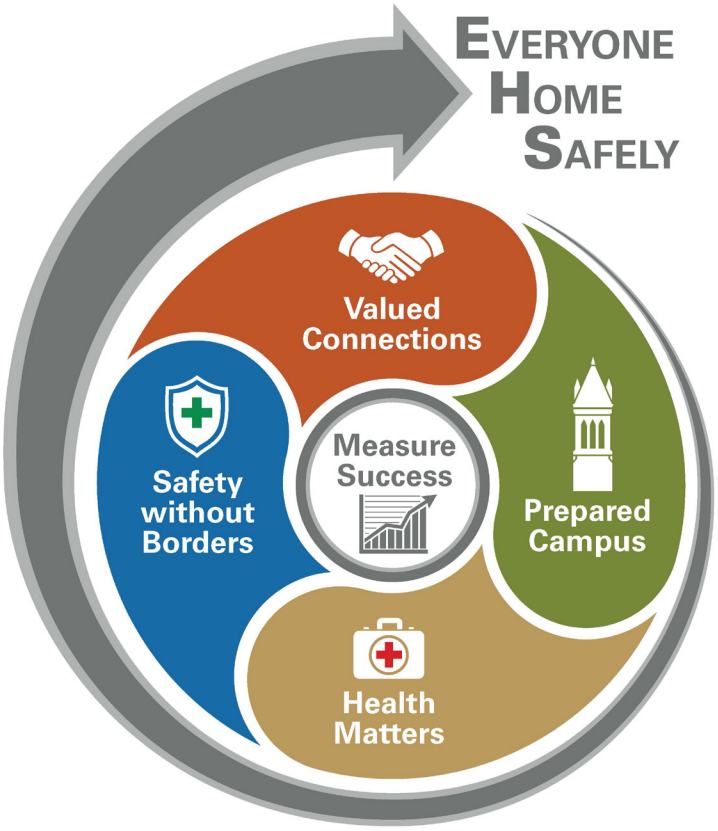
IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

ENVIRONMENTAL HEALTH AND SAFETY

Annual Report

2016



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Valued Connections | Prepared Campus | Health Matters | Safety without Borders | Just the Facts

Prevention: Thinking Ahead

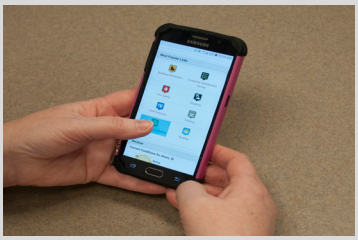
Greetings from the Department of Environmental Health and Safety (EH&S). We invite you to review our 2016 Annual Report to learn more about our department.

The report highlights EH&S's successes, commitments, and goal to send "**E**veryone **H**ome **S**afely".

— Paul Richmond, Director EH&S

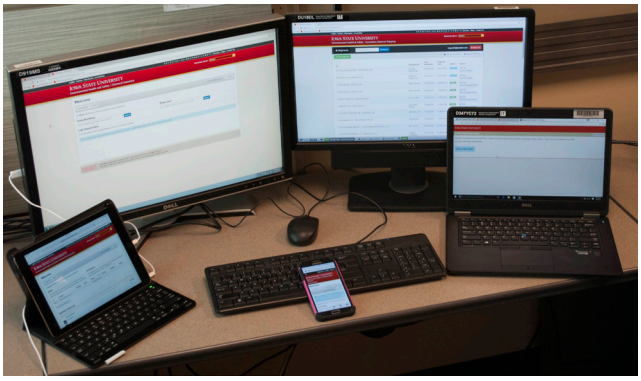
Valued Connections

Connecting Users and Technology



Several new and updated online applications were added or improved to enhance usability and provided quick data access for our customers. Two of the major roll outs included the updated Waste Removal Form and the Hazardous Materials Shipment application.

- The Waste Removal Form allows users to quickly enter waste removal information, review their requests, and access their history. The system is now compatible with mobile devices.
- With a growing number of packages containing hazardous materials being shipped from campus, the Hazardous Materials Shipment application provides the campus community an efficient tool to input information and track the status of their packages.



Other systems with additional enhancements and improvements:

- The Chemical Inventory system is now tracking over 90,000 chemicals in campus laboratories.
- Web applications were created to provide Environmental Health and Safety (EH&S) staff and colleagues with instant access to data while on campus.
- The EH&S customer satisfaction survey provides feedback to make improvements to campus services.

Valued Connections

Researching the Future

The Senior Vice President and Provost sponsored a Symposium on Research Safety. The symposium was coordinated by the Department of Environmental Health and Safety (EH&S) in collaboration with the Department of Agricultural and Biosystems Engineering, Office of the Vice President for Research, and Ames Laboratory. The purpose of the symposium was; to provide a briefing on the national outlook on research safety and facilitate collaborative conversations about safety culture at Iowa State University.

There were **120** attendees comprising of research faculty, post-doctoral researchers, and graduate students. Specific areas of discussion included, fire safety, punctures and lacerations, general safety, and proper management of potentially hazardous materials.

It is our hope that this symposium becomes the spring board for future discussions on research safety and safety culture on campus.

Featured Speakers included:

Dr. Mark McLellan, Vice President for Research and Dean of Graduate Studies, Utah State University

Dr. Robert Emery, Vice President for Safety, Health, Environment, and Risk Management and Associate Professor of Occupational Health at the University of Texas Health Science Center at Houston

Dr. Lisa Nolan, Dr. Stephen G. Juelsgaard Dean's Chair in Veterinary Medicine, Iowa State University

Dr. Steven Martin, Distinguished Professor, Materials Science and Engineering, Iowa State University.

Dr. Thomas Lograsso, Director, Materials Science and Engineering and

For more information visit Symposium on Research Safety web page.

Valued Connections

Engineering a Commitment to Safety

The College of Engineering (CoE) and Environmental Health and Safety (EH&S) teamed up to enhance safety. Mary Wickham, Associate Dean of Operations and Planning, expressed an interest in increased safety awareness as part of CoE daily operations. During 2016, well-defined goals were outlined supporting increased safety focus on student clubs, research and teaching laboratories, field research, and the development of emergency preparedness.

The partnership resulted in a job search and hiring of an Iowa State University Agricultural and Biosystems Engineering graduate to be the “boots on the ground” face of the collaboration.

Prepared Campus

Exercising a Commitment

Emergency exercises and drills may look like fun and games, but they are serious work. Drills and exercises provide interactive hands-on training and discussion among participants to help them plan their actions in the event of an actual emergency.

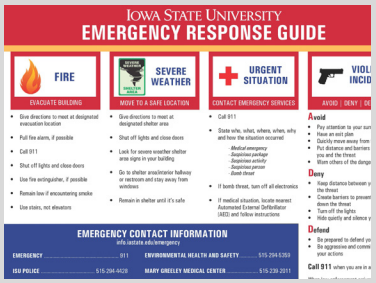
Environmental Health and Safety (EH&S) coordinated and participated in numerous training, drills and exercises in 2016 including

- Confined space exercise with Ames Fire Department at the ISU Power Plant
- IT leadership tabletop exercise
- ISU senior leadership and Critical Incident Response Team tabletop exercise
- Student Health tabletop exercise
- Athletics Event Staff training and tabletop exercise
- Department of Residence Weather Awareness and AED presentation
- ISU Foundation Severe Weather Awareness training
- Storm Spotter training in conjunction with the National Weather Service
- ISU Lab School Preschool Home Fire Safety talk
- Industrial Design 302 class Disaster Challenges presentation

Over **500** faculty, students, and staff at Iowa State University participated in an emergency preparedness training, exercise or drill to improve the health and safety of our campus.

Prepared Campus

A System of Safety

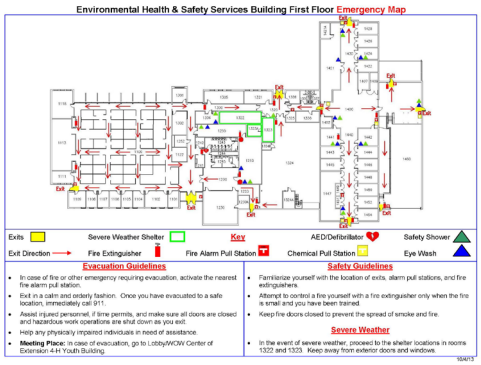


Fires, severe weather, medical emergencies, and violent incidents are occurrences we never wish upon our campus; however, having systems in place can make these traumatic events more manageable.

Emergency Response Guide posters are now located in nearly **800** classrooms, teaching laboratories, and departmental seminar rooms. The posters provide quick, useful information needed in the event of an emergency.

Knowing where to go or how to evacuate in the event of an emergency is critical. Campus emergency maps provide key information including storm shelters, evacuation routes, and emergency equipment locations.

Medical emergencies may require the use of an Automated External Defibrillator (AED). In 2016, there was a **20%** increase in AEDs on



campus including 10 units in residence halls as well as 10 in various campus locations for a total of **121**. Since the inception of the program, AEDs have been used on campus **5** times, saving **4** lives.

Prepared Campus

A Good Time Starts with an Inspection

Incidents due to improper construction have occurred on campuses and in communities around the nation. Environmental Health and Safety (EH&S) identified a need for a campus tents and temporary structures program.

The program is based on the following guidelines and regulations:

- Tent Rental Division of the Industrial Fabrics Association International Guidelines
- International Fire Code

EH&S partners in the program are Facilities Planning and Management (FP&M), Event Authorization Committee, Athletics, and Risk Management.

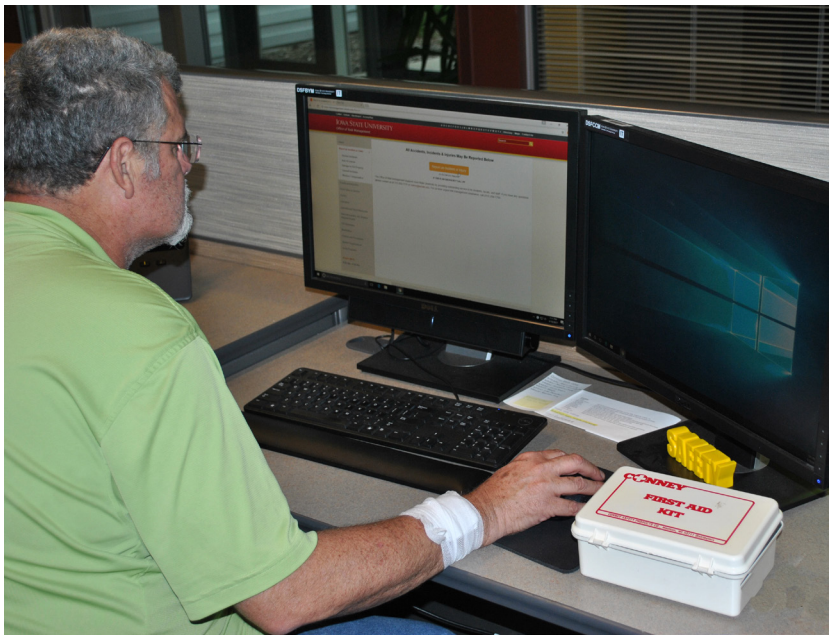
In 2016, EH&S inspected **63** tents and **8** stages and platforms for organizations on campus.

Health Matters

ISU Incident Reporting

Environmental Health and Safety (EH&S) focuses on accident and injury prevention. To simplify the accident and injury reporting process and improve record keeping, EH&S collaborated with Risk Management (Risk), University Human Resources (UHR) and a software developer to implement a new incident reporting system.

The Iowa State University (ISU) Incident Portal went live October 31, 2016. The portal is a total incident reporting system; everyone with an ISU Net ID can access the web interface from virtually anywhere on campus or outlying facilities.



The power of the system lies in the ability to accumulate and analyze incident data to proactively enhance safety on campus. The ability to analyze trends and patterns in this data will allow EH&S to pinpoint areas on campus that need attention, and it will target particular types of injuries that occur frequently. For instance, this data will be used to determine which sidewalks and parking lots contain slip, trip, and fall hazards. Once identified, the hazards can be reported and corrected.

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Building a Safe History

As Iowa State University grows and improves infrastructure, some obsolete buildings must be demolished to make room.

Three examples are:

- Spangler Geotechnical Laboratory,
- Nuclear Engineering Laboratory,
- 1929 and 1936 additions of Sweeney Hall.

These buildings have a history involving the use of radioactive materials. Environmental Health and Safety (EH&S) performed radiological surveys following the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM).

The MARSSIM describes the process for finding and quantifying any residual radioactive contamination that may exist on a specific site. If contamination is found, the manual describes a process for cleaning up and decontaminating the area. This process is well defined, widely accepted, and used by agencies needing to decommission buildings or sites that once had radioactive materials.

EH&S personnel followed the MARSSIM process and verified that the buildings were ‘clean’, preventing future concerns about the disposal of demolition rubble.

Safety without Borders

Biorisk Management and Twinning Program

Diversion of biological materials for nefarious purposes continues to be a worldwide concerns. To prevent a biological threat, the United States government has funded a grant to develop a network of biosafety professionals from around the world. The goal of the network is to share technical expertise, promote good biosafety and biosecurity practices, and build relationships with scientists around the Middle East and North Africa (MENA) region.

A strong reputation of biological safety at Environmental Health and Safety (EH&S) garnered a request for participation in a Twinning Project. Dr. Betsy Matos, ISU Biosafety Officer, was paired with an Egyptian counterpart (Dr. Emad Rizkalla). Together they worked on compiling monthly progress reports and completing the project. Upon completion, the outcomes of their project will be presented at a biological safety conference.

The expertise provided by EH&S has had a worldwide impact. Participation in this program unifies partners with different perspectives and backgrounds for shared goals of decreasing terrorist acquisition of deadly pathogens, increasing safety for laboratory workers, and helping prevent unintended biological agent release.

Safety without Borders

Where are they now....

Environmental Health and Safety (EH&S) is proud of the many student employees who have contributed to our success over the past 45 years. Two recent student employees and Iowa State alumni, Maria del Mar Melendez Anadon and Ja'Markkus Evans, pursued careers in the health and safety industry after their time with EH&S. We caught up with them to talk about their life, their careers, and the importance of their time working at EH&S.

Maria del Mar Melendez

What have you been doing since graduation?

"Since graduation, I have been working as the Environmental Health & Safety Specialist at INVISTA Precision Concepts in Martinsville, Virginia."

What do you remember about working at EH&S?

"I will always remember the emergency maps. That was huge project and something that I was able to put to practice at INVISTA. I will also remember the waste pickups. Not only were they a lot of fun, they have been crucial in doing my job here as well."

Ja'Markkus Evans

What have you been doing since graduation?

"I am currently an Assistant Safety Manager at a pork processing facility in Ottumwa for one of the largest protein based companies in the world JBS."

How are you putting the skills you learned at ISU EH&S to use?

"EH&S definitely helped me understand the importance of training because of all the training I went through while I was working there. Learning about hazard communication was a easy concept for me to understand because of the work I was involved in with the Environmental Programs group. I knew all about Safety Data Sheets and was able to give some helpful insight to my co-workers about them."

In 2016 EH&S employed 17 student from xx academic areas on campus.

In 2016 EH&S employed **27** student from **12** academic areas on campus.

Safety without Borders

Corridor for Safety

Environmental Health and Safety (EH&S) continues its long standing commitment of providing consultation and support services to the Iowa State University Research Park. Tenants of the Research Park often have specialized operational needs like fume hood certification, hazard assessments, or disposal challenges associated with regulated wastes. Starting up work in the Research Park can also require local, state, or even federal permits which often involve complicated, technical applications. EH&S is able to provide expert knowledge and technical assistance to companies too small or too young to rely on internal resources.

RESEARCH PARK
IOWA STATE UNIVERSITY

The Research Park is growing rapidly. The number of emerging technologies that the research park attracts means EH&S can anticipate an increased demand for external services. The department continues to invest in training, professional development, as well as cross training of existing staff to meet the needs of the Research Park in addition to the campus community.