



University of California Centers of Excellence  
**ANNUAL REPORT FY21/22**

# Table of Contents

Overview..... 1

## Centers of Excellence

### ENVIRONMENTAL HEALTH & SAFETY (EH&S)

BSL-3 Biosafety Training Program ..... 2

Center for Laboratory Safety ..... 3

Field Research Safety ..... 4

Pesticide Safety ..... 5

Radiation Safety ..... 6

Risk & Safety Training ..... 7

### RISK MANAGEMENT

Unmanned Aircraft Safety System (UAS) ..... 8

### WELLNESS

WorkStrong Program ..... 9

## Shared Services

### ENVIRONMENTAL HEALTH & SAFETY (EH&S)

Dive and Boat Safety Consortium ..... 10

Fire and Life Safety ..... 11

## Overview

CoE	Lead	Host Location	Sponsoring Program	Established	Status
<b>BSL-3 Biosafety Training Program</b>	Gary Landucci	UCI	EH&S	2/1/15	<i>Current</i>
<b>Center for Laboratory Safety</b>	Imke Schroeder	UCLA	EH&S	2/1/15	<i>Current</i>
<b>Field Research Safety</b>	Sara Souza	UCB	EH&S	7/1/16	<i>Current</i>
<b>Pesticide Safety</b>	Cheryl Wilen	UC ANR	EH&S General Liability	4/1/20	<i>Current</i>
<b>Radiation Safety</b>	Cathleen Edmunds	UCSF	EH&S	12/1/17	<i>Current</i>
<b>Risk &amp; Safety Training</b>	Janette Ducut	UCR	EH&S	4/15/15	<i>Current</i>
<b>Unmanned Aircraft System Safety (UAS)</b>	Brandon Stark	UCM	Risk Management - General Liability	3/1/16	<i>Current</i>
<b>WorkStrong</b>	Alison Frink	UCLA	Workers' Compensation	4/1/16	<i>Current</i>

Shared Services	Lead	Host Location	Sponsoring Program	Established	Status
<b>Dive and Boat Safety Consortium</b>	Jim Hayward	UCSB	EH&S	7/1/19	<i>Current</i>
<b>Fire and Life Safety</b>	Dana Johnson	UCLA	EH&S	7/1/20	<i>Current</i>

*The Centers of Excellence (CoEs) are funded by the Office of Risk Services while Shared Service programs are funded by participating locations.*

# Centers of Excellence

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## **ENVIRONMENTAL HEALTH & SAFETY (EH&S)**

- BSL-3 Biosafety Training Program
- Center for Laboratory Safety
- Field Research Safety
- Pesticide Safety
- Radiation Safety
- Risk & Safety Training



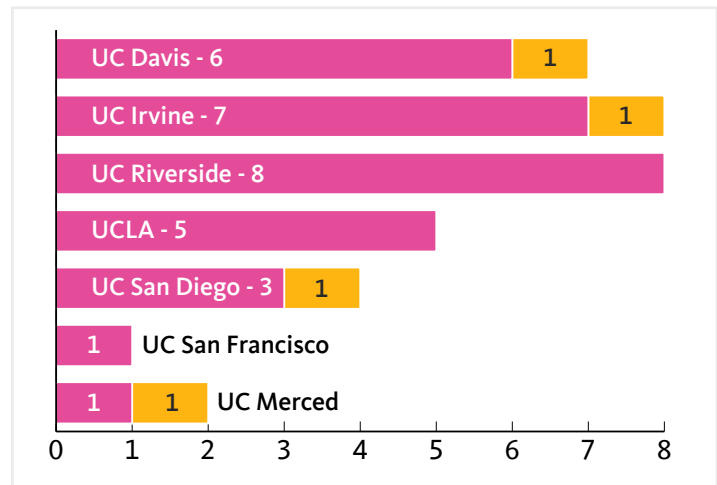
# BSL-3 Biosafety Training Program

The Biosafety Level-3 (BSL-3) Biosafety Training CoE develops and delivers high-containment laboratory safety training for personnel groups, including laboratory staff, biosafety professionals, first responders and operations & maintenance personnel. The CoE is integral in supporting the systemwide High-Containment Laboratory Oversight Committee by conducting BSL-3 lab evaluations, plan reviews and on-site training.

## Accomplishments

- Conducted 4-day site-specific BSL-3 laboratory trainings at:
  - UC Merced (23 participants)
  - UC San Diego Veterinary ABSL-3 (two 4-day sessions; 46 participants - split into 2 groups)
  - UC Irvine (7 participants)
- Conducted BSL-3 facility site-testing and performance verification training at:
  - UC Merced
  - Scripps Research Institute
- Conducted BSL-3 First Responder training at:
  - UC Merced (50 participants)
  - Orange County Joint Hazard Assessment Team (JHAT) (62 participants)
- Conducted BSL-3 training at the following non-UC facilities:
  - Thompson Bishop Sparks Diagnostic Laboratory (5-day; 12 participants)
  - Scripps Research Institute Research Personnel (4-day; 17 participants)
  - Stanford University (2-day; 18 participants)

## Metrics



UC campus participants in **4-day laboratory trainings** conducted at UC Irvine's BSL-3 National Training Center

UC campus participants in **4-day facilities maintenance training** conducted at UC Irvine's BSL-3 National Training Center

**350** | Individuals trained in 2021-22

## BSL-3 Trainings Conducted

Participating Entity	Facilities Maintenance	Researchers	First Responders
UC Schools	4	100	52
Other Academic Institutions	7	63	0
Government/Military Organizations	2	29	60
Corporate	6	27	0

# Center for Laboratory Safety

The Center for Laboratory Safety CoE sponsors and supports research on laboratory safety practices with the goal of identifying, developing and applying best practices in laboratories. The Center for Laboratory Safety (UCCLS) is a founding member of the national Safety Training Consortium (STC), which focuses on developing impactful online training courses for academic institutions and researchers.

## Accomplishments

- Conducted a year-long consultation for UC Irvine EH&S focusing on:
  - Administrative restructuring
  - Program metrics
  - Laboratory inspections
  - Researcher communications
- Supported the Joint Research Safety Initiative (JRSI) to improve the safety culture at UCLA's Chemistry/Biochemistry department:
  - Increased student membership from 1 to 10
- Managed the Safety Training Consortium, which recruited 4 new members:
  - The Food and Drug Administration (FDA)
  - Oregon State University
  - Cornell University
  - Columbia University
- Collaborated with Risk & Safety Training CoE and 9 subject matter experts from 4 UC campuses and Berkeley Lab on STC course development.
  - STC courses released to UC campuses:
    - Biosafety [September 2021]
    - PPE Training [November 2021]
  - STC courses in development:
    - Pressure Vessel Safety [for release in September 2022]
    - Fundamentals of Laboratory Safety Version 2 [for release in December 2022]
    - Risk Management for Researchers [for release in 2023]
    - Pyrophoric Materials Safety [for release in 2023]
- Delivered 8 presentations at major universities, companies, and national conferences, including 2 at UC campuses.

## Metrics



# 54

Safety Training  
Consortium members



# 3

Papers published  
on research safety

# 19,000

UCCLS website visits



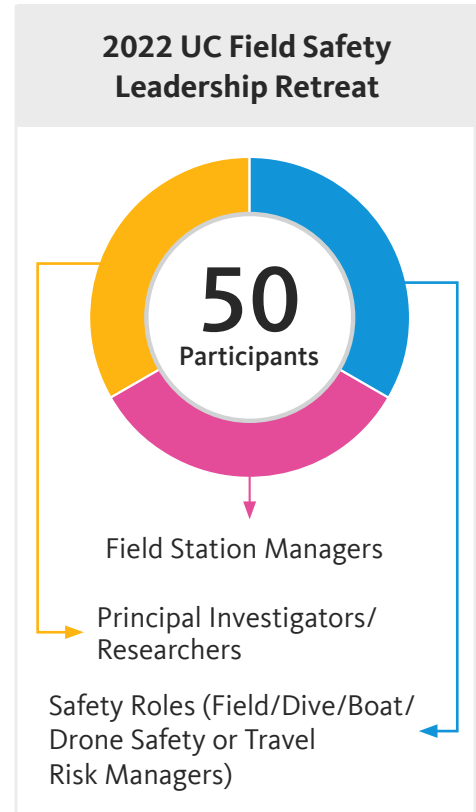
# Field Research Safety

The Field Research Safety CoE facilitates the sharing of lessons learned and best practices in field work, while promoting risk management through the development of safety planning tools and resources.

## Accomplishments

- Hosted the 2022 UC Field Safety Leadership Retreat at UCLA’s Lake Arrowhead Lodge detailing topics such as:
  - Safe Learning Environments
  - Risk Assessment
  - Weather Forecasting
  - Accommodating Researchers with Disabilities in Field Settings
  - Virtual tools to establish expectations and reduce anxiety
  - LGBTQ+ and Safety in the Field
  - Boundary Setting and Personal Safety
- Managed Garmin inReach satellite device program for UC Natural Reserve Managers affiliated with the following campuses:
  - UC Berkeley
  - UC Merced
  - UC Riverside
  - UC Santa Barbara
  - UC Irvine
  - Loaner program at UC Berkeley for campus researchers
- Obtained 5-year training renewal for the UC Epinephrine Auto-Injector Training Program from the California Emergency Medical Services Authority.
- Supported UC Vice Chancellors of Research, oversight committees, academic departments, and field station managers on COVID-19 policies and protocols; monitored emergency Cal/OSHA COVID-19 regulations and other State requirements related to transportation and housing.
- Presented on “Field Safety and Equity” at the American Geosciences Union Annual Meeting.
- Served as Co-Chair of the Campus Safety, Health, and Environmental Management Association (CSHEMA) Field Research Safety Community of Practice.

## Metrics



- Workgroup Topics**
- Extreme Weather
  - Code of Conduct
  - Minimum Training Requirements
  - Crisis Management
  - International Challenges

**Supported Wilderness First Aid Training for:**

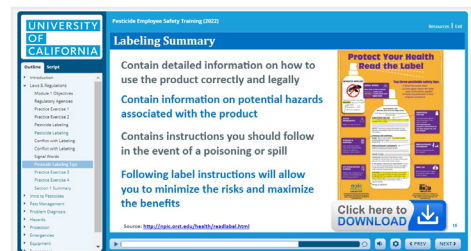
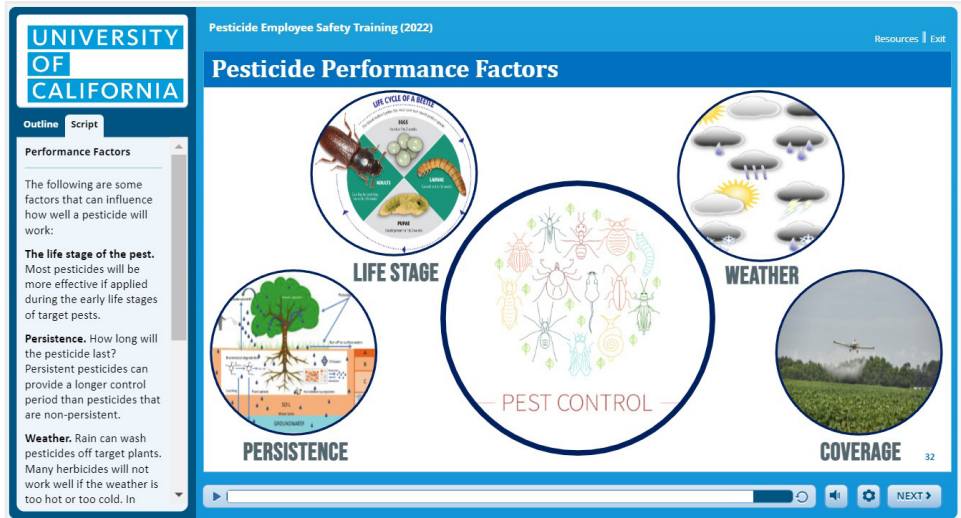
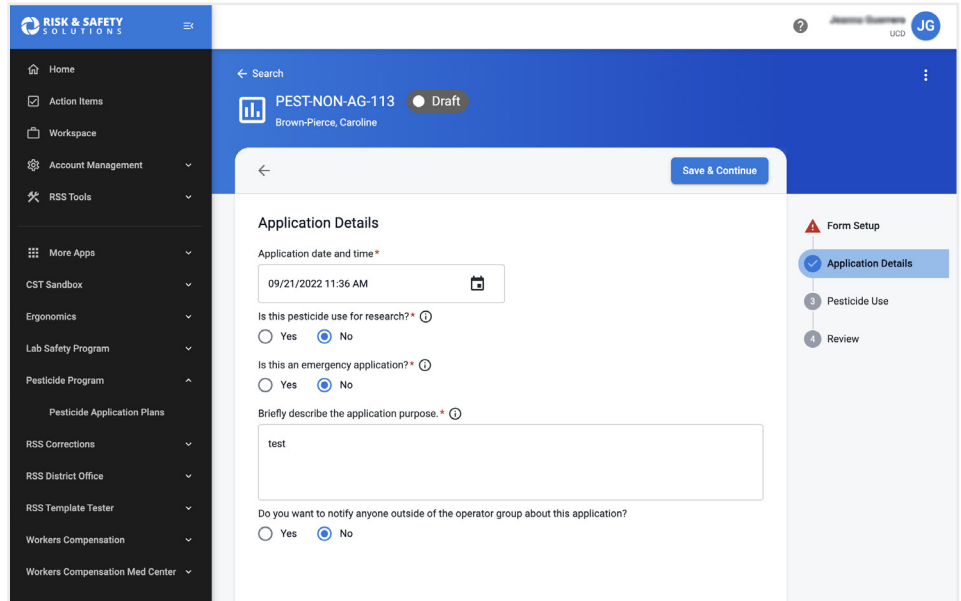
**96** Researchers and students from UC Berkeley, UC Davis and UC Riverside

# Pesticide Safety

The Pesticide Safety CoE provides technical support to the UC Office of the President, Office of Risk Services (OPRS) to implement the recommendations of the UC Herbicide Taskforce, including acting in an advisory role to the UC Systemwide Pesticide Oversight Committee (SPOC).

## Accomplishments

- Met with the SPOC to discuss UC stakeholder feedback on the draft UC Presidential Policy on Integrated Pest Management.
- Provided Risk & Safety Solutions with subject matter expertise to support the continued development of the pesticide use authorization software.
- Coordinated with the Risk & Safety Training CoE to develop training materials for UC employees who apply pesticides as part of their work assignments, including the following specific items:
  - Assessed policy for minimum training requirements
  - Developed proposal to create in-house Pesticide Employee Safety Training (PEST) certification in place of the Qualified Applicator Certificate (QAC), and in addition to QAC for supervisory staff
  - Consulted with Pesticide Applicator’s Professional Association (PAPA) for best practices in QAC test preparation
  - Collected training materials from Department of Pesticide Regulation (DPR) and UC ANR/ IPM (videos, study guides, handbooks, etc.)
  - Compiled a subject matter expert list for review of content
  - Developed eLearning draft





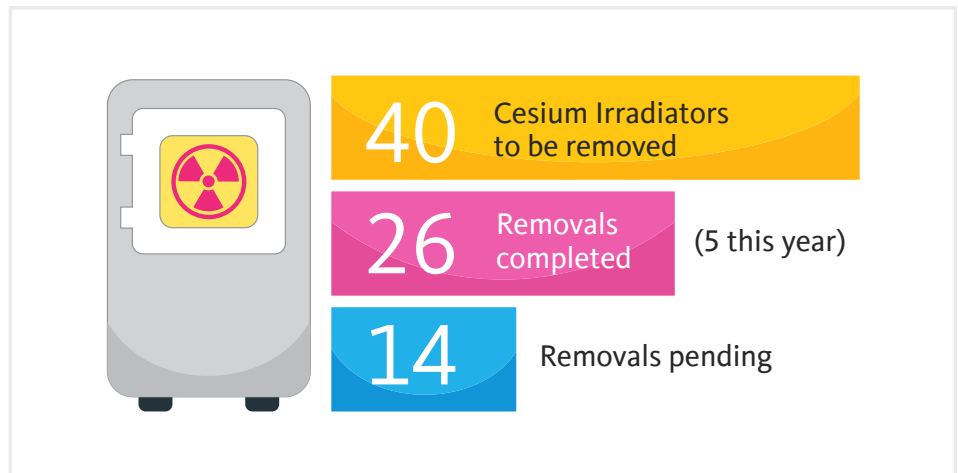
# Radiation Safety

The Radiation Safety CoE provides expert guidance on radiation safety concerns within the University of California system. The CoE is supporting development of the UC Radiation software application and is managing the UC Cesium Irradiator Replacement Program (CIRP).

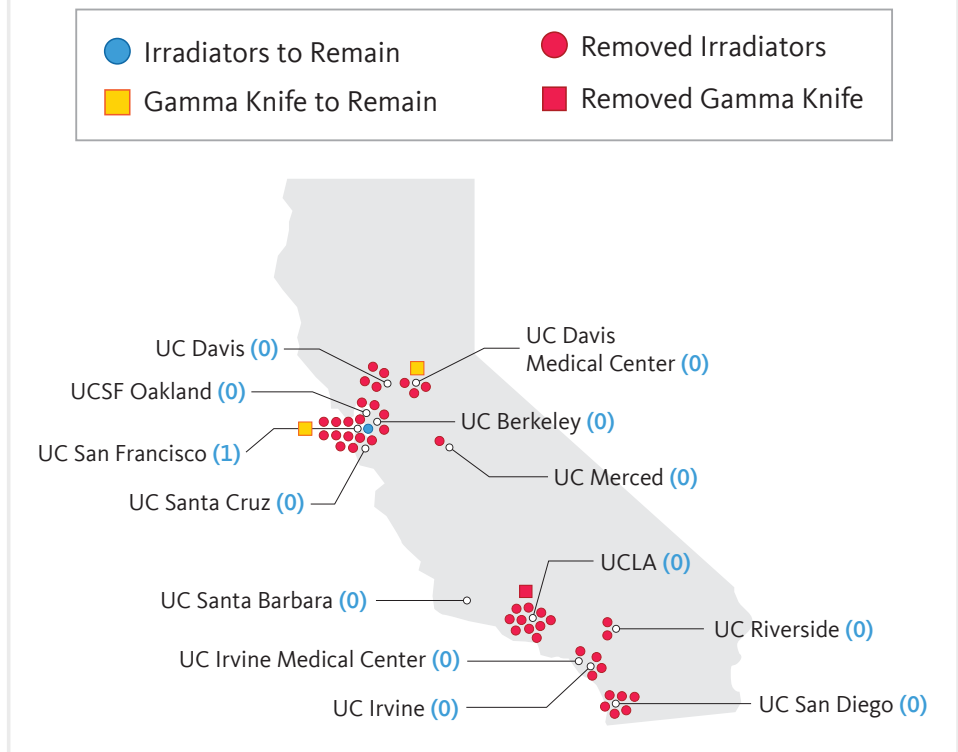
## Accomplishments

- Removed 5 Cesium Irradiators from the following locations:
  - UCLA (3)
  - UC Riverside
  - UC San Francisco
- Coordinated enhanced security measures for UC Merced due to government-imposed removal delays.
- Assisted in arranging updates to blood irradiators at:
  - UC Davis
  - UC San Francisco
- Developed PowerPoint Presentation for training local law enforcement agencies with security concerns and background information for Cesium Irradiators.
- Coordinated with UC Legal to develop a document defining entities' responsibilities for Irradiator removals.
  - National Labs
  - Subcontractors
  - Radiation Safety Teams
  - Radiation Safety Officer
  - Security Teams
- Supported UC locations with X-Ray Irradiators, including determining service contract expirations and contacts to assist in the transition from Cesium.
- Provided interim Radiation Safety Officer support for UC Irvine and UC Merced.
- Developed a checklist to assist in completing an extensive evaluation of the UC Merced Radiation Safety Program.

## Metrics



## UC Irradiators



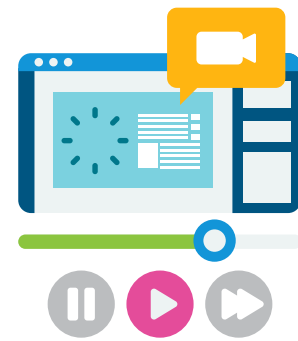
# Risk & Safety Training

The Risk & Safety Training CoE develops, distributes and analyzes systemwide training on environmental health and safety topics and risk-related initiatives. The CoE produces training in a variety of blended formats, including online (eLearning), instructor-led, tutorials (video), and webinars.

## Accomplishments

- Produced over 40 resources, including systemwide training courses and materials, presentations, conferences, and webinars.
- Managed course catalog of 243 courses and resources
  - Addressed 148 requests for accessibility, including issues not covered by course design, such as course transcripts and assistance with training completions
- Updated the UC COVID-19 prevention resources website:
  - Training and videos (new versions)
  - Guidance documents: new Cal/OSHA regulation 8 CCR 3205 (readopted), resources, and FAQ's
  - Cases dashboard, testing locations and symptom screeners by campus
  - Vaccine policies, announcements, and campus websites
- Completed 5 major training initiatives:
  - COVID-19 Prevention revision** [*eLearning, video and website*]: Resources designed to prevent illness and meet changing requirements of new Cal/OSHA regulation 8 CCR 3205; launched to over 14,800 people
  - Abuse Prevention (minors)** [*eLearning*]: Keeping your day camp, overnight camp and higher education program safe.
  - Professional Liability** [*webinar, website and videos*]: mediation strategies; launched to over 250 people
  - Research Security** [*video and website*]: over 1,000 views
  - Sexual Violence Sexual Harassment (SVSH) Professional Boundaries** [*eLearning and implementation plan*]: overview for Student Health Services (SHS) / Counseling and Psychological Services (CAPS) clinicians on how to establish professional boundaries, prevent violations, build and create a culture of safety, and respond to red flags; launched to over 1,700 people

## Metrics



# 184,444+

Online trainings were completed in the Learning Management System



Evaluations received: **44,042**  
("good" or "very good": **68%**)

Website Views: **23,393**

YouTube Views: **48,734**

## TOP 5 VIDEOS

- Ergonomics for Facilities
- COVID-19 Prevention
- Ergonomics for Dining
- Fieldwork Leadership
- Bloodborne Pathogens Awareness

## UC COVID-19 prevention resources website

- 3,289 visits** to the site from 7/1/21-6/30/22
- Peak daily visit: August 26, 2021 with **389 views**

# Centers of Excellence

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## **RISK MANAGEMENT**

- Unmanned Aircraft System Safety



# Unmanned Aircraft Safety System (UAS)

The Unmanned Aircraft System Safety CoE provides guidance and training in support of the safe operation of Unmanned Aircraft Systems, commonly known as drones. The CoE curates the UC Drones software application that was developed in partnership with Risk and Safety Solutions to manage flight requests and the reporting of flight data. The CoE also created the Presidential Policy that provides the framework and basis for the safe use of drones within the UC system and maintains the related policy guidance document.

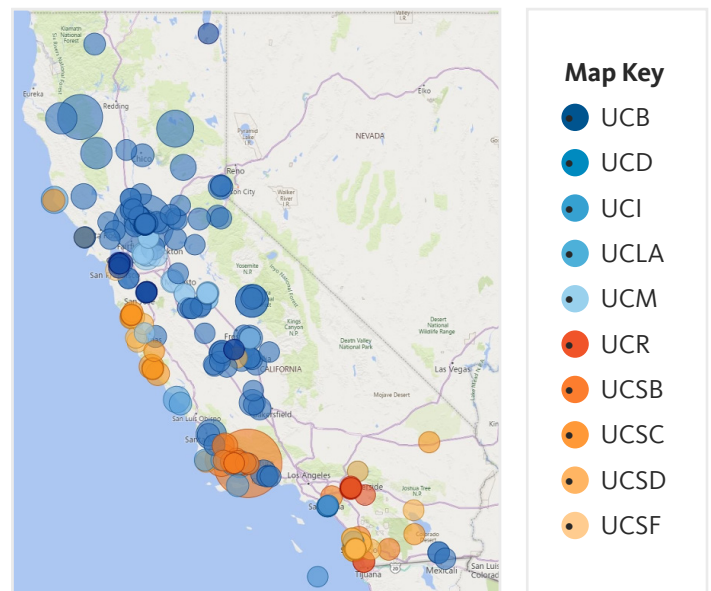
## Accomplishments

- Collaborated with UC Santa Cruz, UC ANR and CSU Monterey Bay for DroneCamp 2022, an in-person drone training workshop, with topics covering flight safety and data processing.
- Launched 2 new tools to support drone users:
  - Visual Line of Sight Estimator (provides an estimate of how far a pilot can see their drone)
  - UC Drone Risk Checker (updated risk analysis tool for assessing a drone project's risk)
- Deployed 2 training modules in the UC Drone Knowledge Portal:
  - Drone Flight Instruction
  - Part 107 License Guide for New Pilots
- Scheduled over 180 consultations on various UC drone-related projects and proposals to help drone operators keep up with the latest drone regulations, including the new The Recreational UAS Safety Test (TRUST) certificate for all student drone pilots (Released July 2021):
  - UC Merced: 42
  - UC Davis: 39
  - UC Berkeley: 20
  - UC Santa Cruz: 20
  - UC Riverside: 17
  - UC San Diego: 14
  - UC Santa Barbara: 12
  - UC Irvine: 11
  - UC San Francisco: 8
  - UCLA: 7
- Reviewed and assessed 18 safety incidents and provided recommendations on improving safety practices.

## Metrics

Stats	Number
DroneCamp participants	<b>95</b>
Flight Hours	<b>472 hrs</b> (+11% from FY20-21)
UAS Missions	<b>1,012</b> (+56% from FY20-21)
Average Approval Time	<b>&lt; 5 hours</b> (46% faster than FY20-21)
Drones in the UC System	<b>603</b> (+63 from FY20-21)
UC Drones Portal Analytics	<b>~2,600+ visits, 7,600+ page views</b>

## UAS Flight Missions



# Centers of Excellence

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## WELLNESS

- WorkStrong





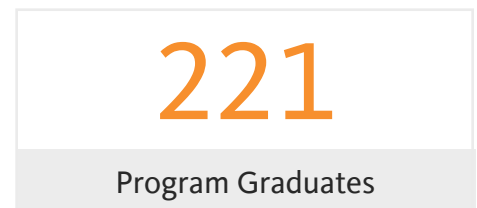
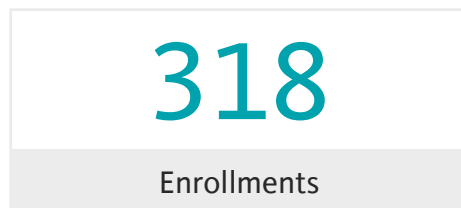
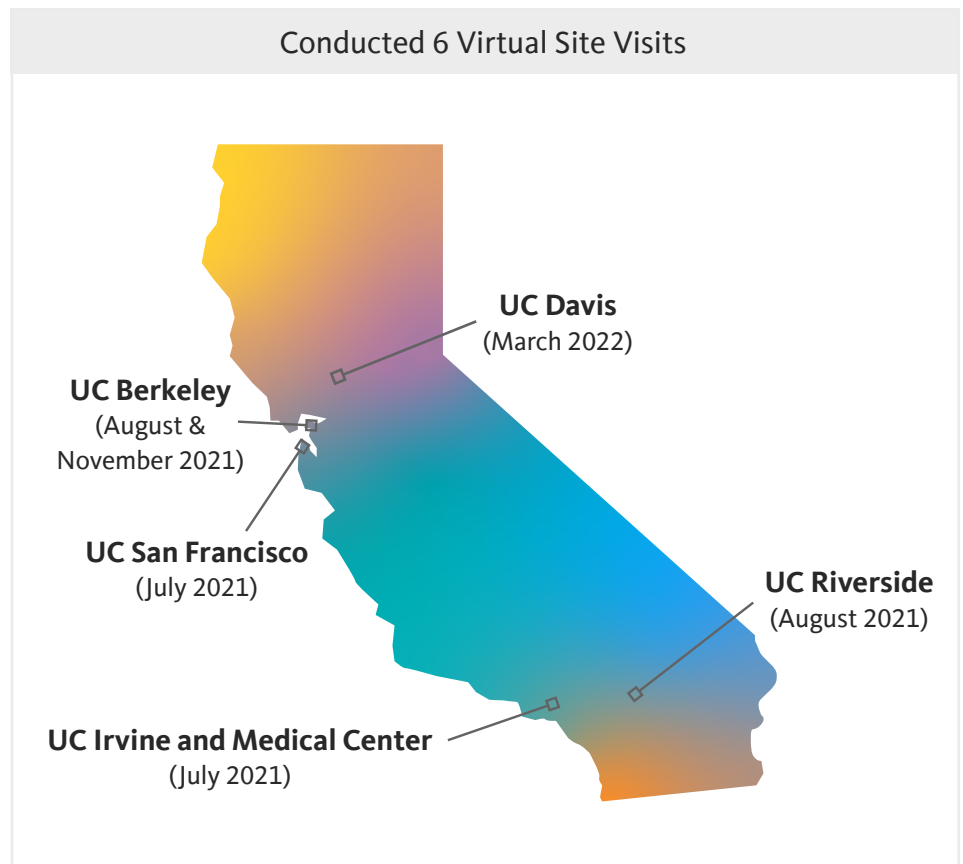
# WorkStrong Program

The WorkStrong CoE is a resource for all campuses to support increased enrollment in local WorkStrong programs. The WorkStrong program is designed to promote recovery from and prevent future workplace injuries with the expertise and collaborative support of UC staff in wellness programs, occupational health and recreational services. Participation in WorkStrong will decrease the likelihood of repeat occupational injuries and result in improved worker health, fitness, and overall well-being.

## Accomplishments

- Collaborated with the UCOP Risk Services Communications Core Services Team to develop WorkStrong posters that convey key elements of the program to UC employees being treated by an occupational health physician.
- Coordinated with Risk & Safety Solutions to launch a new WorkStrong online platform (April 2022) to increase security of information shared between the WorkStrong program participants, physicians and service providers.
- Reinstated quarterly check-ins (in addition to site visits every other year) with each program location to identify support needs faster, ensure consistent delivery of the program systemwide and to maintain a thriving program at each location.
- Created a “WorkStrongER” pilot program structure to assess whether a tune-up after a new, post-program injury is of value.

## Metrics



# Shared Services

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## **ENVIRONMENTAL HEALTH & SAFETY (EH&S)**

- Dive and Boat Safety Consortium
- Fire and Life Safety

# Dive and Boat Safety Consortium

The Dive and Boat Safety Consortium provides systemwide resources on behalf of UCOP and oversight, support and training for diving and boating operations at participating campuses. Consortium members include UC Berkeley, UC Irvine and UC Merced.

## Accomplishments

- Continued to support researchers, post-docs, graduate students and associated administrative staff at UC Berkeley, UC Irvine and UC Merced as activities resume amid the continuing global pandemic.
- Supported diving and boating safety at UC Berkeley's Gump Station.
- Provided the required training (classroom, hands-on emergency skills, confined water and open water), planning and support for researchers conducting dive operations in the field.
- Coordinated an in-person meeting of the UC Diving Safety Officers Workgroup to address action items and high priority deliverables from the 2021 American Academy of Underwater Sciences (AAUS) review of UC Scientific Diving programs.
- Participated in the AAUS, the Scientific Boating Safety Association (SBSA) and Diving Officers of California (DOCal) meetings.
- Worked with the AAUS to develop eLearning courses for Scientific Nitrox Divers and Lead Divers.
- Assisted with the development of a best practices guideline for snorkeling and free diving programs in conjunction with AAUS.
- Updated the UC Consortium Diving Safety Manual which was accepted by the AAUS.

## Metrics

**5 Dive Plans** were approved with locations in:



- Santa Barbara
- San Diego
- Smithsonian Tropical Research Institute (STRI) in Panama
- Palau



16

Consortium Divers and Boaters Who Conducted Fieldwork

Training and checkout dives conducted

**1 UC Irvine diver**  
San Diego, Spring 2022

**5 UC Merced divers**  
Monterey, Spring 2022



CPR, First Aid, Oxygen Administration, etc. was conducted for **5 UC Merced divers** in June of 2022

Emergency Skills Training

Boaters Approved for Vessel Operations



**2 UC Merced** boaters and **1 UC Irvine** boater



# Fire and Life Safety

The Fire and Life Safety (FLS) Shared Service provides systemwide resources and consultation on behalf of UCOP, as well as training and support for fire and life safety programs at participating locations, which include UC Davis Health, UCI Health, UCLA Health, UC San Diego Health, and UCSF Health. The FLS Shared Service manages UC participation in the California Department of Health Care Access & Information (HCAI) Fire Academy Program. This program provides UC with qualified employees to fulfill the roles of HCAI Designated Campus Fire Marshals (HDCFM) that are required in the UC’s Memorandum of Understanding (MOU) with HCAI for the review of fire and life safety plans and inspection of construction projects at UC Health locations.

## Accomplishments

- Recruited 6 UC Fire and Life Safety Officers for the Department of HCAI Fire Academy Program.
- Assisted with obtaining delegation of a third-party HCAI, to complete inspections and plan reviews for construction and building updates within UC Health Systems.
- Established quarterly meetings with command staff at HCAI and OSFM.
- Developed proposed language for the renewal of MOUs with OSFM and HCAI.
- Developed and distributed an informational bulletin regarding Senate Bill 1044 on replacing firefighting foam containing Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS).
- Provided clarification to the UC system on the minimum California Fire Code requirements for the frequency of Fire and Evacuation Drills.
- Provided direct support to UC Merced by collaborating with the UC Office of the President and the Office of the State Fire Marshal (OSFM) to improve the Fire and Life Safety Program
  - One 1-day site visit and at least weekly calls with stakeholders
  - Guided the process for approval of a Designated Campus Fire Marshal (DCFM)
  - Participated on an interview panel for a new fire protection consultant
- Provided temporary DCFM coverage for UC Santa Barbara allowing fire and life safety operations, including plan review and inspections, to continue during the local DCFM’s leave
  - Two 1-day site visits
  - Numerous calls with the Campus Building Official, Fire Marshal, and the fire protection engineering consultant
- Supported all UC campuses through the process of identifying and nominating DCFMs and Lead DCFMs to be approved by OSFM.

