

LABORATORY SAFETY AWARDS & INNOVATIONS EVENT

December 9, 2019
HUB, room 250





WASHINGTON
Clean Energy Testbeds

University of Washington Clean Energy Institute

HYDROFLUORIC ACID SAFETY IN A USER FACILITY

Michael Pomfret & Phillip Cox

BE BOUNDLESS



WASHINGTON CLEAN ENERGY TESTBEDS

The Washington Clean Energy Testbeds, located in the Bowman Building provide fee-for-use facilities with state-of-the-art fabrication, characterization, and computational capabilities. Researchers from UW and industry work on next-generation solar energy and battery materials and devices, modeling of energy systems and the grid, and other related technologies.

LAB USER SAFETY TRAINING

The following are required of all new users:

> EH&S Online Trainings

- Fire Extinguisher
- GHS Globally Harmonized System (HazCom) Training
- Lead Awareness (Perovskite Photovoltaics)
- Managing Laboratory Chemicals
- Fume Hood

LAB USER SAFETY TRAINING

The following are required of all new users:

> On-Site Orientation

- Important Lab Documents**
- Dress Code & Gowning Procedure**
- Chemical Hygiene Plan & Materials Requests**
- Buddy System**
- Emergency Communication**
- Fire Safety & Evacuation**

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WHY HF IS USED

HF materials requests MUST justify use. Currently only used for purification of materials for lithium-ion batteries

- > **Users encouraged to find alternatives**
- > **Minimal amounts and concentrations**
- > **Additional Training Required**
 - **EH&S Online**
 - **On-site with signed verification**



CURRENT HF SOP

Lab-specific SOP developed based on EH&S SOP

- > Teams of 2
- > Staffed hours only
- > Clear signage
- > Spill kit
- > Cleaning materials
- > Emergency documents



ACCIDENT AND RESPONSE

Altered set-up led to faulty ring stand placement, which led to spill

- > **Emergency response went well**
- > **No injuries**
- > **Deadline was a factor**
- > **Corrective actions to enhance prevention & response**



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Thank You!

For more information

- Web: wcet.washington.edu
- Twitter: @WCETestbeds
- Email: mpomfret@uw.edu or wcet@uw.edu

BE BOUNDLESS



UW EH&S LABORATORY SAFETY AWARDS & INNOVATIONS EVENT

CERID SAFETY TEAM

Grant Whitman



CENTER FOR EMERGING AND RE-EMERGING INFECTIOUS DISEASES

- > CERID specializes in cross-disciplinary research to identify, prevent, diagnose, and treat infectious diseases
- > Spanning 15 labs, 2 floors, and over 100 researchers, ensuring that everyone is on the same page with respect to safety is of paramount importance



UW MEDICINE AT SOUTH LAKE UNION

A campus away from campus

- > UW Medicine SLU buildings are leased from BGIS Realty
- > Although still subject to UW EH&S policies, over time there were some differences that arose in policy and policy implementation



STARTED INTERNALLY, EXPANDED OUTWARD

- > The CERID Safety Team was established in August 2018 to ensure a cohesive safety program and structure within the center
 - Includes representative from each lab in unit
 - Focuses on biosafety and chemical handling and management
- > As cohesiveness within CERID was established, began to address other issues around the SLU campus



CERID SAFETY TEAM QUARTERLY MEETINGS

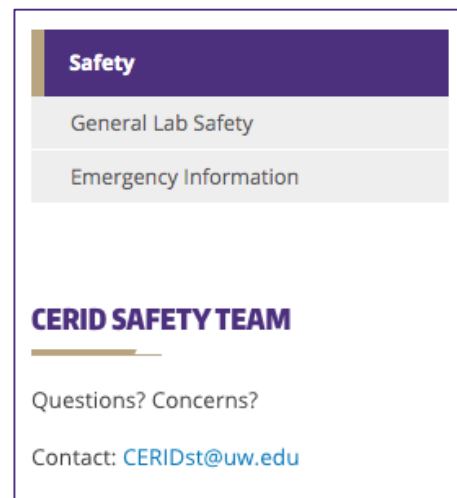
A time to address incidents and concerns

- > Incidents that the team has addressed
 - Mouse bite incidents
 - Hit by falling item
 - Security incidents
- > Review new policies/changes to existing policies
- > Identify tasks to make CERID safer, more efficient, more organized



GENERAL LAB SAFETY

- > CERID shared equipment, open to all users now has an equipment point of contact for all users to receive training from prior to use
- > Team sends monthly newsletter with safety related topics, for both in the lab and outside of it
- > Website is updated with commonly used resources and information



MONTHLY NEWSLETTERS

Segregating Hazardous Waste Streams

A fire in the Brotman Autoclave Room highlights the importance of segregating waste streams. An investigation identified that dimethyl sulfoxide (DMSO) was improperly disposed of into a pipette keeper box. During the autoclave process, it is suspected that the DMSO ignited and consumed the oxygen in the autoclave. When the autoclave was opened the following day, black smoke billowed out and the waste reignited from smoldering embers. The fire was extinguished by the technician.

- Flammable, reactive, oxidizer, corrosive, toxic, and radioactive wastes should not be disposed of with biohazard waste.
- If you have biohazard waste contaminated with other hazardous waste, contact ehsbio@uw.edu for consultation.
- For more information, consult the [Biohazardous Waste Guidelines](#), page.



W UNIVERSITY of WASHINGTON



DECEMBER 2019

CERID SAFETY TEAM

Hello CERID,

Happy Holiday Season!

Updated Hazardous Waste Labels

UW EH&S has updated hazardous waste labels to be in compliance with the new [Hazardous Waste Generator Improvements Rule](#). These labels fulfill all requirements of the new standard. Waste containers over 4 liters no longer need two labels if replaced with this new label. Learn about the update and print your new labels [here](#).

UNIVERSITY OF WASHINGTON
**HAZARDOUS
WASTE**

Building: _____ Room: _____
Contact Name: _____
Phone: _____ Email: _____
Chemical Composition: _____ %

PRIMARY HAZARD:
TOXIC

Request collection from ehs.washington.edu
Questions: call 616-5835

Text-to-911 Now Available in King County

Call if you can. Text if you can't.

King County, along with eleven other Washington counties, now accept text messages to 911. This service benefits those that are unable to speak during emergency situations, such as a home invasion or abusive partner, as well as those that are hearing and/or speech impaired. You should always call 911 if you can, as you will be able to provide information more quickly than over text. Here's what you need to know about this new service:

- To text 911, open your text messaging program, enter "911" in the recipient field. In the body of the message, include the exact location of the emergency including the city, and the type help needed (police, fire, or medical) and press send. Operators may follow up with additional questions.
- If you are texting 911 in order to not be heard, be sure to silence your phone.
- Do not include other recipients, as a group message will cause the message not to go through.
- Interpreters are not available for text at this time. Only use plain english and do not use abbreviations or acronyms.
- Photos and videos cannot be sent.
- If Text-to-911 is unavailable in your area or the message otherwise does not go through, you should receive an alert message.
- Text-to-911 is not available while roaming.



UPDATING FIRE SAFETY AND EVACUATION PLAN

- > Previous campus Emergency Evacuation and Operations Plan (EEOP) was from 2011
- > With the rollout of the Fire Safety and Evacuation Plan (FSEP), good time to lobby facility staff to update
- > Established meetings with Scott Nelson (EH&S Fire Safety & Engineering Manager) and Facility staff to identify updates needed



EMERGENCY PLANNING

- > Conducted earthquake drill and evacuation drill
 - Maintain a roster and identify a contact from each lab
- > In the process of obtaining supplies for a disaster kit in the event of a prolonged emergency

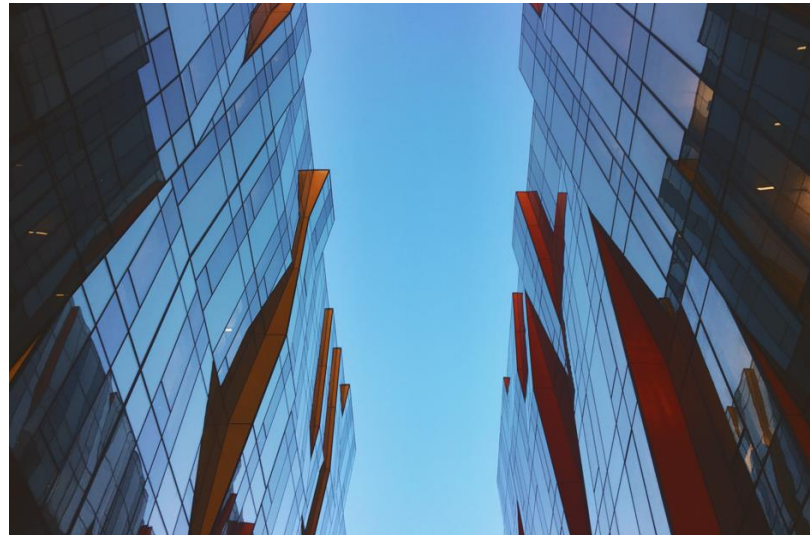


CERID SAFETY TEAM CONTACT INFORMATION

CERID Safety Team Members

Lynn Barrett, Robyn Emery, Mark Fernandez, Rob Gillespie, Chris McClurkan, Samantha Michaels, Glenna Peterson, Lesley Rabago, Melanie Shears, Robert Smith, Richard Wells, Grant Whitman, Krystle Yu

- ceridst@uw.edu
- cerid.uw.edu/safety





2019 SAFETY INNOVATIONS

ENVIRONMENTAL HEALTH & SAFETY
UNIVERSITY *of* WASHINGTON

Lukehart / Marra Labs
Neurology, School of Medicine

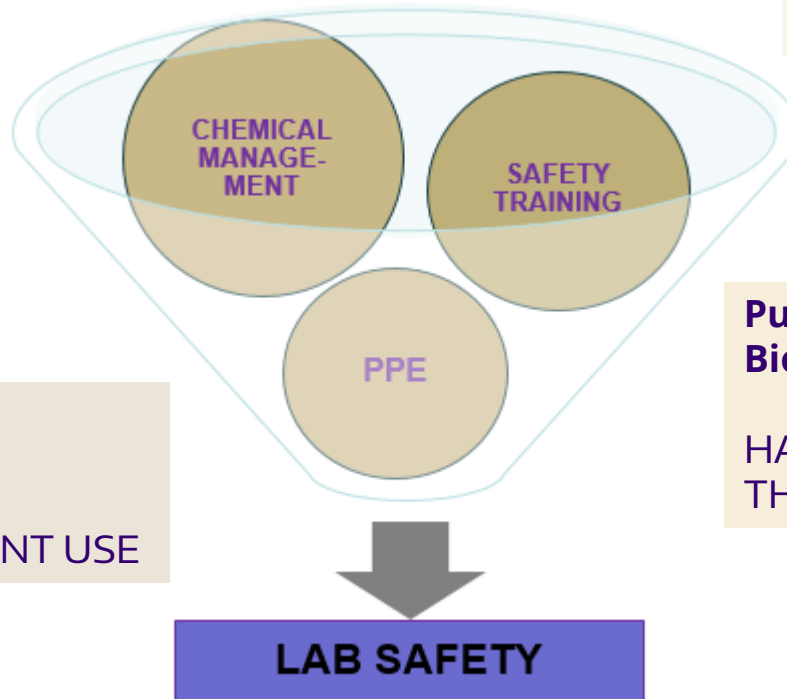
SAFETY QUIZZES AS PART OF LAB MEMBER
ORIENTATION AND TRAINING

Gale Lab
Immunology, School of Medicine

USING SLOGANS AND UNIQUE SIGNAGE
FOR SAFETY COMMUNICATION

Baker Lab
Biochemistry, College of Arts & Sciences

HOLDING PPE PRODUCT SHOWS
FOR LAB MEMBERS



Pun Lab
Bioengineering, College of Engineering

HANDS-ON TRAINING THROUGH
THE BUDDY SYSTEM

Ratner Lab
Bioengineering, College of Engineering

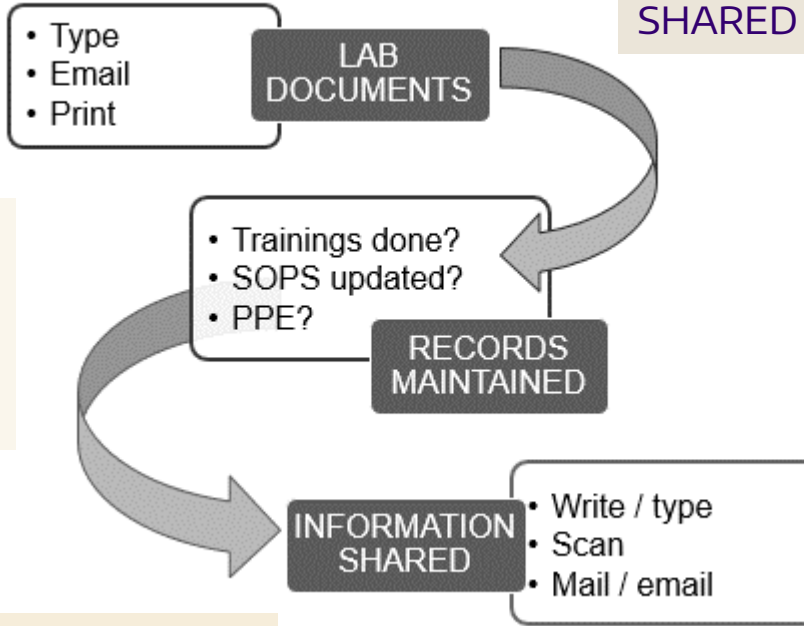
NOTIFICATION SYSTEMS FOR EQUIPMENT USE

Steig Lab, IsoLab
Earth and Space Sciences,
College of the Environment

LAB SOP WEBSITE

Raymond RedCorn
Civil and Environmental Engineering,
College of Engineering

SHARED EQUIPMENT INVENTORY APP



Dunham Lab
Genome Sciences, School of Medicine

CUSTOM CHECKLISTS FOR TRAININGS
AND POLICIES

Velian Lab
Chemistry, College of Arts & Sciences

RISK EVALUATION SOFTWARE

Society for Advanced Rocket Propulsion (SARP)
Aeronautics and Astronautics, College of Engineering

INCLUDING STUDENTS IN RISK ASSESSMENT
AND SOP DEVELOPMENT

MacCoss Lab
Genome Sciences, School of Medicine

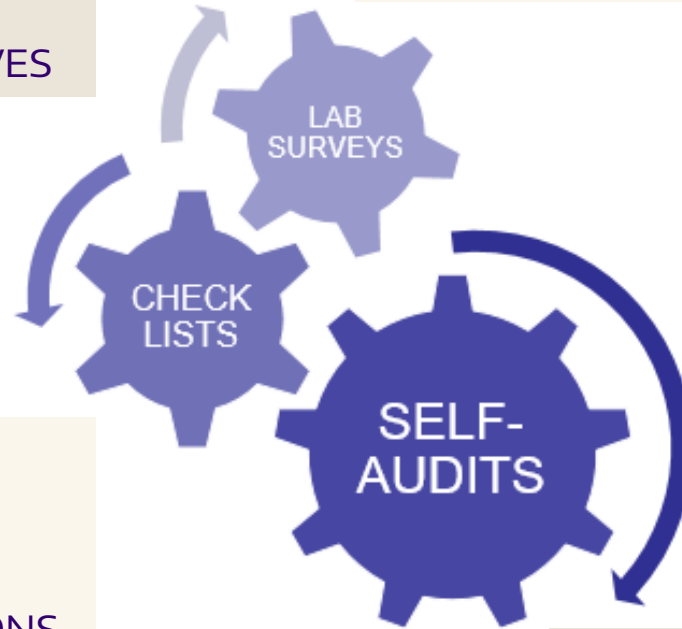
ELECTRONIC
CHEMICAL HYGIENE PLAN

Jane Ranchalis
Medical Genetics, School of Medicine

TRAINING CHECKLISTS FOR AUTOCLAVES

Nance Lab
Chemical Engineering, College of Engineering

REFRESHER TRAINING DAYS FOR THE WHOLE LAB



Gelb / Velian / Dalton Labs
Chemistry, College of Arts & Sciences

CONDUCTING CROSS-INSPECTIONS
WITH NEIGHBORING LABS

Coombs Lab
Lab Medicine, School of Medicine

ROTATING
ASSIGNMENT OF SELF-INSPECTIONS

Kerr Lab,
Biology, College of Arts & Sciences

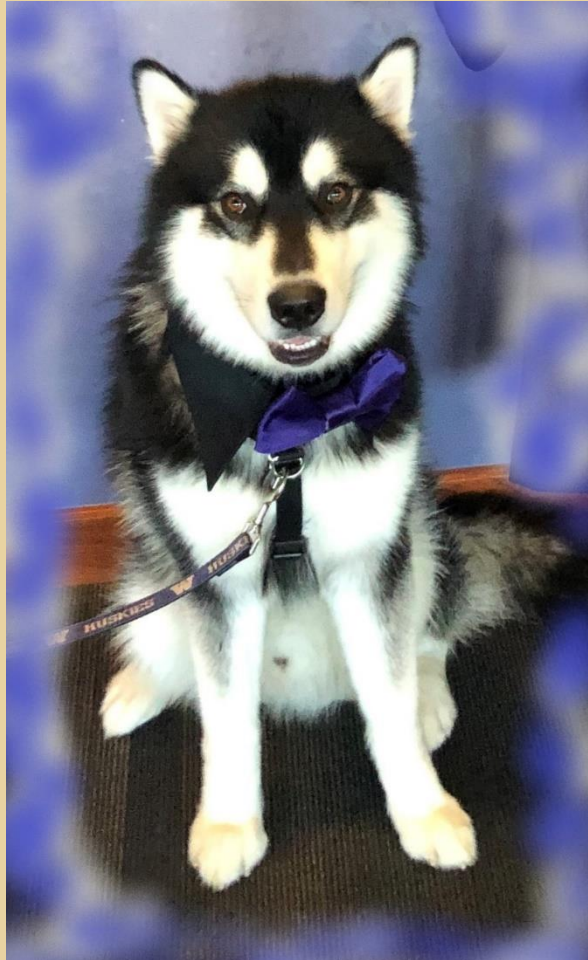
REVISING PROTOCOLS TO REDUCE THE RISK OF FIRE



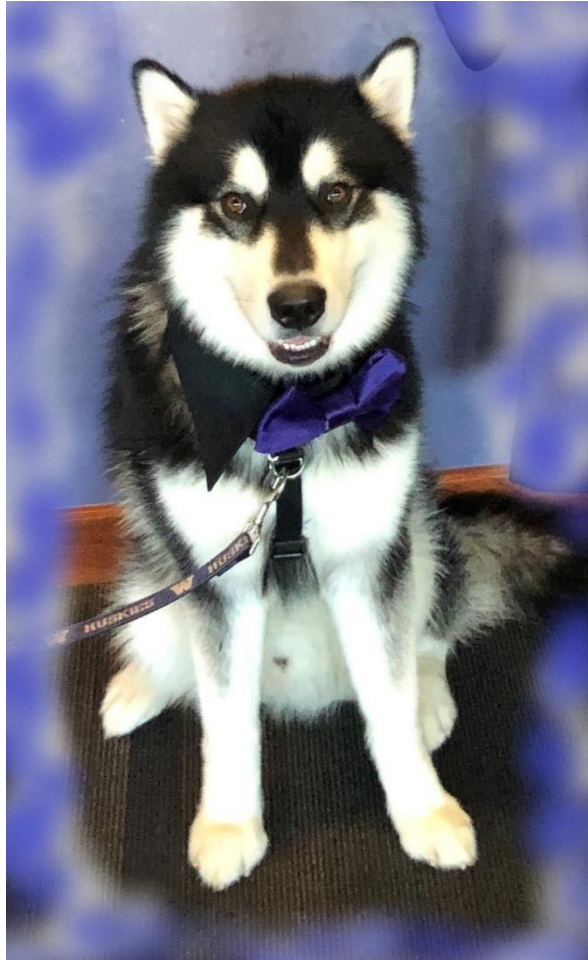
2019 SAFETY AWARDS

ENVIRONMENTAL HEALTH & SAFETY
UNIVERSITY *of* WASHINGTON

2019 PACK LEADERS IN SAFETY AWARD WINNERS



- ❖ **Gerard Cangelosi**
- ❖ **Charles Chavkin**
- ❖ **Manuel Ferreira**
- ❖ **David Ginger**
- ❖ **Ann Groat-Carmona**
- ❖ **Santica Marcovina**
- ❖ **Jonathan Posner**
- ❖ **Eric Steig**
- ❖ **David Symon**



2019 TOP DAWGS IN SAFETY AWARD WINNERS

- ❖ **Department of Anesthesiology**
- ❖ **Department of Aquatic & Fisheries Sciences**
- ❖ **Department of Chemical Engineering**
- ❖ **Department of Global Health**
- ❖ **Department of Obstetrics & Gynecology**
- ❖ **Department of Pediatrics**
- ❖ **Department of Physics**

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