, grease, dirt, etc.).
- Always maintain a 3-point contact** (two hands and one foot, or two feet and one hand) on the ladder when climbing. Keep your body near the middle of the step and always face the ladder when climbing.
- Do not use a step ladder** in a single ladder leaning against a wall or in a partially opened position.
- Do not move a ladder** while a person is dependent on the ladder.
- An extension or straight ladder** used to access an elevated surface must extend at least 3 feet above the point of support. Do not extend it to the full height of a ceiling, beam or extension ladder.
- The proper angle** for setting up a ladder is to pull the base a quarter of the working length of the ladder from the wall or other vertical surface.
- Do not use the top step/rung** if it is not designed for use as a step/rung.
- A ladder placed in any location** where it can be tripped by nearby work activities must be secured to prevent movement. If a fall risk, keep the ladder to keep traffic away from the ladder.
- Do not place a ladder on boxes** or other unstable surfaces.
- Check the ladder's "duty rating"** to ensure that capacity (225 lb. for most ladders) is not exceeded. Do not exceed the maximum weight it can safely support including the person's weight and any tools or equipment carried or used on it.

Energy Isolation SOPs for Research and Lockout/Tagout (LOTO) Program and App



All powered equipment operates on potentially hazardous energy (electricity, compressed gas, fluids under pressure, hydraulics, mechanical movement, fuels, etc.). Safe "Energy Isolation" of equipment is the process of determining what types of energy are used by and/or stored in

equipment as part of its operation, and then developing procedures to safely shut-down and isolate the equipment from hazardous energy prior to working on it. For facilities work, these written procedures are commonly known as "Lock out Tag out" (LOTO) procedures, and are required for compliance with Cal/OSHA codes. For Researchers, while locks and tags might not need to be used, LOTO procedures may be used for research equipment "Energy Isolation SOPs" to... [Read More](#)

CRANES, HOISTS, WINCHES AND LIFT- GEAR SAFE PRACTICES

Employees and students must receive formal and documented training on safe use and operation of the equipment prior to use. Lift equipment, whether motorized or not, has a manufacturer's manual that contains information about the intended use and design of the device, load specifications, and instructions on safe operation. Refer to it to familiarize yourself with your equipment's specific safe-use and operation procedures. The following codes of safe practices are general guidelines for use of any lift equipment:

1. Never exceed the hoist's lifting capacity; check to ensure the capacity is stenciled on both sides of the hoist.
2. Determine the allowable weight of the load by checking the manufacturer's information.
3. Ensure the allowable weight is clearly labeled on the hoist/winch and support structure(s).
4. Select the proper rigging gear. Based upon the rigging arrangement, ensure it is within the Safe Working Load (SWL) of the web sling, wire rope or other rigging gear being used.
5. Never exceed 45 degrees on the sling angle, as this will put too much tension on the sling.
6. Inspect the rigging gear prior to use. Look for signs of wear and/or damage, such as broken wires, separation in the wire or strand, flattened wires, signs of chemical etching, rust, or other unusual conditions.
7. Replace and discard wire rope when even one broken wire is observed at any point in the rope.
8. Check emergency stops and brakes for efficiency and safety.
9. Only use a hoist hook equipped with a safety latch that closes the throat of the hook.
10. Based upon pre-use inspection and operation, lock out and tag out the equipment if it is defective, malfunctions, or needs repair, and report these details to your supervisor or instructor immediately.
11. Conduct all lifting operations so no one would be injured if there were an equipment failure.
12. Never leave a suspended load unattended.
13. Never pass a load over coworkers or allow anyone to walk under the load unless appropriate safety measures are in place.
14. Require all students and employees working in the area to wear personal protective equipment appropriate to the hazard, including hard hats, eye protection, hearing protection, and gloves.
15. Talk to your supervisor or instructor if you have any unanswered questions as to capacity, loads, applications, or movement.

UC's Dive Safety Programs

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The six existing UC Dive Safety Programs serve approximately 550 UC scientific divers and many more through collaborations and reciprocity. In 2014 UC scientific divers made over 17,000 dives, more than 11% of the national science dives as reported to the AAUS. That makes the University of California the largest science diving program in the country. In comparison, for that same year, the National Oceanic and Atmospheric Administration (NOAA) conducted 10,394 dives (science and training/ proficiency dives).

The UC Dive Safety Officers oversees the largest and most active scientific diving system in the country and have a long history of collaborating together to meet the shared mission of ensuring this high risk activity occurs in a safe and effective manner. UC also owns the Gump Station property in Moorea and the UC Berkeley Dive and Boat Safety Officer oversees all of Gump's diving and boating activities.

*"In 2014
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17,000 dives,
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Summary of the Diving and Boating Safety Officer Services

- Cal OSHA Compliance (Scientific, Aquarium and Commercial Diving)
- US Coast Guard Compliance
- Training of Scientific Divers & Boaters
- Providing required documentation when collaborating with another scientific diving organization
- Diving and Boating Consultation and Technical Support
- Development and ongoing oversight of Diving, Boating & Emergency Management Plans
- Management of Boat Safety Programs
- Dive Safety Equipment Testing and Repair Services
- Purchasing of Dive & Boat Safety Related Equipment

UC's Dive & Boat Safety Officers

UCB	Jim Hayward	ucbdiver@berkeley.edu
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Energy Isolation SOPs for Research and Lockout/Tagout (LOTO) Program and App

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...document and train lab personnel on safe research equipment operation / shut down.

UC Risk and Safety Solutions recently released a flexible, customizable procedure management system designed to manage procedures for a variety of work settings, including LOTO. RSS Procedures enables you to create, edit and read procedures across a variety of work settings and is available for iOS and Android and has a complementary desktop version. Beyond LOTO, it can be used for research safety, standard operating procedures (SOPs) and more.

Benefits include:

- Create new procedures to fit your needs using a variety of available templates.
- Ability to create a new procedure by cloning an existing one.
- Take photos and draw or add text to emphasize what's important.
- Use your device's GPS to record where a piece of equipment is located.
- Control who has access to the procedures you create using permission settings.
- Add a procedure to your "favorites" in order to read them offline. Any procedures that you have read recently will also be available when offline.
- If using offline, any newly created procedures or edits you've made will automatically sync when the application is back online.

Android users can download it for free from the Google Play store. iPhone users can download it for free at the Apple App store. Find it by searching for "RSS Procedures." SBN LOTO app will transition current users and all data from our LOTO app databases to UC RSS Procedures by year's end.

For more information about the Procedures app, contact the Risk and Safety Solutions Service Desk at service@RiskandSafetySolutions.com or at 530-638-3375.



CONNECT

Know where to turn on your UC campus for the information you need to keep yourself, your workplace and your environment safe and secure. Click on the campus links below to connect to local program, educational and informational resources.

[UC Berkeley](#) • [UC Davis](#) • [UC Irvine](#)
[UCLA](#) • [UC Merced](#) • [UC Riverside](#)
[UC San Diego](#) • [UC San Francisco](#)
[UC Santa Barbara](#) • [UC Santa Cruz](#)
[UCOP](#) • [UC ANR](#)

RESOURCES

- [UC Safety](#)
- [Performing Arts Safety](#)
- [Federal OSHA page on lock-out tag-out](#)
- [California General Industry Safety Order on Lock-out Tag-out](#)
- [UC LOTO app and LOTO Safety Program Information](#)
- [UC LOTO app training videos](#)



FEEDBACK PLEASE

Send an email to safetyspotlight@ucdavis.edu to submit your comments on the February issue or to suggest content ideas for future issues. We look forward to hearing from you!

This publication is produced and maintained by the Communications Team at Risk & Safety Solutions. For more information regarding our products and services, please email service@RiskandSafetySolutions.com.

