

ANNUAL REPORT 2016

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MESSAGE FROM THE EXECUTIVE DIRECTOR



It is our great pleasure to provide the 2016 issue of the Department of Environmental Safety, Sustainability & Risk (ESSR) Annual Report. The intent of the report is to inform the campus community about the focus of our programs and to highlight our accomplishments during the year. Each of our main program areas — emergency management, environmental affairs, fire marshal, research safety, risk management, and sustainability — has contributed to this report.

Change has continued to be a theme in ESSR in 2016. I will mention just a few examples.

I became the executive director last February (I had previously been the director of the department from 2004 - 2009). In June, the ESSR offices moved from the Chesapeake Building to the Seneca Building. We continued the implementation of new technology and added new aspects to enhance our laboratory outreach efforts. We joined much of the campus in shifting to the use of Google for email and other information management. It has been a busy and energizing year!

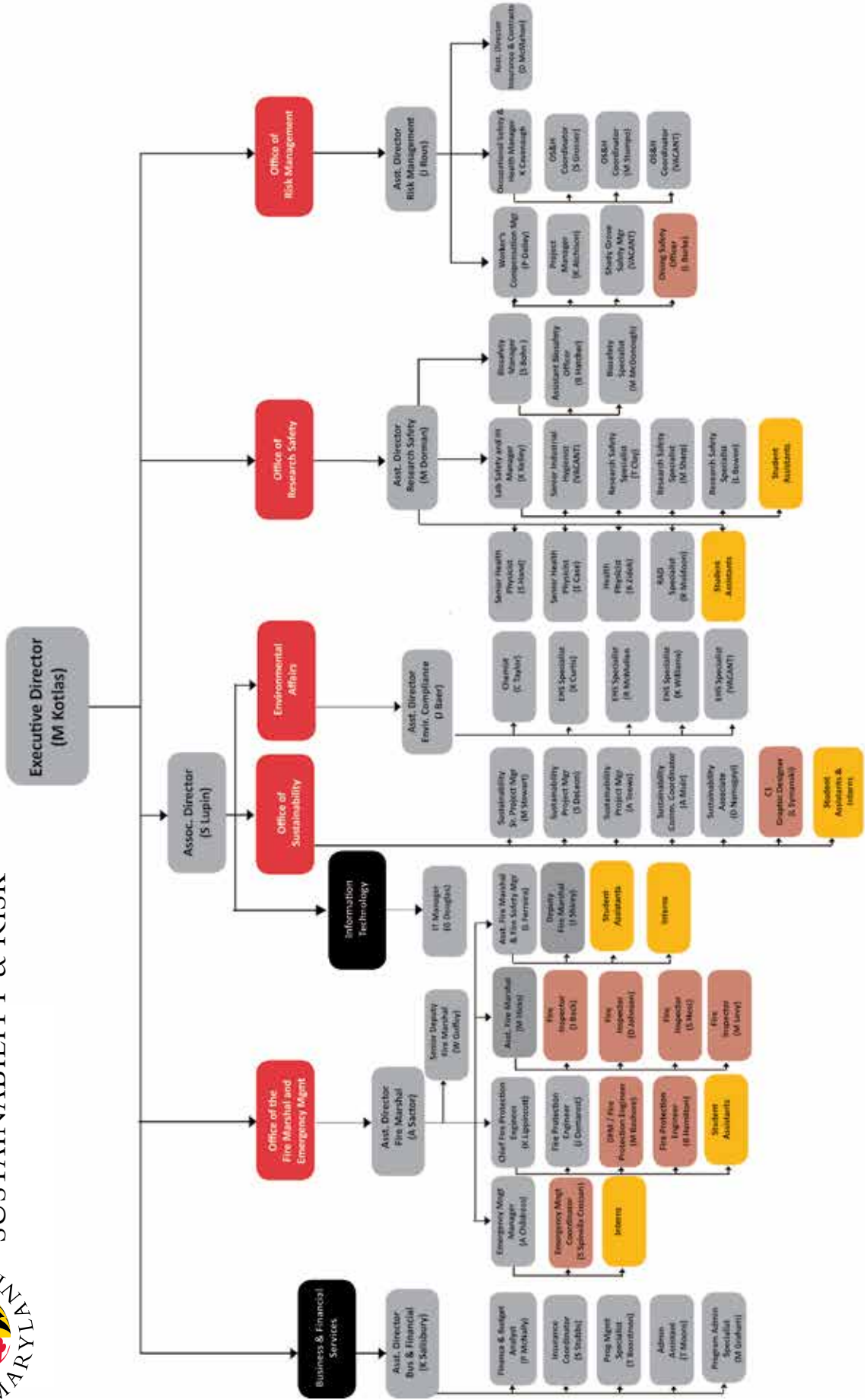
As we move further into 2017, we look forward to a continuing collaboration with the campus community, welcome your ideas, and seek your input on our programs.

We hope you find this report informative and useful. If there is anything you would like more information about, please let us know.

Sincerely,
Maureen Kotlas
Executive Director
www.essr.umd.edu



DEPARTMENT OF ENVIRONMENTAL SAFETY, SUSTAINABILITY & RISK



DEPARTMENT OF ENVIRONMENTAL SAFETY, SUSTAINABILITY & RISK

Our Vision

Our vision is a campus where safety and sustainability are core values at every level of the institution.

Our Mission

Our mission is to provide leadership in the identification and management of safety and environmental risks and to foster excellence in safety and sustainability through our technical expertise, our quality of work and our professional integrity.

Our Values

The Department of Environmental Safety, Sustainability & Risk (ESSR) holds these values as intrinsic to our mission —

Protect People and the Environment

We put the highest priority in returning people home the same or better than they arrived. Through education, training and knowledge sharing we promote a culture of safety and sustainability.

Excellence

We expect state-of-the-art competencies of ourselves and others in all areas of workplace safety, environmental management and sustainability. We deliver high quality programs and services to the campus community.

Leadership

Our people at all levels, have ownership and take initiative in their areas of responsibility and demonstrate the safe, sustainable and environmentally friendly behaviors we expect of others.

Service

We provide professional services to the University of Maryland community. We are a resource for those we support and we follow through on our commitments in a timely manner.

Diversity

We acknowledge and honor the fundamental value and dignity of all individuals. We are committed to inclusiveness and actively seeking and encouraging discussion and participation from a diverse group with different perspectives and experiences.

Collaboration

We are committed to building partnerships and working together to find the best solutions to collectively achieve our goals. We are open to new ideas and creative solutions. We seek to engage and motivate the campus community to accept ownership of the university's safety and sustainability culture.

The Office of Emergency Management (OEM), led by the Emergency Manager in the Office of the Fire Marshal and Emergency Management (OFMEM), plays a critical role in supporting the university's mission. OEM promotes a culture of resiliency to ensure that the university and campus community maintain essential functions before, during, and after an incident or emergency. Efforts during 2016 included conducting emergency preparedness outreach and education, facilitating training and exercises, plan revision and development support, and enhancing a strong cross-divisional structure.

The Emergency Management Council is Formed

The Emergency Management Working Group has concluded its work on the Emergency Operations Plan and has transformed into a permanent Emergency Management Council (EMC). The EMC retains cross-divisional members and is comprised of a variety of university departments. This standing council holds bi-monthly meetings to discuss topics related to emergency management such as risk assessments, exercises, and training. OEM facilitates the EMC and serves as a conduit of information sharing between EMC members.

OEM Coordinates a Stadium Evacuation Exercise

On July 29, 2016, OEM facilitated a combination table top and full scale evacuation exercise at Maryland Stadium. The purpose of the exercise was to test and evaluate operations, delivery of public information, and emergency warnings for event management. Over 250 members of the campus community participated, as well as external agencies such as the College Park Volunteer Fire Department, Prince George's Fire and Emergency Services Medical Department (PGFD), Special Events Medical Services, and Contemporary Services Corporation.



First responders practice during Maryland Stadium evacuation exercise.



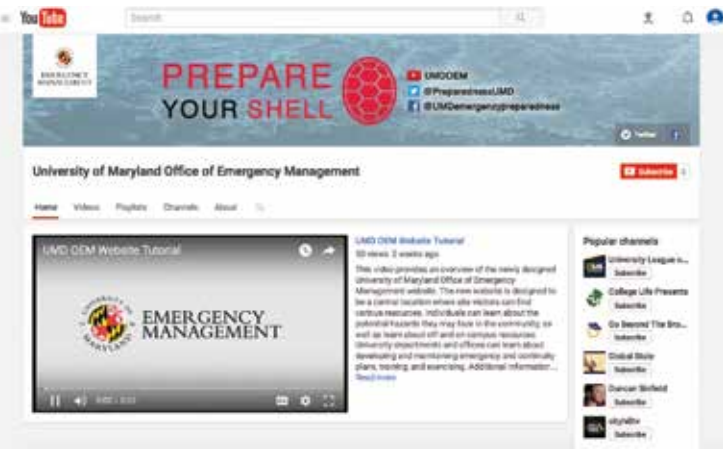
OEM Website Gets a Makeover

OEM revamped its website (www.prepare.umd.edu) to create a friendlier user experience and to help individuals and departments find the information they need to plan and prepare for emergencies.

Customized plans for individuals and groups are now available and easier to request. A new "Contact Us" form has been placed on the web site to request training and consultations, develop, test and evaluate plans, and to participate in campus events. OEM advises all individuals and groups to not only create emergency plans, but also to train, test and evaluate them. Planning and training are paramount to any emergency situation. Knowing what to do — and when to do it — can save lives.



University departments and community partners participate in tabletop discussion exercise prior to full-scale operations-based exercise.



Check Us Out on YouTube

To expand outreach and create new educational materials for students, faculty and staff, OEM has created a YouTube Channel to host instructional videos. YouTube is the third social media account OEM has a presence on. The others are Facebook and Twitter.

Emergency Preparedness Pocket Guide Goes Mobile

Important information in the *Emergency Preparedness Pocket Guide* is now available anytime and anywhere on a mobile device! This handy guide highlights preparedness tips regarding evacuations, sheltering in place, active shooters, fires, utility outages, and what to include in an emergency kit, as well as emergency and non-emergency phone numbers. Be sure to bookmark it on your phone's browser in order to have quick, easy and instant access. The pocket guide also contains reusable coupons for 10% off your entire check at Looney's Pub and Mulligan's Grill.



The Emergency Management Pocket Guide is now available on your cell phone for instant access to important information.



UMD Staff member prepares for AED training in the Stamp Student Union.


AEDs Installed in Stamp Student Union


OFMEM recently worked with the Adele H. Stamp Student Union (Stamp) staff to install four new Automatic External Defibrillators (AEDs) in the Stamp building. Stamp is a start to the goal of increasing the number of AEDs across campus. Departments interested in AED installation and training should contact the Fire Marshal's Office. Campus departments can learn more about the AED program by visiting the OEM web site.

Web site and Social Media

OEM has a new web site and web site address — **www.prepare.umd.edu**. Users can find a variety of resources including plan support, protective actions, weather emergency information, campus and off-campus resources, preparedness tips via social media and more.

 **UMDOEM**

 **@PreparednessUMD**

 **@UMDemergencypreparedness**

Environmental Affairs (EA) facilitates compliance with federal and state environmental regulations. EA manages environmental risk by developing policies, procedures, training, and consulting. EA supports faculty, staff and students in labs, offices, and maintenance shops. EA manages the university's compliance programs in the following environmental regulatory arenas: regulated waste management, air quality (Title V) permits, fuel and oil storage tank management, water quality permits, environmental assessments, and real estate initiatives.

Surface Water Quality and Storm Water Management

Stormwater management, permitting, and pollution control continued to be a priority area. EA currently oversees two National Pollutant Discharge Elimination System (NPDES) permits for the university: an Individual Industrial Permit which specifically authorizes the university's discharge of cooling water, boiler blow-down, and condensate wastewater to surrounding surface waters and a NPDES Municipal Separate Storm Sewer System (MS4) Phase II General Permit which covers the general discharge of stormwater run-off from land, pavement, building rooftops and construction sites on campus. These permits require the university to meet certain discharge limitations and employ Best Management Practices (BMPs) to minimize pollutants discharged into the stormwater.

During the past year, EA focused on deploying additional requirements of the MS4 Permit, including an Illicit Discharge Detection and Elimination (IDDE) Plan and development of a more robust community outreach program. In 2017, EA will focus on fully implementing these programs, as well as

working with other university departments to identify and fund projects to improve stormwater quality under the NPDES permits.

Air Quality Permitting and Reporting

UMD is required under federal and state regulations to hold a Title V Air Quality Permit, with this requirement being primarily driven by the university's Combined Heat and Power facility. EA collaborates with other departments on campus to ensure that various management tasks associated with the Title V Air Permit are completed and submitted in a timely manner, including testing fuel-burning equipment, permitting new fuel-burning equipment and reporting air emissions from the campus, including greenhouse gas emissions.

Regulated and Universal Waste Management Programs

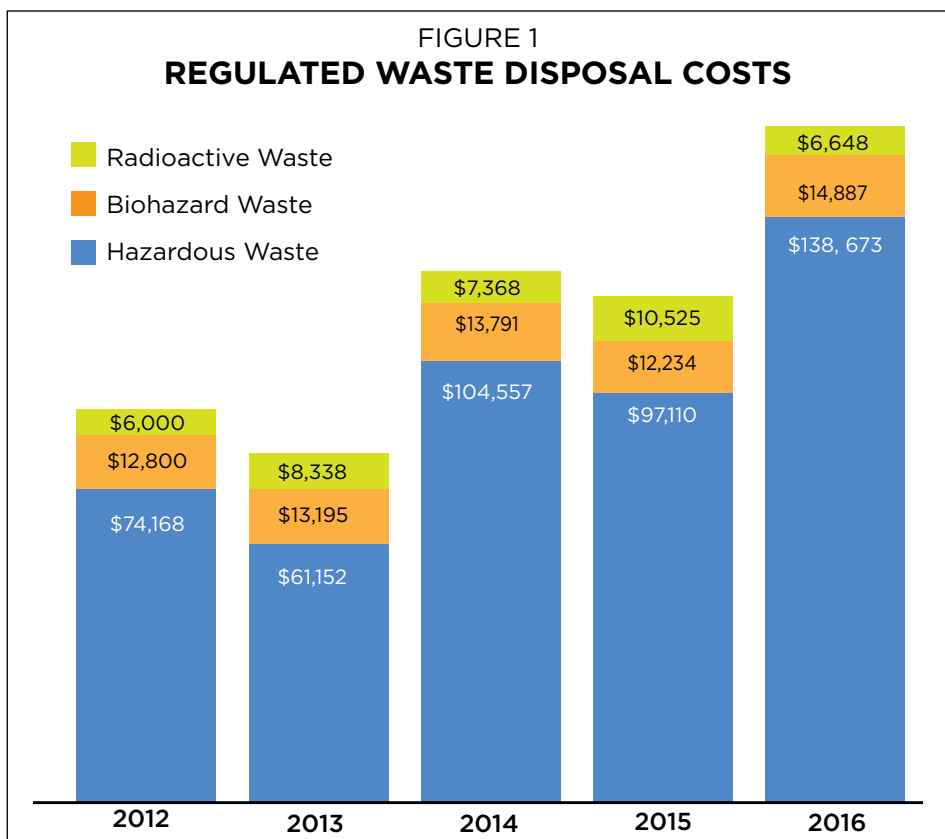
The regulated waste programs encompass the collection, management, and disposal of all chemical, biological, radioactive and "universal" waste generated

at the College Park campus and UMD's satellite facilities. EA operates a fully permitted hazardous waste Treatment, Storage and Disposal Facility (TSDF) on campus, one of only 18 such facilities in the state of Maryland. Operations at the TSDF are performed in a safe manner to ensure that all waste is managed and disposed of safely and practices meet all federal and state environmental compliance regulations. Additionally, the TSDF allows the university to



EA staff members Robert McMullen and Keith Williams monitor UMD water discharge at various locations on campus.

FIGURE 1
REGULATED WASTE DISPOSAL COSTS



to collect, segregate and dispose of thousands of chemicals generated in the Chemistry & Biochemistry Department, as part of “The Great Chemistry Laboratory Cleanout.” Teams of specialized technicians worked throughout the 2016 summer to collect and segregate chemicals that ranged from miscellaneous non-hazardous salts to explosives and Drug Enforcement Administration controlled substances.

Spill Response

Cleanup and spill response for all hazardous materials incidents are managed by EA, with staff on call 24 hours a day, 365 days a year to respond

manage the wastes generated in the most cost effective manner possible by allowing wastes to be combined and packaged in bulk, as appropriate. In 2016, EA managed and disposed of 234,908 pounds of chemical waste, 10,334 pounds of biological waste and 16,004 pounds of radioactive waste.

EA also manages and disposes of universal waste, with the Facilities Management (FM) Recycling and Solid Waste Management group. Batteries, fluorescent bulbs and light ballasts are collected and recycled when possible to minimize hazards to the environment. EA and FM have collected and disposed of 19,872 pounds of universal waste in 2016.

EA is often called upon to remove and dispose of hazardous waste from laboratories, workshops or buildings when faculty, staff or departments vacate the space. In 2016, EA performed several cleanouts, in one case removing and disposing of several hundred chemicals (some over 50 years old) for a researcher leaving the university after 30 years of research. Also in 2016, EA was asked to remove and dispose of approximately 2,500 chemicals for a researcher reducing his research within a department. Some of these chemicals were highly reactive or posed inhalation hazards that required special packaging and handling. Finally, EA supervised an outside contractor

to and mitigate environmental incidents on campus. EA responded to 19 incidents in 2016 alone, or with UMPD and PGFD. A few of the incidents required outside contractors to assist with the mitigation and cleanup efforts.

Pollution Prevention Compliance and Training

As required by the federal Clean Water Act, EA has developed and maintains a Spill Prevention Control and Countermeasure (SPCC) Plan to prevent and mitigate oil spills on campus. EA is responsible for tank and piping testing, monthly tank inspections, SPCC plan revisions and permit renewals, personnel training, and above ground fuel storage tank projects. EA trained 228 people in the requirements of the SPCC Plan in 2016. Training was provided in person, as well as online.

As required by the university’s NPDES permits, and in conjunction with the SPCC Plan requirements, EA manages UMD’s Stormwater Pollution Prevention Plan (SWPPP). EA is developing a SWPPP training program and will provide required annual training on the deployment of BMPs to various university departments beginning next year.

The Fire Marshal's Office (FMO) in the Office of the Fire Marshal and Emergency Management (OFMEM), works to preserve and protect life and property from fire, explosion, and natural hazards.

This is accomplished through enforcement of the State Fire Prevention Code, fire protection engineering, training, public education, fire investigation, and emergency response and preparedness. FMO is the Authority Having Jurisdiction (AHJ) for the University of Maryland. Fire Marshals are delegated legal authority by the Maryland State Fire Marshal.

Fire Inspections

Fire Marshals annually inspect hundreds of university facilities in College Park and throughout the state in order to identify hazardous conditions and practices that could cause a loss due to fire or explosion. Residential occupancies — the places where people live and sleep — are always a primary concern. Over 10,000 rooms in 157 residence halls, apartment buildings, and fraternity and sorority houses were inspected. Greek houses affiliated with UMD that are located off-campus are also inspected in accordance with an MOU with the City of College Park and Prince George's County.

During 2016, a total of 577 laboratory inspections were performed. The laboratory fire inspection program continues to provide the benefit of improved communication between the FMO and laboratory staff. In addition to on-campus laboratories, the FMO inspected 67 buildings located at research farms throughout the state.

Overall, FMO performed 1,166 fire inspections and re-inspections of UMD facilities.

Plan Review and Construction

Fire protection engineers in the FMO review plans, conduct inspections, and provide occupancy approval for capital, campus, and department construction projects. Through the UMD Service Center, this AHJ service is provided for capital projects at other USM institutions including Salisbury University, Frostburg State University, University of Maryland Eastern Shore, and Bowie State University. The FMO is also the AHJ for University of Maryland University College. In 2016, there were 46 plans reviewed and 100 inspections performed for capital projects. The total value of capital projects worked on was in excess of \$1.2 billion. Many smaller campus projects (value less than \$1 million) were also reviewed and inspected.

Event Management

Fire Marshals plan for, and stand-by at, all major events to assure that life safety objectives are met and to function as part of the emergency management leadership. There were 126 events worked in 2016 accounting for 1,800 work hours. Fire Marshals often work at night, on weekends, and during holidays to provide this service.

Events during 2016 included: The Robotics Camp at Xfinity Center, the Bitcamp and Technica Hackathons at Reckord Armory, and the NextNOW festival at the Clarice.



Students from around the region participate in Technica, a 24-hour all-female hack-a-thon at Reckord Armory.

Evening Shift

Jeff Shirey, a retired captain from the PGFD, joined the FMO team this year to handle operations for the evening shift during the week. The evening fire marshal conducts fire inspections, provides assistance with fire alarm and sprinkler issues, inspects events and other evening operations, responds to fire and hazardous materials incidents, and is the point of

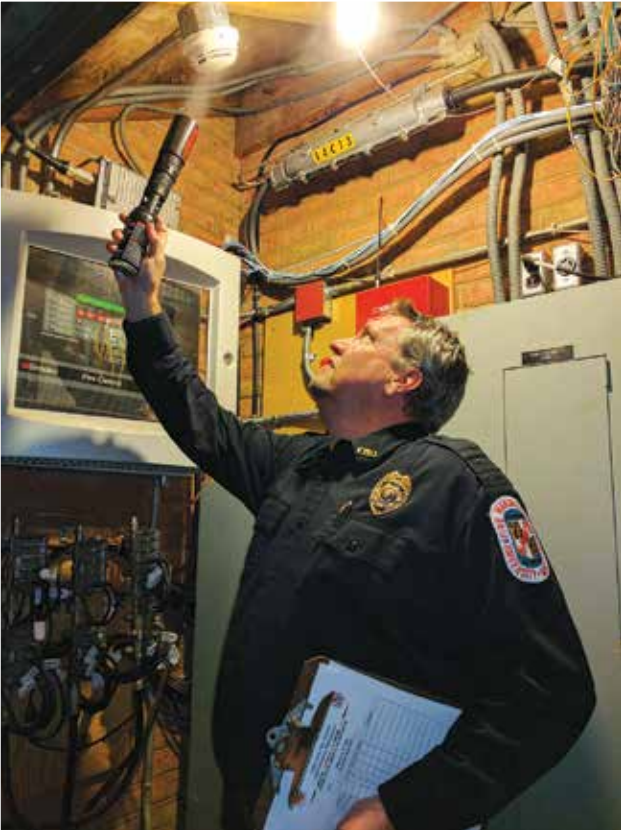


contact for all safety related concerns.

Evening shift Deputy Fire Marshal Jeff Shirey performs an inspection of a kitchen hood.

Part-Time Deputy Fire Marshals

In addition to full-time staff, dedicated part-time staff are also integral to the FMO. They perform the same important duties such as public assembly details, fire drills and fire inspections. They must meet all of the same training and certification requirements. Among the part-time staff is Deputy Fire Marshal John Beck, a retired captain from the PGFD. DFM Beck, with a lifetime of fire service experience, finds working as a fire marshal in the unique university environment to be a challenging and rewarding experience.



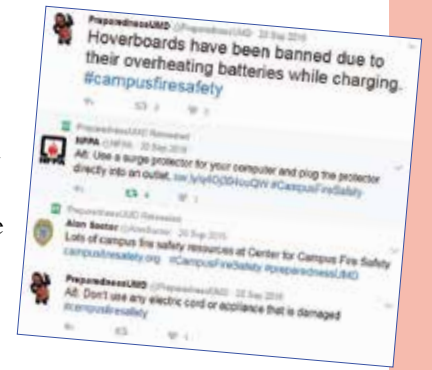
Deputy Fire Marshal John Beck activates a smoke detector to begin a fire drill in the Leonardtown Community.

Staff at the Clarice Smith Performing Arts Center examine evacuation routes and areas designated for sheltering in place.



Tweetchat

In recognition of Campus Fire Safety Month, OFMEM participated in a Tweetchat hosted by the Maryland Fire and Rescue Institute. The discussion highlighted fire safety hazards in the college campus environment and offered tips on how to choose safe housing, how to prevent fires and how to respond should a fire occur.



Evacuation/Shelter Signs

The OFMEM and FM have partnered in an effort to provide the campus community with emergency information that is building specific. A pilot project was devised to post emergency information in eight critical buildings on campus. That information covers not only fire evacuation routes and assembly points, but also areas suitable for sheltering in place and how to stay safe during an earthquake. The signs also indicate where to find an AED if available and where emergency blue light phones are located. The Evacuation/Shelter Plans are posted at major entrances and other critical areas of the buildings in the pilot. The pilot will be accessed to determine if the number of buildings should be expanded and if the signs should be modified in any way.

The Office of Research Safety (ORS) includes the expertise of the Biosafety, Laboratory Safety and Radiation Safety professional staff, who support the research community in meeting the university's Expectations for Conducting Safe Research. In 2016, the Provost and the Vice President for Research renewed their commitment to a strong safety culture by reissuing the Expectations with the emphasis of including research areas outside of the traditional laboratories.

From collecting specimens at remote areas around the world to handling hazardous materials within the research and teaching laboratories on campus, research often provides for multiple health and safety risks and regulatory requirements that must be identified and managed. ORS offers a broad range of comprehensive safety training classes, conducts risk assessments, partners with the campus community to identify and address research safety needs and helps with the implementation of controls necessary to minimize risks and to ensure personnel safety. ORS directly administers the requirements for many of the university's federal and state licenses and registrations for hazardous and risk significant materials, ensuring that all regulatory commitments are met as the research community achieves their research goals.

New Field Research Safety Support

Researchers at UMD conduct field research all over the world in both urban and remote environments. The dynamic, and often isolated, field research setting provides for a wide range of hazards and a limited means of communication and emergency response capabilities. In 2016, ORS Laboratory Safety member Miriam Sharp spearheaded a new Field Research Safety Program with guidance and resources aimed at assisting researchers in managing health and safety concerns related to field research. Fifteen academic departments and 11 support departments at UMD collaborated to develop the program; a focus group consisting of current UMD field researchers provided feedback and direction. External resources, including the United

States Geological Survey, were engaged to identify best practices and resources. Field research hazard assessment tools, fact sheets, checklists, and listings of news articles related to field safety are now available on the ESSR web site.

BioRAFT Research Safety Management System & the New IBC Biosafety Module

In 2016, ORS continued implementation of BioRAFT, the web-based research safety management system. By capturing pertinent research safety data including laboratories, researchers, locations of high hazardous research and the tracking of inspection results to closure, this single interface directly supports two Expectations for Conducting Safety Research: Assessing Hazards and Implementing Controls. In 2016, there were 183 Principal Investigators (PIs) who successfully set up their research laboratories in BioRAFT, and ESSR conducted 288 laboratory inspections pertaining to biosafety, laboratory safety, radiation safety and fire safety. Just as important as conducting inspections is the resolution of any findings. Building upon the PI's platform established in BioRAFT, ORS Biosafety implemented the IBC Biosafety Module, specifically designed to assist in registering biological research and submitting and approving research protocols. Since August 2016, thirty-six biological material registrations were approved in BioRAFT. This new system provides a more detailed, focused, and informative view into biological research at UMD, and captures the range of biological agents used on campus. Feedback from the research community regarding the new system has been extremely positive.



Professor Andrew Baldwin, ENST researches wetland plant and ecosystem ecology. He provided direction and assistance in developing the University's Field Research Safety program.

Fostering an Instinctive Safety Culture

Helping to foster a positive safety culture in our research laboratories, and to support the Expectations for Conducting Safety Research: Strive for Continuous Improvement, ORS launched the SAFE Initiative focused on strengthening four cornerstones of safety: Skills, Application, Foundation and Engagement. In



Representing Dr. Amy Mullin's laboratory, Graduate Student Paul Diss, wins the Laboratory Safety Video Contest. Shown here with his prize — a new Apple iPad!

2016, ORS focused on "Engagement" by hosting a safety video contest for graduate students in Chemistry and Biochemistry and Chemical and Biomolecular Engineering. Chemistry graduate student Paul Diss produced the winning video, "Cryogen Safety." In the area of "Application" ORS partnered with the Department of Chemistry and Biochemistry, FM,

Terrapin Trader, and ESSR Environmental Affairs to conduct "The Great Chemistry Laboratory Cleanout" in order to improve laboratory housekeeping and the management of unwanted chemicals. Twenty-eight laboratory groups participated and removed over 25 tons of materials from 64 laboratory spaces and 35 departmental spaces in the Chemistry Building. Sixteen spaces were completely emptied and reclaimed. The Operations and Maintenance Department of FM provided the funding for "The Great Chemistry Laboratory Cleanout."

Community Outreach & Emergency Preparedness

ORS dedicates significant efforts to the prevention of accidents and incidents; however, equally important is preparedness for the unexpected. Being prepared and knowing what to do in the event of an accident ensure successful outcomes and minimizes disruption. In 2016, ORS Biosafety facilitated tours of critical biological research areas for the University of Maryland Police Department, PGFD and University stakeholders. ORS Radiation Safety partnered with the Maryland University Training Reactor staff to conduct a full-day emergency response table top training exercise bringing together University stakeholders and PGFD.



Assistant Biosafety Officer Brandon Hatcher leads a tour of the BSL3 lab in the Gudelsky Building.

The Office of Risk Management (ORM) provides support and consultation regarding the risk naturally encountered in the course of research, service, and teaching mission of the university. The ORM works to reduce the chance and severity of loss to the university's financial and reputational assets, and physical and human resources through identification of these hazards and development of controls. Both traditional and progressive programs are utilized by Occupational Safety and Health (OSH), Diving Safety, Worker's Compensation and Risk Management to accomplish this goal.

Community Outreach

ORM chairs the annual University Risk Management and Insurance Association Mid-Atlantic Regional Risk Management Conference in Baltimore. This conference draws risk management professionals from educational institutions all over the Mid-Atlantic region.

Honey Bee Researchers Ergonomic Evaluation

The Honey Bee Researchers in the Entomology Department were suffering from lower back issues caused by lifting bee colony boxes that weigh between 50-70 pounds. ESSR evaluated their tasks and recommended utilizing the material handling equipment at UMD's Central Maryland Research and Education Centers like forklifts, front-end loaders, lift gates as well as lifting straps. Design improvements to the lifting grips for bee colony box handles were also discussed. In collaboration with the Kinesiology Department, a stretching and strengthening program was developed.



Optimal working height is between your knees and chest to avoid bending.

Snowzilla Recovery

The Federal Emergency Management Agency (FEMA) declared the January 2016 "Snowzilla" storm a federal disaster. Under this declaration, the university was eligible to request financial reimbursement for the snow removal efforts and repair of damages. Insurance processed claims from departments across the university to account for the repair of 47 buildings, over 300 curb stops, 22 sign posts, and 11 signs, as well as the labor to remove the snow and support university operations during the storm. FEMA reimbursement to the university was over \$500,000.

Mighty Sound of Maryland Aerial/ Scissor Lift Training

The Mighty Sound of Maryland provides a college experience like no other, performing at every home football game, traveling to at least one away game per year, and creating the loudest and most dedicated Terrapin cheering section anywhere! Members of the Mighty Sound of Maryland play every time the band



An aerial scissor lift is used to help conduct the Mighty Sound of Maryland during rehearsals.

performs, and all majors are welcomed - both music and non-music majors. Over 250 members represent every academic college and department at UMD. OSH provided the Band Director and staff Aerial/Scissor Lift Safety Training for their Rough Terrain, 32-foot, Hybrid (Diesel/Elec) Scissor Lift. The training covered Safe Work Practices including: pre-operation inspection, inclement weather precautions, tip-over hazards, fall protection requirements, load ratings, setting up on uneven surfaces and overhead electrical line danger.

Insurance & Contracts

This year, ORM worked with the Office of International Affairs to develop and purchase International Travel Health Insurance for Faculty and Staff working and traveling abroad. Travelers become registered for this insurance through the TAR (Travel Approval Request) System. This insurance becomes the travelers' primary health insurance while traveling outside of the United States, and is provided at no cost to the traveler. The ORM also assists the Department of Intercollegiate Athletics in the administration of injury claims to student-athletes. Lastly, through UMD's insurance broker, the ORM works closely with various departments on projects and research requiring specialized insurance.

OSH Modification Funds

The OSH group works across the university to identify deficiencies and safety hazards on campus and uses OSH Modification Allowances to fund or support the correction of these items. Over 40 projects have been completed since FY 12, including installing SawStop Safety Saws in Campus Shops; replacing or adding biosafety cabinets, fume hoods/fume hood alarms, safety eye washes/showers; improving emergency egress from Mechanical/Electrical Rooms; installing Exit signs, emergency egress doors and door hardware, emergency lighting, and smoke/heat detectors; installing proper ladders and cages, guardrails and fall protection; and upgrading building electrical systems. Over the last year, ESSR worked closely with FM and the Facilities Advisory Council (FAC)/Facilities Council (FC) to improve the process and reduce timeline from project identification through design, estimation, bid and construction.

Residence Hall Elevator Mechanical Room Improvements

During the incident investigation following a staff injury, OSH worked with Residential Facilities and FM to identify and install safety improvements for multiple elevator mechanical rooms. These included: 1) high traction walk-off mats at both the top and bottom of the stairs, 2) traction tape with safety text at top of stairs and exits to roof, and 3) slip hazard signage at the top of each staircase. Improvements were installed in the elevator mechanical rooms of Denton, Easton, Elkton, Ellicott, Hagerstown, La Plata, Cumberland, and Centreville Halls.

Workers' Compensation

The UMD Workers' Compensation Working Group was awarded the 2016 State Employee Risk Management Administration (SERMA) Health and Safety Working Group Award of Excellence. The UMD team, with key representatives from university departments, targeted reduction of accident rates, improved reporting times and started an effective return-to-work program. As a result of their initiatives, their incident rate has decreased by almost 50 percent, injury rates decreased by almost 50 percent, reporting speed has improved, injuries related to ergonomics and exertion decreased, and they saw an overall decrease in injuries. UMD FM was also selected as a Working Group winner for their collaborative efforts of tracking injury data, creating safety improvement committees, and conducting detailed accident investigations. Due to these efforts the injury rate in FM decreased 31 percent from 2014 to 2015.

Ongoing Needs and Challenges

Injury Prevention and Return to Work:

UMD continues to work to eliminate hazards and prevent workplace injuries. Efforts continue to expand support for employees with injuries returning to work.

The Office of Sustainability (OS) supports and advances environmental performance, economic prosperity and social equality through a variety of initiatives. The staff facilitate the development and implementation of sustainable policies, practices and curricula for the campus community by:

- Educating the campus community about sustainability
- Developing sustainability programming that affects student education and campus operations
- Fostering collaboration between units of the university and external resources
- Consulting with campus departments (administrative and academic) to find ways of reducing environmental impacts and promoting sustainability
- Coordinating efforts to meet the goals of the American College and University Presidents Climate Commitment
- Measuring and reporting on-campus sustainability efforts
- Providing outreach to individuals and organizations both internal and external to the university
- Supporting the University Sustainability Council

University Sustainability Council

UMD established the University Sustainability Council in 2009 to advise the president on sustainability policy and performance. The Director of OS serves as a permanent member and the Office serves as staff to the Council. In 2016, the Council focused its efforts on the following projects:

- **Carbon Offset Work Group Report** – The Council reviewed the Work Group’s report and approved and recommended six strategies. These strategies were then taken to the Executive Council for approval. They were approved in November.
 - The University System of Maryland announced that it will stop investing the university’s endowment directly in top 100 public coal, oil and gas companies.
- **Sustainability Progress Report** – This report was presented to the Council in fall 2016. Highlights from the report include:
 - UMD achieved its 2015 Climate Action Plan target by reducing campus greenhouse gas emissions by more than 25%;
 - By using bottle filling stations around campus, the UMD community has prevented the purchase and disposal of almost 3 million plastic water bottles;
 - More than 120 bikes are now available at 15 stations through mBike, a new bike-sharing program;
- **Climate Action Plan (CAP 2.0)** – The Sustainability Council approved the plan in December 2016 and sent it to the Administrative Council to review.
- **The University Sustainability Council** approved the disbursement of \$375,953 from the **University Sustainability Fund** in Fiscal Year 2016. OS administers the Fund and works with students to review and recommend proposals to the Council for funding. In 2016, they recommended the following notable projects:



UMD student fills her reusable water bottle at a bottle filling station on campus.



More than 120 bikes are available to faculty, staff and students through mBike.

– **Transforming Student Culture through Green Housing - \$112,458.**

The Department of Resident Life (DRL), the Department of Fraternity and Sorority Life (DFSL), and the Office of Sustainability received a grant that will fund a new staff position to coordinate sustainability initiatives within DRL and DFSL.

– **Anytime Dining: A Residential Dining Transformation - \$50,000.**

Dining Services received a grant for \$50,000 to fund a dish conveyor belt in the North Campus Diner. This renovation is part of the department’s switch to “anytime dining” where students have unlimited access to all three residential dining halls (replacing the point-based plans with an all-your-care-to-eat setup), and 6.2 million disposable products per year will be eliminated from the dining halls.

– **MDSE Wellness Way Vegetated Swale - \$25,325.**

A local project team from the student group, Maryland Sustainability Engineering, was given a grant of \$25,325 to retrofit an existing stormwater management system on Wellness Way. The retrofit will transform a concrete runoff channel to a vegetated swale. The swale will absorb runoff that currently flows directly into Campus Creek and eventually the Chesapeake Bay.

Outreach & Communications

Our on-campus outreach includes participating in special events such as Maryland Day, Earth Day, First Look Fair and Stamp Fest. OS also deploys the LEAF Outreach Team, a group of trained and dedicated students who support and reward sustainable actions at events, gatherings, residence and dining halls. The OS communications team profiles and promotes campus initiatives and success stories via print and social media vehicles including:

- University sustainability website;
- Sustainability newsletters;
- *SustainableUMD Magazine*; and,



The Sustainable UMD magazine, published every two years, featured a historical retrospective of sustainability at UMD.

- Facebook, Twitter, Instagram and YouTube (search SustainableUMD).

OS also plans and hosts the Smart and Sustainable Campuses Conference. This professional development event was held in April 2016 and drew almost 400 college and university professionals from across North America.

Program Development

To further sustainable practices and behaviors on campus, OS develops and manage initiatives including:

- **The Chesapeake Project** – Now in its ninth year, this two-day workshop has introduced sustainability issues to 185 professors in each of the university’s 13 colleges/schools. Professors have integrated sustainability into more than 190 courses across the curriculum.
- **Sustainability Advisors** – Also in its ninth year, this program trains students to teach a one-hour lesson on sustainability in freshmen seminar classes. Advisors introduced sustainability to roughly 2,150 students in fall 2016.
- **The Green Office Program** – This program celebrated its five year anniversary in 2016. It guides offices interested in changing personal behaviors and integrating sustainability into the workplace. To date, over 150 offices and more than 3,000 staff and faculty participate. The program boasts 11 Gold, 37 Silver, 39 Bronze and 64 participating offices.



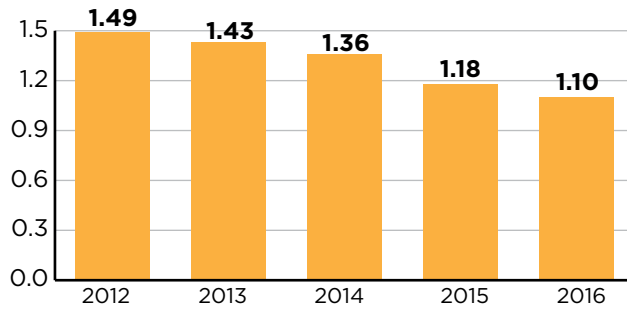
Green Office representatives receive free plants at a five year anniversary celebration.

Measurement & Performance

OS is responsible for conducting the annual campus greenhouse gas inventory, establishing and measuring annual performance metrics and reporting campus performance to external rating organizations including the Princeton Review, Sierra Club and the Association for the Advancement of Sustainability in Higher Education. OS also prepares the sustainability progress report annually and reassesses the university’s performance under the national Sustainability Tracking, Assessment, and Rating System (STARS) every other year.

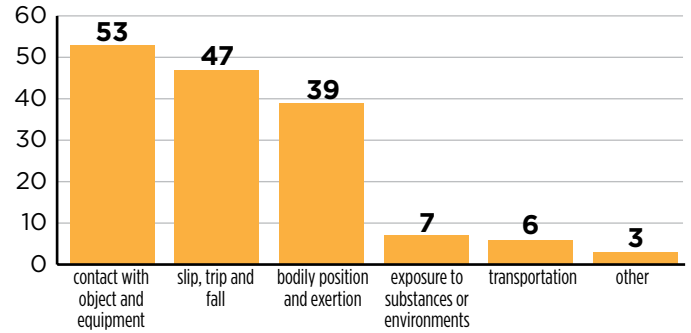
UMD LOSSES AND INCIDENT RATES

OSHA TOTAL RECORDABLE INCIDENT RATES (TRIR)



TRIR = # of injuries x 200,000 ÷ total # hours worked.
The TRIR for colleges and universities in 2015 was 1.9, according to the US Department of Labor, Bureau of Labor Statistics.

2016 UMD RECORDABLE INJURIES AND ILLNESSES BY INCIDENT/EVENT



2016 PROPERTY CLAIMS

Type of Claim	Number of Claims	Damages
Broken Pipes – Flood	10	\$85,609
Fire Damage	5	\$14,772
Weather-related Damage	3	\$35,289
Chemical/Mechanical Damage	4	\$23,772
Snow Storm Jan 2016	8	\$505,032
Third Party Property Damage	3	\$45,758
Other Flood Damage	24	87,789
Other Property Damage (vandalism, sewage, foundation leaks)	11	67,829
Total	68	\$865,850

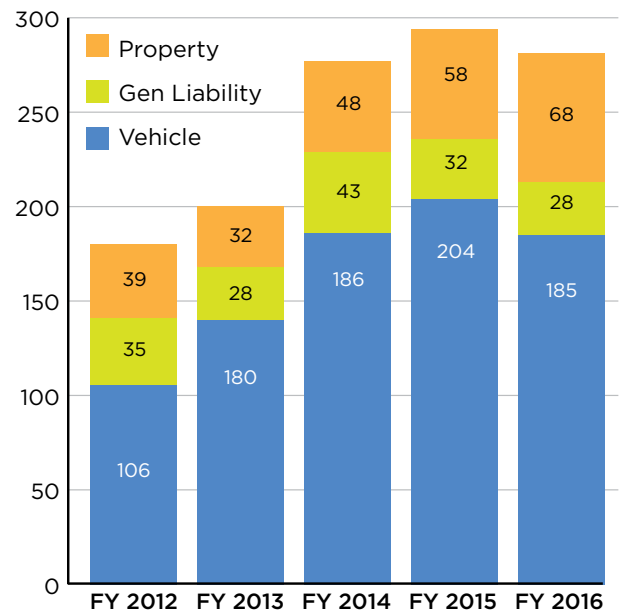
2016 GENERAL LIABILITY

Type of Claim	Number of Claims
Tort Injury (Non-employees)	9
Tort Property	4
Tort Vehicle	15
Total	28

2016 STATE VEHICLE CLAIMS

Type of Claim	Number of Claims
Hit and Run Accidents	15
Not at Fault Accidents	24
Other Vehicle Accidents (includes pedestrians & bicyclists)	8
Rental Vehicle	4
Report Only (Minor) Accidents	86
Reversing Accidents	15
State Vehicle Struck Fixed Object/Parked Vehicle	15
State Vehicle Struck/Sideswiped Another Vehicle	30
Total	197

INSURANCE PROCESSING CLAIMS Total Claims: FY12-FY16



Beginning in FY14, incidents that were less than the \$1,000 deductible have been included in the total number of vehicle claims.

TRAINING

Training is a fundamental part of ESSR’s mission, ensuring that the University of Maryland community has the knowledge and tools needed to protect themselves and their environment. ESSR training encompasses a wide range of topics and audiences as described below. The five units within ESSR offer a total of 92 training courses, 62 classroom and 30 online. The total attendance for classroom and online training courses in 2016 was 16,182. This is an increase of 10% from 2015 and 35% from 2014.

Training Highlights from 2016

Environmental Affairs training ensures that all hazardous waste generated at the University of Maryland complies with environmental regulations and is handled and disposed of safely. *EA’s online Hazardous Waste Generator training was taken by 1,473 employees and students.*

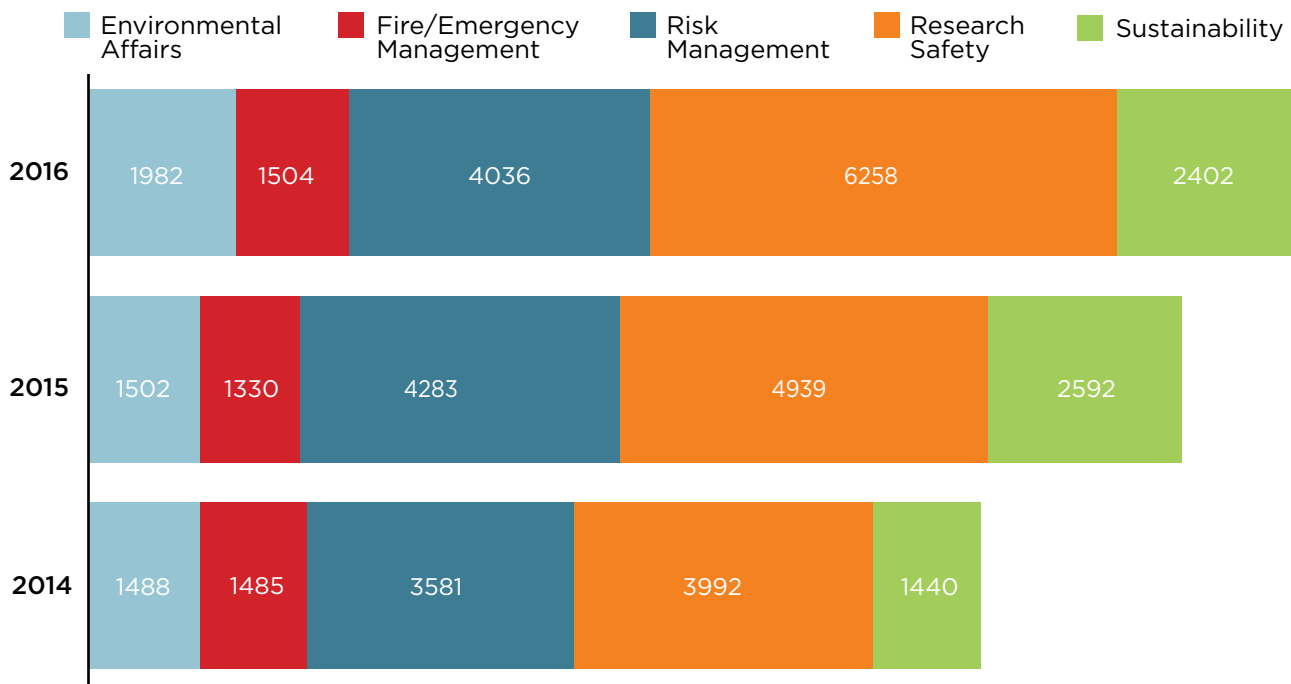
Fire and Emergency Management training teaches the UMD community how to prevent incidents and emergencies and how to respond to emergencies if they do occur. *Fire and Emergency Management staff trained 310 Resident Assistants on how to manage emergencies in residence halls.*

Risk Management training covers a wide range of training topics that teach Facilities Management, Housekeeping, Residential Facilities, and other staff members to work safely. *Risk Management staff trained 609 employees in Asbestos Awareness training and 272 employees in Winter Ergonomics.*

Research Safety training teaches faculty, staff, and students working in research and instructional labs how to work safely with biological, chemical, and radiological hazards they may work with in their laboratories, and how to respond to incidents and emergencies involving these materials. *Research Safety staff trained 863 new faculty, staff, students and teaching assistants in New Laboratory Researcher Training and Safety Orientation for Graduate and Teaching Assistants.*

Sustainability training focuses on promoting a culture of sustainability at UMD. *Sustainability staff trained 17 Sustainability Advisors (peer educators) who taught one-hour lessons to 91 sections of first-year seminar classes, reaching 2,346 students.*

TOTAL TRAINING





DEPARTMENT OF ENVIRONMENTAL
SAFETY, SUSTAINABILITY & RISK

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