Field Research Safety CoE Update

The Field Research Safety Center of Excellence was formed to support hazard assessment, training and planning for researchers conducting fieldwork in outdoor locations. Inherent hazards to fieldwork include transportation to field sites; hazardous terrain, climate and changing conditions; wildlife, zoonotic and vector-borne diseases; remote or isolated work sites that lack basic services; and field activities involving a wide variety of equipment, tools, and complex tasks. In parallel, many EH&S departments are developing their own campus field safety programs to provide field safety plan templates, assist with hazard assessment, offer relevant training such as wilderness first aid, loan out emergency satellite communication devices, or provide other support for fieldwork. A list of key EH&S contacts are provided below:

UCSC: Steve Loveridge fieldsafety@ucsc.edu
UCSB: Nelly Traitcheva Nelly.Traitcheva@ehs.ucsb.edu
UC Irvine: Blaise Bautsch bbautsch@uci.edu
UCLA: Mike Williams mwilliams@ehs.ucla.edu
UCSD: Kris Morris krmorris@ucsd.edu
UC Merced: Karen Smith ksmith23@ucmerced.edu
UC Davis (hiring) fieldsafety@ucdavis.edu
UC Riverside: Pamela See pamela.see@ucr.edu
UC Berkeley: Sara Souza fieldsafety@berkeley.edu
UC ANR: Brian Oatman baoatman@ucanr.edu

Highlights of Recent Field Safety Outreach Topics

To join the UC-TRIPSS listserv and receive monthly field safety updates, please email sarasouza@berkeley.edu.

Wildfire Safety: Prevent Fires. Understand Wildfire Behavior. Make a Plan. Get to a Safety Zone. These are critical actions for outdoor staff and researchers working in California’s dry landscapes. Learn more about wildfire behavior and surviving wildfire here.

FACILITY/STRUCTURE PROTECTION

Maintain a defensible space of 100’ around structures. Remove all flammable vegetation within 30’ immediately around structures. Create a reduced fuel zone in the remaining 70’ around structures.

VEHICLE @ EQUIPMENT USE

Do not drive or park over dry grass. Mow before 10 AM; never mow or trim dry grass on a ‘Red Flag Warning’ day. Spark arresters are required in wildland areas on all portable gas-powered equipment. Keep gasoline in an approved container with a flame arrester at the spout.
Every year, thousands of California workers become injured or ill due to work. While fatal workplace injuries have been on a downward trend since 1999, preventable workplace fatalities still occur. In the years ahead, climate change, social disparities and the changing world of work will present new challenges to health and safety professionals tasked with protecting public health.

For the last 40 years, faculty, researchers and students at the Center for Occupational and Environmental Health (COEH) have conducted vital research to help inform state policy, provided education and training to protect vulnerable workers, and promoted health and safety in California's workplaces.

In celebration of their 40th anniversary, COEH at UC Berkeley and UC Davis will be hosting a joint symposium in Sacramento, California on May 4 - May 5, 2018. The symposium will celebrate occupational health successes, and look ahead to explore emerging occupational and environmental health issues.

Continuing education credits are available, visit https://www.regonline.com/18SYMP to learn more.

(see below for more information)

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**CAMPFIRES**

If campfires are permitted, use an existing fire ring if available and keep at least a 3 foot wide area around your campfire ring free of litter, vegetation, or other material. Keep your fire small and under control. Never leave a fire unattended. Before going to sleep, douse the embers with water, break them up, and douse them again.

**Allergic Reactions & Anaphylaxis:** Allergic reactions range from mild (e.g. hay fever) to severe. Anaphylaxis is a serious, life-threatening allergic reaction. The most common anaphylactic reactions are to foods, insect stings, or medications. Symptoms may develop immediately, rapidly progress over minutes, or develop slowly over hours. Anaphylaxis requires immediate medical treatment, including a prompt injection of epinephrine. Learn more about new Epinephrine Auto-Injector laws.

**Surviving Cold Water Immersion & Hypothermia:** Remember the 1-10-1 principle (coined by Dr. Gordon Giesbrecht of the University of Manitoba).

**COLD SHOCK:** You have about 1 minute to control your breathing. Wearing a life jacket is critical to keep you afloat during this initial response of shock and gasping for air.

**COLD INCAPACITATION:** You have about 10 minutes of “meaningful movement” to swim to safety and self-rescue, after which you will lose effective use of your fingers, arms, and legs.

**HYPOTHERMIA:** Even in ice water you could have about 1 hour before you lose consciousness from hypothermia. Signal for help (e.g. with a whistle on your life jacket), huddle with others, or if alone, wait for rescue in the HELP position by crossing your arms tightly against your chest, drawing your knees up, and keeping your head and face out of the water. Learn more about cold stress.

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**UC Field Safety Workgroup Meeting at UCSB’s Sedgwick Reserve**

I’d like to thank Kate McCurdy and Marion Wittmann of the UCSB Natural Reserve System for hosting and supporting our first UC Field Safety Workgroup meeting last month to cross-train EH&S staff and support development of our campus field safety programs. We had a broad group of subject matter experts contribute including Ines DeRomana, Director of International Health, Safety and Emergency Response for UC Education Abroad Program, Eric Hessell, UCSB Dive & Boat Safety Officer, Joe Harkins, UCSB Fire Marshal, Jim Norris, UC NRS Weather Station Specialist, Jamie Bishop, UCSB Campus Biosafety Officer, Hayley Crowell, Cal Poly grad student and rattlesnake researcher, and Sean Mayuga from the UCSB IACUC Office.

Questions? Please email sarasouza@berkeley.edu. Thanks for your interest and support. Sara Souza – Health & Safety Advisor, UC Field Research Safety Center of Excellence.
CONTINUED...
COEH BUILDS BRIDGES

Friday, May 4:
Day one of the symposium will feature moderated panel discussions on topics such as climate change and health, animal health and human infectious disease risk, community outreach and engagement, sexual harassment and assault at work, and the prevention of injuries through ergonomics. Course content is intended for occupational and environmental health and safety professionals including occupational medicine physicians and mid-level practitioners, occupational health nurses, registered environmental health specialists, industrial hygienists, and certified safety professionals.

Saturday, May 5:
Day two of the symposium will explore current topics in occupational and environmental medicine. Topics include the health impacts of wildfires, emerging treatments for myofascial pain, managing co-morbidities in the workplace, and updates in the examination of commercial drivers, among others. Course content is intended for clinicians including MD, DO, nurse practitioners, physician assistants, registered nurses, and allied health professionals.

Event Details:
Symposium - COEH Builds Bridges:
Four Decades of Progress in the California Workplace

Friday, May 4th, 2018:
9:00 AM - 3:15 PM (lunch provided)

Saturday, May 5th, 2018:
8:00 AM - 5:00 PM (lunch provided)

Location: Betty Irene School of Nursing, Sacramento, CA 95817
For more information: https://www.regonline.com/18SYMP

Top 10 Tips for Safe UAS (Drone) Flying

UASs (Unmanned Aircraft Systems, or Drones) are becoming more common devices to support field research activities. Follow the Top 10 Tips for Safe Drone Use. For more information, contact Brandon Stark.

1. **Practice.** There is no substitute for experience. Gain experience by practicing flying your drone, conducting data collection missions and flight planning. Get familiar with your equipment and processes.
2. **Write Everything Down.** Not only are many records federally required such as flight logs, they can help you maintain your equipment, monitor for unsafe practices and keep you on track. Things to track: battery usage, weather conditions, equipment use/damage, software versions.
3. **Make Checklists and Use Them.** Nothing derails a flight mission like forgetting an item or a step. Make a checklist for planning a mission, make a checklist for packing your equipment, make a checklist for preflight inspections and any other process you may have.
4. **Always Keep an Eye on the Weather.** Experienced field researchers know that weather reports are only a suggestion. Conditions in the field may change dramatically and can turn a good flying day to a disaster.
5. **Bring a friend or two.** Between juggling a flight controller, operating a payload, monitoring weather conditions and scanning for intruding air traffic, it can be taxing to try to do it all at an appropriate level. Bring some help to make sure everything goes smoothly.
6. **Bring backups or replacement parts.** Many operators will bring spare propellers or batteries to their flight missions, but don’t forget about other supporting equipment such as cables, landing gear, radios or antennas. Make sure backup parts are on your pre-departure checklist.
7. **Choose appropriate flight locations.** When you choose a location to fly at, make sure you’re aware of all the hazards. Look for indicators of hidden hazards like rolling hills or high tree lines that create turbulence, or low visibility hazards such as power-lines or towers that interfere with radio systems. Be aware that you as the pilot are responsible of ensuring the safety of all persons on the ground, whether you can see them or not.
8. **Set boundaries for go/no-go situations and stick to them.** Deciding when to fly and when not to fly should not be an ambiguous decision. Don’t let external pressures push you to make unsafe decisions.
9. **If something isn’t right, stop immediately.** Nothing fixes itself in the air. If something doesn’t sound right on the ground during pre-flight checks, don’t fly. If the weather changes to an unsafe condition, land as soon as it is safe.
10. **Pause and consider all the risks before you fly.** Damage to your aircraft is only one of many aspects to consider. Consider the payload, consider potential damage to other’s property, consider secondary effects such as causing an auto accident when your aircraft crashes in the middle of a road.
**UC Berkeley Center for Occupational & Environmental Health**

- Beryllium Health Effects on Workers (Wednesday, April 4, 2018, 10:30am – 11:30am, Online)
- Latest Research on Silica Dust Exposure (Thursday, April 19, 2018, 1:00pm – 4:15pm, Oakland, CA)
- COEH Builds Bridges: Four Decades of Progress in the California Workplace (Friday, May 4, 2018, 9:00am – 3:15pm – Saturday, May 5, 2018, 8:00am – 5:00pm, Sacramento, CA)

**UCLA/UC Irvine Southern California Education & Research Center**

- Ergo Online Webinar Series 2018 (Enroll in 1 or More, 2nd Tuesday of each Month, 11:00am - 12:00pm, Online)
- Ethics for Health & Safety Professionals Webinar: Making the Right Choices (2 Meetings, Monday, April 16, 2018 & Thursday, April 19, 2018, 10:00am – 12:00pm)

**UC Risk & Safety Training**

- EH&S Professional Education (Online)
  - UC Davis Workshop (Tuesday, April 17, 2018, 9:00am – 5:00pm, UCD)

**American Academy of Underwater Sciences (AAUS)**

UC Davis and UC Berkeley are co-hosting the Annual Symposium of the American Academy of Underwater Sciences (AAUS) in Tahoe City, October 9-13, 2018. Abstracts are now being accepted! [More details are available here.](#)

**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**

Inciweb Incidents for California: [http://inciweb.nwcg.gov/state/5/](http://inciweb.nwcg.gov/state/5/)

Wildfire Smoke – A detailed report from the USFS, EPA, CDC and California Air Resources Board for public health officials on wildfire smoke and sensitive populations: [https://oehha.ca.gov/media/wildfiresmoke2016.pdf](https://oehha.ca.gov/media/wildfiresmoke2016.pdf)

Insect repellent search engine: [http://cfpub.epa.gov/oppref/insect/](http://cfpub.epa.gov/oppref/insect/)

**FEEDBACK PLEASE**

Send an email to [safetyspotlight@ucdavis.edu](mailto:safetyspotlight@ucdavis.edu) to submit your comments on the this issue or to suggest content ideas for future issues. We look forward to hearing from you!

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