

## **DETAILED MITIGATION PRIORITIES for Oklahoma State University**

**As part of a FEMA Multi-Hazard Mitigation Plan, we have been collecting information about OSU to better protect our campus from a variety of disasters. To be eligible for federal disaster funds, OSU is now required to have a Mitigation Plan. In addition to an exhaustive list of Mitigation Activities, we were also required to prioritize and detail ten Mitigation Activities that would be implemented first, should the funds become available.**

### **Priority 1**

**Title: Hazard-Based Evacuation Planning**

**Responsible Department: Arts & Sciences**

**Goal:** Protection of life, safety and health. Create detailed evacuation plans for buildings with hazards (hazardous chemical, venomous snakes, radioactive or biological agents and/or other sources of potential serious hazards).

**Objectives:**

- Identify and/or verify specific potential hazards in buildings used by Arts & Sciences, CEAT, Veterinary Medicine and other buildings containing such hazards.
- Create a master list of information on potential hazards in conjunction with academic deans, Institutional Research, EHS, and OSU Police Department.
- Develop evacuation plans based on known hazards and plausible emergency scenarios.
- Identify safety officers in each building/department who will maintain the hazard lists in compliance with Oklahoma Statute, Title 40, Sections 401-424 and conduct evacuation drills twice annually.
- Test evacuation plans.
- Maintain hazard list and evacuation plans in the OSU and Stillwater E.O.C. and provide to City of Stillwater first responders as needed (fire, EHS, police department).

**Justification:** Such information and plans are critical in cases of terrorist activity, fire, tornados, severe wind storms and earthquakes for the safety of first responders as well as faculty, staff and students in or near these labs and classrooms.

**Cost:** \$100,000

**Timeline:** 18 months

## **Priority 2**

**Title: Development of a backup source of electricity in case of a prolonged outage.**

**Responsible Department: All Colleges**

**Goals:**

- The protection of faculty and staff research projects conducted in biosafety level 2 and 3 research laboratories.
- Protection of equipment and research items stored in selected freezers/refrigerators used for essential research.
- The protection of HVAC systems necessary to safely operate laboratories working with biohazards.

**Objectives:**

- Install 2 diesel generators with appropriate switching gear to maintain electrical service to research laboratories.
- Identify the needs within each department for maintaining electricity to valuable equipment/collections.
- Determine the necessary number of portable generators required to maintain power to critical equipment/collections.
- Develop a protocol for movement of generators to appropriate areas in the case of an emergency

**Justification:** Many of the science departments have collections of extremely valuable tissue samples stored in ultra-cold freezers. If there is a prolonged power outage (>48 hours) many of these tissues would begin to degrade and become useless. As many of these biological samples are irreplaceable, long-term power outages could be detrimental to many researchers. Moreover, loss of these biological samples would be a loss to society as a whole.

**Cost:** \$4 million

**Time Line:** 1 year

### **Priority 3**

**Title: Create and provide lab safety classes for select undergraduates and graduate students involved in laboratory classes.**

**Responsible Departments: Academic Deans, Environmental Health & Safety Services and VP Research.**

**Goal:** To protect the life and safety of undergraduate and graduate students through safety training involving hazardous chemicals, materials and equipment in laboratory settings.

**Objectives:**

- Identify and evaluate current training efforts and materials (Environmental Health and Safety and University Safety Committee)
- Develop committee of lab instructors and safety officers (Deans and Department Heads)
- Develop systematic training guidelines for review by faculty (University Safety Committee)
- Department Heads and key faculty to finalize training materials by discipline, type of experiments or unique hazards
- Training fully implemented by fall 2008
- Evaluate compliance and effectiveness of new training in November 2008 and April 2009 (University Safety Committee and Environmental Health and Safety)

**Justification:** Create college and departmental materials and training modules for lab-specific and mandatory training for all graduate and undergraduate level students conducting research in labs that contain hazardous materials and equipment. These classes will include components relevant to the safety hazards present in the lab used by the graduate and undergraduate students. Topics can include, but are not limited to, hazardous chemical storage, hazardous chemical disposal, high pressure systems, radiation safety, and electrical safety. The completion of safety modules germane to respective colleges, departments, or research teams will be approved either by EHS, the University Safety Committee and/or the Office of the Vice President for Research, whichever is applicable.

**Cost:** \$50,000

Graduate-level research is often highly specialized and can involve a variety of hazardous materials, specifically in science and engineering programs. Therefore, it is essential that graduate students conducting research in these fields receive adequate training regarding the hazardous materials and equipment utilized in the process of their research.

**Timeline:** 1 year

## **Priority 4**

**Title: Mainframe Disaster Recovery**

**Responsible Department: Information Technology**

**Goal:** Ensure the availability and integrity of administrative and enrollment data. Installation of a mainframe, compatible with Tulsa Community College, making it possible for OSU and TCC to enter into a disaster recovery agreement.

**Objectives:**

- Draw up mainframe specifications
- Obtain quote
- Submit to master lease
- Obtain Board approval
- Order and receive

**Cost:** Mainframe - \$842,000; disk storage - \$430,000; tape drives for backup - \$176,000. From the costs listed, it is estimated that approximately 25% of these costs are attributed to the disaster recovery efforts - \$494,000.

**Timeline:** 1 year

## **Priority 5**

**Title: Call Routing System for Business Continuity**

**Responsible Departments: Information Technology, Division of Business & Finance**

**Goal:** Enhance business continuity efforts

**Objectives:**

- Identify the group that will choose the key phone numbers for OSU ..... 2 weeks
- Work with the selected group to identify the key phone numbers at OSU ..... 3 weeks
- Consult with AT&T on implementation ..... 3 weeks
- Implement ..... 3 weeks
- Test ..... 3 weeks
- Develop documentation and distribute ..... 2 weeks

**Justification:** In the event of OSU phone interruption (complete outage) this agreement would enable pre-defined phone numbers to be routed to any area where communication is available through AT&T.

**Cost:** \$75,000 for 3 year contract for up to approximately 12 numbers

**Timeline:** 4 months

## **Priority 6**

**Title: Purchase of AED Units**

**Responsible Department: Vice President for Student Affairs**

**Goal:** Save lives in cardiac-related emergencies.

**Objectives:**

- Purchase forty (40) units to be strategically placed in high-traffic areas (e.g. Colvin Center, Gallagher-Iba Arena, Boone Pickens Stadium, Res Life) throughout campus and in OSU PD squad cars and EHS units.
- Train appropriate staff in proper use.
- Maintain equipment and recertify.

<b>Cost:</b> \$1,035 per unit x 40.....	\$41,400
\$147 per battery, per unit .....	5,880
\$30,000 training and maintenance of units .....	<u>30,000</u>
	\$77,280

**Timeline:** 1 year

## **Priority 7**

**Title: Wildfire Prevention and Wildland/Urban Interface Fuel Reduction**

**Responsible Department: CASNR**

**Goal:** Protection of life, health, and property from catastrophic wildfires affecting OSU property and the City of Stillwater.

### **Objectives:**

- Obtain funding to develop and continue a program to inform the public on protection of property, fuel load reduction and development of prescribed burn associations.
- Prepare and provide: handouts, workshops, television and radio spots, newspaper articles, mailings, development and demonstration areas to educate the public and private sector on wildfire management. .... \$ 20,000
- Mechanical control of cedar to reduce volatile fuels..... \$100,000
- Development of prescribed fire schedule for lands adjacent to wildland and urban interface areas..... \$25,000
- Two trucks and plumbing units ..... \$150,000
- Fire equipment, radio, drip torch, weather kits, and clothing ..... \$30,000
- Equipment for fire breaks installation..... \$100,000
- Skid steer, cedar cutter, grapple hook..... \$75,000
- Labor 3 @ 25,000 x 4 years ..... \$300,000
- Total..... \$800,000

**Justification:** Assist with suppression of wildfires and to reduce fuel loads through mechanical and prescribed fire methods on University property and near private property to minimize wildfire risks to OSU, research interests and the City of Stillwater.

**Cost:** \$800,000

<b>Timeline:</b>	Public Awareness	6 months – 1 year
	Preventative initiation	6 months – 1 year
	Implementation	1 – 4 years

**Priority 8**

**Title: Sprinkler system for McElroy Hall**

**Responsible Department: Veterinary Health Services**

**Goal:** Protect property and human life

**Objective:** Sprinkler system will be installed in all non-protected offices, classrooms and laboratories to decrease the spread of fire and mitigate damage from fire.

**Cost:** \$750,000

**Timeline:** 18 months

**Priority 9**

**Title: Campus-wide Participation in Online Classroom Environment**

**Responsible Departments: Information Technology, Academic Affairs**

**Goal:** Sustain learning activities in event of a disaster such as a pandemic.

**Objectives:**

- Identify campus on-line curriculum committee ..... 1 month
- Work with committee to identify courses requiring D2L presence ..... 1 month
- Review storage requirements
- Order if necessary
- Implement ..... 2 months
- Train all faculty and student in D2L functionality ..... 3 months
- Assist faculty in course creation spanning 3 main semesters ..... 17 months

**Justification:** Ideally, every course is to have a presence in the Online Classroom environment so that in the event of a disaster, learning efforts could continue.

**Cost:** \$400,000

**Timeline:** 2 years

## **Priority 10**

**Title: Alkaline tissue digester for Oklahoma Animal Disease Diagnostic Laboratory**

**Responsible Department: Veterinary Medicine**

**Goal:** Provide effective means of animal carcass disposal

**Objective:** Install an alkaline tissue digester with a capacity large enough to handle several hundred pounds of animal tissue each cycle. The digester would be installed at the Oklahoma Animal Disease Diagnostic Laboratory.

**Justification:** Provide a safe and efficient method of disposing of animals killed during a disaster.

**Cost:** \$800,000

**Timeline:** 18 months