

# Tennessee Tech University Agriculture Emergency Operations Plan

*October 2014*



**TTU** TENNESSEE TECH  
UNIVERSITY

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**TTU** TENNESSEE TECH  
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# 1.0 Basic Plan

## Letter of Promulgation

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Tennessee Tech University (TTU) is committed to protecting the safety, security, and welfare of its campus, farms, and community members. This Emergency Operations Plan (EOP), herein referred to as the Plan, was developed to provide the TTU farms a means to mitigate, prepare for, respond to, and recover from emergencies. This Plan supplements the TTU Emergency Operations Plan (EOP). This Plan's development is to enhance preparedness and response capabilities for emergency situations that specifically affect the farms.

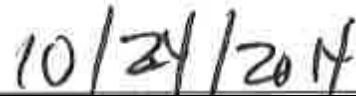
In accordance with Homeland Security Presidential Directive (HSPD) – 5, the Plan incorporates National Incident Management System (NIMS) concepts and principles, and utilizes the Incident Command System (ICS) for management of emergency events. The Plan provides the opportunity for TTU's farm community to better prepare for and to quickly recover from disasters.

Faculty, staff, and students are encouraged to continue their on-going efforts in emergency preparedness, planning, and training in order to enhance disaster response and recovery. Those receiving the Plan shall review and become committed to the Plan's goal for protecting the welfare of the farm and the University's community. The Plan will become effective immediately after the final approval by the TTU President.



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Dr. Philip Oldham, President  
Tennessee Tech University



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Approval Date



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Jim Cobb, Director of Environmental Health  
and Safety  
Tennessee Tech University

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Rusty Chilcutt, Farm Manager  
Tennessee Tech University  
Farm Emergency Response Coordinator

## Approval and Implementation

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This is Tennessee Tech University's Agriculture EOP. You have received a copy of the Plan because you will have important responsibilities during a farm crisis or disaster. Please read this document immediately, and re-read it periodically, so that you are thoroughly familiar with the contents of the Plan and fully understand your specific role.

The Plan set forth in this document is designed to rapidly and efficiently mobilize the University's resources, both personnel and equipment, to meet an emergency that may confront TTU's farms. The effectiveness of this Plan is dependent upon the full and rapid response of all personnel. In the event that a TTU farm is faced with an emergency, the TTU Director of Environmental Health and Safety and the Farm Emergency Response Coordinator, acting under the guidelines of this Plan, is authorized to implement those measures necessary to prepare for an emergency to minimize loss, to react to the emergency to save lives and property, and recover rapidly to minimize disruption of normal activity. Each member of the farm community who has a part in these important tasks will give matter his or her full and complete attention and support.

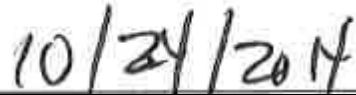
This Plan is brought into action when:

- The President, or in his/her absence the appointed designee, declares an emergency for the purpose of safeguarding the lives and property of TTU's agricultural system, or to maintain orderly conduct of business.
- The EOP plan is activated.
- Governmental officials proclaim a state of emergency that affects the University, either locally, city-wide, regionally, or statewide.



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Dr. Philip Oldham, President  
Tennessee Tech University



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Approval Date

## Record of Changes

This Plan will be staffed, revised, exercised, readopted, and reissued annually. All updates to this document must be tracked and recorded utilizing the form below. Revised Plans should be distributed to individuals and organizations that have received previous versions of this Plan as identified in the [Record of Distribution](#).

Change Number	Date of Change	Page or Section Changed	Summary of Change	Name of Person Authorizing Change
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## 1.1 Purpose, Scope, Situation Overview, and Assumptions

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### 1.1.1 Purpose

This document, with its associated information and contingencies, constitutes the Emergency Operations Plan for TTU farms. This Plan is to be implemented to deal with emergencies and disasters, and is intended to protect lives and property through effective use of available manpower and resources during emergency operations. It is placed into operations whenever a natural or manmade emergency or disaster affecting the farm reaches proportions where such a situation cannot be controlled by routine measures.

This Plan incorporates NIMS concepts and principles, and the ICS organizational structure for handling major emergencies which disrupt normal operations at the farm such as, but not limited to: tornadoes, floods, earthquakes, hazardous materials incidents, and other potential disasters.

The overall Plan begins with the end state of the emergency in mind. It is recognized that TTU farms present unique hazards and vulnerabilities that the TTU main campus does not encounter. With that in mind, the Plan is meant to align and follow the EOP whenever possible. The purposes of the Plan are:

- Protect the lives and property of every person and animal on the farms and to preserve the orderly continuity of farm functions through coordination between departments and local first responders.
- To establish a mutual understanding of authority, responsibilities, and operations of TTU farm personnel during emergencies and disasters.
- To establish an emergency organization to direct and control operations during the emergency situation by assigning responsibilities to specific entities.
- To provide a basis for the conduct and coordination of emergency operations and the management of resources during emergencies and disasters.
- To provide contingencies for major potential disasters that may affect TTU farms.
- To identify the TTU farms' roles in coordinating emergency operations with University departments and outside agencies.

This Plan consists of the basic plan, annexes, and appendices. The basic plan provides an overview of the farms' approach to emergency response and operations. It explains the policies, organization, and tasks that would be involved in response to an emergency. The hazard specific annexes focus on special planning or response needs generated by the subject hazard. The appendices give definition to the terms and acronyms used throughout the plan, and are the location for supporting checklists, figures, maps, and forms.

### 1.1.2 Scope

This Plan is brought into action by declaration of an emergency by the President, or in his/her absence, the appointed designee. This Plan and all its contents applies to TTU owned and leased farms located in Tennessee. This Plan is designed to address a comprehensive range of hazards that could affect the University's farms. The Plan includes procedures for responding to a range of levels of emergency, regardless of the size, type, or complexity. Personnel or partners who have a role will have access to and be knowledgeable of the Plan.

This Plan should integrate seamlessly with the EOP. The EOP’s policies and procedures supersede this Plan. If any portion of this Plan is held invalid by judicial or administrative ruling, such ruling shall not affect the validity of the remaining portions of this Plan.

**Nothing in this Plan should be construed in a manner that limits the use of good judgment and common sense in matters not foreseen or covered by the elements of this Plan.**

### 1.1.3 Situation Overview

#### 1.1.3.1 University Farms

TTU’s School of Agriculture consists of two main farms, the Shipley Farm and Oakley Farm. In addition to these farms, TTU may rent farm land in other locations based on a year-year lease. These farms not only provide a place for students to gain hands on experience, but some of the farms’ livestock and crops are sold for consumption. TTU’s cafeteria serves ground beef, tenderloins, sausage, bratwurst, and pork loins produced on TTU farms, marketed as a “Tech Pride” product. Products are also sold at TTU events and are sold to other retail outlets such as the IGA on North Washington Avenue and the IWC on Willow Avenue in Cookeville.

In terms of crops and livestock, the farms grow hay, soybean, and corn and livestock consists of cattle, sheep, and swine. Estimated counts of livestock are depicted below:

Farm	Livestock	Winter	Spring	Summer	Fall
Shipley Farm	Cattle	100	175	176	100
	Sheep	40	75	75	40
	Swine	75	75	100	100
Oakley Farm	Cattle	450	750	750	450

Population on the farm fluctuates throughout the year due to enrollment and events held at the farms. Estimated populations for the numbers of students and employees/non-student volunteers are listed in the tables below. A change in population could affect plan implementation.

Student Population:

Farm	Winter	Spring	Summer	Fall
Shipley Farm	12	12	3	12
Oakley Farm	4	4	0	4

Employees/Non-Student Volunteers Population:

Farm	Winter	Spring	Summer	Fall
Shipley Farm				
Oakley Farm				

Four homes are located on the Shipley Farm. Approximately 14 people (10 students and 1 family) live there during winter, spring, and fall. During the summer, only 3 students live on the farm, as well as the family. The farm manager, referred to as the Farm Emergency Response Coordinator in this Plan, lives on Shipley Farm. Two homes are located on the Oakley Farm. During winter, spring, and fall, four students live at the farm; currently no residents live on the Oakley Farm during the summer. The number of residents on the farms may change year to year.

### **Shipley Farm**

The Shipley Farm, also known as the Tech Farm, is located at 2390 Gainesboro Grade, Cookeville, TN. The major transportation routes that are near the Shipley Farm are Interstate 40, U.S.70/State Route 24, and Tennessee State Routes 111, 135, 136, and 290/Gainesboro Grade. The farm is approximately 2-4 miles from the TTU Main Campus.

The Shipley Farm is 300 acres and consists of the following:

- Hyder-Burks Agriculture Pavilion
- Waters Organic Farm
- Heritage Farm
- Nursery Research and Service Center

#### Hyder-Burks Agriculture Pavilion:

The W. Clyde Hyder-Tommy Burks Agricultural Pavilion is a multipurpose facility, which consists of 3.5 acres under one roof, and is the most critical infrastructure for the farm. The facility is operated by the School of Agriculture at TTU as a teaching facility Monday through Friday. The facility may be rented for various public activities, such as horse shows, expositions, rodeos, craft fairs, livestock shows and sales, class reunions, meetings, wedding receptions, showers, and more.

The pavilion consists of a 125' x 250' indoor show arena with a dirt floor that can be covered upon request. The arena will seat approximately 2,096 people with comfortable, permanent stadium seats. The arena is equipped with restrooms, showers, concession stands, and a spacious show office with heat and air conditioning.

Adjoining the show arena is a 36,000 square foot clear span covered livestock barn. It is equipped with 133 stalls that are 10' x 10', 37 box horse stalls, 399 tie rings for haltered cattle, two 80' x 80' concrete wash racks with tie rails, electrical receptacles, Public Address system, lighting, restrooms, and showers. The barn has a covered walkway to the indoor arena and is equipped to handle any type of livestock.

Adjoining the livestock barn is the Robert M Harrison Sr. Sales/Demonstration Arena. The sales arena consists of a permanent sale ring, sales office, portable bleacher seating for 300 people, central heat and air conditioning. This arena is used for cattle, horse, goat and sheep sales, demonstrations, lectures, meetings and many other activities.

The Pavilion also consists of a 100' x 40', 4,000 square foot multipurpose room. This room is equipped with folding tables and chairs, and a kitchen area. It will accommodate 300 people, and meals may be catered by an outside caterer. It is also heated and air conditioned and may be divided into four smaller rooms. This room may be used for meetings, seminars, political rallies, proms, showers, wedding receptions, auctions, banquets, classes, and many other activities.

Located near the main entrance of the Hyder-Burks Ag Pavilion, the picnic shelter at Shipley Farm contains a screened area for food preparation and service. Two rows of picnic tables seated under a covered shelter with tall oak trees provide ample shade for outside activities. Restrooms are located just beyond the shelter.

#### Waters Organic Farm:

The Waters Organic Farm uses 5 acres of the Shipley Farm. This section of the farm is used to conduct organic research.

#### Heritage Farm:

TTU is one of only three institutions in the U.S. approved to offer a degree in Agritourism. The TTU School of Agriculture created the Heritage Farm to support agritourism education and to preserve history for the community. The Heritage Farm uses approximately 9.4 acres of the Shipley Farm including the Shipley barn, to establish a working replica of an 1830's Upper Cumberland farmstead. The Heritage Farm recreates a snapshot of crop and livestock production of the early 1800s and introduces current generations to the culture and lifestyle of that era.

#### Nursery Research and Service Center:

The TTU Nursery Research and Service Center serves the horticulture industry of Tennessee. It uses 2 acres of the Shipley Farm and is located across the road from Hyder-Burks Agricultural Pavilion. The Nursery Research and Service Center cooperates with State and Federal organizations such as the Tennessee Department of Transportation (TDOT), the United States Department of Agriculture (USDA), and the National Arboretum. The personnel at the Center are available to area garden clubs and home owners for consultation.

### **Oakley Farm**

The Oakley Farm is located at 1051 Monterey Highway in Livingston, Tennessee and is part of Overton County. The farm is an 1800 acre working ranch that is leased to TTU and supports the state's second-largest beef cattle herd of mostly brood cows. The property is in two tracts – about 1,350 acres east of Livingston near Monterey and another 450 acres near Roaring River in Putnam County. The farm is approximately 20 miles from TTU's main campus.

#### **1.1.3.2 Hazards**

The following section depicts potential hazards for TTU farms.

#### **Criminal Activity**

The TTU farms maintain a large amount of farm equipment, supplies, vaccines, and chemicals that can increase the probability of theft on the farms. Criminal activity such as burglary, larceny, use of alcohol/narcotics, motor vehicle theft, or assault is most likely to occur on the farm property. Though the farms are less likely to experience criminal activity that poses a threat of imminent death or serious bodily injury to the TTU farm community, criminal activity such as a bomb threat, active shooter, violent protests/civil unrest, or bioterrorism could have devastating effects and must be planned for.

## Disease Outbreaks

The farms do not have any history with livestock disease. The U.S. is free of most List A diseases such as Foot and Mouth Disease or Classical Swine Fever, though other diseases such as Bluetongue still occur sporadically. Because of the unconventional threats that face us today, a biological terrorism event is low probability, but a high consequence event that must be planned for. Such attacks could be directed against the animals that are housed on the farms.

## Drought and Extreme Heat

- **Drought:** Drought occurs during a period of abnormally dry weather and can cause increased likelihood of fire. Drought can cause drastic agriculture losses. Droughts bring reduced availability of forage and decreased growth rates in animals, and make livestock production less efficient. During droughts, watering holes can dry up and animals may become dehydrated and suffer from starvation.
- **Extreme Heat:** Extreme heat is often associated with conditions that lead to drought. Heat stress can occur in livestock when animals have not had time to adjust to a sudden increase in temperatures. Extreme heat can also cause excessive drain on power supplies, electronic equipment, and can cause chemical canisters to explode.

## Earthquakes

Earthquakes are unpredictable and can strike without warning. Earthquakes can range in intensity from slight tremors to great shocks and may cause death or injuries to animals and humans, and can destroy property and crops. On 6/19/2007, a magnitude 3.3 earthquake occurred approximately 27 miles away from the city center of Cookeville.

## Fires

Fires can be intentionally started, or initiated by several other hazards such as drought, lightning, earthquakes, hazardous materials spills, etc. Farms storing hay must be careful of combustion.

## Flooding

Flooding/flash flooding can have a serious impact on human and animal health and safety, cause crop damage, and move hazardous materials across pastures. Following a flood, there can be a danger of infectious diseases in livestock, and feeds and water may be contaminated. Flooding occurs several times a year in Putnam County, most of which is of the minor flash flood variety. Floods typically affect 25% of the county's population at any given time.

## Hazardous Materials

A hazardous materials accident can occur virtually anywhere within Tennessee. Hazardous materials (e.g., chemical, radiological, biological, and explosive) are transported and used throughout Putnam County and Tennessee. The storage of chemicals on the farm presents an area of interest for individuals who could try to acquire these substances using illegal methods. This increases the probability of the occurrence of a hazardous material incident near the farm.

## **Medical Emergency**

A medical emergency may occur from a simple incident involving one individual, to a disaster involving multiple people.

## **Severe Thunderstorms**

Thunderstorms and lightning occur in every region of Tennessee. Thunderstorms are responsible for significant structural damage to buildings, fires, downed power lines and trees, and flash flooding. Hail usually occurs during severe thunderstorms. The size ranges from smaller than a pea to as large as a softball, and can be very destructive to buildings, vehicles, and crops. The National Oceanic and Atmospheric Administration (NOAA) reports that in June of 1968, golf ball sized hail hit Putnam County, and in 1997, Baseball-sized hail was reported.

## **Tornadoes**

Tornadoes can cause rapid destruction of homes, property, and crops, as well as injury and death to humans and animals. NOAA reports eleven tornadoes, ranging from F0-F4 on the Fujita scale and EF1-EF2 on the Enhanced Fujita scale, since 1955 for Putnam County. The worst tornado was an F4 occurring on April 03, 1974, approximately six miles southeast of Cookeville; 10 people lost their lives, and 51 had injuries.

## **Utility Outage**

A utility failure can happen at any time and involves a disruption to the normal operations of electricity, water, gas, and telephone.

## **Winter Storms**

According to NOAA, Cookeville measured 15.2” of snow fall in Nov 1966, 7.5” in March 1960, and 6” in February 2004. Winter storms can last for days. Animals are subject to wind chill factors, hypothermia, and frostbite just as humans are. Winter conditions may make getting food and water to animals more difficult. Livestock may be lost.

### **1.1.4 Assumptions**

- Safety of human life will take precedence over protecting animals during incidents.
- This Plan has been developed in accordance with the EOP, as amended. This Plan will be staffed, revised, exercised, readopted, and reissued annually.
- The University will appoint a Farm Emergency Response Coordinator who will be charged with ensuring all personnel with roles and assignments laid out in this Plan are trained and knowledgeable of their responsibilities.
- The Farm Emergency Response Coordinator, in concert with the TTU Director of Environmental Health and Safety will coordinate all disaster and emergency response on the farms by and between all agencies and all political subdivisions in accordance with TTU's policies and procedures.
- The resources of local and state government may not be readily available to TTU officials to cope with emergencies and disasters affecting the farms.
- The farms may not be the top priority in the response effort.
- Hazards such as severe weather, floods, tornadoes, winter weather, and other weather related emergencies or natural disasters will continue to occur annually in Tennessee.
- Incidents relating to the storage and transportation of hazardous materials can occur.
- Industrial accidents involving the release of hazardous materials, injuries to both on site personnel and fires affecting the safety, welfare, and economic well-being of the citizens of the surrounding area will require the services of local emergency responders.
- New and currently unknown diseases will continue to be discovered periodically and could affect the animal population either by being discovered at TTU farms or by entering in an animal shipment from elsewhere.
- Sabotage and criminal activity could disrupt response efforts.
- Civil unrest will require intervention by local and state agencies.
- The farms could be subjected to more than one disaster at a time.
- An emergency or disaster can occur at any time of the day or night, weekends or holidays, with little or no warning.
- Since events in an emergency or disaster are not predictable, this Plan will serve only as a guide and may require modification to meet the requirements of the emergency or disaster.
- Basic services, including electrical, water, natural gas, heat, telecommunications, and other information systems may be interrupted.
- Buildings, other structures, and equipment may be damaged.
- Normal suppliers may not be able to deliver goods.
- TTU farm personnel and students are familiarized with the EOP.



## 1.2 Concept of Operations

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### 1.2.1 General

This Plan is brought into action by declaration of an emergency by the President, or in his/her absence, the appointed designee. In an emergency there will be two levels of control. The first level of control will be at the scene of the incident. The second level will be at the Emergency Operations Center (EOC), where the central point of coordination for all emergency operations will be. Emergencies occurring on the farms may require the activation of the EOC. The President activates the EOC, and activation is dependent on the severity of an emergency/disaster.

As identified in TTU's EOP, the EOC is located at the following:

- Primary – Facilities Conference Room, Business & Facilities Building
- Secondary – University Police Office, Foundation Hall, First Floor
- Tertiary – Presidents Conference Room, Derryberry Hall Room 210

The EOC will be headed by the President during potential or actual emergency situations, and will manage all university activities with the assistance of the EOC team members and necessary support personnel. The Vice President for Business and Fiscal Affairs will notify personnel that need to respond to the EOC, and will provide them with the exact location for the EOC at that time. The Farm Emergency Response Coordinator, or his/her designee, may be tasked to work in the EOC when an emergency impacts the farm.

For incidents involving farm specific operations, initial emergency management response will, to the maximum extent possible, be by the Farm Emergency Response Coordinator and farm personnel. The Farm Emergency Response Coordinator will notify the Director of Environmental Health and Safety (the On-Scene Coordinator) of any emergency situation occurring on the farms. Emergencies occurring on farm property will be handled using the farms' resources. When a situation occurs, requiring additional support, the Farm Emergency Response Coordinator will inform the Director of Environmental Health and Safety to request needed resources. If the resources within the farm and TTU main campus become overwhelmed and expended, the University will rely on other resources and capabilities such as from Mutual Aid Agreements (MAA), the private sector, non-government organizations, and local government. The Vice President for Business and Fiscal Affairs is responsible for acquiring resources from outside the University.

TTU and Cookeville-Putnam County Emergency Management Agency (EMA) has a MAA in place. Cookeville-Putnam County Emergency Management Agency's Emergency Operations Plan identifies the use of TTU's- College of Agriculture as a support agency. Responsibilities in the county plan include:

- Provide contact information to appropriate authorities for the opening and use of the Hyder-Burks Agricultural Pavilion for use as a shelter for large animal victims of emergency or disaster.
- Respond appropriate personnel to open and manage the Hyder-Burks Agricultural Pavilion as a housing shelter for large animal victims of disaster. (Any prior contract of Hyder-Burks with an outside entity must be honored as a priority.)
- Provide transportation of and housing for large animal victims of disaster at the Hyder-Burks Agricultural Pavilion.



- Provide agriculture students to help care for any large animal victims of disaster housed at the Hyder-Burks Agricultural Pavilion on a volunteer basis.

In terms of continuity, vital records must be protected. Essential records include livestock ownership, transportation slips, licensure, etc. Most emergencies/disasters will not require significant adjustments to farm operations, though the farm should identify a plan incase significant measures are necessary such as the need to transporting livestock to an off-site location or to quarantine.

As for alert and warning, the University will immediately notify all members of its community of incidents and situations on or near TTU campus property that have the potential to immediately threaten or endanger lives or that threaten severe bodily injury or extensive loss of property.

Should legal issues arise out of emergency operations, questions and concerns should be presented to the University Counsel.

## 1.2.2 Phases of Management

This Plan is based on NIMS concepts and principles, and on emergency management key phases which are:

- Prevention/Protection/Mitigation
- Preparedness
- Response
- Recovery

Each phase is listed below with suggested actions.

### Prevention/Protection/Mitigation

Prevention, protection, and mitigation all consists of actions to eliminate risks, threats, or impacts of hazards. Prevention consists of actions that reduce risk from human-caused incidents, primarily terrorism. Protection consists of actions that reduce or eliminate a threat to people, property, and the environment. Mitigation includes activities that provide a critical foundation in the effort to reduce the loss of life and property from natural and/or human-caused disasters by avoiding or lessening the impact of a disaster and providing value to the public by creating safer communities. Mitigation seeks to fix the cycle of disaster damage, reconstruction, and repeated damage. These activities or actions, in most cases, will have a long-term sustained effect. For this plan, prevention, protection, and mitigation actions are all grouped together under the term mitigation. The TTU farms will conduct mitigation activities as an integral part of the emergency management program. Examples of mitigation activities include:

Action
Identify grant programs for loss reduction measures (if available).
Work with the Tennessee Emergency Management Agency (TEMA) to develop mitigation grant projects to assist in areas most at risk.
Conduct routine maintenance on equipment such as generators, fire extinguishers, and smoke and carbon monoxide detectors.
Verify and update all call down and contact lists routinely.
Identify potential hazards and take steps to remedy them (e.g., remove dead/rotting trees and branches).

Action
Ensure all livestock have identification such as ear tags, tattoos, or brands.
Implement mitigation measures in the rebuilding of infrastructure damaged in incidents.
Identify additional resources that may be needed and develop mutual aid agreements (MAAs) and memorandums of agreement (MOAs)/memorandums of understanding (MOUs) with agencies including private sector and non-governmental organizations.

### Preparedness

The TTU farms will conduct Preparedness activities to develop the response capabilities needed in the event of an emergency. Anticipating what can go wrong, determining effective responses, and developing preparation of resources are critical steps in preparing for the unexpected. Examples of preparedness activities include:

Action
Provide public information and educational materials to students, faculty, and visitors via newsletters, brochures, yearly training, websites, and other media.
Develop, review, exercise, and maintain the Plan.
Assure the viability and accuracy of emergency contact lists, resource lists, and MAAs/emergency contracts.
Alert emergency response personnel and develop a staffing pattern.
Determine any protective action measures that need to be implemented in preparation for the situation.
Ensure students who have animals on campus can be notified of impending hazardous conditions.
Provide emergency equipment and facilities.
Identify necessary provisions for those with disabilities or other access and functional needs, children, individuals with limited English proficiency, household pets, and service animals.
Involve emergency responders, emergency management personnel, other local officials, and volunteer groups who assist TTU during emergencies in training opportunities.
Conduct periodic exercises to test emergency plans.
Complete an After Action Report/Improvement Plan (AAR/IP) after exercises to provide the basis for continuous improvement of this Plan.

### Response

Response is based on the aggressive delivery of resources to the hardest hit areas as soon as possible. The Plan has divided response into two phases, Initial Response and Sustainment. These phases are overlapping and require the constant gathering of information to enable informed actions synchronized across all of the responding personnel and organizations.

**Initial Response Phase:** The Initial Response Phase typically takes place during the first 48-72 hours after the emergency or incident. This timeline is predicated on the severity of the disaster. In the Initial Response Phase the farms must accomplish the following basic tasks:

Action
Preserve life, property, the environment, and the social, economic, and political structure of the community.
Establish communications. <ul style="list-style-type: none"> <li>• Normal methods of communication may not exist. In many disasters cell phone and land line service is disrupted.</li> <li>• Alternative means of communication must be developed in order to fill this void.</li> </ul>
Establish command and control. <ul style="list-style-type: none"> <li>• The Farm Emergency Response Coordinator will work in-conjunction with the Director of Environmental Health and Safety and local authorities to respond to any event that may affect the farm.</li> <li>• Due to the specific nature of the farms, the Farm Emergency Response Coordinator will have the technical subject matter expertise to guide the response on the farms.</li> </ul>
Gain situational awareness. <ul style="list-style-type: none"> <li>• Situational awareness must come from on-scene reports from first responders.</li> <li>• This information is then sent to the TTU EOC for personnel to analyze.</li> </ul>
Notify local emergency response agencies. <ul style="list-style-type: none"> <li>• Upon learning of an accident or emergency on the farms, personnel shall contact appropriate local emergency response agencies. The numbers to these agencies can be found in <a href="#">Appendix A – Emergency Contact Lists</a>.</li> </ul>
Notify TTU emergency management personnel. <ul style="list-style-type: none"> <li>• The Director of Environmental Health and Safety should be notified of any instance on the farms that could result in this Plan being implemented.</li> </ul>
Determine the course of action students and personnel, impacted by the incident, should take. <ul style="list-style-type: none"> <li>• Farm personnel shall take appropriate action to ensure that all students, personnel, and visitors remain safe while the emergency situation is being corrected.</li> </ul>
Take immediate actions to preserve life of students, faculty, and visitors.
Take immediate action to preserve life of animals and prevent further suffering of animals.
Any inquiry for information by media sources will be directed to contact TTU’s Public Affairs Office. Inquiries made concerning employees will be directed to the Office of Human Resources. Inquires made concerning students will be directed to the Office of Student Affairs.

**Sustainment Phase:** The Sustainment Phase takes place after the Initial Response Phase of an emergency or incident. This phase typically takes place after the first 48-72 hours of an incident, but is dependent on the severity of the disaster. In the Sustainment Phase the farms must accomplish the following tasks:

Action
Preserve life, property, the environment, and the social, economic, and political structure of the community.
Support students, personnel, and visitors that cannot care for themselves socially, economically, and or medically.
Support on site and off site animals that have been impacted by the disaster.
Repair critical infrastructure. All infrastructures shall be inspected following a disaster even if it is not believed to have been involved in the disaster itself. This includes all farm vehicles, storage buildings, fences, and housing located on the farms.

Action
Continue to support the response effort.
Acquire food stock for animals left on site if supply on hand is not sufficient.
Acquire sufficient water supplies for animals left on site if necessary.
Arrange for animals not owned by the school to be transported to a location agreed upon by their owner.
Dispose of animal's remains in a manner agreed upon by owner, the State Veterinarian and farm personnel.
Provide support to TTU Main Campus in disaster response efforts.
Resume normal day-to-day-operations.

### Recovery

If a disaster occurs, the farms will carry out a recovery program that involves both short-term and long-term efforts. Short-term operations seek to restore vital services to the farms and provide for the basic needs of the students, personnel, and visitors. Long-term recovery focuses on restoring the farms to normal operations. TTU must be prepared to provide quick recovery to normal business operations. The long-term recovery process includes assistance to students and farm personnel. During the Recovery Phase farm personnel will need to interact with many governmental agencies. It is important for the farms to designate one person to interact with these officials, in conjunction with the Director of Environmental Health and Safety, to ensure a consistent recovery process. Examples of recovery actions include:

Action
Repair damaged infrastructure.
Conduct a hot wash after actual emergencies to provide the basis for continuous improvement of this Plan.
Implement any corrective actions, including changes to Plans, which are identified during the hot wash.

## 1.3 Organization and Assignment of Responsibilities

### 1.3.1 Organizational Structure

ICS will be utilized for managing emergencies occurring on the farms. ICS is a management system designed to enable effective and efficient domestic incident management by integrating a combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure. ICS is used for a broad spectrum of emergencies, from small to complex incidents, both natural and manmade. ICS is used by all levels of government—Federal, State, local, and tribal—as well as by many private sector and nongovernmental organizations. ICS is also applicable across disciplines. It is normally structured to facilitate activities in five major functional areas: command, operations, planning, logistics, and finance and administration as depicted in [Figure 1: Example ICS Organizational Structure](#).

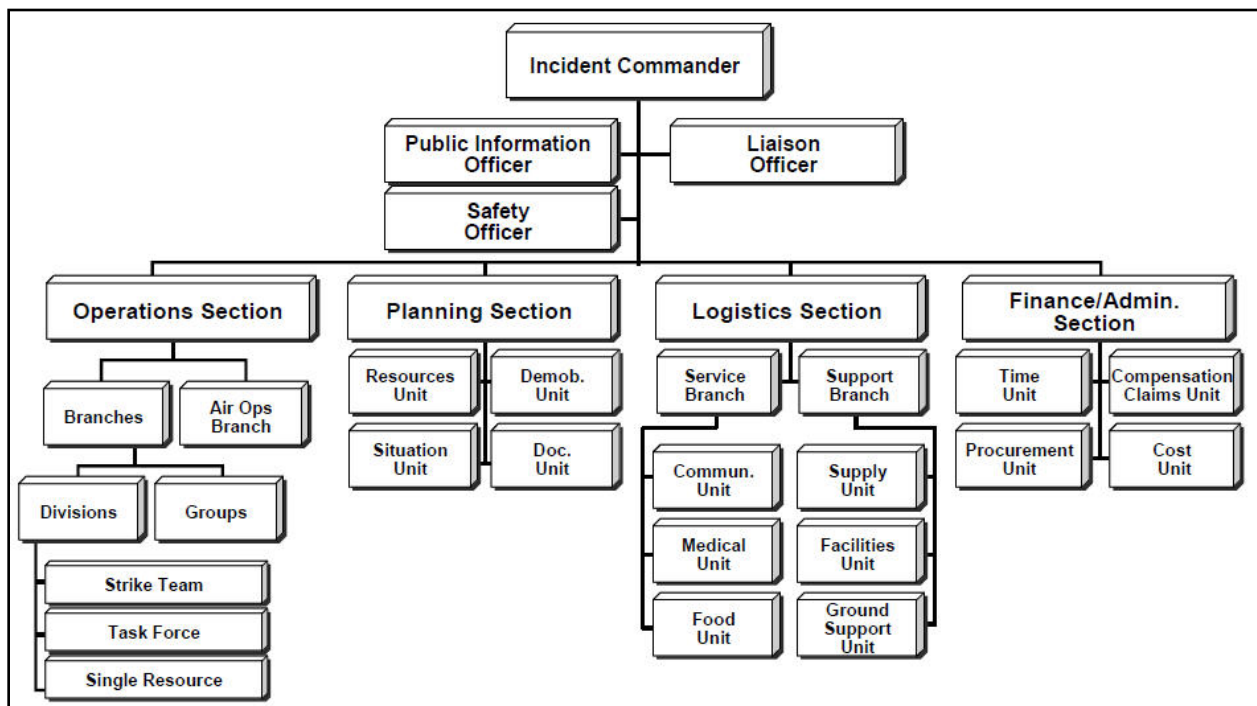


Figure 1: Example ICS Organizational Structure

The ICS organizational structure is flexible. The structure can be expanded from a very small size organization for routine operations to a larger organization capable of handling catastrophic events. For example, a small-scale incident affecting the farms may only require a few key personnel to handle all five major functional areas (each farm personnel could potentially carry out multiple ICS functions). However, larger incidents, such as one involving TTU’s main campus and farms, will require more individuals in the organizational structure to manage the incident. The figure above is intended as informational purposes only; the ICS Organizational Structure for the farm should be structured to best meet the needs of the farm during an incident, as determined by Incident Command, which bases the ICS organization on the requirements of the situation.

## 1.3.2 Assignments and Responsibilities

Those assignments and responsibilities covered under TTU's EOP (e.g., President, Vice President for Business and Fiscal Affairs, Director of Environmental Health and Safety, etc.) shall carry over for this Plan. This section identifies the assignments and responsibilities specifically for farm emergency operations and are as follows:

### Farm Emergency Response Coordinator

The Farm Emergency Response Coordinator, or his/her designee is authorized to implement those measures necessary to prepare for an emergency to minimize loss, to react to the emergency to save lives and property, and to recover rapidly to minimize disruption of normal activity on farm locations. The Farm Emergency Response Coordinator may be located near the incident site to coordinate with emergency first responders in order to assist the Director of Environmental Health and Safety with up to date situational awareness during the incident. In the event that the Farm Emergency Response Coordinator must be present in the TTU EOC, his/her designee will perform their duties for the farm.

The Farm Emergency Response Coordinator is responsible for:

- Controlling farm specific operations for mitigating against, planning for, responding to, and recovering from emergencies and disasters.
- Serving as liaison with the Director of Environmental Health and Safety, local first responders, and government agencies, to ensure an effective timely response to all incidents upon activation of the Plan.
- Working from the TTU EOC if requested, in order to provide the most current situational awareness of events taking place on the farms during a large scale event that impacts the main campus and farm.
- Ensure this Plan is updated annually, and update contact lists for all key points-of-contacts for the farms.
- Participate in training and exercises conducted by the Director of Environmental Health and Safety.

The Farm Emergency Response Coordinator's designated alternates are listed in order of succession below:

- Assistant Farm Emergency Response Coordinator

### Assistant Farm Emergency Response Coordinator

The TTU Assistant Farm Emergency Response Coordinator will support the farms Emergency Response Coordinator with his/her duties. The Assistant Farm Emergency Response Coordinator may be located near the incident site if the Farm Emergency Response Coordinator is requested in the TTU EOC. If the situation dictates it, the Assistant Farm Emergency Response Coordinator may fill the position in the TTU EOC while the Farm Emergency Response Coordinator remains at the incident site.

The Assistant Farm Emergency Response Coordinator is responsible for:

- Supporting the Farm Emergency Response Coordinator as necessary with the overall operation of emergency response to disasters and emergencies at the Farm.
- Assuming responsibility for the overall operation of emergency response to disasters and emergencies on the Farm if the Farm Emergency Response Coordinator is requested in the EOC.
- Reporting to the TTU EOC, when requested, if it is determined the Farm Emergency Response Coordinator will remain on the farms to conduct overall operation of emergency response to disasters and emergencies that take place on the farms.
- Participate in training and exercises as requested by the Farm Emergency Response Coordinator.

The Assistant Farm Emergency Response Coordinator may be one of the following:

- One of the Assistant Farm Managers from Shipley Farm
- The Farm Supervisor from Oakley Farm

### **Farm Personnel**

Farm personnel are responsible for:

- Assisting the Farm Emergency Response Coordinator, and/or designee, with emergencies and disasters. Responsibilities include tasks involved with mitigating, planning, responding, and recovering from incidents.
- Participate in training and exercises as requested by the Farm Emergency Response Coordinator (a list of trained students and volunteers should be maintained).

### **Student/Volunteer Involvement**

Students/volunteers may be available to assist with farm emergency activities.

Students and volunteers have the responsibility to:

- Participate in training and exercises as requested by the Farm Emergency Response Coordinator (a list of trained students and volunteers should be maintained).
- Provide initial first-responder response to events as requested by the Director of Environmental Health and Safety or Farm Emergency Response Coordinator.
- Assist in additional emergency response activities as requested by the Director of Environmental Health and Safety or Farm Emergency Response Coordinator.

## **Private Sector**

The private sector may consist of the following:

- Private owners of critical infrastructure (either a facility that could be impacted by a disaster or used as a resource).
- A response organization (e.g. private ambulance services, environmental clean-up services).
- A regulated or responsible party: owner operators of certain regulated facilities may have responsibility under law to prepare for and prevent incidents from occurring.
- A local emergency organization member.

The private sector has the responsibility to:

- Plan for personal and business disaster preparedness, mitigation, response, and recovery.
- Have knowledge of local emergency response plans and procedures.
- Implement protective actions as requested or required.
- Provide assistance as requested.



## **1.4 Direction, Control, and Coordination**

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The President maintains executive control of this Plan. The President is supported by the Vice President for Business and Fiscal Affairs who has the responsibility for ground level operational implementation and direction of this Plan. The Vice President for Business and Fiscal Affairs will be the primary point of contact for the Director of Environmental Health and Safety who serves as the On-Scene Coordinator. The Farm Emergency Response Coordinator or designee will support the Director of Environmental Health and Safety with farm specific emergency operations.

Emergency operations that are not farm specific will continue to be directed, controlled, and coordinated as indicated in TTU's EOP. For incidents involving farm specific operations, initial emergency management response will, to the maximum extent possible, be by the Farm Emergency Response Coordinator and farm personnel. Additional assistance needed, will be requested through the Director of Environmental Health and Safety. MAAs and/or MOUs can be used. Other sources of assistance may come from main campus, private sector, non-government organizations, Cookeville-Putnam County EMA, Tennessee Department of Agriculture, and as needed, from the TEMA. All University resources will become the purview of the members of the EOC to direct in any way to provide priority protection of life, preservation of property, and restoration of the University and farm operations.

When directed, the Farm Emergency Response Coordinator or designee will operate out of the EOC during its activation to assist with farm specific operations for the University. The EOC may also require the Farm Emergency Response Coordinator or designee to assist the EOC during incidents that involve Putnam County. TTU – College of Agriculture is listed as a support agency under the Emergency Support Function (ESF) 16 – Animal Housing & Care Services Annex of the Cookeville-Putnam County EMA's Emergency Operations Plan.

## **1.5 Information Collection, Analysis, and Dissemination**

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All farm personnel, students, volunteers, etc., should be cognizant and watch for anything that deviates from normal farm operations (e.g., suspicious persons, suspicious packages, ill animals, etc.). Depending upon the type of threat or hazard, immediate notification to first responders will be required (refer to the Hazard-Specific Annexes). In general, information pertaining to farm threats and incidents will be distributed on a need to know basis.

The Farm Emergency Response Coordinator will keep the Director of Environmental Health and Safety notified of all threats and incidents occurring on the farms. The Director of Environmental Health and Safety will comply with University procedures and ensure information is distributed to Executive Advisory Committee members as needed.

Under no circumstances should farm personnel make statements to the media. All information must be vetted through the Public Affairs Office and coordinated with the President prior to release.

## 1.6 Communications

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### 1.6.1 Notifications

It is the intent of TTU to make timely warnings to all members of its community of incidents and situations that pose a potential ongoing threat or risk in which the threat or risk is not likely to require immediate notification in order to greatly reduce the victimization risk to individuals or groups.

In accordance with the Federal law known as the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistic Act - the Clery Act (reference [20 USC 1092](#) and [34 CFR 668.46](#)), it is the intent of TTU to immediately notify all members of its community of incidents and situations on or near TTU campus property that have the potential to immediately threaten or endanger lives or that threaten severe bodily injury or extensive loss of property. These incidents and situations will typically be characterized as:

- Ongoing in nature in that they continue to pose a real or likely threat.
- They may be mitigated by the quick release of information to the campus community.
- The release of information regarding the possible threats in a more immediate fashion may significantly reduce the chances of individuals or groups becoming victims.

The decision to immediately notify the TTU campus community will be made on a case-by-case basis by either the President of the university (or designee), or the TTU Police Department. These decision-makers may also determine that a particular building or structure on campus, an area of TTU campus, the entire TTU campus, or other TTU property should be immediately evacuated in order to create or maintain a safer situation for persons inhabiting those areas. Notification for incidents that pose a grave and immediate threat to people and/or property will be made using any number of notification systems currently employed by TTU; these include:

- **Fire Alarm Notification System:** Pre-recorded messages broadcast over fire alarm system; initialized by the TTU Police Department.
- **Text Alert/Text Messaging:** Service contracted through Rave Mobile Safety to send messages to TTU faculty, staff and students who have signed up for notification; initialized by the TTU Police, Communications & Marketing or Telecommunications.
- **Email:** Messages sent to all current email accounts; initialized by Communications & Marketing.
- **Outdoor Warning System:** Tornado warning tones initialized by Putnam County Emergency Management or the TTU Police and voice broadcast messaging initialized by TTU Police.
- **Automated Phone Call Messaging:** Messages composed by Communications & Marketing and/or the TTU Police; initialized by Telecommunications.
- **Public Address Systems Broadcast:** messages via the public address systems and/or the TTU Police patrol vehicles.
- **Web Pages:** Messages composed by Communications & Marketing and/or the TTU Police; initialized by Communications & Marketing.
- **Social Media:** Messages composed by Communications & Marketing and/or the TTU Police; initialized by Communications & Marketing.
- **Voice Mail Box:** Messages composed by Communications & Marketing and/or the TTU Police; initialized by Telecommunications.

TTU maintains three tornado siren warning towers that are equipped with Public Address Systems; these towers are strategically placed throughout the campus to facilitate communication through the Public Address system. TTU utilizes a private vendor (Rave Mobile Safety) to send emergency notifications to all TTU employees and TTU students via their Rave Mobile Safety accounts. These accounts are established by visiting [ntech.edu/ttualert](http://ntech.edu/ttualert) and registering for the service. The Rave Mobile Safety accounts may be utilized in sending each TTU employee and each TTU student an email in the event the campus community is notified of a situation or an event. The university will post updates during a critical incident on the TTU Alert System.

## 1.6.2 Weather and Broadcast Stations

In addition to the [NOAA's National Weather Service \(NWS\)](#), local radio and television stations provide as a source for weather-related reports.

### Television Stations

- WCTE (Channel 22, Cookeville, TN)

### Radio Stations

- WTTU (88.5 FM, Cookeville, TN)
- WHUB (1400 AM, Cookeville, TN)
- WPTN (780 AM, Cookeville, TN)
- W265BC (100.9 FM, Cookeville, TN)
- WGIC (98.5 FM, Cookeville, TN)
- WHRS (91.7 FM, Cookeville, TN)
- W206AJ (89.1 FM, Cookeville, TN)
- WGSQ (94.7 FM, Cookeville, TN)
- WWOG (90.9 FM, Cookeville, TN)

## 1.6.3 Amateur Radio

The Tennessee Tech Amateur Radio Society (TTARS) is a student organization that operates the amateur radio station WA4UCE. Many club members are members of the Cookeville-Putnam County Amateur Radio Emergency Service (ARES) and work with the Cookeville-Putnam County EMA to provide communications services as volunteers during times of need. Many members are certified SKYWARN Weather Spotters and Advanced Weather Spotters for the NWS providing visual spotting, tracking, and verification of local weather conditions. TTARS operates the two meter repeater, SKYWARN Net on frequency 147.21(+)  
MHz.

## 1.6.4 Farm Communication

Due to the nature of the work conducted on the farms, the Farm Emergency Response Coordinator should consider additional notification efforts for those who are working in the field after an initial message is announced via the University's emergency notification systems. Farm personnel currently use cell phones for communication methods; however, there is potential for persons in the field to not carry their cell phone, have battery power, or have signal in order to receive those messages.

## 1.7 Administration, Finance, and Logistics

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All assets (human resources, facility, equipment, livestock, and crops) of the University will become the purview of the members of the EOC to direct in any way to provide priority protection of life, preservation of property, and restoration of the University and farm operations.

Documentation of records is vital prior to, during, and after an incident. Records will be utilized to create a historical record, recover costs, address insurance needs, and develop mitigation strategies; therefore, detailed documentation of assets is necessary. The Farm Emergency Response Coordinator is responsible for maintaining records on all resources for the farms. Records are to remain current and are updated at least on a monthly basis. Records are kept on the farm and for continuity purposes; a backup of the information is available on main campus. Procedures should be put into place to aid in the tracking and costs of farm resources used during emergency operations.

Assignments and responsibilities identified in the EOP will be followed under this Plan. Incident Command in the field will be instrumental in monitoring and documenting needs and requests to the EOC. Personnel in the EOC will handle and document available resources and requests as well as keep disaster records in relation to damage, expenses, time, assistance, and recovery. All actions taken during and after the emergency must be recorded to maintain a historical log.

After incidents administration should review and discuss response efforts and develop an after-action report. The AAR will review actions taken, identify equipment shortcomings, improve operational readiness, and identify strengths and weaknesses. The Farm Emergency Response Coordinator will be responsible for ensuring after-action items related to the farm are followed up on and are addressed.

## **1.8 Plan Development & Maintenance**

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The Farm Emergency Response Coordinator will perform a review of this Plan to ensure it remains current and make revisions if required, and TTU and the farms shall formally adopt the revised Plan.

Drafting an emergency plan is a community effort and relies heavily on the administrators and experts in the community to provide comprehensive guidance on hazard analysis, exercise design, evacuation planning, emergency management, mitigation, recovery, emergency preparedness, and educational awareness.

Examples of Plan participants can include:

- University President
- Deans, Directors, and Department Heads
- Director of Environmental Health and Safety
- Farm Emergency Response Coordinator
- Building Management Coordinators
- TTU Police Department
- Emergency Operations Center Personnel
- University Legal Counsel
- Director of Cookeville-Putnam County Emergency Management Agency
- Local Emergency Planning Committee
- Tennessee Emergency Management Agency
- City of Cookeville, Mayor's Office
- Cookeville Police Department
- Cookeville Fire Department
- Tennessee Highway Patrol

The Farm Emergency Response Coordinator will update the Plan annually. The Farm Emergency Response Coordinator will coordinate with emergency response organizations/officials and the Director of Environmental Health and Safety to assure the development and maintenance of an appropriate emergency response capability. It is the responsibility of the Farm Emergency Response Coordinator in coordination with the Director of Environmental Health and Safety to assure that the Plan is tested and exercised on a scheduled basis.

The Farm Emergency Response Coordinator, in coordination with the Director of Environmental Health and Safety, will maintain the exercise schedule and assure that the appropriate resources are available to complete these activities. After each drill, exercise, or actual event, a hot wash will take place. Any findings from these post-event reviews will be analyzed and incorporated as deemed necessary into a revised Plan.

## 1.9 Authorities and References

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### 1.9.1 Federal

1. [20 USC 1092.](#)
2. [34 CFR 668.46.](#)
3. [Extension Disaster Education Network.](#)
4. [Federal Emergency Management Agency \(FEMA\), Developing and Maintaining Emergency Operations Plans – Comprehensive Preparedness Guide \(CPG 101v.2\).](#)
5. [FEMA/Emergency Management Institute ICS Review Material.](#)
6. [FEMA Map Service Center.](#)
7. [Homeland Security Exercise and Evaluation Program.](#)
8. [IS-111 Livestock in Disasters.](#)
9. [Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act \(2008\).](#)
10. [Local and Tribal NIMS Integration: Integrating the National Incident Management System into Local and Tribal EOPs and Standard Operating Procedures, V. 1, Department of Homeland Security.](#)
11. [National Climatic Data Center.](#)
12. [National Incident Management System.](#)
13. [National Response Framework.](#)
14. [The Center for Food Security and Public Health; All Hazards Preparedness for Rural Communities.](#)
15. [The Homeland Security Act.](#)
16. [The Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 93-288, as amended.](#)
17. [Title III of the Superfund Amendments and Reauthorization Act \(SARA\) of 1986 and the Comprehensive Environmental Response Compensation and Liability Act \(CERCLA\) of 1980.](#)
18. [USDA, Animal and Plant Health Inspection Service.](#)

### 1.9.2 State

1. [Tennessee Emergency Management Plan.](#)

### 1.9.3 Local

1. [Cookeville-Putnam County Emergency Management Agency’s Emergency Operations Plan September 30, 2005.](#)
2. [Tennessee Tech University Annual Security Report, 2012.](#)
3. [Tennessee Tech University Emergency/Disaster Response Plan.](#)



**TTU** TENNESSEE TECH  
UNIVERSITY

# 2.0 Hazard-Specific Annexes



## 2.1 Criminal Activity

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### 2.1.1 Purpose, Scope, Situation, and Assumptions

#### 2.1.1.1 Purpose

The purpose of the Criminal Activity response guidance is to provide an effective and systematic means for the farms to assess and respond to criminal activity that could pose as a threat or cause imminent death/serious bodily injury to the farm community.

#### 2.1.1.2 Scope

The farms are part of the University; therefore, farm personnel and students shall follow emergency procedures as identified within the EOP. This particular annex provides additional actions that farm personnel should consider to assist with mitigation, preparedness, response, and recovery actions for dealing with farm specific operations.

Nothing in this annex shall be construed in a manner that limits the use of good judgment and common sense in matters not foreseen or covered by this Plan.

#### 2.1.1.3 Situation

The farms maintain a large amount of farm equipment, supplies, vaccines, and chemicals that can increase the probability of theft on the farms. Criminal activity such as burglary, larceny, use of alcohol/narcotics, motor vehicle theft, or assault is most likely to occur on the farms. Though, the farms are less likely to experience criminal activity that poses a threat or causes imminent death/serious bodily injury to the farm community, criminal activity such as a bomb threat, active shooter, violent protests/civil unrest, or bioterrorism could have devastating effects and must be planned for.

#### 2.1.1.4 Assumptions

- In the event of an incident threatening the farm community, property, or infrastructure, the TTU Police Department will respond with available resources and also determine additional resource requirements to effectively manage the incident.
- The TTU Police Department will provide communication resources in support of emergency operation needs.
- Section [2.2 Disease Outbreak](#) response guidance will be referenced by farm personnel for specific responsibilities related to bioterrorism targeting crops and/or livestock.

## 2.1.2 Concept of Operations

This concept of operations applies to criminal activity incidents and operations within the farms. The Farm Emergency Response Coordinator will notify the Director of Environmental Health and Safety when additional resources are required to support the farms with mitigation, preparedness, response, and recovery activities.

### Mitigation Actions

Action	Complete
Coordinate with the TTU Police Department and local law enforcement periodically to provide tours and become familiar with farm grounds and buildings.	<input type="checkbox"/>
Work with the TTU Police Department to identify security vulnerabilities on the farms and develop a plan to minimize susceptibility to criminal activity.	<input type="checkbox"/>
Develop a building floor plan for each facility and ensure the TTU Police Department and local law enforcement can get access to copies.	<input type="checkbox"/>
Minimize vehicular access to areas of the farms in which visitors do not need access (e.g., insuring gates are locked).	<input type="checkbox"/>
Ensure TTU Police Department can access locked areas (e.g., provide key codes, location of keys, or current contact information to gain access).	<input type="checkbox"/>
Minimize the number of entrance areas and implement security measures for events held at the Hyder-Burks Agriculture Pavilion.	<input type="checkbox"/>
Install surveillance cameras near entrance and exit ways of buildings and critical resources.	<input type="checkbox"/>
Ensure farm personnel are aware of specific roles/responsibilities and emergency procedures to take in response to a criminal activity.	<input type="checkbox"/>

### Preparedness Actions

Action	Complete
Watch for suspicious activity or abnormal behavior.	<input type="checkbox"/>
Educate and train farm personnel on procedures for responding to identified threats.	<input type="checkbox"/>
Identify, coordinate, and train with additional law enforcement agencies that may provide assistance in an incident.	<input type="checkbox"/>
Conduct exercises periodically to test response actions for criminal activities (e.g., practice lockdown drills for emergencies such as a shooting/intruder in the building).	<input type="checkbox"/>
Keep the Bomb Threat Checklist accessible at all phones.	<input type="checkbox"/>
Take photographs of buildings and equipment; maintain records.	<input type="checkbox"/>

### Response Actions

Action	Complete
Suspicious Person:	
<ul style="list-style-type: none"> <li>Do not physically confront the person.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Do not let anyone into a locked building/office.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Do not block the person's access to an exit.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Call 911.</li> </ul>	<input type="checkbox"/>

Action	Complete
<ul style="list-style-type: none"> <li>Provide as much information as possible about the person and their direction of travel.</li> </ul>	<input type="checkbox"/>
<b>Threat of Harm/Criminal Activity – In General:</b>	
<ul style="list-style-type: none"> <li>Do not threaten your safety or safety of others in attempt to deter a crime – never put yourself in a dangerous situation.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Move away from the vicinity of incident.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Call 911 immediately to report a crime in progress or if you suspect criminal activity that may be life threatening.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Assist law enforcement response efforts as requested; this typically includes providing information (answering questions, providing maps/blueprints, access to video footage, etc.) and providing accessibility to secured/locked locations.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Do not report any information related to a criminal activity to the media. Any inquiry for information by media sources will be directed to contact the Public Affairs Office.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Do not disturb the scene of any crime.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>After evacuating from buildings or leaving an area due to a criminal act, do not re-enter the area until an “All Clear” is issued.</li> </ul>	<input type="checkbox"/>
<b>Protest/Riots/Civil Unrest:</b>	
<ul style="list-style-type: none"> <li>In the event one or more people begin to protest an issue, or make verbal remarks publically that disturb normal operations on the farm, call 911.</li> <li>Do not overreact; most demonstrations are peaceful. However, peaceful protest can quickly turn into a riot/civil unrest; informing police early can mitigate the situation.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Avoid provoking or obstructing demonstrators.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>In the event a riot/civil unrest occurs indoors, evacuate buildings using established evacuation routes.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>In the event a riot/civil unrest occurs outside and you are inside, move away from doors or windows; if you are outdoors, move away from the vicinity of the incident.</li> </ul>	<input type="checkbox"/>
<b>Terrorist Threats/Terrorism:</b>	
<b>• Toxic/Irritant Gas:</b>	
<ul style="list-style-type: none"> <li>Immediately vacate the building using established evacuation routes.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Call 911.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Account for all building occupants upon arrival at the designated meeting area.</li> </ul>	<input type="checkbox"/>
<b>• Infectious Agents.</b>	
<ul style="list-style-type: none"> <li>Do not move or handle the material. Immediately vacate the building using the established evacuation route.</li> </ul>	<input type="checkbox"/>

Action	Complete
<ul style="list-style-type: none"> <li>▪ Call 911.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>▪ Account for all building occupants upon arrival to the designated meeting area.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>▪ Segregate individuals who may have been exposed to an infectious agent.</li> </ul>	<input type="checkbox"/>
<b>Bomb Threats:</b>	
<ul style="list-style-type: none"> <li>• Most bomb threats are received by telephone, although some may be made via email or letter.</li> <li>• Remain calm and keep the caller on the line as long as possible. Ask the caller to repeat the message and record every word.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• If the caller does not indicate the location of the bomb or the time of detonation, ask for this information.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Advise caller that the building is occupied and detonation could result in death or serious injury to innocent people.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Pay particular attention to background noises, such as motors running, music, or any other noises which may indicate the location from which the call is being made.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Listen closely to the voice to determine voice quality, accents, speech impediments, sex, or unusual characteristics.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• If the caller can be kept talking, ask specific questions for the bomb threat (refer to the <a href="#">3.2.1 Bomb Threat Checklist</a>).</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• It is desirable, but not always practicable to have more than one person listen in on the bomb threat call.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Call 911. The police will initiate search procedures. Under no circumstances should an untrained faculty or staff member attempt to locate and move a suspicious device.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Notify the Director of Environmental Health and Safety.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Do not use hand held radios after receiving a bomb threat, as electronic devices can activate bombs.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Be prepared to evacuate.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Upon an evacuation, account for all building occupants at the designated meeting area.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Do not re-enter the building until given an “All Clear”.</li> </ul>	<input type="checkbox"/>
<b>Suspicious Object:</b>	
<ul style="list-style-type: none"> <li>• Do not touch or disturb the object.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Do not use a cell phone!</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Call 911.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Notify your supervisor.</li> </ul>	<input type="checkbox"/>

Action	Complete
<ul style="list-style-type: none"> <li>Be prepared to evacuate.</li> </ul>	<input type="checkbox"/>
<b>Suspicious Packages and Mail:</b>	
<ul style="list-style-type: none"> <li>Stay calm.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Do not open the letter or package (or open any further), do not shake it, do not show it to others, or empty its contents.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Leave the letter or package where it is or gently place it on the nearest flat surface.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>If possible, gently cover the letter (use a trash can, article of clothing, etc.).</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Shut off any fans or equipment in the area that may circulate the material.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Alert others nearby to relocate to an area away from the site of the suspicious item.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Take essential belongings, like cell phones, keys, purse, etc. with you in case return to your office is delayed.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Call 911.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Leave and close the door to the space containing the suspicious letter or package, cover the threshold area under the door with a towel or a coat if possible, and section off the area (keep others away).</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>To prevent spreading any powder or hazardous substance to your face, wash your hands thoroughly with soap and water.</li> </ul>	<input type="checkbox"/>
<b>Shooter/Intruder/Hostage Situation:</b>	
<ul style="list-style-type: none"> <li>Seek shelter if unable to evacuate (shelter in place).</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Clear all hallways and stairs.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Silence phones and electronic devices.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Lock all interior doors.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Turn off all lights.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Remain calm, quiet and out of sight.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Await further instructions from authorities.</li> </ul>	<input type="checkbox"/>

### Recovery Actions

Action	Complete
Inform the Director of Environmental Health and Safety of criminal activity that occurs on the farms.	<input type="checkbox"/>
Continue to work with law enforcement on investigation/follow-up activities.	<input type="checkbox"/>
Provide mental health service support/information for victims/witnesses to a crime that occurred on the farms.	<input type="checkbox"/>
Take pictures of any damages and identify property losses to insurance companies.	<input type="checkbox"/>
Contact Facilities & Business Services for damages that affect farm buildings.	<input type="checkbox"/>
Decontaminate any buildings or farm equipment.	<input type="checkbox"/>

Action	Complete
In the event animals or crops are harmed:	
<ul style="list-style-type: none"> <li>• Inform the veterinarian of any animal injuries or contamination.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• The veterinarian shall aide the injured animals, and depending upon the situation, will decontaminate or euthanize animals as deemed necessary.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Record any animal deaths.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Dispose of animal bodies in accordance with guidance given by local, state, and federal agriculture officials.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Destroy contaminated crops used for feed.</li> </ul>	<input type="checkbox"/>
Conduct a hot wash and discuss lessons learned to identify additional mitigation activities or updates for the Plan.	<input type="checkbox"/>

## 2.2 Disease Outbreak

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### 2.2.1 Purpose, Scope, Situation Overview, and Assumptions

#### 2.2.1.1 Purpose

The purpose of the Disease Outbreak response guidance is to provide an effective and systematic means for the farms to assess and respond to an epidemiological outbreak.

#### 2.2.1.2 Scope

The farms are part of the University; therefore, farm personnel and students shall follow emergency procedures as identified within the EOP. This particular annex provides additional actions that farm personnel should consider to assist with mitigation, preparedness, response, and recovery actions for dealing with farm specific operations.

Nothing in this annex shall be construed in a manner that limits the use of good judgment and common sense in matters not foreseen or covered by this Plan.

#### 2.2.1.3 Situation

Biological emergencies for rural communities can involve any number of infectious microorganisms. While there are hundreds of bacteria, viruses, fungi, and other pathogens constantly present in our environment, many pose little threat. However, some of these organisms are of special concern, even of emergency priority, based on their ability to rapidly spread or cause severe disease in humans, animals, or plants. Many can lead to large outbreaks or involve new (or emerging) pathogens that may be unfamiliar.

Diseases can be spread by any number of ways, including person-to-person, from the environment (air or contaminated surfaces), insects (e.g., mosquitoes and ticks), even animals (directly or food products). Greater than 60% of all human infectious diseases are zoonotic. Zoonosis refers to diseases that can be transmitted between animals and humans (e.g., salmonellosis, rabies, West Nile Virus, etc.). Contagious diseases are those that can be spread quickly and easily.

The U.S. is free of most List A diseases such as Foot and Mouth Disease or Classical Swine Fever, though Vesicular Stomatitis and Bluetongue still occur sporadically. Because of the unconventional threats that face us today, a biological terrorism event is low probability, but a high consequence event that must be planned for. Such attacks could be directed against the animals that are housed on the farms.

#### 2.2.1.4 Assumptions

- The farms will provide a list of known biological outbreaks that have occurred in the area to the appropriate emergency response organizations.
- Emergency response personnel with biological response training will be needed to respond.
- Cookeville Fire Department Hazardous Materials Team has the training and equipment to respond to a hazardous materials incident and to perform decontamination.
- Cookeville General Hospital will have the capability to perform decontamination.

## 2.2.2 Concept of Operations

This concept of operations applies to disease outbreaks and operations within the farms. The Farm Emergency Response Coordinator will notify the Director of Environmental Health and Safety when additional resources are required to support the farms with mitigation, preparedness, response, and recovery activities.

### Mitigation Actions

Action	Complete
Implement strict biosecurity measures on the farms:	
<ul style="list-style-type: none"> <li>• Restrict access to property, crops, and animals.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Check current veterinarian signed papers, test, and/or vaccinate any new or returning animals to the farms before placing them with resident stock.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Isolate any new or returning animals to the farms before placing them with resident stock.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Develop and implement a visitor tracking system for the farms.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Prohibit visitors near animals unless absolutely necessary.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Have all personnel or allowed visitors wear protective clothing while working with animals on the farms:                             <ul style="list-style-type: none"> <li>▪ Coveralls that can be laundered or disposed of after each use.</li> <li>▪ Rubber boots that can be cleaned and disinfected or disposable protective shoe coverings.</li> <li>▪ Disposable gloves or heavy-duty waterproof gloves that can be disinfected.</li> <li>▪ Head or hair covers help prevent contamination of hair if a shower-out facility is not available.</li> <li>▪ Masks, especially if working in confined areas or in close contact with animals.</li> </ul> </li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Wash hands thoroughly for at least 20 seconds with soap and water.                             <ul style="list-style-type: none"> <li>▪ Before and after working with animals.</li> <li>▪ After removal of any personal protective clothing.</li> </ul> </li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Clean and disinfect clothes, shoes, equipment, vehicles, and hands after contact with animals.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Clean vehicles before leaving the farms.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Do not share equipment with other farms, unless items have been cleaned and disinfected.</li> </ul>	<input type="checkbox"/>



**Preparedness Actions**

Action	Complete
Maintain the inventory of animals on the farms; include vaccination history.	<input type="checkbox"/>
Get vaccinated with the human flu vaccine.	<input type="checkbox"/>
Monitor animals for signs of illness and crops health.	<input type="checkbox"/>
Provide training on monitoring and response efforts for diseases. <ul style="list-style-type: none"> <li>The response needed for a high consequence livestock disease will involve various state and federal agencies in efforts to control the further spread of the disease. To learn more about the necessary response to a high consequence disease, visit the Animal and Plant Health Inspection Service (APHIS) site: <a href="http://www.aphis.usda.gov/">http://www.aphis.usda.gov/</a>.</li> </ul>	<input type="checkbox"/>
Develop/maintain working relationships with Putnam County Agricultural Extension Agents.	<input type="checkbox"/>
Develop/maintain a plan for dealing with mass livestock illness and casualties, to include planning for quarantine and disposal. <ul style="list-style-type: none"> <li>Ensure legality for usage of the compost area at the Waters Organic Farm for quarantining the sick and disposal of the dead animals.</li> </ul>	<input type="checkbox"/>

**Response Actions**

Action	Complete
Be aware for flu-like symptoms in yourself or others working on the farms. These include: fever, cough, sore throat, runny or stuffy nose, body aches, headache, chills, and fatigue.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Limit contact with other people or animals.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Contact your healthcare provider.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Stay home for 7 days after symptoms begin or until symptom free for 24 hours (whichever is longer).</li> </ul>	<input type="checkbox"/>
Avoid contact with animals having signs of flu-like illness.	<input type="checkbox"/>
Notify the farm veterinarian.	<input type="checkbox"/>
Notify Director of Environmental Health and Safety.	<input type="checkbox"/>
Notify the Putnam County Agricultural Extension Office. <ul style="list-style-type: none"> <li>As listed in the Putnam County Emergency Operations Plan, the Extension Office is charged with contacting the Area Veterinarian in Charge (AVIC) and the Cookeville-Putnam County Emergency Management Agency in the event of any emergency disease in animals.</li> </ul>	<input type="checkbox"/>
Cooperate with veterinarians and officials to prevent the disease from spreading further.	<input type="checkbox"/>
Coordinate with farm veterinarian on quarantine recommendations. <ul style="list-style-type: none"> <li>As charged in the Putnam County Emergency Operations Plan, when an animal health situation warrants, the premise and all off-site locations where the animal(s) have been housed will be quarantined or a hold order immediately issued by a state-employed veterinarian or animal health technician of the response team.</li> </ul>	<input type="checkbox"/>
Decontaminate personnel and animals that have had contact with the disease.	<input type="checkbox"/>

Action	Complete
If animals cannot be treated, euthanize based on guidance from the veterinarian.	<input type="checkbox"/>
If criminal activity is suspected, contact local law enforcement personnel.	<input type="checkbox"/>
Implement equipment quarantine for any equipment that may have come in contact with diseased crops. This equipment will need to be cleaned of all soil, plant life, and debris that are on the equipment.	<input type="checkbox"/>

**Recovery Actions**

Action	Complete
Monitor livestock for further symptoms and report any to TTU veterinarian.	<input type="checkbox"/>
Coordinate with local and state agriculture and emergency management officials to determine eligibility of disaster assistance.	<input type="checkbox"/>
Animal disposal:	
<ul style="list-style-type: none"> <li>• Record any animal deaths.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Dispose of animal bodies in accordance with guidance given by local, state, and federal agriculture officials.</li> </ul>	<input type="checkbox"/>
Provide mental health services to personnel, students, visitors, first responders, and others who were involved in the disease outbreak.	<input type="checkbox"/>
Decontaminate or replace equipment used during the response.	<input type="checkbox"/>
Conduct a hot wash and discuss lessons learned to identify additional mitigation activities or updates for the Plan.	<input type="checkbox"/>

## 2.3 Drought and Extreme Heat

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### 2.3.1 Purpose, Scope, Situation Overview, and Assumptions

#### 2.3.1.1 Purpose

The purpose of the Drought & Extreme Heat response guidance is to provide an effective and systematic means for farm personnel to assess and respond to a drought and extreme heat conditions.

#### 2.3.1.2 Scope

The farms are part of the University; therefore, farm personnel and students shall follow emergency procedures as identified within the EOP. This particular annex provides additional actions that farm personnel should consider to assist with mitigation, preparedness, response, and recovery actions for dealing with farm specific operations.

Nothing in this annex shall be construed in a manner that limits the use of good judgment and common sense in matters not foreseen or covered by this Plan.

#### 2.3.1.3 Situation

Drought is defined as a prolonged period of abnormally dry weather, where the lack of sufficient precipitation causes a serious hydrologic imbalance, having consequences which may affect all or a portion of the farms. Drought is a cyclical weather phenomenon, which can have a profound effect upon the farms. Droughts bring reduced availability of forage and decreased growth rates in animals, and make livestock production less efficient. During droughts, watering holes can dry up and animals may become dehydrated and suffer from starvation. Additionally, drought can increase the risk of fire. Drought is progressive in nature, and its presence may not be recognized until it has reached a severe level.

Extreme heat is often associated with conditions that lead to drought. Extreme heat is defined as temperatures that are 10 degrees or more above the normal average high temperature. Heat stress can occur during extreme heat conditions, but it can also occur at lower temperatures, e.g., when ambient temperatures are hot (>105°F), humidity is high (>90 percent), and there is little or no air movement or cloud cover. Heat stress can occur in livestock when animals have not had time to adjust to a sudden increase in temperatures. Exposure to excessive heat may endanger or destroy/kill crops, animals, and people. Excessive heat can drain power supplies and can lead to power blackouts and affect phone and other electronic equipment. It can also cause canisters to explode.

When drought and extreme heat occur at the same time, the conditions can be very dangerous. Significant droughts occur about once every 15 years or so in Tennessee. The potential is there for such events to affect the entire state.

#### 2.3.1.4 Assumptions

- Drought and extreme heat will create unusual farm management problems due to the uncertainty surrounding its occurrence, duration, magnitude, and severity.
- Local preparedness, community action, and cooperation will be keys to coping with a water shortage.

- TTU and the farms will cooperate fully with water conservation recommendations made by Putnam County.

## 2.3.2 Concept of Operations

This concept of operations applies to drought and extreme heat incidents and operations within the farms. The Farm Emergency Response Coordinator will notify the Director of Environmental Health and Safety when additional resources are required to support the farms with mitigation, preparedness, response, and recovery activities.

### Mitigation Actions

Action	Complete
Avoid excessive exercise in equine.	<input type="checkbox"/>
Avoid transporting animals.	<input type="checkbox"/>
Establish cool housing or shaded areas. Adequate shade is important and can be provided by trees, buildings or sunshades.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Ensure building roofs are high enough to allow for air movement.</li> </ul>	<input type="checkbox"/>
Prepare access to water.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Animals will require more water during extreme heat conditions – prepare up to twice as much as normal.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Ensure animals always have access to cool, clean water.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Shade above ground water lines or tanks to keep water cool.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Additional watering tanks may be necessary; if possible provide these in advance so animals can become used to multiple water sources.</li> </ul>	<input type="checkbox"/>
Install sprinkler systems.	<input type="checkbox"/>
Provide ventilation.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Install fans; open windows, front of stalls, or roof ventilation to increase air movement in buildings.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Cut tall vegetation 150 ft back from perimeter of holding pens.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Consider building earth mounds to minimize bunching of animals.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Increase floor space per animal or reduce the number of animals in an area.</li> </ul>	<input type="checkbox"/>
Prepare for power outages. High summertime temperatures increase energy demand for cooling; overloaded energy systems will result in power outages.	<input type="checkbox"/>
Install irrigation systems for row crops.	<input type="checkbox"/>
Review crop insurance plans.	<input type="checkbox"/>
Test soil types for appropriate locations of crops.	<input type="checkbox"/>

**Preparedness Actions**

Action	Complete
Monitor weather forecasts and local regulations (e.g., burn bans, water advisories) and communicate information to farm personnel.	<input type="checkbox"/>
Review available data sources and existing drought reports, and analyze potential threats.	<input type="checkbox"/>
Ensure water and shade is available for personnel, students, and visitors who will be exposed to extreme heat for long periods of time.	<input type="checkbox"/>
Monitor animals frequently for heat-related illness and sunburn. <ul style="list-style-type: none"> <li>• Signs of heat stress can be subtle initially, so watch animals closely.</li> <li>• Signs of heat stress include: increased respiration rate or panting, excessive salivation, elevation of head to make it easier to breathe, and open mouth breathing.</li> <li>• Animals with darker fur (e.g., black haired beef cattle) may be more susceptible.</li> <li>• Animals can get sunburned just like people, especially their ears and noses.</li> <li>• Animals with pink skin are at greatest risk for sunburn.</li> </ul>	<input type="checkbox"/>
If animals are showing signs of heat stress:	
<ul style="list-style-type: none"> <li>• Contact the veterinarian immediately.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Move animals to the shade immediately.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Offer plenty of cool, clean water.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Spray animals with cool water, especially on the legs and feet, or stand them in water.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Increase air movement around them.</li> </ul>	<input type="checkbox"/>

**Response Actions**

Action	Complete
Avoid or limit handling of animals. Processing or working animals can elevate body temperature.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Avoid handling during mid-day. If animals must be handled, work them early in the morning (prior to 8 AM – not after 10 AM) and if possible in a shaded facility or area.</li> </ul>	<input type="checkbox"/>
Monitor farm personnel, students, and visitors for heat related health conditions:	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Dehydration is a condition that occurs when the loss of body fluids, mostly water, exceeds the amount that is taken in. With dehydration, more water is moving out of our cells and then out of our bodies than the amount of water we take in through drinking. The signs and symptoms of dehydration range from minor to severe. They include: increased thirst, dry mouth and swollen tongue, weakness, dizziness, palpitations (feeling that the heart is jumping or pounding), confusion, sluggishness, fainting, inability to sweat, and decreased urine output.</li> <li>• Try to get people who are dehydrated (even those who have been vomiting) to take in fluids in the following ways:               <ul style="list-style-type: none"> <li>▪ Sip small amounts of water.</li> <li>▪ Drink carbohydrate/electrolyte-containing drinks. Good choices are sports drinks such as Gatorade or prepared replacement solutions (Pedialyte is one example).</li> <li>▪ Suck on popsicles made from juices and sports drinks.</li> <li>▪ Suck on ice chips.</li> </ul> </li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Heat stroke is a life-threatening situation. It occurs when the body is unable to regulate its temperature and cool itself. Signs include: extremely high body temperature (above 103°F); red, hot, and dry skin (no sweating); rapid, strong pulse; throbbing headache; dizziness; nausea; confusion; and unconsciousness.</li> <li>• If you see heat stroke signs, get medical assistance immediately!</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Heat exhaustion is a milder form of heat-related illness that can develop after several days of exposure to high temperatures and inadequate or unbalanced replacement of fluids. Signs include: cool, moist, pale or flushed skin; heavy sweating; headache; nausea; dizziness; and weakness.</li> <li>• Cool the victim by providing cool, nonalcoholic beverages; rest in a cool or air-conditioned environment; cool shower, bath, or sponge bath; lightweight clothing.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• If the person vomits or begins to lose consciousness, get medical assistance immediately!</li> </ul>	<input type="checkbox"/>

Action	Complete
<ul style="list-style-type: none"> <li>• Heat cramps are muscle pains or spasms (usually in the legs or abdomen) that occur in association with loss of fluids and electrolytes following strenuous activity. It is often an early sign that the body is having trouble with heat. Treatment of heat cramps includes:                             <ul style="list-style-type: none"> <li>▪ Acclimatization (the process of adjusting to a gradual change in the environment).</li> <li>▪ Rest in a cool place and drink fluid mixed with salt.</li> <li>▪ Make a salt solution by mixing 1/4 to 1/2 teaspoon table salt dissolved in a quart of water.</li> <li>▪ Commercially available electrolyte beverages will provide adequate dietary salt intake, too.</li> <li>▪ Salt tablets by themselves should not be used. They can cause stomach upset and don't adequately replace fluid volume lost.</li> </ul> </li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Sunburn is damage to the skin that significantly slows the skin's ability to release heat. Usually sunburns are a minor discomfort that heals in a week. Signs include redness of the skin and blistering in severe cases.</li> <li>• Seek medical attention for severe sunburns.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Heat rash is skin irritation caused by excessive sweating during hot, humid weather. Signs include: Red cluster of pimples or small blisters that are most common on the neck, upper chest, or folds of the skin (e.g., elbow creases).</li> <li>• To prevent heat rash, avoid situations that can lead to excessive sweating, such as hot, humid environments and strenuous physical activity. In hot weather, use air conditioning, fans, and cool showers and baths to stay cool; dry skin thoroughly; and wear lightweight, loose-fitting clothes.</li> </ul>	<input type="checkbox"/>
<p>Provide animals with water.</p>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Provide adequate amounts of cool, clean water. Water should be made available at a rate of at least 25 percent body weight per day.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Check water delivery systems periodically for plugs or other problems.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Monitor the water temperature and keep it cool.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• If possible, keep water in a shaded area.</li> </ul>	<input type="checkbox"/>
<p>Keep animals cool.</p>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Move livestock to designated shaded areas.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Spray with oscillating sprinklers; water can have a cooling effect for animals.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Run water on the ground to keep hooves cooled.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Run water across roofs of buildings where animals are housed to cool the area.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Ship animals at night or early morning (e.g., arrival time before 7 AM).</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Cool animals after exercise with sprays of water.</li> </ul>	<input type="checkbox"/>

Action	Complete
Flies and other insects are more active in warm weather; animals may increase their activity trying to avoid insects and risk overheating. Reduce insect breeding areas to control biting insects by:	
<ul style="list-style-type: none"> <li>Remove weeds/brush.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Remove standing pools of water or mud.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Remove manure.</li> </ul>	<input type="checkbox"/>
Provide animals with feed and encourage feed intake.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Feed later in the day.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Offer high quality and aromatic feeds and clean feed bunk out completely at least once a day.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Do not feed animals during the hottest periods of the day.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Shift feeding toward the evening after peak day temperature.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Cover feed bunks to prevent spoilage from heating in the sun.</li> </ul>	<input type="checkbox"/>
If a grass-land fire occurs due to drought conditions, refer to fire response guidance (see Section <a href="#">2.5 Fire</a> ).	<input type="checkbox"/>

### Recovery Actions

Action	Complete
Farm Emergency Response Coordinator should coordinate with university officials, Putnam County Office of Emergency Management and local agriculture officials to receive disaster assistance.	<input type="checkbox"/>
Livestock should be monitored for prolonged health issues. If conditions persist, livestock may need to be sold.	<input type="checkbox"/>
Animal disposal:	
<ul style="list-style-type: none"> <li>Record any animal deaths.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Dispose of animal bodies in accordance with guidance given by local, state, and federal agriculture officials.</li> </ul>	<input type="checkbox"/>
Crops should be monitored for long-term damage due to drought conditions.	<input type="checkbox"/>
Mitigation projects shall be reviewed to prevent further drought conditions from occurring.	<input type="checkbox"/>
Provide mental health services to those personnel involved in the event.	<input type="checkbox"/>
Conduct a hot wash and discuss lessons learned to identify additional mitigation activities or updates for the Plan.	<input type="checkbox"/>



## 2.4 Earthquakes

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### 2.4.1 Purpose, Scope, Situation Overview, and Assumptions

#### 2.4.1.1 Purpose

The purpose of the Earthquake response guidance is to provide an effective and systematic means for the farms to assess and respond to the conditions that follow an earthquake.

#### 2.4.1.2 Scope

The farms are part of the University; therefore, farm personnel and students shall follow emergency procedures as identified within the EOP. This particular annex provides additional actions that farm personnel should consider to assist with mitigation, preparedness, response, and recovery actions for dealing with farm specific operations.

Nothing in this annex shall be construed in a manner that limits the use of good judgment and common sense in matters not foreseen or covered by this Plan.

#### 2.4.1.3 Situation

An earthquake is a shaking or trembling of the earth's crust, caused by the breaking and shifting of rock beneath the surface or underground volcanic forces. While scientists are able to measure the amount of energy that is building beneath the earth's surface, they are not able to predict exactly when an earthquake will occur. Therefore, earthquakes are unpredictable and can strike without warning. They can range in intensity from slight tremors to great shocks and can last from a few seconds to as long as five minutes. Earthquakes can either occur by themselves or in a series over a period of several days, or even months. However, they are almost always accompanied by aftershocks, which can be equally as damaging as the quakes that they follow. On June 19, 2007, a magnitude 3.3 earthquake occurred approximately 27 miles away from the city center of Cookeville.

There is a correlation between landslides and natural disasters such as earthquakes and flooding. Landslides most often occur in the mountainous regions of the eastern part of Tennessee. Landslides are not a significant problem in Putnam County.

#### 2.4.1.4 Assumptions

- Earthquakes may occur in areas where faults have not yet been identified and could result in damage to property and injuries to people. Typical damage could be buildings destroyed, infrastructure disrupted, and landslides on steep slopes.
- A major earthquake would create extraordinary requirements for Emergency Medical Services (EMS).
- Injuries serious enough to require hospitalization are estimated to be about four times greater than fatalities.
- Businesses and industries may not be prepared for adequate response to an earthquake. Businesses that rely on computer-based systems are particularly vulnerable.

- In the event rubble and debris resulting from an earthquake prevent access to the affected area for a prolonged time, helicopters may be necessary to bring rescue teams in and remove casualties from the area.
- Food supply lines could break down.
- The first few hours following an earthquake are critical in saving the lives of people trapped in collapsed buildings. Therefore, the use of local resources during the initial response period will be essential until state and federal support is available.
- It may be several hours before personnel and equipment can be mobilized and initial teams deployed to affected areas. Therefore, state and local resources will be relied upon heavily in the period immediately following the earthquake.
- The earthquakes and aftershocks may trigger one or more secondary events such as landslides, release of hazardous materials, dam failure or flooding, and transportation disturbances.

## 2.4.2 Concept of Operations

This concept of operations applies to earthquake incidents and operations within the farms. The Farm Emergency Response Coordinator will notify the Director of Environmental Health and Safety when additional resources are required to support the farms with mitigation, preparedness, response, and recovery activities.

### Mitigation Actions

Action	Complete
Assess hazards on the farms.	
<ul style="list-style-type: none"> <li>• Fasten shelves securely to walls.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Place large or heavy objects on lower shelves.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Store breakable items such as bottled vaccinations, medical supplies, and glass in low, closed cabinets with latches.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Brace overhead light fixtures.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Repair defective electrical wiring and leaky gas connections. These are potential fire risks.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Secure a water heater by strapping it to the wall studs and bolting it to the floor.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Repair any deep cracks in ceilings or foundations. Get expert advice if there are signs of structural defects.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Store weed killers, pesticides, and flammable products securely in closed cabinets with latches and on bottom shelves.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Store fuel in secure locations that are not easily damaged from falling debris.</li> </ul>	<input type="checkbox"/>

Action	Complete
Identify safe places indoors and outdoors: <ul style="list-style-type: none"> <li>• Under sturdy furniture such as a heavy desk or table.</li> <li>• Against an inside wall.</li> <li>• Away from where glass could shatter around windows, mirrors, pictures, or where heavy bookcases or other heavy furniture could fall over.</li> <li>• In the open, away from buildings, trees, telephone and electrical lines, overpasses, or elevated expressways.</li> </ul>	<input type="checkbox"/>

### Preparedness Actions

Action	Complete
Earthquakes are no notice events; the best preparedness actions are to educate personnel, students, and visitors on what to do in the event of an earthquake.	<input type="checkbox"/>

### Response Actions

Action	Complete
Stay as safe as possible during an earthquake. Be aware that some earthquakes are actually foreshocks and a larger earthquake might occur. Minimize your movements to a few steps to a nearby safe place and if you are indoors, stay there until the shaking has stopped and you are sure exiting is safe.	<input type="checkbox"/>
The Farm Emergency Response Coordinator shall immediately gain accountability of all personnel, students, and visitors on the farms.	<input type="checkbox"/>
Notify EMS if any injuries have been sustained.	<input type="checkbox"/>
Notify the Director of Environmental Health and Safety of any injuries sustained along with name, address, phone number, and hospital where transported to.	<input type="checkbox"/>
If indoors, complete the following:	
<ul style="list-style-type: none"> <li>• DROP to the ground; take COVER by getting under a sturdy table or other piece of furniture; and HOLD ON until the shaking stops. If there isn't a table or desk near you, cover your face and head with your arms and crouch in an inside corner of the building.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Stay away from glass, windows, outside doors and walls, and anything that could fall, such as lighting fixtures or furniture.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Stay in bed if you are there when the earthquake strikes. Hold on and protect your head with a pillow, unless you are under a heavy light fixture that could fall. In that case, move to the nearest safe place.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Use a doorway for shelter only if it is in close proximity to you and if you know it is a strongly supported, load-bearing doorway.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Stay inside until the shaking stops and it is safe to go outside. Research has shown that most injuries occur when people inside buildings attempt to move to a different location inside the building or try to leave.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Be aware that the electricity may go out, or the sprinkler systems or fire alarms may turn on.</li> </ul>	<input type="checkbox"/>

Action	Complete
<ul style="list-style-type: none"> <li>DO NOT use the elevators.</li> </ul>	<input type="checkbox"/>
If outdoors, complete the following:	
<ul style="list-style-type: none"> <li>Stay there.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Move away from buildings, streetlights, and utility wires.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Once in the open, stay there until the shaking stops. The greatest danger exists directly outside buildings, at exits and alongside exterior walls. Ground movement during an earthquake is seldom the direct cause of death or injury. Most earthquake-related casualties result from collapsing walls, flying glass, and falling objects.</li> </ul>	<input type="checkbox"/>
If in a moving vehicle, complete the following:	
<ul style="list-style-type: none"> <li>Stop as quickly as safety permits and stay in the vehicle. Avoid stopping near or under buildings, trees, overpasses, and utility wires.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Proceed cautiously once the earthquake has stopped. Avoid roads, bridges, or ramps that might have been damaged by the earthquake.</li> </ul>	<input type="checkbox"/>
If trapped under debris, complete the following:	
<ul style="list-style-type: none"> <li>Do not light a match or lighter.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Do not move about or kick up dust.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Cover your mouth with a handkerchief or clothing.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Tap on a pipe or wall so rescuers can locate you. Use a whistle if one is available. Shout only as a last resort. Shouting can cause you to inhale dangerous amounts of dust.</li> </ul>	<input type="checkbox"/>

### Recovery Actions

Action	Complete
Expect aftershocks. These secondary shockwaves are usually less violent than the main quake but can be strong enough to do additional damage to weakened structures and can occur in the first hours, days, weeks, or even months after the quake.	<input type="checkbox"/>
Listen to a battery-operated radio or television. Listen for the latest emergency information.	<input type="checkbox"/>
Use the telephone only for emergency calls.	<input type="checkbox"/>
Open cabinets cautiously. Beware of objects that can fall off shelves.	<input type="checkbox"/>
Stay away from damaged areas unless police, fire, or relief organizations have specifically requested your assistance. Return only when authorities say it is safe.	<input type="checkbox"/>
Help injured or trapped persons. Do not move seriously injured persons unless they are in immediate danger of further injury. Call for help.	<input type="checkbox"/>
The TTU Main Campus may require special assistance. The farms have equipment that will be valuable in the response effort. Give first aid where appropriate.	<input type="checkbox"/>
Clean up spilled medicines, bleaches, gasoline or other flammable liquids immediately. Leave the area if you smell gas or fumes from other chemicals.	<input type="checkbox"/>
Inspect utilities.	<input type="checkbox"/>

Action	Complete
<ul style="list-style-type: none"> <li>Check for gas leaks. If you smell gas or hear blowing or hissing noise, open a window and quickly leave the building. Call Facilities &amp; Business Services from another building/location to turn off the gas, or if they are unavailable, turn it off at the outside main valve if trained. If you turn off the gas for any reason, consult Facilities &amp; Business Services before it is turned back on.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Look for electrical system damage. If you see sparks or broken or frayed wires, or if you smell hot insulation, call Facilities &amp; Business Services to turn off the electricity, or if unavailable, turn it off at the main fuse box or circuit breaker. If you have to step in water to get to the fuse box or circuit breaker, wait for Facilities &amp; Business Services.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Check for sewage and water line damage. If you suspect sewage lines are damaged, avoid using the toilets and call a plumber. If water pipes are damaged, contact the water company and avoid using water from the tap. You can obtain safe water by melting ice cubes.</li> </ul>	<input type="checkbox"/>
<p>Check animals for injuries, beware that injured animals can cause injury to personnel treating them.</p>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>If animals are injured, notify the veterinarian.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Animals can be euthanized if injuries are severe.</li> </ul>	<input type="checkbox"/>
<p>Animal disposal:</p>	
<ul style="list-style-type: none"> <li>Record any animal deaths.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Dispose of animal bodies in accordance with guidance given by local, state, and federal agriculture officials.</li> </ul>	<input type="checkbox"/>
<p>Animals that are housed in structures should be released into open pasture in the event of aftershocks.</p>	<input type="checkbox"/>
<p>Conduct rapid damage assessment of facilities and equipment.</p>	<input type="checkbox"/>
<p>Provide mental health services for those involved in the event.</p>	<input type="checkbox"/>
<p>Conduct a hot wash and discuss lessons learned to identify additional mitigation activities or updates for the Plan.</p>	<input type="checkbox"/>

## 2.5 Fire

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### 2.5.1 Purpose, Scope, Situation Overview, and Assumptions

#### 2.5.1.1 Purpose

The purpose of the Fire response guidance is to provide an effective and systematic means for the farms to assess and respond to a fire on the farms.

#### 2.5.1.2 Scope

The farms are part of the University; therefore, farm personnel and students shall follow emergency procedures as identified within the EOP. This particular annex provides additional actions that farm personnel should consider to assist with mitigation, preparedness, response, and recovery actions for dealing with farm specific operations.

Nothing in this annex shall be construed in a manner that limits the use of good judgment and common sense in matters not foreseen or covered by this Plan.

#### 2.5.1.3 Situation

Putnam County has both wildfires and urban fires. A wildfire is any incident of uncontrolled burning in grasslands, brush, or woodlands. In 1992, there were almost 3,000 such occurrences in Tennessee, burning just under 26,000 acres. Wildfires occur about 250 times per year throughout Putnam County. An urban fire is any instance of uncontrolled burning which results in structural damage to residential, commercial, industrial, institutional, or other properties in developed areas. The Cookeville City Fire Department responds to about 40 instances per year.

The farms must take special care when dealing with fire prevention. Once a fire has been started it can quickly engulf entire buildings or fields. With livestock and large amounts of forage being stored or kept on site this presents a grave risk and liability to the farm. Fires can be intentionally started, or initiated by several hazards such as drought, lightning, earthquakes, hazardous materials spills, etc. Farms storing hay must be careful of combustion.

#### 2.5.1.4 Assumptions

- Human life will take precedence over animal life.
- Fire personnel will assume the role of incident command upon arriving on scene.
- The farms will provide Safety Data Sheets (SDS) to the appropriate fire department. These SDSs will also be posted in each building.
- Farm personnel have only limited capability for containing fires.
- Depending on the severity of the fire and locations involved, multiple alarms may be required.
- If arson is suspected, investigation will be conducted by trained personnel.

## 2.5.2 Concept of Operations

This concept of operations applies to fire incidents and operations within the farms. The Farm Emergency Response Coordinator will notify the Director of Environmental Health and Safety when additional resources are required to support the farms with mitigation, preparedness, response, and recovery activities.

### Mitigation Actions

Action	Complete
Coordinate with the Cookeville Fire Department periodically to provide tours and become familiar with farm grounds and buildings.	<input type="checkbox"/>
Ensure fire department can access locked areas (e.g., provide key codes, location of keys, or current contact information to gain access).	<input type="checkbox"/>
Notify first responders of where chemicals and hazardous materials are stored on the farms.	<input type="checkbox"/>
Limit storage areas to the minimum needed to discourage storing unneeded chemicals.	<input type="checkbox"/>
Store chemicals in a secure area:	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Keep chemicals in locked, weather proof storage areas. Make sure these areas are well lit.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Flammable materials should be stored in a properly labeled flame resistant cabinet.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Post a sign indicating the storage area contains chemicals. The sign should also include at least two emergency contact numbers – the Farm Emergency Response Coordinator’s and a local first responder agency’s (e.g., law enforcement or fire).</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Keep storage areas dry and well ventilated; keep it from freezing and extremely high temperatures.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Store chemicals above ground level to prevent moisture problems (rusting or disintegration).</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Locate storage areas at a safe site that will not be subjected to flooding.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Keep chemicals out of reach of pets.</li> </ul>	<input type="checkbox"/>
Store chemicals in their original containers. Never use food or beverage containers to store chemicals.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Keep containers tightly closed and clearly labeled.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>If labels become worn or damaged, re-label the container with its contents or discard the chemical.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Do not store chemicals in damaged containers.</li> </ul>	<input type="checkbox"/>
Install sprinkler systems and fire alarms in all buildings.	<input type="checkbox"/>
Separate hay storage areas to limit potential for loss.	<input type="checkbox"/>
Keep flammable materials away from heat sources.	<input type="checkbox"/>
Install fire extinguishers.	<input type="checkbox"/>

Action	Complete
Develop a plan for fires. This should include: <ul style="list-style-type: none"> <li>• Emergency phone numbers to call should a fire occur.</li> <li>• An inventory of chemical products on the farms; include any protective equipment.</li> <li>• A copy of the SDS for all chemicals on the farms.</li> <li>• Evacuation plans for all rooms and buildings on the farms.</li> </ul>	<input type="checkbox"/>
Post signs with chemical spill response procedures.	<input type="checkbox"/>

### Preparedness Actions

Action	Complete
Test fire alarms on a monthly basis.	<input type="checkbox"/>
Test ventilation system controls for activation when exposed to smoke or extreme heat.	<input type="checkbox"/>
Conduct fire evacuation drills on a regular basis (at least once per year).	<input type="checkbox"/>
Test fire extinguishers on a semi-annual basis or according to state law.	<input type="checkbox"/>
Coordinate with the local fire department to inspect buildings for potential fire hazards.	<input type="checkbox"/>
Keep walkways and stairwells free from obstruction at all times.	<input type="checkbox"/>
Clean equipment frequently. <ul style="list-style-type: none"> <li>• Clean up fuel, oil, grease, and other flammable liquid spills.</li> </ul>	<input type="checkbox"/>
Inspect equipment routinely for damage that could cause a fire. <ul style="list-style-type: none"> <li>• Keep a record of these inspections and repairs.</li> </ul>	<input type="checkbox"/>
Maintain grassy and overgrown areas near buildings, these areas should be mowed on a regular basis to keep fire from spreading.	<input type="checkbox"/>
Waste must be stored and properly disposed of to prevent the creation of a fire and safety hazard.	<input type="checkbox"/>
Keep closets free of old rags, paper, or other combustible odds and ends.	<input type="checkbox"/>
Do not overload outlets with multiple outlet cords or multiple plug adapters.	<input type="checkbox"/>

### Response Actions

Action	Complete
If fire, smoke, or an explosion occurs in a building, activate the nearest fire pull station. <ul style="list-style-type: none"> <li>• Call 911 immediately.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Evacuate and close doors (Do Not Lock); Do Not use elevators – use evacuation routes and follow to the nearest exit               <ul style="list-style-type: none"> <li>▪ For those with physical impairment, see <a href="#">Appendix F – Evacuation Procedures for Individuals with Disabilities</a>).</li> </ul> </li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Assemble in designated area; at least 300 ft away from a building.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Stay clear of emergency response personnel and equipment.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Do not re-enter the building until emergency response officials have declared that it is safe to do so.</li> </ul>	<input type="checkbox"/>



Action	Complete
If fire, smoke, or an explosion occurs in a building such as a barn/shed or in a field, evacuate the area and inform other personnel/students.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Call 911 immediately.</li> </ul>	<input type="checkbox"/>
If anyone has become incapacitated, call 911.	<input type="checkbox"/>
Ensure all personnel, students, and visitors are accounted for.	<input type="checkbox"/>
Evacuate animals if time allows.	<input type="checkbox"/>
If personnel are not trained to extinguish a fire, do not let them near the site of the fire.	<input type="checkbox"/>
If trained, control the fire/contain the fire.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>If possible, safely stop the fire (e.g., use fire extinguisher, turn on sprinklers manually if they have not started themselves).</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Do what you can to keep the fire from spreading (e.g., apply water, use fire extinguisher, dig a trench to contain fire, move roll bales of hay).</li> </ul>	<input type="checkbox"/>
Take caution: Personal Safety.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>If the fire is too big for one person to control and extinguish, call 911.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Do not expose yourself unnecessarily to danger.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Avoid situations where you may become trapped.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Approach the fire from a safe direction. Only do this if trying to extinguish a small fire with a fire extinguisher.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Avoid spills that are reacting (hissing, bubbling, smoking, gassing, burning).</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Evacuate the area; set up barriers to keep people (and animals) out.</li> </ul>	<input type="checkbox"/>
Notify Director of Environmental Health and Safety.	<input type="checkbox"/>
Notify Facilities & Business Services and Environmental Health & Safety.	<input type="checkbox"/>

### Recovery Actions

Action	Complete
Coordinate with local fire department and Tennessee State Fire Marshal's Office to determine cause of fire. Once cause is determined work to mitigate the causing factors in other buildings.	<input type="checkbox"/>
Report building damage to Facilities & Business Services.	<input type="checkbox"/>
Update fire evacuation routes.	<input type="checkbox"/>
Monitor animals for signs of stress.	<input type="checkbox"/>
Animal disposal:	
<ul style="list-style-type: none"> <li>Record any animal deaths.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Dispose of animal bodies in accordance with guidance given by local, state, and federal agriculture officials.</li> </ul>	<input type="checkbox"/>
Remove debris and take to the farm's landfill; ensure to follow regulations.	
Provide mental health services for personnel involved in the response.	<input type="checkbox"/>
Conduct a hot wash and discuss lessons learned to identify additional mitigation activities or updates for the Plan.	<input type="checkbox"/>

## 2.6 Flooding

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### 2.6.1 Purpose, Scope, Situation Overview, and Assumptions

#### 2.6.1.1 Purpose

The purpose of the Flooding response guidance is to provide an effective and systematic means for the farms to assess and respond to flooding related hazards such as high water, river erosion, dam failure, and debris. Flooding is one of the most common and most costly disasters. Preparing for flood situations can minimize injury or death, and speed the recovery process.

#### 2.6.1.2 Scope

The farms are part of the University; therefore, farm personnel and students shall follow emergency procedures as identified within the EOP. This particular annex provides additional actions that farm personnel should consider to assist with mitigation, preparedness, response, and recovery actions for dealing with farm specific operations.

Nothing in this annex shall be construed in a manner that limits the use of good judgment and common sense in matters not foreseen or covered by this Plan.

#### 2.6.1.3 Situation

On an annual basis, flooding causes the most damage in Tennessee. Some floods develop slowly – allowing time to prepare and evacuate. Others (e.g., flash floods) can develop quickly, even within a few minutes and without any visible signs of rain. Flooding/flash flooding can have a serious impact on human and animal health and safety, cause crop damage, and move hazardous materials across pastures. Following a flood, there can be a danger of infectious diseases in livestock, and feeds and water may be contaminated.

Most precipitation in Tennessee occurs between December and late March, this is the period during which the majority of the flooding can be expected to occur. From 1963 through 1993, flooding had resulted in 16 Presidential-declared disasters across the state, with expenditures in excess of \$30 million. In 2002, there was a three-day flooding event across Middle Tennessee; two persons were killed in Cookeville on January 23, 2002.

Flooding occurs several times a year in Putnam County, most of which is of the minor flash flood variety. There are three minor dams in Putnam County, but none pose any statistically significant problem. A flood map for the area is shown in [Appendix D – Maps](#).

#### 2.6.1.4 Assumptions

- Flooding can happen during any month of the year.
- Flooding can occur very rapidly depending on a number of variables.
- Flooding could hinder transportation in/out of the farms.
- Evacuations may be necessary due to risk of flooding.

- Some areas are more prone to flooding. Farm personnel should have floodplain maps on hand to verify where the most at risk areas are at.
- Response to floods is a very dynamic response which will incorporate many response agencies.
- Farm personnel should not expect to receive aid initially from local and state responses.
- The farms have equipment that could be used during response actions.

## 2.6.2 Concept of Operations

This concept of operations applies to flooding incidents and operations within the farms. The Farm Emergency Response Coordinator will notify the Director of Environmental Health and Safety when additional resources are required to support the farms with mitigation, preparedness, response, and recovery activities.

### Mitigation Actions

Action	Complete
Determine the risk of flooding for the farms.	<input type="checkbox"/>
Identify potential hazards on the farms.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Know how to turn off electrical power, gas, and water supplies.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Secure structurally unstable materials (e.g. lumber, logs, equipment, fuel tanks).</li> </ul>	<input type="checkbox"/>
Prepare buildings.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Build with or install flood resistant material.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Raise electrical components above the projected flood elevation.</li> </ul>	<input type="checkbox"/>
Stockpile emergency building materials and food stocks.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Store plywood, plastic sheeting, lumber, nails, sandbags, sand, etc.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Maintain at least a 14-day supply of food sources for livestock on premises.</li> </ul>	<input type="checkbox"/>
Make a list of farm inventory.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Inventory animals.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Inventory crops.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Inventory machinery and equipment (Make and Model).</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Inventory hazardous substances (pesticides, fertilizers, fuels, medicines, and other chemicals).</li> </ul>	<input type="checkbox"/>
Identify areas of higher ground to relocate valuable or hazardous materials.	<input type="checkbox"/>
Obtain/ensure the farms have flood insurance.	<input type="checkbox"/>
Secure all important documents in a flood proof safe or in areas that are not reachable by flood.	<input type="checkbox"/>
Develop relationships with local emergency management officials and flood plain management officials.	<input type="checkbox"/>
Review floodplain maps for hazards on the farms.	<input type="checkbox"/>

### Preparedness Actions

Action	Complete
Provide personnel and student training on flood response.	<input type="checkbox"/>
Monitor local weather forecasts. <ul style="list-style-type: none"> <li>Listen to the radio, television, internet, and Emergency Alert System (EAS) messages for situation developments and evacuation instructions.</li> </ul>	<input type="checkbox"/>
Communicate with farm personnel about current weather forecasts and develop courses of actions for response.	<input type="checkbox"/>
If an evacuation order is given, identify evacuation routes and evacuate immediately.	<input type="checkbox"/>
Move animals and equipment to safe areas likely not to be affected by rising floodwaters.	<input type="checkbox"/>
Develop a work plan based off of current forecasts.	<input type="checkbox"/>
Ensure all electrical devices are safe from rising floodwaters.	<input type="checkbox"/>

### Response Actions

Action	Complete
Maintain accountability of personnel, students, and visitors.	<input type="checkbox"/>
Turn off all utilities at the main power switch and close the main gas valve of buildings on site.	<input type="checkbox"/>
Open building doors and windows at least 2 inches to equalize pressure and help prevent building from shifting.	<input type="checkbox"/>
If possible, move motors and portable electric equipment to a dry location.	<input type="checkbox"/>
Be aware of animal behavior changes before, during, and after a disaster.	<input type="checkbox"/>
Avoid leaving animals behind. <ul style="list-style-type: none"> <li>Establish escape routes to safe locations with higher elevations.</li> <li>If there is time, move or evacuate livestock and horses to higher ground.</li> <li>If there are no other alternatives, keep gates and buildings open so animals can escape high water.</li> <li>Provide access to safe free-choice food sources (hay, grain, open pasture, etc.), clean water, and the safest living area possible.</li> <li>Do not rely on automatic watering systems, because power may be lost.</li> <li>Place the Farm Emergency Response Coordinator's contact number, and the name and number of the veterinarian the farm uses on the building.</li> </ul>	<input type="checkbox"/>
Move equipment to higher ground if there is time.	<input type="checkbox"/>

### Recovery Actions

Action	Complete
Only return to farm after officials have declared the area safe.	<input type="checkbox"/>
Assess the situation. <ul style="list-style-type: none"> <li>Assess the impact and areas of damage to the different properties on the farms.</li> </ul>	<input type="checkbox"/>

Action	Complete
<ul style="list-style-type: none"> <li>Identify dangerous materials, downed power lines, damaged gas lines, damaged water lines, damaged sewage lines, and other hazards.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>If a natural gas or propane leak is found, leave the area immediately, and contact the natural gas or propane provider.</li> </ul>	<input type="checkbox"/>
Report any hazardous materials spills immediately (see Section <a href="#">2.7 Hazardous Materials</a> ).	<input type="checkbox"/>
Keep power off until an electrician has inspected the farm for safety.	<input type="checkbox"/>
Check the status of all animals on the property.	<input type="checkbox"/>
Account for all equipment.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Check for damage.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Photograph all damage of equipment and facilities for the insurance company.</li> </ul>	<input type="checkbox"/>
Clean up safely.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Wear Protective Clothing.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Do not use contaminated water for consumption, nor for washing or brushing teeth.</li> </ul>	<input type="checkbox"/>
Prevent and treat injuries.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Exposure to flood waters in cold weather can lead to hypothermia.</li> </ul>	<input type="checkbox"/>
Take precautions to minimize insect exposures.	<input type="checkbox"/>
Prevent illness.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Wash hands frequently.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Use clean, boiled, or disinfected water.</li> </ul>	<input type="checkbox"/>
Animal disposal.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Record any animal deaths.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Dispose of animal bodies in accordance with guidance given by local, state, and federal agriculture officials.</li> </ul>	<input type="checkbox"/>
Assess the crops.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Determine how much of the crops are water logged (only the roots flooded) and fully submerged (entire plants under water).</li> </ul>	<input type="checkbox"/>
Contact crop insurance agent to discuss coverage.	<input type="checkbox"/>
Remove debris and take to the farm's landfill; ensure to follow regulations.	<input type="checkbox"/>
Provide mental health services for those personnel involved in the event.	<input type="checkbox"/>
Conduct a hot wash and discuss lessons learned to identify additional mitigation activities or updates for the Plan.	<input type="checkbox"/>

## 2.7 Hazardous Materials

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### 2.7.1 Purpose, Scope, Situation Overview, and Assumptions

#### 2.7.1.1 Purpose

The purpose of the Hazardous Materials response guidance is to provide an effective and systematic means for the farms to assess and respond to a hazardous materials spill.

#### 2.7.1.2 Scope

The farms are part of the University; therefore, farm personnel and students shall follow emergency procedures as identified within the EOP. This particular annex provides additional actions that farm personnel should consider to assist with mitigation, preparedness, response, and recovery actions for dealing with farm specific operations.

Nothing in this annex shall be construed in a manner that limits the use of good judgment and common sense in matters not foreseen or covered by this Plan.

#### 2.7.1.3 Situation

A hazardous materials incident can occur from a transportation accident or as a stationary incident. Each year, about 250,000 shipments of hazardous materials crisscross the state of Tennessee. Hazardous material transportation incidents can occur at any place within the state, although the vast majority occurs on the highways or the major rail lines. There are 2 major highways passing through Putnam County. A significant incident occurs on these routes approximately twice a year. Also, the Nashville and Eastern Railroad (NERR) is a short line, freight railroad which runs track west/east between Nashville and Monterey, Tennessee. This rail runs approximately 2 miles south of the Hyder-Burks Agriculture Pavilion.

In terms of stationary accidents, major events (i.e., those requiring significant evacuations) occur approximately six times per year across the state. There are several facilities within Putnam County that manufacture, store, or utilize hazardous materials in some capacity. An incident at one of these facilities could be expected to affect as much as 20% of the county's population.

The storage of chemicals on the farm (mostly herbicides and pesticides) presents an area of interest for individuals who try to acquire these substances using illegal methods. This increases the probability of the occurrence of a hazardous material incident on the farms.

#### 2.7.1.4 Assumptions

- Emergency services personnel will be trained in hazardous materials control and they will carry emergency response guidebooks and instructions to help control possible incidents in their vehicles.
- The farms will provide SDSs to the appropriate fire department. These SDS sheets will also be posted in each building.
- Fire services have only limited capability for initial spill/release containment.

- Fire services do not have the capability or responsibility for cleanup of any spills/releases.
- The Cookeville Fire Department has the training and equipment to respond to a hazardous materials incident and to perform decontamination.
- All hazardous materials planning will be completed in conjunction with the requirements of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) of 1980, in addition to other University, local, state and Federal standards, regulations and guidelines.
- Cookeville Regional Medical Center has the capability to perform decontamination.

## 2.7.2 Concept of Operations

This concept of operations applies to hazardous materials incidents and operations within the farms. The Farm Emergency Response Coordinator will notify the Director of Environmental Health and Safety when additional resources are required to support the farms with mitigation, preparedness, response, and recovery activities.

### Mitigation Actions

Action	Complete
Limit storage areas to the minimum needed to discourage storing unneeded chemicals.	<input type="checkbox"/>
Store chemicals in a secure area:	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Keep chemicals in locked, weather proof storage areas. Make sure these areas are well lit.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Flammable materials should be stored in a properly labeled flame resistant cabinet.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Post a sign indicating the storage area contains chemicals. The sign should also include at least two emergency contact numbers – the Farm Emergency Response Coordinator’s and a local first response agency’s (e.g., law enforcement or fire).</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Keep storage areas dry and well ventilated; keep it from freezing and extremely high temperatures.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Store chemicals above ground level to prevent moisture problems (rusting or disintegration).</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Locate storage areas at a safe site that will not be subjected to flooding.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Keep chemicals out of reach of pets.</li> </ul>	<input type="checkbox"/>
Notify first responders of where chemicals are stored.	<input type="checkbox"/>
Store chemicals in their original containers.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Keep containers tightly closed and clearly labeled.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• If labels become worn or damaged, re-label the container with its contents or discard the chemical.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Do not store chemicals in damaged containers.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Never use food or beverage containers to store chemicals.</li> </ul>	<input type="checkbox"/>

Action	Complete
Develop a plan for responding to spills. This should include: <ul style="list-style-type: none"> <li>Emergency phone numbers to call should a spill occur – include the state’s agrochemical hotline.</li> <li>An inventory of chemical products on the farms; include any protective equipment.</li> <li>A copy of SDSs for all chemicals on the farms.</li> <li>Evacuation plans for the room or building containing chemicals.</li> <li>Instructions for containing and cleaning up spills. Separate instructions for different chemicals may be needed.</li> </ul>	<input type="checkbox"/>
Post copies of SDSs near the chemical storage area; keep an additional set in a separate location.	<input type="checkbox"/>
Post signs with chemical spill response procedures.	<input type="checkbox"/>

### Preparedness Actions

Action	Complete
Always read packaging labels for information on their proper use, handling and actions in case of spills.	<input type="checkbox"/>
Use original or appropriate containers to store and transport chemicals.	<input type="checkbox"/>
After using application equipment make sure valves are closed, hoses are empty, and pumps are turned off.	<input type="checkbox"/>
Clean equipment frequently, especially before switching to a new mix.	<input type="checkbox"/>
Inspect equipment routinely for damage that could cause a leak.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Keep a record of these inspections and repairs.</li> </ul>	<input type="checkbox"/>
Visually inspect chemical storage area(s) regularly for signs of tampering or illegal activity.	<input type="checkbox"/>

### Response Actions

Action	Complete
If personnel have not been trained in hazmat response do not let them near the site of the spill.	<input type="checkbox"/>
Chemical spills not immediately dangerous to life or health.	
<ul style="list-style-type: none"> <li>Evacuate the area; set up barriers to keep people (and animals) out.</li> <li>If in a building, close the door upon evacuating, but do not lock it.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Immediately notify responsible department.</li> </ul>	<input type="checkbox"/>
If trained and familiar with the hazard, follow the 3 C’s: Caution, Control/Contain, and Clean up.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Do not expose yourself unnecessarily to chemicals.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Avoid situations where you may become trapped.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Wear Personal Protective Equipment (PPE), such as splash goggles, rubber gloves, boots, long sleeves, long pants; use additional PPE as instructed by the label.</li> </ul>	<input type="checkbox"/>



Action	Complete
<ul style="list-style-type: none"> <li>Approach the spill from a safe direction (e.g., upwind/ upstream).</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Avoid spills that are reacting (hissing, bubbling, smoking, gassing, and/or burning).</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>If possible, safely stop the spill (e.g., place a leaking container in a larger container, close a valve), immediately!</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Do what you can to keep the spill from spreading (e.g., apply absorbent material, place sandbags around the area, dig a trench to contain fluid).</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Stay with the spill site until someone relieves you.</li> </ul>	<input type="checkbox"/>
Chemical spills immediately dangerous to life or health.	
<ul style="list-style-type: none"> <li>Immediately notify all building occupants or those in the area which the spill has occurred.</li> <li>Pull fire alarm if necessary.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Call 911.</li> </ul>	
<ul style="list-style-type: none"> <li>Immediately notify Environmental Health and Safety, and Facilities &amp; Business Services.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Ensure the HVAC (heating, ventilation, and air conditioning) for the building is shut down – call Facilities &amp; Business Services if needed.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Evacuate the area; set up barriers to keep people (and animals) out; meet in designated area.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Account for all occupants of the building/area.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Ensure all personnel, students, and visitors are accounted for.</li> </ul>	<input type="checkbox"/>
In case of exposure:	
<ul style="list-style-type: none"> <li>Notify emergency personnel if you have been exposed.</li> </ul>	
<ul style="list-style-type: none"> <li>If chemicals get into your eyes, follow emergency directions on the label. Flush eyes with water for 10-15 minutes and get medical attention.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>If you accidentally swallow the chemical or become ill shortly after use, call your health care provider or get medical attention immediately! Take the chemical label with you.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>If a chemical gets on your skin:</li> </ul>	
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>Immediately remove all contaminated clothing.</li> </ul> </li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>Wash the exposed area for 15 minutes, including hair, with generous amounts of water and soap.</li> </ul> </li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>Put on fresh, clean clothes.</li> </ul> </li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>See your healthcare provider immediately.</li> </ul> </li> </ul>	<input type="checkbox"/>
If anyone has become incapacitated, call 911.	<input type="checkbox"/>
Notify emergency personnel if you have any information about the release.	<input type="checkbox"/>
Dispose of any contaminated foods or crops utilized for food.	<input type="checkbox"/>

Action	Complete
Identify any exposure to animals and contact the local Extension Agency and veterinarian for appropriate actions (decontamination, euthanized, etc.).	<input type="checkbox"/>

### Recovery Actions

Action	Complete
Maintain accurate records.	<input type="checkbox"/>
Clean up for general spills:	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Spread absorbent material (fine sand, vermiculite, clay, pet litter) on the spill area.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Avoid using sawdust. Strong oxidizing chemicals can combust and be a potential fire hazard.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Sweep and scoop all material; work from the outside toward the inside to reduce further spread.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Scoop material into a steel or fiber drum lined with a heavy-duty plastic bag.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Repeat until the spill is soaked up.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Seal the bag. Double bag it, label it clearly and dispose of it properly.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Some chemicals (e.g., organophosphates) will require special handling. Check the product label for more information.</li> </ul>	<input type="checkbox"/>
Clean up for spills on soil:	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>For minor spills, apply activated charcoal immediately.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>For larger spills, the top 2-3 inches of soil must be removed and disposed of properly. Then cover the area with at least 2 inches of lime, followed by fresh topsoil.</li> </ul>	<input type="checkbox"/>
Animal disposal:	
<ul style="list-style-type: none"> <li>Record any animal deaths.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Dispose of animal bodies in accordance with guidance given by local, state, and federal agriculture officials.</li> </ul>	<input type="checkbox"/>
Provide mental health services for those personnel involved in the event.	<input type="checkbox"/>
Conduct a hot wash and discuss lessons learned to identify additional mitigation activities or updates for the Plan.	<input type="checkbox"/>

## 2.8 Medical Emergency

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### 2.8.1 Purpose, Scope, Situation Overview, and Assumptions

#### 2.8.1.1 Purpose

The purpose of the Medical Emergency response guidance is to provide an effective and systematic means for the farms to assess and respond to a medical emergency.

#### 2.8.1.2 Scope

The farms are part of the University; therefore, farm personnel and students shall follow emergency procedures as identified within the EOP. This particular annex provides additional actions that farm personnel should consider to assist with mitigation, preparedness, response, and recovery actions for dealing with farm specific operations.

Nothing in this annex shall be construed in a manner that limits the use of good judgment and common sense in matters not foreseen or covered by this Plan.

#### 2.8.1.3 Situation

A medical emergency can occur at any time. Emergency medical care is the most important function during the first few hours of a disaster. TTU Health Services provides services for treating various medical problems. Additionally, the farm has two Automated External Defibrillators (AEDs); one is located at the pavilion, the other at the auction/livestock barn. The Putnam County 911 center is automatically dialed when a cabinet door is opened to retrieve an AED.

#### 2.8.1.4 Assumptions

- Many disasters that could occur at the University have the potential for generating large numbers of casualties.
- The TTU Health Services could be damaged or rendered inoperable as a result of a disaster.
- An incident may cause an immediate demand for health services in excess of normal demand.
- TTU may require the assistance of local EMS and health care system.
- Some disasters may generate casualty loads beyond the treatment capabilities of local EMS and health care system.

### 2.8.2 Concept of Operations

This concept of operations applies to medical emergency incidents and operations within the farms. The Farm Emergency Response Coordinator will notify the Director of Environmental Health and Safety when additional resources are required to support the farms with mitigation, preparedness, response, and recovery activities.

### Mitigation Actions

Action	Complete
Encourage hydration with working drinking fountains and other means of access to bottled water (e.g., vending machines, stores, etc.).	<input type="checkbox"/>
Maintain farm buildings' cooling and heating capabilities.	<input type="checkbox"/>

### Preparedness Actions

Action	Complete
Offer Cardio-Pulmonary Resuscitation (CPR) and AED training courses to farm personnel and students.	<input type="checkbox"/>
Provide Health Insurance Portability and Accountability Act (HIPAA) training.	<input type="checkbox"/>
Perform monthly inspections on AED devices and replace parts as suggested by manufacturer.	<input type="checkbox"/>
Supply PPE gear to personnel who handles chemicals.	<input type="checkbox"/>
Provide training on PPE gear.	<input type="checkbox"/>
Inspect and maintain PPE gear.	<input type="checkbox"/>
Maintain first aid kits/medical supplies.	<input type="checkbox"/>

### Response Actions

Action	Complete
Do not move a seriously injured person unless that person's life would be threatened by not doing so.	<input type="checkbox"/>
Render first-aid or CPR if trained.	<input type="checkbox"/>
Do not leave the injured person unattended except to summon help. Call 911.	<input type="checkbox"/>
When reporting a medical emergency, provide the following information: <ul style="list-style-type: none"> <li>Type of emergency.</li> <li>Location of injured.</li> <li>Condition of injured.</li> <li>Any dangerous conditions.</li> </ul>	<input type="checkbox"/>
Comfort the injured person until EMS arrives.	<input type="checkbox"/>
Have someone stand outside the building to flag EMS as they reach the vicinity of the building.	<input type="checkbox"/>
If exposed to the injured persons' body fluids wash the exposed area and contact a supervisor.	<input type="checkbox"/>

### Recovery Actions

Action	Complete
Take pictures of any injuries and include in reports.	<input type="checkbox"/>
Provide mental health services/information for victims, family, and witnesses.	<input type="checkbox"/>
If needed, conduct a hot wash and lessons learned to identify additional mitigation activities or updates for this Plan.	<input type="checkbox"/>

## 2.9 Severe Thunderstorms

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### 2.9.1 Purpose, Scope, Situation Overview, and Assumptions

#### 2.9.1.1 Purpose

The purpose of the Severe Weather response guidance is to provide an effective and systematic means for the farms to assess and respond to storm related hazards.

#### 2.9.1.2 Scope

The farms are part of the University; therefore, farm personnel and students shall follow emergency procedures as identified within the EOP. This particular annex provides additional actions that farm personnel should consider to assist with mitigation, preparedness, response, and recovery actions for dealing with farm specific operations.

Nothing in this annex shall be construed in a manner that limits the use of good judgment and common sense in matters not foreseen or covered by this Plan.

#### 2.9.1.3 Situation

A severe thunderstorm may be accompanied by strong winds, hail, lightening, or other phenomena, which can produce considerable damage to buildings and crops, and cause downed power lines and trees, flash flooding, and wildfires. In stormy weather, livestock frequently gather under trees to seek shelter or are trapped in barns where a lightning strike can destroy an entire herd. Hail usually occurs during severe thunderstorms. The size ranges from smaller than a pea to as large as a softball, and can be very destructive to buildings, vehicles and crops. NOAA reports that in June of 1968, golf ball sized hail hit Putnam County, and in 1997, baseball-sized hail was reported. Thunderstorms also present conditions for tornadoes.

#### 2.9.1.4 Assumptions

- Severe weather can occur at any time.
- Strong winds, rain, hail, and lightning often will accompany severe weather.
- Severe weather can uproot trees, blow down utility poles, and blow down buildings.
- Lighting can strike causing fires, electrocution, and damage equipment.
- Severe weather can last for several hours.
- Severe weather can result in fatalities.
- Severe weather will continue to be a risk to livestock and crops.
- Due to the nature of work, farm hands are at a greater risk being caught outdoors during a storm.

## 2.9.2 Concept of Operations

This concept of operations applies to severe weather incidents and operations within the farms. The Farm Emergency Response Coordinator will notify the Director of Environmental Health and Safety when additional resources are required to support the farms with mitigation, preparedness, response, and recovery activities.

### Mitigation Actions

Action	Complete
Establish multiple modes of communications between farm storm safe areas.	<input type="checkbox"/>
Ensure each building has a first aid kit located near the storm safe area.	<input type="checkbox"/>
Identify potential hazards on farm property:	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Remove dead/rotting trees and branches that could fall and cause injury/damage.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Trim limbs that are crossing power lines or buildings.</li> </ul>	<input type="checkbox"/>
Train farm personnel on how to turn off electrical power, gas, and water supplies if needed to support the farms.	<input type="checkbox"/>
Keep roofs of buildings clear of debris.	<input type="checkbox"/>
Make sure buildings have proper drainage systems installed.	<input type="checkbox"/>
Consider installing a lightning protection system.	<input type="checkbox"/>
Install surge protectors on all electronic devices.	<input type="checkbox"/>
Install emergency generators on critical infrastructure.	<input type="checkbox"/>
Repair loose siding, roofing, and fencing, as these can become dangerous projectiles.	<input type="checkbox"/>
Remove or fence off single trees in pastures to prevent animals from congregating under them.	<input type="checkbox"/>
Ensure all livestock have identification, examples include: <ul style="list-style-type: none"> <li>Ear tags</li> <li>Tattoos</li> <li>Brands</li> </ul>	<input type="checkbox"/>

### Preparedness Actions

Action	Complete
Train key personnel on the Plan's procedures.	<input type="checkbox"/>
Inform farm personnel and students on locations of storm safe areas within/across farm property.	<input type="checkbox"/>
Conduct first aid training or request training through TTU.	<input type="checkbox"/>
Be aware, animal behavior may change before, during, and even after a disaster.	<input type="checkbox"/>

Action	Complete
<p>Monitor weather forecasts and local regulations (e.g., road closures) and communicate information to farm personnel and students.</p> <ul style="list-style-type: none"> <li>• A Severe Weather WATCH is issued when weather conditions favor the formation of severe weather, for example, during a severe thunderstorm -- be prepared to take shelter immediately if conditions worsen.</li> <li>• A Severe Weather WARNING is issued when severe weather is sighted or indicated by weather radar -- You should take shelter immediately!</li> </ul>	<input type="checkbox"/>
<b>Severe Weather Watch:</b>	
<ul style="list-style-type: none"> <li>• Stop work operations in outdoor areas.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Secure unstable materials that are outside of facilities.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Secure outside doors on unused infrastructure.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Unplug appliances and other electrical items such as computers, and turn off air conditioners. Power surges from lightning can cause serious damage to equipment.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Locate flashlights and first aid kits.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• If possible, bring animals into a barn or shelter well in advance of a storm.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Move injured or ill livestock to indoor location.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Ensure animals kept indoors have ample water and feed.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Keep animals away from areas with windows.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• NEVER leave animals tied up or restrained outside.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Remove equipment and debris from fields.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Open drainage ditches if applicable.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Ground wire fences.</li> </ul>	<input type="checkbox"/>

### Response Actions

Action	Complete
<b>Severe Weather Warning:</b>	
<ul style="list-style-type: none"> <li>• Avoid open fields during severe weather.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Move personnel and students to storm safe areas as warning sirens sound. <ul style="list-style-type: none"> <li>▪ Move to designated storm shelters as posted in buildings. Storm shelters outside of main facilities include: the dairy barn on the north end of the Shipley farm, and the teaching green house on the east side of Shipley farm.</li> </ul> </li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Account for all personnel, students, and visitors.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Keep all personnel and students away from doors and windows.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>▪ Watch for flying debris.</li> </ul>	<input type="checkbox"/>

Action	Complete
<ul style="list-style-type: none"> <li>Draw blinds and shades over windows to prevent glass from shattering into facilities (if high winds break the windows).</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Avoid corded telephones and metal; telephone lines and metal pipes can conduct electricity.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Do not allow anyone to leave a safe location until the storm has passed.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Monitor weather for updated information.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Maintain accountability of all personnel and students.</li> </ul>	<input type="checkbox"/>

### Recovery Actions

Action	Complete
Stay away from storm-damaged areas.	<input type="checkbox"/>
Attend to anyone who is injured by lightning.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Call 911 or local EMS.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Check the person for burns or other injuries; being struck by lightning can also cause nervous system damage, broken bones, and loss of hearing or eyesight.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>If breathing has stopped, begin rescue breathing.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>If the heart has stopped beating, a trained person should give CPR.</li> </ul>	<input type="checkbox"/>
Assess the situation.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Survey damage to farm buildings, equipment, livestock, and crops.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Report any downed power lines.</li> </ul>	<input type="checkbox"/>
If a power outage occurs, do not try to turn the power back on.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Call campus Facilities &amp; Business Services to assist.</li> </ul>	<input type="checkbox"/>
If a natural gas or propane leak is smelled, vacate the area immediately.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Call the natural gas or propane provider and call campus Facilities &amp; Business Services.</li> </ul>	<input type="checkbox"/>
Account for inventory.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Account for all livestock, fuels, chemicals, machinery, and equipment; use the inventory list previously prepared.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Note any livestock losses.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Check machinery and equipment for damage.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Take photographs of all damage for insurance or emergency assistance purposes.</li> </ul>	<input type="checkbox"/>
Report any hazardous materials (e.g., fuels, agricultural chemicals) spills or leaks to emergency response personnel (see Section <a href="#">2.7 Hazardous Materials</a> ).	<input type="checkbox"/>
Cleanup safely.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Wear sturdy shoes or boots, long sleeves, and gloves to protect your body from injury.</li> </ul>	<input type="checkbox"/>



Action	Complete
<ul style="list-style-type: none"> <li>Stay away from downed power lines and report them.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Be aware of hazards that may cause injury to you or others while cleaning up (e.g., chain saws, electrical or chemical hazards).</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Gather and dispose of trash, limbs, wire, and damaged equipment that could harm livestock.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Use caution when clearing broken tree branches; downed or damaged power lines can send electrical current through them.</li> </ul>	<input type="checkbox"/>
Use caution with gas powered equipment – dangerous carbon monoxide can be generated; use in well ventilated areas.	<input type="checkbox"/>
Examine animals closely; notify the veterinarian the farm uses, if injuries are observed.	<input type="checkbox"/>
Provide animals non-contaminated feed or water.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Provide clean, uncontaminated water.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Do not feed flood damaged/moldy feed or hay.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Do not use any feed or forage that may have been contaminated by chemical or pesticides.</li> </ul>	<input type="checkbox"/>
Animal disposal.	
<ul style="list-style-type: none"> <li>Record any animal deaths.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Dispose of animal bodies in accordance with guidance given by local, state, and federal agriculture officials.</li> </ul>	<input type="checkbox"/>
Assess crops.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Survey the damage to crops from wind, hail, or flooding.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Determine how much of the farms' crops are water logged (only roots flooded) and how much are fully submerged (entire plants under water).</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Evaluate injured plants to determine whether the growing potential is still viable; this is best done 3-5 days after the storm to allow time for plant recovery – if it occurs.</li> <li>Factors affecting the extent of crop damage include: <ul style="list-style-type: none"> <li>Degree of submergence of plant.</li> <li>Weather conditions prior to the situation (e.g., temperature).</li> <li>Plant growth stage and height – younger stages are more vulnerable.</li> <li>Significant loss of soil nitrogen.</li> <li>Mud deposited on plants can stress plants and reduce photosynthesis.</li> </ul> </li> <li>Yield losses due to hail damage may include: <ul style="list-style-type: none"> <li>Stand reduction due to plant death.</li> <li>Leaf area reduction due to hail damage to leaves.</li> <li>Severe bruising of leaf tissue.</li> </ul> </li> </ul>	<input type="checkbox"/>
Consider replanting crops.	<input type="checkbox"/>

Action	Complete
<ul style="list-style-type: none"> <li>Contact the farms' crop insurance agent prior to destroying or replanting crops to discuss coverage.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>The United States Department of Agriculture (USDA) Farm Service Agency has a number of disaster assistance programs to aid farms in recovering from severe weather damage to crops. <a href="http://www.fsa.usda.gov/">www.fsa.usda.gov/</a></li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Evaluating whether to replant will depend on:                             <ul style="list-style-type: none"> <li>The existing plant stand.</li> <li>Distribution of the plant stand.</li> <li>Calendar date.</li> <li>Weed situation.</li> <li>Seed availability of earlier maturing hybrids.</li> <li>Cost to replant.</li> <li>Yield potential of the existing crop.</li> </ul> </li> </ul>	<input type="checkbox"/>
<p>Monitor for diseases.</p>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Flood conditions can increase disease incidence in surviving plants; scout the fields often to determine if and when problems occur.</li> </ul>	<input type="checkbox"/>
<p>Do not feed heated, molded, or sour feed/moldy legume hays (alfalfa, clover) to any livestock.</p> <ul style="list-style-type: none"> <li>Rain damaged grain is likely to contain toxins as warm wet conditions are ideal for mold growth.</li> </ul>	<input type="checkbox"/>
<p>Do not use flood damaged or wet feeds until tested. It may be possible to dry and clean rain damaged grain, but it must be tested for mycotoxins before use.</p> <ul style="list-style-type: none"> <li>Soaked grain will spoil within a day or two at high moisture and summer temperatures.</li> <li>Flood damaged grain should always be destroyed due to the potential contaminants that can enter through the water.</li> <li>Wet seed grain will probably not be suitable for planting, as wetness causes the seed to germinate.</li> </ul>	<input type="checkbox"/>
<p>Remove debris and take to the farm's landfill; ensure to follow regulations.</p>	<input type="checkbox"/>
<p>Provide mental health services for those personnel involved in the event.</p>	<input type="checkbox"/>
<p>The Farm Emergency Response Coordinator or designated personnel will contact the local Extension Office or Tennessee Department of Agriculture for any matter regarding livestock or crop issues that cannot be resolved.</p>	<input type="checkbox"/>
<p>For disaster assistance, Farm Emergency Response Coordinator should coordinate with TTU Director of Environmental Health and Safety and the Putnam County Office of Emergency Management.</p>	<input type="checkbox"/>
<p>Conduct a hot wash and discuss lessons learned to identify additional mitigation activities or updates for the Plan.</p>	<input type="checkbox"/>

## 2.10 Tornadoes

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### 2.10.1 Purpose, Scope, Situation Overview, and Assumptions

#### 2.10.1.1 Purpose

The purpose of the Tornadoes response guidance is to provide an effective and systematic means for the farms to assess and respond to tornado conditions.

#### 2.10.1.2 Scope

The farms are part of the University; therefore, farm personnel and students shall follow emergency procedures as identified within the EOP. This particular annex provides additional actions that farm personnel should consider to assist with mitigation, preparedness, response, and recovery actions for dealing with farm specific operations.

Nothing in this annex shall be construed in a manner that limits the use of good judgment and common sense in matters not foreseen or covered by this Plan.

#### 2.10.1.3 Situation

Tornadoes are defined as a violently rotating column of air extending from a thunderstorm to the ground, often formed when warm and cold air masses clash. They are capable of tremendous destruction, creating damage paths in excess of one mile wide and 50 miles long. Tornadoes speed can vary from nearly stationary to up to 70 mph; however, the wind speed from these formations can exceed 250 mph. Tornadoes are classified using the Enhanced Fujita Scale. Most tornadoes (~88%) are considered weak (F0 or F1) and about 95% of all U.S. tornadoes are below F3 intensity.

Tornadoes can cause rapid destruction of homes and property, as well as injury and death to humans and animals. NOAA reports eleven tornadoes, ranging from F0-F4 and EF1-EF2, since 1955 for Putman County. The worst tornado was an F4 occurring on April 03, 1974, approximately six miles southeast of Cookeville; 10 people lost their lives, and 51 had injuries.

The springtime months, from mid-March through the first of June, are the peak months for tornado activity; however, tornadoes can and have occurred in every month of the year. The afternoon and early evening hours from 3:00 P.M. to 9:00 P.M. are the best time for tornado development. In Putnam County, significant tornadoes occur once every 3-5 years and affect up to 25% of the county's population.

#### 2.10.1.4 Assumptions

- Tornadoes can happen any time of year.
- Tornadoes are unpredictable and can cause major damage and destruction in seconds.
- Nothing can be done to prevent tornadoes.
- The extremely high winds, flying debris, as well as the wreckage left behind, can cause personal injury or possibly death.
- Tornadoes will continue to be a risk to livestock and crops.

- Due to the nature of work, farm hands are at a greater risk being caught outdoors during a tornado watch or warning.

## 2.10.2 Concept of Operations

This concept of operations applies to tornado incidents and operations within the farms. The Farm Emergency Response Coordinator will notify the Director of Environmental Health and Safety when additional resources are required to support the farms with mitigation, preparedness, response, and recovery activities.

### Mitigation Actions

Action	Complete
Post shelter-in-place and evacuation plans in high traffic areas in buildings.	<input type="checkbox"/>
Store NOAA Weather Alert Radios in key locations.	<input type="checkbox"/>
Have a way of receiving weather information while you work, especially at remote locations.	<input type="checkbox"/>
Identify potential hazards on farms.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• When inspecting facilities, pay particular attention to the windows, doors, roof, gables and connections (roof-to-wall, wall-to-foundation). Weaknesses in these elements of buildings make it more vulnerable to significant damage.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Secure unstable materials that are outside of buildings (e.g., patio furniture, fuel tanks).</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Remove dead/rotting trees and branches that could fall and cause injury/damage during a tornado.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Keep trees and shrubbery trimmed. Cut weak branches and trees that could fall on buildings.</li> </ul>	<input type="checkbox"/>
Protect buildings.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Place furniture so that chairs and beds are away from windows, mirrors, and picture frames.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Place heavy or large items on lower shelves.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Secure large appliances, equipment, and electronics, especially water heaters, air compressors, and table saws with flexible cable, or metal strapping.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Secure top-heavy, freestanding furniture (e.g., bookcases) that could topple to the wall, by using “L” brackets, corner brackets, or aluminum molding.</li> </ul>	<input type="checkbox"/>
Safeguard valuable equipment and sensitive items:	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Create a room-by-room inventory of sensitive items.</li> <li>• Equipment above \$250.</li> <li>• Vaccinations.</li> <li>• Controlled substances.</li> </ul>	<input type="checkbox"/>

Action	Complete
<ul style="list-style-type: none"> <li>Gather copies of critical documents, such as finance records, insurance policies, and animal records. Keep these in a secure place (e.g., safe deposit box, waterproof container).</li> <li>If records are maintained electronically, backup files regularly at a remote site.</li> </ul>	<input type="checkbox"/>
Create an inventory list.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Inventory livestock and animals (species, number of animals, location, and records of ownership).</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Inventory crops (acres, type).</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Inventory machinery and equipment (make, model #).</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Inventory hazardous substances (e.g., pesticides, fertilizers, fuels, medicines, other chemicals).</li> </ul>	<input type="checkbox"/>
Have identification for all animals.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Make sure animals have some form of permanent identification (e.g., ear tags, tattoos, microchips, etc.).</li> </ul>	<input type="checkbox"/>
Review insurance coverage.	<input type="checkbox"/>
Tornadoes can cause structural damage and power outages. Have well maintained backup generators or alternate power sources for livestock production operations.	<input type="checkbox"/>
In the event of animal escape, have handling equipment (e.g., halters, nose leads) and safety and emergency items for farm vehicles and trailers.	<input type="checkbox"/>
Ensure a safe environment.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Assess the stability and safety of barns and other structures.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Remove loose objects from fields or livestock areas that may become potential flying debris.</li> </ul>	<input type="checkbox"/>

### Preparedness Actions

Action	Complete
Inform farm personnel and students on locations of storm safe areas within/across farm property.	<input type="checkbox"/>
Check weather reports before planning work activities.	<input type="checkbox"/>
Develop a communication plan with personnel and students.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Know how to contact each other in the event of severe weather, especially if you are in separate locations.</li> </ul>	<input type="checkbox"/>
Establish shelter locations on farm property.	<input type="checkbox"/>
Identify potential hazards on property.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Secure structurally unstable materials (e.g. lumber, logs, equipment, fuel tanks), and loose equipment and materials (e.g., buckets, tools, etc.) that can become dangerous if airborne.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Fix loose siding, roofing, fence posts, etc., as these can become dangerous projectiles in high winds.</li> </ul>	<input type="checkbox"/>

Action	Complete
<ul style="list-style-type: none"> <li>Know how to turn off electrical power, gas, and water supplies for buildings on the farm.</li> </ul>	<input type="checkbox"/>
Stockpile emergency materials.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Store plywood, lumber, nails, hammer, saw, pry bar.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Store wire and rope to secure objects.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Store fire extinguishers at all barns and in all vehicles.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Store a safe supply of food to feed livestock.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Store a gas-powered generator in case of power failure.</li> </ul>	<input type="checkbox"/>
Secure items that could jar off of walls or that could become flying debris.	<input type="checkbox"/>
Turn off unused electronics.	<input type="checkbox"/>
Tornadoes can cause structural damage and power outages. Have well maintained backup generators or alternate power sources for livestock production operations.	<input type="checkbox"/>
In the event of animal escape, have handling equipment (e.g., halters, nose leads) and safety and emergency items for farm vehicles and trailers.	<input type="checkbox"/>
Ensure a safe environment.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Assess the stability and safety of barns and other structures.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Remove loose objects from fields or livestock areas that may become potential flying debris.</li> </ul>	<input type="checkbox"/>

### Response Actions

Action	Complete
Be aware, animal behavior may change before, during, and even after a disaster. Animals sense tornadoes in advance.	<input type="checkbox"/>
Monitor weather forecasts and communicate information to farm personnel and students. <ul style="list-style-type: none"> <li>A tornado WATCH is issued when weather conditions favor the formation of tornadoes, for example, during a severe thunderstorm -- be prepared to take shelter immediately if conditions worsen. Never try to outrun a tornado. Get off of farm machinery and get as far away from it as possible.</li> <li>A tornado WARNING is issued when a tornado funnel is sighted or indicated by weather radar -- You should take shelter immediately!</li> </ul>	<input type="checkbox"/>
Direct students and personnel to move to the designated shelter area immediately. <ul style="list-style-type: none"> <li>If possible, get inside a sturdy building. The safest place is an inside room on the lowest floor or an interior hallway remaining clear of exterior windows and doors.</li> <li>Move to designated storm shelters. Signs are placed in all campus buildings designating shelter areas. Storm shelters outside of main facilities include: the dairy barn on the north end of the Shipley farm, and the teaching green house on the east side of Shipley farm.</li> </ul>	<input type="checkbox"/>
Immediately evacuate areas without reinforced construction such as auditoriums, gymnasiums, and large rooms with wide free-span roofs.	<input type="checkbox"/>
If possible, close all doors as you leave an area.	<input type="checkbox"/>
If there is time, move any large objects that could be a potential danger, out of the room.	<input type="checkbox"/>

Action	Complete
Do not open windows. You won't save buildings, as once thought, and may actually make things worse by giving wind and rain a chance to get inside.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Avoid windows, or glass doors, which can be broken by strong winds or hail, and cause damage or injury.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>For added protection, get under something sturdy, such as a heavy table or workbench.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>If possible, cover your body with a blanket; protect your head with anything available--even your hands.</li> </ul>	<input type="checkbox"/>
If farm personnel, students, or visitors are at risk, ignore animals.	<input type="checkbox"/>
If your personal security isn't threatened, you may only have time to open routes of escape for livestock.	<input type="checkbox"/>
If possible, make animals safe.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Bring animals into a barn or shelter well in advance of a storm.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Make sure they have plenty of food and water.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Keep them away from areas with windows.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>NEVER leave animals tied up or restrained outside.</li> </ul>	<input type="checkbox"/>
After moving to a safe location, listen to the radio for further alerts and updates, and inform farm personnel.	<input type="checkbox"/>
Account for all personnel and students on site.	<input type="checkbox"/>
If outdoors and adequate shelter is not immediately available:	
<ul style="list-style-type: none"> <li>Move away from the tornado's path at a right angle.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Lie flat in the nearest ditch or other low-lying area.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Cover your head and neck with your arms.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Stay away from trees.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Do not get under any vehicle, no matter what its size.</li> </ul>	<input type="checkbox"/>
Seek medical attention for the injured.	<input type="checkbox"/>

### Recovery Actions

Action	Complete
Continue to monitor battery-powered radios or television for emergency information.	<input type="checkbox"/>
Assess the situation.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Survey damage to the outside and inside of farm buildings, equipment, livestock, and crops.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Identify sharp objects, dangerous materials, downed power lines, damaged gas lines, or other hazards (e.g., chemical spills).</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Be aware of possible structural, electrical, or gas-leak hazards in buildings. If you suspect any damage, do not attempt to turn utilities off, contact Facilities &amp; Business Services immediately.</li> </ul>	<input type="checkbox"/>

Action	Complete
<ul style="list-style-type: none"> <li>• Check for power outages.</li> </ul>	<input type="checkbox"/>
Account for inventory.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Account for all animals, fuels, chemicals, machinery and equipment; use the inventory list prepared prior to the incident.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Check machinery and equipment for damage.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Take photographs of all damage for insurance or emergency assistance purposes.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Note any animal losses.</li> </ul>	<input type="checkbox"/>
Report any hazardous materials (e.g., fuels, agricultural chemicals) spills or leaks to emergency response personnel (see Section <a href="#">2.7 Hazardous Materials</a> ).	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Report any property damage to the farms' insurance agent or company representative immediately after a natural disaster and make temporary repairs to prevent further damage.</li> </ul>	<input type="checkbox"/>
Cleanup safely.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Wear sturdy shoes or boots, long sleeves, and gloves when handling or walking on or near debris.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Be aware of hazards that may cause injury to you or others cleaning up - these can include chain saw injuries, electrical, or chemical hazards.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Do not touch downed power lines or objects in contact with downed lines. Report electrical hazards to the police and the utility company.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Use caution with gas powered equipment – dangerous carbon monoxide can be generated; use in well ventilated areas.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Gather and dispose of trash, limbs, wire, and damaged equipment that could harm livestock.</li> </ul>	<input type="checkbox"/>
Care for animals.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Make sure that animals have food and water.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Remove any debris that may cause injury.</li> </ul>	<input type="checkbox"/>
Provide non-contaminated feed or water.	<input type="checkbox"/>
Provide clean, uncontaminated water.	<input type="checkbox"/>
Do not use any feed or forage that may have been contaminated by chemical or pesticides.	<input type="checkbox"/>
Assess animals and building structures.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Survey damage to barns and other structures; assess the stability and safety.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Examine animals closely; contact the veterinarian if injuries are observed.</li> </ul>	<input type="checkbox"/>
Animal disposal:	
<ul style="list-style-type: none"> <li>• Record any animal deaths.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Dispose of animal bodies in accordance with guidance given by local, state, and federal agriculture officials.</li> </ul>	<input type="checkbox"/>
Remove debris and take to the farm's landfill; ensure to follow regulations.	<input type="checkbox"/>



<b>Action</b>	<b>Complete</b>
Provide mental health services for those personnel involved in the event.	<input type="checkbox"/>
For disaster assistance, Farm Emergency Response Coordinator should coordinate with Director of Environmental Health and Safety and coordinate through the Putnam County Office of Emergency Management.	<input type="checkbox"/>
Conduct a hot wash and discuss lessons learned to identify additional mitigation activities or updates for the Plan.	<input type="checkbox"/>

## 2.11 Utility Outages

### 2.11.1 Purpose, Scope, Situation Overview, and Assumptions

#### 2.11.1.1 Purpose

The purpose of the Utility Outage response guidance is to provide an effective and systematic means for the farms to assess and respond to utility failures.

#### 2.11.1.2 Scope

The farms are part of the University; therefore, farm personnel and students shall follow emergency procedures as identified within the EOP. This particular annex provides additional actions that farm personnel should consider to assist with mitigation, preparedness, response, and recovery actions for dealing with farm specific operations.

Nothing in this annex shall be construed in a manner that limits the use of good judgment and common sense in matters not foreseen or covered by this Plan.

#### 2.11.1.3 Situation

A utility failure can occur as an outcome of another hazard or as a standalone event and involves a disruption to the normal operations of electricity, water, gas, and/or telephone operations. Power failures are common with severe weather and winter storm activity. Significant power outages occur in Putnam County about once a year, affecting as much as 25% of the population.

#### 2.11.1.4 Assumptions

- A utility failure may occur at the farm only, or during a campus or city outage.
- Depending on the situation, utilities may be restored within hours or may take several weeks/months.
- Clean water is necessary to sustain life.

### 2.11.2 Concept of Operations

This concept of operations applies to utility outage incidents and operations within the farms. The Farm Emergency Response Coordinator will notify the Director of Environmental Health and Safety when additional resources are required to support the farms with mitigation, preparedness, response, and recovery activities.

#### Mitigation Actions

Action	Complete
Check utility systems on farms routinely and identify any hazards (pipes, water pressure, utility lines/trees, etc.).	<input type="checkbox"/>
Maintain accurate documents/maps locating all water lines and valves on the farm.	<input type="checkbox"/>
Identify generator needs on the farm.	<input type="checkbox"/>
Maintain emergency exit signs and floodlighting.	<input type="checkbox"/>

**Preparedness Actions**

Action	Complete
Conduct regular maintenance on farm infrastructure.	<input type="checkbox"/>
Have emergency flashlights and fresh batteries within buildings.	<input type="checkbox"/>
Train and conduct exercises to include a utility failure on campus.	<input type="checkbox"/>

**Response Actions**

Action	Complete
Identify dangerous materials, downed power lines, damaged gas lines, damaged water lines, damaged sewage lines, and other hazards.	<input type="checkbox"/>
Determine the cause of failure. If it is related to infrastructure, consider evacuation of building.	<input type="checkbox"/>
If smell of gas is present evacuate building immediately.	<input type="checkbox"/>
Call Facilities & Business Services or contact the TTU Police Department.	<input type="checkbox"/>
In any case, be prepared to give: <ul style="list-style-type: none"> <li>• Location</li> <li>• Nature of problem</li> <li>• Person to contact or telephone extension.</li> </ul>	<input type="checkbox"/>

**Recovery Actions**

Action	Complete
Do not re-enter a building or area until an “All Clear” is provided.	<input type="checkbox"/>
Take pictures of any damages to University property and inform Facilities & Business Services.	<input type="checkbox"/>
If needed, conduct an incident review and lessons learned to identify additional mitigation activities or updates for this Plan.	<input type="checkbox"/>

## 2.12 Winter Storms

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### 2.12.1 Purpose, Scope, Situation Overview, and Assumptions

#### 2.12.1.1 Purpose

The purpose of the Winter Storms response guidance is to provide an effective and systematic means for the farms to assess and respond to winter storm related hazards such as cold waves, snowfall, ice storms, and blizzards.

#### 2.12.1.2 Scope

The farms are part of the University; therefore, farm personnel and students shall follow emergency procedures as identified within the EOP. This particular annex provides additional actions that farm personnel should consider to assist with mitigation, preparedness, response, and recovery actions for dealing with farm specific operations.

Nothing in this annex shall be construed in a manner that limits the use of good judgment and common sense in matters not foreseen or covered by this Plan.

#### 2.12.1.3 Situation

Winter storms bring heavy snow, ice, strong winds, and freezing rain. On average, winter storms occur twice a year affecting all of Putnam County. Winter storms can have a tremendous impact on individuals, animals, and communities. Winter storms can last for days. Accumulations of snow and ice can result in road closures or blockages – isolating homes and farms for days. Roofs may collapse due to heavy weight burden, and knock trees and power lines down resulting in power outages and subsequent loss of heat in homes. Dangerous driving conditions can lead to travelers being stranded on the road. Prolonged exposure to low temperatures, wind, or moisture can result in serious or life threatening conditions, such as frostbite or hypothermia. Each year, dozens of Americans die due to cold-related illnesses with additional fatalities occurring from vehicle accidents, fires following the misuse of heaters, and other winter weather fatalities (e.g., carbon monoxide poisoning). Animals are also at risk during severe winter weather and are subject to wind chill factors, hypothermia, and frostbite just as humans are. Unprotected livestock may be lost. Deaths can also occur due to dehydration, when water sources freeze and become unavailable. Winter conditions may make getting food and water to animals more difficult.

#### 2.12.1.4 Assumptions

- People are susceptible to cold weather injuries.
- Fatalities can occur due to winter storms.
- Food and water consumption increases for animals during the late fall through the early spring seasons.
- Depending on the degree of preparedness, even small amounts of snow or unexpected low temperatures and wind can have devastating effects on animal health and survival, animal care businesses, and personal life.
- Loss of livestock during heavy snowfall and blizzards can be very high.
- Ice storms can break power lines, causing widespread blackouts.

- Water supply may be compromised due to frozen pipes and potential pipe burst.
- Large amounts of snow can lead to localized flooding when warmer temperatures melt the snow in a short period of time.
- Snow accumulation and/or heavy icicles can cause barn and building roof collapse.
- Severe cold may prevent animals from maintaining proper body heat and may distress animals.

## 2.12.2 Concept of Operations

This concept of operations applies to winter storm incidents and operations within the farms. The Farm Emergency Response Coordinator will notify the Director of Environmental Health and Safety when additional resources are required to support the farms with mitigation, preparedness, response, and recovery activities.

### Mitigation Actions

Action	Complete
In the event of road closures, be sure to have extra food available for animals.	<input type="checkbox"/>
For animals requiring continual medications, have at least a two-week supply on hand.	<input type="checkbox"/>
Install a smoke detector and a battery-operated carbon monoxide detector near the area to be heated.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Test smoke detectors monthly.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Replace batteries twice yearly.</li> </ul>	<input type="checkbox"/>
Winterize any buildings that provide shelter for farm personnel, students, visitors, livestock, or equipment.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Install storm shutters, doors, and windows.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Caulk and weather-strip doors and windows.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Check the roof structure for its ability to hold heavy weight accumulations of snow and ice.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Repair any roof leaks.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Add insulation, insulated doors, storm windows, or thermal-pane windows.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Insulate any water lines that run along exterior walls so they will be less likely to freeze.</li> </ul>	<input type="checkbox"/>

### Preparedness Actions

Action	Complete
Maintain/acquire generators.	<input type="checkbox"/>
Monitor weather forecasts and local regulations (e.g., road closures) and communicate information to farm personnel.	<input type="checkbox"/>
Provide warming facilities, and warm food and beverages to personnel, students, and visitors who will be exposed to extreme cold weather for long periods of time.	<input type="checkbox"/>
Survey and monitor animal health and care.	<input type="checkbox"/>
Monitor farm buildings for structural integrity.	<input type="checkbox"/>

**Response Actions**

Action	Complete
Monitor farm personnel, students, and visitors for cold weather related health conditions; if it is suspected that a cold weather injury has occurred, seek medical attention immediately.	<input type="checkbox"/>
Monitor animals for cold weather injuries. <ul style="list-style-type: none"> <li>Frostbite: Extremities (ears, tail) are particularly subject to frostbite. Male reproductive organs may be affected and impair animal fertility. Frozen or chapped teats will impact milk production. Signs may not be immediately obvious or show for several days and may include white, waxy, or pale appearance to affected area, signs of freeze-damaged tissue.</li> <li>Hypothermia signs include: extreme shivering, increased respiration, confused, erratic or clumsy behavior; especially young animals.</li> </ul>	<input type="checkbox"/>
Seek veterinary care immediately if signs of cold weather injuries are identified.	<input type="checkbox"/>
Provide food.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Haul extra feed to feeding areas.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Check mechanized feeders in case of power outages; provide for emergency feeding procedures.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Provide enough space for all animals to get to the feed.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Check to ensure snow is not covering feed bunkers.</li> </ul>	<input type="checkbox"/>
Provide water.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Remove ice buildup around waterers.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Keep water fresh and unfrozen.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Use heaters in water tanks.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>If pipes freeze or power is out, haul, water to animals.</li> </ul>	<input type="checkbox"/>
Get frozen water pipes fixed.	<input type="checkbox"/>
Provide shelter.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>If possible, move animals to an indoor shelter or building, especially the young.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Provide additional bedding to keep animals insulated from the ground and keep them dry.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Place sand or other non-toxic gritty material on icy feedlots to provide good footing.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Ensure heaters are working properly and are located in an area with adequate ventilation.</li> </ul>	<input type="checkbox"/>
Ensure adequate ventilation in the building.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>If mechanically ventilated facilities are not functioning properly, animals could suffocate from lack of oxygen.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Open vents to facilitate natural air flow.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Clear ice and snow from vents.</li> </ul>	<input type="checkbox"/>

**Recovery Actions**

Action	Complete
Animal disposal.	
<ul style="list-style-type: none"> <li>• Record any animal deaths.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Dispose of animal bodies in accordance with guidance given by local, state, and federal agriculture officials.</li> </ul>	<input type="checkbox"/>
Check fences and buildings for damage from downed tree branches, contact with downed power lines, or inoperable electric fencing.	<input type="checkbox"/>
Remove debris and take to the farm's landfill; ensure to follow regulations.	<input type="checkbox"/>
Continue to monitor animals daily for signs of illness, dehydration, frostbite, or hypothermia.	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• If any of these conditions are suspected, seek veterinary care immediately!</li> </ul>	<input type="checkbox"/>
Provide mental health services for those personnel involved in the event.	<input type="checkbox"/>
Conduct hot wash and discuss lessons learned to identify additional mitigation activities or updates for the Plan.	<input type="checkbox"/>



## 3.0 Appendices



## 3.1 Appendix A – Emergency Contact Lists

### 3.1.1 Farm Emergency Contact List

Contact	Phone Number(s)
Police	<b>911</b> – Emergencies
<ul style="list-style-type: none"> <li>• TTU Police Department</li> </ul>	931-372-3234
<ul style="list-style-type: none"> <li>• Cookeville Police</li> </ul>	931-526-2125
<ul style="list-style-type: none"> <li>• Putnam County Sheriff’s Office</li> </ul>	931-528-8484
<ul style="list-style-type: none"> <li>• Tennessee Highway Patrol</li> </ul>	931-528-8496
City Fire Department	<b>911</b> – Emergencies 931-520-5255
Tennessee State Fire Marshal’s Office	615-741-7190
Emergency Medical Service – Ambulance	<b>911</b> – Emergencies
Campus Health Services	931-372-3320
Putnam County Health Department	931-528-2531
Tennessee Department of Health – Division of Communicable and Environmental Disease & Emergency Preparedness	615-741-7247
Cookeville Regional Medical Center	931-528-2541
Poison Control Center	1-800-222-1222
Putnam County Office of Emergency Management	931-528-7575
Cookeville Water and Sewer Department	
<ul style="list-style-type: none"> <li>• Business hours</li> </ul>	931-520-5227
<ul style="list-style-type: none"> <li>• After hour emergencies</li> </ul>	931-526-2125
Cookeville Gas Department	
<ul style="list-style-type: none"> <li>• Business hours</li> </ul>	931-520-4427
<ul style="list-style-type: none"> <li>• After hour emergencies</li> </ul>	931-520-5231
Tennessee Department of Agriculture	615-837-5103
Agricultural Extension Office	931-526-2432
State Veterinarian’s Office:	615-837-5120
Area Veterinarian in Charge (AVIC):	
<ul style="list-style-type: none"> <li>• Dr. George Boyd</li> </ul>	931-528-5604
State Plant Health Director	615-907-3357
American Red Cross – Caney Fork Chapter	931-473-2595
Counseling Center	931-372-3331
Nashville and Eastern Railroad (NERR)	615-444-1434

Contact	Phone Number(s)
Farm Emergency Response Coordinator	
• Shipley Farm Manager: Rusty Chilcutt	931-372-6767
Assistant Farm Emergency Response Coordinator	
• Shipley Assistant Farm Manager: Cortis Jarvis	931-267-1071
• Shipley Assistant Farm Manager: Amanda Houser	931-267-1802
• Oakley Farm Supervisor: Brian York	931-239-8765

## 3.2 Appendix B – Checklists

### 3.2.1 Bomb Threat Checklist

A Bomb Threat Checklist should be readily available at each phone located on the farm.

Questions to ask:

1. When is bomb going to explode? \_\_\_\_\_
2. Where is it right now? \_\_\_\_\_
3. What does it look like? \_\_\_\_\_
4. What kind of bomb is it? \_\_\_\_\_
5. What will cause it to explode? \_\_\_\_\_
6. Did you place the bomb? \_\_\_\_\_
7. Why? \_\_\_\_\_
8. What is your address? \_\_\_\_\_
9. What is your name? \_\_\_\_\_

Threat Language	Exact Wording of the Threat	
Foul		
Educated		
Well Spoken		
Irrational		
Taped		
Incoherent		
	Length of Call:	
	Number at which call is received:	
	Time:	Date:

Caller's Voice			Background Sounds	
Female	Male	Age	Crockery	Booth
Calm	Crying	Deep	Voices	Clear
Angry	Normal	Ragged	Music	Motor
Cracking Voice	Deep Breathing	Clearing Throat	Office Machinery	
Slow	Slurred	Distinct	Street Noises	
Rapid	Nasal	Excited	Long Distance	
Soft	Stutter	Disguised	Factory Noises	
Loud	Lisp	Accent	House Noises	
Laughter	Raspy	Familiar	Other:	
If voice is familiar, who does it sound like?				

### 3.3 Appendix C – TTU’s Emergency Procedures

<b>EMERGENCY PROCEDURES TENNESSEE TECH UNIVERSITY</b>		<b>ALL EMERGENCIES CALL 911 UNIVERSITY POLICE: 372-3234</b>
<p style="text-align: center;"><b>SEVERE WEATHER TORNADO</b></p> <p><b>INDOORS:</b></p> <ul style="list-style-type: none"> <li>• Move quickly to a safe interior area without windows (e.g., hallways, basements, restrooms).</li> <li>• Move to the lowest level of the building. Tornado shelters are marked.</li> <li>• If possible, close all doors as you leave an area.</li> <li>• Stay away from windows, doors, and exterior walls.</li> <li>• Do NOT go outdoors.</li> </ul> <p><b>OUTDOORS:</b></p> <ul style="list-style-type: none"> <li>• Get inside if possible.</li> <li>• Stay away from trees, power lines, utility poles, and other hazards.</li> <li>• Curl up in a ditch or low-lying area; stay low to the ground; use your arms to protect your head and neck.</li> </ul>	<p style="text-align: center;"><b>SUSPICIOUS PERSON</b></p> <ul style="list-style-type: none"> <li>• Do not physically confront the person.</li> <li>• Do not let anyone into a locked building/office.</li> <li>• Do not block the person’s access to an exit.</li> <li>• Call 911.</li> <li>• Provide as much information as possible about the person and their direction of travel.</li> </ul>	<p style="text-align: center;"><b>HAZARDOUS MATERIALS RELEASE</b></p> <ul style="list-style-type: none"> <li>• If an emergency exists or if anyone is in danger, move away from the site of the hazard to a safe location and call 911.</li> <li>• Follow the instructions of emergency personnel.</li> <li>• Alert others to stay clear of the area.</li> <li>• Notify emergency personnel if you have been exposed or have information about the release.</li> </ul>
<p style="text-align: center;"><b>FIRE</b></p> <ul style="list-style-type: none"> <li>• Remain calm.</li> <li>• Activate the nearest fire alarm pull station and call 911.</li> <li>• Evacuate the building.</li> <li>• Do NOT use elevators!</li> <li>• Do NOT enter the building until authorized by emergency personnel.</li> </ul>	<p style="text-align: center;"><b>SUSPICIOUS OBJECT</b></p> <ul style="list-style-type: none"> <li>• Do not touch or disturb the object.</li> <li>• Do NOT use a cell phone!</li> <li>• Call 911.</li> <li>• Notify your instructor or supervisor.</li> <li>• Be prepared to evacuate.</li> </ul>	
<p style="text-align: center;"><b>EMERGENCY: Call 911</b></p> <p style="text-align: center;"><b>Stay informed with TTUAlert messaging. Visit <a href="http://www.tntech.edu/ttualert" style="color: white;">www.tntech.edu/ttualert</a> to register.</b></p>		<p style="text-align: center;"><b>EVACUATION</b></p> <ul style="list-style-type: none"> <li>• Remain calm.</li> <li>• Evacuate using the nearest exit.</li> <li>• Do NOT use elevators!</li> <li>• Gather personal belongings (medication, keys, purses, wallets, etc.), but only if safe to do so.</li> <li>• Follow directions given by emergency personnel.</li> <li>• Assist persons with disabilities or injuries without jeopardizing your safety.</li> <li>• If you are unable to evacuate due to a physical disability, go to a safe location (e.g., stairwell) and wait for assistance. Ask others to inform emergency personnel of your location.</li> <li>• IF THERE IS TIME: Secure any hazardous materials or equipment before leaving.</li> </ul>
February 23, 2008		



### 3.4 Appendix D – Maps

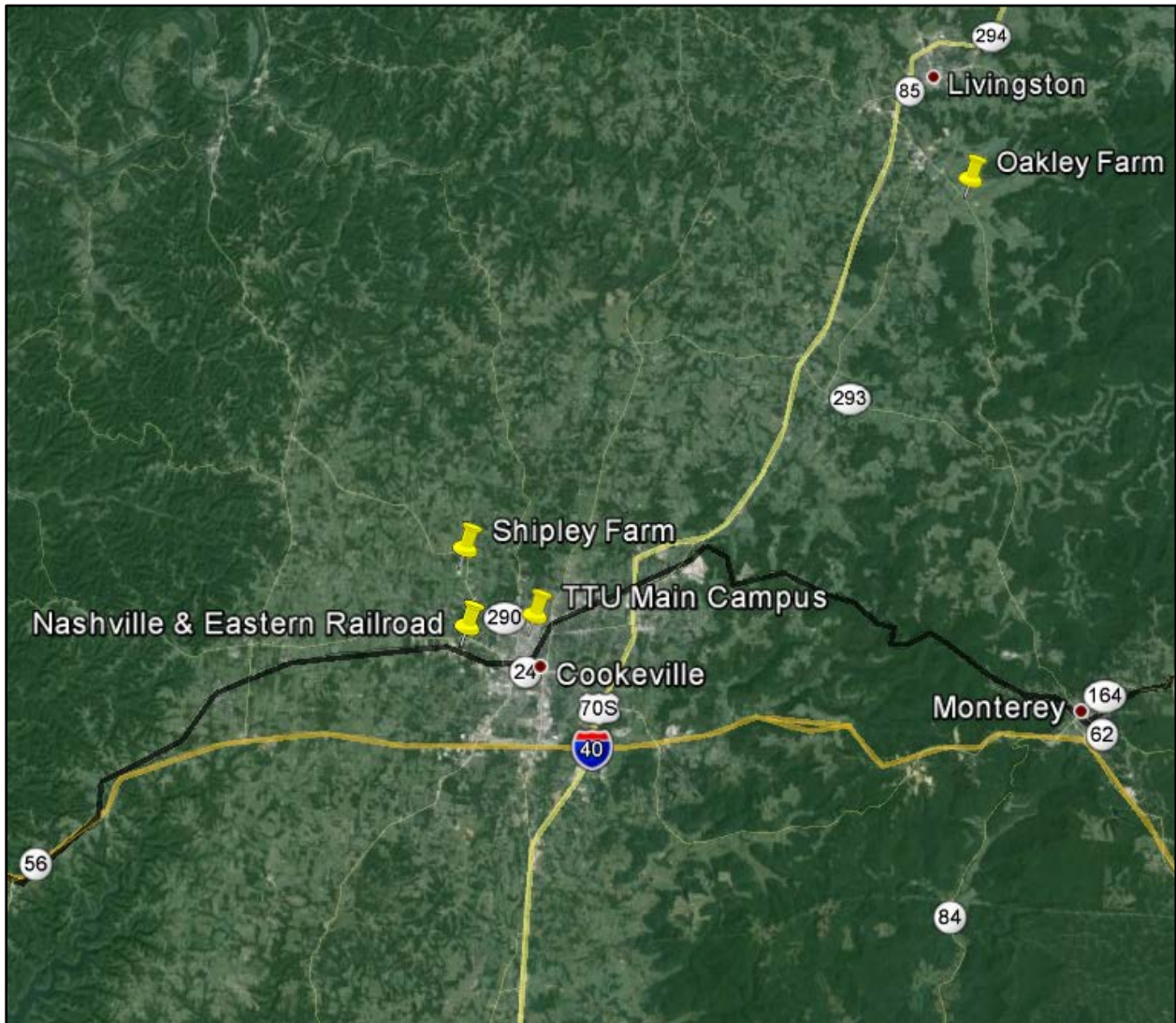


Figure 2: TTU Farms Overview Map

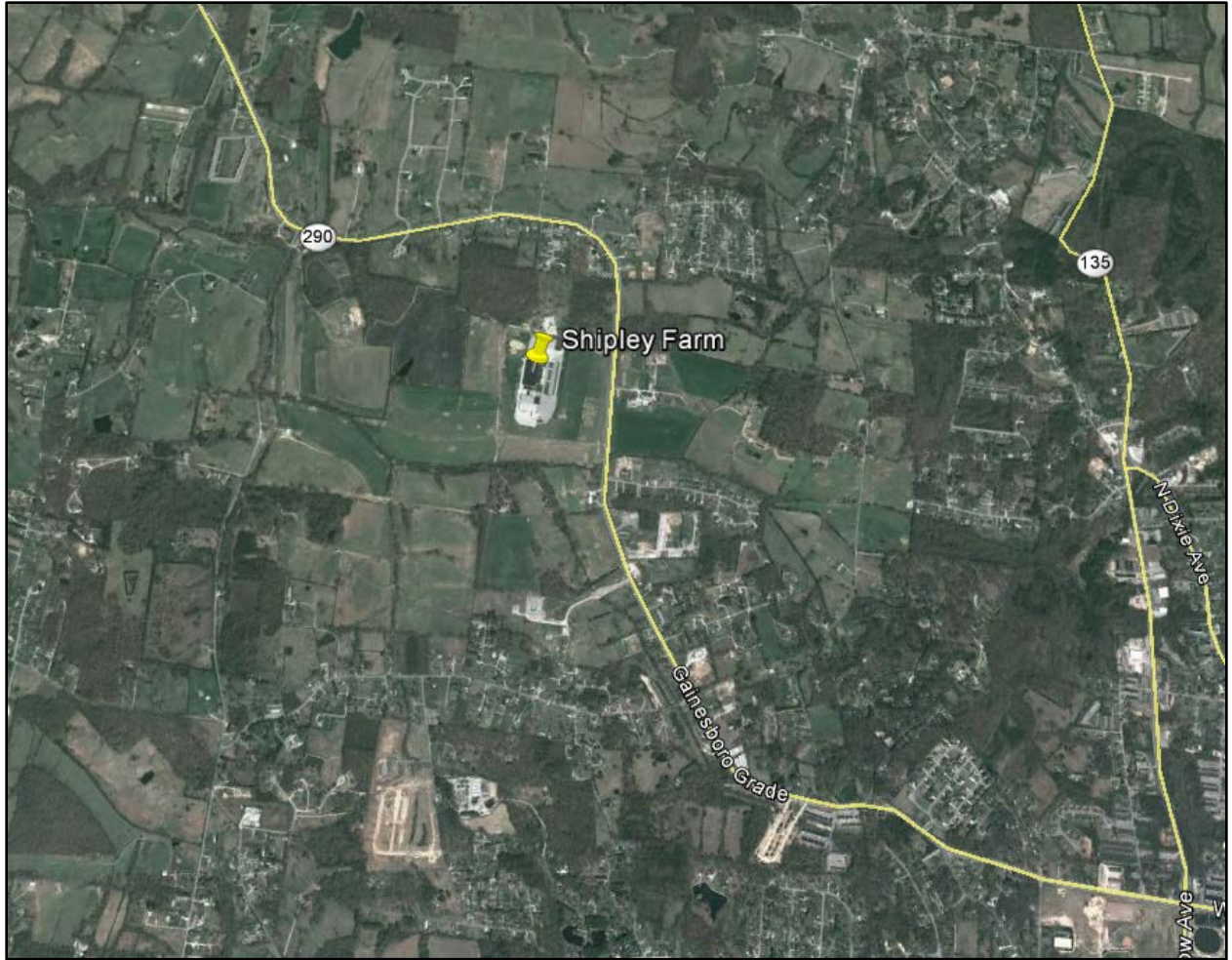


Figure 3: Shipley Farm Overview Map



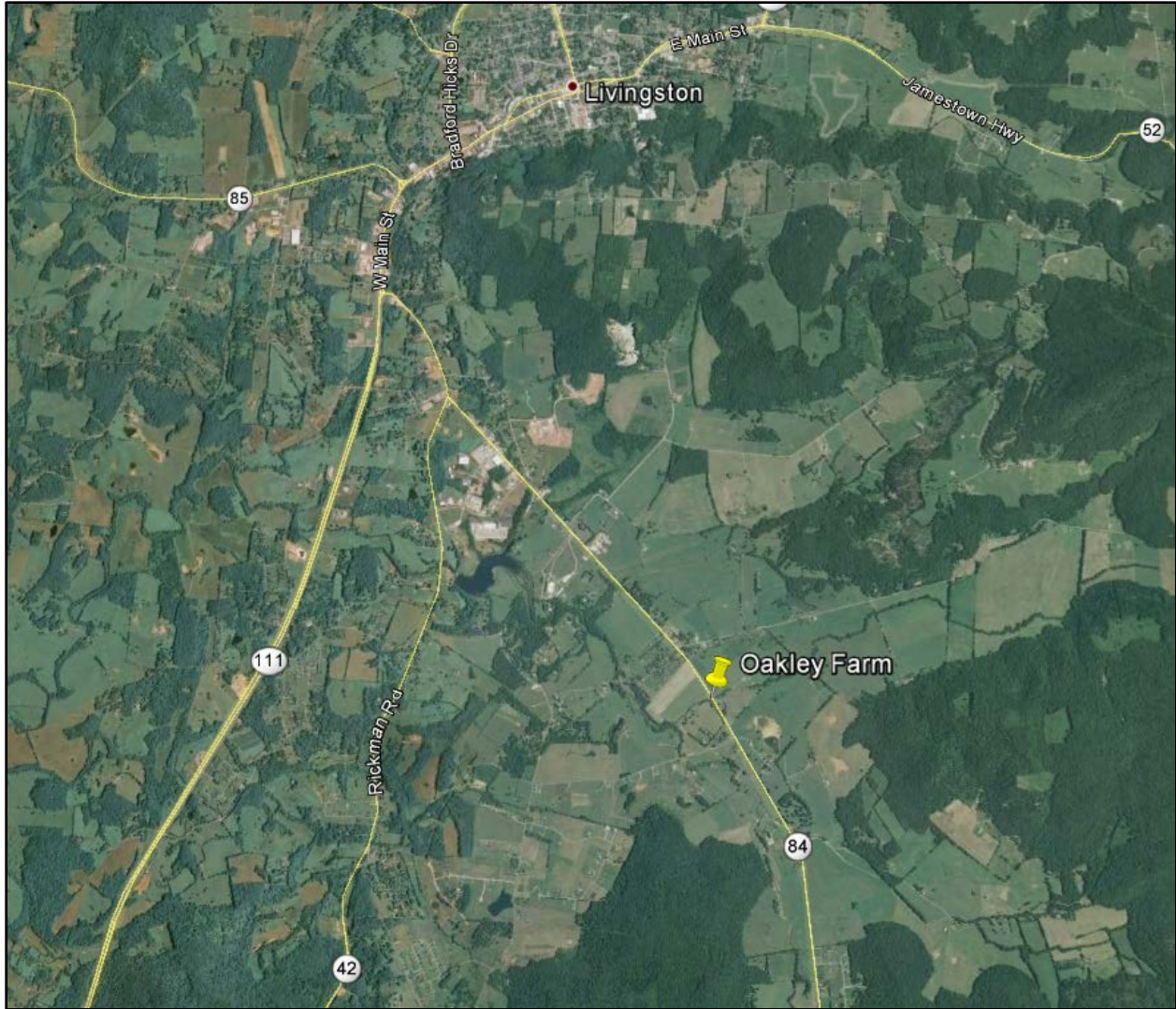


Figure 4: Oakley Farm Overview Map

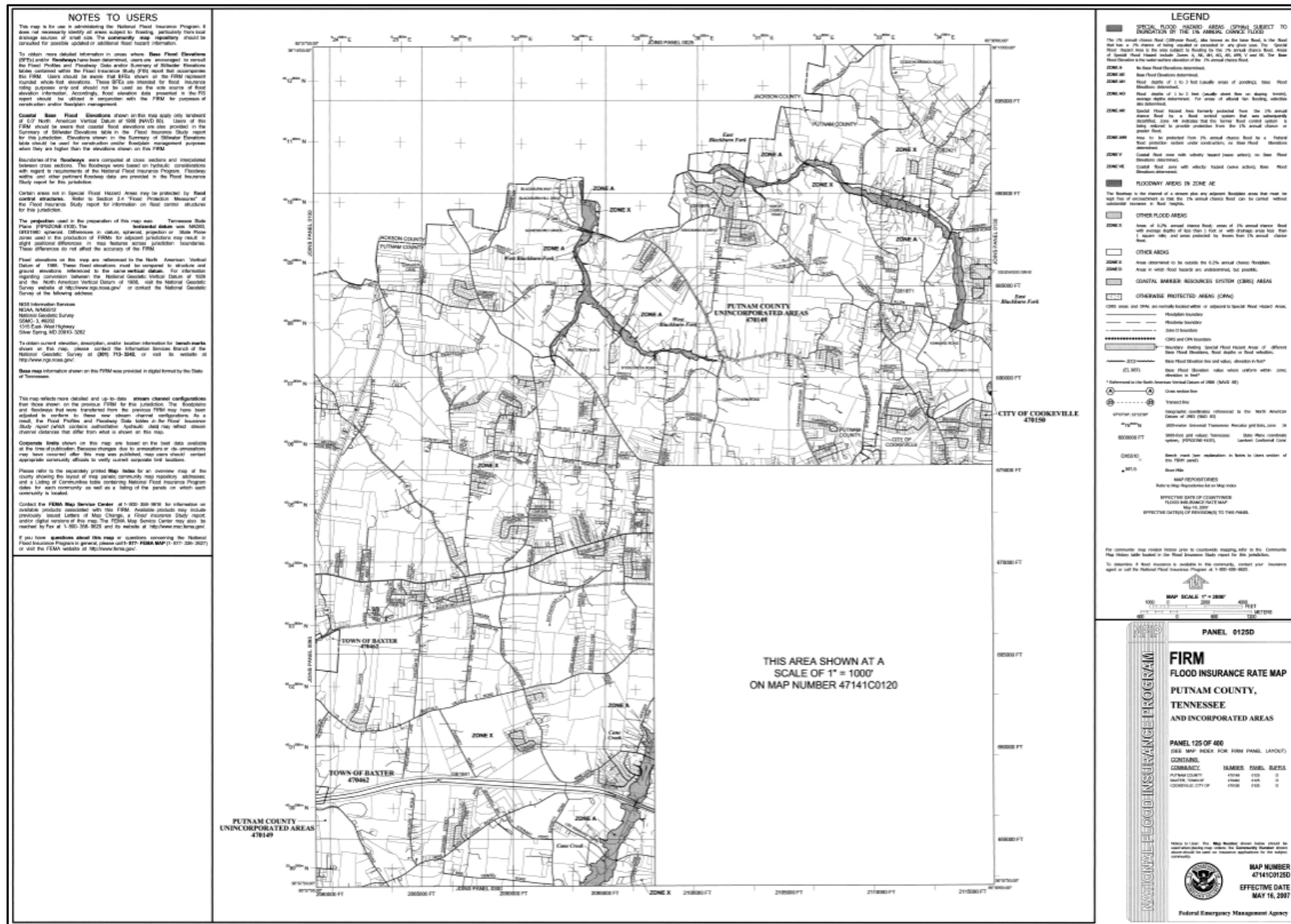


Figure 5: Flood Insurance Rate Map (for Shipley Farm)



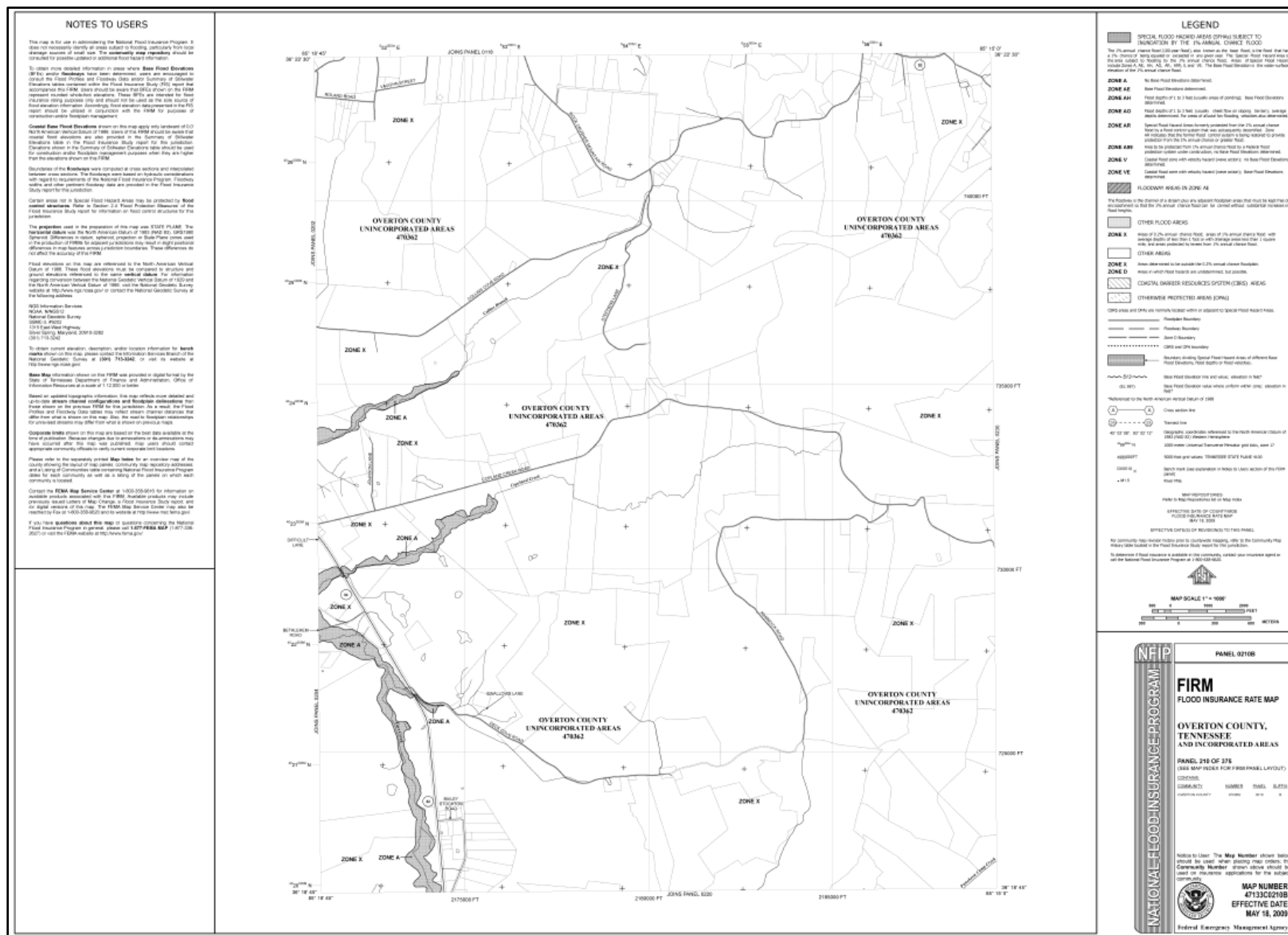


Figure 6: Flood Insurance Rate Map (for Oakley Farm)

## 3.5 Appendix E – Exercise and Training

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Trained and knowledgeable personnel are essential for the prompt and proper execution of this Plan. The Farm Emergency Response Coordinator, with the coordination and assistance of the Director of Environmental Health and Safety, will ensure that all farm personnel have a thorough understanding of their assigned responsibilities in a disaster or emergency situation, as well as, how their role and responsibilities interface with the other response components of this Plan. All personnel will be provided with the necessary training to execute those responsibilities in an effective and responsible manner.

The Farm Emergency Response Coordinator, with the coordination and assistance of the Director of Environmental Health and Safety is responsible for the development, administration, and maintenance of a comprehensive training and exercise program customized to the needs of the farms. This program will be comprised of a general, core, functionally specific, as well as, on-going refresher training programs designed to attain and sustain an acceptable level of emergency preparedness for the farms.

Training will be based on local, state, and federal guidance. Instructors may be selected from farm personnel, local, state, and federal government officials, private industry, the military, and/or volunteer groups trained in emergency services and response. All training and exercises conducted for the farms will be documented. Training needs will be identified and records maintained for all personnel assigned emergency response duties in a disaster.

The Farm Emergency Response Coordinator, with assistance from the Director of Environmental Health and Safety, will develop, plan, and conduct an emergency response exercise annually. These exercises will be designed to not only test the Plan, but to train all appropriate officials, emergency response personnel, and farm personnel. Emergency response organizations, quasi-public, volunteer groups, and/or agencies will be encouraged to participate.

It is strongly recommended that exercises be conducted in accordance with the Homeland Security Exercise and Evaluation Program (HSEEP). HSEEP is a capabilities- and performance- based exercise program that provides a standardized policy, methodology, and terminology for exercise design, development, conduct, evaluation, and improvement planning. HSEEP also provides tools and resources to facilitate the management of self-sustaining exercise programs.

In accordance with HSPD-8 and the National Preparedness Goal, HSEEP uses a capabilities-based approach to individual exercises and exercise program management. In the spirit of NIMS, HSEEP promulgates standardized policies and terminology usable by officials and emergency responders at all levels of government.

The Independent Study (IS) Courses listed below are self-paced courses offered free of charge and are available online through the [Emergency Management Institute](#) (EMI). These courses are recommended for any TTU farm personnel, student, or volunteer that will assist in mitigating, planning, responding, and/or recovering from an incident.

<b>Course ID</b>	<b>Course Title</b>
IS-10.a	Animals in Disasters: Awareness and Preparedness
IS-11.a	Animals in Disaster: Community Planning
IS-111	Livestock in Disasters
IS-100.b	Introduction to Incident Command System
IS-200.b	ICS for Single Resources and Initial Action Incidents
IS-700	National Incident Management System (NIMS), An Introduction
IS-800.b	National Response Framework, An Introduction

## 3.6 Appendix F – Evacuation Procedures for Individuals with Disabilities

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- Plan ahead. Be prepared. Know what you are going to do before an emergency arises. Determine what your alternatives are.
- When you enter an unfamiliar building, look it over and locate the most available telephones, note horizontal exits and ramps, note exit signs and enclosed stairwells (determine if landings are large enough), note rooms that would make good areas or refuge, and note the location of fire alarm pull stations.
- When an alarm sounds, it is important to determine the nature of the emergency and act accordingly.
- Elevators are not to be considered as an exit option unless directed so by the Fire Department.
- Individuals who walk with assisting devices (crutches, canes, etc.) should evacuate as expeditiously as possible. They may request assistance from a fellow student, faculty or staff member. Once outdoors, these individuals should meet in the designated area of assembly for the evacuated building.
- Wheelchair users who are on the main level of a building, and can exit directly to the outdoors should do so as quickly as possible, and meet in the designated area of assembly. Those on floors other than the level of exit discharge should proceed to the nearest area of refuge. In most buildings, these are the stair landings. Areas of refuge are identified on emergency evacuation plans posted on each floor of each building.
- The horizontal evacuation method should be utilized if possible. Horizontal evacuation is traveling on the same floor level and, where possible, passing from one building to another.

## 3.7 Appendix G – Glossary of Key Terms

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### **After Action Report/Improvement Plan**

The main product of the evaluation and improvement planning process is the AAR/IP. The AAR/IP has two components: an AAR, which captures observations of an exercise and makes recommendations for post-exercise improvements; and an IP, which identifies specific corrective actions, assigns them to responsible parties, and establishes targets for their completion.

### **All-Hazards**

Describing an incident, natural or manmade, that warrants action to protect life, property, environment, and public health or safety, and to minimize disruptions of government, social, or economic activities.

### **American Red Cross**

A humanitarian organization led by volunteers, that provides relief to victims of disasters and helps prevent, prepare for, and respond to emergencies. It does this through services that are consistent with its Congressional Charter and the Principles of the International Red Cross Movement.

### **Assessment**

The process of acquiring, collecting, processing, examining, analyzing, evaluating, monitoring, and interpreting the data, information, evidence, objects, measurements, images, sound, etc., whether tangible or intangible, to provide a basis for decision making.

### **Command**

The act of directing, ordering, or controlling by virtue of explicit statutory, regulatory, or delegated authority.

### **Communications**

The process of transmission of information through verbal, written, or symbolic means.

### **Coordinate**

To advance an analysis and exchange of information systematically among principals who have or may have a need to know certain information to carry out specific incident management responsibilities.

### **Critical Infrastructure**

Assets, systems, and networks, whether physical or virtual, so vital to the United States that the incapacitation or destruction of such assets, systems, or networks would have a debilitating impact on security, national economic security, national public health or safety, or any combination of those matters.

### **Decontamination**

The process of making people, objects, or areas safe by: absorbing, destroying, neutralizing, making harmless, or removing hazardous materials.

## **Emergency**

Any incident, whether natural or manmade, that requires responsive action to protect life or property. Under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, an emergency means any occasion or instance for which, in the determination of the President, federal assistance is needed to supplement State and local efforts and capabilities to save lives and to protect property and public health and safety, or to lessen or avert the threat of a catastrophe in any part of the United States.

## **Emergency Alert System**

A network of broadcast stations interconnecting facilities authorized by the Federal Communications Commission (FCC) to operate in a controlled manner to warn and inform the public of needed protective actions in the event of a disaster or emergency situation.

## **Emergency Management/Response Personnel**

Includes Federal, State, territorial, tribal, sub-state regional, and local governments, NGOs, private sector-organizations, critical infrastructure owners and operators, and all other organizations and individuals who assume an emergency management role. (Also known as emergency responder.)

## **Emergency Management Plan/Emergency Operations Plan**

An ongoing plan for responding to a wide variety of potential hazards.

## **Emergency Operations Center**

The physical location at which the coordination of information and resources to support incident management (on-scene operations) activities normally takes place. An EOC may be a temporary facility or may be located in a more central or permanently established facility, perhaps at a higher level of organization within a jurisdiction. EOCs may be organized by major functional disciplines (e.g., fire, law enforcement, medical services), by jurisdiction (e.g., Federal, State, regional, tribal, city, county), or by some combination thereof.

## **Emergency Support Function**

A functional area of response activity established to facilitate the delivery of federal assistance required during the immediate response phase of a disaster to save lives, protect property and public health, and maintain public safety.

## **Evacuation**

The organized, phased, and supervised withdrawal, dispersal, or removal of civilians from dangerous or potentially dangerous areas, and their reception and care in safe areas.

## **Exercise**

An exercise is an instrument to train for, assess, practice, and improve performance in prevention, protection, response, and recovery capabilities in a risk-free environment. Exercises can be used for: testing and validating policies, plans, procedures, training, equipment, and interagency agreements; clarifying and training personnel in roles and responsibilities; improving interagency coordination and communications; identifying gaps in resources; improving individual performance; and identifying opportunities for improvement. (Note: an exercise is also an excellent way to demonstrate community resolve to prepare for disastrous events).

### **Federal Disaster Assistance**

Aid to disaster victims and/or state and local governments by federal agencies under provisions of the Robert T. Stafford Relief and Emergency Assistance Act of (PL 93-288).

### **Hazardous Materials**

Substances or materials which may pose unreasonable risks to health, safety, property, or the environment when used, transported, stored or disposed of, which may include materials which are solid, liquid, or gas. Hazardous materials may include toxic substances, flammable and ignitable materials, explosives, or corrosive materials, and radioactive materials.

### **Incident**

An occurrence, natural or manmade, that requires a response to protect life or property. Incidents can, for example, include major disasters, emergencies, terrorist attacks, terrorist threats, civil unrest, wild-land and urban fires, floods, hazardous materials spills, nuclear accidents, aircraft accidents, earthquakes, hurricanes, tornadoes, tropical storms, tsunamis, war-related disasters, public health and medical emergencies, and other occurrences requiring an emergency response.

### **Incident Command**

The Incident Command System organizational element responsible for overall management of the incident and consisting of the Incident Commander (either single or unified command structure) and any assigned supporting staff.

### **Incident Commander**

The individual responsible for all incident activities, including the development of strategies and tactics and the ordering and release of resources. The IC has overall authority and responsibility for conducting incident operations and is responsible for the management of all incident operations at the incident site.

### **Incident Command System**

A standardized on-scene emergency management construct specifically designed to provide an integrated organizational structure that reflects the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries. ICS is the combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, designed to aid in the management of resources during incidents. It is used for all kinds of emergencies and is applicable to small as well as large and complex incidents. ICS is used by various jurisdictions and functional agencies, both public and private, to organize field-level incident management operations.

### **Incident Management**

The broad spectrum of activities and organizations providing effective and efficient operations, coordination, and support applied at all levels of government, utilizing both governmental and nongovernmental resources to plan for, respond to, and recover from an incident, regardless of cause, size, or complexity.

### **Jurisdiction**

A range or sphere of authority. Public agencies have jurisdiction at an incident related to their legal responsibilities and authority. Jurisdictional authority at an incident can be political or geographical (e.g., Federal, State, tribal, local boundary lines) or functional (e.g., law enforcement, public health).

### **Liaison**

A form of communication for establishing and maintaining mutual understanding and cooperation.

### **Livestock**

Cattle, equine (horses), sheep, goats, swine (pigs), poultry and other animals designated by the State Agriculture Department.

### **Local Emergency**

The condition declared by the local governing body when, in its judgment, the threat or actual occurrence of a disaster is or threatens to be of sufficient severity and magnitude to warrant coordinated local government action to prevent, or alleviate loss of life, property damage, or hardship. Only the Governor, upon petition of a local governing body, may declare a local emergency arising wholly or substantially out of a resource shortage when he deems the situation to be of sufficient magnitude to warrant coordinated local government action to prevent or alleviate, the hardship or suffering, threatened or caused thereby.

### **Local Emergency Planning Committee**

Appointed representatives of local government, private industry, business, environmental groups, and emergency response organizations responsible for ensuring that the hazardous materials planning requirements of the Superfund Amendments and Reauthorization Act of 1986 (SARA Title III) are complied with.

### **Logistics**

The process and procedure for providing resources and other services to support incident management.

### **Mitigation**

Activities providing a critical foundation in the effort to reduce the loss of life and property from natural and/or manmade disasters by avoiding or lessening the impact of a disaster and providing value to the public by creating safer communities. Mitigation seeks to fix the cycle of disaster damage, reconstruction, and repeated damage. These activities or actions, in most cases, will have a long-term sustained effect.

### **Mutual Aid Agreement or Assistance Agreement**

Written or oral agreement between and among agencies/organizations and/or jurisdictions that provides a mechanism to quickly obtain emergency assistance in the form of personnel, equipment, materials, and other associated services. The primary objective is to facilitate rapid, short-term deployment of emergency support prior to, during, and/or after an incident.

### **National Incident Management System**

A set of principles that provides a systematic, proactive approach guiding government agencies at all levels, nongovernmental organizations, and the private sector to work seamlessly to prevent, protect against, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life or property and harm to the environment.

### **National Response Framework**

A guide to how the Nation conducts all-hazards response.



### **National Weather Service**

The federal agency which provides localized weather information to the population, and during a weather-related emergency, to state and local emergency management officials.

### **Nongovernmental Organization**

An entity with an association that is based on interests of its members, individuals, or institutions. It is not created by a government, but it may work cooperatively with government. Such organizations serve a public purpose, not a private benefit. Examples of NGOs include faith-based charity organizations and the American Red Cross. NGOs, including voluntary and faith-based groups, provide relief services to sustain life, reduce physical and emotional distress, and promote the recovery of disaster victims. Often these groups provide specialized services that help individuals with disabilities. NGOs and voluntary organizations play a major role in assisting emergency managers before, during, and after an emergency.

### **Preparedness**

A continuous cycle of planning, organizing, training, equipping, exercising, evaluating, and taking corrective action in an effort to ensure effective coordination during incident response. Within the National Incident Management System, preparedness focuses on the following elements: planning; procedures and protocols; training and exercises; personnel qualification and certification; and equipment certification.

### **Prevention**

Actions to avoid an incident or to intervene to stop an incident from occurring. Prevention involves actions to protect lives and property. It involves applying intelligence and other information to a range of activities that may include such countermeasures as deterrence operations; heightened inspections; improved surveillance and security operations; investigations to determine the full nature and source of the threat; public health and agricultural surveillance and testing processes; immunizations, isolation, or quarantine; and, as appropriate, specific law enforcement operations aimed at deterring, preempting, interdicting, or disrupting illegal activity and apprehending potential perpetrators and bringing them to justice.

### **Private Sector**

Organizations and individuals that are not part of any governmental structure. The private sector includes for-profit and not-for-profit organizations, formal and informal structures, commerce, and industry.

### **Protection**

Actions to reduce or eliminate a threat to people, property, and the environment. Primarily focused on adversarial incidents, the protection of critical infrastructure and key resources is vital to local jurisdictions, national security, public health and safety, and economic vitality. Protective actions may occur before, during, or after an incident and prevent, minimize, or contain the impact of an incident.

### **Protocol**

A set of established guidelines for actions (which may be designated by individuals, teams, functions, or capabilities) under various specified conditions.

### **Public Information Officer**

A member of the Command Staff responsible for interfacing with the public and media and/or with other agencies with incident-related information requirements.

### **Recovery**

The development, coordination, and execution of service- and site-restoration plans; the reconstitution of government operations and services; individual, private-sector, nongovernmental, and public assistance programs to provide housing and to promote restoration; long-term care and treatment of affected persons; additional measures for social, political, environmental, and economic restoration; evaluation of the incident to identify lessons learned; post-incident reporting; and development of initiatives to mitigate the effects of future incidents.

### **Reimbursement**

A mechanism to recoup funds expended for incident-specific activities.

### **Resources**

Personnel and major items of equipment, supplies, and facilities available or potentially available for assignment to incident operations and for which status is maintained. Resources are described by kind and type and may be used in operational support or supervisory capacities at an incident or at an Emergency Operations Center.

### **Response**

Activities that address the short-term, direct effects of an incident. Response includes immediate actions to save lives, protect property, and meet basic human needs. Response also includes the execution of emergency operations plans and of mitigation activities designed to limit the loss of life, personal injury, property damage, and other unfavorable outcomes. As indicated by the situation, response activities include applying intelligence and other information to lessen the effects or consequences of an incident; increased security operations; continuing investigations into nature and source of the threat; ongoing public health and agricultural surveillance and testing processes; immunizations, isolation, or quarantine; and specific law enforcement operations aimed at preempting, interdicting, or disrupting illegal activity, and apprehending actual perpetrators and bringing them to justice.

### **Shelter-in-Place**

In the event of a large chemical spill or a biological weapons attack, the safest course of action may be to “shelter in place.” Close all windows and doors, arrange to get HVAC systems shut down and remain in the indoor safe area until you receive further instructions.

### **State of Emergency**

The condition declared by the Governor when, in his judgment, a threatened or actual disaster in any part of the state is of sufficient severity and magnitude, to warrant disaster assistance by the state, to supplement local efforts to prevent/alleviate loss of life and property damage.

### **Superfund Amendments and Reauthorization Act of 1986**

Established federal regulations for the handling of hazardous materials.

### **Terrorism**

As defined in the Homeland Security Act of 2002, activity that involves an act that is dangerous to human life or potentially destructive of critical infrastructure or key resources; is a violation of the criminal laws of the United States or of any State or other subdivision of the United States; and appears to be intended to intimidate or coerce a civilian population, to influence the policy of a government by intimidation or coercion, or to affect the conduct of a government by mass destruction, assassination, or kidnapping.

### **Threat**

Natural or manmade occurrence, individual, entity, or action that has or indicates the potential to harm life, information, operations, the environment, and/or property.

### **Tornado Warning**

A tornado warning indicates a tornado has been sighted or is spotted on radar. Listen for local weather forecasts so that you know if you will be affected. You should be prepared to take cover immediately.

### **Tornado Watch**

A tornado watch indicates that conditions are right for a tornado to develop. When a tornado watch is issued, you should prepare to take cover.

### **Unified Command**

An Incident Command System application used when more than one agency has incident jurisdiction or when incidents cross over political jurisdictions. Agencies work together through the designated members of the UC, often the senior persons from agencies and/or disciplines participating in the UC, to establish a common set of objectives and strategies and a single Incident Action Plan.

### **Volunteer**

For purposes of the National Incident Management System, any individual accepted to perform services by the lead agency (which has authority to accept volunteer services) when the individual performs services without promise, expectation, or receipt of compensation for services performed. See 16 U.S.C. 742f(c) and 29 CFR 553.101.

## 3.8 Appendix H – List of Acronyms

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AAR/IP	After Action Report/Improvement Plan
AED	Automated External Defibrillator
APHIS	Animal and Plant Health Inspection Service
ARES	Amateur Radio Emergency Service
AVIC	Area Veterinarian in Charge
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CPR	Cardio-Pulmonary Resuscitation
EAS	Emergency Alert System
EOP	Emergency/Disaster Response Plan
EMA	Emergency Management Agency
EMI	Emergency Management Institute
EMS	Emergency Medical Service
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
ESF	Emergency Support Function
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
HIPAA	Health Insurance Portability and Accountability Act
HSEEP	Homeland Security Exercise Program
HSPD	Homeland Security Presidential Directive
HVAC	Heating, Ventilation, and Air Conditioning
ICS	Incident Command System
IS	Independent Study
MAA	Mutual Aid Agreement

MOA	Memorandums of Agreement
MOU	Memorandum of Understanding
SDS	Safety Data Sheet
NIMS	National Incident Management System
NOAA	National Oceanic and Atmospheric Administration
NWS	National Weather Service
PPE	Personal Protective Equipment
SARA	Superfund Amendments and Reauthorization Act
TDOT	Tennessee Department of Transportation
TEMA	Tennessee Emergency Management Agency
TTARS	Tennessee Tech Amateur Radio Society
TTU	Tennessee Tech University
USDA	U.S. Department of Agriculture