APPENDIX L – OLD DOMINION UNIVERSITY

PURPOSE

Since 2007, ODU Emergency Management has sought opportunities and funding to update the university's existing hazard mitigation plan in order to attain eligibility for various grant programs and to carefully develop and prioritize mitigation activities on campus. Simultaneously, ODU has expanded its footprint in Hampton Roads. ODU recognized that the need was urgent for an up-to-date hazard mitigation plan that outlines a mitigation strategy tailored to the university's vulnerabilities across all campuses, and identified the "Special District" addendum to the regional plan as a way to cost effectively fulfill this need in accordance with FEMA guidance.

In order to address the university's multi-hazard mitigation project needs, ODU Emergency Management implemented a stand-alone planning process resulting in this addendum to the 2022 Hampton Roads Hazard Mitigation Plan. The addendum treats ODU as a Special District within the larger, regional planning area.

Similar to the overall plan, the general purposes of this 2022 Hampton Roads Hazard Mitigation Plan amendment for ODU are to:

- protect life and property by reducing the potential for future damages and economic losses that result from natural hazards;
- qualify the university and the region for additional grant funding, in both the pre-disaster and post-disaster environment;
- speed recovery and redevelopment following future disasters;
- integrate existing mitigation documents;
- demonstrate a firm local commitment to hazard mitigation principles; and
- comply with state and federal legislative requirements tied to local hazard mitigation planning.

The planning process took approximately 9 months to complete, beginning in September 2025. This timeline was critical in allowing ODU to maintain their regular required emergency operations planning cadence as required by the *Code of Virginia*, including adding new hazard mitigation content into their *2026 Crisis and Emergency Management Plan*, which will go in front of the ODU Board of Visitors for quadrennial adoption in mid-late 2026.

SCOPE

The Hampton Roads Hazard Mitigation Plan is updated and maintained to continually address those natural hazards determined to be of high and moderate risk as defined by the results of the risk assessment (see "Conclusions on Hazard Risk" in Section 5: Vulnerability Assessment). This enables Hampton Road's planning committees to prioritize mitigation actions based on those hazards which present the greatest risk to lives and property.

In the Hampton Roads region of southeastern Virginia, the University maintains operations in the following facilities beyond the main Norfolk campus along Hampton Boulevard:

- Macon & Joan Brock Virginia Health Sciences Medical Campus in Norfolk (University-owned)
- Peninsula Higher Education Center (HEC) in Hampton (space leased from and co-located with Virginia Peninsula Community College)
- Tri-Cities HEC in Portsmouth (University-owned)
- Virginia Beach HEC (University-owned)
- Virginia Modeling, Analysis, and Simulation Center (VMASC) in Suffolk (University-owned)

- Applied Research Center (ARC) in Newport News (space leased from City of Newport News and co-located with Jefferson Lab)
- ODU Innovation Center in Norfolk (space leased from City of Norfolk)
- Virginia Beach Institute of Data Science (leased space)
- Governmental Relations Offices in Richmond and Washington, DC (leased space)

This appendix amends the 2022 Hampton Roads Hazard Mitigation Plan using a format similar to the overall plan subsections to add information specific to the university's amended planning effort. This appendix introduces only new information and does not repeat the contents of the overall plan, emphasizing that the cities of Norfolk, Hampton, Portsmouth, Suffolk and Virginia Beach are included in the regional processes of the past and are expected to be so included in the future.

This appendix summarizes the amended Planning Process (Section 2 of the overall plan), the Community Profile (Section 3 of the overall plan), the Capability Assessment (Section 6 of the overall plan), and the updated Mitigation Strategy (Section 7 of the overall plan). Section 4, Hazard Identification and Risk Analysis, and Section 5, Vulnerability Analysis, are amended to share information on additional hazards the committee indicated were critical for ODU. Section 8 Plan Maintenance Procedures from the overall plan is not amended herein.

COMMUNITY PROFILE

Located in Hampton Roads and the City of Norfolk, ODU is considered the Commonwealth of Virginia's public doctoral research university. Their main, 335-acre waterfront campus sits at the forefront of industry and defense partners in the region. ODU has nearly 24,000 students, and as a top R1 research institution, provides programs of study in cybersecurity, artificial intelligence, healthcare, data science, maritime logistics and the arts, among many others. Almost one-third of students are military-affiliated.

ODU is a public university, which opened in 1930 as the Norfolk Division of The College of William & Mary. In 1962, it became independent and was named Old Dominion College, then renamed Old Dominion University in 1969. In 2024, Eastern Virginia Medical School integrated into ODU, and was recently renamed the Macon & Joan Brock Virginia Health Sciences at ODU. There are 148 main campus buildings in Norfolk, and eight medical campus buildings near downtown Norfolk.

The University's urban location has influenced the development of its sites, blending academic, residential and research spaces within a dense, walkable campus. As enrollment and program offerings have grown, the University locations have increasingly faced challenges related to facility utilization, specifically accessibility, adaptability and resilience. [1] Master planning, strategic planning and hazard mitigation planning are integrated through this planning process to help reduce university vulnerability to various hazards.

As of the Fall 2024 census, Old Dominion University enrolls approximately 17,746 undergraduate students and 5,997 graduate students (totaling approximately 23,743 students) and employs approximately 3,442 faculty, 1,957 staff, 2,064 part-time staff and adjunct faculty, and 654 administrative and professional faculty. Approximately 5,300 students live in on-campus residential housing and 2,500 students live in off-campus apartments. The University's population includes special considerations such as access and functional needs provisions and a significant international student population (92 countries represented beyond the United States).

[1] *ODU 2025-2035 Master Plan*, available online at: https://www.odu.edu/master-plan

THE PLANNING COMMITTEE

Similar to the process outlined in Section 2, Planning Process, ODU Emergency Managers convened their University Advisory Board for Hazard Mitigation (UABHM) and provided them the opportunity to participate in workshops and meetings; help locate best available data; respond to a capability survey; and, review and comment on plan elements.

Table L.1 shows the attendees from each meeting. The invitee list was extensive and included representatives from ODU departments at multiple campuses, adjacent community departments, and regional utility providers. The list is available upon request from ODU Emergency Management.

TABLE L .1: ODU UABHM MEMBERS

NAME AND POSITION	COMMUNITY AND AGENCY	EXPERTISE
Jared Hoernig	ODU, Emergency Management	Emergency services
Mark Salmon	ODU, Emergency Management	Emergency services
Jerry Reed	ODU, Emergency Management	Emergency services
Leigh Chapman, Senior Planner	Salter's Creek Consulting, Inc.	Preventive measures, Property protection, Structural flood control projects, Natural resource protection
Candice Goodin	ODU, Deputy Chief Information Officer	Public information
Veleka Gatling	ODU, Associate Vice President for Community Relations	Public information
Rob Wells	ODU, Executive Director for Compliance & Risk Management	Risk analysis, Prevention of future risk, Property protection
Barry Ezell	ODU, VMASC	Preventive measures
Tiana Weatherly	ODU, Emergency Management Intern	Emergency services
Kaleen Lawsure	ODU, Senior Project Scientist	Preventive measures, Natural resource protection, Emergency services, Risk analysis
Amber Kennedy	ODU, University Communications	Public information
Patrick Blanchard	ODU, School of Nursing, Testing Coordinator	Preventive measures, Emergency services
Ed Hanrahan	Virginia Natural Gas	Preventive measures, Emergency services, Risk analysis, Prevention of future risk
Stephanie Smaglo	ODU, University Communications	Public information
Stuart Frazer	ODU, Admin Systems Librarian	Risk analysis
Marissa Jimenez	Executive Director, ODU Provost's Office	Risk analysis, Prevention of future risk
Anna McRay	Portsmouth, Deputy Coordinator of Emergency Management	Emergency services
Marie Balak	Hampton Roads Transit, Emergency Management Specialist	Emergency services
Wie Yusuf	ODU, Faculty	Preventive measures, Natural resource protection, Emergency services, Risk analysis
Maria Vandermeid	ODU, Medical Director/Physician, Student Health Services	Emergency services, Risk analysis, Preventive measures, Property protection

TABLE L .1: ODU UABHM MEMBERS		
NAME AND POSITION	**COMMUNITY AND AGENCY**	**EXPERTISE**
Jess Whitehead	ODU, Executive Director of the Institute for Coastal Adaptation and Resilience	Preventive measures, Property protection, Structural flood control projects, Natural resource protection
Fred Tugas	ODU, Chief of Staff & Assistant Vice President, Student & Campus Life	Risk analysis, Prevention of future risk, Public information, Property protection
Donita Lamarand	ODU, Executive Director, Risk Management	Risk analysis, Prevention of future risk
Alan Johnson	Norfolk Public Schools, Public Safety Assistant Director	Preventive measures, Prevention of future risk, Public information, Property protection, Risk analysis
Richard Brammer	Deputy Exec Dir/Sr Dir, Sponsored Programs	Public information
Victoria Paul	ODU Real Estate Foundation	Property protection
Etta Henry	ODU, Executive Director, Strategic Sourcing & Payment Solutions	Risk analysis
Romina Samson	ODU, Chief of Staff & Executive Dir Strategic & Financial Operations, Office of Research	Property protection
Kyle Spencer	Norfolk, Chief Resilience Officer	Preventive measures, Property protection, Structural flood control projects, Natural resource protection, Public information
Zachary Pearce	ODU, Transportation and Parking Services, Assoc Director of Operations	Preventive measures, Property protection
Bob McCoy	ODU, Digital Transformation and Technology, Lead Network Engineer	Property protection
Michael Hall	ODU, Digital Transformation and Technology, Manager, Network Engineering	Property protection
Jodie Gregory	Sentara, Emergency Manager & Business Continuity Manager	Emergency services, Property protection, Public information
Johnny Teasley	ODU, Environmental Health and Safety, Laser & Radiation Safety Officer	Emergency services, Property protection, Preventive measures
Coulson Thomas	ODU, Director, Recreation & Wellness	Preventive measures, Property protection
Courtney Kerr	ODU, Director, Environmental Health & Safety	Preventive measures, Property protection
David Mu	Associate Dean of Research Administration	Property protection, Preventive measures
Kate Rhodes	ODU, Chief Information Security Officer	Preventive measures, Property protection, Risk analysis, Prevention of future risk
Justin Nelson	ODU, Director of Transportation & Parking Services	Preventive measures, Property protection
Liam Costello	ODU, Assistant Director of Counseling Services	Public information, Emergency services
Kristi Mantay	ODU, Assistant Administrator/Clinical Supervisor, Student Health Services	Emergency services
Darylnet Lyttle	ODU, Director Student Health Services	Emergency services

TABLE L .1: ODU UABHM MEMBERS		
NAME AND POSITION	**COMMUNITY AND AGENCY**	**EXPERTISE**
Bobby Jackson	ODU, Facilities Management and Construction, Director of Maintenance & Operations	Preventive measures, Property protection, Risk analysis, Prevention of future risk
Michael Dean	ODU, Executive Director of Study Abroad	Public information
Steven Risch	ODU, Director International Admissions	Public information
Christopher Davis	ODU, Digital Transformation and Technology, GeoSEA, GIS Coordinator	Risk analysis, Prevention of future risk
Jason Gunning	ODU, Finance Reconciliation Accountant Supervisor	Risk analysis
Margaret Pollard	ODU, Director Card & Mail Services	Public information
Paul Posener	ODU, Director for Administrative Services, Housing & Residence Life	Public information, Emergency services, Prevention of future risk, Risk analysis, Property protection
Kasie Reyes	ODU, Director of VISA & Immigration Services Advising	Public information
Roger Wojtowicz	ODU, Interim Executive Director, Barry Art Museum	Property protection, Risk analysis
Mike Johnson	ODU, Facilities Management and Construction, Senior Director Capital Design & Construction	Prevention of future risk, Property protection, Risk analysis, Preventive measures, Structural flood control projects, Natural resource protection
Christopher Norton	ODU, Manager of Collections and Exhibitions, Barry Art Museum	Property protection, Risk analysis
Karen Cobb	ODU, Police Department, Department Manager	Property protection, Risk analysis, Preventive measures
Bruce Finlay	ODU, Associate Director, Safety Officer, Biological	Property protection, Risk analysis, Preventive measures, Emergency services
Dan Genard	ODU, Associate Vice President for Advancement Development	Property protection, Preventive measures, Risk analysis
Sharon Pitney	ODU Medical Group	Risk analysis, Preventive measures, Emergency services
Jeff Orrock	NOAA/NWS	Risk analysis, Prevention of future risk
Greg Wooldridge	ODU, Fire Marshal	Risk analysis, Preventive measures, Emergency services, Prevention of future risk
Dawn Hamilton	ODU, Business Administrator, FSO	Prevention of future risk, Risk analysis
Jamie Sosaya	Naval Support Activity Hampton Roads, Installation Emergency Manager	Emergency services, Prevention of future risk, Property protection, Risk analysis, Preventive measures, Structural flood control projects, Natural resource protection
Matt Spencer	ODU, Police Department, Assistant Chief	Emergency services, Prevention of future risk, Property protection, Risk analysis, Preventive measures
Shannon Hurt	ODU, Student and Campus Life, Assistant Vice President for Campus Life Services	Prevention of future risk, Property protection, Risk analysis

2025-2026 COMMITTEE MEETINGS

Below is a summary of the key meetings held during the 2025-2026 ODU amendment and plan update process. Routine discussions and additional meetings were held with project planners to accomplish some project-related tasks. A consultant team (Salter's Creek Consulting, Inc., of Hampton, Virginia) was hired with university funds to guide the committee members through the planning process based on hazard information from the main plan, and to assist with development of appropriate mitigation actions. Committee meeting minutes and attendance sheets are included at the end of this appendix.

September 24, 2025: PROJECT KICKOFF MEETING

The meeting was held in person at the ODU Stadium Emergency Operations Center on September 24, 2025, from 11am to 1pm. The purpose of this meeting was to consider the project timeline and overall process, to outline a public outreach strategy and to provide initial verification of critical hazards impacting university operations. Attendees were encouraged to stay for the Emergency Management Advisory Committee (EMAC) meeting from 1pm-2:30pm which immediately followed. Leigh Chapman from Salter's Creek Consulting provided additional procedural details to the larger EMAC group at the beginning of that meeting, as well.

The group discussed the importance of the mitigation action plan development to overall project success. They examined the tools the contractor proposed to use to develop a mitigation action plan. The group reviewed the Detailed Work Plan and the Project Schedule and made recommendations. Suffolk and Newport News Emergency Management, VDOT, Virginia Port Authority, U.S. Navy, Norfolk Public Schools, WHRO, Verizon, and additional City of Norfolk transportation/Public Works representatives were added to the stakeholder invite list.

The group discussed the critical hazards in the 2022 Hampton Roads Hazard Mitigation Plan, the 2010 EVMS Hazard Vulnerability Assessment, and the Draft ODU Hazard Mitigation Plan from 2007. The group concluded that Cyber Attack, Active Shooter, Building Fire and Utility/ Infrastructure Failure merit additional discussion by the UABHM as to the criticality of those hazards for ODU operations.

October 23, 2025: UABHM Meeting #1

The UABHM Meeting #1 was held in person at ODU Spong Hall on October 23, 2025, from 9:00 a.m. to 12:00 p.m. The purpose of this meeting was to share the project timeline and overall process, to share the public outreach strategy and to brief the group on critical hazard information from the regional plan. Summary information from the 2007 ODU and 2010 EVMS plans was also provided as background. The group participated in two interactive activities to obtain feedback on Cyber Attack, Active Shooter, Building Fire and Utility/Infrastructure Failure - four hazards that the Kickoff team indicated could be applicable to ODU.

November 20, 2025: UABHM Meeting #2

The UABHM Meeting #2 was held in person at ODU Main Campus Webb Center North Cafeteria on November 20, 2025, and lasted from 9:00 a.m. to 12:00 p.m. The purpose of this meeting was to review hazard-related data resulting from Meeting #1, walk through capability gaps, and discuss the regional plan's mitigation goals, objectives, and strategies. The consultant guided meeting participants through a review of mitigation strategy types, and briefly discussed 2007 ODU and 2010 EVMS mitigation strategies to gather feedback on the status of those strategies. The consultant then facilitated a working session to consider new mitigation strategies moving forward. The meeting wrapped after all breakout sessions reviewed a minimum of four different hazards and developed or edited future mitigation strategies for the appendix.


UABHM participants discuss future mitigation actions at Meeting #2.

April 21, 2026: Open House

While not technically a committee meeting, UABHM members were invited to attend this open house in the Webb Center on February 17, 2026, from 11:30 a.m. to 1:30 p.m. Project leaders shared hard copy and digital information from the plan addendum, and gathered feedback on specific plan elements with passersby in a heavily-trafficked student center. [insert photo here]

INVOLVING THE PUBLIC

Public meetings, the public survey and posted drafts of the overall Hampton Roads plan included robust outreach to all residents in the ODU campus cities in 2021 and 2022. For this amendment, ODU planners focused on the university community and adjacent neighborhood stakeholders for feedback on the planning process and the final mitigation actions.

The university used a variety of outreach methods, including:

- **invitations to stakeholders to participate** in the UABHM meetings and workshop;
- **creation of a public-facing web site** hosted on www.odu.edu/emergency/article/new-odu-hazard-mitigation-plan to include planning process information, plan drafts and meeting presentation materials;
- **capability survey** sent to UABHM members and additional stakeholders to gather feedback on hazard capability perceptions; and
- **Open House** in April 2026 as detailed above.

Evidence of these efforts is included at the end of this appendix. In addition, adoption of the amendment through a resolution of adoption by the Board of Visitors at the end of the process was useful in communicating mitigation priorities to the larger university community. This adoption occurred [insert date here], and a copy of the meeting minutes are included at the end of this appendix.

HAZARD IDENTIFICATION AND RISK ANALYSIS

For historical perspective, ODU has dealt with impacts from a variety of threats and hazards covered in this plan. The most common impacts from tropical storm and winter weather events are trees falling from high winds or ice, power outages and flooded roads. The following events were significant for their impacts on university assets and resources:

- Hurricane Isabel, September 2003
- Nor'easter, November 2009
- Mineral, Virginia earthquake, August 2011
- Hurricane Irene, August 2011
- Barry III House bathroom fire, January 2013
- Multiple snowstorms, February 2015
- Hurricane Joaquin, October 2015
- Norfolk House bedroom fire, December 2015
- Whitehurst Hall infrastructure failure (water pipe break), January 2016
- Tropical Storm Hermine, September 2016
- Hurricane Matthew, October 2016
- Multiple tropical weather events, August-September 2017
- Smithfield House bedroom fire, September 2017
- Multiple snowstorms, January 2018
- Hurricane Florence, September 2018
- Hurricane Michael, October 2018
- Newport News House bedroom fire, October 2018
- Bomb Threat, November 2018
- York House Kitchen Fire, December 2018
- Smithfield House Kitchen Fire, August 2019
- Hurricane Isaias, August 2020
- COVID-19 Pandemic, 2020-2021
- Multiple snowstorms, January 2022
- Welcome Center Fire, December 2025
- Active Threat Incident, March 2026

In addition to natural hazards, the security and integrity of the University's information technology (IT) infrastructure is tested hundreds of times daily by malicious external entities. Significant quantities of chemicals and gas bottles are stored and used throughout campus for research and maintenance. In addition, peaceful protests routinely take place on campus.

Based on this background knowledge of hazard history, and as documented in the UABHM Committee meeting minutes, ODU has concerning exposure to four hazards that have not been previously documented in the Hampton Roads Hazard Mitigation Plan. Based on recent history of these hazards in Virginia, and as documented in the *Commonwealth of Virginia Hazard Mitigation Plan*, committee members indicated that these four hazards should be addressed and mitigated through the University's plan, and they suggested consideration in future regional plan updates. These hazards include: Active Shooter, Cyber Attack, Building Fire, and Utility/Infrastructure Failure. A brief description and history of each is provided in this section, as well as information regarding risk analysis and campus vulnerabilities.

Active Threat

Active threat is a term used by law enforcement to describe a situation where there is an attack in progress and an aspect of the crime may affect the protocols used to respond. The "active" aspect implies that both law enforcement personnel and citizens have the potential to affect the outcome of the event based on their responses. An active threat is a dynamic, rapidly evolving situation where an individual or group is actively using weapons—such as firearms, knives, or vehicles—to inflict death or serious injury in a populated area. These unpredictable, fast-moving events (often lasting 5–10 minutes) require immediate, independent protective actions to minimize harm, such as running, hiding, or fighting.

Location and Spatial Extent

Active threat events could arise on any of ODU's campuses. However, these individuals tend to target large groups of people. According to the *DRAFT 2026 Commonwealth of Virginia Hazard Mitigation Plan*, the FBI has identified 11 locations where the public is most at risk during an

active threat event: grade schools, institutions of higher education, government properties, military properties, open spaces, residences, houses of worship, health care facilities, businesses open to pedestrian traffic, businesses closed to pedestrian traffic, and malls.

Significant Historical Events

Prior to 2026, ODU had not experienced an active threat incident on campus. However, during the planning period for this plan addendum, tragedy struck the main campus on the morning of Thursday, March 12, 2026. A gunman opened fire inside a classroom in Constant Hall, killing Lt. Col. Brandon A. Shah and injuring two students. The FBI confirmed Shah confronted the gunman when he entered the classroom and placed himself between the gunman and his students. ROTC cadets in the room physically intervened and subdued the shooter, stopping the attack before additional casualties could occur. The ODU Alerts emergency notification system was activated to immediately notify all students as well as staff, faculty and other ODU community members who had opted in to alerts, advising all to “Run, Hide, Fight.” Following Spring Break, the University amplified counseling services to students and staff in need.

The shooting was still being investigated as an act of terrorism as of the date of this plan. ODU canceled classes and suspended operations on its main campus through the next day; the following week was students’ Spring Break. Constant Hall was closed through the remainder of the 2025-2026 academic year.

Ten days after the shooting, the U.S. Army honored the cadets for their bravery and sacrifice during the March 12 attack in a private ceremony. Secretary of the Army Dan Driscoll and Sergeant Major of the Army Michael R. Weimer awarded eight cadets the Meritorious Service Medal and two cadets the Purple Heart.

Another incident in 2018 involved an anonymous report of a bomb threat that resulted in canceled classes and activities at ODU on November 29, just before final exams began. Campus was closed as officials investigated the threat. An alert was sent to the campus community that morning announcing the closure. Staff was instructed not to report to campus, and students were told to stay inside their secured residence halls. Several streets around the campus were also closed.

The following information from the *DRAFT 2026 Commonwealth of Virginia Hazard Mitigation Plan* provides regional context for the hazard, as well as several events that took place on other Virginia university campuses. Each of these incidents occurred between 2007 and 2022.

> Blacksburg, VA 2007 – a student, armed with two handguns, started shooting in a dormitory at the Virginia Polytechnic Institute and State University. Two and a half hours later, the shooter chained doors shut to an education building on campus and began shooting at students and faculty. There were 32 people killed and 17 wounded.
>
> Christiansburg, VA 2013 – a man armed with a shotgun began shooting in the New River Community College satellite campus in the New River Valley Mall. No one was killed; two were wounded. The shooter was apprehended by police after being detained by an off-duty mall security officer as he attempted to flee.
>
> Alexandria, VA 2017 – a man shot several individuals including U.S. House Majority Whip Steve Scalise, U.S. Capitol police officer Crystal Griner, congressional aide Zack Barth, and lobbyist Matt Mika during a practice for the annual Congressional Baseball game. The man engaged in a ten-minute shootout with law enforcement during which he was shot and later died from his wounds.
>
> Virginia Beach, VA 2019 – a man armed with two handguns, began shooting at the Virginia Beach Municipal Center. The shooter shot and killed one victim in the parking lot before entering the building and firing indiscriminately. Twelve people

were killed and four were wounded. The assailant was shot during an exchange of gunfire with law enforcement and later died of his wounds.

Bridgewater, VA 2022 – two officers were killed by an active shooter after a brief interaction at Bridgewater College. The shooter was arrested after the incident and several firearms belonging to the assailant were seized.

Chesapeake, VA 2022 – a man, armed with a handgun, began shooting at people in Walmart. Six people (employees) were killed; six people (employees) were wounded. The shooter committed suicide prior to the arrival of law enforcement on the scene.

Probability of Future Occurrence

The occurrence of six major active threat events in 16 years in Virginia, equates to a frequency of 3.75 events per year statewide. The chance of an active threat event at ODU is low because precautions are in place to prevent such attacks; however, the probability of a future occurrence is likely between 0 and 3.75 events each year.

Cyber Attack

A cyber attack is a deliberate, malicious attempt by individuals or groups to breach, damage, or disrupt computer systems, networks, or digital devices. These attacks aim to steal sensitive data, hold systems for ransom, or destroy information, often resulting in financial loss, identity theft, and reputational damage for individuals and organizations. There are many types of cyber attack incident patterns, all of which may apply to an institution of higher learning, including:

- Web app attacks - Incidents in which web applications are attacked, which can include exploiting code-level vulnerabilities in the application;
- Social engineering - Psychological compromise of a person, which alters their behavior into taking an action or breaching confidentiality;
- System intrusion - System intrusion captures the complex attacks that leverage malware and/or hacking to achieve their objectives including deploying ransomware;
- Insider and privilege misuse - Unapproved or malicious use of legitimate privileges;
- Miscellaneous errors - Incidents in which unintentional actions directly compromise a security attribute of an information asset;
- Lost and stolen assets - Incidents where an information asset went missing through misplacement or malice; and,
- Denial-of-service attacks - Any attack intended to compromise the availability of networks and systems that are designed to overwhelm, resulting in performance degradation or interruption of service.

Location and Spatial Extent

Cyber attack events can occur and/or impact virtually any location within the ODU campuses in which computing devices are used. A disruption to a cybernetic system can have far-reaching effects beyond the location of the system. As a result, a cyber attack that occurs outside of the University can also impact ODU. The converse is true as well; an event that impacts systems in ODU can cause impacts outside the physical campuses.

Significant Historical Events

Cyber attacks are becoming increasingly common. As new procedures are implemented to counter cyber attacks, hackers are adapting and finding different methods to commit fraudulent acts. For regional context, the *DRAFT 2026 Commonwealth of Virginia Hazard Mitigation Plan* documents numerous occurrences of cyber attacks in or affecting Virginia. High profile incidents, and those affecting other university systems, include:

- August 2014: Community Health Systems, located throughout Virginia, announced that hackers broke into their physician network and stole patient information. Hackers were

able to access patient names, addresses, social security information, and date of birth information.

- August 2015: The University of Virginia's computer network was compromised by a cyber attack. The investigation into the attack indicated that no personal information, such as student names, contact information, social security numbers, etc. was accessed by the hackers. Also, no sensitive research material was accessed.
- April 2017: The Virginia State Police experienced a significant cyber event involving a malware infection that impacted their email system. The malware, described as aggressive and sophisticated, led to a temporary shutdown of the department's email services to prevent further damage and to allow for remediation efforts. The Virginia Information Technologies Agency and Northrup Grumman were involved in identifying, containing, and eradicating the malware. The incident required the Virginia State Police to communicate with the public through alternative means, such as telephone and social media, while ensuring that their daily field operations remained unaffected.
- June 28, 2017: A hospital in Princeton, West Virginia, along the Virginia border, was targeted by a cyber attack. Apparently, personal information was not transferred from the servers; however, all electronic medical files were encrypted and inaccessible.
- September 2019: Smyth County Public Schools were hit by a ransomware attack that temporarily paralyzed its network across the school system. Though there was no evidence that sensitive data was taken, the school system was forced to restore significant amounts of data from backups and accelerate its plans to migrate infrastructure to the cloud.
- November 2020: A ransomware attack on the Hampton Roads Sanitation District successfully disabled phone and computer networks, including customer billing systems.
- December 2020: A major cyber attack alleged to have been committed by the Russian government successfully compromised data belonging to thousands of governments and private sector organizations. The malicious actors successfully hacked a widely used service provider known as SolarWinds, conducting a software supply chain attack believed to be one of the biggest cyber-espionage incidents in history.
- May 2021: The Colonial Pipeline Company halted all pipeline operations in response to a ransomware attack impacting its IT systems. The shutdown affected numerous supply chains for refined oil, leading to Commonwealth and federal disaster declarations.
- December 2021: The Virginia Department of Legislative Automated Systems, which provides technology services to the legislative branch and General Assembly of Virginia, was targeted by a cyber attack impacting several critical systems. The attack, which prohibited legislators and staff from accessing the systems that handle bills, also took down the Virginia Law Portal and several services of the Virginia Capitol Police.

Public entities in Virginia that have recently (2023) been affected by cyber attacks include the City of Richmond, Fauquier County Public Schools, Pulaski County Public Schools, and the Greater Richmond Transit Company.

The FBI's Internet Crime Complaint Center (IC3) is a central hub for reporting cyber-enabled crime. IC3 releases an annual report most years that summarizes these crimes and the number of victims. In 2024 (the most recent report available), Virginia ranked 13th in the number of cybercrime complaints per state at 17,466. Table L.2 breaks down the victim count by type of cybercrime.

TABLE L .2: VIRGINIA CYBERCRIMES WITH VICTIM COUNTS, 2024

Crime Type by Victim Count			
Crime Type	*Victim Count*	*Crime Type*	*Victim Count*
Advanced Fee	208	Lottery/Sweepstakes/Inheritance	152
BEC	667	Malware	16
Botnet	17	No Lead Value	1,562
Confidence/Romance	566	Non-payment/Non-Delivery	1,399
Credit Card/Check Fraud	338	Other	314
Crimes Against Children	65	Overpayment	99
Data Breach	101	Personal Data Breach	1,629
Employment	577	Phishing/Spoofing	2,288
Extortion	2,908	Ransomware	64
Government Impersonation	722	Real Estate	292
Harassment/Stalking	310	SIM Swap	20
Identity Theft	658	Tech Support	1,258
Investment	1,139	Threats of Violence	50
IPR/Copyright and Counterfeit	46		
Descriptors*			
Cryptocurrency	2,514	Cryptocurrency Wallet	1,503

Source: Internet Crime Complaint Center (IC3)

Additionally, the 2024 IC3 report data reflect that victim counts by age, while highest for the elderly, are also significant for the under 20 age group, with 448 incidents and over $740,000 in losses. Victims aged 20 to 29, had 1,643 incidents totaling over $5.6 million in losses.

Probability of Future Occurrence

The probability of a significant and damaging cyber attack increases daily. Phishing scams have become more frequent in attempts to lure unsuspecting victims by sending unsolicited email or posing as legitimate websites, which attempt to collect personal and financial information. Ransomware is also becoming more sophisticated and used more frequently. Ransomware is a type of malware that is designed to lock digital files; subsequently, attackers demand a ransom to unlock the files remotely. Ransomware is easily sent via spam email; however, spam email is increasingly filtered out by email servers. Hackers constantly adapt by targeting specific individuals with emails and in some cases with websites embedded with malicious code. Email and downloading from the internet are the primary sources of corporate malware infections. Most local governments, businesses, and institutions of higher education, including ODU, have policies and procedures in place to reduce vulnerability to a cyber attack. Continued research, training and outreach regarding awareness of cyber attack techniques reduces the probability of occurrence.

Quantifying the exact probability or severity of a disruption is difficult due to the limited information available and many unknown factors. The intentional disruptor could range from something as minor as leaving a message to a major issue with sensitive data collection or control of a critical facility. The probability of an error or failure is also hard to quantify as most systems are properly updated, replaced, and maintained as needed. Usually, it is an extenuating circumstance that drives a failure. Therefore, the probability of a major attack for ODU is described as <1-percent per year, consistent with the *DRAFT 2026 Commonwealth of Virginia Hazard Mitigation Plan*.

Building Fire

Building fires on campus may be classified as accidental or intentional, residential or non-residential, with intentional fires classified as arson. The Commonwealth of Virginia defines ‘arson’ as an act of unlawful and intentional damage, or attempt to damage, any real or personal property by fire or incendiary device.

For many college students, the last fire safety training they received was in grade school, and there are many new responsibilities associated with their newfound independence for which students may not be prepared. There are several specific causes for accidental fires in on- and off-campus college housing, including: cooking, candles, lithium-ion batteries, smoking and overloaded power strips. In addition, laboratory science environments and the use of lasers and radiation must be carefully managed to prevent fires or hazardous materials incidents.

Behavioral factors can contribute to the problem of dormitory housing fires. The U.S. Fire Administration indicates that approximately 25% of all campus fire fatalities follow a party,[2] and 73% occur between 12:00 a.m. and 6:00 a.m.[3] Beyond parties, additional factors include:

- Improper use of 911 notification systems, which delays emergency response;
- Student apathy - many are unaware that fire is a risk or threat in the environment;
- Evacuation efforts may be hindered since fire alarms are often ignored;
- Building evacuations are delayed due to lack of preparation and preplanning;
- Vandalized and improperly maintained smoke alarms and fire alarm systems inhibit early detection of fires;
- Misuse or misunderstanding of cooking appliances, overloaded electrical circuits and extension cords; and,
- Lack of understanding about the risks and prevalence of modern lithium ion batteries.

At ODU, the following items are prohibited in residence halls:

- Extension cords
- Multi-plug adapters
- Halogen and torch lamps
- Toasters/toaster ovens
- Countertop grills
- Hazardous materials
- Appliances with exposed heating elements
- Explosives/flammables/propane/gas grills
- Motorized vehicles
- Firearms/weapons/Incendiary devices
- Live holiday trees
- Candles/incense/oil lamps/open flames
- Portable heaters
- Fireworks

Location and Spatial Extent

All ODU campuses, buildings and infrastructure are vulnerable to fire, whether intentional or accidental. Almost all campus buildings are equipped with fire alarms and sprinkler systems to mitigate fire risk, including residence halls. Newer buildings, built to modern building codes, are outfitted with technologies, methods and materials that limit fire risk, improve firefighting access and prevent fire from spreading. All ODU housing facilities meet or exceed all minimum fire and life safety standards.

Significant Historical Events

According to the ODU Office of Fire Prevention, the majority of fire alarms in residence halls result from:

- Improper or unattended cooking;
- Hair styling products used with hot irons/hair dryers;
- Excessive shower steam; and,
- Use of prohibited items.

[2] https://www.usfa.fema.gov/prevention/home-fires/at-risk-audiences/college-students/ (accessed 2/6/26)
[3] www.usfa.fema.gov/downloads/pdf/publications/campus_fire_fatalities_report.pdf (accessed 2/6/26)

Table L.3 provides a summary of fire incidents in university facilities since 2013. There were no injuries or fatalities associated with these events.

TABLE L .3: ODU FIRE INCIDENT HISTORY, 2013 - 2026

DATE	TIME	LOCATION	CAUSE	COST
22Jan2013	1943	Powhatan I Apartments, Barry House, Apartment F6 Bathroom	Exhaust Fan Overheated	$1,000-9,999
06Mar2013	1749	Powhatan 1 Apartments, Doumar House, Apartment C3	Cardboard Box Fire (Arson)	$0
13Jan2014	0229	England House, Third Floor Lounge	Cooking	$100-999
04Dec2015	0336	University Village 4 Apartments, Norfolk House, Fourth Floor Bedroom	Candle	$1,000-9,999
13Oct2016	2123	Nusbaum Apartments, Apartment 7 Kitchen	Cooking	$100-999
24Sep2017	0530	University Village 7 Apartments, Smithfield House, First Floor Bedroom	Candle	$1,000-9,999
23Oct2018	1708	University Village 3 Apartments, Newport News House, Third Floor Bedroom	Trash Can Fire	$100-999
15Dec2018	2144	Powhatan II Apartments, York House, First Floor Kitchen	Cooking	$100-999
31Aug2019	0043	University Village 7 Apartments, Smithfield House, Apt. 7 Kitchen	Cooking	$100-999
01Jan2020	0119	University Village 2 Apartments, Hampton House, Apt 307 Kitchen	Cooking	$100-999
19Oct2021	2320	Old Dominion Inn, Second Floor Community Lounge	Electrical Short	$100-999
03Sep2022	2209	University Village 6 Apartments, Portsmouth House, Apt 301 Kitchen	Cooking	$100-999
16Mar2023	1633	Whitehurst Hall, B Tower, Room 447 Bathroom	Trash Can Fire	$100-999
28Mar2023	1651	Powhatan I Apartments, Barry House, Apt. 202F Kitchen	Cooking	$100-999
10Apr2023	1208	Rogers Hall, Room 250 Bathroom	Trash Can Fire	$100-999
26Apr2023	1811	Whitehurst Hall, B Tower, Room 541 Bathroom	Bathroom Fire	$100-999
07Sep2023	2209	University Village 7 Apartments, Smithfield House, Room 109 Kitchen	Cooking	$100-999
11Oct2023	2121	University Village 2 Apartments, Hampton House, Room 210 Kitchen	Cooking	$100-999
15May2024	0931	University Village 10 Apartments, Williamsburg House, Room 206 Kitchen	Microwave placed on hot stove burner during renovations	$100-999
10Sep2025	0052	University Village 2 Apartments, Hampton House, 302 Kitchen	Power returned on when oven was left on by occupants and burnt food in pan causing minor smoke damage	$100-999
07Dec2025	0816	Welcome Center	Electrical	TBD
05Feb2026	0825	France House, Room 3213	Cell phone battery failure	$100-999

One insurance claim due to building fire caused by arson is recorded in the insurance claims data. On the evening of January 23, 1999, a mattress was set on fire in the Health and Physical Education Building elevator causing approximately $160,000 in damage. The fire was contained to the elevator, but a small section of the building suffered smoke and water damage. Smoke from burning hydraulic fluids in the elevator shaft spread throughout the second floor of the building. One professor was temporarily displaced from his first floor office due to smoke damage.

Probability of Future Occurrence

The *Code of Virginia* §36-139.3 mandates annual inspections for all student residence facilities (dorms) owned, leased, or otherwise operated by a State college or university. These inspections are done annually by the State Fire Marshal's Office.

Building fire location, cause and magnitude are relatively unpredictable. Given the fact that there have been building fires in the past at the university, there is high potential for a building fire in the future. With 22 incidents of varying degrees in the past 8 years, the frequency of occurrence is estimated to be 2.75 events per year.

Infrastructure Failure

Because "infrastructure failure" can be broadly defined, this section specifically focuses on the transportation and utility infrastructure supporting ODU. Both the Main Campus and the Medical Campus are complex micro-cities where utility failures can disrupt everything from high-stakes research to student housing safety. Common failures could include:

Primary Utility Failures

- Electrical Outages (Blackouts/Brownouts): These are the most frequent disruptions, often caused by storms, old switchgear, or equipment failure. They can lead to lost research data, spoiled perishable lab samples, and the failure of safety systems like fire alarms and electronic locks.
- Water and Plumbing Failures: Includes water main breaks, pipe leaks, or total supply loss. These force building closures due to a lack of sanitation (restrooms) and can damage infrastructure through interior flooding.
- Natural Gas Leaks: These represent immediate explosion hazards and typically require full building or area evacuations.
- HVAC and Ventilation Problems: Failures in heating, cooling, or air handling are critical during extreme weather or in specialized labs (e.g., fume hoods) where proper ventilation is required to manage hazardous fumes.

Specialized Infrastructure Failures

- Information Technology and Communication: Disruption of internet, Wi-Fi, or telephone services isolates campus communities and halts modern learning environments.
- Elevator Malfunctions: Power or mechanical failures can lead to occupant entrapment, requiring emergency rescue.
- Sewer and Wastewater Issues: Backup or failure in the sewage system creates immediate health and sanitation risks, possibly necessitating temporary building(s) closures.

Significant transportation infrastructure failures impacting ODU may happen on or adjacent to any of the campuses and may include:

- Bridge-tunnel complex failures: whether from intentional or accidental forces, any disruption to the many bridges and tunnel systems that provide critical links from Southside to the Peninsula, the Eastern Shore, between Norfolk and Portsmouth, and over to Suffolk are crippling. Long term failures, such as the Key Bridge incident in Baltimore, would be debilitating for transporting students, faculty and administrators to and from various points in the Hampton Roads region.
- Road flooding: Several roads on both the Main Campus and the Medical Campus are flood-prone and that risk increases as sea level rises into the future. The Hazard

Identification and Risk Assessment portion of the plan highlights these hazards in greater detail.

- Cascading Infrastructure Failures: High winds and rain, which are common in the region, may lead to downed trees that cause power outages. Snow and ice storms are also capable of leading to downed trees. This creates a "cascading failure" where traffic signals lose power, leading to gridlock at major intersections near campus. Another cascading infrastructure failure might include a major rail or port incident involving hazardous materials. Given the proximity of the Main and Medical campuses to these busy transportation arteries, the possibility of a waterway impact having campus-related impacts is relevant.

Location and Spatial Extent

The main campus' primary electrical system is 23 K.V. and owned by Dominion Energy. Design requirements for future construction indicate that both systems must be 3-phase, 4-wire WYE connected. Recently, the University has begun to transition to some solar installations, which represents a long-term investment in increased future resilience in the case of main power provider outages in the future. Dominion Energy also provides power to the Medical Campus and the other standalone buildings throughout the region.

Utility infrastructure, such as underground corridors, switchgear, sewage and water lines, and mechanical heating/cooling components are aging on both campuses. While regular inspection and upkeep helps maintain the utilities in general, there is ongoing possibility of utility failure. The risk of cascading or compound failures in conjunction with high wind or flooding events is high given the frequency of such events.

Transportation infrastructure is critical throughout the Hampton Roads region and catastrophic interruptions would have impacts for all of the ODU campuses. Flooding along Hampton Boulevard is an important consideration for University students, staff and faculty.

Significant Historical Events

Power outages on Main Campus are fairly common, often occurring several times each year. For example, storms on September 9, 2025, impacted roughly 2,000 customers near ODU, including parts of the Main campus. The University sent an alert to students and staff about outages impacting the Village Apartments and Monarch Way, indicating power was expected to be restored several hours later. Tropical systems and nor'easters, such as Tropical Storm Isabel, Hurricane Irene and the 2009 Nor'Ida nor'easter are examples of memorable storms that regularly bring high winds to the region, which can cause locally- and regionally-significant outages.

Water main breaks have impacted university functions at least twice in the recent past, including a water pipe break on campus in Whitehurst Hall, in January 2016, and a New Year's Day 2023 water main break in the area of West 43rd Street and Hampton Boulevard in Norfolk that caused disruption to water service in areas around the Old Dominion University campus. Roads were also closed in the area to make repairs. Fortunately, school was not in session for the 2023 incident.

With regard to transportation infrastructure, the roads and bridges in the region experience regular traffic backups, bottlenecks and slowdowns daily, with as many as 20 crashes and 90 breakdowns per month. Less common but still problematic (and too commonplace to list) are incidents such as:

- high tide flooding,
- car/truck fires in the tunnels,
- guardrail failures resulting in vehicles going overboard,
- high wind closures of the Chesapeake Bay Bridge Tunnel,
- incidents involving tunnel flood gate failure,
- drawbridge failures, and

- scheduled maintenance or construction related closures of bridges, tunnels and drawbridges.

Major incidents involving long-term closures due to complete failure are rare. In July 2009, the westbound tube of the Hampton Roads Bridge Tunnel partially flooded after a thunderstorm hit the region. The flooding was caused by a failed water main, which burst and led a chamber below the tunnel roadway to fill with millions of gallons of water. Pumps designed to remove water from the chamber were overwhelmed, and water began to puddle on the roadway, forcing VDOT to close the tunnel for nearly seven hours during midday on July 2, 2009. This closure forced hundreds of thousands of commuters, tourists, as well as Hampton Roads residents heading westbound for the Fourth of July holiday, to divert and go through the Monitor Merrimac Bridge Tunnel (MMMBT) or the James River Bridge, the only alternate routes to get to the peninsula. The MMMBT had troubles of its own during the afternoon, as a multiple-vehicle collision shut down the northbound lanes, closing the tunnel and causing a 20-mile traffic jam along I-664. The James River Bridge was also closed on July 2 because of downed wires from the storm. The series of events involving all three water crossings led to a "perfect storm" of traffic which caused gridlock throughout all major arteries of Hampton Roads. In addition, the flooding of the Hampton Roads Bridge–Tunnel caused widespread concern about evacuation capabilities of the region during the approach of a hurricane, as the HRBT, MMMBT, and the James River Bridge serve as the primary hurricane evacuation routes for residents of Virginia Beach, Portsmouth, Norfolk, and Chesapeake.

Probability of Future Occurrence

Aging university utility infrastructure is a concern for campus planners. Probability of future failure of some feature is likely to occur, despite regular inspections and ongoing replacement of aging components.

Similarly, complete bridge/tunnel failure is unlikely to occur. However, as of 2021, nearly 51% of Virginia's bridges are more than 50 years old and have met or exceeded their expected life of service. Older bridges and/or tunnels are more likely to fail. The probability of weather-related incidents involving local ODU or ODU-adjacent roads, including road flooding and tree strikes is high, and expected to occur at least once per year.

VULNERABILITY ANALYSIS

Active Threat

Vulnerability and Consequence Analysis

Recent experience shows that the impacts of active threat incidents affect the whole community no matter how isolated or contained the incident may be. Post-incident concerns for safety and security are common. There is a wide array of common responses to the shock of the situation, both for those involved and those in the surrounding community. The psychological scars left on a tightknit university community may take years to heal.

Training and exercises are the best way to effectively prepare responders and potential targets for an active threat situation. All campus buildings have procedures in place regarding how to respond to an active threat incident. ODU students are required to take online active threat training per *Code of Virginia* §23.1-808.2 while all faculty and staff are required to take Emergency Management for State Employees online training annually per *Governor's Executive Order 41* (2019), which includes an overview on how to respond to an active threat incident. The ODU Police Department also provides in-person active threat/Run-Hide-Fight/threat assessment training to members of the University community on an as-requested basis.

People can and do suffer direct impacts from an active threat incident, with the potential for both injuries and fatalities. The number of injuries and fatalities are variable, dependent on many

factors surrounding the attack including the location, the number and type of weapons used, the shooter's skill with weapons, the amount of people at the location and law enforcement response time.

The potential for damage to property is highly dependent on the type of attack. Buildings and infrastructure may be damaged, but given the intent of active threat events, significant damage is unlikely. Impacts are highly localized to the target of the attack. As seen with the ODU March 2026 incident and the Virginia Beach 2019 incident, the trauma and memories from such an event may lead University leadership to implement long-term recovery strategies, including closing or reprogramming a building or buildings where such an incident took place to avoid putting students and staff back into areas where the incident took place.

Risk

True risk and potential losses due to an active threat on campus are difficult to predict with certainty because each incident is, by its nature, unique. Athletic events, auditorium events, and student gatherings such as classes and commencement are vulnerable because of the large numbers of people in one place; campus police and emergency managers put special precautions in place during these events to thwart and mitigate attacks.

Frequency of active threat events has increased in recent years. There are several indicators that may assist in pre-identifying a potential active threat:

- Concerning behavior noted by friends, family, associates, and others, such as, disciplinary problems, depressed mood, changes in personality or performance, delusional statements, non-specific threats of violence, interest in or acquisition of weapons, odd or bizarre behavior;
- Verbal or written threats about causing harm to the target;
- Stalking or harassing behavior; or
- Physically aggressive acts toward the target.

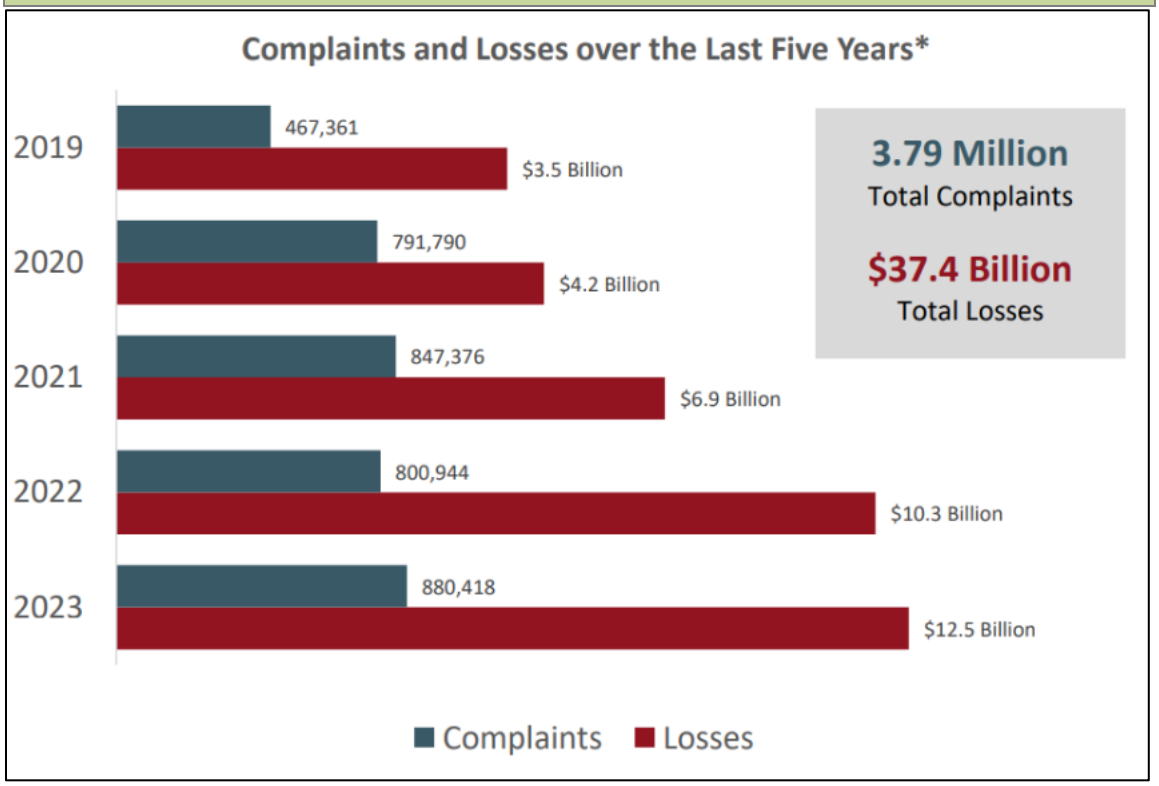
Cyber Attack

Vulnerability and Consequence Analysis

Most cyber attacks have negligible impacts; however, it is possible for a cyber attack to have catastrophic impacts if the data breach is significant enough or if critical, protected information gets into the hands of terrorist groups. One of the primary challenges of cyber attacks for institutions of higher learning is fully understanding their system's vulnerabilities on an ongoing basis.

Cyber attacks can have a significant cumulative economic impact over time. According to IC3 data produced by the FBI, the U.S. experienced a loss of $37.4 billion between the years 2019 to 2023. Economic losses associated with cybercrime increased every year during this five-year period as shown in Figure L.1.

FIGURE L .1: COMPLAINTS AND LOSSES DUE TO CYBERCRIME IN THE US, 2019-2023



Source: Internet Crime Complaint Center

Businesses and institutions like ODU continue to use evolving technologies to improve operations, and increasingly, student personal and financial information is stored and transferred online. Consumers' continued usage of online services, such as banking and shopping, increase vulnerability to personal and financial information theft or manipulation.

Direct injuries or fatalities from cyber attacks are expected to result only from a major cyber terrorist attack against critical infrastructure. Property damage from cyber attacks is typically limited to computer systems. A major cyber terrorism attack could potentially impact the environment by triggering a release of hazardous materials, or by causing an accident involving hazardous materials by disrupting traffic-control devices, railway infrastructure or port facilities. Cyber attacks could also shut down important communication infrastructure and could limit ODU's ability to communicate with students, faculty, administrators and others outside the university system.

Cyber Attack Risk

Risk and potential losses due to cyber attacks are difficult to predict in a university setting because of the wide variety of attack durations, severity and complexity to resolve. To estimate some level of potential loss, the DRAFT 2026 Commonwealth of Virginia Hazard Mitigation Plan cites the I3C 2024 Annual Report, which notes that 12,711 complaints of cybercrime were reported in the Commonwealth of Virginia in 2024. The following hypothetical scenarios include brief discussions of potential impacts in qualitative terms as they might relate to University assets:

- Failure of a medical research database: This would most likely be a localized event that would have minimal losses associated with it if adequate data backup systems were in place. Losses would consist of staff time restoring data from backup as well as down time while the system is inaccessible. Depending on the period before the system is brought back online, associated costs could range from hundreds to thousands of dollars. With this scenario, there are no anticipated injuries or loss of life.

- University intranet failure due to hardware failure: This would also be localized, though external users could also be impacted. Hardware failures are typically able to be replaced within a day or two. Losses would depend on the functionality that is lost while the system is down. Assuming the site affected is used for general information, inquiries, and some on-line data transactions, the magnitude could be estimated to be in the range of hundreds to thousands of dollars, with no injuries or losses to life.
- Breach of sensitive database for the administrative offices: This type of event could have broad-reaching effects, depending on if and how the breached data is utilized and whether the university community is made aware. Potential losses would be influenced not so much by the event itself, but rather by the administration's reaction to the event. A partial or complete rebuilding of the system and its security processes would occur. In addition, increased security for individuals impacted, as well as resources deployed to identify and prosecute those responsible. A loss of trust could also entail necessary changes to processes and resources spent to assure the university community. The magnitude of this type of event could be estimated to be in the range of tens to hundreds of thousands of dollars. Specifically targeted injuries or deaths could conceivably result for those whose personal information was revealed.
- Utility/Infrastructure services remotely accessed and controlled: This event would be on the scale of a worst-case situation that could have wide-ranging impacts as a result of a coordinated strike on supervisory control and data acquisition (SCADA) industrial control systems impacting utility and infrastructure controls. Targeting these areas would have the largest health and safety concerns. Losing direct control of any type of utility could have far-reaching impacts on the safety of the university community as well as the functionality of any related systems. This domino effect could negatively influence the daily life activities of students and faculty, and could take university services completely off-line. Community safety could be at risk. For example, if Dominion Power is the target, individuals that rely on power for health-related treatments could be at risk. Prolonged outages would result in loss of automated traffic control and other power-dependent safety measures. Other utility outages, such as loss of communications would cause additional cascading impacts. This type of event could produce impacts similar to a severe natural hazard event. The magnitude of losses for this event could reach into millions of dollars across ODU's multiple campuses if all are impacted. Injuries or deaths could conceivably occur, although such a scenario would likely involve other hazards such as failure of backup power resources.

Building Fire

Vulnerability and Consequence Analysis

The previous ODU Hazard Mitigation Plan included a detailed building fire vulnerability analysis for the Main Campus using the following eight parameters: Hazard Index; Building Square Footage; Building Replacement Value ($); Contents Replacement Value ($); Loss of Function (LOF) ($/day); Community Impact ($/day); Criticality; and, Building Fire Damage Functions for Buildings, Contents, LOF and Community Impact.

From a vulnerability perspective two Main Campus buildings, Facilities Management and Mills Godwin, were considered to have a high vulnerability based on the analysis conducted for this plan. An additional forty buildings are considered to have a medium-high vulnerability. These buildings were:

- Batten Arts & Letters
- Chemistry
- Spong Hall
- Koch Hall
- Hughes Hall
- Education
- Diehn Fine Arts
- Art Studio
- Gresham Hall

- Gresham Hall Annex (East)
- Rogers Main
- Rogers East Annex
- Powhatan I Complex (14 buildings total)
- Powhatan II Complex (14 buildings total)

The EVMS Vulnerability Assessment also included a detailed analysis of building fire hazards for all buildings on the Medical Campus at that time. The analysis was based on five technical parameters: Fire Protection; Construction Type; Exterior Construction Type; Roof Type; and, Contents Type.

The assessment determined that no buildings on the Medical Campus had a high hazard index for building fire. Three buildings were assessed as having a medium-high hazard and an additional nine buildings a medium hazard. These buildings were:

- Chemical Storage (Medium-High);
- Facilities Management (Medium-High);
- Nusbaum Apartments (Medium-High);
- Art Studio (Medium);
- Batten Arts & Letters (Medium);
- Education (Medium);
- Gresham Hall Annex East (Medium);
- Hughes Hall (Medium);
- Koch Hall (Medium);
- Peri Nuclear (Medium);
- Rogers East (Medium); and,
- Spong Hall (Medium).

Consequences of a fire in or around campus buildings or infrastructure include a risk to lives of those living or working on campus. Fires can lead to injuries or fatalities among students and staff, or to firefighters responding to dangerous incidents. Property damage is a consequence of even minor events. Buildings, equipment, and personal belongings can be severely damaged or destroyed. Damage to research projects, infrastructure or IT resources can lead to cascading hazards if fire leads to additional vulnerabilities. Disruption of education is a concern if classes must be canceled or relocated, thereby affecting academic schedules. There may also be financial or legal costs on campus, including: repairing damages, lawsuits and liability issues, arson investigations and implementing new safety measures. For very large incidents, there may be emotional impact to survivors who may experience trauma or anxiety related to the incident.

Building Fire Risk

Based on the frequency with which fires have impacted campus facilities, the likelihood of fire occurrence is relatively high. However, the severity and impacts of campus fires are mitigated by the University's strong capabilities as described in more detail below under Capabilities. These measures include a focus on training, safety equipment in buildings, information sharing, partnerships with surrounding jurisdictions, exercises, and emergency response plans.

Infrastructure Failure

Vulnerability and Consequence Analysis

ODU is vulnerable to impacts from infrastructure failure both outside the campus and in the surrounding jurisdictions. Bridges, roads and tunnels maintained by VDOT and their Federal partners, the waterways, railways and ports supporting worldwide commerce and the utility providers throughout Hampton Roads are all critical to the ongoing smooth operation of the regional economy. Disruptions in functionality of that infrastructure, whether as secondary impact from another hazard (such as a Coastal Storm) would have cascading consequences for the University community members.

The immediate consequence of a bridge or tunnel failure can be the loss of life or serious injuries. Members of the University community could be caught in a collapse – especially if it occurs during heavy peak traffic hours. Additionally, bridge or tunnel failure can disrupt local and regional transportation networks for long periods of time. University community members who rely on the bridge for daily commutes, deliveries, or travel will face significant delays. Detours and alternative

routes often lead to longer travel times, traffic congestion, and increased fuel consumption. In addition, public transit systems dependent on bridges or tunnels may be affected, further complicating mobility to and from the University.

Reconstructing or fixing a critical bridge or tunnel after collapse is extraordinarily expensive and can cost hundreds of millions of dollars. Additionally, the closure of a major transportation route can lead to economic losses for businesses near the University that depend on it for the transportation of goods and services. Shipping delays, disrupted supply chains, and higher transportation costs may result in procurement problems for ODU. The broader regional economy could also be impacted, especially if the bridge is critical to interstate or even regional commerce as are many Hampton Roads' bridges. Bridge failure could occur in any jurisdiction surrounding ODU's multiple campuses; however, jurisdictions containing older bridges, especially those that are considered structurally deficient may be more likely to experience bridge failure.

Critical impacts on campus life can result from infrastructure failures and utility stoppages on campus, as well. Consequences of power outages, for example, may include impacts to research such as loss of long-term experiment data, death of biological samples in freezers, and damage to sensitive equipment. Academic impacts can mean postponed exams, canceled classes or students who cannot access digital learning platforms. And residential impacts for campus-housed students might mean lack of heat, light or food. Transportation infrastructure failures may impact University students, faculty or administrators from reaching certain campus facilities, parking conveniently or using affected campus facilities. Impacts to residential buildings could include financial impacts to the University if alternative housing is necessary for impacted students.

Summary of Risk Assessment

At UABHM Meeting 1, participants provided feedback regarding the four hazards unique to this addendum and ODU. Each participant was asked how they would decide to spend hypothetical "mitigation dollars," and the feedback was assessed to determine relative mitigation priorities for these special hazards at ODU. Participants were also asked to provide risk scoring using the methodology provided in Section 5 of the main plan.

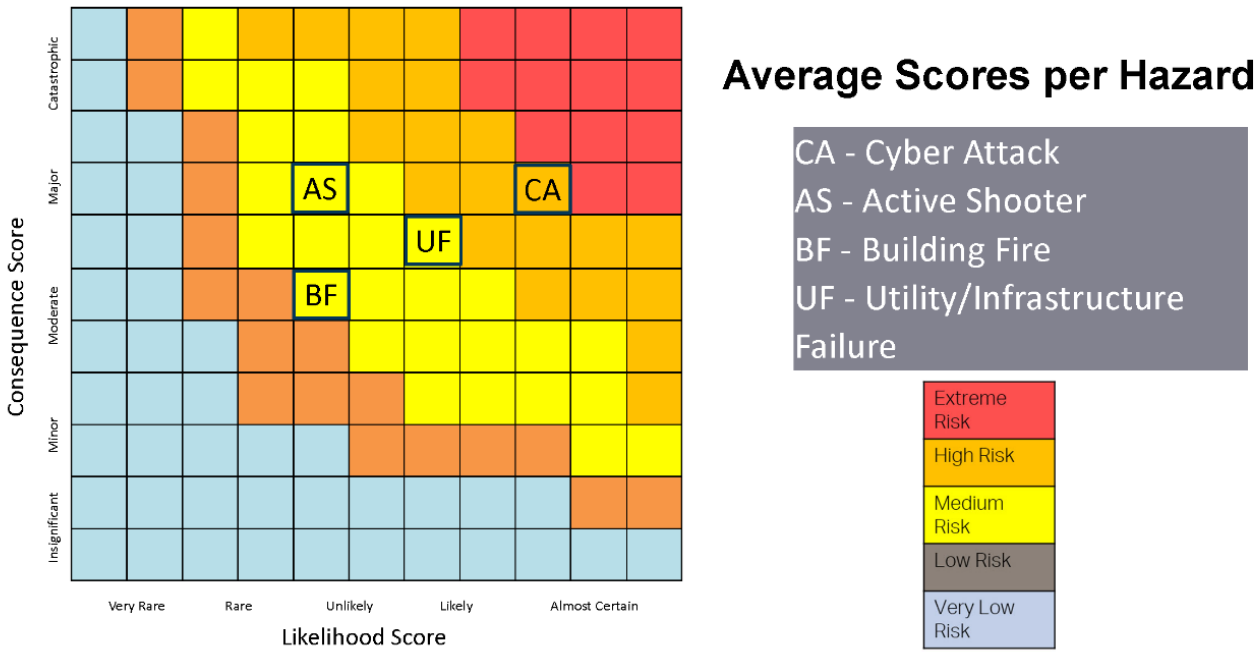
As shown in Table L.4, Cyber Attack and Active Threat stand out as 2 critical hazards that merit further examination as mitigation actions are considered for ODU.

TABLE L .4: QUALITATIVE ASSESSMENT OF ODU-SPECIFIC HAZARDS

HAZARD	Units of $250,000	Units of $50,000	TOTAL MITIGATION DOLLARS SPENT
Cyber Attack	30	22	$ 7,500,000
Active Threat	19	26	$ 4,750,000
Infrastructure Failure	14	39	$ 3,500,000
Building Fire	5	37	$ 1,250,000

As shown in Figure L.2, Cyber Attack, Active Threat and Infrastructure Failure stand out as most concerning to the UABHM members, using the Australian Institute for Disaster Resilience (AIDR) Risk Ranking described in Section 5 of the regional plan. In this exercise, the following number of participants indicated they believed the hazards posed "Extreme Risk" at ODU: Cyber Attack – 20; Active Threat – 8; Infrastructure Failure – 7; Building Fire - 2.

FIGURE L .2: AIDR RISK RANKING FOR ODU-SPECIFIC HAZARDS



CAPABILITY ASSESSMENT

This section provides a brief overview of the departments, planning documents and priorities that are relevant to mitigation planning. In addition, there is summary information obtained from the capability survey that was conducted among the UABHM members over the course of this addendum planning process, which highlights perceptions of mitigation capabilities in the ODU community.

In addition to the nationally-recognized hazard-related capabilities of the communities surrounding ODU's campuses, including especially the City of Norfolk, ODU has developed a strong foundation of hazard planning with physical and technical capabilities to support implementation of their various support plans. ODU's highly knowledgeable and experienced staff have responded to and recovered from several local and declared disasters in the course of their careers at the University and other academic institutions or related facilities. Among the staff are credentialed engineers, architects, planners, and trades personnel. The University maintains relationships with pre-approved and vetted contractors with excellent histories of service. The University has a strong financial standing and continues to show a serious commitment to investing in emergency preparedness and business continuity. Given the University's documented economic impact ($3.8 billion annually) and reliance on the local and regional economy, the cooperative and enduring relationship with local officials is expected to remain a priority for all.

The ODU **Office of Emergency Management** is responsible for building, sustaining, and continually improving a comprehensive emergency management program that promotes institutional resiliency, departmental readiness, and individual preparedness. Through an inclusive, all-hazards approach, these professionals facilitate prevention, mitigation, preparedness, response, and recovery activities to allow the University to focus on its chief mission areas of academics, research, and community engagement.

Led by a full-time Fire Marshal/Fire Prevention Manager with 33 years in the fire service, the ODU **Office of Fire Prevention**'s programs focus on fire prevention and life safety education, realistic training, proactive inspections and enforcement, customer service, and modern technology to realize the goal of a fire-safe campus. ODU is committed to instilling a culture of fire prevention and life safety within the campus community. Through a partnership with local fire departments, fire prevention bureaus, and the Virginia State Fire Marshal's Office, the ODU Office of Fire Prevention works to meet or exceed all local and State fire code requirements. Norfolk Fire-Rescue is the designated first responder to all main campus fire and medical emergencies, and is included in efforts to plan for, train, exercise, respond to, and mitigate fire hazards in all University facilities.

The ODU **Police Department** is dedicated to creating and maintaining the safest possible environment for students, staff, and visitors. This includes a proactive approach to law enforcement and aggressive problem-solving techniques for identified crime trends. The department employs 55 sworn law enforcement officers who provide 24-hour protection for more than 25,000 students, faculty, and staff. They cover the 288 acre main campus and the surrounding communities of Lamberts Point, Larchmont, and Highland Park of our concurrent jurisdiction in the City of Norfolk.

The University **Information Security Office** is charged with review of draft policies and standards and assists with vetting of their proposals. IT standards are reviewed as needed by the Records Manager Officer, CISO, and CIO Computing policies, standards and associated guidelines are formulated to direct and guide University practices, to help ensure compliance with laws, regulations and requirements, and to assist the University in reaching long-term goals. By establishing specific requirements for all members of the university community, policies and standards connect the University's mission to individual conduct, institutionalize impartial expectations, mitigate institutional risk, and enhance productivity and efficiency in the University's operations.

ODU's **Crisis and Emergency Management Plan** (CEMP) was peer-reviewed and updated throughout late 2025; it serves as both the foundation of and umbrella for all emergency and business continuity planning and preparedness activities at ODU. The plan provides the framework within which the University prevents, mitigates against, prepares for, responds to, and recovers from all hazards that may impact ODU interests, and is written from a regional perspective to encompass all ODU facilities in the Hampton Roads, Virginia area. The CEMP is built on the following (abbreviated) planning assumptions which provide critical insight to the University community's hazard-related capabilities:

- ODU maintains a current CEMP, trains personnel to evaluate and respond to incidents, emergencies, and events, and maintains a roster of emergency response personnel to make such response in an immediate and effective manner.
- Personnel assigned responsibilities in the CEMP are familiar with requirements in the CEMP and are prepared to identify and assist in response to an incident by developing plans within their respective campus or department that supports the CEMP.
- All departments and campuses maintain specific emergency response plans relevant to their areas and operations; ensure that all personnel are trained in and familiar with their responsibilities in the CEMP, including the respective departmental/campus plan and procedures; and ensure that staff members are capable of implementing them in a timely and effective manner.
- The roles of ODU officials include ensuring public safety at each University location and protecting ODU property. They also implement all phases (prevention, mitigation, preparedness, response, and recovery) of the emergency management cycle to ensure the efficiency and effectiveness of emergency operations.
- Assistance from local, State, and Federal agencies and from volunteer and private organizations may be available to supplement ODU resources. Through memoranda of understanding (MOUs), government agencies can agree to lend their resources and personnel to one another during an emergency.

- The succession of events in an emergency or disaster is not predictable; therefore, published operations plans, such as this one, only serve as a guide and may require modifications to meet the requirements of the emergency.
- As a part of their commitment to this plan, groups, departments, and agencies referenced in this plan will engage in systematic assessments of procedures, resources and training to ensure their continued ability to carry out their responsibilities as outlined in the plan.
- In time of emergency, the department heads will continue to be responsible for the protection and preservation of records essential for the continuity of government operations. Department and agency heads will establish lists of succession of key emergency personnel.
- Incidents are typically managed at the lowest possible level of leadership.
- There may be competition among the University and localities for scarce resources and widespread power and communications outages may require the use of alternate methods of providing public information and delivering essential services.
- Communications may be problematic due to demands exceeding capacities.
- Protection and restoration of critical infrastructure and key resources is a priority.
- The CEMP is the core plan for managing operations during University incidents/emergencies/events. Other supplemental plans, such as Building Emergency Action Plans and other documents provide details on the authorities, response protocols, and technical guidance for responding to and managing specific contingency situations. Higher-level functional, incident-specific, and support plans are vertically integrated into the CEMP as annexes. In many cases, University departments manage incidents under guidance provided by department-level plans using their own authorities. These supplemental plans, which are horizontally integrated into and may be implemented concurrently with the CEMP, are subordinate to the overarching core coordinating structures, processes, and protocols detailed in the CEMP.

ODU also maintains and operates using Building Emergency Action Plans, a Building Emergency Coordinator Program, Building Emergency Egress Maps, and Departmental Continuity Plans that are integrated with the CEMP.

Hazard Mitigation Planning at ODU has occurred irregularly in the past, but has struggled to keep pace with the rapidly expanding footprint of University-owned assets, as well as the growing prominence of a dedicated emergency management team. In 2007, a contractor prepared a Hazard Mitigation Plan for the Main Campus, and in 2010, a Vulnerability Assessment was conducted for what is now the Medical Campus in Downtown Norfolk. Both of these documents contain detailed building-by-building assessments that have proven to be a valuable resource for the mitigation actions identified in this addendum, and are included by reference. The plans are available upon request from the ODU Office of Emergency Management. Both plans were light on implementation details for identified mitigation actions, and were not approved by FEMA as being fully compliant with the agency's mitigation planning requirements. University planners recognize the importance of hazard mitigation planning, desire to gain eligibility for future grant-funded mitigation projects, and thus expect to participate fully in the Hampton Roads Planning District Commission (HRPDC) hazard mitigation planning process in coming years. The UABHM will continue to play a prominent role in the planning process for ODU.

The ODU **2025-2035 Master Plan** outlines a visionary but practical set of ideas that coordinate physical change across the sites of ODU. The plan prioritizes goals to guide future physical development. Through near- and long-term objectives that adapt and respond to unexpected future changes, the plan serves as an extension of the University's strategic plan. The Master Plan focuses on improving the physical environment, such as facilities, open space, mobility, and infrastructure systems. The plan's "big ideas" related to hazards include: concentrate and densify campus; better connect across Hampton Boulevard; and, use open space as a sponge to absorb future flooding. The actions promulgated in the plan strive to integrate resilient practices into growth and operations. The plan recognizes that ODU is a relatively young institution and most of the structures were built after 1970, but the pace for capital investment and renovation will quicken. The resiliency and sustainability section focuses on the multiple climate-related vulnerabilities that threaten the campus experience, infrastructure integrity and operation

continuity, including: existing flood vulnerability, sea level rise and subsidence, infrastructure degradation, energy system fragility, and thermal stress. Several of the Master Plan recommended actions were also considered during this mitigation planning process in an effort to integrate the concepts relevant to both plans.

ODU implemented a robust **Strategic Planning** process in 2021-2022. The University's five-year strategic plan, "Forward-Focused: Where Innovation Meets Possibilities," is built around seven key areas: Academic Excellence; Branding, Marketing, and Communication; Corporate/ Community Partnerships and Economic Development; Philanthropic Giving and Alumni Engagement; Research Growth; Strategic Enrollment Growth; and Student Engagement and Success. Together, these focal areas lay the groundwork for the University's development and growth during the subsequent five years. The various goals and strategies defined in these areas, along with their associated key performance indicators, will bring the University's vision to successful fruition.

The purpose of the **University Continuity Plan** is to provide the framework for ODU to continue or rapidly restore its mission essential function (MEF) in the event of an incident/emergency/event that affects operations. This document establishes ODU's Continuity Program procedures for addressing three types of extended disruptions that could occur individually or in any combination:

- Loss of access to a facility or portion of a facility (e.g., a building fire);
- Loss of services due to a reduced workforce (e.g., pandemic influenza, incidents in which employees are victims or incidents that prohibit employees from reporting to the workplace); and
- Loss of services due to equipment or systems failure (e.g., telephone, electrical power, or information technology system failures).

The University Continuity Plan is not an emergency response plan; rather, it is a recovery plan that works in concert with the ODU CEMP, the ODU Information Technology Disaster Recovery Plan, and other plans as appropriate. This Plan provides a framework designed to minimize potential impact to operations and allow for rapid recovery from an event which may or may not cause the activation of emergency response or incident action plans. Each primary business function has completed a business process analysis that supplements the Continuity Plan.

The ODU **Information Technology Disaster Recovery Plan** (ITDRP) documents the continuity of IT business operations plans. The plan is protected as sensitive data and stored at a secure off-site location. The ITDRP is maintained, reviewed and updated minimally at 12 month intervals. The plan includes manual process procedures for designated staff to reference as part of restoration of essential university services. Departments are responsible for the manual processes and procedures used to accomplish their primary business. The plan documents the identified support teams, their specific responsibilities and names and contact information of team members and alternate team members. The ITDRP works in conjunction with the University Continuity Plan.

Cross-Department Capabilities

ODU has built mitigation capabilities in multiple departments over a span of several decades. During the planning process, Emergency Managers provided input regarding mitigation capabilities segmented roughly by hazard. This section provides an overview of those existing capabilities.

Tropical/Coastal Storm

- ODU has a debris and tree management program in place that prioritizes pruning, species selection, and debris staging contracts.

- Shelter or refuge and evacuation triggers are operational, to include pre-designated hardened refuge areas, clear triggers for closure or evacuation and transit/traffic coordination.

Winter Weather

- ODU has a pretreatment and de-icing program in place to include brine production/storage, calibrated spreaders, and priority ADA/pedestrian routes.
- Cold weather utility hardening includes insulating/heat-tracing vulnerable mains and emergency showers, and generator-backed heat for life safety.
- Communication for remote operations is in place, with remote work/learn policy triggers, and exam/clinical contingency protocols.

Flooding

- Mechanical, electrical and plumbing components have been elevated or floodproofed, and watertight doors/curbs are installed as necessary.
- ODU's Green-Blue Infrastructure Program focuses on installing bioswales, permeable paving, rain gardens, cisterns, and integrating such with the landscape plan. The program prioritizes heat and flood mitigation co-benefits.
- Buildings have leak/water sensors that are networked and tied into dispatch, with auto-shutdown/interlocks for sensitive areas.
- Parking garage protection protocols include gate seals, sump redundancy, evacuation triggers, and occupant communications signage.
- University collections are protected through high-water shelving, flood-resistance storage and salvage contracts, as appropriate.

Sea Level Rise

- ODU has a campus elevation and design flood elevation policy that is part of the building design standards. Guidance incorporates sea level rise scenarios and subsidence, requiring mechanical, electrical, and plumbing (MEP) systems above design flood elevation.
- There are sea level rise pathways maps and retreat/adapt options in place that incorporate nuisance tide impacts and groundwater rise, coupled with a classification of assets.
- ODU has a shoreline and outfall adaptation plan in place that incorporates the use of living shorelines, raised bulkheads, one-way valves, and pump stations phased to sea level projections.
- Site selection and land banking plans in place include future siting criteria that favor higher ground/low exposure, and evaluation of long-horizon relocation for select functions.

Hazardous Materials Incident

- Real-time chemical inventory and segregation measures are in place which designate centralized inventory with expiration and incompatibility controls and accountability for researchers.
- Ventilation and gas detection tied to building automation systems (BAS), emergency shutoffs and a hood performance program.
- Spill Prevention program is in place, with standard kits, drain covers, and a response/cleanup contractor on call.
- Compressed gas safety and restraints are in place with a chain/restraint program, medical gas checks, and delivery controls.
- Waste stream continuity plan is in place with alternate vendor agreements, surge storage, and manifest continuity planning.
- Transport interface and notifications are in place, coupled with MOUs with rail/port/arterials for routing/staging, notification triggers, and campus detours.

Active Threat

- Unified Camera Governance program in place, which covers ingress/egress and public spaces, a retention and privacy policy, and analytics oversight.
- Mass Notification Optimization planning includes plain language pre-scripted messages, geo-targeting, desktop pop emergency notification systems, and siren/PA standards.

Cyber Attack

- Network segmentation and multi-factor authentication throughout system; separate enterprise IT from OT/BAS; multi-factor authentication for privileged and vendor accounts.
- Campus-wide endpoint detection and response monitors end-user devices to mitigate threats in real-time, tuned security information and event management is in place, and Managed Security Service Provider or Security Operations Center per service.
- ODU has system backups with 3-2-1 immutables in place for key systems; they are regularly tested offline.
- Breach and Attack Simulation/ISC hardening is in place.
- Ransomware continuity of operations plans are in place with paper processes, and includes prebuilt paper forms/workarounds for critical operations and decision triggers for network segmentation/shutdown.
- Procurement security requirements are in place that include contractual service level agreements for patches, security notifications, incident escalation and software bills of materials.
- Awareness and phishing drills and training are in place, with role-based training red-team phishing, and operational technology technicians upskilling.

Building Fire

- Fire Alarm Modernization has taken place across the ODU campuses. The system includes addressable panels, nuisance reduction measures, dual-path monitoring, and intelligible voice evacuation instructions.
- Compartmentation integrity includes barrier inspections, penetration sealing, fire door PM and closer repairs, as well as annual reporting.
- The ODU commercial kitchen program includes hood suppression, interlocks, cleaning contracts and staff training.
- Residence Hall Electrical Risk Reduction program includes outlet load education, UL-listed device policy coupled with enforcement, and ARC-fault upgrades as feasible.
- Standpipe/functional capacity evaluation (FCE) accessibility measures include reconfigured obstructions, signage, and a hydrant flow testing program.
- Hot Work and Construction Fire Safety Program includes a permit system, fire watch, impairment tags and restoration checks.

Infrastructure Failure

- Dual feeds and sectionalizing, including lateral redundancy, looped distribution and automatic sectionalizers.
- Uninterruptable Power Supply for IT/Telecom and Controls are in place throughout the University system; they are sized to orderly shutdown or sustain short outages and tested regularly.
- Sewer backflow valves are installed on potable and sanitary lines;
- Priority restoration Memorandums of Understanding (MOUs) are in place with Dominion and includes campus criticality tiers.

UABHM Capabilities Survey

In fall 2025, UABHM committee members were asked to respond to several online questions regarding their perceptions of ODU's capabilities with regard to hazard mitigation. In a university setting, the financial means, willingness of leadership, staff administrative and technical capability, quality of relationships with external stakeholders and future planning commitment are

important indicators of the degree to which the university can effectively mitigate the hazards to which it is exposed.

On a scale of 1 to 3 (with 1 being weak and 3 being strong), the mean value of respondents' rating for ODU's capability indicators was as follows:

- Financial means (e.g., capital set asides, grant eligibility) – 2.0;
- Willingness of leadership – 2.5;
- Staff administrative capability (e.g., grant writing and fulfillment) – 2.1;
- Staff technical capability (e.g., GIS, hazard data gathering, risk management) – 2.5;
- Relationships with external stakeholders (e.g., City of Norfolk, utility providers, neighborhood groups) – 2.52;
- Future planning (e.g., master planning, economic development plan, emergency operations plan) – 2.58.

While this data highlights existing strengths, it also shows where increased effort through mitigation actions may broaden capabilities, thus increasing resilience.

Specific weakness descriptions with regard to financial means included indications that long-term replacement planning and maintenance (of infrastructure) needs attention, and that budget processes use old, opaque technology. Future planning is difficult on legislative cycles, and ODU does not have as much power as larger universities in capital fundraising or donations. The University's single entry point and submission for grants was cited as a weakness because there is just a single point of failure [if grants are not received].

University leadership has a history of being supportive of the mitigation-related needs expressed by Emergency Management program stakeholders. Programmatic investment is evidence of these priorities. While limited capability survey respondents indicated a disconnect between leadership and certain campus-related problems, their responses were not completely aligned with the intended scope of the survey for mitigation planning purposes.

One respondent indicated that grant submittal timetables are frustrated by insufficient and remote staff with poor response times. Training for grant writing is also affected by ODU Research Foundation. Existing staff technical capabilities are often stressed by large scale project "assignments" that may not be relevant to staff inventory or expertise. Staff turnover is high, which impacts ongoing technical capabilities. And some respondents expressed frustration that the University often demands [technical] services from subject matter experts in departments related to future planning, but does not then allow those same experts to provide feedback or to participate in planning efforts.

Respondents highlighted ODU programs that help protect University staff, faculty and administrators from natural hazards such as: the ODU Institute for Coastal Adaptation and Resilience, frequent communication and outreach from emergency planners/responders, and recent stormwater management projects. Protection from human-caused hazards includes ODU's Safe App, emergency drills and tabletop exercises, training for students/staff/responders, fire plans communication, annual fire drills, and active threat training.

The survey gauged respondents' perception of how knowledgeable certain groups in the University community are about different types of hazards. Overall, they felt that students were most knowledgeable about flooding hazards and building fire, but least knowledgeable about hazardous materials incidents. Results were similar for faculty and administrators. Respondents indicated a need for specific training programs in the near-term, including: tidal flooding/coastal storm/sea level rise literacy; cyber attacks; active threat training; and more advanced notifications with regard to weather events. Respondents provided several mitigation action ideas that were used during UABHM Meeting #2 to develop final actions for this addendum.

MITIGATION ACTION PLAN

The mitigation actions proposed for university adoption are listed in the mitigation action plan (MAP) on the pages that follow. They will be implemented according to the plan maintenance procedures established for the *Hampton Roads Hazard Mitigation Plan* (see Section 8: Plan Maintenance Procedures). The action items have been designed to achieve the mitigation goals and priorities established by the main planning committee and reviewed by the UABHM.

Each proposed mitigation action has been identified as an effective measure to reduce hazard risk for ODU. Each action is described with available background information such as the location of the project and general cost benefit information.

Other information provided includes data on cost estimates and potential funding sources to implement the action should funding be required (not all proposed actions are contingent upon funding). Most importantly, implementation mechanisms are provided for each action, including the designation of a lead agency or department responsible for carrying the action out, as well as a timeframe for its completion. Proposed actions are not listed in exact priority order though each has been assigned a priority level of “high,” “moderate” or “low” as described in the previous section.

At the end of each action, under “Additional Comments,” there is information showing the status of the action and whether it is new or retained with modifications. **Table L.5** provides an update on the status of the mitigation actions suggested by the university’s prior planning efforts, clearly indicated which have been deleted and which are retained or modified.

TABLE L .5: STATUS OF PRIOR SUGGESTED MITIGATION ACTIONS

SUGGESTED MITIGATION ACTION 2007 ODU HAZARD MITIGATION PLAN	STATUS
Update emergency operations plan to reflect current conditions and ensure compliance with National Incident Management System standards. Pay particular attention to the evacuation component.	Deleted; action complete & updated annually
Update continuity of operations plan to reflect current conditions and ensure compliance with National Incident Management System standards.	Deleted; action complete & updated annually
Recruit and train Campus Emergency Response Teams (CERTs) to respond to disasters on campus.	Deleted; similar to CERT, ODU has a Building Emergency Coordinator (BEC) program that's currently being rolled out campus-wide in all buildings.
Create a generator purchase plan prioritizing residence halls, research facilities and critical administrative buildings. Ensure that buildings are equipped to use generators as they are purchased (i.e., hook-ups are installed).	Retained with modifications; inventory is complete, but need to assess future purchase plan, quick-connects & fuel continuity
Hire or appoint an Emergency Services Manager (ESM) who can be responsible for overseeing all emergency management activities.	Deleted; Director of Emergency Management was hired in May 2014
Conduct bi-annual exercises and simulations.	Deleted; a Multi-Year Training and Exercise Plan has been implemented
Consider establishing a designated fund for emergency management. The fund could be used for mitigation activities before and/or after a disaster. In addition, the fund could be used to provide emergency assistance following a disaster.	Deleted; not likely to be funded
Continue development of business continuity plans for critical University business, financial and other key operations to allow them to resume activity within a predetermined time.	Deleted; action complete with program in place per ODU Policy 1021: Emergency Management
Upgrade older structures with automatic sprinkler systems and fire alarms connected to a central dispatch. Prioritize multi-story buildings and dormitories. Base additional prioritization on information provided in HIRA.	Deleted, substantially complete. Fire Alarm Modernization, with addressable panels, nuisance reduction, dual-path monitoring and intelligible voice evacuation is in place for Main Campus. Additional actions to similarly

TABLE L .5: STATUS OF PRIOR SUGGESTED MITIGATION ACTIONS	
	modernize and incorporate Medical Campus are underway. ODU Mitigation Action 3 outlines new actions.
Undertake non-structural mitigation measures for vulnerable buildings on campus.	Incomplete; retained with modifications for 2026. Though many mitigation projects have been accomplished, additional projects remain.
SUGGESTED MITIGATION ACTION 2010 EVMS VULNERABILITY ASSESSMENT	**STATUS**
General 1 - Create an all-hazards public education and outreach program that is part of campus orientation and is also ongoing.	Deleted; action complete & updated annually
General 2 - Conduct response & evacuation exercises involving campus populations and local emergency management personnel.	Deleted; action complete & updated annually
General 3 - Warning systems tied to response/continuity plans, public education and outreach	Deleted; action complete & updated annually
General 4 - Provide backup power through installation of generators	Retained with modifications; generators provided but need to assess future purchases, quick-connects & fuel continuity
Flood 1 - Identify 1% and .02% flood elevation on all structures on campus.	Retained with modifications. This analysis will be included in Resilience Layer proposed for Master Plan
Flood 2 - Explore dry floodproofing techniques (especially relocation of valuable equipment, systems and operations from areas below .02% flood elevation), wet floodproofing (anchor structures, flood-resistant materials, relocating MEP, openings or breakaway walls).	Retained
Flood 3 - Improve drainage capacity around roads and low lying areas. Maintain drainage canals (widen/clean ditches, replace culverts, upgrade pumps, install check valves & inverts)	Deleted; ODU relies on updated City of Norfolk systems for drainage system maintenance
Flood 4 - Elevate all generators to above the .02% flood elevation.	Retained with modifications; Lester Hall generator has been elevated to the roof
Flood 5 - Survey all first floor (Chemical, Biological, Radiological (CBR) storage to ensure that all CBR storage is at the .02% flood elevation at a minimum – preferably, there should be considerable freeboard for such materials.	Retained
Utility Failure 1 - Elevate all EVMS generators to .02% flood level, at least	Retained with modifications; Lester Hall generator has been elevated to the roof
Utility Failure 2 - Ensure back-up fuel supply; underground storage tanks (USTs) may be compromised by saltwater & roads impassable	Retained
Utility Failure 3 - Address over-taxed Lewis Hall generator	Completed; new generator added
Wind 1 - Assess areas surrounding buildings with large expanses of glazing for wind-borne debris	Completed
Wind 2 - Enhance glazing, remove potential missiles, and relocate vulnerable operations	Assessed; no enhanced glazing required
Wind 3 - Assess equipment on roofs, ensure stability and anchoring	Completed
Wind 4 - Bury electric power lines	Completed
Fire 1 - Add fire-suppression sprinklers in Lewis Hall	Retained
Fire 2 - Add fire escapes to Hague Club Apartments	Deleted; fire escapes cannot be added with existing single access/egress points
Fire 3 - Assess & potentially improve existing fire and evacuation plans	Partially complete; retained with modifications

Table L.6 provides an updated matrix indicating that each of the hazards identified as specific to ODU is addressed in the Mitigation Action Plan.

TABLE L .6: NUMBER OF MITIGATION ACTIONS FOR ODU-SPECIFIC HAZARDS	
Cyber Attack	1
Active Threat	More than 3
Building Fire	More than 3
Utility/Infrastructure Failure	More than 3

MITIGATION ACTIONS

ODU MITIGATION ACTION 1
Create a generator purchase/replacement plan prioritizing residence halls, research facilities and critical administrative buildings. Ensure that buildings are equipped to use generators as they are purchased (i.e., hook-ups are installed). Protect fuel and underground storage tanks (USTs) with fuel from floating or corroding.

BACKGROUND INFORMATION	
Site and Location:	Main campus; Medical campus
Benefit Cost:	ODU CEE/Coastal Community Design Lab may be able to provide low-cost survey of generator elevations. Internal resources such as ODU GeoSEA or the Department of Geography may be able to help with vulnerability assessments on all campuses.

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	All
Goal(s) Addressed:	Goal 1, Objectives 1.2, 1.3, 1.4
Priority (High, Moderate, Low):	High
Impact on Socially Vulnerable Populations:	Low
Estimated Cost:	$5,000-$10,000
Potential Funding Sources:	DHS: BRIC, HGSP, HMGP, HMGP 5% Initiative
Lead Agency/Department Responsible:	Facilities Management and Construction
Implementation Schedule:	Within 5 years

ADDITIONAL COMMENTS

Generator inventory is complete, but need to assess future purchase plan, quick-connects and fuel continuity. Fuel storage tanks in flood-prone areas must be inspected for corrosion and anchored to resist flotation.

Verify that all generators at Medical Campus are elevated above 500-year flood. Assessment should include determination as to what extent generators provide power to facility vs. power to emergency egress lighting, fire pumps, etc. Ensure access roads are available to deliver fuel in times of flooding.

Retained with modifications from previous plans.

ODU MITIGATION ACTION 2
Prepare crisis communications and continuity of business planning in the event of catastrophic and long-term internet outage.

BACKGROUND INFORMATION	
Site and Location:	All ODU campuses and facilities
Benefit Cost:	Pre-planning can reduce length and severity of impacts. Pre-approved communications are low cost but decrease response times and assure users of IT engagement.

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Utility/Infrastructure Failure; Cyber Attack
Goal(s) Addressed:	Goal 1, Objectives 1.4, 1.5; Goal 2
Priority (High, Moderate, Low):	Moderate
Impact on Socially Vulnerable Populations:	Low
Estimated Cost:	$5,000 - $10,000, using staff time
Potential Funding Sources:	DHS
Lead Agency/Department Responsible:	IT Security / Division of Digital Transformation & Technology
Implementation Schedule:	Within 5 years

ADDITIONAL COMMENTS
New action

ODU MITIGATION ACTION 3
Sprinkler and Fire Alarm Retrofit Program - upgrade older structures with automatic sprinklers and alarms connected to central dispatch.

BACKGROUND INFORMATION	
Site and Location:	High priority for: Lewis Hall (4th floor), Medical Campus Apartments, Rogers Hall/Gresham, Powhatan 1 & 2, Nusbaum Apartments, and Whitehurst. Smoke detector relocation in Whitehurst required to reduce number of nuisance fire alarm calls.
Benefit Cost:	Risk of fire and related injuries in older buildings without sprinklers and alarms is far higher, and damage can be more severe, as well.

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Building Fire
Goal(s) Addressed:	Goal 1, Objectives 1.2, 1.3, 1.5
Priority (High, Moderate, Low):	High
Impact on Socially Vulnerable Populations:	Moderate
Estimated Cost:	$_____ per year
Potential Funding Sources:	Internal operating funds
Lead Agency/Department Responsible:	Fire Prevention, EM, Facilities Management and Construction
Implementation Schedule:	Ongoing

ADDITIONAL COMMENTS

Sprinklers recently added to Whitehurst Hall but need to relocate smoke detectors.

Retained from prior plans with modifications.

ODU MITIGATION ACTION 4
Include Virginia Natural Gas representatives in fire (and other) disaster response protocols. Investigate/develop priority restoration MOUs.

BACKGROUND INFORMATION	
Site and Location:	Phase plan for unsprinklered legacy buildings; prioritize sleeping occupancies, assembly spaces, high-risk labs, and buildings with natural gas service.
Benefit Cost:	This is a very low cost coordination action, and the parties are actively involving each other in similar actions.

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Building Fire, Flooding, Earthquake, Tornado, Tropical/Coastal Storm, Utility/Infrastructure Failure, Hazardous Materials Incident
Goal(s) Addressed:	Goal 1, Objectives 1.2, 1.3; Goal 3, Objectives 3.1, 3.3, 3.4
Priority (High, Moderate, Low):	Moderate
Impact on Socially Vulnerable Populations:	Low/Moderate
Estimated Cost:	Minimal staff time
Potential Funding Sources:	Existing resources
Lead Agency/Department Responsible:	Facilities Management and Construction, EM, Fire Prevention
Implementation Schedule:	Within 3 to 5 years

ADDITIONAL COMMENTS
New action

ODU MITIGATION ACTION 5
Visual Cues - Install building visual exterior fire alarm indicator lights and post Evacuation Route Maps throughout all campus buildings, with focus on older buildings. Share severe weather shelter area location for each building (signage).

BACKGROUND INFORMATION	
Site and Location:	New buildings have exterior alarm lights & adhere to existing codes
Benefit Cost:	Relatively low cost action reinforces existing mitigation measures by providing visual cues to the many users of University buildings.

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Building Fire, Hazardous Materials Incident, Utility/Infrastructure Failure, Active Shooter
Goal(s) Addressed:	Goal 1, Objective 1.2, 1.3, 1.5; Goal 2, Objectives 2.1, 2.2, 2.3
Priority (High, Moderate, Low):	Moderate
Impact on Socially Vulnerable Populations:	Low
Estimated Cost:	~$100,000
Potential Funding Sources:	DHS
Lead Agency/Department Responsible:	EM, Fire Prevention
Implementation Schedule:	Within 8 years

ADDITIONAL COMMENTS

Increase installation of generator-supported path lighting and flood closure signs to inform University community.

New Action

ODU MITIGATION ACTION 6
Supply all residential kitchens with necessary tools for fire protection, including but not limited to: fire blankets, vent hoods, and safety controls on cooking appliances, and signage/stickers. Vent hoods are installed, but many still need ductwork to vent to exterior.

BACKGROUND INFORMATION	
Site and Location:	Geared toward sleeping occupancies with cooking facilities.
Benefit Cost:	Fire protection in residential cooking areas is low cost but critically important to reducing risk from building fire.

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Building Fire
Goal(s) Addressed:	Goal 2, Objectives 2.1, 2.2, 2.3
Priority (High, Moderate, Low):	High
Impact on Socially Vulnerable Populations:	Low
Estimated Cost:	>$75,000, depending on scope
Potential Funding Sources:	DHS
Lead Agency/Department Responsible:	Fire Prevention, Residence Life
Implementation Schedule:	Within 3 years

ADDITIONAL COMMENTS
New action

ODU MITIGATION ACTION 7
Continue Knox Box (or similar) installation program.

BACKGROUND INFORMATION	
Site and Location:	All new buildings have Knox Boxes; existing buildings are getting them at a rate of about 10 per year
Benefit Cost:	A Knox Box system costs roughly $600 for a one-time purchase and installation, providing significant benefits by enabling rapid fire department entry, preventing thousands of dollars in forced-entry damages (broken doors/windows), and securing properties without requiring keys during emergencies.

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Building Fire
Goal(s) Addressed:	Goal 1, Objectives 1.2, 1.3, 1.5; Goal 3
Priority (High, Moderate, Low):	High
Impact on Socially Vulnerable Populations:	Low
Estimated Cost:	$6,000 per year
Potential Funding Sources:	DHS, University internal funds
Lead Agency/Department Responsible:	Fire Prevention
Implementation Schedule:	Ongoing

ADDITIONAL COMMENTS

Police Department has keys, etc., to allow access to most areas, but Knox Boxes help prevent delayed response.

New action

ODU MITIGATION ACTION 8
Implement Lithium Ion Battery Safety Program.

BACKGROUND INFORMATION	
Site and Location:	Focus on external storage outside residence halls.
Benefit Cost:	Problem is increasing in frequency. A carefully designed and deployed safety program offers significant, long-term financial and operational benefits that far outweigh the initial investment in training, monitoring, and infrastructure. Program reduces risks of thermal runaway, and fire.

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Building Fire, Hazardous Materials Incident
Goal(s) Addressed:	Goal 1, Objective 1.2, 1.3, 1.5; Goal 2, Objective 2.1, 2.2, 2.3
Priority (High, Moderate, Low):	High
Impact on Socially Vulnerable Populations:	Low
Estimated Cost:	Staff time
Potential Funding Sources:	Existing resources
Lead Agency/Department Responsible:	Fire Prevention, EM
Implementation Schedule:	Some program components are in place; additional measures are already under consideration. Within 2 years.

ADDITIONAL COMMENTS

Safe Charging Zone setups, Safety Policies, & Training components to promote student awareness and facility safety. Integrate into Residence Hall Electrical Risk Reduction program.

New action

ODU MITIGATION ACTION 9

Conduct infrastructure asset condition assessment, outline predictive maintenance program and obtain critical spares.

BACKGROUND INFORMATION	
Site and Location:	Across Main and Medical campuses
Benefit Cost:	Low cost; conducted partially using subject matter experts inside the University community. Prevents long-term failures or extended outages due to unpredicted failures.

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Utility/Infrastructure Failure
Goal(s) Addressed:	Goal 1,Objective 1.1, 1.2, 1.3, 1.5
Priority (High, Moderate, Low):	Moderate/High
Impact on Socially Vulnerable Populations:	Moderate
Estimated Cost:	$200,000
Potential Funding Sources:	DHS: BRIC, HGSP, HMGP, HMGP 5% Initiative
Lead Agency/Department Responsible:	Facilities
Implementation Schedule:	Within 8 to 10 years

ADDITIONAL COMMENTS

Include potable & sanitary assets, power, natural gas, stormwater; GIS resilience layer proposed in Master Plan is a primary component of this effort.

As part of resilience layer, assess: age, condition, resilience, useful life, criticality, future need, % fulfillment. ODU GeoSEA and new Google AI partnership have a lot of data for Resilience Overlay. 2007 HMP has lowest floor and MEP elevations that should be included, as well.

New Action

ODU MITIGATION ACTION 10
Retrofit existing buildings and infrastructure using hazard resistant construction principles to reduce multi-hazard risk. May include demolition, structural retrofits, structural or non-structural flood protection, floodproofing, or relocation.

BACKGROUND INFORMATION	
Site and Locations:	Retrofits to Oceanography & Physical Sciences Building, including building envelope repairs, heating/cooling system replacement is high priority from Master Plan. The Materials Management Building on the Medical Campus is vulnerable to sea level rise. Building has no generator. Andrews Hall on the Medical Campus is exposed to flooding and may need wet or dry floodproofing to protect data and hazardous materials on the lowest floor. Diehn Fine Arts Building on the Main Campus is vulnerable to flooding. Include inspection of the pumps and equipment in annual maintenance schedule; install elevated backup generator to power pumps; install flood shields at entrances to reduce flood risk. Ensure below grade entrances have adequate drainage from stairwells. Floodproof utility corridors throughout Main and Medical Campuses. Raise vaults, seal duct banks, relocated vulnerable feeders over time. Medical Campus (previously Hague Club) Apartments on the Medical Campus were elevated to protect from flood damage, but floors need to be releveled to allow for safe occupation.
Benefit Cost:	Retrofits such as those described above reduce damages, and would represent only a fraction of the cost of demolishing and rebuilding to modern building codes.

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	All hazards, particularly Wind, Flood, Utility/Infrastructure Failure, Extreme Heat
Goal(s) Addressed:	Goal 1, Objectives 1.1, 1.2, 1.3, 1.6
Priority (High, Moderate, Low):	Moderate; Andrews Hall is High priority
Impact on Socially Vulnerable Populations:	Low
Estimated Cost:	To be determined on a project by project basis
Potential Funding Sources:	DHS: BRIC, HGSP, HMGP, HMGP 5% Initiative
Lead Agency/Department Responsible:	Facilities Management and Construction, Risk Management
Implementation Schedule:	Long-term planning horizon; within 20 years

ADDITIONAL COMMENTS
Action is adapted from Master Plan, page 32, and existing hazard mitigation plans. These actions should be incorporated into future Master Planning.

ODU MITIGATION ACTION 11
Improve public safety radio coverage.

BACKGROUND INFORMATION	
Site and Location:	Test campus coverage inside buildings; remediate deficiencies. Begin with highest priority buildings, such as BAL, Oceanography, Physical Science; older buildings (new buildings being tested/wired/built for radios) are a priority if they are remaining in place; not as big an issue with Medical Campus. Medical Campus Kenwood system to be replaced with Motorola system used on the main campus in the near term.
Benefit Cost:	Improvements to radio communications among various departments, both internal and external to the University, will reduce response times, improve coordination and generally contribute to a safer university environment with less damage to assets and fewer impacts to student health.

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	All
Goal(s) Addressed:	Goal 3, Objective 3.1, 3.2, 3.3
Priority (High, Moderate, Low):	Very High
Impact on Socially Vulnerable Populations:	Moderate
Estimated Cost:	Estimated to be in excess of $1.2 million
Potential Funding Sources:	DHS
Lead Agency/Department Responsible:	Police Department, Emergency Management
Implementation Schedule:	Within 2 years

ADDITIONAL COMMENTS

Communication infrastructure needs upgrades. Damage or failure of the existing system is possible. Police Department occasionally cannot communicate across campus or to the Medical Campus. Repeaters and radios are aged or obsolete. Need interoperability with local jurisdictions, as well.

New action.

ODU MITIGATION ACTION 12

Address Building Access Control through:

a) Implementation and testing of campus-wide access control measures for high profile buildings, classrooms and events;

b) Investigation of options, costs and desirability of interior locking systems and refuge improvements; and,

c) Continuing to include Police (Chief), Security and Fire Prevention on plan review for new buildings, substantial renovations, or landscaping/lighting projects to ensure that Crime Prevention Through Environmental Design (CPTED) measures are considered. State Division of Engineering and Buildings also reviews new plans.

BACKGROUND INFORMATION	
Site and Location:	Throughout all ODU campuses
Benefit Cost:	Benefits and costs will be analyzed in the investigatory process, as planners determine appropriate and cost-effective measures for individual structures.

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Active Shooter
Goal(s) Addressed:	Goal 1, Objectives 1.4, 1.5; Goal 3, Objectives 3.1
Priority (High, Moderate, Low):	High
Impact on Socially Vulnerable Populations:	Low
Estimated Cost:	a) determined on a building by building basis; b) entails only staff time for investigation; c) entails staff time only.
Potential Funding Sources:	DHS: HMGP, HMGP 5% Initiative
Lead Agency/Department Responsible:	Police Department
Implementation Schedule:	Ongoing

ADDITIONAL COMMENTS

CPTED measures may include assessment of sightlines/glass coverings (especially new buildings), lighting, landscaping, and entry vestibules. Access control measures for specific buildings include electronic access with lockdown profiles and security/visitor management, as well as classroom hardware for lockdowns and screening/perimeter plans for large events, and health science buildings. Rooftop sensors or gunfire sensors may be appropriate for some high occupancy buildings.

Emergency managers need additional details on how interior locking systems operate, costs, and feasibility of such measures before determining if appropriate for ODU. Sub action b) centers on conducting the necessary research to determine if such measures could be added to future mitigation plans.

New to the hazard mitigation plan, but this action is ongoing.

ODU MITIGATION ACTION 13
Ensure future facility infrastructure investments exceed minimum building requirements to address future climate risk.

BACKGROUND INFORMATION	
Site and Location:	Campus-wide, as older buildings are replaced or new buildings are constructed, and also as infrastructure components are replaced.
Benefit Cost:	Building to a higher standard protects utilities and building components from damage resulting from a variety of hazards. Flood protection measures are more likely to be cost effective within or near designated 100- or 500-year floodplains. The configuration of future floodplains should also be incorporated into internal design guidelines so that long-term impacts are minimized.

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Utility/Infrastructure Failure, Flooding, Extreme Heat
Goal(s) Addressed:	Goal 1, Objective 1.2, 1.3, 1.5
Priority (High, Moderate, Low):	High
Impact on Socially Vulnerable Populations:	Low
Estimated Cost:	Costs to modify design requirements are minimal; marginal cost to build to a higher standard is to be determined for each project.
Potential Funding Sources:	Existing resources
Lead Agency/Department Responsible:	Facilities, Capital Planning
Implementation Schedule:	Ongoing

ADDITIONAL COMMENTS

For opportunities, see LEED requirements, flood protection methods such as freeboard, Norfolk Zoning Ordinance green building options, and wind protection standards such as FORTIFIED.

Action is adapted from the Master Plan, page 21.

ODU MITIGATION ACTION 14

Increase training opportunities and simulations for student and staff preparedness. Purchase and install additional AEDs to ensure all buildings have appropriate numbers of well-maintained units. Purchase and install Stop the Bleed kits to accompany all AEDs. Verify all responders have Tactical Casualty Care training.

BACKGROUND INFORMATION	
Site and Location:	Throughout all ODU campuses
Benefit Cost:	Training is a low cost, but highly effective way to convey information that will help University community members protect themselves and others during or following a hazard event. The result would be reduced vulnerability to damage or loss of life from a severe event.

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Active Shooter, Building Fire, Tornado, Utility/Infrastructure Failure, Hazardous Materials Incident
Goal(s) Addressed:	Goal 1, Objective 1.5, Goal 2
Priority (High, Moderate, Low):	Moderate/Low
Impact on Socially Vulnerable Populations:	Low
Estimated Cost:	$60,000
Potential Funding Sources:	DHS: BRIC, HGSP, HMGP, HMGP 5% Initiative
Lead Agency/Department Responsible:	ODU EM, Fire Prevention, Police
Implementation Schedule:	Ongoing

ADDITIONAL COMMENTS

The University already has existing training platforms, but needs additional training for AEDs. Building Emergency Coordination and Police/Public Safety personnel need to add training. EM will explore possibility of a full-time Training/Exercise Coordinator in the future.

Training programs must include information on location of response tools, such as AEDs. May include non-traditional "training" such as posters, messages during student orientation, simulations/exercises/drills, webinars or social media videos, and creditable classes for students.

Action is new to plan but has been ongoing.

ODU MITIGATION ACTION 15
Prepare GIS floor plans of ODU facilities, readily available to responders on mobile device.

BACKGROUND INFORMATION	
Site and Location:	Main and Medical Campuses
Benefit Cost:	It may be possible to use on campus GIS experts to reduce costs of this action. The goal is to increase response times, thus reducing impacts to assets and students/staff/administrators.

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Active Shooter, Building Fire, Tornado, Infrastructure Failure, Hazardous Materials Incident
Goal(s) Addressed:	Goal 1, Objective 1.2, 1.3; Goal 3, Objective 3.2, 3.4
Priority (High, Moderate, Low):	Moderate
Impact on Socially Vulnerable Populations:	Low
Estimated Cost:	$600,000
Potential Funding Sources:	State funding
Lead Agency/Department Responsible:	Police Department
Implementation Schedule:	Within 8 to 10 years

ADDITIONAL COMMENTS
First responders can use these maps to identify onsite needs during response. Retained from previous plans with modifications.

ODU MITIGATION ACTION 16	
Strengthen ongoing mental health and counseling opportunities for students in crisis, to include postvention programming in the aftermath of a suicide on campus.	
BACKGROUND INFORMATION	
Site and Location:	Ensure all ODU campuses are addressed by this action.
Benefit Cost:	Postvention programs on university campuses are cost saving measures due to their ability to reduce long-term care costs, prevent further suicides, and facilitate rapid return to academic functioning and productivity.
MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Active Shooter, as well as Suicide Prevention and other crisis management; programs are also useful in aftermath of other hazard events such as Tornado, or major Tropical Storm
Goal(s) Addressed:	Goal 1, Objective 1.4, 1.5; Goal 2, Objective 2.2
Priority (High, Moderate, Low):	Moderate
Impact on Socially Vulnerable Populations:	High
Estimated Cost:	Existing staff will continue to fulfill need as part of current job descriptions
Potential Funding Sources:	Existing resources
Lead Agency/Department Responsible:	Office of Counseling Services, EM
Implementation Schedule:	Ongoing
ADDITIONAL COMMENTS	
Many aspects of this action are ongoing, but the University continues to pursue new and improved methods.	

ODU MITIGATION ACTION 17	
Finalize Debris Management Plan	
BACKGROUND INFORMATION	
Site and Location:	Throughout all University campuses.
Benefit Cost:	Debris accumulation after a major incident can negatively impact nearby water quality, transportation access, and ongoing University operations.
MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Building Fire, Flooding, Earthquake, Tornado, Tropical/Coastal Storm, Utility/Infrastructure Failure, Hazardous Materials Incident
Goal(s) Addressed:	Goal 1, Objective 1.5, 1.6; Goal 3, Objective 3.1
Priority (High, Moderate, Low):	Low
Impact on Socially Vulnerable Populations:	Low
Estimated Cost:	Existing staff
Potential Funding Sources:	Existing resources
Lead Agency/Department Responsible:	Facilities Management and Construction, EM
Implementation Schedule:	Within 1 year
ADDITIONAL COMMENTS	
Debris management responsibilities are assigned in various University plans and response tools, but details are scarce regarding collection contracts, designated short-term and long-term debris storage areas, and the possibility of contaminated debris. Action is new to plan, but is ongoing.	

ODU MITIGATION ACTION 18

Plan Integration:

a) Audit each of the primary business function's business process analysis that supplements the Continuity Plan to identify additional resilience/mitigation strategies;

b) Work with departments that house records, research data, collections, specimens, cultural artifacts and art to develop a plan for protection; and,

c) Align Master Plan and HMP to ensure that future hazard risk is addressed in capital sequencing and that the Master Plan includes decision points tied to observed thresholds.

BACKGROUND INFORMATION	
Site and Location:	Administrators in each of the University's primary business functions, and University buildings that store artifacts.
Benefit Cost:	These actions minimize the possibility that various University plans will act at cross purposes. Cost to integrate is minimal, but important to multi-plan execution.

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	All hazards
Goal(s) Addressed:	Goal 1, Objective 1.3, Goal 3
Priority (High, Moderate, Low):	Low/Moderate
Impact on Socially Vulnerable Populations:	Low
Estimated Cost:	Minimal additional effort with each planning initiative
Potential Funding Sources:	Existing resources
Lead Agency/Department Responsible:	EM
Implementation Schedule:	Within 5 to 10 years

ADDITIONAL COMMENTS

As the ODU Continuity Plan is updated, EM can request specific mitigation actions and priorities from across the business units. This will also be critical as the Medical Campus is more fully integrated into ODU operations.

Integrate team findings from a) and b) above across all campus Strategic Plans, Master Plans, Emergency Response Plans, Hazard Mitigation Plan. Incorporate student and faculty expertise in implementing actions. Integrate outside the University community by providing input to locality Comprehensive Plans, Resilience Plans and the Regional Hazard Mitigation Plan.

Action is adapted from the Master Plan, adding specific new details.

ODU MITIGATION ACTION 19	
Implement Wind Hardening and Mitigation Program	
BACKGROUND INFORMATION	
Site and Location:	Medical Campus - Jones Hall, Hofheimer Hall, Andrews and EV Williams Hall are particularly vulnerable to high winds.
Benefit Cost:	Wind impacts to tall buildings can cause implosions and blowing glass, damaging people and assets. If roof components are not anchored, they can become projectiles, damaging other buildings. The cost to anchor components, reglaze windows and inspect/maintain these items on a regular basis is minimal compared to the potential damage or loss of life from glass or projectiles.
MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Tropical/Coastal Storm, Tornado, Winter Weather
Goal(s) Addressed:	Goal 1, Objective 1.2, 1.3
Priority (High, Moderate, Low):	Low
Impact on Socially Vulnerable Populations:	Low
Estimated Cost:	$5,000 - $10,000 annually
Potential Funding Sources:	DHS: BRIC, HGSP, HMGP, HMGP 5% Initiative
Lead Agency/Department Responsible:	Facilities
Implementation Schedule:	Program developed and formalized within 2 years; annual maintenance inspection thereafter
ADDITIONAL COMMENTS	
Retained from previous plans with modifications.	

ODU MITIGATION ACTION 20
Plan a risk education campaign using posters, social media and in person presence at large campus gatherings. Continue to improve ODU Safe App to make it more intuitive with enhanced features, and continue use of a focus group to determine best practices.

BACKGROUND INFORMATION	
Site and Location:	All ODU campuses; most large gatherings are on Main Campus
Benefit Cost:	The primary benefits of this action would be to provide an additional level of protection from hazard events. Refined communications, in language understood across campus communities, reduces damages, injuries and deaths because people know where to go and what actions to take.

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	All hazards
Goal(s) Addressed:	Goal 2
Priority (High, Moderate, Low):	Moderate
Impact on Socially Vulnerable Populations:	Low
Estimated Cost:	$5,000 to $10,000
Potential Funding Sources:	Existing resources
Lead Agency/Department Responsible:	EM
Implementation Schedule:	Within 6 years

ADDITIONAL COMMENTS

Design a campaign to communicate the language of risk using posters and matching social media posts to campus communities.

Hazard risk terms: Shelter in Place, Assembly Areas, Watches vs. Warnings
Identifying evacuation routes
Signing up for ODU Safe, Norfolk Alert (or similar)
Using WAZE for flooded street alerts
Considering flood insurance for contents off campus (faculty, too)

Award Monarch Plus Points as incentives for signing up for Norfolk Alert or other protective actions taken by students.

New action

ODU MITIGATION ACTION 21
Develop multi-department resilience training targeted for multi-building campuses that could be tested within ODU and expanded to other universities, local governments, and businesses.

BACKGROUND INFORMATION	
Site and Location:	Throughout University community
Benefit Cost:	Long-term resilience is built through a series of forward-looking actions that collectively reduce vulnerability to a variety of hazards. Most actions are low cost (e.g., implementing new design guidelines) with very high long-term benefits.

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	All hazards
Goal(s) Addressed:	Goal 3
Priority (High, Moderate, Low):	Low
Impact on Socially Vulnerable Populations:	Low
Estimated Cost:	$25,000
Potential Funding Sources:	DHS: BRIC, HGSP, HMGP, HMGP 5% Initiative; Virginia CFPF, Virginia DCR
Lead Agency/Department Responsible:	ICAR
Implementation Schedule:	Within 5 years

ADDITIONAL COMMENTS

ODU ICAR staff and students could be tasked to develop training program as online certification geared toward leadership.

Portsmouth has asked ICAR for similar materials in the past; FEMA no longer updates Disaster Resistant University guidance. This action would provide service learning opportunities for students.

Action is adapted from the Master Plan, adding specific new programming.

ODU MITIGATION ACTION 22
Expand campus wind-resistant tree canopy. Tap student and faculty expertise on campus to recommend trees, design landscaping, and recruit planting volunteers.

BACKGROUND INFORMATION	
Site and Location:	Main Campus
Benefit Cost:	Such a program could increase service learning opportunities for students, while simultaneously reducing the cost to the University.

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Tropical/Coastal Storm
Goal(s) Addressed:	Goal 1, Objective 1.5, 1.6; Goal 3
Priority (High, Moderate, Low):	Low
Impact on Socially Vulnerable Populations:	Low
Estimated Cost:	Minimal cost using existing resources
Potential Funding Sources:	DHS: BRIC; Virginia CFPF
Lead Agency/Department Responsible:	Facilities Management and Construction
Implementation Schedule:	Within 5 years

ADDITIONAL COMMENTS
Action is adapted from the Master Plan with specific programming added.

ODU MITIGATION ACTION 23	
Include flood awareness information with student orientation and Off-Campus Housing options, as well as emergency management training for Building Managers.	
BACKGROUND INFORMATION	
Site and Location:	Main Campus and Medical Campus
Benefit Cost:	Prior knowledge of flood-prone residences, streets and other infrastructure may influence decisions of the University community regarding where to live, commute or play, thus reducing risks to life and safety.
MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flooding, Sea Level Rise/Land Subsidence
Goal(s) Addressed:	Goal 2
Priority (High, Moderate, Low):	Moderate
Impact on Socially Vulnerable Populations:	Low/Moderate
Estimated Cost:	<$10,000
Potential Funding Sources:	DHS: BRIC, HGSP, HMGP, HMGP 5% Initiative
Lead Agency/Department Responsible:	EM, Housing, Risk Management
Implementation Schedule:	Ongoing; discussion of this action at UABHM meetings triggered EM actions in early 2026
ADDITIONAL COMMENTS	
Help students make informed decisions about travel on flooded roads and how housing locations may be impacted by area floods; push notifications to students (some exist, formalize across all campuses). Consider partnerships with City of Norfolk and their WAZE program. Action is retained from previous plan with modifications.	

ODU MITIGATION ACTION 24	
Demolish Visual Arts Building to provide space for stormwater mitigation and divert water from flood-prone areas on the mall. Create new stormwater detention area at new Student Center "Backyard" to mitigate flooding.	
BACKGROUND INFORMATION	
Site and Location:	Main Campus, Visual Arts Building and proposed Student Center (see Master Plan)
Benefit Cost:	The flood-prone Visual Arts Building demolition will eradicate the possibility for future flood impacts. By creating new stormwater detention, the University controls future flooding and further reduces flood damages.
MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flooding, Sea Level Rise/Subsidence
Goal(s) Addressed:	Goal 1, Objective 1.1, 1.2, 1.3, 1.5
Priority (High, Moderate, Low):	Moderate because it's a long-term goal
Impact on Socially Vulnerable Populations:	Low
Estimated Cost:	To be determined as project nears design phase
Potential Funding Sources:	DHS: BRIC, HGSP, HMGP, HMGP 5% Initiative; Virginia CFPF
Lead Agency/Department Responsible:	Facilities
Implementation Schedule:	To be determined as project nears design phase
ADDITIONAL COMMENTS	
Action is adapted from the Master Plan.	

ODU MITIGATION ACTION 25
Move to a cloud-based Security Information and Event Management (SIEM). The University's SIEM security solution life cycle replacement is due for renewal.

BACKGROUND INFORMATION	
Site and Location:	University-wide
Benefit Cost:	An iterative SEIM life cycle ensures security tools adapt to evolving threats and organizational changes. By adding context and enriching data, ODU receives actionable intelligence over time to reduce cyber attack risk and vulnerabilities.

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Cyber Attack
Goal(s) Addressed:	Goal 1, Objectives 1.3, 1.5
Priority (High, Moderate, Low):	High
Impact on Socially Vulnerable Populations:	Low
Estimated Cost:	$1 million
Potential Funding Sources:	Internal resources
Lead Agency/Department Responsible:	Division of Digital Transformation & Technology
Implementation Schedule:	Implement by June 2027

ADDITIONAL COMMENTS

The SIEM life cycle encompasses the end-to-end process of planning, deploying, operating, and refining a Security Information and Event Management system to detect and respond to threats. It involves data collection, normalization, correlation, alerting, investigation, and continuous tuning.

ODU MITIGATION ACTION 26	
Conduct a crosswalk of business analysis reports that are part of the Continuity of Operations plan to develop work arounds (e.g., paper) for critical operations.	
BACKGROUND INFORMATION	
Site and Location:	University-wide
Benefit Cost:	This action helps ODU realize the full benefits of Continuity of Operations planning that has already occurred by expanding the scope of the COOP tools, and spreading the benefits across multiple departments.
MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Cyber Attack
Goal(s) Addressed:	Goal 1, Objectives 1.3, 1.5; Goal 3
Priority (High, Moderate, Low):	High
Impact on Socially Vulnerable Populations:	Moderate
Estimated Cost:	$5,000 - $10,000
Potential Funding Sources:	Existing resources
Lead Agency/Department Responsible:	Emergency Management, with technical support from Division of Digital Transformation & Technology
Implementation Schedule:	Within 2 years
ADDITIONAL COMMENTS	

ODU MITIGATION ACTION 27
Finalize Business Impact Analysis (BIA) to identify and evaluate the potential effects of cyber infrastructure disruptions—such as ransomware, data breaches, or system failures—on critical business operations. BIA determines which systems are essential for survival, calculates potential financial and reputational losses, and sets recovery time objectives. **ODU is also in the process of moving to a new Governance, Risk and Compliance (GRC) tool, OnSpring, and will conduct periodic BIAs until there are better data and processes in place.**

BACKGROUND INFORMATION	
Site and Location:	University-wide
Benefit Cost:	The BIA provides improved system resilience by serving as a "business health checkup" that prepares the University for unexpected cyber events. It also enables faster recovery because leadership knows which systems are highest priority in a disaster. GRC tools are software platforms that centralize, automate, and streamline the management of IT risks, regulatory compliance, and policy enforcement. They enable the University to assess risk, audit controls, and monitor compliance in real-time, reducing manual efforts and improving security posture.

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Cyber Attack
Goal(s) Addressed:	Goal 1, Objectives 1.3, 1.5
Priority (High, Moderate, Low):	High - BIA will help prioritize future cyber security spending, focusing investments on the most critical assets
Impact on Socially Vulnerable Populations:	Low
Estimated Cost:	$___,000
Potential Funding Sources:	Existing resources
Lead Agency/Department Responsible:	Division of Digital Transformation & Technology
Implementation Schedule:	BIA is underway.

ADDITIONAL COMMENTS

Steps in a generic BIA include:

- **Identify Priorities:** Determine which processes are indispensable for system and University continuity.
- **Risk Identification:** Identify potential threats (e.g., cyberattacks).
- **Likelihood Assessment:** Evaluate the probability of these risks occurring.
- **Impact Analysis:** Determine the specific damage if threats materialize.
- **Resource Prioritization:** Focus resources on protecting and recovering critical areas.

ODU MITIGATION ACTION 28

Improve software and equipment capabilities within ODU EM to prepare for and respond to hazards, including:

a) Evaluate and enhance existing Microsoft Teams collaboration platform to include additional functionality available through the Microsoft suite.

b) Upgrade and integrate audio-visual components of the EOC.

c) Extend remote streaming contract and warranty for Fotokite unmanned aerial system and continue integration with existing EOC and incident/emergency/event functions. EM previously purchased a system with a one-time grant.

BACKGROUND INFORMATION	
Site and Location:	University-wide
Benefit Cost:	Enhanced MS Teams platform tools are expected to provide more immediate activation, improved situational awareness, and real-time communication for all decision makers, including managers, responders and leadership. Key benefits include cost efficiency, enhanced information sharing, and increased flexibility during crises.

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	All Hazards
Goal(s) Addressed:	All Goals
Priority (High, Moderate, Low):	High
Impact on Socially Vulnerable Populations:	Moderate
Estimated Cost:	To be determined
Potential Funding Sources:	Existing resources and one-time funding, as needed
Lead Agency/Department Responsible:	EM
Implementation Schedule:	2027

ADDITIONAL COMMENTS

Current EOC audio/visual capabilities limit effective information sharing, situational awareness, and coordination during activations.

Regarding the unmanned aerial systems support, sustainment and remote streaming capabilities are required to fully leverage existing UAS assets for real-time aerial situational awareness.

MEETING MATERIALS

OLD DOMINION UNIVERSITY

Special District Addendum to the
2022 Hampton Roads Hazard Mitigation Plan

Minutes from Kickoff Meeting
September 24, 2025

Meeting Description

The Kickoff Meeting for the Special District Addendum to the *2022 Hampton Roads Hazard Mitigation Plan* was held in person at the ODU Stadium EOC on September 24, 2025, from 11am to 1pm. The purpose of this meeting was to consider the project timeline and overall process, to outline a public outreach strategy and to provide initial verification of critical hazards impacting university operations. Attendees were encouraged to stay for the Emergency Management Advisory Committee (EMAC) meeting from 1pm-2:30pm which immediately followed. Leigh Chapman from Salters Creek Consulting provided additional procedural details to the larger EMAC group at the beginning of that meeting, as well.

Meeting Agenda

Introductions & Background
Work Plan & Schedule
University Advisory Board for Hazard Mitigation
- Membership
- Communications

Plan for Public Outreach
- Examining the Regional Plan Public Outreach
- Determining ODU's Needs

Critical Hazards

Meeting Notes

The group discussed the importance of the mitigation action plan development to overall project success. They examined the tools the contractor proposed to use to develop a mitigation action plan that would serve ODU well in their pursuit of mitigation project implementation. The group reviewed the Detailed Work Plan and the Project Schedule and made recommendations.

Attendees reviewed proposed membership to the University Advisory Board for Hazard Mitigation (UABHM), including EMAC members, internal university representatives and external stakeholders. The group indicated that ODU Student and Campus Life may have several pertinent representatives, including off-campus housing. The ODU Real Estate Foundation and ODU Athletic Foundation were added, and the EM teams will ensure that other satellite campus facilities are provided an opportunity to participate. Suffolk and Newport News Emergency Management, VDOT, Virginia Port Authority, U.S. Navy, Norfolk Public Schools, WHRO, Verizon, and additional City of Norfolk transportation/Public Works representatives will be added to the stakeholder invite list.

The Communications Plan for the planning process will be led by Jared Hoernig, with support from Leigh Chapman. Primary means of communication will be a Microsoft Teams channel and standard email.

The group examined the public outreach efforts conducted during 2021 for the Hampton Roads plan, and determined that the ODU addendum will focus on the following:

1) An Open House to share the draft plan addendum, focusing on the mitigation action plan developed as a result of the planning process;
2) a limited survey of the UABHM regarding experience and perceptions of hazards and capabilities;
3) the use of existing social media channels to share planning information and obtain feedback; and
4) ODU EM will set up a Hazard Mitigation Project Page on their existing department web site where they will post project and plan information, Open House information, and allow interested readers to "opt-in" to receiving additional information and participating in the UABHM.

Leigh Chapman described the Capability Assessment she will conduct and asked about several projects, including the *Life in Hampton Roads Survey* and the *Blue Line Project*. Kaleen Lawsure will help obtain information on these projects from Tom Allen and George McLeod in the Geography Department.

The group discussed the critical hazards in the 2022 Hampton Roads Hazard Mitigation Plan, the 2010 EVMS Hazard Vulnerability Assessment, and the Draft ODU Hazard Mitigation Plan from 2007. Most hazards matched up well with only slight differences in nomenclature. However, the group concluded that Cyber Attack, Active Shooter, Building Fire and Utility/Infrastructure Failure merit additional discussion by the UABHM as to the criticality of those hazards for ODU operations.

Meeting Attendance

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Special District Addendum to the
2022 Hampton Roads Hazard Mitigation Plan

Sign In Sheet for Kickoff Meeting
September 24, 2025

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Special District Addendum to the
2022 Hampton Roads Hazard Mitigation Plan

Minutes from UABHM Meeting #1
October 23, 2025

Meeting Description

The UABHM Meeting #1 for the Special District Addendum to the *2022 Hampton Roads Hazard Mitigation Plan* was held in person at ODU Spong Hall on October 23, 2025, from 9am to noon. The purpose of this meeting was to share the project timeline and overall process, to share the public outreach strategy and to brief the group on critical hazard information from the regional plan. Summary information from the 2007 ODU and 2010 EVMS plans was also provided as background. The group participated in two interactive activities to obtain feedback on Cyber Attack, Active Shooter, Building Fire and Utility/Infrastructure Failure - four hazards that the Kickoff team indicated were likely uniquely applicable to ODU.

Meeting Agenda

Introductions & Background
Work Plan & Schedule
University Advisory Board for Hazard Mitigation (UABHM)
Hazard Identification and Risk Assessment Review
- 2022 Hampton Roads Hazard Mitigation Plan
- ODU and EVMS previous plans

Additional Hazards to Consider for ODU – Risk Assessment and Prioritization
- Cyber Attack
- Active Shooter
- Building Fire
- Utility/Infrastructure Failure

Meeting Notes

As the meeting was primarily a briefing on existing material, the meeting slides represent what was discussed. The following notes provide additional feedback gathered:

1. The *Campus Facility Master Plan* contains mitigation actions and should be integrated into the addendum's mitigation strategy.
2. Different ODU campuses adhere to slightly different requirements with regard to land use and building code. Structures that are "campus adjacent" and owned by the ODU Real Estate Foundation are governed by the City of Norfolk regulations and higher standards for building and zoning. Main campus structures on land owned by the Commonwealth are governed by the Virginia USBC.
3. EVMS has 3 underground storage tanks; 2 for diesel and 1 for unleaded fuel. These should be addressed in mitigation actions.
4. Virginia Natural Gas representative asked that planners draw a distinction between fuel and gas. "Gas" refers to natural gas, whereas "fuel" is liquid petroleum products.
5. Capability Notes:
    a. Hughes Hall is now Dragas Hall and is new.

b. The Vivarium at EVMS was removed about 6 years ago.
c. The City of Norfolk or Chrysler Museum owns Smith-Rogers Hall.
d. The Education Building is now Monarch Hall and has had some minor renovations.
e. Hague Club Apartments at EVMS have been elevated and renamed to Medical Campus Apartments.

6. Risk Scoring of ODU-specific hazards – Additional analyses of the results is ongoing; however, the number of people who rated ODU-specific hazards "critical" is as follows:
   Active Shooter – 8
   Cyber Attack – 20
   Infrastructure Failure – 7
   Building Fire - 2
7. Prioritization Exercise - The group voted to spend imaginary mitigation dollars as follows:

Hazard	Green	Yellow	Total Spend
	$ 250,000	$ 50,000	
Active Shooter	19	26	$ 4,750,000
Cyber Attacks	*30*	*22*	*$ 7,500,000*
Infrastructure Failure	14	39	$ 3,500,000
Building Fire	5	37	$ 1,250,000

   Cyber Attack and Active Shooter stand out as 2 critical hazards that merit mitigation strategies in the regional plan addendum.

Meeting Attendance

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Special District Addendum to the
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Minutes from UABHM Meeting #2
November 20, 2025

Meeting Description

The UABHM Meeting #2 for the Special District Addendum to the *2022 Hampton Roads Hazard Mitigation Plan* was held in person at ODU Main Campus North Cafeteria, on November 20, 2025, and lasted from 9am to noon. The purpose of this meeting was to review hazard-related data resulting from Meeting #1 held on October 23rd, walk through capability gaps, and discuss the regional plan's mitigation goals, objectives, and strategies. Our consultant then guided meeting participants through a review of mitigation strategy types, and briefly discussed 2007 ODU and 2010 EVMS mitigation strategies to gather feedback on the status of those strategies. Salter's Creek then facilitated a working session to consider new mitigation strategies moving forward. The meeting wrapped early after all breakout sessions reviewed a minimum of four different hazards and developed or edited future mitigation strategies for the addendum.

Meeting Agenda

Capability Assessment Survey Results
Results of Hazard Analysis at Meeting #1
Examination of Regional Mitigation Goals, Objectives & Strategies
Types of Mitigation Strategies
New Strategies (Interactive workshop format)

Meeting Notes

- Goal for the addendum is to provide about 20 feasible and realistic mitigation measures, as opposed to a lengthy wishlist
- A notable strength for ODU, based on the capability survey, is good working relationships with external partners and stakeholders
- ODU Master Plan guiding concepts that should be reflected in the mitigation strategy include:
    - Concentrate and densify campus
    - Use open space as a sponge to absorb future flooding
    - Focus on sustainability and resilience
- Types of mitigation strategies
    - protection of built environment
        - Hague Club Apts - elevation conducted, but not done properly
    - natural resource protection
    - hazard modification through construction
        - talk to Jessica Whitehead more about flood wall options & impacts on ODU, including sailing center impacts
    - emergency services
        - tornado-rated shelters on campus
    - public education and awareness

    - risk analysis
    - prevention of future risk
- Notes on ODU 2007 HMP Recommended Strategies
    - EOP Update/NIMS/Evac: Completed (annual update)
    - COOP Update: Completed (annual update)
    - CERT: ODU has a Building Emergency Coordinator (BEC) program that's being rolled out campus-wide in all buildings. This is somewhat similar to CERT.
    - Generators: Inventory available, need to assess future purchase plan, quick-connects, fuel continuity
    - ESM hire: completed (Director of Emergency Management hired in May 2014)
    - T&E: Multi-Year Training and Exercise Plan implemented, can provide this as a separate document if needed
    - Fund for EM: not implemented, not likely to be funded.
    - COOPS for key units: program in place per ODU Policy 1021: Emergency Management
    - Fire Prevention: this is being addressed informally at this time. Needs to be identified as specific mitigation action for the 2025-26 update.
    - Non-structural mitigation measures: piecemeal implementation as needed, more specifics and a cohesive plan needed for 25-26 plan revision
- 2010 EVMS Vulnerability Assessment
    - 1. yes - need more specifics though
    - 2. yes - need more specifics though
    - 3. yes
    - 4. yes, but need to verify
    - Mark Salmon can provide the remainder of the status updates
    - Add Waitzer Hall
    - need to ensure USTs are anchored
    - HCA needs fire alarm system and sprinkler system
- The breakout groups each shared their favorite mitigation action(s) at the end of meeting:
    - charging pods and storage for li-ion battery
    - campus-wide active threat simulation
    - auditing all area business continuity plans and identifying gaps - adding mitigation actions
    - cyber - detect and respond; need SIM tool in 2027 - monitor, ID, respond
    - examine access control for buildings
    - awareness, education, communication - IAAs, evac plans, how are these communicated through a shared vocabulary - watch, warning, shelter in place - GLOSSARY on website
    - find ways to tap expertise already present on campus
    - better comms, better training...main, medical, HECs
- JARED WILL
    - SEND OUT LINK TO CAPABILITY SURVEY RESULTS: https://ql.tc.aiXOcj
    - put survey and public results on ODUEM page
    - off-campus flooding guide & on-campus map of flooding hotspots
    - automate tornado warnings - CAP/polygons

Meeting Attendance

There were 42 attendees, primarily from ODU. Several regional stakeholders also attended.

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WEB SITE FOR HAZARD MITIGATION PLANNING

New ODU Hazard Mitigation Plan

November 14, 2025

Share

In order to address the university's multi-hazard mitigation project needs, ODU Emergency Management has begun a planning process that will result in an addendum to the *2022 Hampton Roads Hazard Mitigation Plan.* The addendum will treat ODU as a "Special District" within the larger, regional planning area.

Purpose and Need

Since 2007, ODU Emergency Management has sought opportunities and funding to update the university's existing hazard mitigation plan in order to attain eligibility for various grant programs and to carefully develop and prioritize mitigation activities on campus. Simultaneously, ODU has expanded its footprint in Hampton Roads with campuses in Suffolk, Portsmouth, Virginia Beach, Hampton, and the Eastern Virginia Medical School (EVMS) in Norfolk. ODU recognizes that the need is urgent for an up-to-date hazard mitigation plan that outlines a mitigation strategy tailored to the university's vulnerabilities across all campuses, and identified the Special District addendum to the regional plan as a way to cost effectively fulfill this need in accordance with FEMA guidance.

Scope

ODU Emergency Management has contracted with Salter's Creek Consulting, Inc. to execute an abbreviated mitigation planning process and develop a brief written addendum to the *2022 Hampton Roads Hazard Mitigation Plan*. The addendum will reference existing vulnerability assessments and highlight where ODU vulnerabilities may differ from the overall region. The addendum to the Hampton Roads plan will include summary information on all phases of the planning process, and focus on the prioritized mitigation strategies to be appended to the region's plan. The addendum is expected to be reviewed by VDEM and FEMA prior to the ODU Board of Visitors adoption.

Project Schedule

The project is expected to take approximately nine (9) months to complete, beginning in September 2025. Keeping to this timeline will allow ODU to maintain their regular required emergency operations planning cadence as required by the *Code of Virginia*, including adding new hazard mitigation content into their *2026 Crisis and Emergency Management Plan*, which will go in front of the ODU Board of Visitors for quadrennial adoption in mid-late 2026. The first phase of the process involves a committee meeting to review components of the regional plan (October), and a workshop to formulate mitigation actions for the future (November). The second phase involves obtaining feedback on the mitigation actions from various stakeholders and State and Federal reviewers.

ODU will host an Open House in mid-January 2026 to share and discuss plan components with stakeholders and the public. Feedback obtained through the Open House will be used to prepare the final addendum.

Open House date and location will be announced on this web site!

Helpful Links

Hampton Roads Planning District Commission (https://www.hrpdcva.gov/157/HRPDC)

2022 Hampton Roads Hazard Mitigation Plan (https://www.hrpdcva.gov/400/2022-Hampton-Roads-Hazard-Mitigation-Pla)

FEMA Hazard Mitigation Planning (https://www.fema.gov/emergency-managers/risk-management/hazard-mitigation-planning)

How to Participate and Provide Input

Reach out to Jared Hoernig, Director, ODU Emergency Management, who will add your name to the appropriate notification list. Mr. Hoernig can be reached by telephone at 757-683-5116, or by email at

jhoernig@odu.edu (mailto:jhoernig@odu.edu)

Legal

Legal & Compliance (/legal-compliance)
Privacy (/privacy)
Accessibility (/accessibility)
Health & Safety (/life/health-safety)
Emergency Management (/emergency)
Campus Hazing Transparency (https://cm.maxient.com/chtr.php?OldDominionUniv=)

Visit

Visit ODU (/visit-campus)
Transportation & Parking (/transportation-parking-services)
Campus Map (/map)

Choose Language English

CAPABILITY SURVEY

NOTE: Survey questions are shown below and results are summarized in the Capabilities section above. A complete set of responses is available upon request from ODU Emergency Management.

Thank you for your willingness to participate in the mitigation planning process for Old Dominion University. The final mitigation strategy is expected to include a wide range of actions, from traditional elevation projects to protect flood-prone assets or green building features to reduce extreme heat impacts on people, to programmatic actions like targeted hazard education for students or expanding staff capability to pursue mitigation funding. The following capability-related questions will help us develop necessary and effective future actions. Your answers are anonymous.

Please rate the following programmatic areas in terms of **ODU's ability to plan for and implement mitigation initiatives** in the future.

	1 (Weak)	2	3 (Strong)	Don't know
Financial means (e.g., capital set asides, grant eligibility)	○	○	○	○
Willingness of leadership	○	○	○	○
Staff administrative capability (e.g., grant writing and fulfillment)	○	○	○	○
Staff technical capability (e.g., GIS, hazard data gathering, risk management)	○	○	○	○
Relationships with external stakeholders (e.g., Norfolk, utility providers, neighborhood groups)	○	○	○	○
Future planning (e.g., master plan, economic development plan, emergency operations plan)	○	○	○	○

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What examples come to mind of **previous or ongoing university initiatives** to protect students, faculty, staff, and/or assets from the impacts of **natural hazards** such as flooding, tropical/coastal storm, sea level rise and land subsidence, winter storm, and tornado?

What examples come to mind of **previous or ongoing university initiatives** to protect students, faculty, staff, and/or assets from the impacts of **human-caused disasters** such as hazardous materials incident, active shooter, cyber attack, infrastructure failure, and building fire?

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Rate your perception of how knowledgeable **students** are regarding the on-campus risks associated with these critical hazards:

	1 (Not very knowledgeable)	2	3	4	5 (Extremely knowledgeable)
All flooding hazards	○	○	○	○	○
All wind hazards	○	○	○	○	○
Hazardous materials incident	○	○	○	○	○
Cyber attack	○	○	○	○	○
Building fire	○	○	○	○	○

Rate your perception of how knowledgeable **faculty and staff** are regarding the on-campus risks associated with these critical hazards:

	1 (Not very knowledgeable)	2	3	4	5 (Extremely knowledgeable)
All flooding hazards	○	○	○	○	○
All wind hazards	○	○	○	○	○
Hazardous materials incident	○	○	○	○	○
Cyber attack	○	○	○	○	○
Building fire	○	○	○	○	○

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Are there **hazard education initiatives** that stand out to you as **High Priority** for the next five-year period?

Please share any **mitigation actions** that you would like the group to consider for ODU moving forward.