



Department of Environmental Safety
Annual Report 2005-2006



Prepared by:
The Department of Environmental Safety

Department Mission Statement

The Department of Environmental Safety provides technical, regulatory, and related management services to the University of Maryland community in order to achieve a safe and healthful campus environment in compliance with environmental and life safety regulations and standards. DES takes a leadership role in working with students, faculty, and staff to arrive at innovative, cost-effective solutions in response to their needs and to create a culture in which all share the responsibility for an environmentally safe campus.

Our Mission Is Achieved Through the Following Specific Services:

- Policy and standard development related to Environmental, Safety and Health regulatory matters with a focus on cost containment.
- University of Maryland representation and intermediary to MDE, EPA, NRC, NIH, MOSH, OSHA, CDC, DOE, DOT, USDA, FDA, OSFM, WSSC, other appropriate federal, state, and local regulatory agencies, neighboring communities, and professional and educational organizations.
- Technical assistance and evaluation to assess and communicate risks.
- Investigation of accidents, exposures, discharges, illness clusters and incidents.
- Authorizations, certifications and other in-house requirements for ORAA.
- Implementation of customized programs in biosafety, campus safety, environmental protection, industrial hygiene, radiation protection, fire protection and insurance.
- Training and education related to Environmental, Safety and Health programs.
- Management of insurance claims process
- Collection and maintenance of records regarding exposures, waste, compliance, permits and incidents; oversight of inspection and testing of campus safety equipment and systems.
- Emergency planning and response for the University.
- Departmental representation and support to relevant campus committees.

DES Services

The Department of Environmental Safety provides many services to the University of Maryland community. The following is a list of DES Sections and the related programs and information. Further detail is available at www.essr.umd.edu/general/map2.html

Biological Safety

- Autoclave Procedures
- Autoclave Safety
- Bloodborne Pathogens
- Containment Laboratory Design
- Infectious Agents
- Recombinant DNA
- Select Agents
- Sharps (Use & Disposal)
- Shipping Infectious Agents

Environmental Affairs

- Air Quality Permitting
- Emergency Spill Response
- Environmental Site Assessment
- Environmental Sustainability
- Facility Planning–Real Estate Support
- Hazardous and Controlled Waste Management
- Laboratory Clean Outs
- Natural Resource Permitting
- Oil Management
- Pollution Prevention Management
- Stormwater Permitting and Monitoring
- Wastewater Permitting

Fire Marshal's Office

- Construction Plan Review and Inspection
- Fire and Life Safety Inspections
- Fire Safety Education
- Greek Facilities Safety
- Hot Works Permits
- Open Fire Permits
- Laboratory Fire Safety
- Public Assembly
- Resident Hall Fire Safety
- Stairwells/Corridors
- Fire Investigation
- Consultation and Risk Assessment

Radiation Safety

- Dosimetry–Radiation Producing Equipment
- Dosimetry–Radiation Producing Materials
- Laser Safety
- Particle Accelerators
- Radiation Producing Equipment
- Radiation Producing Materials
- X-ray Devices

Occupational Safety/Health

- Accident/Incident Response
- Asbestos Management
- Autoclaves/Sterilizers State Inspection
- Chemical and Lab Safety
- Confined Spaces
- Construction Safety
- Design Review
- Electrical Safety
- Ergonomics
- Fall Protection
- Hazard Communication
- Hearing Conservation
- Incident Response
- Indoor Air Quality
- Lead Management
- Lockout- Tagout
- Material Safety Data Sheets
- Noise Control
- Personal Protective Equipment
- Powered Industrial Trucks
- Respiratory Protection
- Water Testing

Risk Management and Communications

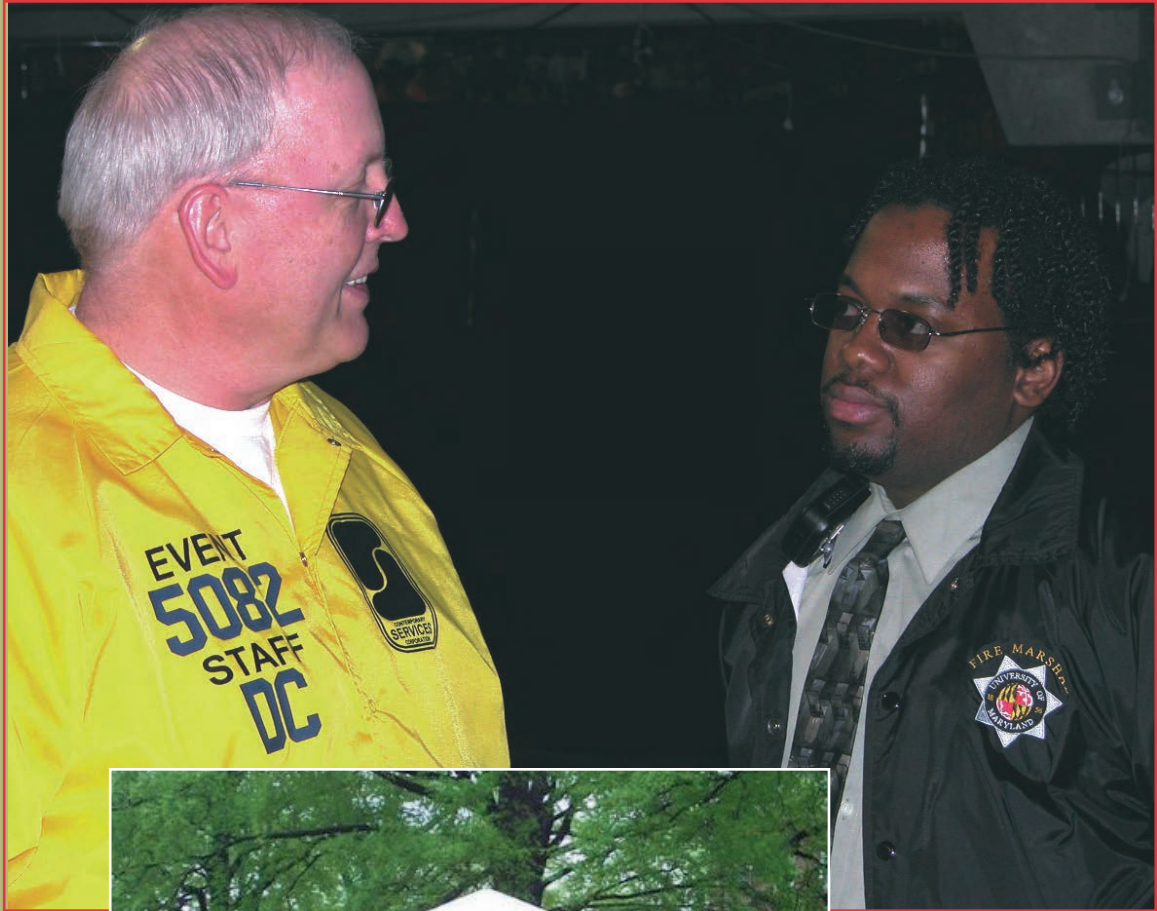
- Diving Safety
- E,S&H Management Policy
- Fifteen Passenger Van
- Insurance
- Public Education
- Tort Claim
- Training Record
- Training Schedule
- Travel Safety
- Vehicle Accident
- Workers' Compensation

The Department of Environmental Safety is comprised of more than 40 full and part time professionals who support the mission and goals of the department. Our staff holds a variety of bachelors' and masters' degrees and the following certifications, designations and specializations:

Certifications, Designations and Specializations:

- American Academy of Microbiology Specialist Microbiologist
- Assistant State Fire Marshal
- Certified Biological Safety Professional (CBSP)
- Certified Fire and Explosion Investigator
- Certified Fire Inspector I, II, III
- Certified Fire Protection Specialist (CFPS)
- Certified Hazardous Materials Manager (CHMM)
- Certified Industrial Hygienist (CIH)
- Certified Professional Environmental Auditor (CPEA)
- Certified Safety Professional (CSP)
- Comp TIAA A+
- Diving Certifications (6)
- First Aid and CPR/AED
- ICC Certified Fire Inspector
- Paralegal Certificate
- Professional Engineer (PE)
- Registered Biosafety Professional (RBP)
- Registered Environmental Professional (REP)
- Special Assistant State Fire Marshal – Inspector
- Special Assistant State Fire Marshal – Inspector/Investigator
- State of Maryland Certified X-ray and Accelerator Inspectors

The most current DES Staff Directory is available at <https://des.umd.edu/apps/employee/list.cfm> A list of College and Department Compliance Officers is available at <https://des.umd.edu/apps/compliance/list.cfm>



Support of the University Mission

DES is committed to supporting the University in its mission and goals to fulfill the State's mandate as the Flagship Institution of the University System of Maryland to the best of our ability. In 1988 and again in 1999, the State of Maryland affirmed a commitment to bring the University into the nation's top twenty public universities. This goal was achieved and now the University is looking to rank among the top ten public universities. DES supports this mission as illustrated in the following:

- Provided biological safety support for the study of avian influenza. The research is sponsored by the USDA with the largest grant ever provided to study a single animal disease
- Initiated a comprehensive audit program to identify potential for hazardous conditions, equipment and operations in all departments with academic and research laboratories
- Developed online training for a variety of regulatory required topics
- Continued to provide contracted environmental and safety support services to USM facilities – Shady Grove Center and UM Biotechnology Institute
- Provided code review for on and off campus properties
- Provided biological safety support for renovation of high containment laboratories

Customer and Stakeholder Satisfaction

DES considers its customers to include the university's faculty, staff, students, affiliates and visitors to the campus. The department staff continued to participate in a variety of campus committees and work groups and implemented many programs to help ensure the safety and well being of the campus community and its environment. Some examples of customer service oriented initiatives are:

- Offered safety training and programs in Spanish to accommodate the increasing numbers of workers who provide essential services to support UM facilities and operations
- Continued to refine the DES web page to improve navigation
- Participated in the development of the environmental stewardship concept including a steering committee and guidelines
- Established a centralized web-based program to procure affordable insurance coverage for individuals and groups using UM campus facilities for events
- Added a RSS (Really Simple Syndication) feed to the DES website for the campus community to subscribe to. The RSS feed allows DES to better communicate additions to the web site, current events and other news and information
- Participated as part of the faculty of the UM Leadership Development Institute

Professional Development

DES prides itself on a highly educated and experienced staff. The technical, scientific and regulatory compliance nature of the field of environmental health and safety makes it crucial that staff stay competent, proficient and current in their fields of expertise. Often, it is necessary to provide new skills and knowledge for greater depth and to assist with professional growth. A commitment to supporting the professional development of our staff is evidenced in the inclusion of this as a goal in each staff member's Performance Review.

DES staff attends a variety of professional conferences, seminars, symposia and training program throughout the year and are often speakers and presenters. This year, DES staff members presented at the American Society of Safety Engineers Professional Development Conference and the Campus Safety Health and Environmental Management Association Regional Conference. The department was the host and co-sponsor of the first Smart and Sustainable Campuses Conference, co-sponsored by the US Environmental Protection Agency and several other national organizations.

Many DES staff serve on regional, state and national committees, advisory boards and professional society boards of directors. Some examples are:

- NFPA standards committees
- Council on Governmental Relations, working group on Research Security
- Subcommittees to write new chapters on Biosecurity and Level-3 Agriculture Containment for 5th edition of the NIH/CDC Biosafety in Microbiological and Biomedical Laboratories.
- Authored chapter and served as Section Editor of the American Society for Microbiology textbook, "Biological Safety: Principles and Practices"

- Ad hoc member of NIH Recombinant DNA Advisory Committee, Safety Considerations in Recombinant DNA Research with Pathogenic Viruses
- EPA College and University Sector Program – Environmental Management Systems Work Group
- American Society of Safety Engineers, Campus Fire Safety Advisory Group.
- Governor's Risk Management Advisory Council
- Maryland Department of the Environment Work Group on State Agency Environmental Compliance
- Board of Directors Chesapeake Region Safety Council
- Chesapeake Region Safety Council – School and Colleges division
- State Risk Management Committee
- University Risk Management & Insurance Association – Inter-Association Alliances Subcommittee
- ASSE Excellence in Safety Leadership Symposium Planning Committee
- Maryland State Fire Code Update Committee
- Maryland Metropolitan Fire Chiefs Code Enforcement Subcommittee

Campus and Community Outreach

DES staff members help to support the campus through collaborative work on safety-focused committees and groups that plan special events on campus. These committees and work groups include:

- Biological and Chemical Hygiene Committee
- EH&S Policy Committee
- EH&S Operations Committee
- Radiation Safety Committee

- Institutional Biosafety Committee
- Institutional Animal Care and Use Committee
- UM Accident Review Board
- Maryland Day Planning Committee and Event
- Commencement Committee
- Black History Month Event Planning
- UM Charter Day volunteer
- Fire Department training initiative
- Prince George's County 4H Babysitter Training Program
- UM Alcohol Management Task Force

Special Initiatives

A number of initiatives were undertaken during this fiscal year. Of special note are:

- Developed a proposal for central monitoring of the campus fire alarm systems
- Participated and fulfilled a leadership role on the Maryland Department of the Environment Work Group on State Agency Environmental Compliance
- Participated on the University's Business Continuity Plan Committees
- Hosted and co-sponsored the EPA/NACUBO/SCUP/APPA "Smart and Sustainable Campuses Symposium" in November 2005
- Attended IACLEA "Simulation-Based Training for Command Post Personnel"
- Co-coordinated disaster preparedness/continuity of operations planning for the campus with the Department of Public Safety
- Participated on the Avian Influenza Pandemic Flu Planning Committee
- Assisted Facilities Management in achieving the USEPA's 2005 Energy Star Award
- Completed the update of the DES Incident Response Plan
- Conducted and compiled results of more than 300 audits of campus laboratories
- Purchased a new emergency response vehicle
- Participated on a steering committee for a FEMA Disaster Mitigation Grant
- Purchased an Automatic External Defibrillator and provided training to department volunteers
- Participated in the Campus Safety, Health and Environmental Management Association Benchmarking Survey
- Hosted and assisted with an emergency management conference sponsored by local chapters of the American Society of Safety Engineers and the American Industrial Hygiene Association
- Received a Corporate Safety Award from the American Society of Safety Engineers for a better than industry average occupational injury/illness rate
- Coordinated the first annual Terps Fire Safety Challenge and Terps Fire Corps events with UM departments, student groups, MFRI, College Park Volunteer Fire Department, and City of College Park
- Transferred responsibility for the procurement of insurance and coordination of certificates of insurance from the Department of Business Services to the Risk Management division
- Hosted and co-sponsored of the Scientific Diving Symposium, "Diving in Polluted Waters" in October 2005
- Submitted winning Risk Management proposal to the State Employee Risk Management Administration on behalf of UM Dining Services in recognition of their commitment to employee health and workplace safety. Dining Services received an award for Excellence in Safety
- Attended Emergency Response and Disaster Recovery Symposium
- Participated and fulfilled a leadership role on the Risk Management in Higher Education Committee for the State of Maryland



The field of Biosafety has paralleled the development of the science of microbiology and its extension into the related areas of recombinant DNA (rDNA) technology.

Biosafety promotes safe laboratory practices and procedures, and proper use of containment equipment and facilities. The UM Biosafety Unit provides guidance to the University community in the prevention of occupationally acquired infections. We accomplish this by serving as a source of information to faculty, staff, and students who conduct research involving infectious agents and recombinant DNA, and by assisting University members to comply with federal, state and local regulations and guidelines related to such research.

During the past year, we have been involved in many initiatives. More than 150 grant applications for external funding that involved the use of biological materials were reviewed for compliance with the NIH Guidelines for Research Involving Recombinant DNA Molecules. We processed 60 rDNA and infectious agent registrations that were submitted by faculty for review by the UM Institutional

Biosafety Committee (IBC). During the past year, the Biosafety Unit was part of the review teams providing consultation on containment design requirements for new and renovated laboratories. The Biosafety Unit serves as coordinator and executive secretary for the UM IBC, which meets monthly to review the use of rDNA in campus laboratories. Ultimately, the Biosafety Unit strives to provide guidance on preventing occupationally acquired infections, and to assist the University community in complying with federal and state regulations.

Bloodborne Pathogens (BBP) Training

In addition to supporting University researchers who work with biological materials, the Biosafety Unit provides training to staff that may come into contact with human blood during the course of their work. During the past year, we have provided the following support for these staff members:

**TABLE 1 Bloodborne Pathogen Training
July 1, 2005 – June 30, 2006**

	NUMBER OF CLASSES	NUMBER PEOPLE TRAINED
English – Speaking Classes (on-campus)	10	239
Spanish – Speaking Classes (on-campus)	2	87
Classes for Community Outreach (City of College Park, Department of Public Works)	1	44
Vietnamese – Translation Class	1	6
Training by CRS	16	595
Researcher Training - Initial	Online	50
Researcher Training - Refresher	Online	26
Totals	30	1147

Environmental Affairs

The Environmental Affairs Unit was involved in a wide array of activities during the 2005-2006 fiscal year.

As in the past, the unit continued its primary focus on regulatory compliance matters. These issues primarily involve the management of hazardous, radioactive and biological waste including the operation of a permitted storage facility; stormwater permitting, sampling and reporting; the inspection of oil storage tanks and associated training; air quality permitting and reporting; and internal auditing. In addition, the unit managed and/or participated in several incidents involving petroleum and hazardous materials and continued to support campus construction, real estate and planning efforts. Table 2 presents year-end statistics related to these programs.

Environmental Affairs has also continued to place a high priority to “go beyond compliance” by supporting the University’s expanding environmental sustainability efforts. This work has also involved contributions at the local, state and federal levels. Major initiatives in this area during the reporting year included:

Continued support of the campus Environmental Stewardship Committee in the implementation of the campus Environmental Stewardship Guidelines.

Cosponsored and hosted a national college and university environmental sustainability conference entitled the “Smart and Sustainable Campus Conference,” held at UM on November 3-4, 2005.

Presentation of the University’s environmental sustainability experience with Bill Mallari (Facilities Planning) and Jack Sullivan (Chair –

UM Environmental Stewardship Committee) at the Campus Safety Health and Environmental Management Association Regional Conference in May 2006.

Implementation of several initiatives to reduce the quantity and toxicity of hazardous waste on campus. This effort included the reinstatement of the mercury thermometer exchange program that allows the exchange of a mercury thermometer for a non-mercury thermometer at no charge to the user.

In addition to the core regulatory programs and ongoing sustainability efforts, the Environmental Affairs Unit is a key participant in campus operations and development. This includes the acquisition of new properties and the collaborative resolution of existing environmental issues. For example, Environmental Affairs was involved in the following efforts during the reporting year:

Management of the environmental review associated with refinancing the South Campus Commons and University Courtyard properties.

Conduct of soil and groundwater analyses prior to construction of a new sewer line at the Maryland Fire and Rescue Institute to allow for the capture of fire training wastewater and the elimination of the site’s NPDES stormwater permit.

Finalization of the draft RCRA Corrective Action permit that includes language governing USEPA’s involvement in the redevelopment of historic landfill areas.

Management of natural resource permitting associated with construction including efforts associated with the North Gate Park, the expansion of Metzert Road, the new Golf Course Driving Range and several projects at other USM locations.

Participation in a campus-wide emergency drill involving a terrorist threat.

Participation in the revision of the DES emergency response guidelines and the provision of training to the College Park Volunteer Fire Department to better ensure coordinated emergency response.

As part of its mission, Environmental Affairs also participates on external committees that focus on environmental compliance and sustainability at colleges and universities. In 2006, the Unit continued to represent UM and the University System of Maryland on the Maryland Department of the Environment's (MDE's) "State Agency Environmental Compliance Workgroup." This group was

formed by MDE to identify strategies that would facilitate and better assure environmental compliance within Maryland's state agencies. The Unit provided significant advise to MDE representatives in the development of the Workgroup's final recommendation that was ultimately adopted by the Agency and the Governor. In addition to efforts with the MDE, the Unit also continued its participation in the US EPA's national College and University Sector program. USEPA has formed a workgroup that is assisting the agency in developing information and tools other institutions may use to implement Environmental Management Systems (EMS) and sustainability programs.

In the coming year, the Unit anticipates continued participation in the USEPA Sector program, continued support of environmental sustainability efforts, and hosting a second national sustainability conference. The Unit will continue to meet its environmental compliance responsibilities and support new initiatives related to campus facilities.

**TABLE 2 Environmental Affairs Selected Program Statistics
July 1, 2005 – June 30, 2006**

No. of Containers of Controlled Waste Collected	7,853
Pounds of Hazardous Waste Managed	76,979
Cost Savings from Waste Minimization Efforts	\$60,000
No. of Regulatory Agency Violations Issued	0
Chemical Incident Responses	51

Fire Marshal's Office

Life safety is the primary objective of the fire safety program.

The Fire Marshal's Office is responsible for managing the University's compliance with the State Fire Prevention Code and other applicable fire safety laws and standards, providing fire safety education and training, investigating all fires that occur on University property, and performing plan review and construction inspections. Life safety is the primary objective of the fire safety program.

In 2006, the responsibilities of the Fire Marshal's Office were expanded to include Emergency Management. The University Fire Marshal works jointly with the UMDPS Technology Services Bureau Commander (Major/Assistant Director) to develop the University's disaster response and recovery plan. The University Fire Marshal & DES Director participated as members of the Large Scale Exercise Planning Committee (Operation Basketball Bomber). They also acted as Controller and Evaluator during the exercise. The Fire Marshal's Office managed the implementation of the DES External Automated Defibrillator (AED) program. Most DES personnel received training and certification. An AED was purchased and located in the Chesapeake Building.

The staff of the Fire Marshal's Office also expanded during FY 2006. The position of Fire Safety Manager/Assistant University Fire Marshal was created and filled internally. The open position of Fire Protection Engineer was also filled.

DES Fire Marshals are delegated fire prevention and investigation authority by the Maryland State Fire Marshal pursuant to Public Safety Article, Title 6 of the Maryland Code. The

University Fire Marshal is appointed as an Assistant State Fire Marshal. The Assistant Fire Marshal, Deputy Fire Marshals, Fire Inspectors, and Fire Protection Engineers are appointed as Special Assistant State Fire Marshals.

A typical year in the Fire Marshal's Office includes many diverse activities. All residence halls, University-owned and privately owned Greek houses, and public-private apartment buildings are inspected. Public assembly details are provided at all football games in Byrd Stadium, basketball games in the Comcast Center, and other large or high profile special events. Fire drills are conducted in all residence halls, the Center for Young Children, and the University Health Center. Training is provided for Resident Assistants, lab workers, Greek House Directors, event managers, UM Police Academy, and UM Police Auxiliary. Required hot work, open burning, pyrotechnic and explosives permits are coordinated and/or issued. Emergency response is provided for fires and other emergencies on a 24/7 basis. Consultation and planning are provided to the campus community. Construction plans are reviewed and construction inspections are performed for capital and campus projects.

The Fire Marshal's Office has Authority Having Jurisdiction (AHJ) responsibilities that extend beyond the College Park campus. The Code Services Unit is part of the Service Center that performs plan review and construction inspections for other campuses including Frostburg University, Salisbury University, Bowie State University, UMES, Universities at Shady Grove, and UMUC.

Major construction projects in various stages of design and construction include: BioScience Building, Van Munching Hall Addition, Shady Grove Education Center III, Tawes Fine Arts Renovation, Bowie State Business and

Graduate Studies Building, Bowie State Center for Fine and Performing Arts, Salisbury State University/Teacher Education and Technology Center, CARB II Facility/UMBI.

**TABLE 3 Fire Marshal's Office Highlights and Selected Statistics
July 1, 2005 – June 30, 2006**

Residential Inspections	197 buildings (includes 1198 apartments)
Emergency Response	91 incidents
Fire Investigations	11 conducted
Public Assembly	49 details
Fire Drills	187 conducted (Includes University View, a private high-rise, through contract with UMDES)
Hot Work Permits	593 issued
Construction Plans	194 reviewed
Major Training Courses/Certifications	Fire Inspector I, Fire Inspector II, Hazardous Material Awareness, Hazwoper Refresher, CPR/AED
Fire Prevention Activities	Two major cooperative initiatives were started. The Terps Fire Safety Challenge was held in the high-rise residence hall area and included a firefighter style combat challenge for students. The Terps Fire Corps involved training for students to provide fire safety information to other students, primarily off campus. As part of the program, students and student-firefighters went door to door in the City of College Park providing fire safety information and courtesy fire safety checks. Over 100 homes were visited. Departments participating in the initiatives included: Resident Life, City of College Park, MFRI, SGA, College Park VFD, Campus Commuters Association, Fraternity and Sorority Life.
Fire Safety Presentations	18 Conducted

In addition, Fire Marshal's Office personnel participate in professional organizations and provide community outreach.

Conference Presentations

- American Society of Safety Engineers Conference & Exhibition, Seattle, WA.
Working Together for a Safe Campus: A Model for Fire Safety in Student Housing. Maureen Kotlas, Alan Sactor
- Campus Fire Safety Forum 7, Tempe, AZ.
Residence Hall Fixed Fire Protection. Alan Sactor
- Campus Fire Safety Forum 7, Tempe, AZ.
Case Study: Single Fatality Off-Campus Fire in College Park, MD. Alan Sactor
- Campus Safety, Health, and Environmental Management Association Regional Conference at Catholic University, Washington, D.C.
Off-Campus Fire Safety Issues. Alan Sactor
- Campus Safety, Health, and Environmental Management Association Regional Conference at Catholic University, Washington, D.C.
Anatomy of Two University Fire Incidents/Fire Safety Workshop. Alan Sactor
- Department of Defense Sprinklers in Military Housing Forum, Washington, D.C.
Residential Fire Sprinklers: Their Use in Prince George's County, MD. Keith Lippincott

Committees/Outreach

- Maryland Metropolitan Fire Chiefs Code Enforcement Subcommittee
- NFPA 1037 Professional Qualifications for Fire Marshals
- Maryland State Fire Code Update Committee
- Prince George's County 4H Baby Sitter Training
- UM Commencement Committee
- UM Maryland Day Planning Committee and Logistics Sub-Committee
- UM Homecoming Committee and Parade Sub-Committee
- UM Alcohol Management Task Force



Occupational Safety and Health

The Occupational Safety & Health (OSH) group develops and manages programs to recognize, evaluate and control occupational diseases and injuries caused by chemical, biological and physical hazards.

OSH works with the campus community to facilitate operations in a safe and healthful manner while also helping to ensure compliance with federal Occupational Safety and Health Administration (OSHA) regulations as well as other local, state and federal requirements. OSH fulfills this safety and health responsibility by developing campus programs, policies and procedures as well as conducting or coordinating training seminars face-to-face or on-line through the DES' web site. OSH programs and training topics include the following: Asbestos, Confined Spaces, Electrical Safety, Ergonomics, Fall Protection, Hazard Communication (also known as Right-to-Know), Indoor Air Quality, Laboratory Safety, Lead, Personal Protective Equipment, Powered Industrial Vehicles, and Research Pressure Vessels.

Several University organizations contract health and safety services through the OSH group or fund dedicated support from DES for their programs. A safety engineer evaluates code compliance, hazardous materials and conformance with recognized standards of care for all construction projects that are managed through the Department of Facilities Management (FM). DES also provides support to FM operations by assigning a dedicated Safety Manager to oversee safety programs and environmental compliance within that department. The USM Shady Grove Center and the Center for Advanced Research in Biotechnology (CARB) in Gaithersburg contract with DES to provide dedicated personnel and support services.

During this past year several OSH training programs were updated to ensure that they

include the most current information and meet regulatory requirements. These updated training programs include: Respiratory Protection, Hearing Conservation, Laboratory Safety, Electrical Safety and Chemical Hygiene. New safety programs were developed (e.g., Powered Pallet Jacks) to focus training efforts to employees conducting hazardous operations. Most DES training programs are also provided in Spanish to ensure that the growing Latino workforce is provided information and resources to conduct work safely.

Despite a significant reduction of staff resources due to vacancies, the OSH group conducted 98 classroom training seminars and maintained 4 on-line training classes during FY06. The OSH group trained a total of 2237 University employees during this period, of which 1709 attended classroom seminars and 528 completed on-line training. The OSH group also responded to 77 incidents including chemical spills, gas leaks, student/employee injuries, air quality complaints, chemical exposures and damaged asbestos conditions.

The OSH group coordinated the development and implementation of a campus-wide laboratory audit program in FY06 to identify safety program needs and deficiencies in research and academic facilities. All DES units participated with conducting audits and a total of 310 laboratories were evaluated for compliance with regulations, UM policies and accepted standards of practice. Audit results were provided to individual laboratory representatives and department Chairs/Directors, and college Deans were provided summary results.

Other initiatives included:

Health and safety provisions were incorporated into a new Facilities Management internet-based facilities information management system. This system will track all inventoried assets and identify risk factors associated with assigned maintenance tasks.

Safety Talk, a newsletter directed to all UM faculty and staff, was distributed in fall and spring editions.

A Knife Safety training program was provided to Dining Services employees.

The Department of Environmental Safety Incident Plan revision was completed. This new version of the existing plan will help assure appropriate response capabilities for hazardous chemical, biological and radiological events and minimize the release of materials to the environment.

Electrical Safety training was provided for 282 Facilities Management and Residential Facilities workers including targeted elements for employees working with live electrical circuits.

Reduction of formaldehyde exposure to undergraduate students in an undergraduate Animal Sciences anatomy laboratory was achieved through procedural modifications, ventilation improvements and administrative control of exposures.

A campus-wide emergency shower & eyewash installation project was implemented. A total of 32 showers and 101 eyewashes were installed in campus facilities where employees were exposed to corrosive materials.

Respirator fit-testing was provided for all Public Safety officers and Health Center staff.

The department participated with an external review team to evaluate potential risks associated with the 3-meter dynamo experiment. DES also assisted start-up operations of the 60-centimeter dynamo by reviewing procedures/facilities and ensuring that appropriate safeguards were implemented.

The department monitored and assessed the adequacy of fire alarm sound levels in a number of residence halls.

Comprehensive follow-up audits were conducted at all agricultural research facilities throughout Maryland to evaluate safety and environmental compliance.

A “Laboratory Safety Lessons Learned” seminar presented at Goddard Space Flight Center as part of their Safety Awareness Campaign.

Campus asbestos conditions were assessed and prioritized for submittal to State for consideration for abatement funding.

Fume hood performance was assessed for 469 units in campus laboratories.

Training was provided for College Park Volunteer Fire Department on specific hazards that might be encountered in University facilities.

The department participated in the 2006 Health Fair at the University Health Center and a Health Fair for Residential Facilities and Dining Services.

The objective of the Radiation Safety Office is to keep radiation exposures to all individuals As Low As Reasonably Achievable (ALARA).

Radioactive material and radiation producing devices continue to be powerful research tools used by a variety of departments at the University of Maryland College Park and at satellite campuses within the broader University System of Maryland. Federal and state regulations require that sources of ionizing radiation be under the control of a Radiation Protection Program to insure the health and safety of both the researcher and members of the general public. The potential and real harm associated with radiation is the one of the most studied and investigated fields involving human detriment, yet at the same time providing enormous benefits in science, industry and medical fields, including the healing arts.

The objective of the Radiation Safety Office is to keep radiation exposures to all individuals As Low As Reasonably Achievable (ALARA). The Radiation Safety Office maintains a well-established regulatory compliance program and works with the campus Radiation Safety Committee to ensure campus compliance with state, federal and local regulations. This objective is met by adherence to basic protection principles and practices including controlled access of personnel, property, and material; inspection and surveys of laboratories; and personnel training. The office conducts online and one-on-one training with personnel requesting to use radioactive sources and radiation producing devices; monitors individual exposures through dosimetry; and conducts quarterly inspections of authorized users. The office also assists the Environmental Affairs Unit in the disposal of unneeded radioactive sources as well as radioactive waste. Table 3 presents selected program statistics for fiscal year 2005.

An essential element of maintaining campus compliance and keeping personnel safe from unnecessary exposures is by staying abreast of radiation regulations, standards and recommended practices. The Radiation Safety Officer actively participates in the Penn State Roundtable which enables Radiation Safety Officers (RSOs) from across the country to meet and exchange ideas and practical methods of radiation protection. Our participation in the past has led to sharing our unique on-line and practical one-on-one training programs with other institutions, discussing confidential information on current security of radioactive materials, and assisting new and seasoned RSOs with problems faced in their radiation protection programs.

As part of its ongoing mission, the Radiation Safety Office continues to train staff in new areas of protection in both ionizing and non ionizing fields of safety. This year the Health Physics staff attended training with the Laser Institute of America for laser safety. Lasers are one of the premier tools used by faculty, staff and students in chemistry, physics, engineering and space science. The University is home to class III and IV lasers which are the two most hazardous classes of lasers according to OSHA and the American National Standards which sets the recommendations under which personnel may be exposure to laser light.

The Health Physics staff continues to face new challenges in radiation protection. This past year our staff used its combined expertise in radiation protection in working side by side with faculty, staff and students on new experiments involving the University of Maryland Training Reactor, UMTR. Helping to guide students in their

work, consulting with and advising faculty and staff on ALARA principles and acceptable exposure practices, and actively monitoring exposures and helping to direct the removal of the UMTR thermal plug provided a new challenge to our staff. All exposures and

potential contaminations to personnel were maintained well within acceptable regulatory limits. The Radiation Safety Office is continuing its successful support of the reactor program and its new and special experiments into the new fiscal year.

**TABLE 4 Radiation Safety Program Selected Statistics
July 1, 2005 – June 30, 2006**

Principal Investigators	100
Personnel Trained	81
Personnel in Dosimetry Program	650
Radiation Packages Received	241
X-ray and Accelerator Inspections	21
Laboratory Inspections	506



Risk Management and Communications

The Risk Management and Communications (RM&C) unit is responsible for the management of risks to and loss of human, property and financial resources to the University.

Risk Management is the planning, organizing, leading and controlling of operations of the organization in order to minimize the adverse effects of accidental and avoidable losses without unduly curtailing or modifying activities necessary to the mission of the University. The Risk Management and Communications (RM&C) unit is responsible for the management of risks to and loss of human, property and financial resources to the University. RM&C accomplishes this by: monitoring the dynamic environment of the university on an on-going basis to identify sources of loss to UM property, employees, students and the general public; evaluating the impact of losses in terms of frequency and severity; and developing the most effective and economical means to attempt to control the causes of loss through loss control efforts. Additionally, RM&C provides consultation and information and advises and assists university administrators, department chairs, faculty, staff, students, affiliated State agencies, and the general public on appropriate risk management policies, procedures and issues related to campus safety, tort claims, insurance claims, insurance coverage, workers' compensation, loss control, and general risk management issues.

RM&C services include: vehicle, property loss and tort liability claims processing, workers' compensation claims processing and case management, data tracking and accident trend analysis, scientific diving program development and coordination, business continuity/disaster recovery planning, accident investigation, coordination of EH&S training, management of DES IT and LAN support, research, athletic, special event risk assessments, student activity review, and risk management consultation.

During fiscal year 2005-2006, a number of risk management projects and/or initiatives were accomplished:

- In October 2005, Risk Management hosted a Scientific Diving Symposium entitled Diving in Polluted Waters. The symposium was attended by nearly 100 scientific, public safety, police and military divers from around the State of Maryland and Delaware to discuss risks, best practices, and equipment use when diving in polluted waters. The symposium was sponsored by the Department of Environmental Safety, the UM Dive Control Board, the UM Cooperative Extension Service, the UM Sear Grant Program, and the Maryland Scuba Association.
- The Tenant User Liability Insurance Program (TULIP) became fully functional in centralizing and coordinating multiple campus booking groups in implementing the process and maintaining oversight of the web-based program for providing the means for procuring affordable insurance coverage to individuals or groups using UM campus facilities for their events.
- Worked with the Maryland Emergency Management Agency Hazard Mitigation Team to determine, assess and explore mitigation actions to State-owned facilities on the UM campus that are most at-risk of multiple hazards, and those at-risk of flash and riverine flooding that can be included as possible mitigation projects in the 2007 version of the State Mitigation Plan.
- Expanded risk management activities into Student Affairs in working with Campus Programs on risk issues and Fraternity and

Sorority Life and made presentations to Greek Community House Directors on risk issues involving students.

- Rewrote and updated the online Chemical Hygiene Training Program for Laboratory Workers.
- Added a “Documents in Spanish” section to the DES web site and added several commonly requested documents to the site in Spanish.
- Individuals were provided the opportunity to view their own DES training record and to provide their supervisor with the ability to view the record.
- A RSS (Really Simple Syndication) feed was added to the DES web site to better communicate additions to the web site, current events and other safety news and information.

- Presented “Best Risk Management Practices for Agency Success” at the annual State Employee Risk Management Association conference at Towson University.
- Risk Management proposal and nomination was selected by SERMA to award UM Dining Services, the Award of Excellence for their valuable contribution to the safety of the workplace.
- UM received a 2005 Corporate Safety Recognition Certificate for demonstrating a commitment to employee health and safety by achieving an Incidence Rate below the nation average in our industry.



**TABLE 1 RM&C Selected Statistics
July 1, 2005 – June 30, 2006**

WORKERS' COMPENSATION

	CALENDAR YEAR 2005 DATA
Accidents Reported	541
OSHA Recordable Accidents	150
Lost Work Days	1,196
Claims	65
Settlements	15
Total Settlements Paid	\$154,200
Total Medical Paid	\$434,527
Total Compensation Paid	\$129,201

INSURANCE SERVICES

	CLAIMS FOR 2005
Total Auto Accidents	219
Total Auto Claims	75
Total Tort Claims (General Liability)	19
State Insurance Trust Fund Claims	12
FY 2005 Auto Claims above \$10,000	3
FY 2005 General Liability Claims above \$10,000	0
FY 2005 SITF Property Claims above \$100,000	3

Selected SITF Claims Detail 2005

- July 4th Campus Wide Flooding from Storm Drainage Backup – \$301,753
- Hartwick Bldg (Leased) Frozen Pipes Brake – \$143,997
- LeFrak Sprinkler Caused Flooding – \$100,000
- Norovirus Campus Wide Bldg Cleanup – \$85, 274
- Anne Arundel Hall Sprinkler Pipe Rupture – \$34,974

SCIENTIFIC DIVING

- Neutral Buoyancy Research Facility – 2005 Dive Statistics
 - Dive time in minutes: 31,110
 - Dives logged: 546
 - Number of divers logging dives: 25
 - UM Training Dives UM Divers - 2005 Dive Statistics
 - Dive time in minutes: 300
 - Dives logged: 6
 - Number of divers logging dives: 4
- All dives conducted on open circuit scuba

IT & COMMUNICATIONS

- During CY2005, DES's 16 on-line training programs were taken over 915 times.
- DES receives on average, 175,000 hits to the web pages each month and over 2.1 million visits annually, including 850,000 users on campus.
- DES web site has over 730 dynamic web pages; the DES Intranet contains over 440 pages.



Department of Environmental Safety Fiscal year 2006 Budget

SALARIES AND BENEFITS

UNIT	BUDGETED
Business Management and Customer Service	401,445
Biological Safety	87,406
Fire Marshal Office	126,775
Environmental Affairs	423,843
Occupational Health and Safety	448,514
Radiation Safety	200,987
Risk Management and Communications	278,008
Total Salaries and Benefits	1,966,978

OPERATING AND EQUIPMENT

UNIT	BUDGETED
Business Management and Customer Service	99,787
Biological Safety	13,050
Fire Marshal Office	7,350
Environmental Affairs	82,750
Occupational Health and Safety	34,000
Radiation Safety	11,150
Risk Management and Communications	6,500
Total Operating and Equipment	254,587

TOTAL DIRECT EXPENSES 2,221,565





