

# Safety Beacon

Department of Environmental Health and Safety

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## HAZWOPER Training is Coming!



In collaboration with the Department of Geological Sciences, the Department of Environmental Health and Safety is once again hosting Hazardous Waste Operations and Emergency Response (HAZWOPER) training this January. Graduates of the 40-hour course will be certified to the technician level and be able to access hazardous waste sites, conduct associated hazardous waste operations as well as respond to emergency chemical spill situations. This course will take place January 28 – 31, 2014 from 8 a.m. to 6 p.m. and will be held in the General Services Building, room 130.

A new addition this year will be the 8-hr refresher! After successfully completing the initial 40-hr course OSHA requires an annual 8-hr refresher thereafter to maintain a level of competency. This course will be offered on January 31, 2014 in the same location as the 40-hr starting at 8 a.m. and concluding at 4 p.m. Both courses are available to the University community as well as local Industry.

University laboratory managers, building managers responsible for laboratory facilities, and first responders are all encouraged to enroll. Space is limited so don't delay. For interested UD employees use the following course information to register: for the 40-hr GEOL 422 / 622 and for the 8-hr refresher use 467/ 667. Questions? Call Mike Gladle 831-1435.

## What's your Flammable Liquid MAQ?



No, MAQ isn't a new IQ test nor is it a new federal agency. MAQ stands for Maximum Allowable Quantity and it is an important component the safe storage of flammable liquids.

Fire code limits the amount of flammable liquids that can be stored in laboratories based on the type of chemical, how it is stored, and where in the building the lab is located. Fire protection plans are based on MAQs and exceeding these limits is a serious safety issue.

It is incumbent upon all Laboratory Managers and Principal Investigators to know what the flammable liquid MAQ is for their labs and to make sure these limits are not exceeded. Furthermore, they should make sure all flammable liquids are properly stored when not in use and keep close tabs on the inventory levels.

Don't know your lab's MAQ? Contact Kevin McSweeney or Jane Frank and we will be glad to help you determine your MAQ and provide advice on how to keep your laboratory space fire-safe.

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*Interpretive Stormtech® sign at the Harrington Beach*

## **UD Sustainability Fund Highlights Underground Stormwater Management with New Interpretive Signs**

Managing rain water runoff is challenging on the urban parts of campus. Traditional methods of stormwater ponds or dry detention are not practical as there is not enough open land available so new approaches are needed for dealing with stormwater runoff. Underground storage devices are an alternative method to controlling runoff and improving water quality. The University uses StormTech® chambers on urban parts of the campus where suitable soil conditions exist. U-shaped chambers are installed underground on a bed of stone and then covered by more stone and soil. A storm drain directs rain water to the chambers which act like an underground bathtub and slowly let the water infiltrate into the stone and the soil below. If a heavy rain drops more water than the chamber can handle, the excess water is directed to the local storm water system to prevent flooding.

Parking lots and other structures such artificial turf fields can be built over the StormTech® chambers. Since the chambers are underground and not seen by the public, people are often unaware of their role in managing rain water. Recognizing the importance of educating citizens, the UD Sustainability Fund provided a grant to the Environmental Health and Safety Department to design and install interpretive signs.

Look for the interpretive signs the where the StormTech® chambers are installed: Laird artificial turf field, Harrington artificial turf field, Visitor’s Center parking lot, Roselle Center for the Arts garage, and, coming this Spring, at the new Carpenter Sports Building artificial turf field. Other StormTech® installations are located underground at the Barnes and Noble parking lot, Life Sciences parking lot, and the Frazier field artificial turf field.

Special thanks to the UD Sustainability fund and the following contributors to the project:

- Department of Agriculture: Dr. Jules Bruck, Dr. Sue Barton, Sarah Minnich (graduate student)
- Water Resources Agency: Kate Miller (graduate student)
- Grounds Department: Roger Bowman

These stormwater chambers may be unseen but they are definitely not unimportant. They are a key component of the University’s effort to keep our creeks cleaner.



## RA's Gather for Annual Fire Safety Training

One of the important responsibilities of Resident Assistants is the safety of the students in their dorms. Every August, before the beginning of a new academic year, the RAs gather for special fire safety training provided by Environmental Health and Safety, the University of Delaware Police Department, and Residence Life and Housing. The session was held in the early evening on East Campus. In addition to information sessions about such topics as evacuating a building and developing fire safety awareness, the RAs gained hands-on experience using a fire extinguisher to put out a fire, learned how to properly escape from a smoke-filled hallway, and learned about kitchen fires.



## CONSUMER SAFETY ALERT — Laser Pointers: Study Shows Many Laser Pointers Fail Eye Safety Regulations

A recent study by researchers at the National Institute of Standards and Technology (NIST) found that most laser pointers they tested did not comply with federal eye safety standards.

Of the 122 laser pointers NIST randomly purchased on the internet, 90% of the green lasers and 44% of the red lasers were found to be unsuitable for use in a public setting such as a classroom, conference room, or home. Furthermore, most of the lasers found to be non-compliant were also labeled with the incorrect laser hazard “class”, claiming to emit a lower laser power than that which was actually measured. Another finding of the NIST study was that many of the green lasers also emitted invisible infrared radiation at levels that could damage the eye. This was primarily due to cheap construction.



Accidentally (or purposely) shining one of the laser pointers that fail eye safety standards into someone’s eye could result in a serious eye injury. Follow these suggestions when buying and using a laser pointer:

- Do not buy lasers as toys or give them to children.
- Consider buying a laser pointer that emits a red beam instead of one that emits a green beam.
- All lasers have a warning label that shows the laser “class”. Consider buying a Class 2 laser pointer, instead of a Class 3 pointer.
- If you have a green laser pointer labeled as a Class 3A, Class IIIa, or Class 3R laser, consider replacing it with a red Class 2 pointer.
- Lasers that claim to pop balloons or burn materials are not safe to use as laser pointers. Never shine a laser pointer at your eye or towards a person, vehicle, mirror, or window.

More information about the NIST study can be found at <http://www.nist.gov/pml/div686/pointer-032013.cfm>  
 Contact the UD Laser Safety Officer (831-8475) if you have questions about this matter.

## Compliance Requirements when Autoclaving Regulated Biological Materials

Preventing the escape and dissemination of a regulated organism or agent is a minimal requirement for researchers, especially those holding a United States Department of Agriculture Permit. When an investigator signs a federal regulatory issued permit they agree to meet all permit conditions including proper management and documentation of waste. If a violation of a permit occurs, regulators may cancel the permit, which may have a significant affect on planned research. Furthermore, a violation may also result in civil or criminal penalties.



To ensure that all researchers and investigators are complying with the United States Department of Agriculture Animal and Plant Health Inspection service permits, the following requirements should be followed:

- a. Waste must be autoclaved at 121° Centigrade (250° Fahrenheit) for a minimum of 30 minutes.
- b. Special autoclave tape or another type of indicator must be placed on each bag or sharps container prior to treatment. These devices change color when exposed to the minimum temperature and time limits of autoclaving. The autoclave tape or other indicator on each container must be checked to verify color change before disposal.
- c. A log must be completed by each user for each autoclave cycle. All parameters must be noted as listed on the log for each autoclave load.
- d. If the autoclave does not attain the minimum time and/or temperature or the autoclave tape does not change color, a notation must be made in the comment section of the autoclave log and the load must then be treated again after placing new tape on the material. If minimum time and temperature is not attained on the second cycle, users must take the autoclave out of service and contact the person responsible for maintaining it. Waste must be treated at the alternate autoclave until the unit has been repaired.
- e. Thermometers on the autoclave must be calibrated annually and a written record of the calibration must be maintained. Calibration should be done by an authorized autoclave service company during routine servicing.
- f. Every 6 months, test the operation of the autoclave using a commercially available test kit that uses bacterial spores of *Bacillus stearothermophilus*, which are rendered unviable at 121° C (250° F). For the test, ampoules of *B. stearothermophilus* are autoclaved along with a load of waste. At the end of the cycle, the ampoules are incubated for 48 hours and then observed for any sign of growth, which would indicate that the autoclave is not sterilizing properly. If any growth is observed, the autoclave must be serviced and retested until it passes testing.

### What's New?

The Faculty Compliance Guide has been recently updated. This is an excellent tool for researchers who are about to join our university and set up their lab, or for recently-arrived faculty. There is a checklist to determine what environmental health and safety programs apply to their work, and brief guidance on each applicable topic as well as where to find additional information. The guide is available at <http://www.udel.edu/ehs/safetycomm/>

# Happy Holidays

From our EHS family to yours!