

# RISK, SAFETY, & RESILIENCE ANNUAL REPORT 2024

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**FY24 ANNUAL REPORT** 

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#### FY24 Risk, Safety, & Resilience Annual Report Message from the Vice President & Chief Risk Officer





#### About Julie Zobel, PhD

Julie Zobel, George Mason University's inaugural Chief Risk Officer, leads the university's Enterprise & Operational Risk Management, Emergency Management & Fire Safety, Environmental Health & Safety, and Employee Health & Well-Being programs. Dr. Zobel holds degrees in Hazardous Materials Management, Civil and Environmental Engineering, and a doctorate in Biodefense.

#### Dear Colleagues and Stakeholders,

As I reflect on Fiscal Year 2024, I am filled with pride and gratitude for the strides we have made together. This year has been one of significant transformation, strategic initiatives, and dedicated service to our university community.

A pivotal change this year was the reorganization of our unit, which now reports directly to President Gregory Washington. This new structure underscores the importance of the Risk, Safety, & Resilience mission and has empowered us to act with greater agility and influence. Additionally, I am honored to have been appointed as Chief Risk Officer, a role that allows me to work closely with our outstanding team to ensure the safety and resilience of our institution.

Our commitment to fostering a supportive and engaged workplace has never been stronger. Building on the Employee Engagement Action Plan launched in FY23, we continued to adhere to its principles in FY24. This included a series of internal and external recognition programs celebrating the remarkable contributions of our staff. Social events throughout the year further strengthened our community, creating opportunities for connection and collaboration.

In response to the global conflicts that have deeply impacted our campus, we provided major support for demonstrations, ensuring that they were conducted safely and respectfully. Our efforts enabled our community to express their views and advocate for change in a manner consistent with our university's values of dialogue and understanding.

This year, we also played a crucial role in supporting the university's commencement ceremony. Our team worked tirelessly behind the scenes to ensure the event was a resounding success, allowing graduates and their families to celebrate this milestone with joy and security.

As we look ahead, I am confident that our continued focus on risk management, employee engagement, and community support will drive us to even greater achievements. Thank you for your unwavering dedication and support throughout this transformative year.

Sincerely,

#### Julie Zobel, PhD

VIce President & Chief Risk Officer

## RISK, SAFETY, & RESILIENCE DIVISIONAL UPDATES





#### **Commencement Support**

Emergency Management & Fire Safety (EM&FS) collaborated with University Events, George Mason Police, and University Life to enhance security, logistics, and demonstration planning for commencement and graduation ceremonies at George Mason University in May 2024. Like the 2023 commencement, this partnership involved meticulously planning and executing a sign-in process for all graduates, ensuring the appropriate weapons detection devices were in place for security screening, and managing all logistics related to the movement of graduates. Additionally, staff were prepared to effectively handle potential demonstrations and disruptions and managed the graduate check-in process.

By working closely with these departments, each event was conducted smoothly, safely, and in alignment with the university's values of dialogue and understanding, allowing graduates and their families to celebrate this important milestone with confidence and security.

#### **Presidential Event Support**

In January 2024, the Democratic National Committee held an event at the Hylton Performing Arts Center on George Mason University's SciTech Campus with President Joe Biden, first lady Jill Biden, Vice President Kamala Harris and second gentleman Douglas Emhoff. EM&FS provided support for this event which presented a rare and challenging emergency management scenario where the President of the United States, Vice President, and their respective spouses were to be all together at one venue that was not the White House. The event went well and was without incident, thanks in major part to the efforts of the EM&FS team.





#### **Continuity of Operations Planning Software Update**

In FY24, EM&FS launched a new software for Continuity of Operations Planning (COOP), Archer. Continuity of operations planning software is crucial as it ensures the seamless continuation of essential functions during disruptions, safeguarding organizational resilience and stability. As part of this effort, RSR scheduled planning meetings with multiple COOP Units/Teams from various departments across George Mason. Large strides have been made in updating all university COOP plans, with this effort continuing into FY25.

#### **Demonstrations on Campus**

In the past year, significant efforts were dedicated to planning for and facilitating demonstrations on campus, particularly those related to the war in Gaza, potential tuition increases, and the proposed cricket stadium. This involved hosting weekly meetings with the Emergency Operations Group (EOG), and staffing demonstration events to ensure compliance with the new face covering policy, 1408, as well as engaging with participants and bystanders. These measures were crucial in maintaining a safe and orderly environment during demonstrations, allowing for the expression of diverse viewpoints while maintaining campus safety.

Additionally, considerable time was invested in updating, coordinating, and clarifying policies at George Mason regarding free speech and students' ability to attend classes without restrictions. This process required balancing First Amendment considerations with the need to maintain safety. By refining these policies, the university aimed to protect the rights of students to express their views freely while maintaining an environment conducive to academic pursuits and campus harmony.





#### **Stop the Bleed & Naloxone Kits**

In FY24, EM&FS introduced new emergency supplies to the George Mason University community – stop the bleed kits and naloxone kits. Stop the bleed kits contain supplies to help control life threatening bleeding until more advanced medical assistance arrives. Naloxone kits contain a medication that can reverse the potentially fatal effects of an opioid overdose. This effort coincides with updates to all evacuation plan signs on campus. In addition to showing exit routes and fire extinguisher locations, the maps will be updated to show the locations of AED, stop the bleed, and Narcan kits. The locations of these emergency supplies are currently available online on the ready.gmu.edu website, and via an interactive map in the Rave Guardian mobile safety application.

#### **Events & Exercises**



#### Fire Safety Symposium

Emergency Management & Fire Safety hosted the 12th annual Institutions of Higher Education Fire Safety Symposium at University of Virginia in June 2024. Thirty-five other fire safety professionals from across the Commonwealth attended this event to share information about their respective fire safety programs.



#### UCC Bootcamp

In June 2024, EM&FS hosted the International Association of Emergency Managers Universities and Colleges Caucus (UCC) Boot Camp for emergency managers new to the higher education environment. With over 40 participants this is the second boot camp hosted by UCC, and by all accounts it was a success.



#### Tabletop Exercises

Emergency Management & Fire Safety conducted two tabletop exercises with senior leadership in FY24 to discuss political events on campus and active threat scenarios. In addition, EM&FS conducted a tabletop exercise with Strategic Communications that tested their Joint Information Center (JIC). The JIC is important for publishing updates to the campus community during an emergency, as well as coordinating messages to the media, other public information officers and monitoring social media. Conducting tabletop emergency management exercises is vital for testing and refining response plans, enhancing coordination, and ensuring preparedness for real-life emergencies.



#### **Mason Alert Summary**

Mason Alert emergency notifications alert George University community members Mason of emergencies or hazards on campus or in the region and provide direction on how to safely respond. In FY24, RSR delivered 688 Mason Alerts, an increase of 106% from FY23 (Table 1; Figure 2). Deviations in number of alerts from year to year is due to the unpredictable nature of emergencies. In addition, automated lightning alerts were implemented during FY23 and account for a significant portion of the alerts that are sent out. It is also worth noting that some alerts are delivered to specific audiences based on their role and/or geographic location. For instance, someone whose primary campus is Fairfax would not receive lightning alerts for SciTech or Front Royal campuses depending on their account preferences. Lastly, extensive testing was conducted to ensure that the Mason Alert system and new hardware installed in FY24 functioned properly.



Rave Guardian Mobile Safety App



www.ready.gmu.edu/mason-alert

#### Table 1. Mason Alert Summary; FY22-FY24

Alert Category	FY22	FY23	FY24
Emergency	12	4	9
Utility Outages / Restores	18	6	4
Weather Alerts	5	1	5
Delayed Opening / Closing	11	0	7
Test / Exercise	2	66	120
Lightning Watch / Alert*	N/A	113	196
Lightning Warning**	N/A	143	347
Total	48	333	688

Figure 2. Mason Alert Summary; FY22-FY24



\*Lightning Watch: Issued when lightning is detected 10-15 miles from campus.
\*\*Lightning Warning: Issued when lightning is detected less than 10 miles from campus.



#### Emergency Management & Fire Safety Services Summary

Tables 2 and 3 summarize EM&FS equipment and building inspections, certifications, and fire safety services conducted during FY24, compared to FY22 and FY23. The number of units, where relevant, is also provided to provide context, scope, and scale of work (Table 3). In FY24, there was a decrease in the number of building inspections conducted and a corresponding decline in the number of deficiencies noted compared to FY22 and FY23. A temporary critical staffing vacancy prevented EM&FS from completing scheduled inspections. This all position has been filled and it is anticipated that normal inspection schedules will resume in FY25.

Table 4 provides a summary of evacuation drills conducted throughout FY24, compared to data from FY22 and FY23. Fire drill participation varies from year to year based on evacuation drill schedules (e.g. time of day, day of the week) and variability in oncampus population; however, total evacuation drill participation has increased following the COVID pandemic as students, faculty, staff, and visitors returned to campus.

#### Table 2. EM&FS Services Summary; FY22-FY24

Service	FY22	FY23	FY24
Fire Incident Investigations	0	0	1
Fire Safety Building Inspections	122	94	57
<ul> <li>Building Inspection Discrepancies Corrected</li> </ul>	386	296	72
Fire Alarm / Fire Suppression Systems Deficiencies Noted	119	197	181
Special Event Assistance	4	3	5
Hot Work Permits Issued	36	40	17

#### Table 3. EM&FS Services Summary with Units; FY22-FY24

Service	FY22	FY23	FY24	# Units (FY24)
Fire Alarm Systems Inspected	0	0	1	1
Back Flow Devices Inspected	122	94	57	57
Fire Extinguishers Inspected	386	296	72	72
Fire Extinguishers Certified	119	197	181	181
Fire Extinguishers Replaced	4	3	5	5
Fire Pumps Inspected	36	40	17	17
Fire Sprinklers Inspected	36	40	17	17
Smoke Detectors Inspected	36	40	17	17
Valves Inspected	36	40	17	17
Commercial Kitchen Fire Hood Fire Alarms and Suppression Systems Inspected	36	40	17	17
AED Inspected	36	40	17	17

#### Table 4. Evacuation Drills; FY22-FY24

	FY22		FY23		100 B	Y24
Evacuation Drills	Drills	Evacuees	Drills	Evacuees	Drills	Evacuees
Academic Buildings (Annually)	23	1,497	25	2.724	28	3,351
Assembly Buildings (Quarterly)	52	2,192	56	3,491	60	4,942
Child Care Facilities (Monthly)	12	729	12	866	12	1,057
Residence Halls (Four Times / Year	90	9,522	94	10,604	96	11,011
Total	177	13,940	187	17,685	196	20,361

## Risk, Safety, & Resilience | FY24 Annual Report Employee Health & Well-Being





#### **Travel Consultations**

In FY24, Employee Health & Well-Being (EHW) launched a brand-new service - travel consults for employees traveling for work related purposes. A medical travel consultation involves a comprehensive review of the traveler's health history, along with destination-specific advice on health risks and necessary precautions. It includes recommendations for vaccinations and medications, guidance on preventive measures such as insect bite avoidance and food safety. The consultation also covers preparing for medical emergencies, including information on accessing healthcare abroad. Additionally, it provides general travel advice and addresses any special considerations for high-risk travelers, ensuring the traveler is well-prepared for a safe and healthy trip.

#### Medical Surveillance Program Updates

Major updates were made to the Medical Surveillance Plan by EHW in FY24. Medical surveillance involves regular health assessments, exposure monitoring, and data collection to detect and prevent work-related illnesses and injuries. It assists with compliance with regulations, facilitates early intervention, and includes risk assessment and employee education to promote workplace safety and well-being. Most notably among the updates to this program, EHW now takes the place of third-party vendors and Student Health Services (SHS) as the team providing services, increasing compliance and significantly reducing burden on employees who no longer need to travel off-site for most medical surveillance services.





#### **Infection Control Inspection**

In FY24, an infection control inspection of Student Health Services (SHS) was conducted by EHW. The inspection spanned two days, utilizing a comprehensive 20-page checklist developed by the Centers for Disease Control and Prevention (CDC). This rigorous inspection, an integral part of the SHS accreditation process, is conducted biennially to ensure adherence to the highest standards of infection control.

## Risk, Safety, & Resilience | FY24 Annual Report **Employee Health & Well-Being**



### **Employee Health & Well-Being Services**

Table 5 provides an overview of EHW services performed during FY24. As this team has shifted from pandemic operations to occupational health services, COVID diagnostics and vaccines are no longer provided as services, explaining the dramatic reduction in COVID tests and vaccines administered since FY23. With greater resources available now that the COVID pandemic response has concluded, EHW have been able to expand services, such as travel consults for those going on George Mason-related travel, and focus on other pre-pandemic occupational health services (i.e., ergonomics assessments).

#### Table 5. EHW Services; FY22-FY24

Service	FY22	FY23	FY24
Medical Surveillance			
Animal Handler	55	62	43*
Select Agent BSL-3	17	35	23
<ul> <li>Hazardous Materials (HAZMAT)</li> </ul>	2	1	7
<ul> <li>Respiratory Protection</li> </ul>	26	70	32
<ul> <li>Audiometry (Hearing Protection)</li> </ul>	0	127	161
Diagnostic and Screening Services	8	11	36
Chest X-Ray	N/A	N/A	1
Electrocardiography (EKG)	2	0	7
Vision Screening	N/A	N/A	19
Spirometry	1	1	1
Vaccines and Titers	19	3,211	29
Ergonomic Assessments	15	32	18
Travel Consultation	N/A	N/A	2

\*Animal Handler related services decreased in FY24, as the clearances are needed every 3 years and therefore cyclical.











### **Enterprise Risk Assessment**

In FY24, an updated Enterprise Risk assessment was completed, and Executive Risk Owners were identified. Orientation for Executive Risk Owners and Action Plan Risk Owners is currently underway and expected to result in robust mitigation plans.





#### **Certificates of Insurance**

Operational Risk Management (ORM) provides support to departments when evidence of insurance coverage is needed. Insurance contracts are reviewed by ORM to ensure the language is acceptable and that only individuals with appropriate signature authority are signing the agreements. In FY24, ORM facilitated the distribution of 122 certificates of insurance to George Mason departments.

### **University Travel Advisory Committee**

The University Travel Advisory Committee (UTAC), co-chaired by the Director of Operational Risk Management and the Vice Provost of Academic Affairs, serves to assist the university in balancing the competing priorities of safety and managing risk with the university mission of education, research, and service in hazardous international locations. University Policy 113 restricts travel to areas that are deemed high-risk but permits exceptions in circumstances in which there may be a compelling reason to tolerate a higher degree of risk. The committee notified 38 travelers of the UTAC process and reviewed 28 applications in FY24 for exceptions for travel to the following areas: China, Israel, Colombia, Lebanon, Burkina Faso, Honduras, Ethiopia, Cuba, Mexico, Jamaica, Uganda, Nigeria and Saudi Arabia (Figure 3).



Risk, Safety, & Resilience | FY24 Annual Report



#### Insurance Premiums & Renewals

The annual renewal of insurance policies related to university property and activities is overseen by ORM (Figure 5). FY24 insurance renewal premiums totaled \$1,436,417 (Figure 4). Insurance policies cover the University's property, assets, and liability exposures, including international travel and cyber liability coverages. The Commonwealth of Virginia provided a "premium holiday" from medical malpractice and bond coverage premiums for state agencies in FY24, as such, no payment was made for these coverages and therefore they are not included in Figures 4 or 5.

#### Figure 4. Summary of Insurance Premiums, FY22-FY24



Note: Insurance premium costs dropped between FY23 and FY24 because, after a needs assessment of all policies, it was determined that one policy was no longer needed and could be dropped.

#### Figure 5. FY24 Insurance Premiums by Category

10



### **Open Claims History**

Reducing the frequency and severity of accidents is something that ORM strives for. Figure 6 represents the number of claims opened over the last three years.









### **Claim Cause Analysis and Recovery**

Tables 6 through 8 represent claims closed during the last three fiscal years for vehicle, property, and tort (i.e., general liability). This information provides ORM with details on which types of claims occur the most frequently, which require further analysis, and implementation of controls to minimize the severity and future risk exposure. Overall in FY24, ORM closed 84 claims (44 property and 40 auto loss claims). ORM was able to recover \$856,562 that was redistributed to university departments. In addition, ORM managed the closure of 15 general liability tort claims.

#### Property (Table 6)

Damages resulting from flooding was the most frequent type of claim. The most severe claim for FY24 was mechanical failure, which resulted in a fire and secondary water damage due to the activation of the sprinkler system.

Two major claims in FY24 contributed to the overall increase in total claim cost from FY23 to FY24 (Table 6). One involved a claim for a rental space following water damage caused by a pipe that ruptured. The claim costs included business interruptions losses of \$22,807. Total claim costs recovered were \$185,904.

In addition, an equipment malfunction resulted in a fire which activated the sprinkler system. This incident necessitated a replacement of the boiler, building repairs, and water damage remediation. Total claim costs and reimbursement recovery totaled \$504,399.

#### Table 6. Property Claims; FY22-FY24

Type of Claim	FY	22	FY23		FY24	
Type of Claim	# Claims	Cost	# Claims	Cost	# Claims	Cost
Cyber	0	N/A	1	\$0	1	\$7,815
Environmental	0	N/A	0	N/A	0	N/A
Fire	1	\$1,608	0	N/A	1	\$78
Golf Cart Damage	2	\$0	2	\$143	2	\$0
Mechanical Failure	0	N/A	0	N/A	1	\$501,463
Named Storm	2	\$70,032	0	N/A	0	N/A
Other	6	\$21,378	2	\$7,163	5	\$8,684
Property Damage by						
Personal Vehicle	11	\$28,653	9	\$13,751	5	\$22,682
State-Operated Vehicle	1	\$254	0	N/A	1	\$5,665
Property Damage	6	\$7,733	9	\$49,735	4	\$34,431
Theft	4	\$2,719	13	\$17,416	8	\$9,559
Vandalism	4	\$8,954	4	\$3,034	2	\$2,405
Water Damage / Flood	4	\$107,666	7	\$70,939	14	\$264,735
Weather Related	2	\$20,470	4	\$19,357	0	N/A
Total	43	\$269,467	51	\$181,537	44	\$857,516





#### Vehicle (Table 7)

FY24 demonstrated that back up is the number one cause of vehicle claims while sideswipes represent the highest cost (Table 7).



#### Tort (Table 8)

Operational Risk Management is tasked with the investigation of claims covered under the Virginia Tort Claims Act. As is typical in the US, slips, trips and falls accounted for the largest number of claims and equates to 46% of all personal injury claims to nonemployees for FY24. These types of claims typically increase during inclement weather events.



#### Table 7. Vehicle Claims; FY22-FY24

Type of Claim	FY	22	FY	FY23		24
	# Claims	Cost	# Claims Cost		# Claims	Cost
Animal	0	N/A	3	\$7,917	1	\$0
Backing	10	\$11,243	5	\$13,937	15	\$10,764
Head-on / Frontal	0	N/A	2	\$2,157	2	\$5,688
Non-Collision	7	\$7,520	8	\$3,661	12	\$9,104
Sideswipe	1	\$718	12	\$9,444	6	\$12,075
Rear-End	1	\$5,054	4	\$3,572	2	\$6,844
T-Bone	2	\$42,474	0	N/A	0	N/A
Vandalism	0	N/A	1	\$0	2	513
Total	21	\$67,009	35	\$40,689	40	\$44,988

#### Table 8. Tort Claims; FY22-FY24

Type of Claim		FY23	FY24
		# Claims	# Claims
Non-Employee Personal Injury	1	4	4
Non-Employee Personal Injury - Slip, Trip, Fall	4	7	6
Tort Property	4	3	3
Theft	0	0	0
Other (Legal Actions)	3	3	2
Total	12	17	15

#### **Accident Review Committee**

The Accident Review Committee (ARC) meets quarterly to evaluate each accident involving state-owned or state-rented vehicles. Each accident is reviewed and classified as Preventable, Not Preventable, or an Incident, pursuant to the definitions provided by the Virginia Department of State Police. In the past three years, the committee has classified 85 accidents as represented by Figure 7 (p. 16). After an evaluation of each accident's causative factors, ARC recommendations can include but are not limited to additional driver training, verbal counseling by the driver's supervisor, revocation of driving privileges and utilization of technology (e.g., installation of back-up cameras). ORM tracks and monitors the committee's recommendations to ensure each driver has completed the required actions and actively participates in the Safe Driver Program.



#### **Auto Accident Reporting**

Operational Risk Management provides a State Vehicle Crash report to the Commonwealth annually. The report is based on George Mason's annual auto claims history and the miles driven by state-owned vehicle operators. Due to the small number of accidents reported, George Mason University was selected by the Commonwealth of Virginia to receive a Motor Vehicle Accident Prevention Award for the second year in a row. This award recognizes the University's Safe Drivers Program and the collective efforts of its stakeholders (e.g., University Police, Facilities Management, and others). The data in Figure 8 and Table 9 do not include the accident numbers or miles driven by rented or leased vehicles.

Table 9. Accidents per 100,000 Miles Driven

Year	Miles Driven	# Accidents	# Accidents / 100k Miles
FY22	914,834	10	1.09
FY23	948,051	20	2.11
FY24	998,595	19	1.90
Average	953,827	16	1.68







Risk, Safety, & Resilience | FY24 Annual Report



#### Motor Vehicle Report (MVR) Checks

Motor Vehicle Report (MVR) checks, established in University Policy 1411, requires all drivers to maintain a driving record that meets the conditions set forth in the policy. ORM staff completed 447 DMV records checks in FY24, which included 195 from states other than Virginia.

Human Resources and ORM collaborate to assist drivers and their supervisors in understanding how an unacceptable MVR report resulting in a Restricted Driver status can impact university department's daily operations and the driver's ability to conduct their required job functions.





#### Safe Driver Program

George Mason's Safe Driver Program emphasizes the importance of safe operation of motor vehicles, develops a sense of responsibility and accountability among operators of state-owned vehicles, and encourages defensive driving to reduce the frequency and severity of accidents. Components of the Safe Driver Program include the Accident Review Committee (ARC), Driver Safety Awareness Training, and Motor Vehicle Report checks. These control methods work collectively to minimize George Mason's liability exposure.

#### **Current Replacement** Value Assessment

In FY24, ORM, University Business Consulting, Facilities, and Fiscal Services collaborated on an assessment project to ensure building values and contents Current Replacement Values (CRV) were accurately reported to the Commonwealth of Virginia. Accurate CRV and maintenance reserves are essential and ensure funds are available to repair a building or replace building contents following a loss. The assessment found that the previous values reported to the Commonwealth appeared low based on the industry cost and engineering estimates for materials. Following the assessment, the team worked to ensure the CRV for every campus building and its contents were updated. Reported values increased by 37%.





#### **Routine Services**

Environmental Health & Safety (EHS) provides various services to the George Mason community on a continuous basis. These services are to support the overall health and safety of our building occupants and researchers. Tables 10 and 11 provide a summary of services and the total annual volume of those services. Service areas span several program areas, including Industrial Hygiene, Indoor Air Quality, laboratory equipment registration and certification, and research and instructional protocol approval and modification. These numbers provide RSR with context of how George Mason community's safety needs may be evolving and can help to identify where more resources may be needed.

#### There are several notable updates to the routine services data in FY24.

**Autoclaves:** In FY24, EHS worked with stakeholders across the university to identify and remove three autoclaves from the university's Permit by Rule in order to reduce the university's regulatory burden. Sixteen autoclaves were permitted, instead of the historical 19. This will assist with compliance as new autoclave regulations take effect in September 2024.

**Biosafety Cabinets:** There was a slight increase in the number of biosafety cabinets certified, which reflects growth in biological research and several lab moves.

**Shower and Eye Wash Units:** Testing for this equipment has returned to normal since the pandemic, with almost half of the units being tested every six months as they reach 10 years in service, instead of annually. Units that have been installed for ten years or more are required to be tested semi-annually. FY23 saw an increase in units tested because some units were tested on a six-month interval when they should have remained on a 12-month cycle. This was corrected in FY24.

**Bulk Sampling:** The increase in bulk sample analysis is related the Foragers' Forest soil sampling project to continue in FY25 and multiple complex and multi-faceted indoor air quality investigations.

**Indoor Air Quality (IAQ):** There was a significant increase in IAQ assessments in FY23 due to a large project that year. FY22 had 22 IAQ assessments which is more consistent with the 27 IAQ assessments in FY24.

**Noise dosimetry:** Seventeen individuals from university police and event services received noise monitoring to determine whether occupational exposure levels required enrollment in the Hearing Conservation Program.

**Lead air monitoring (dosimetry):** Five university police officers were monitored for lead exposure while using firearms at the shooting range. One officer was tested on two occasions, using two different weapons, bringing the total number of assessments to six.

**Radiation Safety:** A total of nine x-ray devices were active and certified through Virginia Department of Health in FY24. Of the nine devices, eight were used for research (non-clinical) purposes and one was used in a clinical setting. Four radioactive material protocols were submitted by researchers and approved by EHS, two of which were renewals from previously existing research and two of which were to support new research endeavors.

#### Table 10. Routine EHS Services, FY22-FY24

Service	FY22	FY23	FY24
Air Samples Collected	2	29	29
Bulk Samples Collected	3	16	75
Noise Dosimetry	N/A	N/A	17
Lead Air Monitoring (Dosimetry)	N/A	N/A	6
Indoor Air Quality Assessments	18	42	27
Job Safety Analyses Conducted	0	40	30
Research Materials Packages Shipped	2	7	2
Biological Laboratory Projects:			
Submitted to IBC	35	44	47
Modifications Submitted to IBC	0	6	15
IBC Administrative Review	14	20	19
IBC Full Committee Review	21	30	43
• IBC Total # Reviewed	35	50	62
Minors / Volunteers Projects Reviewed	15	44	63
Radioactive Material Protocol Approved	0	0	4
Lasers Registered (3B / 4)	N/A	N/A	36

#### Table 11. Routine EHS Services with FY24 Units, FY22-FY24

Service	FY22	FY23	FY24	FY24 # Units
Autoclaves Permitted	19	19	16	29
Biosafety Cabinets Certified	129	143	154	165
Chemical Fume Hoods Certified	239	242	238	247
Shower & Eye Wash Unit Tests	775	906	773	495
X-Ray Devices Certified	0	0	9	10

## Risk, Safety, & Resilience | FY24 Annual Report Environmental Health & Safety



#### **IBC Protocol to RAMP Migration**

Environmental Health & Safety oversaw the implementation of the Research Administration Management Portal (RAMP) to manage Institutional Biosafety Committee (IBC) protocols. As of Fall 2023, the module is up and serving George Mason's researchers and IBC committee members in a more modern and streamlined approach to protocol submission, review, and management. The number of projects submitted, amended and reviewed by the IBC all increased in FY24 (Table 10). This reflects growth in the university's research, most notably the Forensics department within the College of Science. Researcher awareness and engagement with IBC has grown with the implementation of RAMP to manage IBC protocols from submission to termination. Projects reviewed that involved minors and volunteers also increased. This reflects growth in the university's community engagement programs, such as the Aspiring Scientists Summer Internship program (ASSIP).

#### **BRL Education**

Once a year, the Biomedical Research Laboratory (BRL) is shut down so that a variety of activities including training and facility maintenance can take place. EHS uses this shutdown period as a chance to help educate stakeholders internally and external to George Mason about the BRL. During the shutdown in FY24, EHS hosted several groups, including RSR team members and local police, to educate them about BRL activities and strengthen collaboration with local first responders.

Environmental Health & Safety also hosted the FBI Weapons of Mass Destruction Directorate and the Virginia Department of Health at the BRL in FY24 to identify opportunities for collaboration on the BRL's emergency and incident response planning.

#### **Regulatory Inspections**

The Biomedical Research Laboratory went through an unannounced Centers for Disease Control and Prevention (CDC) inspection in FY24 that resulted in no findings, thanks to the diligent work of the College of Science, the Institute for Biohealth Innovation, and EHS.

The Department of Environmental Quality (DEQ) conducted regulated medical waste inspection of George Mason. The program received a perfect inspection report and is a direct result of several programmatic enhancements that EHS led, including improved training and developing positive relationships with researchers.





#### Laboratory Inspections

Each year, EHS conducts laboratory inspections to check for compliance with health and safety policies and regulations. Table 12 provides a summary of annual laboratory inspections completed in FY24 by department and the average number of deficiencies based on how many laboratories that department manages. Table 13 provides a summary of the types of deficiencies noted during inspections, compared by fiscal year.

This data is being reported to provide trends on where the university is experiencing compliance issues by department and deficiency type. Tracking changes to laboratory safety compliance allows EHS to identify areas of concern and develop training resources to address these concerns as needed. EHS prioritizes units with the highest number of deficiencies per laboratory.

The average number of deficiencies per lab is 1.34 (Table 12), an increase from FY23. This modest increase in deficiencies reflect a resurgence in laboratory work and an increase in laboratory personnel to pre-pandemic numbers, where historical total average deficiencies were more than two.

The largest increase in type of deficiency was in lab personnel behavior (9 deficiencies noted, up from 0 in FY22 and 23; Table 13, Figure 9). This aligns with the inspector observation that more personnel have been working in the laboratories at the time of inspection, allowing for safety behaviors to be observed unlike the former FY22 and FY23 cycles. Overall, no deficiencies were found in 65% of laboratories inspected (Table 12, Table 13).

#### Table 12. Laboratory Inspections, FY24

Department	# Def.	# Labs	Avg. # Def. / Lab
Atmospheric, Oceanic and Earth Sciences	22	15	1.47
Biological Engineering	14	13	1.08
Biomedical Research Laboratory	13	13	1.00
CEHD Administration	2	2	1.00
Center for Applied Proteomics & Molecular Medicine	22	19	1.16
Chemistry and Biochemistry	82	54	1.52
Civil, Environmental & Infrastructure Engineering	19	12	1.58
Department of Biology	68	59	1.15
Department of Physics and Astronomy	25	13	1.92
Electrical and Computer Engineering	13	12	1.08
Environmental Health & Safety	12	11	1.09
Environmental Science & Policy	31	29	1.07
Forensic Science Program	7	4	1.75
Governor's School	1	1	1.00
IBI Operations	10	10	1.00
Interdisciplinary Program in Neuroscience	16	9	1.78
Mechanical Engineering	30	14	2.14
Nanofabrication Facility	4	4	1.00
Nutrition and Food Studies	8	5	1.60
Psychology	3	3	1.00
SciTech Administration	1	1	1.00
School of Systems Biology	49	30	1.63
Shared Research Instrumentation Facility	3	1	3.00
Smithsonian-Mason School of Conservation	7	7	1.00
Sociology and Anthropology	7	3	2.33
Sponsored Programs Admin	26	26	1.00
Total	495	370	1.34
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## Risk, Safety, & Resilience | FY24 Annual Report Environmental Health & Safety



Type of Deficiency	FY22	FY23	FY24
No Deficiencies*	152	182	240
Documentation	42	33	67
Housekeeping & Facility Design	23	33	42
Emergency Equipment & Supplies	67	67	48
Chemical Safety	31	36	60
Laboratory Waste	10	20	19
Electrical & Mechanical	1	3	1
Biosafety	5	2	3
Fume Hood	2	7	1
Behavior	0	0	9
Laboratory Entrance and Egress	4	1	2
Personal Protective Equipment	4	1	0
Radiation Safety	0	0	0
Animal	0	0	0
Total	189	203	255



\* **No Deficiencies** is not included in the sum of total deficiencies for each FY.





#### **Accidents and Incidents**

Human Resources & Benefits, EHS, and ORM work cooperatively to record, investigate, and report on accidents, incidents and injuries that occur at George Mason University. RSR maintains an accident and incident database, which includes injuries, hazardous material spills, chemical or biohazard exposures, as well as near-miss accidents that did not result in injury.

In FY24, RSR transitioned to a web-based application for managing accident and illness data. This update streamlined processes between RSR divisions and Human Resources and Benefits allowed for detailed root cause analysis, and improved reporting capability. Additionally, the data entered generates the accident and injury data required to be reported annually to the Occupational Safety and Health Administration (OSHA).

Accident and incident totals for the past three fiscal years are included in Table 14. There was a 25% increase in accidents and incidents reported in FY24 compared to FY23; however, the number of accidents and incidents reported in FY24 is consistent with the seven-year running average (142; Figure 10). Two categories of accidents account for the increase in reported accidents and incidents; chemical exposure and slips/trips/falls. A review of the increase of the chemical exposure incidents found that these incidents were generally resolved without injury by flushing exposed skin area with water. Slip/trip/falls are one of the most common accidents in all workplaces and although EHS works to address these hazards, the dynamic nature of a university setting (variety of work environments, activities, and number of students, faculty, staff, and visitors on campus each day), contributes to the variability of slips, trips, and falls reported each year.

The incidents classified as "other" are due to their unique and varied nature, making them less frequent and harder to categorize under conventional incident categories.

Table	14	Accidents	and	Incidents	FY22-FY24
lanc		ACCILICITIES	anu	menuents,	1 1 2 2 - 1 1 2 4

Description	FY22	FY23	FY24
Chemical Exposure	3	5	16
Needlestick Exposure	5	3	3
Infectious Agent Exposure	0	0	0
Environmental Spill	5	5	1
Laboratory Spill	4	0	1
Burn	6	2	1
Cut / Abrasion	15	10	13
Caught in / Crushed by	6	1	2
Insect / Animal Bite	1	2	0
Strain / Sprain	19	11	9
Slip / Trip / Fall	41	27	46
Struck By	11	10	22
Medical Emergency	4	9	11
Other	29	16	14
Vehicle	0	1	1
Safety Concern / Near Miss	7	2	0
Total	156	104	140



Figure 10. Total Accidents and Incidents, Seven Year Average

## Risk, Safety, & Resilience | FY24 Annual Report Environmental Health & Safety



### Waste

George Mason University is required to track the volume and types of waste generated in laboratories. Table 15 shows annual waste totals, by category and campus, generated at George Mason between FY22 and FY24. This data also provides a growth metric for George Mason's research and instructional laboratory programs.

Waste totals have remained mostly consistent across the last several years with a few exceptions. There was an increase in the amount of non-hazardous waste generated for the Fairfax (FFX) campus in FY24 due to a hydraulic fluid clean-up project. Additionally, no waste was collected from Potomac Science Center (PSC) during this reporting cycle. Finally, FY22 and FY23 also included biological waste related to the COVID-19 pandemic response (e.g., vaccines and testing), which has ceased as of FY24.



#### Table 15. Waste Totals, FY22-FY24

Year	Hazardous Waste (lbs.)					
	FFX	STC	PSC	Combined		
FY22	6,538	3,193	2,020	11,751		
FY23	7,009	3,145	1,554	11,708		
FY24	7,727	4,837	0	12,564		
Year	Non-Hazardous Waste (lbs.)					
	FFX	STC	PSC	Combined		
FY22	2,200	687	112	2,999		
FY23	2,834	1,298	651	4,783		
FY24	8,815	703	0	9,518		
Voar	Regu	ulated Biolo	gical Waste	(lbs.)		
Year	Regi FFX	ulated Biolog	gical Waste PSC	(lbs.) Combined		
Year FY22	Regu FFX 2,941	ulated Biolo STC 10,695	gical Waste PSC N/A	(lbs.) Combined 13,636*		
Year FY22 FY23	Regu FFX 2,941 1,756	ulated Biolog STC 10,695 2,527	gical Waste PSC N/A N/A	(lbs.) Combined 13,636* 4,283*		
Year FY22 FY23 FY24	Regu FFX 2,941 1,756 1,187	ulated Biolog STC 10,695 2,527 2,271	gical Waste PSC N/A N/A N/A	(lbs.) Combined 13,636* 4,283* 3,458		
Year FY22 FY23 FY24	Regu FFX 2,941 1,756 1,187 Non-Re	ulated Biolog STC 10,695 2,527 2,271 egulated Bio	gical Waste PSC N/A N/A N/A	(lbs.) Combined 13,636* 4,283* 3,458 te (lbs.)		
Year FY22 FY23 FY24 Year	Regu FFX 2,941 1,756 1,187 Non-Re FFX	ulated Biolog STC 10,695 2,527 2,271 egulated Bio	gical Waste PSC N/A N/A N/A N/A N/A PSC	(lbs.) Combined 13,636* 4,283* 3,458 te (lbs.) Combined		
Year FY22 FY23 FY24 Year FY22	Regular       FFX       2,941       1,756       1,187       Non-Regular       FFX       5,497	ulated Biolog STC 10,695 2,527 2,271 egulated Bio STC 12,141	gical Waste PSC N/A N/A N/A N/A N/A	(lbs.) Combined 13,636* 4,283* 3,458 te (lbs.) Combined 17,638*		
Year FY22 FY23 FY24 Year FY22 FY23	Regular         FFX         2,941         1,756         1,187         Non-Regular         FFX         5,497         4,643	Ulated Biolog STC 10,695 2,527 2,271 egulated Bio STC 12,141 2,841	gical Waste PSC N/A N/A N/A N/A PSC N/A N/A	(lbs.) Combined 13,636* 4,283* 3,458 te (lbs.) Combined 17,638* 7,484*		

\*includes COVID waste

#### Lockout Tagout Equipment-Specific Procedures

In FY24, EHS completed Lockout Tagout Equipment Specific Procedures (ESP) project for SciTech campus buildings, with plans to expand to other campuses in FY25. ESP are detailed steps for safely de-energizing machinery during maintenance, including identifying energy sources, shutting down equipment, applying locks and tags, releasing stored energy, and verifying de-energization. These procedures are critical for preventing accidental startup or energy release, protecting workers from severe injuries or fatalities during maintenance and repair activities.

Equipment Specific Procedures have been created for all HVAC, Air Compressors, boilers, chiller pumps, exhaust fans, water pumps, and other such equipment in the buildings on SciTech campus.









#### **Employee Engagement** Action Plan Updates

In FY23, Risk, Safety, & Resilience (RSR) created an Employee Engagement Action Plan (EEAP) based on the 2022 Faculty and Staff Experience survey results. The plan aimed to clarify work expectations, enhance recognition, and strengthen interpersonal connections—key areas for improvement identified in the 2022 survey.

survey was readministered In FY24, the university-wide for comparison. Figure 1 illustrates the survey results from 2022 and 2024. The 2024 survey showed significant growth in targeted areas: the RSR recognition score rose by 10% (from 3.49 to 3.83), the "best friend at work" category increased by 46% (from 2.7 to 3.93), and the progress category saw a 26% rise (from 3.38 to 4.33). These increases, particularly the dramatic rise in those who agree they have a "best friend at work," demonstrate the effectiveness of the RSR Employee Engagement Action Plan.

Risk, Safety, & Resilience leadership plan to update the EEAP in FY25 to further enhance staff experience.

#### Reorganization

In FY24, Safety, Emergency, & Enterprise Risk Management (SEERM) was rebranded as Risk, Safety, & Resilience (RSR). RSR now reports directly to President Washington, while maintaining a matrixed reporting relationship with Executive Vice President Deb Dickenson.

This change stems from President Washington's recognition of RSR's strategic role in university administration and operations which assists in the achievement of the Strategic Direction and advancing the University's mission.

As part of the reorganization, and in response to the growing uncertainty on a global and national scale, George Mason University appointed a Chief Risk Officer (CRO). This move further emphasizes the university's proactive approach to managing threats and risks, reinforcing the importance of RSR's role in enhancing resilience and preparedness.

The new organizational structure includes four distinct divisions: Emergency Management & Fire Safety, Employee Health & Well-Being, Enterprise & Operational Risk Management, and Environmental Health & Safety.

Although internal reporting structures have been adjusted, external stakeholders should not experience any disruption in the quality of programs and services offered by the RSR unit.



#### Figure 1. 2022-2024 Faculty and Staff Experience Survey Q01-Q12 Comparison







#### Employee of the Month | September 2023 Ronda Franklin, Administrative Assistant

Ronda Franklin, Administrative Assistant for RSR, was named Employee of the Month in September 2023 for her exemplary customer service skills and positive dedication to the university community. Ronda provides project, program, and administrative support, including meeting management and training program support for RSR.

### **RSR Star Awards**

Each quarter, a new RSR employee is presented with the RSR Star Award to commend exceptional work performance. The RSR Star is an internal award which consists of a trophy and commendation by the employee's supervisor in front of the RSR team detailing the merits of the award.



Danielle Fritz, December 2023 Danielle Fritz (Risk & Insurance Analyst) received the RSR Star Award for her work producing Operational Risk Management's online training programs (Driver Safety and Golf Cart).



**Christian Garcia, February 2024** Christian Garcia (Program Support Specialist) received the RSR Star Award for his contributions to EHSA software development and for his work supporting RSR's online training programs.



**Timothy Wharton, April 2024** Timothy Wharton (Senior Fire Systems Inspector) received the RSR Star Award for his consistently high performance in the inspection of fire safety systems.



#### Professional Development

**Andrew Beaune** (Lead Fire Systems Inspector) received his National Institute for Certification in Engineering Technologies (NICET) Level 2 certification for fire alarm system inspections.

**Randy Beahm** (Lead Fire Safety Inspector), **Andrew Beaune**, **Mark Gray** (Fire Systems Inspector), and **Timothy Wharton** (Senior Fire Systems Inspector) were all recertified as Sprinkler Technicians in the Commonwealth of Virginia.

**John Crocker** (Chemical Safety Manager) received his Certified Hazardous Materials Manager (CHMM) designation.

**Deisy Flores** (Employee Health Coordinator) became certified as an instructor for First Aid/CPR/AED.

**Danielle Fritz** (Risk & Insurance Analyst) completed her Associate in Risk Management (ARM) from The Institutes.

**Marcus Mckinney** (Risk Control Manager) completed his Commercial Line Insurance Certificate (CLIC) insurance designation from the Insurance Community University.

**Marina Paniara** (Claims Examiner) completed her Associates in Claims (AIC) from The Institutes.

**Ericka Pearce** (Laboratory Safety Program Manager) successfully recertified for another five-year cycle as a Certified Biological Safety Professional (CBSP).

**Gina Reistrup** (Emergency Management Specialist) earned her Master's in Public Health (MPH) from George Washington University.



#### **Presentations**

**David Algert** (Safety Officer) presented with David Farris on fall protection at the Campus Safety, Health, and Environmental Management Association (CSHEMA) - Facilities Management Communities of Practice.

**Gregg Black** (Director of Emergency Management & Fire Safety) presented at the Campus Safety conference on the topic of mass notification and how it bridges the gap between fire safety and emergency management.

**David Farris** (Assistant Vice President for RSR) led a discussion about campus demonstrations at the at the Virginia Emergency Management Association Annual Institutions of Higher Education Caucus meeting in March 2024. RSR hosted a regional International Association of Emergency Managers (IAEM) meeting in September 2023. Dr. Farris presented with his colleagues on the role of higher education emergency managers and how institutions of higher education can support regional emergency preparedness efforts. Dr. Farris also served as a panelist at the Chesapeake Area Biological Safety Association (ChABSA), where he spoke on the topics of laboratory safety and emergency preparedness.

**Danielle Fritz** (Risk & Insurance Analyst) represented RSR during George Mason's annual Mason Thrives Bootcamp with her presentation on Accident & Incident Reporting.

## RISK, SAFETY, & RESILIENCE TRAINING UPDATES

### **FY24 Training Summary**

Risk, Safety, & Resilience provides training to thousands of faculty, staff, and students every year. The majority of training provided by RSR is required by regulatory agencies, while other training is optional but strongly encouraged. Training the George Mason community is one of the primary ways RSR helps to sustain a safe and healthful working and learning environment. Table 16 provides an overview of the number of individuals RSR trained during FY24. It is organized by course title and offers a comparison to the previous two fiscal years to see how the RSR training program has changed over the years.

For nearly all courses that have transitioned online, the number of in person sessions notably decreased in FY24. Attendee count dramatically increased in FY23 when Emergency Preparedness training was moved online and was set as a requirement for all George Mason employees. There was a 40% drop in attendees for BSL-2 Biosafety Refresher, due to all users completing Biological Safety for BSL-2 Laboratories in its online format instead. Hazard Communication Training attendance has tripled since moving to an online format.

One course which saw a notable increase in in-person attendance in FY24 was the Opioid Overdose Response and Naloxone training. In FY24, 526 individuals received this training, up almost 500% from the prior fiscal year when the course was first offered. This increase is due at least in part to marketing efforts. This free course is offered multiple times per year and provides potentially lifesaving education on the appropriate use of opioid overdose reversal medication such as Narcan.





#### **Online Training Updates**

Several RSR courses, previously offered in-person only, were successfully transitioned to an online format during FY24. Eight EHS trainings have transitioned to an online format: Biological Safety for BSL-2 Laboratories, BSL-2 Biosafety Refresher, Hazard Communication, Hazardous and Regulated Waste, Laboratory Safety Refresher, Laboratory Safety Orientation, Laboratory Safety Awareness, and Respiratory Protection. Two Operational Risk Management trainings are also now available online; Driver Awareness and Golf Cart Safety.

#### **Online Training Savings**

Transitioning training programs from in-person to an online format offers significant cost and timesaving benefits. RSR training administrators analyzed RSR's training program and found annual total cost savings estimated at \$200,000 and over 4,000 employee hours saved annually.

One major advantage of online training is the reduction in direct costs, such as venue rentals, travel, accommodation, and printed materials. Additionally, online training allows employees to access courses at their convenience and minimizes time spent away from their primary job responsibilities. This flexibility results in increased efficiency and productivity, as evidenced by the significant time savings observed.

Table 16. Training Sessions and Attendance, FY22-FY24

Course Name	FY22		FY22		FY22	
	Sessions	Attendees	Sessions	Attendees	Sessions	Attendees
Active Threat	2	26	47	152	18	164
Aerial Lift	12	46	10	37	13	63
Animal & Vivarium Safety	18	88	9	75	14	39
Asbestos & Silica Awareness	6	79	11	146	8	99
Autoclave Equipment	0	0	1	8	11	101
BRL Courses	31	277	27	130	18	147
BSL-2 Biosafety Refresher	20	104	13	132	3	79
Basic Fire Safety	3	261	4	321	3	222
Basic Radiation Safety (8-hour)	0	1	0	1	0	3
Biological Safety for BSL-2 Laboratories	26	190	14	207	4	267
Bloodborne Pathogens	49	585	11	132	OL*	395
CPR / AED	0	0	0	0	13	184
Chainsaw Safety	1	6	0	0	1	2
Confined Space	0	0	1	6	0	0
Crowd Manager	2	174	5	309	3	222
Driver Safety Awareness	15	590	12	374	OL*	588
Emergency Preparedness (Employees)	1	15	OL*	4,792	OL*	3,354
Fall Protection	3	10	13	132	2	5
Field Safety	9	28	1	7	2	2
Fire Extinguisher Use	34	297	29	398	34	428
First Aid	0	0	1	26	0	0
General Safety	5	23	5	19	1	10
Golf Cart	12	307	14	280	OL*	474
Hands-only CPR / AED	0	0	6	46	0	0
Hazard Communication	8	43	10	69	OL*	227
Hazardous & Universal Waste Handling & Storage	2	5	3	23	OL*	102
Hearing Conservation	8	43	11	90	23	176
IBC Member	1	8	1	1	0	0
Laboratory Safety Awareness	14	177	5	37	OL*	29
Laboratory Safety Orientation	31	626	24	585	OL*	371
Laboratory Safety Refresher	19	110	18	189	OL*	116
Laser Safety	0	0	0	0	1	10
Lockout / Tagout	6	11	20	133	15	87
Opioid Overdose Response and Naloxone	N/A	N/A	6	88	31	526
PAPR	6	41	7	35	5	30
Powered Industrial Trucks	10	63	1	5	2	7
RA Safety Academy	0	0	0	0	6	196
Radiation Safety	0	0	1	5	1	8
Respiratory Protection APR	17	104	24	110	19	37
Respiratory Protection FFR	0	0	0	0	OL*	33
Stop the Bleed	1	9	46	139	28	417
Working Safely with HIV	2	2	5	10	20	8
X-Ray Safety	0	0	1	2	4	17
	374	1 300	_/17_	9 251	285	9 245
Total	374	4,399	417	9,251	285	9,245

OL\* Online Course, Session count not applicable

## About Risk, Safety, & Resilience



## Fostering a Safe, Healthful, and Resilient George Mason University

Risk, Safety, & Resilience (RSR) is dedicated to fostering a safe, healthful, and resilient university. RSR serves the George Mason University community through the delivery of health, safety, wellbeing, emergency management, and risk management programs and services

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