



**Vulnerability Assessment**

**&**

**Emergency Planning Guide**

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# PLANNING STEPS & DEFINITIONS

## PLANNING STEPS

Steps in planning for an emergency is to recognize what can happen, the likeliness of it happening, how to prevent it from happening, and what to do when it happens. Assessment and management of risk can also be broken down into the following:<sup>1</sup>

STEP	START	WHERE ARE WE?
0	<b>Planning Steps &amp; Definitions</b>	◀
1	↓ <b>Awareness</b>	
2	↓ Assemble Your Team	
3	↓ Assessment of Hazards and Vulnerability	
4	↓ Create A Plan of Action	
5	↓ Train and Distribute the Plan	
6	↓ Complete Action Plans	
7	↓ Review and Modify	

### DEFINITIONS\*

**BURGLARY:** is a felony and involves trespassing, or entering a building with intent to commit any crime

**BUSINESS:** a school, place of worship, private business, governmental building, or place of public gathering

**CYBERCRIME:** broad term that describes everything from electronic hacking to denial of service attacks that cause electronic commerce sites to lose money

**HAZARD:** potential unwanted event

**HAZARDOUS MATERIAL:** Any material that poses a threat to human health and/or the environment. Typical hazardous substances are toxic, corrosive, ignitable, explosive, or chemically reactive.

**LARCENY:** a crime involving stealing

**TERRIORISM:** use of unlawful force or violence against persons or property to intimidates or coerce a government, the civilian population, or any other segment to further political or social objectives.

**VULNERABILITY:** susceptiblity to physical or emotional injury or attack

### ACRONYMS

**CBRNE:** chemical, biological, radiological, nuclear, and explosives

**KCHMP:** Kalamazoo County Hazard Mitigation Plan

**WMD:** weapons of mass destruction

\*: See [www.wikipedia.com](http://www.wikipedia.com) for additional definitions to common programs.

# STEP 1: AWARENESS

## STEP 1: AWARENESS

*Identify what could happen*

Hazards are usually divided in to two types – natural and human-made. There are several sources of information on how to do a hazard assessment; many are available on the internet.<sup>2</sup>

This document provides the basic framework for conducting your own hazard assessment.

### NATURAL DISASTERS IN KALAMAZOO COUNTY

Some of the more common natural disasters that occur in Kalamazoo County include storms, fires, floods, tornadoes, and least likely, earthquakes.

#### Storms

Severe storms are a common occurrence in the Kalamazoo area. Thunderstorms occur frequently throughout much of the year, while snowstorms and ice storms occur commonly throughout the winter months.

Businesses are subject to structural damage and disruption of essential services as a result of the many storms that hit the Kalamazoo area.

#### Fires

Structural fires can occur in virtually every community. The outcome of fires to most businesses relates to structural and loss of contents, but could in some situations, include wildfires that may ultimately cause damage. Two-thirds of businesses that suffer a major fire do not re-open for business.

#### Floods

Surface water is prevalent throughout Kalamazoo County. The Kalamazoo River is the primary river in the county, but there are also numerous streams and creeks. Much of the shoreline of the waterways are heavily populated<sup>3</sup> and subject to flooding damage.

Flooding has caused damage to property, crops, and roadways in Kalamazoo County as well as business disruption.

#### Tornadoes

By 1999, 343 people have been killed by tornadoes in Michigan.<sup>4</sup> Michigan ranks number 20 for frequency of tornadoes, 5<sup>th</sup> for number of deaths, 8<sup>th</sup> for injuries, and 22<sup>nd</sup> for cost of damages between 1950 and 1995.<sup>5</sup> Kalamazoo County experienced 20 tornadoes between 1950 and 2001.

While tornadoes threaten lives of residents of Kalamazoo County, intense damage to property or resources could also occur.

#### Earthquakes

Tremors from earthquakes have been reported in the Kalamazoo area. The risk for earthquake damage to either a business or private residence is extremely low.

Although the risk is low, it is important to recognize the hazards of poor building construction and to conduct routine evaluations of structures for deficiencies, vulnerabilities can be identified and repaired before loss is sustained.

# STEP 1: AWARENESS

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## Human-Made Disasters in Kalamazoo County

### Civil Disturbances

In these situations, widespread property destruction and a disruption of essential functions resulted.<sup>6</sup> A large rally was held in Kalamazoo in 1998. Following a sports event in 2001, over 2500 people were estimated to rampage through a Kalamazoo neighborhood during the weekend, injuring police officers, setting fires and destroying property.<sup>7</sup>

### Criminal Activity

#### Arson

Although not a common occurrence in Kalamazoo County, certain types of business may be more susceptible to the potential of arson.

#### Bomb Threats

Schools, businesses associated with controversial issues, or those that provide critical infrastructure are more commonly subjected to bomb threats. Single-issue or special interest terrorist or extremist groups may target specific types of buildings or structures.

#### Burglary and Larceny

In 2000, there were almost 10,000 burglaries and larcenies reported.<sup>8</sup> Although all businesses are subject to burglary or larceny, there is some evidence that crimes of this type may be associated with funding of terrorist activities.

#### Cybercrimes

For businesses that rely upon computers to function, cybercrime is a reality that must be considered. Because of the specialized knowledge involved in computer security, prevention against cybercrimes is not covered in this guide. The United States Secret Service (USSS), Federal Bureau of Investigation (FBI), or the Michigan State Police (MSP) can be contacted for more information.

### Property Damage

Whether caused accidentally or intentionally, property damage can cause significant economic impact on businesses. Businesses should also be aware that specific types of graffiti or property damage could be affiliated with gang or group activities.

### Workplace Violence

Nationally nearly 1,000 employees are murdered on the job each year.<sup>9</sup> Disgruntled employees, dissatisfied customers, or other individuals who, for whatever reason, may decide to resolve situations through acts of violence.

### Hazardous Materials

The potential for impact of a hazardous materials spill or release will depend on the type of business and what type of materials may be kept at the place of business. Businesses could also be impacted by a release from materials being transported past or near the business location. Hazardous materials are routinely transported by rail and motor vehicles.

### Extremist or Terrorist Attacks

Terrorism is defined as the unlawful use of force or violence against a person or property done to intimidate or coerce a government, citizens, or a part of either, in order to further a political or social objective.

Many people may not believe that Kalamazoo County will be directly affected by terrorist attacks.<sup>10</sup> By this definition, terrorist attacks could occur in Kalamazoo County, possibly originating from either international or, more likely, from domestic terrorist groups.

Terrorist attacks using by weapons of mass destruction (WMD) are currently categorized under the acronym CBRNE (chemical, biological, radiological, nuclear,

# STEP 1: AWARENESS

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and explosive) WMD. More information on preparation and response for WMD and natural disasters can be obtained from the Office of Emergency Management, Kalamazoo County Sheriff's Department.

Even more likely in Kalamazoo County is the possibility of damage or business disruption by extremist groups.

Extremism is defined as "the act of taking a belief, political view or ideology to its most literal extreme" and describes those "who tend to choose extreme methods, particularly violence to express their views, in an attempt to cause political or social change"<sup>11</sup>.

There are a number of domestic extremist groups in Michigan that involve anti-government, white supremacist, and militia ideologies.

## **Power Outages**

Whether caused by downed wires or lightning striking electrical transformers during storms or an automobile accidentally hitting supply pole, power outages commonly occur. Today the electrical power grid is intricately interconnected as evidenced by the August 2003 power outage.<sup>12</sup> The initial event caused a cascade of power loss that affected approximately 50 million people.

Because the risk or probability for this happening to either a business is high, business owners and employees should plan accordingly to determine what measures should be taken to prevent loss of property and business.

## **Loss of Vital Resources**

Interruption in potable water supply, sewers, and/or access to the business

can result from both natural and human-made disasters.

By planning ahead for emergency water and sanitary facilities, a business may be able to maintain basic operation during the loss of these essential services.

## **END OF STEP**

## STEP 2: ASSEMBLE YOUR TEAM

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### Step 2: ASSEMBLE YOUR TEAM

Decide who is in charge and who to contact

Depending on the size of the business, the emergency team could range in size from a single individual or a large committee with many subcommittees.

Each business site should have its own emergency team and should be headed by a manager who will take ultimate responsibility for implementation of the plan. The emergency plan must include contact information so the emergency manager or his/her designee can be contacted at any time.

The first step is the selection of a person who will direct or manage the emergency team and their responses if needed. The responsibilities of each position should be clearly defined and accepted by those filling the position.

#### Site Emergency Team

1. Director – the primary responsibility is establishment, training, and management of the site emergency team; the director may oversee several teams at different sites.
2. Site Emergency Coordinator – responsibilities include coordinating the site team and insuring that the team is ready and able to respond.
3. Unit Emergency Coordinator(s) – these are individuals from different work areas or physical locations throughout the business who may ensure that the actions for a certain area are carried out.
4. Emergency Warning/Communications Coordinator – some of the responsibilities include management of the communications center and making sure that field personnel are able to communicate with each other. This position also is responsible for activating the primary warning system in the facility.
5. Emergency Assessment Coordinator – this position is involved in assessing and recording all events that occur, what actions are taken, etc.
6. Emergency Information Coordinator – responsibilities of this position include providing information to the public and media (if necessary).
7. Emergency Maintenance Coordinator – primary responsibilities include controlling the site's mechanical systems, oversight of damage assessment, clean up, restoration of services, recovery, and re-entry recommendations.
8. Emergency Medical Coordinator – some of the responsibilities include management of medical care and compilation of medical disaster information for the Emergency Assessment Coordinator.
9. Emergency Security Coordinator – this position oversees overall site security during the emergency.

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Emergency manager or backup must be available at any time of the day or night.

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## STEP 2: ASSEMBLE YOUR TEAM

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The table on the following page is to be used as a checklist for completing Step 2. A list including the name of the person, specific responsibilities, and contact information should be completed for each position.

### CHECKLIST FOR STEP 2

POSITION	RESPONSIBILITIES	CONTACT INFORMATION
Director		
Assistant/Alternate Director		
Site Emergency Coordinator		
Unit Emergency Coordinator(s)		
Emergency Warning / Communications Coordinator		
Emergency Assessment Coordinator		
Emergency Information Coordinator		
Emergency Maintenance Coordinator		
Emergency Medical Coordinator		
Emergency Security Coordinator		
Others (to be determined)		

**END OF STEP**

# STEP 3: ASSESSMENT OF HAZARDS AND VULNERABILITIES

## STEP 3. ASSESSMENT OF HAZARDS AND VULNERABILITIES Determining what are your weakest links

The emergency manager should conduct a “site vulnerability assessment” in order to determine if there are areas in the business which could be changed to improve security.

A vulnerability assessment includes evaluation of both the location, the site itself, and a thorough evaluation of the business’ floor plans and physical layout as well as the businesses practices and partners.

It is very important to look both inside and outside and in close proximity to the place of business in order to identify any other hazards that could impact you.

### Outside Assessment

This part entails sitting down with maps of the surrounding areas, site plans, ending with a walk-around the place of business.

#### Location

##### Floodplain

The first step is to find out if the business is located in a floodplain area.

Proximity to any permanent body of water or wetlands should be considered for their flooding potential and possible impact on the physical structures or business disruption.

##### Proximity

A site map that includes surrounding businesses, roads, railways, etc. should be included in the emergency operating plan. It is important to be aware of what hazards could be traveling past your place of business in order to plan accordingly. Proximity to railways, highways, or

businesses that use hazardous materials could potentially impact your business.

### Utilities / Supplies

The outside of the building(s) should be closely evaluated for potential problems or security weaknesses.

#### Power Supply

Power supply lines should be looked at – is it possible to use underground supply to reduce the chance of power outages due to downed wires at the place of business?

#### Electricity and Telephone

A dependable supply of electricity and telephone services is essential for conducting business. Overhead supply lines are more vulnerable than underground lines.

#### Air Supply

Along with water supply, the mechanism for fresh air supply in to the place of business should be evaluated.

#### Water and Sewer

Dependable supply of potable water and a sewage handling system must also be considered. Disruption of supply is often an issue out of the control of a business, but one should be aware of how both are supplied in to the building. One should also be aware of the potential (although slight) of introduction of unwanted entities in to the business via water supply.

#### Reserve Power Sources

Are there reserve or alternate power sources available in the event of a power outage? Are employees trained in how to use safely?

After conducting the site vulnerability assessment, it is the perfect time to go through the business and reduce any hazards that were identified and are able to be remedied.

# STEP 3: ASSESSMENT OF HAZARDS AND VULNERABILITIES

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## OUTSIDE CONSIDERATIONS

### Landscaping

Could landscaping around the building be hazardous? Downed trees or branches close to the building or supply lines could cause physical damage or loss of power in the event of storms, etc. Clearing away some of the landscaping can also reduce potential for wildfires to spread to structures.<sup>13</sup>

Plants, shrubs, and trees close to a building could provide cover for a person during breaking and entering. As recommended for private residences, keeping doorways and windows clear of overgrown landscaping will reduce the opportunity for burglary.

### Parking

Parking areas and driveways should be evaluated for the potential of motor vehicles either entering a business or being parked. This addresses concerns of either damage caused by “suicide bombers” or more likely, explosives left in a vehicle as was the case in the bombing of the Alfred P. Murrah Federal Building in Oklahoma City in April, 1995.

### External Lighting

All entries areas as well as the perimeter of building(s) should be adequately illuminated.

### Fencing

Fencing may help restrict access and provide a measure of security to the business building(s).

### Miscellaneous Receptacles

Various types of receptacles (trash containers, mailboxes, etc.) around the building may provide an easy place to put explosive devices in.

### Roof

The integrity of the roof should be monitored as well as consideration of

rooflines and their potential for the formation of ice dams.

## SECURITY EVALUATION

A questionnaire is attached (Appendix 1) that includes considerations that should be made to determine the potential vulnerability of the business. Many of these become obvious during a “walk-through” evaluation of the vicinity around the place of business.

There are many areas to consider during the external audit and using the acronym CBRNE may be helpful in thinking about how a person or group could impact a business through use of chemical, biological, radiological, nuclear, or explosive weapons.

With that in mind, it is important to look at places where explosive devices could be placed or how chemical agents could be introduced in to a building.

There are many structures around, on, or leading into a building that should be considered for potential vulnerabilities. Some of them include:

### Incoming Resources (Receiving)

It is also important to consider how resources get in to the place of business and how and if those resources could be disrupted or used to interfere with the business.

## EMERGENCIES

Although there are specific assessments that must be made to completely evaluate the hazard potential in each business, there are some basic considerations to make.

### Fires

Are there fully charged fire extinguishers of the right type available? Are employees trained in the use of those

# STEP 3: ASSESSMENT OF HAZARDS AND VULNERABILITIES

extinguishers? Are fully functioning smoke detectors in located in appropriate places?

The following tips for fire safety were taken from the Kalamazoo Fire Marshals website.<sup>14</sup>

## Fire & Burn Hazards

- Broken smoke detector(s)
- Furniture blocking a door
- Too many appliances plugged into an electrical outlet
- Frayed electrical cord
- Paper or fabric too close to a heater

## Evacuation Routes

Are exits marked clearly to help employees get out of the building in case of emergency? Are exit routes clearly defined? Are multiple evacuation routes planned depending on where the inciting cause is located? Are employees with physical disabilities able to get out of the building?

A building may have to be evacuated in case of fire, explosion, release of a hazardous material, civil disturbance, or workplace violence.<sup>15</sup> The actual route may vary depending on where the precipitating incident takes place, so many routes should be planned and routinely practiced. Employees should be assigned to meet at designated assembly sites outside of the building away from danger.

Evacuation routes, building exits, and assembly sites should be clearly marked on maps posted inside the building.

Resources that may be consulted for more information include the Occupational Safety and Health Administration's (OSHA) and FEMA websites as well as your local fire department.

## Tornado Shelter

The destructive effects of a tornado come from high winds, atmospheric changes, and impact of debris.<sup>16</sup> Although each

structure must be evaluated separately, generally the refuge area should be at the lowest level of the building and should avoid windows, exterior walls, and corridors.

There are two useful sources for tornado shelter selection available on the Federal Emergency Management Agency (FEMA) internet site. They are: Tornado Protection: Selecting Refuge Areas in Buildings (<http://www.fema.gov/pdf/fima/fema431.pdf> ) and Taking Shelter From the Storm, Building a Safe Room Inside Your House<sup>17</sup> (<http://www.fema.gov/pdf/fima/fema320.pdf>).

## HAZARDOUS MATERIALS

Are there hazardous materials stored and used in this place of business? Are Material Safety Data Sheets (MSDSs) available and easily accessible for employees to use in times of need? Are employees trained in how to properly handle materials kept on board?

## VITAL RECORDS PRESERVATION

Are there business records that could be lost due to natural or human-made disasters? Are there redundancies in storage or duplicate records maintained off-site?

Each place of business should be evaluated for potential hazards or weaknesses that may exist. Once identified, those weaknesses may be secured or hazards reduced or eliminated. Some of the considerations for the site assessment are included in the following table.

## STEP 3: ASSESSMENT OF HAZARDS AND VULNERABILITIES

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The table on the next page lists the potential hazards and a scale ranging from 0 to 4 of the likelihood of its occurrence in Kalamazoo County. Values of the scaling system are: Zero represents no realistic chance,

- 1 - minimal likelihood,
- 2 - moderate likelihood,
- 3 - high likelihood, and
- 4 - certainty for occurrence.

The abbreviation NP indicates that a forecast of the likelihood is not possible due to variability in influencing factors.

# STEP 3: ASSESSMENT OF HAZARDS AND VULNERABILITIES

## CHECKLIST FOR STEP 3

STRUCTURE	HAZARD OR WEAKNESS IDENTIFIED?	VULNERABILITY – WHAT IS THE POTENTIAL FOR OCCURRENCE? (rate 0 to 4)
<b>Outside Assessment</b>		
Hazardous Materials		
Location		
Floodplain		
Surrounding structures or businesses		
<b>Structural Considerations</b>		
Power supply		
Roof		
Telephone supply		
Landscaping		
Lighting		
Parking		
Miscellaneous receptacles		
Water supply		
Sewer service		
Air supply		
<b>Inside Assessment</b>		
Emergency evacuation		
Fire prevention		
Hazardous materials		
Reserve power sources		
Tornado shelter		
Vital records preservation		
<b>Your Additions</b>		

**END OF STEP**

# STEP 4: CREATE THE EMERGENCY OPERATIONS PLAN

## STEP 4: CREATE THE EMERGENCY OPERATIONS PLAN (who and what are available to help?)

In developing any plan, it is important to perform a capability assessment to evaluate the skills and willingness of employees in the time of disaster or emergency. Availability of outside help in the form of first responders is also a critical part of the assessment.

### Abilities of Employees

Employees may also prove to be a valuable resource if they have pertinent skills and are willing to use them. It may be useful to develop an emergency response team of trained employees who could provide initial assistance.

### Response Personnel Skills Assessment

Developing a working relationship with your local responders is highly recommended – the effectiveness of the fire department increases if they have a working knowledge of your site and business functions.

## STEP 4: RESOURCE ASSESSMENT

Employees who are willing and capable of providing specific responses in an emergency should be recognized and utilized. The check-off list can be used to identify personnel who are willing to take on a specific responsibility, are trained, and have current contact information.

### CHECKLIST FOR STEP 4

RESPONSIBILITY	CONTACT INFORMATION, WILLING, AND TRAINED?
<i>Internal</i>	
Life saving	
Public relations	
Communications	
Fire fighting	
<b>External</b>	
Life saving	
Fire fighting	
Hazardous materials	
Security (civil disobedience, bomb threat, etc.)	
Utility emergency	
Weather-related emergencies	

### THE SITE EMERGENCY PLAN

In general the site emergency plan contains the following sections and subsections. The American Red Cross publication contains specific step-by-step information on how to develop an emergency plan.

#### Introduction

1. Purpose – of the plan.
2. Vulnerability – general description of the physical location of the business and any site vulnerabilities.
3. Response Procedures – includes information about who to initially to contact and who will respond to what type of what type of emergency.

# STEP 4: CREATE THE EMERGENCY OPERATIONS PLAN

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## Site Emergency Team

1. Director
2. Site Emergency Coordinator
3. Unit Emergency Coordinator(s)
4. Emergency Warning/Communications Coordinator
5. Emergency Assessment Coordinator
6. Emergency Information Coordinator
7. Emergency Maintenance Coordinator
8. Emergency Medical Coordinator
9. Emergency Security Coordinator

## Site Plan

The site plan should also include a map with the physical location of each of the following as well as a working plan on utilization of the following.

1. Emergency Control Center – this is the “control” center of the response efforts and should contain adequate equipment for communications, etc.
2. Media Center – this may be located away from the ECC and provide a place for the media to collect.
3. Site Map Diagram – should contain structures, road, parking lots, natural features, etc.
4. Evacuation Routes and Offsite Assembly Area - should be included in the plan with additional copies posted throughout the building to aid in evacuation.
5. Tornado Shelter Diagram- this should also be included in the plan with additional copies posted throughout the building to direct people where to go during a tornado warning.
6. Vital Records List – this should include a list of records that must be protected during an emergency.

## Resource List

This list includes who should be contacted in case of an emergency.

1. Key Official Contact List
2. Equipment and Vehicles
3. Supplies
4. Expertise and Services
5. Media Contact List

## Specific Procedures

Consider what steps that could or should be taken in response to the following specific types of emergencies:

1. Fire or Explosion
2. Tornado
3. Hazardous Materials
4. Flood
5. Severe Winter Weather
6. Bomb Threat
7. Utility Emergency
8. Civil Disturbance
9. Enemy Attack
10. Vital Operations
11. Violent Incident

The following table is to be used as a checklist for completing Step 4. The following parts should be reviewed on a regular basis.

# STEP 4: CREATE THE EMERGENCY OPERATIONS PLAN

## CHECKLIST FOR STEP 4

SECTION / TITLE	COMPLETED?	CONTACT INFORMATION CURRENT?
<b>Introduction</b>		
Purpose		
Vulnerability		
Response Procedures		
<b>Site Emergency Team</b>		
Director		
Site emergency coordinator		
Unit emergency coordinator		
Emergency warning / communications coordinator		
Emergency assessment coordinator		
Emergency information coordinator		
Emergency maintenance coordinator		
Emergency medical coordinator		
Emergency security coordinator		
<b>Site Plan</b>		
Emergency control center		
Media center		
Site map diagrams		
Evacuation maps (routes and offsite assembly area?)		
Tornado shelter diagram		
<b>Vital Records List</b>		
Type of record		
Location		
Preservation method		
Responsible person		
<b>Resource List</b>		
Key official contact list		
Equipment and vehicles		
Supplies		
Expertise and services		
Media contact list (radio, television, newspapers, news services)		
<b>Procedures for Specific Types of Emergencies</b>		
Fire or explosion		
Tornado		
Hazardous materials incident		
Flood		
Severe winter weather		
Bomb threat		
Utility emergency		
Civil disturbance		
Enemy attack		
Violent incident		

**END OF STEP**

# **STEP 5: TRAIN AND DISTRIBUTE THE PLAN, STEP 6: COMPLETE ACTION PLANS STEP 7: REVIEW & UPDATE**

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## **STEP 5: TRAIN AND DISTRIBUTE THE PLAN**

It is now time to train members of the Emergency Team. Each member should know what they are expected to do and how to do it before an event arises. It is also important that each member knows what their responsibilities are in the prevention of emergencies.

It is helpful for the team to get together for a “table top” exercise in which they will discuss how they will respond in the case of a possible scenario. After clearly understanding the plan and their roles, the plan should be distributed to employees in the business.

## **STEP 6: COMPLETE ACTION PLANS**

After distribution of the plan, all employees should be trained in how they are expected to respond or where they should go, who to report to, etc. Training should not be a one-time event, but should be done often enough to make sure that all employees will be able to respond in a safe and correct manner should the need arise.

## **STEP 7: REVIEW & UPDATE**

It is imperative that the plan be reviewed and modified if necessary. An annual review is recommended at a minimum to make sure that the team members, resources, and plans are current.

## **WEBSITES OF INTEREST**

<http://www.fema.gov/pdf/library/bizindst.pdf>  
[www.fema.gov/mit/saferoom](http://www.fema.gov/mit/saferoom)  
[www.ready.gov/business.index.html](http://www.ready.gov/business.index.html)  
[www.niosh.gov](http://www.niosh.gov)  
[www.osha.gov](http://www.osha.gov)

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# APPENDIX 1: EMERGENCY ACTION PLAN CONSIDERATIONS

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## APPENDIX 1:

### Emergency Action Plan Considerations<sup>18</sup>

#### General Issues

Does the plan consider all potential natural or man-made emergencies that could disrupt your workplace?

Common sources of emergencies identified in emergency action plans include - fires, explosions, floods, hurricanes, tornadoes, toxic material releases, radiological and biological accidents, civil disturbances and workplace violence.

Does the plan consider all potential internal sources of emergencies that could disrupt your workplace?

Conduct a hazard assessment of the workplace to identify any physical or chemical hazards that may exist and could cause an emergency.

Does the plan consider the impact of these internal and external emergencies on the workplace's operations and is the response tailored to the workplace?

Brainstorm worst-case scenarios asking yourself what you would do and what would be the likely impact on your operation and devise appropriate responses.

Does the plan contain a list of key personnel with contact information as well as contact information for local emergency responders, agencies and contractors?

Keep your list of key contacts current and make provisions for an emergency communications system such as a cellular phone, a portable radio unit, or other means so that contact with local law enforcement, the fire department, and others can be swift.

Does the plan contain the names, titles, departments, and telephone numbers of individuals to contact for additional information or an explanation of duties and responsibilities under the plan?

List names and contact information for individuals responsible for implementation of the plan.

Does the plan address how rescue operations will be performed?

Unless you are a large employer handling hazardous materials and processes or have employees regularly working in hazardous situations, you will probably choose to rely on local public resources, such as the fire department, who are trained, equipped, and certified to conduct rescues. Make sure any external department or agency identified in your plan is prepared to respond as outlined in your plan. Untrained individuals may endanger themselves and those they are trying to rescue.

Does the plan address how medical assistance will be provided?

Most small employers do not have a formal internal medical program and make arrangements with medical clinics or facilities close by to handle emergency cases and provide medical and first-aid services to their employees. If an infirmary, clinic, or hospital is not close to your workplace, ensure that onsite person(s) have adequate training in first aid. The American Red Cross, some insurance providers, local safety councils, fire departments, or other resources may be able to provide this training. Treatment of a serious injury should begin within 3 to 4 minutes of the accident. Consult with a physician to order appropriate first-aid supplies for emergencies. Establish a

# APPENDIX 1: EMERGENCY ACTION PLAN CONSIDERATIONS

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relationship with a local ambulance service so transportation is readily available for emergencies.

Does the plan identify how or where personal information on employees can be obtained in an emergency?

In the event of an emergency, it could be important to have ready access to important personal information about your employees. This includes their home telephone numbers, the names and telephone numbers of their next of kin, and medical information.

## **Evacuation Policy and Procedure**

Does the plan identify the conditions under which an evacuation would be necessary?

The plan should identify the different types of situations that will require an evacuation of the workplace. This might include a fire, earthquake, or chemical spill. The extent of evacuation may be different for different types of hazards.

Does the plan identify a clear chain of command and designate a person authorized to order an evacuation or shutdown of operations?

It is common practice to select a responsible individual to lead and coordinate your emergency plan and evacuation. It is critical that employees know who the coordinator is and understand that this person has the authority to make decisions during emergencies. The coordinator should be responsible for assessing the situation to determine whether an emergency exists requiring activation of the emergency procedures, overseeing emergency procedures, notifying and coordinating with outside emergency services, and directing shutdown of utilities or plant operations if necessary.

Does the plan address the types of actions expected of different employees for the various types of potential emergencies?

The plan may specify different actions for employees depending on the emergency. For example, employers may want to have employees assemble in one area of the workplace if it is threatened by a tornado or earthquake but evacuate to an exterior location during a fire.

Does the plan designate who, if anyone, will stay to shut down critical operations during an evacuation?

You may want to include in your plan locations where utilities (such as electrical and gas utilities) can be shut down for all or part of the facility. All individuals remaining behind to shut down critical systems or utilities must be capable of recognizing when to abandon the operation or task and evacuate themselves.

Does the plan outline specific evacuation routes and exits and are these posted in the workplace where they are easily accessible to all employees?

Most employers create maps from floor diagrams with arrows that designate the exit route assignments. These maps should include locations of exits, assembly points and equipment (such as fire extinguishers, first aid kits, spill kits) that may be needed in an emergency. Exit routes should be clearly marked and well lit, wide enough to accommodate the number of evacuating personnel, unobstructed and clear of debris at all times, and unlikely to expose evacuating personnel to additional hazards.

# APPENDIX 1: EMERGENCY ACTION PLAN CONSIDERATIONS

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Does the plan address procedures for assisting people during evacuations, particularly those with disabilities or who do not speak English?

Many employers designate individuals as evacuation wardens to help move employees from danger to safe areas during an emergency. Generally, one warden for every 20 employees should be adequate, and the appropriate number of wardens should be available at all times during working hours. Wardens may be responsible for checking offices and bathrooms before being the last person to exit an area as well as ensuring that fire doors are closed when exiting. Employees designated to assist in emergency evacuation procedures should be trained in the complete workplace layout and various alternative escape routes. Employees designated to assist in emergencies should be made aware of employees with special needs (who may require extra assistance during an evacuation), how to use the buddy system, and any hazardous areas to avoid during an emergency evacuation.

Does the plan identify one or more assembly areas (as necessary for different types of emergencies) where employees will gather and a method for accounting for all employees?

Accounting for all employees following an evacuation is critical. Confusion in the assembly areas can lead to delays in rescuing anyone trapped in the building, or unnecessary and dangerous search-and-rescue operations. To ensure the fastest, most accurate accounting of your employees, consider taking a head count after the evacuation. The names and last known locations of anyone not accounted for should be passed on to the official in charge.

Does the plan address how visitors will be assisted in evacuation and accounted for?

Some employers have all visitors and contractors sign in when entering the workplace. The hosts and/or area wardens, if established, are often tasked with assisting these individuals evacuate safely.

## **Reporting Emergencies and Alerting Employees in an Emergency**

Does the plan identify a preferred method for reporting fires and other emergencies?

Dialing 911 is a common method for reporting emergencies if external responders are utilized. Internal numbers may be used. Internal numbers are sometimes connected to intercom systems so that coded announcements may be made. In some cases employees are requested to activate manual pull stations or other alarm systems.

Does the plan describe the method to be used to alert employees, including disabled workers, to evacuate or take other action?

Make sure alarms are distinctive and recognized by all employees as a signal to evacuate the work area or perform other actions identified in your plan. Sequences of horn blows or different types of alarms (bells, horns, etc.) can be used to signal different responses or actions from employees. Consider making available an emergency communications system, such as a public address system, for broadcasting emergency information to employees. Ideally alarms will be able to be heard, seen, or otherwise perceived by everyone in the workplace including those that may be blind or deaf. Otherwise floor wardens or others must be tasked with ensuring all employees are notified. You might want to consider providing an auxiliary power supply in the event of an electrical failure.

# APPENDIX 1: EMERGENCY ACTION PLAN CONSIDERATIONS

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## Employee Training and Drills

Does the plan identify how and when employees will be trained so that they understand the types of emergencies that may occur, their responsibilities and actions as outlined in the plan?

Training should be offered employees when you develop your initial plan and when new employees are hired. Employees should be retrained when your plan changes due to a change in the layout or design of the facility, when new equipment, hazardous materials, or processes are introduced that affect evacuation routes, or when new types of hazards are introduced that require special actions. General training for your employees should address the following:

- Individual roles and responsibilities;
- Threats, hazards, and protective actions;
- Notification, warning, and communications procedures;
- Emergency response procedures;
- Evacuation, shelter, and accountability procedures;
- Location and use of common emergency equipment; and
- Emergency shutdown procedures.

You may also need to provide additional training to your employees (i.e. first-aid procedures, portable fire extinguisher use, etc.) depending on the responsibilities allocated employees in your plan.

Does the plan address how and when retraining will be conducted?

If training is not reinforced it will be forgotten. Consider retaining employees annually.

Does the plan address if and how often drills will be conducted?

# APPENDIX 2: PLANNING FOR EMERGENCIES

## Appendix 2: Planning for Emergencies

### “AUDIT” CHECKLIST FOR EMERGENCY PLANS

The following is a checklist designed to ensure that the principle parts of planning for emergencies are considered. There are likely other considerations that could be made for each specific type and location of business, but were not included in this general review.

#### Step 1: Awareness

See page 4 for more information on awareness of the types of hazards that could occur.

#### Step 2: Assemble Your Team

The first step is the selection of a person who will direct or manage the emergency team and their responses if needed. The responsibilities of each position should be clearly defined and accepted by those filling the position. Current contact information is necessary “24 x 7” as emergencies may happen at any time!

POSITION	RESPONSIBILITIES	CONTACT INFORMATION
Director		
Assistant/Alternate Director		
Site Emergency Coordinator		
Unit Emergency Coordinator(s)		
Emergency Warning / Communications Coordinator		
Emergency Assessment Coordinator		
Emergency Information Coordinator		
Emergency Maintenance Coordinator		
Emergency Medical Coordinator		
Emergency Security Coordinator		
Others (to be determined)		

#### Step 3: Assessment of Hazards and Vulnerability

After reviewing the Guide for Emergency Planning for Businesses, the potential for each hazard identified should be evaluated for your specific business. Once identified, response plans for the hazards with the highest potential of occurrence should be developed. Each place of business should be evaluated for potential hazards or weaknesses that may exist. Once identified, those weaknesses may be secured or hazards reduced or eliminated.

# APPENDIX 2: PLANNING FOR EMERGENCIES

Some of the considerations for the site assessment are included in the following table.

STRUCTURE	HAZARD OR WEAKNESS IDENTIFIED?	VULNERABILITY – WHAT IS THE POTENTIAL FOR OCCURRENCE? (rate 0 to 4)
<b>Outside Assessment</b>		
Hazardous Materials		
Location		
Floodplain		
Surrounding structures or businesses		
<b>Structural Considerations</b>		
Power supply		
Roof		
Telephone supply		
Landscaping		
Lighting		
Parking		
Miscellaneous receptacles		
Water supply		
Sewer service		
Air supply		
<b>Inside Assessment</b>		
Emergency evacuation		
Fire prevention		
Hazardous materials		
Reserve power sources		
Tornado shelter		
Vital records preservation		
<b>Your Additions</b>		

# APPENDIX 2: PLANNING FOR EMERGENCIES

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## Step 4: Create the Emergency Operations Plan

The first part requires evaluation of resources both within and outside of the place of business. Employees who are willing and capable of providing specific responses in an emergency should be recognized and utilized. Some of the responsibilities or needs are listed in the table below.

RESPONSIBILITY	CONTACT INFORMATION, WILLING, AND TRAINED?
<i>Internal</i>	
Life saving	
Public relations	
Communications	
Fire fighting	
<b>External</b>	
Life saving	
Fire fighting	
Hazardous materials	
Security (civil disobedience, bomb threat, etc.)	
Utility emergency	
Weather-related emergencies	

## APPENDIX 2: PLANNING FOR EMERGENCIES

The next part should be included in the Emergency Operations Plan and reviewed on a regular basis to ensure that all information is current.

SECTION / TITLE	COMPLETED?	CONTACT INFORMATION CURRENT?
<b>Introduction</b>		
Purpose		
Vulnerability		
Response Procedures		
<b>Site Emergency Team</b>		
Director		
Site emergency coordinator		
Unit emergency coordinator		
Emergency warning / communications coordinator		
Emergency assessment coordinator		
Emergency information coordinator		
Emergency maintenance coordinator		
Emergency medical coordinator		
Emergency security coordinator		
<b>Site Plan</b>		
Emergency control center		
Media center		
Site map diagrams		
Evacuation maps (routes and offsite assembly area?)		
Tornado shelter diagram		
<b>Vital Records List</b>		
Type of record		
Location		
Preservation method		
Responsible person		
<b>Resource List</b>		
Key official contact list		
Equipment and vehicles		
Supplies		
Expertise and services		
Media contact list (radio, television, newspapers, news services)		
<b>Procedures for Specific Types of Emergencies</b>		
Fire or explosion		
Tornado		
Hazardous materials incident		
Flood		
Severe winter weather		
Bomb threat		
Utility emergency		
Civil disturbance		
Enemy attack		
Violent incident		

# **APPENDIX 2: PLANNING FOR EMERGENCIES**

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## **Step 5: Train and Distribute the Plan**

This step involves the training of members of the Emergency Team to ensure that they know what to do and how to do it before the need arises.

## **Step 6: Complete Action Plans**

It is important to continually train employees so they know how to respond safely if the case of an event.

## **Step 7: Review and Modify**

The plan should be reviewed and modified as needed on a regular basis. Any changes should be communicated to members of the Emergency Team and employees.

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