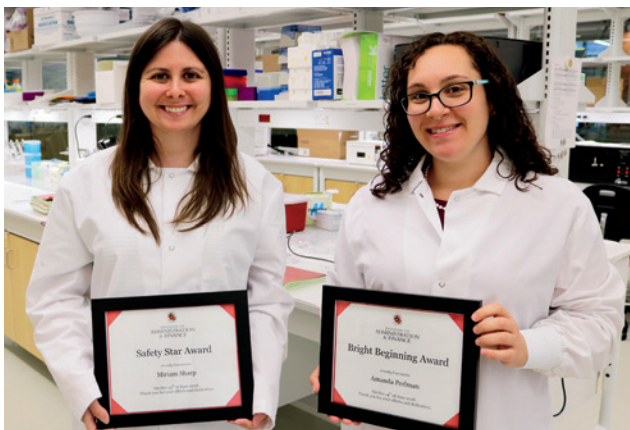




ANNUAL REPORT

2017 - 2018



DEPARTMENT OF ENVIRONMENTAL SAFETY,
SUSTAINABILITY & RISK



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MESSAGE FROM THE EXECUTIVE DIRECTOR

Dear UMD Community,

Time passes quickly. So much has happened in the world since our last Annual Report. Terrorists struck in London, Stockholm, Barcelona, and in nearby New York City among other locations. A hurricane season described as unlike any other devastated areas in Texas, Florida and the Caribbean and took many lives. Lone shooters killed many people in at an outdoor concert in Las Vegas, at a rural church in Texas, and just down the road, in an Annapolis newsroom.

In 2016, there were more than 1 million fires in the United States* and more than 5,000 workers were killed on the job**. These and other tragic and disruptive events remind us of the importance of investing time in safety programs and planning for the possibility of emergencies.

Our goal with this report is to highlight the role that Environmental Safety, Sustainability & Risk (ESSR) plays in providing a safe and sustainable place for us to work, study, and live. You will see details about programs, initiatives, and services that ESSR provided to the University during Fiscal Year 2018 (July 1, 2017 – June 30, 2018.) This year, we are also focusing on our staff, their work and accomplishments in recognition of the University's commitment to a thriving workplace.

If you would like additional information about any of our programs, please visit us at essr.umd.edu or call us at 301-405-3960.

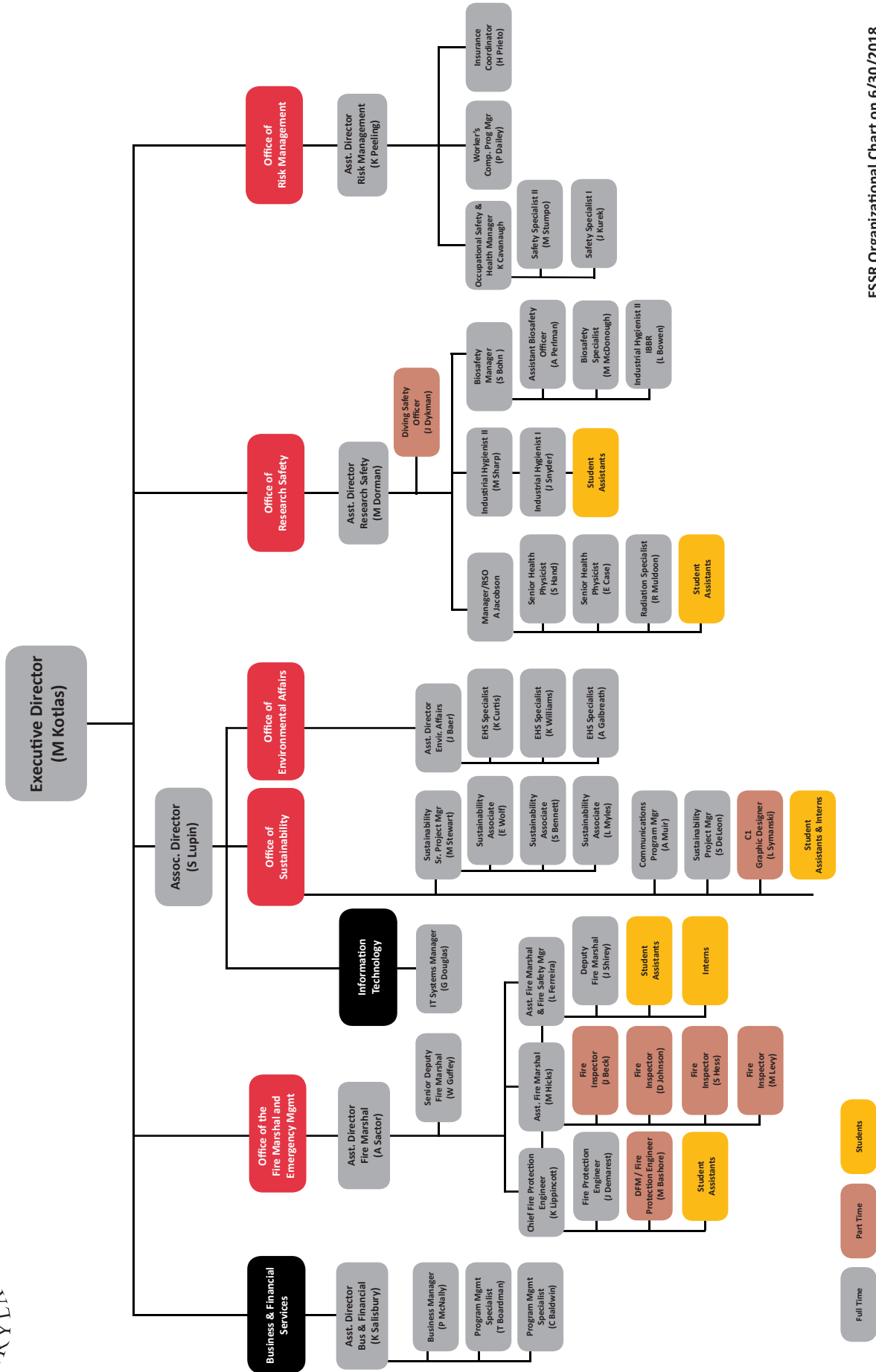
Sincerely,
Maureen Kotlas
Executive Director
essr.umd.edu

*Source: NFPA

** Source: OSHA



DEPARTMENT OF ENVIRONMENTAL SAFETY, SUSTAINABILITY & RISK



ESSR Organizational Chart on 6/30/2018

Full Time

Part Time

Students

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

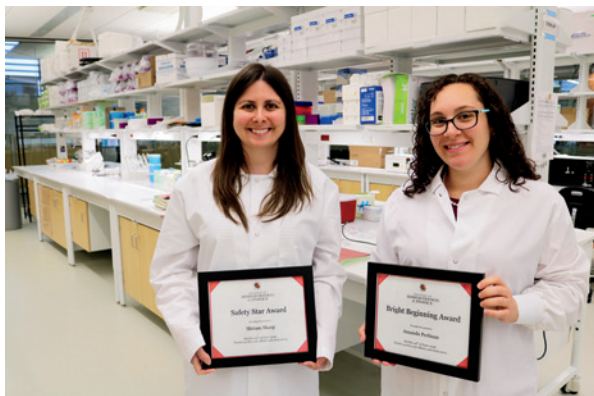
Our mission is to provide leadership in the identification and management of safety and environmental risks and to foster excellence in safety and sustainability through our technical expertise, our quality of work and our professional integrity.

Our Values

The Department of Environmental Safety, Sustainability & Risk (ESSR) holds these values as intrinsic to our mission —**Protect People and the Environment, Excellence, Leadership, Service, Diversity, and Collaboration.**

Associations and Committees

American Academy of Underwater Sciences (AAUS)
American Chemical Society (ACS)
American Industrial Hygiene Association (AIHA)
American Society of Microbiology (ASM)
American Society of Safety Engineers (ASSE)
Association for the Advancement of Sustainability in Higher Education (AASHE)
Association for Biosafety and Biosecurity International (ABSA)
Association of Physical Plant Administrators (APPA)
Campus Safety, Health, and Environmental Management Association (CSHEMA)
Center for Campus Fire Safety (CCFS)
Health Physics Society (HPS)
International Code Council (ICC)
National Association of College and University Business Officers (NACUBO)
National Fire Protection Association (NFPA)
University Risk Managers and Insurance Association (URMIA)



Recognitions

Two Office of Research Safety staff members were recognized by the Division of Administration & Finance for their efforts and dedication in making UMD a great place to work. Amanda Perlman received the “Bright Beginnings” Award and Miriam Sharp, Laboratory Safety Leader, received the “Safety Star” Award.

The Office of Emergency Management (OEM) plays a critical role in supporting the university's mission of safety for the campus community. OEM promotes a culture of resiliency to ensure that the university and campus community are prepared to respond to emergencies, and are working towards mitigating the possible impacts.

Emergency Management Council

The Emergency Management Council, a cross-divisional member group comprised of a variety of university departments, continued to meet regularly throughout the year. Topics of discussion included evaluating and establishing updated protocols for weather emergencies, locking down campus buildings in an emergency, and general sharing of information across campus for safety messaging.



Emergency Management Council visits the Emergency Operations Center.

Civil Unrest Tabletop Exercise for Adele H. Stamp Student Union

The university conducted the collaborative Civil Unrest Tabletop Exercise for Adele H. Stamp Student Union. This exercise provided participants with an opportunity to discuss their response to civil unrest, focusing on



Johnny Ruvolo (right) from OEM facilitates at the Stamp Table Top Exercise.

event disruption, protests, and social media. Exercise participants included representatives from the Office of the Fire Marshal, University of Maryland Police Department (UMPD), Strategic Communications, Division of Student Affairs, Office of Emergency Management, and Facilities Management. Several other university departments observed the exercise. After the exercise, the Stamp and OEM collaborated to produce an "After Action Report/Improvement Plan" based on feedback from participants and observers. One of the major strengths identified was that participating departments prioritized safety and deployed their resources accordingly.

Prepare Your Shell On-Line Course

The Office of Emergency Management teamed up with University Human Resources' Learning and Talent Development group to offer an emergency preparedness course to the entire campus community. From instructional videos, to links, protective actions, and online tools, the course offers information that is critical for safety on campus. Some of the topics covered include what to do in case of an active shooter, fire prevention and evacuation, protective actions during severe weather events, how to get around campus safely at night, and more. The course also focused on ensuring information retention with follow-up quizzes in each section. In its first year, 323 people completed the course.



Prepare Your Shell On-Line Course.

Campus Closure Due to Wind Storm

For the first time ever, the campus was closed in March due to a severe windstorm. Amid high winds—30 to 40 miles per hour (mph)—with gusts up to 70 mph, the storm knocked down multiple trees on campus, including a 90-year-old oak tree on McKeldin Mall located between Woods and Marie Mount Hall. The OEM team played a critical role in making the final decision to shut down campus, coordinate communication between key university departments, and ensure that proper safety precautions were taken.



A 90-year-old oak tree fell between Woods and Marie Mount Hall.

AEDs Installed in More Campus Buildings

OEM and the Office of the Fire Marshal continued adding automated external defibrillators (AEDs) to campus buildings during the year. New installations were completed at McKeldin Library, Hornbake Library, South and North Campus Diner, 251 North Diner, along with other locations. AED locations on campus can be found on the Prince George's County Fire & EMS Pulse Point mobile application.



Evacuation and Shelters

Evacuation and shelter diagram expansion continued across campus. OEM staff collaborated with Dining Services' representatives to ensure that the diagrams were prominently displayed in campus dining halls. Dining Services also installed AEDs and held a Crowd Manager Training. Crowd Managers assist occupants of an assembly area during an evacuation. Training staff as crowd managers ensures compliance with fire code and increases the ability to respond effectively to emergencies.

Active Shooter Training

UMPD offered active shooter trainings on campus to explain police resources and ensure the campus is prepared in the case of an active shooter threat. Any department or student group can request an active shooter training. The presentations explain the Run, Hide, Fight procedure; provide possible emergency plans; and stress the importance of reporting any suspicious behavior.



Captain Ken Ecker provides Active Shooter Training.

prepare.umd.edu



@PrepareUMD

Office of Environmental Affairs (OEA) works to facilitate campus-wide compliance with federal and state environmental regulations. OEA manages environmental risk by developing policies, procedures, training, and consulting with campus entities including faculty, staff and students in labs, offices, and maintenance shops. OEA manages the university's compliance programs in the following environmental regulatory arenas: regulated waste management (universal, chemical, biological, and radioactive), air quality permits, fuel and oil storage tank management, stormwater and water quality permits, environmental assessments, and real estate initiatives. Additionally, OEA provides oil and hazardous materials spill response and cleanup capabilities for the campus.



Environmental Specialist Alex Galbreath takes a water sample at Campus Creek.

Stormwater Management

Stormwater management, permitting, and pollution control continued to be a priority area. OEA currently oversees two National Pollutant Discharge Elimination System (NPDES) permits for the university: an Individual Industrial Permit, which specifically regulates campus outfalls to surrounding streams and a 12-SW Permit, which permits the discharge of stormwater from certain facilities that are targeted as high potential sources for stormwater pollution.

OEA also works closely with Facilities Management and other campus stakeholders on a third campus stormwater permit. The NPDES Municipal Separate Storm Sewer System (MS4) Phase II General Permit covers the general discharge of stormwater runoff from land, pavement, building rooftops and construction sites on campus.

Collectively, these permits require the university to monitor its discharges, meet certain discharge limitations, and employ Best Management Practices (BMPs) to minimize pollutants discharged in the stormwater.

During the past year, OEA implemented a new Illicit Discharge Detection and Elimination (IDDE) Plan, a requirement of the MS4 Permit. This effort involves enhanced monitoring, inspection and follow-up to identify and address any discharges that may not be consistent with permit requirements.

Air Quality Permitting and Reporting

UMD is required under federal and state regulations to hold a Title V Air Permit, with this requirement being primarily driven by the university's Combined Heat and Power (CHP) facility. OEA 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.

Spill Response

Clean up and spill responses for most HAZMAT incidents are managed by the OEA unit. OEA staff are on call 24 hours a day, 365 days a year to respond to and mitigate environmental incidents on the campus. OEA responded to 19 incidents involving the spillage of chemicals or oil in 2017. Most of these spill responses were conducted solely by OEA staff, while several were conducted with the assistance of the Prince George's County Fire Department.

Additionally, OEA staff conducted investigations of 16 reported illicit stormwater discharges. A few of the incidents required outside contractors to assist with the mitigation and clean-up efforts.

Construction, Development and Real Estate

OEA provides a variety of environmental services to support UMD’s construction, development and real estate activities. Services include the removal of hazardous and universal waste from buildings and spaces slated for demolition and renovation as well as environmental assessments to identify known or suspected environmental issues of land and/or buildings where development is being considered. Similarly, OEA provides environmental due diligence assessments of property the university may acquire. Environmental assessments may include the identification of hazardous materials in soil, groundwater, and building materials. This is accomplished through a review of a property’s past uses, and direct sampling of environmental media following established sampling and analytical protocols. During the past year, OEA supported the university by overseeing environmental sampling by a third party within the “Innovation District” as part of a building redevelopment project.



Geoprobe sampling of soil and groundwater.

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 on campus and UMD’s satellite facilities. OEA operates a fully permitted storage facility on campus, one of only 18 such facilities in the state of Maryland. The facility’s operations are performed in a safe manner to ensure that all waste is managed safely and practices meet all federal and state environmental regulations.

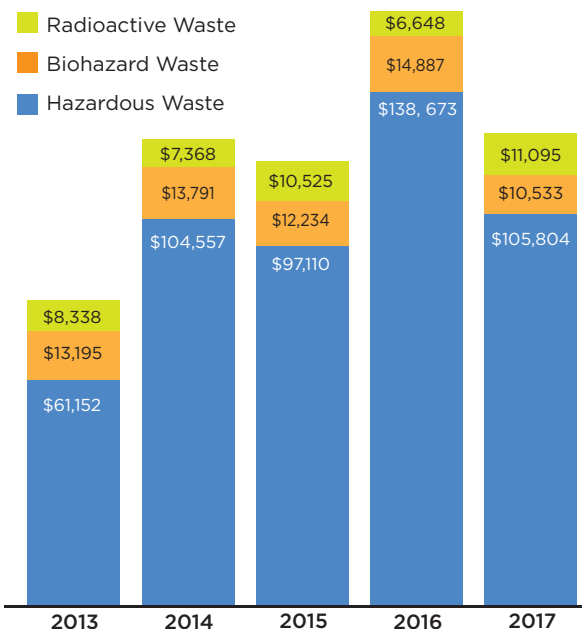
Additionally, the permitted facility allows the university to manage the wastes generated in the most cost effective manner.

Pollution Prevention Compliance and Training

As required by the federal Clean Water Act, OEA has developed and maintains a “Spill Prevention Control and Countermeasure” (SPCC) Plan to prevent and mitigate oil spills on campus. OEA 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. OEA trained 148 staff members in the requirements of the SPCC Plan in 2017. Training was provided in person, as well as online. A new SPCC Plan was prepared for the UMD Institute for Bioscience and Biotechnology Research in Rockville, Maryland.

As required by the University’s NPDES permits, and in conjunction with the SPCC Plan requirements, OEA manages UMD’s Stormwater Pollution Prevention Plan (SWPPP). OEA is developing a SWPPP training program and will provide required annual training on the deployment of BMPs to various university departments beginning next year. During 2017, SWPPP training was provided to specific facilities covered under the university’s 12-SW stormwater permit.

REGULATED WASTE DISPOSAL COSTS



The **Office of the Fire Marshal (OFM)** 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. OFM is the Authority Having Jurisdiction (AHJ) for the University of Maryland. Fire Marshals are delegated legal authority by the Maryland State Fire Marshal.



Chief Fire Protection Engineer Keith Lippincott gives a tour of the A. James Clark Hall to Executive Director Maureen Kotlas and other ESSR staff.

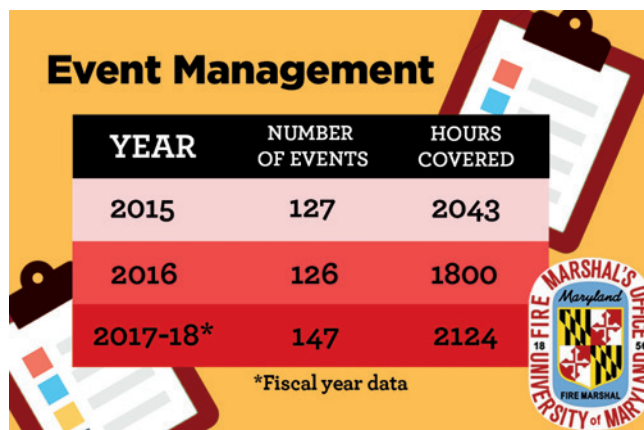
Fire Inspections

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 FY 2018, a total of 371 laboratory inspections were performed. In 2017, OFM began utilizing the web-based research safety management program BioRAFT introduced by the Office of Research Safety (ORS) for inspections and training. Laboratory fire inspections are no longer documented by space identifiers such as building and room, but by principal investigator. BioRAFT provides streamlined communication between the OFM, ORS and campus researchers. Overall, OFM performed 567 fire inspections and reinspections of UMD facilities.

Plan Review and Construction

Fire protection engineers in the OFM 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 OFM is also the AHJ for University of Maryland University College.

Two projects that were completed during FY 2018 were the Edward St. John Learning and Teaching Center (ESJ) and A. Clark Hall. The ESJ uses parts of the former Holzapfel Hall and integrated that historic structure on McKeldin Mall with innovative learning spaces including 2 large lecture halls.



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. Fire Marshals often work at night, on weekends, and during holidays to provide this service.

Events during FY 2018 included: The Robotics Camp and the Bitcamp Hackathon at Xfinity Center, the Technica Hackathon at Reckord Armory, and the NextNOW Festival at the Clarice, and the Fearless Ideas: The Campaign for Maryland event at the Clarice.



Maryland Fire Marshals Committee members at site of Fuse 47 fire.

Fuse 47 Apartment Building Fire

On April 24, 2017 a fire broke out at an off-campus apartment building under construction at 4700 Berwyn House Road. The fire quickly grew out of control, blanketing the area with heavy smoke and causing the closure of Baltimore Avenue because of the amount of emergency responding apparatus. OFM staff responded to the scene and led efforts to relocate tenants of the nearby senior apartment building using shuttle buses. OFM provided updates from the scene to senior administration officials who decided to close the campus due to air quality concerns as well as the road closure.

Fire Investigations

Determining the origin and cause of fires that occur on campus is another responsibility of the OFM. If a fire is determined to be suspicious in nature, the OFM works with the University of Maryland Police (UMPD) to investigate the case. On February 4, 2017, a fire was discovered in the storage area of in the Xfinity Center by the activation of the automatic sprinkler system. The large fire was successfully

controlled by the automatic sprinkler system that contained the fire to the room of origin. The storage room sustained considerable smoke, heat and water damage. Fire Marshals conducted a physical investigation of the scene. Witnesses were interviewed with the assistance of UMPD. The cause was determined to be accidental. The total loss of the fire was over \$200,000. In the aftermath, Athletics Facilities Management worked with the Office of the Fire Marshal to contract a fire protection engineering firm for the evaluation of other storage rooms in the Xfinity Center to assure that adequate levels of fire protection are in place for the materials stored.



Assistant Fire Marshal Luisa Ferreira investigates a fire in a storage area of Xfinity Center.

The Office of Research Safety (ORS) includes the expertise of the Biosafety, Laboratory Safety, Radiation Safety and Scientific Diving Safety professional staff, who support the research community in meeting the university's Expectations for Conducting Safe Research.

From collecting specimens in 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 services for the research community including comprehensive safety training classes, conducting risk assessments, and assisting 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 regulatory commitments are met as the research community achieves their research goals.

Supporting the A. James Clark Hall Researchers

ORS was instrumental in enabling a smooth transition as the Fischell Department of Bioengineering researchers moved into laboratories at the newly constructed A. James Clark Hall. Biosafety facilitated communications between the researchers and the Institutional Biosafety Committee and Institutional Animal Care and Use Committee to ensure approval of research protocols with a minimal disruption to research. Laboratory Safety and Radiation Safety staff assisted researchers with the proper setup of equipment and spaces. ORS also supported the development of emergency response procedures specific to the A. James Clark Hall research community, coordinated the creation of a building specific waste management plan with the Office of Environmental Affairs, and performed risk assessments related to the initiation of research in a new, open laboratory design.



A laboratory at A. James Clark Hall.

Offering New Safety Trainings

Ensuring that all researchers, students and staff have the knowledge and the skill to safely perform their activities is one component of the *Expectations for Conducting Safe Research*, as well as a leading indicator of safety. Therefore, ORS prioritizes providing safety-related training to the UMD research community. In addition to regularly scheduled group classes and online trainings, the ORS team provided training outreach for undergraduate programs such as The First-Year Innovation & Research Experience (FIRE) and Characterizing And Tracking College Health (C.A.T.C.H.) the Virus Study. In 2017, ORS continued the implementation of BioRAFT, the campus-wide, web-based research safety management system. Recognizing the administrative burden faced by researchers, ORS worked to transition some classroom trainings to the online platform. Records for individual laboratory workers are now managed



Laboratory and Chemical Safety Specialist Jessica Snyder provides in person training.

through BioRAFT, streamlining Principal Investigator and ORS access to the research community's training records.

Scientific Diving Safety offered a newly structured Scientific Diving Course for the University of Maryland; this course includes over 100 hours of classroom presentations, pool dives and open water dives. Divers are taught how to safely place heavy equipment and pound rebar underwater so their research equipment can withstand current flows. These are critical skills necessary to work safely in the unique underwater environment, which differs greatly from a recreational dive.

ORS welcomes opportunities to provide additional resources to staff who reach out for individualized training. Laboratory Safety collaborated with student translators from the University of Maryland School of Languages, Literatures, and Culture (SLLC) to provide research safety training in Mandarin for visiting researchers working with potentially hazardous chemicals. With support from SLLC, the laboratory Principal Investigator demonstrated a commitment to safety — another *Expectation for Conducting Safe Research*.

Strengthening Emergency Preparedness

Taking the time to systematically assess risks and plan for the hazards identified is an *Expectation for Conducting Safe Research*. In 2018, ORS supported the research community in planning for emergencies. Biosafety facilitated a tabletop emergency response training exercise for the Gudelsky Veterinary Medicine Select Agent Laboratory. Attendees included stakeholders from the University Police Department, the University Health Center, Select Agent researchers and laboratory staff, Facility Management, the Federal Bureau of Investigations, the Biosafety Officer/Responsible Official and Alternate Responsible Officials. Attendees worked through three potential emergency scenarios to challenge their knowledge and identify gaps in the current program. Attendees were encouraged to collaborate with and learn from each



Science diver practicing the use of specialized research equipment underwater.

other, and contribute to overall program improvement.

Radiation Safety participated in a three day Vigilant Guard Radiological Emergency Exercise involving a power outage that affected the Maryland University Training Reactor (MUTR). The Vigilant Guard is a National Guard and U.S. Northern Command civil support exercise, which simulates possible real-world, catastrophic disasters and is designed to help local, state, and federal agencies coordinate emergency relief efforts as well as the management of response and recovery activities. The MUTR operations staff and campus stakeholders performed exceedingly well during the mock disruption in power.

Supporting Research Excellence

In 2017, Research Safety supported the Director of the Maryland University Training Reactor who led a project with the Department of Energy (DOE), Office of Nuclear Energy, to be the first university research reactor to receive recycled fuel. From demonstrating a commitment to safety by adhering to all rules and modeling safe work practices, to striving for continuous improvement by actively reviewing safety with all project team participants each day, the Director of the MUTR exemplified all five of the *Expectations for Conducting Safe Research*. During the project, Radiation Safety conducted risk assessments, surveys, exposure monitoring for workers and the public, sampling and analysis, and personnel training, ensuring that all exposure to radiation was maintained As Low As Reasonably Achievable.

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

Community Outreach

The Workers' Compensation unit continued to collaborate with departments across campus and with UMD locations throughout the state in promoting a safe campus and prompt reporting initiatives. Benchmarking performance and sharing data has helped to identify and share areas in need of continuous improvement planning. ORM saw positive results continuing the 5-year downward trend in reducing injuries. The efforts of Facilities Management and Residential Facilities contributed to successes with their implementation of safety training programs, effective incident investigation measures, and bi-weekly safety meetings.

An ongoing emphasis of Workers' Compensation is the importance of timely reporting of workplace injuries. The State Employees Risk Management Administration (SERMA) acknowledged the university in their 2017 Annual Report, noting that UMD had a significant decrease in the number of days it takes to report new injuries. Reporting days have decreased 37% since 2012.

Risky Business Week

ORM hosted Risky Business Week events, a weeklong series of topics designed to create a forum for managers and supervisors to learn about common risks, local, state and federal regulations and to advance effective risk



International Risk Management event during Risky Business Week.

practices on campus. Risky Business Week is guided by programming initiated by the University Risk Management and Insurance Association, Inc. (URMIA) to highlight the importance of risk management at institutions of higher education. Presentations included a session on Workers' Compensation Roles and Responsibilities, International Risk Management, Machine Shop Safety, and important information to know for Driving State Vehicles.

Machine Shop Inspections and New Training Initiative

The Occupational Safety and Health (OSH) unit conducts machine shop inspections each year to promote safety for employees and student workers. Inspections correlate with the Occupational Safety and Health Administration (OSHA) regulations and include all aspects of machine shop operation, including, but not limited to: hazard communication, housekeeping, first aid, and training for employees. Findings and recommendations are then provided to supervisors. In



First Aid Kits at Paint and Prop Machine Shop at The Clarice.



A Facilities Management staff member cuts concrete.

order to increase awareness regarding these inspections, a new machine shop safety-training course was developed by OSH personnel. This course was presented for the first time during Risky Business Week, and will be offered regularly in the next fiscal year.

Respirable Crystalline Silica Program

The OSH unit has developed a respirable crystalline silica program to comply with the new OSHA regulation 29 CFR 1926.1153. Personnel coordinated with Facilities Management and Residential Facilities personnel to identify positions and tasks involving possible exposure to respirable crystalline silica dust during construction activities. Exposure is controlled using a combination of engineering controls, administrative controls, and respiratory protection. OSH personnel presented the methods and forms developed for compliance with this new regulation to the regional Campus Safety Health and Environmental Management Association (CSHEMA) conference and were subsequently invited to present a live webinar on this topic to over 30 universities.

Safety Program Audit Committees

New program audit committees were formed by the OSH unit in the last fiscal year. Members of these committees served for a fixed time to contribute in auditing ESSR safety programs. The goal of these committees was to provide input for

the implementation of these programs. Members of Facilities Management, Residential Facilities, and the research community reviewed the Lockout/Tagout Program and provided suggestions to improve training, procedures, and areas for further review during this process. Next fiscal year, new committee members will be auditing the Confined Space program. This will include a thorough review of permit and non-permit confined spaces.

Public Health Students Lend A Hand to Occupational Health & Safety Unit

Graduate students in the School of Public Health (SPH) collaborated with staff members from the Occupational Health & Safety unit on their class projects to analyze and make key recommendations about the workplace health and safety environment at the the university. SPH students enrolled in the course Occupational Health (MIEH 780), worked with staff to collect data and information in regards to noise dosimetry for Heating, Ventilation and Air Condition (HVAC) employees in Facilities Management and to assess styrene levels and ventilation in two campus 3D printing labs. Student teams for each project were given the opportunity to conduct field observations, interview workers, monitor workplace exposures, and then present their findings at the end of the semester to their course professor, and OSH staff.



School of Public Health students at the MakerSpace in McKeldin Library.

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.

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 2017-2018, the Council focused its efforts on the following projects:

Climate Action Plan (CAP 2.0) – OS staff completed a revision to the 2009 Climate Action Plan. President Loh announced CAP 2.0 to the campus community in October 2017.

Carbon Neutral Air Travel Initiative – The Council reviewed and signed off on a new initiative to offset greenhouse gas emissions associated with university air travel. Based on the recommendations and support of the Council, the implementation plans for the initiative were approved by the President and the Administrative Council.

Sustainability Progress Report – This report was presented to the Council in fall 2017. Highlights from the report include:

UMD reduced campus greenhouse gas emissions by 28 percent;

The university launched the Maryland Energy Innovation Institute with \$7.5 million in state funding;

Compost collection expanded to more than 25 collection sites;

Dining Services’ new Anytime Dining program removed 6.3 million disposable items from the waste stream and improved the healthfulness and sustainability



Students enjoy fresh salads at North Campus Diner.

of food served on campus;

UMD joined the “We Are Still In” coalition of over 1,000 leaders, pledging to forge ahead on climate action to meet the Paris Agreement.

The University Sustainability Council approved the disbursement of \$331,146 from the University Sustainability Fund in Fiscal Year 2017. OS administers the Fund and works with students to review and recommend proposals to the Council for funding.



LEAF Outreach Team students promote the Green Terp program.

In 2017-2018, they recommended the following notable projects, in addition to several other projects:

Green Terp and Green Chapter - \$112,458. The Department of Resident Life, the Department of Fraternity and Sorority Life, and the Office of Sustainability collaborated on launching these new programs, collectively called the Green Housing programs. The programs engage residential students in dynamic and interactive goal setting that promotes personal and collective sustainability action. The programs support and reward students that embed sustainability into their daily actions.

Student Leadership in Campus Community Expanded - \$50,000. College of Information Studies (iSchool) and the National Center for Smart Growth Research and Education (Center for Smart Growth) received a grant to fund graduate assistants and undergraduate students to implement parts of at least 60 projects that were developed in the municipalities of

College Park, Hyattsville, Riverdale Park, University Park, Berwyn Heights and unincorporated Prince George's communities near the University of Maryland such as Adelphi, Beltsville, Langley Park, and East Riverdale.

Next Generation Technologies for Sensing, Actuation, and Control of reACT - \$47,500.A.

James Clark School of Engineering and the School of Architecture, Planning, and Preservation received a grant to reconstruct the Solar Decathlon 2017 award-winning house. The goal is to display the house on campus and provide educational opportunities to the community.

Solar Canopies at UMD

The university completed the installation of solar panel canopies at the Institute for Bioscience & Biotechnology Research (IBBR), Regents Drive, Terrapin Trail, and Mowatt Lane parking garages, amounting to over 7,000 total solar panels. OS worked with Facilities Management, Department of Transportation Services, Maryland Energy Administration, and WGL Energy to plan and promote a solar canopy dedication event in October 2017. The event featured representatives from all project partners and attendees included President Wallace Loh; Carlo Collela, Vice President, Administration and Finance; and State of Maryland government representatives.

10-Year Anniversary Celebration

OS held a 10-year anniversary event at The Stamp in November 2017 featuring keynote speaker Scott Nash, CEO and founder, MOM's Organic Market. The event



Keynote speaker Scott Nash shares his sustainability story with event attendees.

highlighted the university's sustainability achievements over the last decade while offering attendees the chance to share what excites them most about sustainability.

Program Development

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

Sustainability Advisors – In its tenth year, this program trains students to teach a one-hour lesson on sustainability in freshmen seminar classes. Advisors introduced sustainability to roughly 2,200 students in Fall 2017.

The Green Office Program – This program guides offices interested in changing personal behaviors and integrating sustainability into the workplace. To date, 129 offices and more than 2,600 staff and faculty have participated. The program boasts 17 Gold, 41 Silver, 44 Bronze and 27 participating offices.

Green Terp & Green Chapter – During the academic year, 13 residence halls and 9 chapters participated in the second year of the pilot programs with over 1,500 students participating.

Measurement and Performance

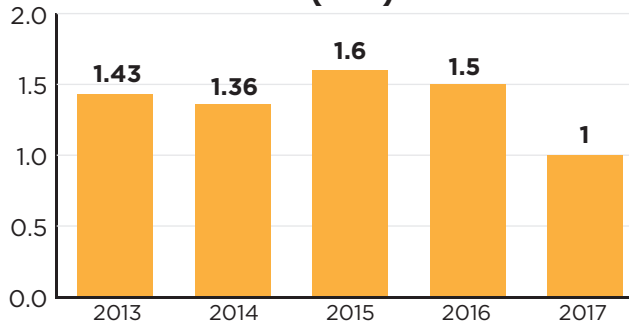
OS is responsible for conducting the annual campus greenhouse gas inventory, establishing and measuring annual performance metrics, and reporting campus performance to external organizations including the Association for the Advancement of Sustainability in Higher Education (AASHE) and Second Nature. OS also prepares the sustainability progress report annually, provides status updates for Climate Action Plan strategies, and assesses the university's performance under the national Sustainability Tracking, Assessment, and Rating System (STARS) every few years.



President Wallace Loh and Carlo Colella, Vice President of Administration & Finance, with project partners and State of Maryland government representatives.

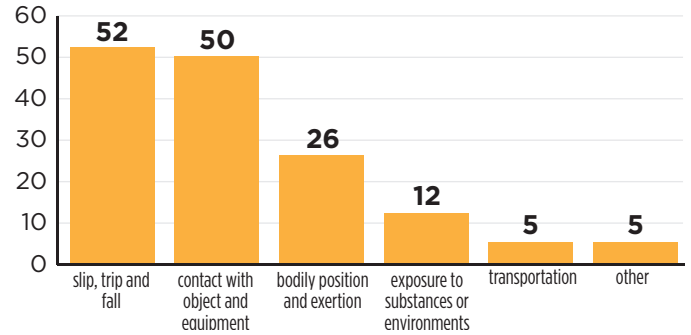
UMD LOSSES AND INCIDENT RATES

5 YEAR OSHA RECORDABLE RATE (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.

2017 UMD RECORDABLE INJURIES AND ILLNESSES BY INCIDENT/EVENT



FY18 PROPERTY CLAIMS

Type of Claim	Number of Claims	Damages
BROKEN PIPES	13	\$624,815.00
HIGH WIND	11	\$265,000.00
HEAVY RAIN	6	\$135,000.00
FIRE SPRINKLER (frozen)	3	\$185,000.00
VEHICLE CRASH	3	\$7,128.98
POWER OUTAGE	3	\$46,000.00
OPEN WINDOW	1	\$50,000.00
STEAM	1	\$35,000.00
VEHICLE	1	\$3,000.00
CLOGGED LINE	1	\$500,000.00
FIRE	1	\$300,000.00
FALSE FIRE ALARM (damaged door)	1	\$3,500.00
ARC FLASH	1	\$10,000.00
MOLD	1	\$15,000.00
TOTAL	47	\$2,179,443.9

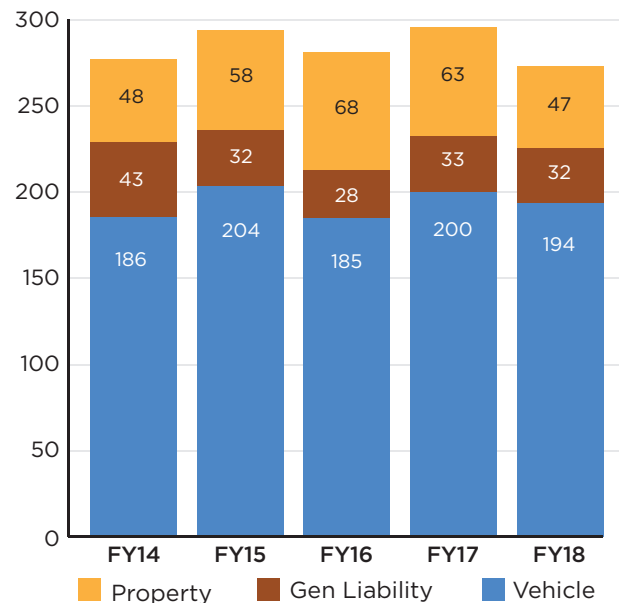
FY18 GENERAL LIABILITY

Type of Claim	Number of Claims
TORT INJURY (NON-EMPLOYEES)	18
TORT VEHICLE	11
TORT PROPERTY	3
TOTAL	32

FY18 STATE VEHICLE CLAIMS

Type of Claim	Number of Claims
REPORT ONLY	124
SIDESWIPING OTHER VEHICLES	35
BACKING	17
REAR ENDED	10
FRONTAL	4
T-BONE	2
DEER	2
TOTAL	194

INSURANCE PROCESSING CLAIMS
Total Claims: FY14-FY18



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 2017-2018 was 16,738.

Training Highlights from 2017-2018

Office of Environmental Affairs training ensures that all regulated waste generated at the University of Maryland complies with environmental regulations and is handled and disposed of safely. *1,522 employees and students received training for Hazardous, Universal, Biological, and Radioactive Waste.*

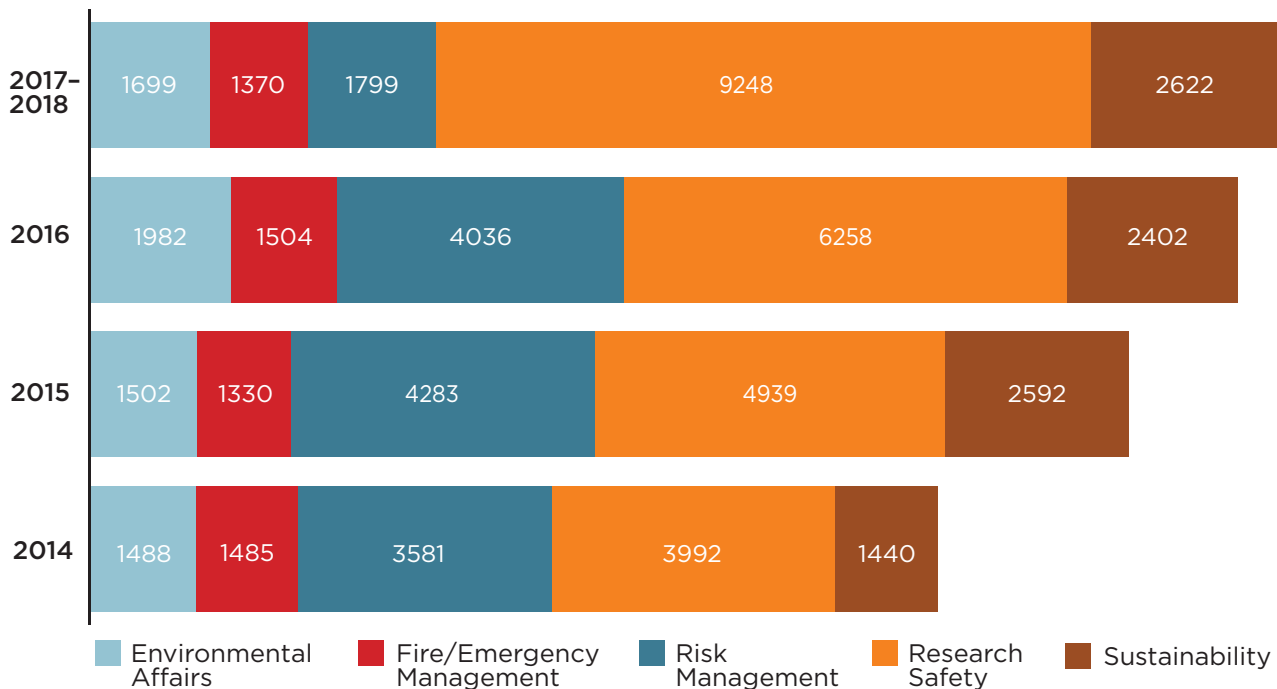
Office of Fire Marshal and Emergency Management training teaches the UMD community how to prevent incidents and emergencies and how to respond to emergencies if they do occur. *Office of Fire Marshal and Emergency Management trained 245 Resident Assistants on how to manage emergencies in residence halls.*

Office of Risk Management training covers a wide range of training topics that teach Facilities Management, Housekeeping, Residential Facilities, and other staff members to work safely. *Office of Risk Management staff trained 222 employees in Hazard Communication and 324 employees in Bloodborne Pathogens.*

Office of 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 encounter in their laboratories, and how to respond to incidents and emergencies involving these materials. Office of Research Safety staff trained 1,393 faculty, staff, students and teaching assistants in 58 “New Laboratory Researcher Training” and “Safety Orientation for Graduate and Teaching Assistants” sessions. *This year, Research Safety has created several online training modules in BioRAFT so that the university community can learn on their own schedule.*

Office of Sustainability training focuses on promoting a culture of sustainability at UMD. Office of Sustainability staff trained 14 Sustainability Advisors (peer educators) who taught one-hour lessons to 66 sections of first-year seminar classes, reaching roughly 2,200 students.

TOTAL TRAINING





DEPARTMENT OF
ENVIRONMENTAL SAFETY,
SUSTAINABILITY & RISK

essr.umd.edu
301.405.3960