



UNIVERSITY OF
MARYLAND

DEPARTMENT OF ENVIRONMENTAL
SAFETY, SUSTAINABILITY AND RISK

ANNUAL REPORT
2021-2022



**DEPARTMENT OF ENVIRONMENTAL
SAFETY, SUSTAINABILITY & RISK**
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MESSAGE FROM THE EXECUTIVE DIRECTOR



Greetings from ESSR!

I am pleased to be writing the introduction to this year's annual report as we have now returned to normal operations following two difficult years of the pandemic. The report will highlight a number of accomplishments within the Department of Environmental Safety, Sustainability and Risk (ESSR) program areas. You will read about interesting and significant initiatives from ESSR's six offices: Research Safety, Fire Marshal, Environmental Affairs, Risk Management, and Sustainability. Added to the list this year is Occupational Safety and Health, formerly part of Risk Management, which is now its own unit headed by an Assistant Director.

ESSR staff have stepped up to the plate to restore our operations to pre-pandemic practices, significantly progressing our efforts to support the University. For example, the Office of Research Safety issued a new Chemical Hygiene Plan, required by OSHA for campus laboratories. Two new BioRAFT (now Sci Shield) modules to track chemicals and safety data sheets (SDS) were also introduced to the University.

The Office of Occupational Safety and Health (OSH) has been implementing a BioRAFT training module in non-research areas and focusing on machine shop inspections. The Office of the Fire Marshal (OFM) has provided services for many onsite events including the IDEA Factory dedication, UMD Commencement, Lt. Collins Memorial dedication, the Big10 Lacrosse Championship, and the Prince George's County High School Commencements. In support of the local community, OFM assisted with a food drive during the 10th annual Good Neighbor Day with the Office of Community Engagement.

The Office of Sustainability developed a new website and the SustainableUMD Progress Hub, organized EarthFest, completed UMD's Climate Action Plan 2.0, and held Green Office training. The Office of Environmental Affairs (OEA) has not missed a beat with regard to maintaining regulatory compliance. OEA staff were onsite throughout the pandemic and continue to manage hazardous waste and other environmental regulatory activities.

The Office of Risk Management (ORM) has kept the workers compensation program and process up and running as usual throughout the pandemic. ORM continues to represent UMD with the State Treasurer's Office for insurance claims and provides support for the youth camp program. We are pleased to say that campers are back onsite with appropriate COVID-19 precautions.

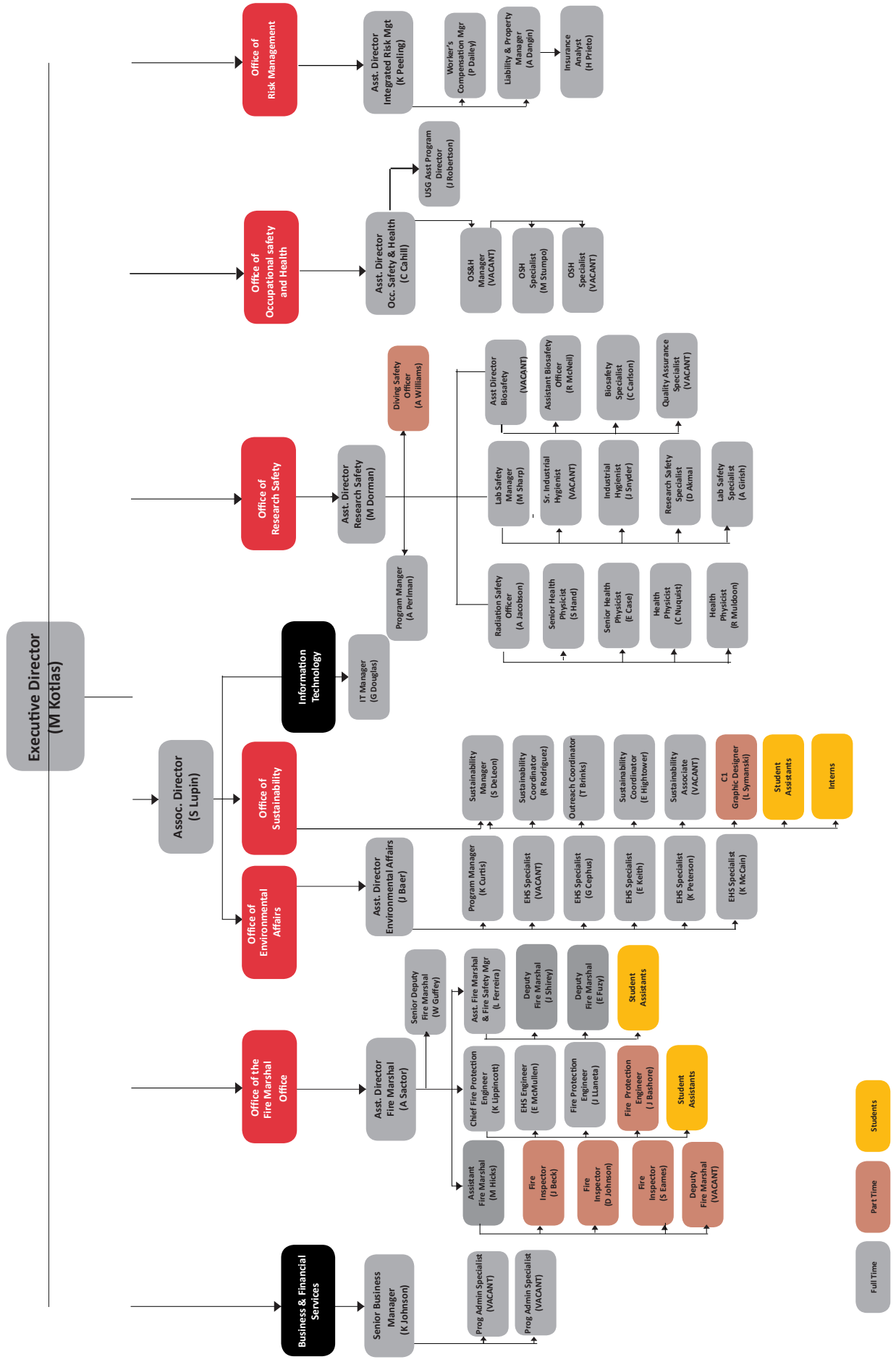
I invite you to read through this annual report and the ESSR websites essr.umd.edu and sustainability.umd.edu to learn about the many programs and services we offer to the University.

Sincerely,

Maureen Kotlas
Executive Director



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.

ENVIRONMENTAL AFFAIRS

The Office of Environmental Affairs (OEA) is engaged in three primary areas of focus—regulated waste management, environmental compliance assurance, and assisting with environmental aspects of property acquisition, divestment, and development. OEA works with campus stakeholders to facilitate campus-wide compliance with federal and state environmental regulations including regulated waste management (chemical, biological, radioactive, and universal), air quality permits, fuel and oil storage tank management, stormwater and water quality permits, environmental site assessments, and real estate initiatives. OEA helps the campus community manage environmental risk by developing policies, procedures, training, and consulting with campus entities including faculty, staff and students in labs, offices, and maintenance shops. OEA conducts required regulatory inspections, testing, and reporting. Additionally, OEA provides oil and hazardous materials spill response and remediation capabilities for the campus.

Regulated 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. OEA operates a fully-permitted hazardous waste storage facility on campus, one of only 14 such facilities in the State of Maryland. The facility's operations are performed in a cost-effective and safe manner to ensure that all waste is managed safely and practices meet all federal and state environmental regulations. In FY22, OEA's six person staff responded to over 8,300 requests for waste collection services, managing approximately 74,400 pounds of hazardous chemical waste, 27,200 pounds of biohazardous waste, and 1,200 pounds of radioactive waste. OEA also manages and disposes

of regulated universal waste (batteries, fluorescent bulbs, and light ballasts), collecting and recycling approximately 21,300 pounds of universal waste in FY22. OEA diverted and recycled approximately 2,500 pounds of scrap metal and semi-precious metal last fiscal year, with a significant portion of that coming from compressed gas cylinders that were collected for disposal. Additionally, OEA diverted approximately 475 pounds of waste collected as municipal solid waste, which is significantly less expensive to manage than hazardous waste. Required regulated waste training (hazardous, biohazardous, radioactive, and universal waste) was provided to almost 4,000 University faculty, staff, and students during FY22.



Spill & Incident Response

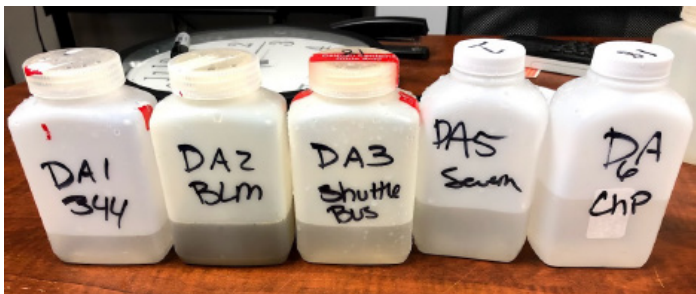
Clean up and spill responses for most HAZMAT incidents are managed by the OEA unit. OEA staff are on call 24 hours a day, 365 days a year to respond to and mitigate environmental incidents on the campus. OEA responded to 20 incidents in FY22. Most of these spill responses were minor and conducted solely by OEA staff, while others were conducted with the assistance of the Prince George's County Fire Department and other ESSR units.



OEA staff dressed in personal protective equipment responding to a spill.

Stormwater / Pollution Prevention Compliance and Training

Stormwater management, permitting, and pollution control efforts remained priorities for OEA, who currently facilitates compliance with three National Pollutant Discharge Elimination System (NPDES) permits for the university: an Industrial Discharge Permit, which specifically regulates campus discharges from outfalls to surrounding streams, a General Discharge Permit for Stormwater Associated with Industrial Activities, which permits the discharge of stormwater from certain facilities that are targeted as high potential sources for stormwater pollution, 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



Outfall water samples for permit testing.

sites on campus. During FY 22, OEA obtained a new General Permit for Discharges Associated with Pesticide Application, which streamlines the use of herbicides and pesticides at the College Park campus and all satellite UMD facilities. Collectively, these permits require the university to monitor its discharges, meet certain discharge limitations, conduct ongoing inspections, and employ Best Management Practices (BMPs) to minimize pollutants discharged in the stormwater. During FY22, OEA staff sampled and inspected 46 of the University's outfalls and conducted 11 Illicit Discharge investigations. In addition to stormwater management efforts on the College Park campus, OEA provided similar support to the IBBR / USG campus in Rockville.

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, personnel training, above-ground fuel storage tank projects, and SPCC Plan revisions. The SPCC Plan currently has 380 oil-containing assets distributed throughout campus that must be inspected and maintained in accordance with the Plan. A required major overhaul to the University's SPCC Plan will be completed in FY 23. OEA provided similar SPCC support to the IBBR / USG campus, as well as the 6 farms operated by the University.

During FY22, OEA renewed the University's Oil Operations Permit that allows for the storage, transportation, and dispensing of oil on the campus. This permit governs 95 oil storage tanks distributed throughout campus. In addition, SPCC Plan training and stormwater pollution prevention training programs were provided to 230 University employees by OEA.

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 (CHP) facility. OEA collaborates with

other departments on campus to ensure that various management tasks associated with the Title V Air Quality 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. During the last year, OEA began a facility-wide audit in support of the renewal of this permit, which governs the operation of approximately 100 pieces of fuel-burning equipment, including turbines, boilers, generators, water heaters, furnaces, and charbroilers. The renewal application package for the Title V Air Quality Permit was submitted previously in FY20. OEA has since been working with the Maryland Department of the Environment to facilitate the renewal of that permit, which we expect will be issued in FY23. During FY22, OEA provided support to various campus departments with obtaining four air Permits to Construct for boilers, emergency generators and cooking equipment.

OEA also continued to provide support to the IBBR campus with their state-issued air Permit to Operate for their relatively new micro CHP system. OEA continues to provide technical support to the University as we plan and implement the NextGen project, which seeks to refurbish the University's CHP facility. OEA staff provided training to 12 University staff related to compliance with the University Title V Air Quality Permit.

Campus Development Initiatives

During FY22, OEA continued to provide support to the University as we acquired new property, developed existing properties, divested property, and engaged in new relationships with non-University entities. In addition to conducting environmental site assessments related to property acquisition / divestment transactions, OEA provided technical assistance to multiple partnerships with non-University entities, including the Purple Line Project, several start-up ventures, and projects related to the divestment and beneficial redevelopment of impaired land in the University's Discovery District.



Stormwater management and spill response on McKeldin Mall.

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, 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.

Events Large and Small Make a Comeback

After two years of cancellations due to the Coronavirus pandemic, events made a comeback. The OFM plays an integral part in the planning and execution of public assemblies to ensure that occupant loads are not exceeded, that event setups meet fire code requirements, and that the required number of trained crowd managers are present. Commencement is the signature large scale event for graduates and their families to celebrate their achievement. There is a main ceremony where the Commencement speaker and other dignitaries address graduates and their guests. That ceremony was held for the first time without restrictions in Spring 2022 at Capital One Field at Maryland Stadium. Graduates are individually honored at school and department ceremonies across campus. The OFM participates in the Commencement Planning Committee and examines and approves set up plans



©Photo by Hong H. Huynh/University of Maryland

The OFM supports planning and execution of public assemblies like Spring 2022 graduation at Maryland Stadium's Capital One Field.

including the use of pyrotechnics which require a permit from the Office of the State Fire Marshal. Ceremonies take place over a three-day period in various venues on campus. OFM is present at each ceremony to ensure that planned safety measures are followed and to document any issues. Afterwards, a report is submitted to the Commencement Planning Committee that is used to determine venue assignments in future ceremonies.

Plan Review and Construction Improvements

The Plan Review and Construction team in the OFM is responsible for plan reviews, site inspections, and occupancy approval for capital and campus construction projects. As part of the UMD Service Center, this AHJ service is also provided for capital projects at other institutions in the University System of Maryland (USM). The need for a more robust review of safety in increasingly complex buildings led to the addition of a full-time Environmental Health & Safety (EH&S) Engineer to the team. A one-page **Needs Assessment for Research Safety, OSH, and Environmental Reviews** checklist, was developed for project managers to quickly check off all aspects of a project that require EH&S review. In addition to enhanced EH&S review, a comprehensive assessment of the plan review and inspection process was depicted in a flow chart. The flow chart is intended to streamline



The EH&S Engineer can look more closely at the safety components of complex construction projects such as laboratories.

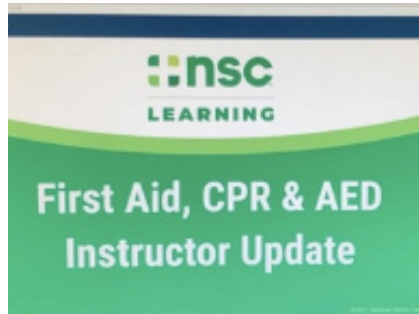


the experience for project managers and improve communication and turnaround times.

Completed capital projects in FY22 include Pyon-Chen Hall, Johnson-Whittle Hall, IDEA Factory, Jones-Hill House, and USM-SM Building #3.

First Aid/CPR/AED Curriculum Update

OFM offers instruction in First Aid/CPR/AED to members of the UMD community using the National Safety Council (NSC) curriculum. In 2020, updated treatment recommendations for First Aid and CPR were released by the International Liaison Committee on Resuscitation (ILCOR). Subsequently, new guidelines were established by the American Heart Association, a member organization of ILCOR. Changes include administering naloxone for opioid overdoses, debriefings for rescuers, cardiac arrest in pregnancy, management of severe bleeding including the use of tourniquets, and additional emphasis on treating low blood sugar and heat stroke. OFM continues to offer sessions on a monthly basis as well as special sessions for groups upon request. Protocols established by NSC as well as UMD requirements were implemented to control the spread of COVID-19. These include decreased class size, masks, and limited physical interaction among participants. Due to decreased class size and the increased cost of supplies, the fee charged per person was increased from \$80 to \$100 per person.



UMD staff participate in CPR/First Aid/AED training.

OFFICE OF THE FIRE MARSHAL Fiscal Year 2022

Service	Number
First Aid/CPR/AED Training Participants	62
Incident Responses	398
Fire Inspections, Building	386
Fire Inspections, Laboratory	389
Construction Plans Reviewed	199
Construction Inspections	143
Events	128

Incident Response

OFM staff are appointed Special Assistant State Fire Marshals in the area of fire investigation and are responsible for determining the origin and cause of fires occurring on university property. If the fire is determined to be incendiary, OFM partners with the University of Maryland Police Department (UMPD). OFM staff are on duty every evening and often on weekends. With their unique skill set, they can respond to a wide variety of calls including odors, chemical spills, and research related alarms. With their knowledge of ESSR operations, additional ESSR expertise can be summoned as needed. UMPD often dispatches OFM to handle situations that do not require fire department response such as fire alarm system trouble signals, residence hall room smoke alarms, and manual pull station cover alarms.



Covering the evening shift. Ready to respond.



Fire response at South Campus Commons.

RESEARCH SAFETY

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. At UMD, our researchers know that research excellence and safety are inextricably intertwined. Thus, safety is a core value of our institution and an integral part of the responsible conduct of research. The University leadership expects all members of our research community to integrate safety into their research activities, to strive for excellence and to go beyond minimum compliance.

From collecting samples 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 to be identified and managed. ORS offers a broad range of services and partners with the research community by providing comprehensive safety training classes, conducting risk assessments and exposure monitoring, and assisting with implementation of safety controls to minimize risks. ORS directly administers many of the university's federal and state licenses and registrations for hazardous and risk significant materials, ensuring regulatory commitments are met as the research community works to achieve their research goals.

Supporting UMD's AMP to Improve Inclusion

To improve inclusion and information access for diverse, non-native speaking UMD community members, ORS partnered with UMD's Administrative Modernization Program (AMP) *EnGen Program* to deploy a language learning module centered on Chemical Safety. The *EnGen Program* is a research-driven, virtual English language learning platform developed by a UMD alumna and offers faculty, staff and students with personalized language learning support via various modules. To support the learning and understanding of complex terminology often encountered in safety, ORS helped EnGen establish the Chemical Safety learning module using both standard safety concepts and UMD-specific details such as the ***Expectations for Conducting Safe Research***.



UMD Chemical Safety learning module available at EnGen's website.

Strengthening Support—A New Animal Safety Program

The new Animal Safety Program Manager (ASPM) supports the Vice President for Research, the Attending Veterinarian and Department of Laboratory Animal Resources (DLAR), and all researchers in achieving

research excellence. The position is focused on the protection of the health and safety of faculty, staff and students who care for and use research animals. As an "embedded" member and integral contributor within DLAR, the ASPM is directly supportive of the mission and needs of the University's animal care and use program. Connected to ESSR and ORS, the ASPM serves as a direct conduit for obtaining subject matter expertise from all ESSR units and serves as an advisor and consultant to support animal care staff, researchers and the various compliance programs applicable to research involving animals. The new ASPM hit-the-ground-running in 2022 to help researchers identify processes to streamline compliance and implement controls to mitigate safety risks.



Amanda Periman, Animal Safety Program Manager, partners with the campus faculty, staff and students in all research areas where animals are cared for to help identify and manage safety and compliance risks.

Tracking Trends & Leading Indicators For Safety

A significant benefit of a centralized safety management database (BioRAFT) is our ability to track trends for key performance indicators and use this data to assess the effectiveness of our safety program. While "lagging performance indicators"—such as incidents and regulatory citations—indicate our past performance, tracking "leading performance indicators"—such as training, inspections, and closure of inspection findings—gives insight into areas where we are proactive in preventing and addressing compliance and safety issues that can lead to incidents and negative outcomes.



Metric	2017	2021	Change
Total Inspections Performed (Tracked by PI, each inspection includes multiple lab/spaces)	744	769	---
Longest Resolution (Days)	761	185	▼ 75%
% Completed ≤30 Days	54%	78%	▲ 44%
% Completed ≤90 Days	77%	96%	▲ 25%
Average Number of Findings Per Inspection	2.33	1.19	▼ 49%

UMD first invested in the BioRAFT Inspection Module to standardize the completion and communication of all research area inspections. Once an inspection is completed, the Principal Investigator, Center Director and/or the designated compliance liaison are contacted with a copy of the report. The lab has a specified time to resolve findings or the Department Chair is automatically notified. The BioRAFT Inspection Module provides the lab, College and University leadership, compliance groups, and ESSR with the ability to evaluate high frequency and high severity findings, and then target training and support where needed to prevent potential or reoccurring issues.

The first full year of inspection data was collected in 2017. While comparing 2017 to 2021, the UMD research community **Demonstrated a Commitment to Safety** with marked improvements across several metrics including overall responsiveness and findings found per inspection. In 2021, 78% of all inspection findings were resolved within the first 30 days, and 96% were resolved within 90 days. The average number of findings per inspection went from 2.33 in 2017, to 1.19 in 2021 showing nearly a 50% decrease.

Keeping Researchers Safe Wherever They Go

Striving for Continuous Improvement is a key **Expectation for Conducting Safe Research**. As ORS engages with the UMD research community, we seek ways to help implement resources that will support researcher safety. Using research enhancement funds directed to ORS by the Vice President for Research, ORS initiated a new Satellite Communicator Device Rental Program to enhance safety and emergency preparedness for researchers working in remote areas across the globe. Free of charge to the research community, ORS now offers three Garmin InReach SE+ and two Garmin InReach Mini communicator devices to serve as emergency communication devices in areas with unreliable cell phone coverage.



Professor Kaufman, College of Computer, Mathematical, and Natural Sciences Department of Geology, stands in a remote area of Namibia, using the Satellite Communicator Device from the ORS Free Rental Program to test the system and check in with UMD contacts at College Park.



Graduate student Amelia Lindsay-Kaufman stands in a remote area of Australia holding up a Satellite Communicator Device from the ORS Free Rental Program. Amelia is there conducting research with Professor Kaufman, College of Computer, Mathematical, and Natural Sciences Department of Geology.

The InReach units operate on the Iridium satellite network, with 100% global coverage when given a clear view of the sky. Each InReach device has unlimited use of the SOS feature and preset text messages. Use of SOS feature will trigger emergency response action via the International Emergency Response Coordination Center and report a person's GPS coordinates to local rescue authorities. To date, the devices have assisted researchers traveling to remote field locations in Russia, Namibia, and Australia.

OCCUPATIONAL SAFETY AND HEALTH

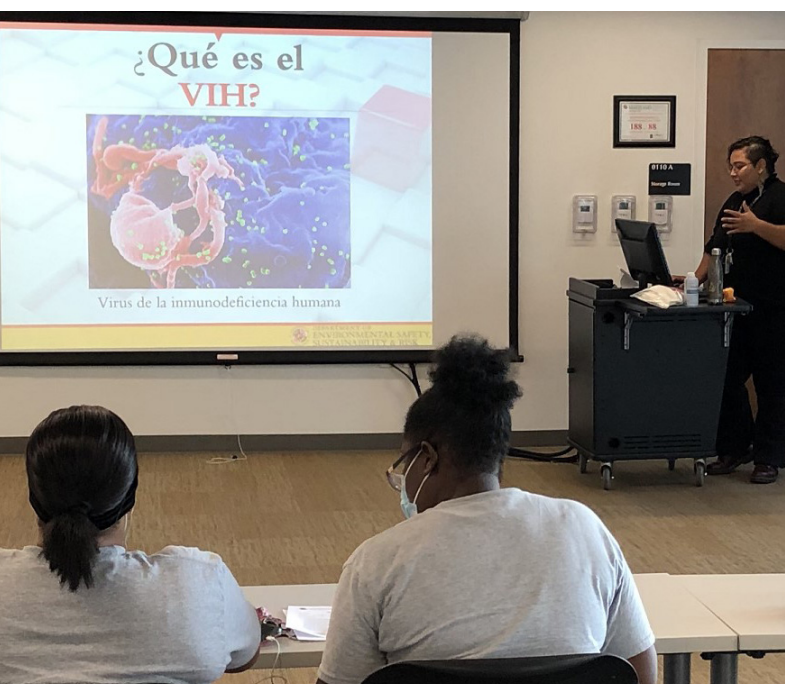
The Office Occupational Safety and Health (OSH) is dedicated to ensuring the wellbeing of employees by promoting health and safety procedures and by assisting the University in anticipating, recognizing, evaluating, and controlling operational and workplace hazards that can cause illness or injuries. All OSH programs are developed with an emphasis towards regulating the most hazardous work conducted on campus. Programs include on-scene direct guidance to University of Maryland Police, managers, supervisors, student, and frontline employees directly engaged in hazardous operations. Continuous improvement in OSH programs presents the means by which members of the UMD community can live and work safely on campus every day.

Safety Training Programs for UMD Employees

Throughout fiscal year 2022, OSH made significant improvements in training to better fit the needs of UMD employees. Participation increased more than 70% compared to training rates in 2021, with over 1,600 trained personnel in 2022. In-person training sessions were presented with more effective hands-on content, enhancing the practical application and understanding for participants. For example, personnel received hands-on demonstration of competence in high-hazard operations.

Continued development of strategic partnerships with the Department of Residential Facilities, Facilities Management, the University Health Center, Dining Services, and RecWell has helped OSH evolve training content and increase participation. In FY 2021, safety training was conducted for 743 personnel from these departments. In FY 2022, the same high-hazard training courses were provided for 1,497 personnel.

To enhance the culture of sustainability and develop a learning organization at UMD, OSH produced videos and guides for on-demand, virtual training. More specifically, OSH developed interactive modules on Root Cause Analysis and Hazard Communication and began modules dedicated to the Control of Hazardous Energy and Bloodborne Pathogens. The self-paced modules enable OSH to train people more efficiently, creating increased flexibility for many UMD employees required to receive health and safety training. Videos include narration and captions to ensure that all UMD community members can benefit from the on-demand training modules. Data on the completion of the virtual modules and associated quiz scores enable OSH to identify and address topic areas that may need additional instruction. The completed videos have been disseminated to 112 managerial and supervisory personnel who further communicated the training to users within these units. This training technique provides a foundation for our UMD community to complete training effectively and efficiently.



A Hazard Communication course is conducted by OSH in Spanish.

Documented Compliance Programs

The Occupational Safety and Health Act (OSHA) identifies three safety programs as the greatest hazards and costs for organizations across the nation: Control of Hazardous Energy; Fall Hazard Prevention and Control; and Confined Space Entry. In fiscal year 2022, OSH prioritized the development of standardized, well-documented programs to help UMD employees control and address these three high-hazard areas. The programs include procedures, assessment and reporting tools, recordkeeping, audits/assessments, and review for UMD departments to optimize safe operations. Training has been imparted to seven high-priority units who demonstrated effective understanding through the attainment of high test scores.





Investigation of Injuries and Near-Miss Events

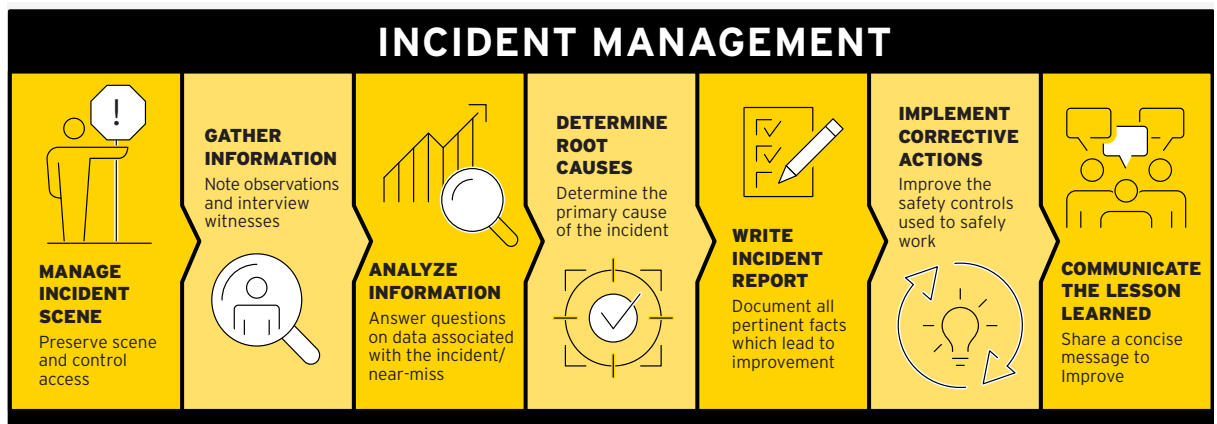
In fiscal year 2022, OSH developed a Cause Analysis Program to investigate all incidents in which a worker was hurt. The program also investigated near misses (also called “close calls”) where a worker was at risk of injury if circumstances were slightly different. Working with the affected unit, the incident or near-miss scene is preserved while information is gathered and analyzed to determine the primary cause(s) of the event. The new program allows OSH and the UMD community to identify and implement effective corrective actions.

An additional program, Lessons Learned, takes the information gathered from the Cause Analysis Program incident investigation to develop short, concise summaries of the events. The primary focus of this new program is to identify causes and methods to prevent recurrence. Lessons Learned is also imparted on the community to illustrate good work practices and encourage campus-wide adoption. OSH has used the Cause

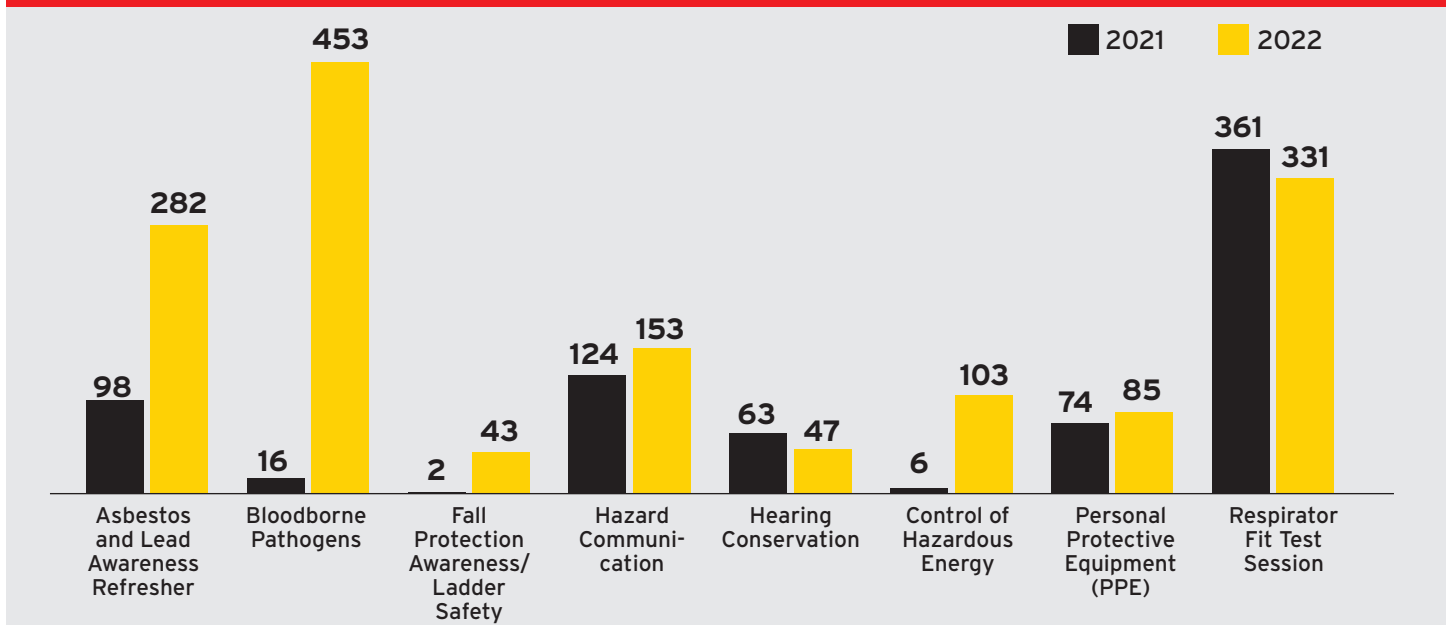
Analysis and Lessons Learned programs to investigate three incidents and impart the corrective actions and lessons learned to improve safety at UMD.



An OSH incident investigator uses instrumentation to determine cause.



2021-2022 UMD Community Participation in OSH Safety Courses



RISK MANAGEMENT

The Office of Risk Management (ORM) supports the academic and operational departments in their efforts to manage risk using a number of methods that are complementary to the Maryland State Self Insurance Program and commercial insurance. The department regularly provides consultation with respect to hazard identification, loss control techniques, risk transfer and the application of commercial insurance.

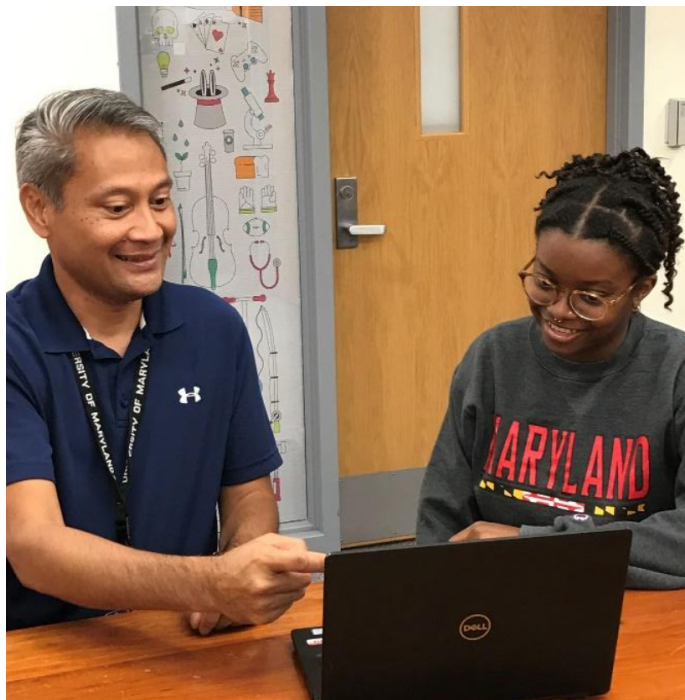
Enterprise Risk Management

Fiscal year 2022 marked the beginning of a return to more normal operations across the UMD campus. With that came a return to the full cadre of risks encountered in the course of the research, service and teaching mission of the University. Rather than continued reliance on existing traditional programs, the ORM has supported University leadership by examining Enterprise Risk Management (ERM), a broader and more integrated approach to managing risk across the entire organization and its extended networks. ERM involves understanding, analyzing and addressing risk to support our university's ability to achieve its strategic objectives.

Over a decade ago, an organization wide effort was launched at UMD to identify the risks that the university faced. This effort resulted in a huge list of risks, allowing the identification of Risk Owners and development of mitigation strategies. Many of the strategies identified during that effort are still in place today. While this valiant effort was a worthwhile start, it lacked a follow up system to measure the effectiveness.



Fast forward a decade and just prior to the University shutting down due to COVID-19, USM adopted **VIII-20.00 Policy On Enterprise Risk Management**. This policy requires each USM institution to adopt an ERM process. Under the leadership of University President Pines and led by Vice President and Chief Administrative Officer Carlo Colella, the President's Cabinet identified the top risks that may impact UMD's ability to meet its strategic goals. This will be an ongoing effort going forward as we work to embed the concept of consciously considering risk in every program, process and decision.



ORM staff discusses event safety with Maryland student.

Registered Student Organizations

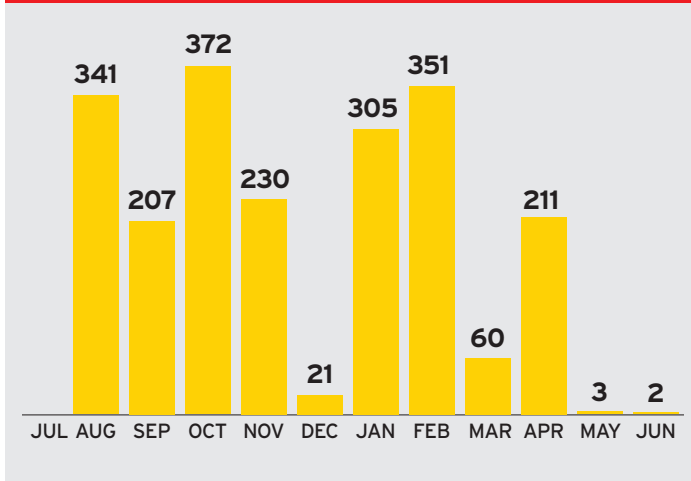
ORM, in collaboration with the Event Management Team, reviews and evaluates Registered Student Organization (RSO) events to ensure that they run smoothly and safely. During the 2021-2022 academic year, ORM assessed 2,103 student events. These events ranged in size from small club meetings to very large-scale public events.

Of the thousands of student events, 893 of them were "high-risk" which include athletic events, events with carnival rides, and activities with children. These all have a higher probability of injury, incident or property damage. ORM educated the student leaders about risk management techniques that made their high-risk event safer and provided them with participant releases that protected the student organization and the University from liability.

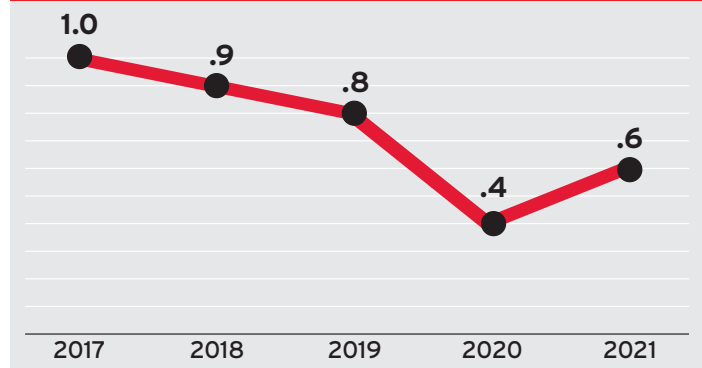


For the higher-risk, large-scale events where the public was invited—for example, Terp Thon, Bitcamp and Technica—ORM helped the student organizations secure commercial liability insurance. ORM also supported children’s events like College Mentor for Kids and Phi Sigma Sigma Sorority’s “Phi-eld Day” by providing student leaders with behavioral guidelines on how to interact and supervise minors.

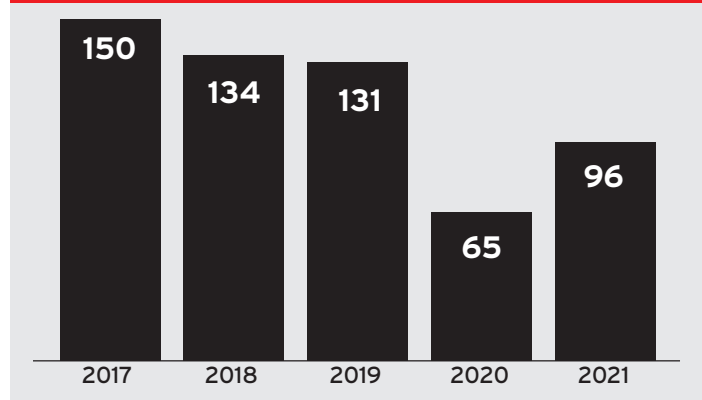
Registered Student Organization Events Reviewed by ORM (FY22)



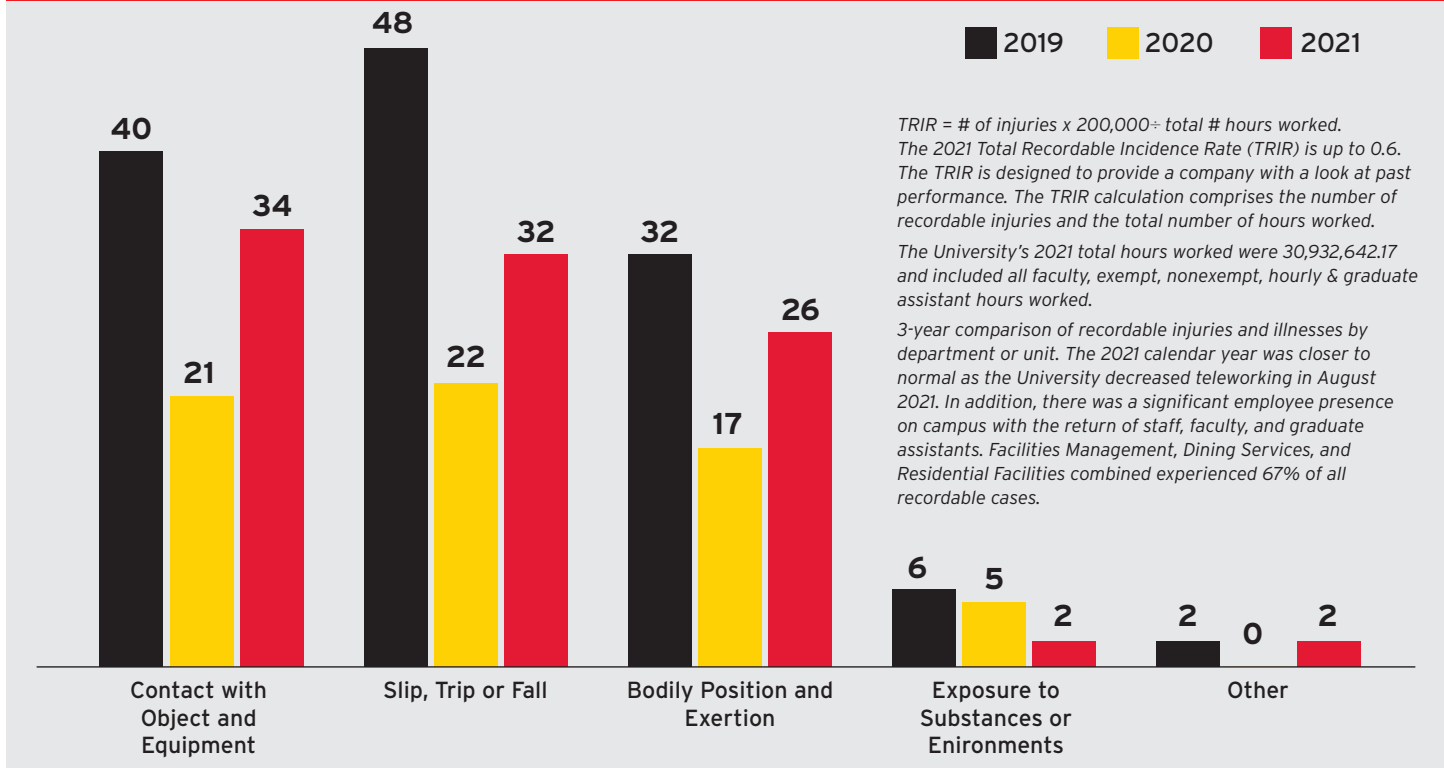
UMD 5-Year OSHA Total Recordable Incidence Rates



UMD 5-Year OSHA Recordable Injury & Illnesses



2019-2021 UMD Recordable Injuries & Illnesses by Incident/Event



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.

Partnerships in Spirit of Strategic Plan

Fearlessly Forward: In Pursuit of Excellence and Impact for the Public Good, The University of Maryland Strategic Plan emphasizes taking on humanity's grand challenges. The plan highlights accelerated development and implementation of Climate Action Plan goals as one of four strategic initiatives and programs supporting the grand challenges aspect of the plan. OS staff members partnered with units around campus to draft new Climate Action Plan strategies that will be implemented between 2022 and 2035. Staff also participated in strategic planning processes and discussions organized by Facilities Management, Residential Facilities, and the College of Agriculture & Natural Resources.

STARS GOLD

In 2022, OS completed a two-year long project to update the University of Maryland's report to the Sustainability Tracking, Assessment, and Rating System (STARS) offered by the Association for the Advancement of Sustainability in Higher Education (AASHE). In this report, UMD was awarded STARS Gold, scoring more than seven points higher than the previous report in 2019. The university will receive recognition as a Top Performer in the annual AASHE Sustainable Campus Index, specifically in research and waste.



The campus Combined Heat and Power plant.

NextGen Support and Carbon Alternatives Strategies

OS continues to provide education and input to Division of Administration energy and transportation leaders on topics that relate to decarbonization of UMD's operating systems. Staff participated in communication and procurement work groups for the NextGen Energy Program. Staff also provided guest lectures and presentations to educate students about campus sources of greenhouse gas emissions, complexities and costs associated with decarbonization, and planning processes that are underway to transition to zero and low carbon energy sources.

University Sustainability Fund Update

The Fund supported a landmark 35 paid undergraduate student opportunities in sustainability for the 2022-2023 academic year. These positions were created by eight grants that received around \$200,000 from the Sustainability Fund. OS supported the student-chaired Sustainability Fund Review Committee in evaluating proposals and presenting funding recommendations to the University Sustainability Council. The Council awarded grants to a new SustainableUMD outreach leadership development pilot program, the Terp to Terp Campus ReStore, a new pilot to increase local, plant-based food options in the Dining Halls, and four research projects involving sustainable agriculture and measuring forest carbon on UMD managed land. In addition, the SGA Sustainability Committee awarded almost \$15,000 in mini-grants to support a variety of student-driven





Students talk with Sustainability Ambassadors at the 2022 EarthFest.



President Pines visits with student interns at Maryland Day 2022.

research projects, a student-driven green labs initiative, and ongoing access to battery recycling around campus. OS also collaborated with the Academy of Innovation & Entrepreneurship to offer spring grant proposal workshops to support students, faculty and staff in networking and preparation to submit strong proposals in the 2022-23 grant cycle.

Sustainability Outreach Update

Outreach programs resumed in person, and continue to cultivate greater leadership by recruiting, training and facilitating engagement in sustainability awareness and commitments. This year, 29 Greek Chapter chairs

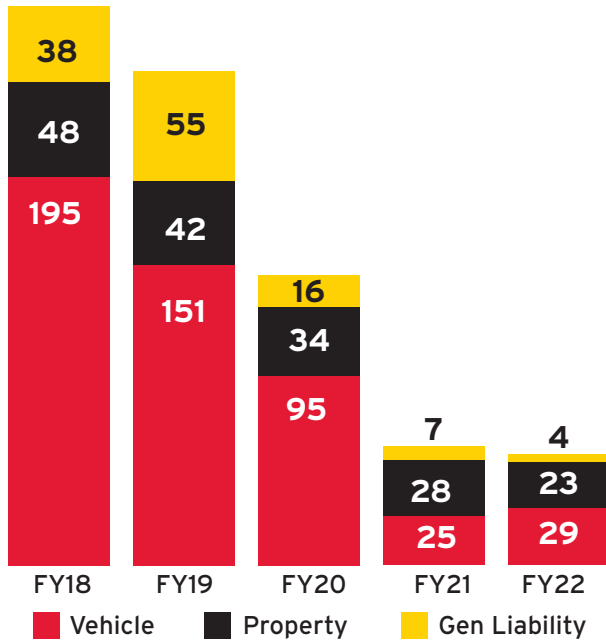
took part in the Green Chapter Program, engaging over 2,400 students. Student Sustainability Advisors delivered 53 presentations, teaching 2,900 students about significant sustainability issues, campus progress, and opportunities. A total of 19 ambassadors educated over 1,200 students at 51 events. As a result of these revitalized outreach programs, nearly 2,100 students took the Green Terp commitment. Over 50 office representatives signed up to achieve Green Office Certification, with the program ramping back up after a hiatus during COVID-19. OS also received a mini-grant to host an in-person Earth Day festival with 24 student organizations and campus departments, reaching approximately 600 campus members.



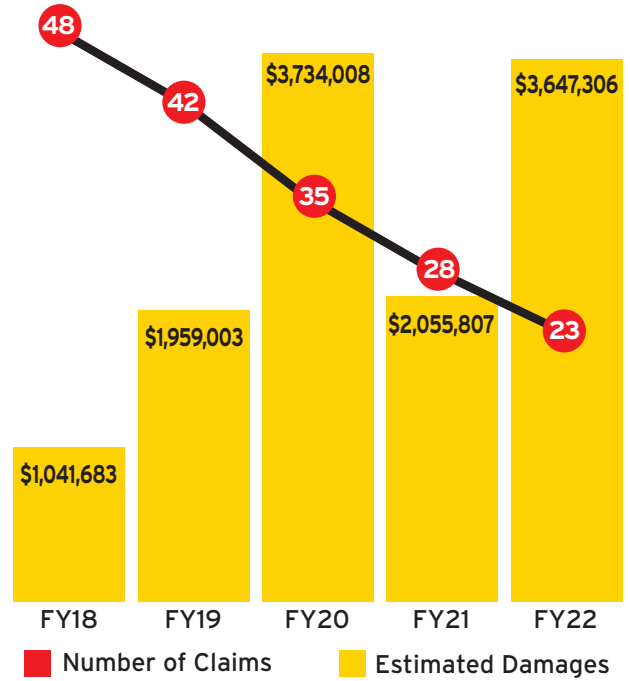
Members of the Green Terp Outreach team at a campus event.

METRICS

INSURANCE PROCESSING CLAIMS FY18-FY22



PROPERTY CLAIMS FY18-FY22



FY22 PROPERTY CLAIMS

Type of Claim	Reason Detail	Number of Claims	Damages (in dollars)
FLOOD	HUMAN ERROR	2	\$51,000
	WEATHER	2	\$169,000
	PIPE FAILURE	10	\$1,450,180
	FIRE	1	\$100,000
FLOOD TOTAL			\$1,770,180
OTHER		7	\$777,125
POWER OUTAGE		1	\$1,100,000
GRAND TOTAL		23	\$3,647,306

FY22 GENERAL LIABILITY

Type of Claim	Number of Claims
TORT PROPERTY	4
GRAND TOTAL	4

FY22 STATE VEHICLE CLAIMS

Type of Claim	Number of Claims
BACKING	6
OTHER	5
REARENDED	3
SIDESWIPE	13
T-BONE	1
FRONTAL	1
GRAND TOTAL	29



**DEPARTMENT OF ENVIRONMENTAL
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