

**BUSINESS & INDUSTRY**

**EMERGENCY PLANNING**

**GUIDE**

2005

CHATHAM EMERGENCY MANAGEMENT AGENCY

# TABLE OF CONTENTS

EXECUTIVE SUMMARY	4
INTRODUCTION	5
INCENTIVES	6
OBJECTIVES	7
PHASES	8
Mitigation	8
Preparedness	8
Response	9
Recovery	9
THE PLANNING PROCESS	10
Planning Team	10
Workshops	11
Organizational Capabilities	11
Vulnerability Analysis	13
Threat	14
Probability of Occurrence	14
Human Impact	14
Property Impact	14
Business Impact	14
Internal Resources	14
External Resources	15
Total Impact	15
THE BASIC PLAN	16
Executive Summary	16
Direction & Control	16
Incident Command System	18
Emergency Operations Center	18
Security	29
External Response	29
Communications	20
Corporate Communications	20
Family Communications	20
Emergency Notifications	21
Warnings	21
Life Safety	21
Evacuation	21
Routes & Exits	22

Assembly Areas & Accountability	22
Shelter	22
Training	23
Information	23
Family Preparedness	23
Property	23
Protective Systems	23
Facility Shutdown	24
Records Preservation	24
Community Outreach	25
Involving the Community	25
Mutual Aid Agreements	26
Community Service	26
Public Information	26
Media Relations	26
Resumption	27
Contingency Contracts	27
Continuity of Management	27
Insurance	27
Employee Support	28
Resuming Operations	28
Administration & Logistics	29
Distribution	31
SPECIFIC THREATS	32
Hazardous Materials	32
Fire	33
Floods	35
Hurricanes	36
Tornadoes	38
Technological Emergencies	39
VULNERABILITY ANALYSIS WORKSHEET	40
PLANNING CHECKLIST	41
CEO'S DISASTER CHECKLIST	44
EMERGENCY PHONE NUMBERS	49
BIBLIOGRAPHY	50

## EXECUTIVE SUMMARY

This Business and Industry Emergency Planning Guide provides step-by-step advice on how to create and maintain a comprehensive emergency management program. It has been compiled from a wide variety of sources that have been adapted to conditions that could occur in Chatham County. The guide is designed to be used as a descriptive model and in some cases, as a checklist, to assist small and medium size businesses to mitigate, prepare for, respond to, and recover from a variety of emergencies.

Specific guidance is presented for organizing a planning team to develop corporate emergency procedures. Different threats are discussed in order to assess individual vulnerabilities and their potential impact on a corporate environment. Once these vulnerabilities have been identified, a detailed outline is provided for the systematic development of a comprehensive emergency plan.

A General Planning Checklist is provided as an abbreviated means of ensuring the company plan is sufficiently comprehensive. The Chief Executive Officer's Disaster Checklist will assist CEOs and managers in minimizing their professional, financial, and legal risks in the event of a disaster.

## INTRODUCTION

Experts predict that during the foreseeable future, disasters will increase in frequency, be more destructive and require more and better coordination of response resources.

While not necessarily happening more frequently, today and in the future, natural disasters are far more likely to threaten catastrophic loss of life and property. For one thing, more people are living and working in dangerous areas. Coastal developments, mobile home parks in the flood plain and island subdivisions are only a few of the high-risk developments vulnerable to natural hazards.

Anti-social behavior also presents new problems. As evidenced by the dramatic increase in school violence, experts predict a growing threat from domestic terrorism. Product tampering that began with the "Tylenol murders" represents just one path that domestic terrorism can take. In our increasingly interdependent society, we have become vulnerable to threats and the consequences of such actions. Businesses and industries that are un-prepared to deal with the consequences of these acts may have to pay a very high price.

In 1998, Information Week Magazine reported that AMAZON.COM, the on-line bookseller, was out of service for a period of eight hours. Based at that time on its estimated annual revenue of \$152 million, the company's daily sales were averaging approximately \$416,000 or more than \$17,000 per hour. Amazon's eight hours of downtime resulted in almost \$140,000 in lost sales. Of equal significance, is the loss of customers that resort to competitors and may never return.

Such a consumer loss was apparent in the 1970s when a devastating earthquake struck Central America. During the earthquake, the dominant soda beverage vendor suffered the destruction of its bottling and distribution facilities. However, the principal competitor's facilities were undamaged, enabling the competitor to fill the temporary market void. Consumers became accustomed to the new product which today has almost total dominance of the national market.

Each year emergencies have an enormous impact on business and industry in terms of both lives and dollars. Nevertheless, by comprehensive planning, these consequences can be limited so that business and industry can efficiently return to normal operations.

## INCENTIVES

The increased frequency and cost of natural disasters has now threatened to impact business and industry to the extent that they can no longer be ignored or considered a cost of doing business. Recent disasters have had a more disruptive effect on business than ever before.

Prior to the 1990s, it was a rare occurrence in which a disaster in the United States resulted in more than \$1 billion of damage. Since 1990, there have been more than 33 major disasters exceeding that \$1 billion mark. The most costly disasters in the 1990's were Hurricane Andrew in 1992-\$27 billion; the 1994 Northridge earthquake-more than \$25 billion; Midwest flooding in 1993-\$21 billion; and Hurricane Floyd in 1999 with preliminary estimates exceeding \$6 billion.

The magnitude of these events is overwhelming and the financial affect almost beyond comprehension. The Northridge earthquake losses represented one-half of one percent of the U. S. gross national product and approximately three percent of California's 1993 gross state product. Direct losses from Hurricane Andrew represented approximately seven percent of Florida's gross state product. Regional loses have reached levels of global economic proportion, leaving the impact on unprepared business and industry quite simple to forecast: financial devastation.

In addition to the dire fiscal impact that can result from disaster induced lost sales and revenues, a number of other issues have equally disruptive potential. Adverse publicity, liability, contractual penalties, unmet contract obligations, lost sales and discounts, overtime, temporary employee expenses and the re-creation of data and records are only a few examples. Although a company disaster plan may not prevent the myriad of potential corporate losses, it can certainly minimize loss and injury, preserve organizational structure and facilitate the rapid resumption of business following an emergency.

## OBJECTIVES

This *Business and Industry Planning Guide* is designed to create awareness among local businesses of the threat of natural and technological disasters. It presents information on the development of emergency management plans and policies and demonstrates through the ease of this fundamental process, the obvious value of these plans.

This guide is a compilation of information provided by private and public organizations. It provides systematic advice on how to create and maintain a comprehensive emergency management program. Small businesses, wholesalers, retailers, corporate offices or utilities in which people work or gather can use it. Whether a business operates from a small building or an industrial complex; whether it owns, rents or leases property; whether it is a large or small company; the concepts in this guide will apply.

To begin, business or corporate planners need not have in-depth knowledge of emergency management. What they need is the authority to create a plan and a commitment from the Chief Executive Officer to make emergency management part of the business culture. If a plan is already in place, use this guide as a resource to assess and to update the plan.

# PHASES OF EMERGENCY OPERATIONS

## MITIGATION:

Activities that eliminate or reduce the probability of occurrence of a disaster or that reduce its damaging effects through protection of the organization's assets include land use controls and equipment purchase. A few examples are:

- Consider ways to reduce the effects of emergencies, such as moving or constructing facilities away from flood plains and fault zones.
- Consider ways to reduce the chances of emergencies occurring, such as changing processes or materials used to run the business.
- Conduct engineering surveys of structural and non-structural components.
- Consider the following structural retrofitting measures:
  - Upgrading facilities to withstand high wind.
  - Install storm shutters or laminate windows.
  - Constructing floodwalls or flood protection devices.
  - Installing fire sprinkler systems.
- Consider the following non-structural mitigation measures:
  - Prepare an emergency kit: NOAA all-hazard alert radio, first aid kit,
  - portable radios & batteries, waterproof plastic bags, camera/video recorder with film/tapes & batteries, tool kits, mops, brooms, buckets and administrative supplies.
  - Installing fire-resistant materials and furnishings.
  - Securing items that could fall or shake loose in an emergency.
  - Moving heavy or breakable objects to low shelves.
  - Attaching cabinets and files to low walls or bolting them together.
  - Moving workstations away from large windows.
  - Review emergency plan with employees.
  - Verify employee IDs.
  - Review and upgrade insurance.
  - Purchase generators.
  - Review maintenance and inspection schedules regularly.
  - Inspect safety and security systems.
  - Finding alternative non-hazardous materials to substitute for Hazardous materials.
  - Minimizing hazmat stored on site by scheduling regular pick-ups.
  - Elevate equipment such as CPUs and electronic equipment.
  - Perform regular, routine backups of computer systems.

## PREPAREDNESS:

Activities to pre-plan and organize disaster response such as development of emergency plans, identification of a first response medical team and emergency procedures training. Examples are:

- Develop emergency assignments and recall procedures.
- Fill all vehicles with fuel.

- Charge cell phone batteries.
- Designate emergency control center and alternate headquarters.
- Inventory emergency equipment.
- Inventory employee emergency skills.
- Identify critical records and equipment for evacuation or relocation.
- Protect, relocate or duplicate vital records and backup computer data.
- Confirm continuity of management plan.
- General cleanup; relocation of outdoor products to interior storage spaces.
- Adequate means of securing equipment unable to be stored inside.
- Reaffirm shelter arrangements.
- Video or photographic inventory.
- Public safety-support agencies contact CEMA for reentry passes.

#### RESPONSE:

Activities to assist disaster victims, reduce further damage and speed recovery such as establishment of first aid stations and the commitment of fire-rescue personnel and equipment. Other examples are the implementation of:

- Control Center operating procedures.
- Warning and communications systems.
- Emergency Shutdown procedures.
- Evacuation procedures.
- Damage assessment and control procedures.
- Radiological monitoring.
- Public information procedures.
- Industrial mutual aid procedures.
- Emergency financial procedures.
- Contingency checklists.

#### RECOVERY:

Actions designed to address business resumption functions that are beyond the time-sensitive issues of the response phase. This includes the repair of the primary site and the restoration of routine business activities as well as activation of the following:

- Employee reporting procedures.
- Protection of the environment.
- Hazmat containment and assessment.
- Alternate supply, banking, and information processing services.
- Repair, replacement and restoration of vital equipment.
- Company insurance procedures.
- Initiate alternate communications procedures.
- Review delivery of materials that may no longer be necessary.
- Must losses be reported to a regulatory agency?
- Is recertification required?
- Payroll distribution?

## THE PLANNING PROCESS

- PLANNING TEAM
- WORKSHOPS
- ORGANIZATIONAL CAPABILITIES
- VULNERABILITY ANALYSIS
- THE PLAN

### PLANNING TEAM:

There must be a responsible individual or group in charge of developing the emergency management plan. The size and composition of the planning team is contingent upon the company's operations, requirements and resources. Involving a group of people is generally preferable to designating an individual because it:

- Encourages participation and broad investment in the process.
- Increases time and energy participants can commit.
- Solicits additional input and advice.
- Enhances the visibility and stature of the planning process.
- Provides a broad perspective on emergency issues.

Determine who can be an active member of the planning team and who can serve in an advisory capacity. In most cases, one or two people will be doing the majority of the work. At the very least, all functional areas should provide input to the plan. Participants should be appointed in writing and their job descriptions amended to reflect these assignments. Remember to include:

- Senior staff and line management
- Labor force representatives
  - Human Resources
  - Engineering and Maintenance
  - Safety, Health and Environmental affairs
  - Public Information Officer/Community relations
  - Security
  - Sales and Marketing
  - Legal
  - Finance and Purchasing
  - Community agencies, organizations and civic groups

Demonstrate management's commitment and promote an atmosphere of cooperation by "authorizing" the planning group to take the steps necessary to develop a plan. The group should be led by the chief executive officer or company manager who should issue a mission statement to define the purpose of the plan. The chief executive or manager should also indicate that the planning process will involve the entire organization and establish a clear line of authority between the group leader and the group members, but with sufficient flexibility to facilitate the free flow of ideas.

A work schedule and preliminary planning deadlines should be developed as well as an initial budget for such things as research, printing, seminars, and other developmental process expenses.

#### WORKSHOPS:

Workshops have two specific objectives. The first is to review the requirements for applicability to the corporation and develop action statements to address them. The second is to identify individuals with the authority to make decisions on behalf of each issue.

Emergency response procedures itemize how the facility will respond to emergencies. Whenever possible, these procedures should be developed as a series of checklists that are readily accessible by senior management, department heads, response personnel and employees.

General procedures should be developed to assess the situation, protect employees, customers, visitors, equipment, vital records and other assets and get the business back up and running.

Before scheduling the workshops, disaster plans from other community organizations should be reviewed. This review will assist in the development of emergency tasks and requirements. Tasks that do not relate to the corporations' vulnerabilities should be eliminated. The remaining tasks should be organized according to the broad functional area to which they most logically apply. These tasks become the starting point or basis for discussion at subsequent meetings.

#### ORGANIZATIONAL CAPABILITIES:

Review the existing plans and policies to evaluate corporate capabilities, resources and where indicated, hazards or vulnerabilities. Documents to consider include:

- Evacuation plan
- Fire protection plan
- Safety and health program
- Environmental policies & reports
- Security procedures
- Insurance programs
- Financing and purchasing programs
- Plant closing policy
- Employee manuals
- Hazardous materials plan
- Process safety assessment
- Risk management plan
- Capital improvement plan
- Mutual aid agreements

Meet with government agencies, community organizations and utility companies. Ask about potential emergencies, formal and informal mutual aid agreements, and plans and resources that may be available. Sources of information include:

American Red Cross	(912) 651-5310
Chatham County Police Department	(912) 652-6500
Chatham County Sheriff's Office	(912) 652-7630
Chatham Emergency Management Agency	(912) 201-4500
Emergency Medical Service	(912) 652-6501
EPD Air Protection Branch	(404) 656-6905
EPD Emergency Response Team	(912) 353-3225
EPD Hazardous Waste Compliance Div.	(404) 657-8831
Savannah Fire Department	(912) 651-6758
Savannah Police Department	(912) 232-4141
Southside Fire Department	(912) 354-5670
US Coast Guard	(912) 652-4353

Identify applicable local, State and Federal codes and regulations that influence corporate activities. Consider:

- Occupational safety and health regulations
- Environmental regulations
- Fire codes
- Seismic safety codes
- Transportation regulations
- Zoning regulations
- Corporate policies
- US Coast Guard Regulations for facilities adjacent to the water

Identify critical products, services and operations that may require back-up plans or systems. Areas to review include:

- Company products, services and the facilities and equipment to produce them.
  - Products and services provided by suppliers; especially sole-source
  - Vendors.
  - Lifeline services such as electricity, water, sewer, gas, communications and transportation.
  - Operations, equipment and critical workforce personnel vital to the functioning of the facility.
- 
- Identify internal resources that may be needed in an emergency:
  - Personnel: Fire brigade, hazardous materials response team, emergency medical services, security, emergency management group, evacuation team, public information officer, maintenance staff, operations staff. Inventory special employee skills such as medical training, engineering, communications and foreign languages that might be needed in an emergency.

- Equipment: Fire protection and suppression equipment, hazmat containment equipment, hazmat cleanup equipment, communications equipment, first aid supplies, emergency supplies, warning systems, emergency power equipment, decontamination equipment and waterproofing or protection equipment.
- Facilities: Emergency operations center, media briefing area, shelter areas, first aid stations and sanitation facilities.
- Organizational capabilities: Training, evacuation plan, recall plan and an employee support system, accountability procedures, facility layout with key hazardous areas identified.
- Backup systems: Arrangements with other facilities to provide:
  - Payroll
  - Communications
  - Production
  - Customer services
  - Shipping and receiving
  - Information systems support
  - Emergency power
  - Recovery support

Conduct an insurance evaluation by meeting with insurance carriers to review all policies. Identify potential shortfalls and establish recommended solutions.

#### VULNERABILITY ANALYSIS:

The next step is to assess the present vulnerability of your facility to hazards: the probability and potential impact of each emergency. Review the SPECIFIC THREAT and the VULNERABILITY ANALYSIS WORKSHEET chapters to guide the process of assigning probabilities and estimating threats to your facility. This is a subjective consideration; use a rating scale of 1 to 5 with 1 as the lowest and 5 as the highest impact for each area evaluated.

THREAT: The first column of the VULNERABILITY ANALYSIS WORKSHEET lists the major emergencies that could affect Chatham County facilities. Consider emergencies that could occur within your facility as well as within the community. As you conduct your analysis, using each of the following factors:

- Historical: Through historical evidence and community knowledge, consider what types of emergencies have occurred in the community, at this facility and at other facilities in the area?
- Geographic: What can happen because of the facility's location? Consider flood plains and elevation; proximity to companies that produce, store, use or transport hazardous materials; proximity to major transportation corridors and airports. Use topographic, flood plain and transportation corridor maps as well as land-use plans from the Metropolitan Planning Commission. Evaluate the proximity of the facility to evacuation routes.
- Technological: What could result from a process or system failure?

- Possibilities might include fire, explosion, hazardous materials incident; safety system failure; telecommunications failure; computer failure; power failure; heating/cooling system failure and emergency notification system failure. What is the threat of an incident originating at an adjacent facility? Could such an incident initiate sympathetic detonation or ignition?
- Human Error: What emergencies can be caused by employee error? Are employees trained to work safely? Do they know what to do in an emergency? Human error is the single largest cause of workplace emergencies and can result from a variety of causes ranging from poor training and maintenance to fatigue, carelessness, substance abuse and misconduct.
- Physical: What types of emergencies could result from the design or construction of the facility? Does the physical plant enhance safety? Consider the construction of the facility, hazardous processes or byproducts, storage of combustibles, layout of equipment, lighting, evacuation routes and exits and the proximity of shelter areas.
- Regulatory: What emergencies or hazards are you regulated to deal with? Analyze each potential emergency from beginning to end and consider what could happen as a result of blocked or prohibited access to the facility; loss of electric power; downed communications lines; ruptured gas lines; water damage; smoke damage; structural damage; air or water contamination; explosion; building collapse; trapped persons and chemical release.

**PROBABILITY OF OCCURRENCE:** Estimate in the Probability column, the probability by rating the likelihood of each emergency's occurrence.

**HUMAN IMPACT:** Assess the potential human impact possible for death or injury of each emergency.

**PROPERTY IMPACT:** Assess the potential impact of property loss and damage. Consider the cost to repair, temporary replacement and the cost to replace.

**BUSINESS IMPACT:** Assess the business impact by considering the potential loss of market share. Consider business interruption, employees unable to report to work, customers unable to access the facility, interruption of critical supplies, company violation of contractual agreements, fines, penalties, legal costs and interruption of product distribution.

**INTERNAL RESOURCES:** Assess internal resources and your ability to respond. Consider each potential emergency from beginning to end and each resource that you would need to respond. Ask these questions: do we have the needed resources and capabilities to respond? If the answers are yes, move on to the next assessment. If the answers are no, identify what can be done to correct the problem. For example, you may need to develop additional emergency procedures and conduct added training.

**EXTERNAL RESOURCES:** Assess external resources and the community's institutional, political, technical, legal and fiscal capability to engage in hazard mitigation and response. In each potential emergency, will external resources meet corporate needs in a timely fashion? If the answer is no, it may be necessary to establish mutual aid agreements and agreements with specialized contractors.

**TOTAL IMPACT:** Totaling the scores for each emergency provides a subjective comparison of the degree of vulnerability to each of the specific threats; the lower the score, the better. A ranking of the total scores will indicate which occurrence provides the greatest threat and should be used to guide the planning effort and prioritization of resources described in the following pages.

## THE BASIC PLAN

**EXECUTIVE SUMMARY:** This one or two page cover sheet provides a brief synopsis of the plan. It should include:

- Purpose of the Emergency Plan
- Corporate policy regarding emergency management
- Authorities and responsibilities of key personnel
- Types of emergencies expected
- Assessment of vulnerabilities
- Location where response operations will be managed

**EMERGENCY MANAGEMENT ELEMENTS:** Provide the basis of the plan and describes the facility's approach to emergency management.

### DIRECTION AND CONTROL:

Throughout all phases of the planning process, remember that a disaster can strike 24 hours a day and that planning must address either the presence of all or no staff at the time of an emergency. Someone must be in charge in an emergency. It should be clearly stated in the introduction to the plan, when the plan will be implemented and who has authority to order the implementation.

Managing resources, analyzing information and making decisions in an emergency requires direction and control. The direction and control system described below assumes a facility of moderate size. Smaller organizations may require a less sophisticated system, although the principles still apply.

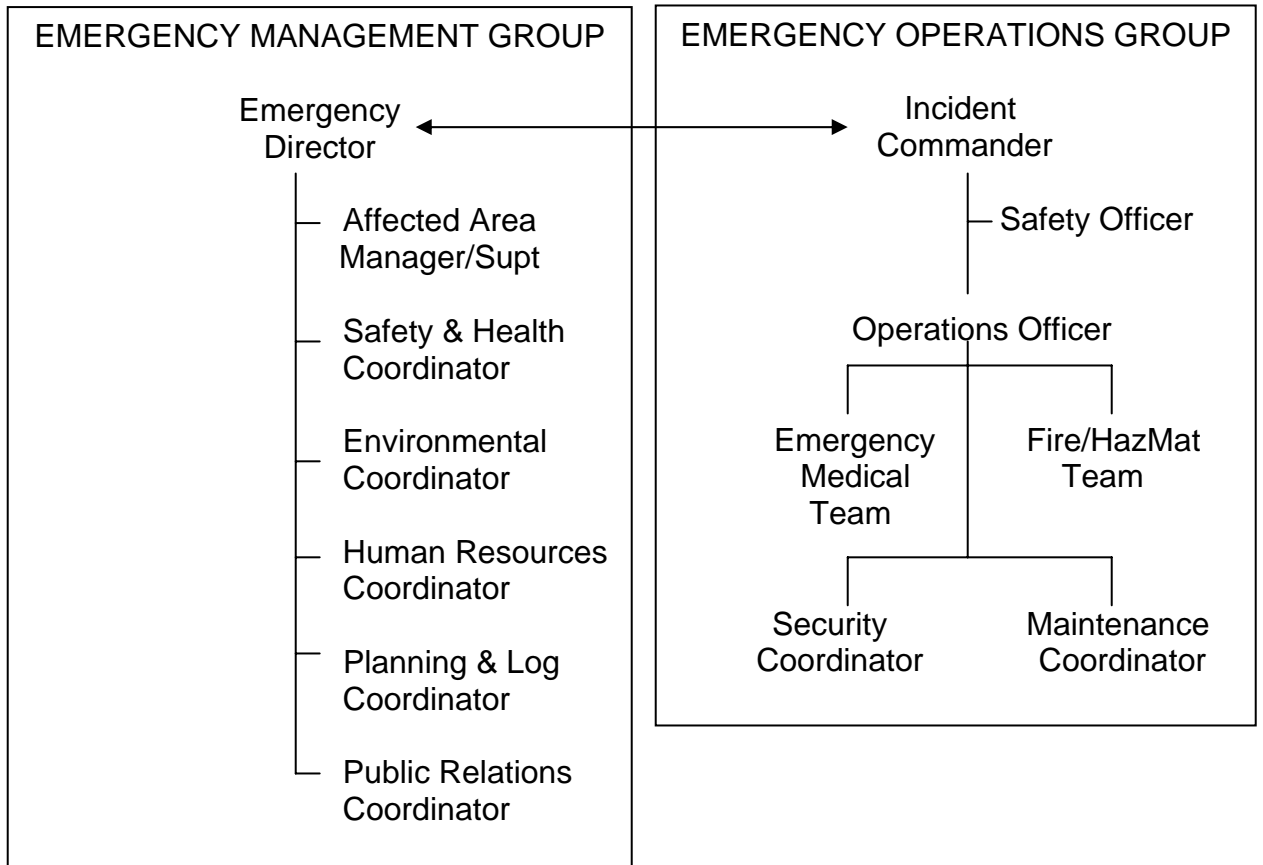
The configuration of each system will depend on many factors. Large facilities may have their own fire fighters, emergency medical technicians or hazardous materials team, while smaller organizations may need to rely on mutual aid agreements. Small facilities may also be able to consolidate positions or combine responsibilities. Tenants of office buildings or industrial parks may be part of an emergency management program for the entire facility.

The Emergency Management Group is responsible for controlling all incident-related activities. It supports the Incident Commander by allocating resources and coordinating with the community, the media, outside response organizations and regulatory agencies. The Incident Commander oversees the technical aspects of the response.

The facility manager should lead the Emergency Management Group. While this Director is in command and control of all aspects of the emergency, other group members should be senior managers who have the authority to:

- Determine the effect of an emergency
- Order the evacuation or shutdown of the facility
- Interface with outside organizations and the media
- Issue press releases

RELATIONSHIP BETWEEN  
EMERGENCY MANAGEMENT GROUP AND THE INCIDENT COMMANDER



## INCIDENT COMMAND SYSTEM:

The Incident Command System (ICS) provides a management structure that is applicable to small-scale daily operational activities as well as major mobilizations. It provides a flexible structure that is particularly applicable to incidents involving multi-jurisdictional or multi-disciplinary responses. The ICS provides for a coordinated response, a clear chain of command and a safe operation.

The Incident Commander is responsible for front-line management of the incident, tactical planning and execution, determining whether outside assistance is needed and relaying requests for internal resources or outside assistance through the Emergency Operations Center (EOC). The Incident Commander can be any employee, but a member of management with the authority to make decisions is usually the best choice. The Incident Commander must have the capability and authority to:

- Assume command
- Assess the situation
- Implement the emergency management plan
- Determine response strategies
- Activate resources
- Order an evacuation
- Oversee all incident response activities
- Declare that the incident is “over”
- Authorize availability and assignment of funds

## EMERGENCY OPERATIONS CENTER:

The EOC serves as a management focal point for emergency operations. Decisions are made here by the Emergency Management Group based upon information provided by the Incident Commander and other personnel. Regardless of the size or process, every facility should designate an area where decision makers can assemble during an emergency. This area should be located in a portion of the facility that is not likely to be involved in an incident, perhaps the security department, the manager’s office, a conference room or the training center. An alternate EOC should also be designated in the event that the primary location is unusable. If access control procedures are required, they should be developed in advance of an emergency.

Each facility must determine its requirements for an EOC based upon the functions to be performed and the number of people to be involved. Ideally, the EOC is a dedicated area equipped with communications, activity logs and the tools necessary to respond to an emergency.

In order to develop a direction and control system:

- Define the duties of personnel with an assigned role. Establish procedures and checklists for each position.

- Define procedures and responsibilities for fire fighting, medical and engineering functions.
- Determine lines of succession to ensure continuity of leadership, authority and responsibility of key positions.
- Determine equipment and supply needs for each response function.
- At a minimum, assign responsibility for:
  - Recognizing and reporting an emergency
  - Warning other employees in the area
  - Taking safety and security measures
  - Evacuating safely

#### SECURITY:

Isolation of the disaster scene should begin as soon as possible. Ideally, the person discovering the incident should attempt to secure the scene and control access but no one should be placed in physical danger to accomplish these functions. Only trained personnel should perform advanced security measures however, basic security precautions can be accomplished that include closing doors and windows, establishing temporary barriers after people have evacuated, and closing file cabinets and desk drawers. Access to the facility, the EOC and the scene should be limited to persons directly involved in the response.

#### EXTERNAL RESPONSE:

In some cases, laws, codes, agreements or the very nature of the emergency requires the Incident Commander to turn operations over to an outside response organization. When this happens, protocols between the facility and the external response organization are implemented. The facility's Incident Commander provides the community's Incident Commander a report on the situation. The facility Incident Commander should maintain a detailed log of actions that occur during the emergency to include event times, a description of what happened, responding organizations, decisions made and any deviations from policy.

Coordinate with outside organizations by meeting periodically with local governmental and community agencies. Inform them that you are creating an emergency management plan and solicit their counsel and insights.

Determine protocols for turning control of a response over to outside agencies. Consider issues such as which gates or entrances will responders use; where and to whom will they report; how will they be identified; how will your personnel communicate with responders; who will be in charge of response activities, who will escort responders from the main entrance to the incident site, and what kind of identification will authorities require to allow your key personnel into your facility during an emergency?

Communicate with other corporate offices and divisions in your company to learn their notification requirements; conditions where mutual aid would be necessary; how offices will support each other in an emergency and names, telephone numbers and pager numbers of key personnel.

#### COMMUNICATIONS:

Communications are essential to any business operation. A communications failure can cut off vital business activities. Communications are needed to report emergencies, warn personnel of danger, inform families and off-duty employees about what is happening at the facility, coordinate response activities and keep in contact with customers and suppliers.

Plan for all possible contingencies from a temporary or short-term disruption to a total communications failure:

- Consider the everyday functions performed by your facility and the voice and data communications used to support them.
- Consider the business impact if your communications were inoperable. How would this affect emergency operations?
- By what means will customers, suppliers and vendors contact you?
- Prioritize all facility communications, determine which should be restored first in an emergency and establish procedures for restoration.
- Determine the effect of a power or telephone outage on emergency alert and warning devices.
- Talk to your communications vendors about their emergency response capabilities and coordinate with them for restoration of service.
- Determine needs for backup communications for each business function; consider telephones, fax, messengers, portable microwave, amateur radios, point-to-point private lines, satellite systems and high-frequency radios.

#### CORPORATE COMMUNICATIONS:

Consider the functions your facility might need to perform in an emergency and the communications systems needed to support them.

Communications are vital between employees, neighboring businesses, customers, suppliers, emergency responders, the Incident Commander, the EOC and the media. Also consider a variety of both high and lo-tech methods of communications and routinely test these systems as well as alarms on a regular basis.

#### FAMILY COMMUNICATIONS:

In an emergency personnel need to know whether their families are safe; taking care of their loved ones must be a high priority. Encourage employees to establish plans to communicate with their families in the event they are separated from one another or injured during an emergency. They should arrange for an out-of-town contact for family members to call in an emergency and they should designate a place to meet in case they cannot get home.

#### EMERGENCY NOTIFICATIONS:

Establish procedures for employees to report an emergency and rehearse personnel assigned specific notification tasks. Post emergency telephone numbers near bulletin boards and in other prominent locations.

- In a larger facility, emergency calls are generally directed to Security; subsequent calls are generally made by Security.
- Maintain, regularly test and update the addresses and telephone and pager numbers of key emergency response personnel.
- Monitor National Weather Service all-hazard radios for warnings of potential dangers.
- Establish procedures for notification of appropriate local, State and Federal agencies in the event an emergency has the potential to affect public health and safety.
- Develop scripted announcements that could be made over public address systems.

#### WARNINGS:

Establish a system for warning personnel of an emergency that is audible or within view of everyone in the facility. Ensure the warning system has a distinct and recognizable signal and an auxiliary power supply. Familiarize personnel with response procedures when the system is activated and ensure customers, contractors, visitors and others that may not be familiar with the warning system know what actions to take. Test the system regularly!

#### LIFE SAFETY:

The first and highest priority in any emergency is the safety of the personnel in the facility and the surrounding area.

#### SITE EVACUATION:

One common means of protection is evacuation. In the event of fire, an immediate evacuation to a predetermined area away from the facility may be necessary. In a hurricane, evacuation could involve the entire community and take place in stages over a period of several days.

To develop evacuation policies and procedures, determine the conditions under which an evacuation would be necessary and establish a clear chain of command identifying personnel with the authority to order an evacuation. Establish specific procedures and a system of accounting for personnel. Designate "evacuation wardens" to assist others in an evacuation and to account for personnel.

Consider employee transportation needs during countywide evacuations. Establish procedures for assisting persons with disabilities and those who do not speak English.

Designate personnel to continue or shutdown critical operations while an evacuation is under way. They must be capable of recognizing when to abandon an operation and evacuate themselves.

Develop post evacuation procedures and coordinate plans with the Chatham Emergency Management Agency.

#### ROUTES AND EXITS:

Designate primary and alternate evacuation routes and exits; have them well lit and clearly marked. Post signs displaying routes so that employees may familiarize themselves with them and have someone outside your organization evaluate the routes and their markings.

Install emergency lighting in case of a power outage during an evacuation and ensure that routes are wide enough to accommodate the number of personnel evacuating, clear, unobstructed and unlikely to expose evacuees to additional hazards.

#### ASSEMBLY AREAS & ACCOUNTABILITY:

Obtaining an accurate count of personnel after an evacuation requires planning and practice.

Designate assembly areas where personnel should gather after evacuating.

Establish a method for accounting for non-employees such as suppliers, customers and visitors. Take a head count after the evacuation. Confusion in assembly areas can lead to unnecessary and dangerous search and rescue operations. The names and last known locations of unaccounted for personnel should be determined and reported to the EOC.

Establish procedures for further evacuation in case the incident expands. This may consist of sending employees home by normal means or providing them with transportation off-site.

Secure the area to prevent unauthorized access.

Rescue persons trapped or unable to evacuate.

Provide first aid of persons injured in the incident or evacuation.

#### SHELTER:

In some emergencies, the best means of protection is to take shelter either within the facility or away from the facility in a public building. Consider the conditions for taking shelter, i.e., tornado warning, hazardous material spill,

etc. Identify shelter space in the facility and in the community and procedures for sending personnel to shelter.

If appropriate, designate shelter managers; determine needs for emergency supplies such as food, water and medical supplies and coordinate plans with the Chatham Emergency Management Agency.

#### TRAINING:

Train employees in evacuation, shelter and other safety procedures. Training sessions should be conducted annually, when employees are hired, personnel with special assignments are designated, new equipment or materials are introduced, procedures are revised, or exercises reveal that employee performance must be improved.

#### INFORMATION:

Provide emergency information such as checklists and evacuation maps with primary and alternate evacuation routes. Post maps in strategic locations and consider the needs of customers and others that visit the facility.

#### FAMILY PREPAREDNESS:

Consider ways to help employees prepare their families for emergencies. This will increase their personnel safety and help the facility resume operations. Those who are prepared at home will be better able to carry out their responsibilities at work.

#### PROPERTY:

Protecting facilities, equipment and vital records is essential to restoring operations following an emergency. Identify sources of backup equipment, parts and supplies. Designate personnel to authorize, supervise and perform a facility shutdown. Train them to recognize when to abandon the effort. Obtain materials to carry out protection procedures and keep them on hand for use in emergencies. Establish procedures for:

- Fighting fires
- Containing material spills
- Closing or barricading doors and windows
- Shutting down equipment
- Covering or securing equipment
- Moving equipment to a safe location
- Backing up critical computer data

#### PROTECTIVE SYSTEMS:

Determine the need for systems to detect abnormal situations, provide warning and protect property. Consult your property insurance carrier about special protective systems and consider:

- Fire protection systems
- Lighting protection systems
- Water level monitoring systems
- Overflow detection devices
- Automatic shutoffs
- Emergency power generation systems

#### FACILITY SHUTDOWN:

Facility shutdown is generally a last resort but always a possibility. An improper or disorganized shutdown can result in confusion, injury and property damage. Some facilities require only simple actions such as turning off equipment, locking doors and activating alarms. Others require complex, extended shutdown procedures.

Establish shutdown procedures that include information about when and how to shut off utilities. Identify the conditions that necessitate a shutdown, who can order a shutdown, who will execute the procedures, how a partial shutdown will effect other facility operations and the length of time required for shutdown and restarting. Post these procedures and train personnel in their implementation.

Do real estate transactions need to be completed before relocation to an alternate site following a shutdown?

If relocation is required, are strategic revenue measures, administration, staff support, communications, transportation, deliveries, inventories and vital records functions adequate for commencement of immediate operations? Is the public relations plan sufficient to advise customers and suppliers of the relocation?

#### RECORDS PRESERVATION:

Vital records may include:

- Financial and insurance information
- Engineering plans and drawings
- Product lists and specifications
- Employee, customer and supplier databases
- Formulas and trade secrets
- Personnel files (Especially in the event of employee injury or death)
- Data processing files, systems and equipment

Preserving vital records is essential to the rapid restoration of operations.

Analyzing vital records involves:

- Classifying operations into functional categories such as finance, production, sales and administration.
- Identifying functions that are essential for business operations such as finance, production and sales.

- Identifying the minimum information that must be readily accessible to accomplish essential functions, for example, maintaining customer collections may require access to account statements.
- Identifying records that contain essential information and where they are located.
- Identifying equipment and materials needed to access and use the information.

Establish procedures for protecting and accessing vital records. Among the many approaches to consider are:

- Labeling vital records.
- Backing up computer systems.
- Making copies of records.
- Storing tapes and discs in insulated containers.
- Storing data off-site.
- Increasing security of the computer facility.
- Arranging for evacuation of records to backup facilities.
- Arranging for backup power.
- Staffing of alternate, temporary sites.
- Suspension of non-essential operations.

Development of an interim alternate-site support plan:

- Transition to operation from a recovery or alternate site.
- Implementation of key systems at the alternate site.
- Duplication of communication and networking requirements.
- Personnel for restoration and operation of critical systems.
- Retrieval of backup data and files.
- Alternate site hardware, software and support requirements.

#### COMMUNITY OUTREACH:

A facility's relationship with the community will influence its ability to protect personnel and property and return to normal operations. This section describes ways to involve outside organizations in the emergency management plan.

#### INVOLVING THE COMMUNITY:

Maintain a dialog with community leaders, first responders, government agencies, community organizations, utility companies and adjoining businesses.

Conduct regular meetings with community emergency personnel to review emergency plans and procedures. Talk about what you are doing to prepare for and prevent emergencies. Explain your concerns for the community's welfare and ways your facility could help in a community-wide emergency.

Look for common interests and concerns and identify opportunities for sharing resources and information. Invite community fire, police and emergency management personnel to participate in your emergency drills and exercises. Meet with your neighbors to determine how you could assist each other in an emergency. Consider firefighting and hazmat response; providing shelter space, emergency storage, supplies and medical support.

#### MUTUAL AID AGREEMENTS:

To avoid confusion and conflict in an emergency, establish mutual aid agreements with local response agencies and businesses. These agreements should define the type of assistance, authority for activating the agreement and communications procedures. Include these agencies in training exercises whenever possible.

#### COMMUNITY SERVICE:

While there is no way to predict the demands that will be placed on your organization's resources, consider how the community's needs might influence your corporate responsibilities in an emergency.

#### PUBLIC INFORMATION:

When site emergencies expand beyond the facility, the community will want to know the nature of the incident, whether the public's safety or health is in danger, what is being done to resolve the problem and what was done to prevent the situation from happening.

Determine the audiences that may be affected by an emergency and identify their information needs. Consider the positive effect of the response to the potentially devastating "Tylenol tampering" incidents. The rapid, upbeat response to the worst type of corporate adversity reassured an anxious public and reinforced a concerned but positive corporate image.

#### MEDIA RELATIONS:

In an emergency, the media are the most important link to the public. It is essential to develop and maintain positive relations with the media. Determine their particular needs and interests and explain your plan for responding to and preventing emergencies. Determine how you will communicate important public information through the media in an emergency.

- Designate a trained primary and alternate spokesperson.
- Designate a media briefing area.
- Establish security procedures.
- Ensure information for the media is complete, accurate and approved for release.
- Determine an effective means of communicating technical information.
- Prepare background information about the facility.

## RESUMPTION:

Business recovery and resumption goes right to the facility's bottom line of keeping people employed and the business running.

## CONTINGENCY CONTRACTS:

- Consider contractual arrangements with vendors for post-emergency services such as record preservation, equipment repair and earthmoving or engineering requirements.
- Ensure that pre-qualified suppliers of critical services have their own emergency plans and will be able to provide services when required.
- Meet with insurance carriers to discuss business resumption policies.
- Are alternate banking resources if your financial institution has a prolonged electrical outage? Can you make payrolls without your primary bank?
- Identify critical operations and plan to bring those systems back on-line. The process may entail repairing or replacing equipment, relocating operations to an alternate location and temporarily contracting operations.
- Consider the possibility of denied or delayed access to the facility.
- Establish criteria for abandoning a facility and relocating to an alternate site. Who authorizes this decision? What special disaster-specific accountability is required?
- Take photographs of or videotape the facility to document company assets; update these records regularly.

## CONTINUITY OF MANAGEMENT:

It can be assumed that not every key person will be readily available or physically at the facility after an emergency. Ensure that recovery decisions can be made without undue delay. Consult legal counsel and corporate bylaws governing continuity of management. Establish and exercise procedures for:

- Assuring the chain of command.
- Maintaining lines of succession for key positions.
- Relocating to alternate headquarters.

## INSURANCE:

Lack of appropriate insurance can be financially devastating. However, most companies discover they are not properly insured only after they have suffered a loss. Have your insurance advisors' name and phone number readily available and secure. Discuss the following topics with your advisor to determine your individual needs.

- How will the property be valued and what are the deductibles?
- Are costs upgrades to code covered if the business is damaged?
- How much insurance must be carried to avoid becoming a co-insurer?
- What perils of loss does the policy cover and is coverage sufficient?
- What actions does the policy require in the event of a loss?

- What types of records will the insurance company want to see?
- Are records in a safe place and accessible after an emergency?
- Is coverage provided for both on and off-premises power interruption?
- Is covered provided for lost income due to business interruption?
- How long is the coverage if the business is closed by civil authority?
- What is the extent of coverage for reduced income from customers not immediately returning when the business reopens?
- How will an emergency management program affect insurance rates?
- Is the cost of both facility and inventory debris removal covered?

#### EMPLOYEE SUPPORT:

Since employees are your most valuable assets, consider the range of services that you could provide, including:

- How will pay be handled in an emergency: OT, comp, straight time, etc.
- Meeting place for employees and their family members
- Cash advances
- Salary continuation
- Flexible work hours
- Reduced work hours
- Crisis counseling or stress management workshops
- Care packages
- Day care.

#### RESUMING OPERATIONS:

Immediately following an emergency, take steps to resume operations.

- Determine if the facility is safe for occupancy.
- Establish a check-in point for associates & conduct employee briefings.
- Assess employee personnel circumstances & provide assistance.
- Establish a recovery team.
- Establish priorities for resuming operations.
- Continue to ensure the safety of personnel on the property.
- Assess the remaining hazards and maintain security at the scene.
- Contact your insurance agent or advisor.
- Policies usually pay for temporary repairs to protect a business and the actual value and replacement value of damaged property. Many policies do not reimburse for debris removal however, if a tree falls on your facility, your insurance may pay for its removal; check with your agent!
- Keep detailed records. Consider audio recording all decisions. Take photographs or video the damage.
- Flood damage caused by rising water is generally covered under flood insurance policies underwritten by the Federal government, but most adjusters can handle the claims. Ask your agent about flood insurance and its reimbursables.

- Account for all damage related costs. Establish special job order numbers and charge codes for purchases and repair work. Keep receipts.
- Only make repairs necessary to prevent further damage to your business. Do not make further repairs without consulting with your agent. Protect undamaged property. Close building openings. Remove smoke, water and debris. Protect equipment against moisture. Restore sprinkler systems. Physically secure the property. Restore power.
- Conduct salvage operations. Segregate damaged from undamaged property. Keep damaged goods on hand until an insurance adjuster has visited the premises, but you can move the material outside if it is seriously in the way and exposure to the elements will not make matters worse.
- Although the inventory of damaged goods is usually done with the adjuster or the adjuster's salvor, it is advisable before the adjuster arrives, to prepare a list of damaged and destroyed property. The list should include a description of the item, date of purchase or age, cost at the time of purchase and estimated replacement value. If you have cancelled checks or receipts, collect them to show the adjuster. If you release goods or receipts to the salvor, obtain a signed inventory stating the quantity and type of items being removed.
- If possible, obtain a detailed assessment of the value of damaged property.
- Assess the impact of business interruption.
- Restore equipment and property but for major repair work, review restoration plans with the insurance adjuster and appropriate government agencies.

Notify employees' families about the status of personnel on the property and notify off-duty personnel about work conditions.

Maintain contact with customers and suppliers.

Be aware of unsolicited and uncertified repair and recovery firms; always verify licenses, credentials and references.

#### ADMINISTRATION AND LOGISTICS:

Maintain complete and accurate records to ensure efficient emergency response and recovery. Certain records may be required by regulation or by your insurance carrier and may prove invaluable in the case of legal action after an incident.

#### ADMINISTRATION:

Create an emergency call list, wallet size if possible, of persons who will respond to an emergency, their responsibilities and their 24-hour telephone numbers.

Actions before an emergency include:

- Establishing a written emergency management plan.
- Maintaining training records.
- Maintaining all written communications.
- Documenting drills, exercises, and their critiques.
- Involving community emergency response organizations in planning activities.

Actions during and after an emergency include:

- Maintaining telephone logs.
- Keeping a detailed record of events.
- Maintaining a record of injuries and follow-up actions.
- Accounting for personnel.
- Coordinating notification of family members.
- Issuing press releases.
- Maintaining sampling records.
- Managing finances.
- Coordinating personnel services.
- Documenting incident investigations and recovery operations.

LOGISTICS:

Contingency funding can be critical following an emergency. Consider the need for pre-approved purchase orders or requisitions and requirements for special funding authorities.

Resource lists of equipment, services and supplies are vital as are mutual aid agreements with other companies and governmental agencies.

Before an emergency, logistics may entail:

- Acquiring equipment.
- Stockpiling supplies.
- Designating emergency facilities.
- Establishing training facilities.
- Establishing mutual aid agreements.
- Preparing a resource inventory.

During an emergency, logistics may entail:

- Providing utility maps to emergency responders.
- Providing material safety data sheets to employees.
- Moving backup equipment in place.
- Repairing parts.
- Arranging for medical support, food and transportation.
- Arranging for shelter facilities.
- Providing for backup power.
- Providing for backup communications.

- Maps may be required that indicate:
  - Utility shutoffs
  - Water hydrants
  - Water main valves
  - Water lines
  - Gas main valves
  - Gas lines
  - Electrical cutoffs
  - Electrical substations
  - Storm drains
  - Sewer lines
  - Location of each building with name and street number
  - Floor plans
  - Alarms and enunciators
  - Fire extinguishers
  - Fire suppression systems
  - Exits
  - Stairways
  - Escape routes
  - Restricted areas
  - Hazardous materials including cleaning supplies
  - High-value items

#### DISTRIBUTION:

Distribute the first draft to group members for review; revise and incorporate changes as necessary. For the second review, conduct a tabletop exercise with personnel who have key emergency management responsibilities. In a conference room setting, describe an emergency scenario and have participants discuss their responsibilities and how they would react to the situation. Based on this discussion, identify areas of confusion and modify the plan.

Once finalized, brief the chief executive officer and senior management and obtain written plan approval. When reproduced for distribution, the plan should be assembled in a fashion that facilitates page updates and changes; a three ring binder works quite well. Next, determine which sections of the plan are appropriate for distribution to whom. In some instances, proprietary information or privacy considerations may preclude dissemination outside the company. Distribute sufficient copies to allow the staff to maintain a copy both at home and at work. Distribution should include all members of the company's emergency response organization, corporate headquarters and selected sections to local emergency management agencies.

## SPECIFIC THREATS

An emergency is any unplanned event that can cause death or significant injury to employees, customers or the public; or cause loss or disruption of critical business applications; cause physical or environmental damage; or threaten the facility's financial standing or public image. A business disaster is any unplanned, extended loss of critical business capability. In any community, as within Chatham County, a number of man-made and natural hazards have the potential to disrupt day-to-day activities and cause extensive damage and injury. Within each of these categories, specific procedures may be required for such functions as:

- Warning employees and customers
- Communicating with personnel and community responders
- Evacuation and accounting for all personnel in the facility
- Managing response activities
- Activating and operating an emergency operations center
- Securing an incident scene
- Rescue
- Medical and first aid
- Fighting fires
- Shutting down operations
- Damage Assessment
- Identification of emergency workers
- Restoring operations

This section provides planning guidance in anticipation of specific hazards that pose a threat to Chatham County.

### HAZARDOUS MATERIALS:

A major source of hazardous material accidents is spills along roadways, railways, pipelines, rivers, and port areas. Hazardous materials are substances that are harmful to the health and safety of people and property. Facilities that produce, process or store hazardous materials are at risk, as are facilities that treat, store or dispose of hazardous wastes.

A hazardous material spill can pose a risk to life, health or property. An incident can result in the evacuation of a few people, a section of a major facility or an entire neighborhood. There are a number of federal laws that regulate hazardous materials including: the Superfund Amendments and Reauthorization Act of 1986 (SARA), the Resource Conservation and Recovery Act of 1976 (RCRA), the DOT, the Occupational Safety and Health Act (OSHA), the Toxic Substances Control Act (TSCA) and the Clean Air Act.

49 CFR-DOT regulates the packaging, labeling, handling, storage and transportation of hazardous materials. Title III of SARA requires facilities to

furnish information about the quantities and health effects of materials used at the facility, and to promptly notify officials whenever a significant release of hazardous materials occurs.

In addition to on-site hazards, you should be aware of the potential for an off-site incident affecting your operations. You should also be aware of hazardous materials used in facility processes and in the construction of the physical plant.

Detailed definitions as well as lists of regulated hazardous materials can be obtained from the Environmental Protection Agency (EPA) and the Occupational Safety and Health Administration (OSHA).

#### Planning Considerations:

- Identify and label all hazardous materials stored handled, produced and disposed of by your facility. Obtain material safety data sheets (MSDS) for all hazardous material at your location.
- Ask the local fire department for assistance in developing appropriate response procedures.
- Train employees to recognize and report hazardous material spills and releases. Train employees in proper handling and storage procedures.
- Establish a hazardous material response plan:
  - Establish procedures to notify management and emergency response organizations of an incident.
  - Establish procedures to warn employees of an incident.
  - Establish evacuation procedures.
  - Depending on your operations, organize and train an emergency response team to confine and control hazardous material spills in accordance with applicable regulations.
  - Identify other facilities in your area that use hazardous materials and determine whether an incident could affect your facility.
  - Identify highways, railroads and waterways near your facility used for the transportation of hazardous materials. Determine how a transportation accident near your facility could affect your operation.

#### FIRE:

Fire is the most common of all hazards. Every year fires cause thousands of deaths and injuries and billions of dollars in property damage. An urban fire is one that burns in a community. This type of hazard will affect people living in the structure or nearby in the neighborhood. Wildland fires impact timber and forest land and are generally the result of dry conditions combined with lightning or carelessness and spread unconstrained through the environment.

#### Planning Considerations:

- Meet with the fire department to talk about the community's fire response capabilities. Talk about your operations. Identify processes and materials that could cause or fuel a fire, or contaminate the environment in a fire.
- Have your facility inspected for fire hazards. Ask about fire codes and regulations.
- Ask your insurance carrier to recommend fire prevention and protection measures. Your carrier may also offer training.
- Distribute fire safety information to employees: how to prevent fires in the workplace, how to contain a fire, how to evacuate the facility and where to report a fire.
- Instruct personnel to use the stairs, not elevators, in a fire. Instruct them to crawl on their hands and knees when escaping a hot or smoke-filled area. Provide instructions and facilities to accommodate handicapped personnel.
- Conduct evacuation drills. Post maps of evacuation routes in prominent places. Keep evacuation routes including stairways and doorways clear of debris. Clearly mark all exits and ensure that they are unlocked from the inside.
- Assign fire wardens for each area to monitor shutdown and evacuation procedures. Have department managers account for their staff.
- Establish procedures for the safe handling and storage of flammable liquids and gasses. Establish procedures to prevent the accumulation of combustible materials.
- Provide for the safe disposal of smoking materials.
- Establish a preventive maintenance schedule to keep equipment operating safely.
- Place fire extinguishers in appropriate locations and train employees in their use.
- Install smoke detectors, inspect them monthly and change batteries at least once each year.
- Establish a system for warning personnel of a fire. Consider installing a fire alarm with automatic notification to the fire department.
- Consider installing a sprinkler system, fire hoses and fire resistant walls and doors.
- Ensure that key personnel are familiar with all fire safety systems.
- Identify and mark all utility and power shutoffs so that fire wardens or responding personnel can quickly shut off power, gas and water. Remember, these markings must be clear enough to be readily understandable to persons responding after normal work hours, on weekends and holidays.
- Determine the level of response your facility will take if a fire occurs. Among these options are:
  - Immediate evacuation of all personnel on alarm.
  - All personnel are trained in fire extinguisher use. Personnel in the immediate area of the fire attempt to control it. If they cannot, the alarm is sounded and all personnel evacuate.
  - Personnel trained in fire extinguisher use.

- A fire team is trained to fight incipient-stage fires that can be controlled without protective equipment or breathing apparatus. Beyond this level fire, the team evacuates.
- A fire team is trained and equipped to fight structural fires using protective equipment and breathing apparatus.

## FLOODS:

Floods are the most common and widespread of all natural disasters. Chatham County can experience some degree of flooding after spring rains and during intense thunderstorms. Most floods develop slowly over a period of days. Flash floods however, can be caused by intense storms and are like walls of water that develop in a matter of minutes.

Overflow of rivers and streams due to severe storms or torrential rains may result independently or as a secondary effect to a tropical storm or hurricane. Different variables impact flooding: topography, ground saturation, previous rainfall, soil types, drainage, basin size, drainage patterns of streams, and vegetative cover.

Planning considerations: Consider the following when preparing for floods:

- Ask the Chatham County Inspections or Engineering Departments whether your facility is located in a flood plain. Learn the history of flooding in your area. Learn the elevation of your facility in relation to streams, rivers and tidal creeks.
- Review the community emergency plan. Learn the community's evacuation routes and know where to find higher ground in the event of a flood.
- Establish warning and evacuation procedures for the facility and make plans to assist employees who may need transportation.
- Inspect areas in the facility that are subject to flooding. Identify records and equipment that can be moved to a higher location. Make plans to move records and equipment in the event of a flood.
- Purchase a NOAA Weather Radio with a warning alarm tone and battery backup; listen for flood watches and warnings.
  - Flood Watch: Flooding is possible; stay tuned to NOAA Radio. Be prepared to evacuate. Tune to local radio and television stations for additional information.
  - Flood Warning: Flooding is already occurring or will occur soon. Be prepared to go to higher ground. If advised to evacuate, do so immediately.
- Ask your insurance carrier for information about flood insurance. Regular property and casualty insurance does not cover flooding. Consider the possibility of flood-proofing your facility. There are three basic types of methods:
- Permanent Flood-proofing measures are taken before a flood occurs and require no human intervention when floodwaters rise. They include:

- Filling windows, doors or other openings with water-resistant materials such as concrete blocks or bricks. This approach assumes that the structure is strong enough to withstand floodwaters.
- Installing check valves to prevent water from entering where utility and sewer lines enter the facility.
- Reinforce walls to resist water pressure. Sealing walls to prevent or reduce seepage.
- Building watertight walls around equipment or work areas within the facility that are particularly susceptible to flood damage.
- Constructing floodwalls or levees outside the facility to keep flood waters away.
- Elevating the facility on walls, columns or compacted fill. This approach is most applicable to new construction though many types of buildings can be elevated.
- Contingent flood-proofing measures are also taken before a flood but requires some additional action when flooding occurs. These measures include:
  - Installing watertight barriers called flood shields to prevent the passage of water through doors, windows, ventilation shafts or other openings.
  - Installing permanent watertight doors.
  - Constructing moveable floodwalls.
  - Installing permanent pumps to remove floodwaters.
- Emergency Flood-proofing Measures are generally less expensive than those listed above, though they require substantial advance warning and do not satisfy the requirements for watertight flood proofing as set forth by the National Flood Insurance Program (NFIP). They include:
  - Building walls with sandbags.
  - Constructing a double row of walls with boards and posts to create a “crib,” then filling the crib with soil or sand.
  - Constructing a single wall by stacking small beams or planks on top of each other.
  - Consider the need for backup systems:
    - Portable pumps to remove floodwaters.
    - Alternate power sources such as generators or gasoline-powered pumps.
    - Battery –powered lighting.

#### HURRICANES:

A hurricane is a tropical cyclone with wind speeds ranging from 74 miles per hour to in excess of 155 mph that can extend inland for hundreds of miles. Hurricanes bring torrential rains and a storm surge of ocean water that can be pushed well inland by the approaching storm. Hurricanes also spawn tornadoes.

Secondary effects, such as tornadoes and flooding, can result from a hurricane and greatly impact inland communities. The period of vulnerability extends from June through November

The National Weather Service issues hurricane advisories as soon as a storm has the potential to develop into a hurricane.

Planning Considerations: The following are considerations when preparing for hurricanes:

- Ask the Chatham Emergency management Agency about community evacuation plans.
- Assign an emergency coordinator well in advance of the hurricane season.
- Establish facility shutdown procedures. Establish warning and evacuation procedures. Make plans for assisting employees who may need transportation.
- Make plans for communicating with employees' families before and after a hurricane.
- Survey your facility. Make plans to protect outside equipment and structures.
  - Make plans to protect windows. Permanent storm shutters offer the best protection. Covering windows with 5/8" marine plywood is a second option.
  - Ensure roof perimeter flashing, drains, gutters and downspouts are clear and secure and that equipment mounted on roofs such as vents, antennas and air conditioners are secure. Have tarps and plastic sheet on hand to cover damage or openings.
  - Clear floor drains. Have containers on hand to catch roof leaks. Keep wet/dry vacuums, mops, squeegees, brooms, buckets, fans and dehumidifiers on hand for cleanup. Consider the use of portable pumps to remove floodwaters.
  - Consider the feasibility of backup electric generator and or battery power.
  - Tape, shutter or board windows.
  - Place sandbags at doorsills and elevate water-damageable goods off floors onto skids. Move valuables away from windows and seal them in plastic bags.
  - Fill above ground tanks for added ballast.
  - Remove contents of lower file cabinet drawers on the ground floor and secure the contents at a higher elevation.
- Keep medical first aid supplies up-to-date. Have flashlights and fresh batteries available along with battery powered radios and extra batteries
- Arrange for an alternate location for continuity of operations. At a minimum, back-up valuable papers and accounts receivable at off-site

locations. Prepare to move records, computers and other items within your facility or to another location

- Purchase a NOAA Weather Radio with a battery backup. Listen for hurricane watches and warnings.
  - Hurricane Watch: A hurricane is possible within 36 hours. Stay tuned for additional advisories. Tune to local radio and television stations for additional information. An evacuation may be necessary.
  - Hurricane Warning: A hurricane will make landfall within the next 24 hours. Take precautions at once and if advised, evacuate.

#### TORNADOES:

Tornadoes are incredibly violent local storms that extend to the ground with whirling winds that can reach 300 miles per hour. Spawned from powerful thunderstorms, tornadoes can uproot trees and buildings and turn harmless objects into deadly missiles in a matter of seconds. Damage paths can be in excess of a mile wide and 50 miles long. Through combined action of strong rotary winds and the impact of wind-born debris, destruction occurs. The official tornado season begins in March and continues through August, but may occur throughout the year with little or no warning.

Planning Considerations: The following are considerations when planning for tornadoes:

- Ask the Chatham Emergency Management Agency about the county's warning siren system.
- Purchase a NOAA Weather Radio with a battery backup. Listen for tornado watches and warnings.
  - Tornado Watch: Tornadoes are likely. Be ready to take shelter. Stay tuned to radio and television stations for additional information.
  - Tornado Warning: A tornado has been sighted in the area or is indicated on Doppler radar; take shelter immediately.
- Establish procedures to inform personnel when tornado warnings are posted. Consider the need for spotters to be responsible for looking out for approaching storms.
- Work with a structural engineer or architect to designate shelter areas in your facility. Ask the Chatham Emergency Management Agency or the national weather Service for guidance.
- Consider the amount of space you will need. Adults require about six square feet of space; nursing home and hospital patients require more.
- The best protection in a tornado is usually an underground area. If an underground area is not available, consider:
  - Small interior rooms on the lowest floor without windows.
  - Hallways on the lowest floor away from doors and windows.
  - Rooms constructed with reinforced concrete, brick or block with no windows and a heavy concrete floor or roof system overhead.

NOTE: Auditoriums, cafeterias and gymnasiums with flat, wide-span roofs are not safe.

- Make plans for evacuating personnel away from lightweight modular offices or mobile home-size buildings. These structures offer no protection from tornadoes.
- Conduct tornado drills.
- Once in the shelter, personnel should protect their heads with their arms and crouch down.

#### TECHNOLOGICAL EMERGENCIES:

Technological emergencies include any interruption or loss of a utility service, power source, life support system, information system or equipment needed to keep the business in operation.

Sporadic as well as prolonged interruption of utility services can disrupt customer service and production. Additionally, inadequate power or brownouts may result in insufficient energy to accomplish normal operations and can have a disastrous effect on electrical equipment. Minor contamination of water supplies can cause major disruption to routine operations.

Planning Considerations: The following are suggestions for planning technological emergencies:

- Identify all critical operations including:
- Utilities including electric power, gas, water, hydraulics, compressed air, municipal and internal sewer systems, waste-water treatment systems.
- Security and alarm systems, elevators, lighting, life support systems, heating, ventilation and air conditioning systems, electrical distribution systems.
- Manufacturing equipment and pollution control equipment.
- Communications systems, both data and voice computer networks.
- Transportation systems including air, highway, railroad and waterway
- Determine the impact of service disruption.
- Ensure that key safety and maintenance personnel are thoroughly familiar with all building systems.
- Establish procedures for restoring systems. Determine need for backup systems.
- Establish preventative maintenance schedules for all systems and equipment.

# VULNERABILITY ANALYSIS WORKSHEET

Type Emergency	Probability of Occurrence Hi 5 ↔ 1Lo	Human Impact Hi 5 ←	Property Impact	Business Impact → 1 Lo	Internal Resources Weak 5 ←	External Resources → 1 Strong	TOTAL
HazMat							
Fire							
Flood							
Hurricane							
Tornado							
Technological							

Note: Totaling the scores for each emergency will provide a subjective comparison of the degree of vulnerability to each of the specific threats. Ranking of the total scores indicates which occurrence provides the greatest threat. This information should be used to guide the planning effort and prioritization of resources described in the preceding pages.

# PLANNING CHECKLIST

## EXECUTIVE SUMMARY:

- Purpose of the Plan
- Corporate policy regarding emergency management
- Authorities and responsibilities of key personnel
- Types of emergencies expected
- Assessment of vulnerabilities
- Location where response operations will be managed

DIRECTION AND CONTROL: Emgcy. Mgmt. Group and Incident Cdr. ID.

INCIDENT COMMAND SYSTEM: organizational diagram.

## EMERGENCY OPERATIONS CENTER:

- Primary and alternate location
- Duties of personnel.
- Procedures for each position and checklists.
- Lines of succession, authority and responsibility.
- Equipment and supply needs for each response function.
- Assignment of initial responsibility for:
  - Recognizing and reporting an emergency
  - Warning employees
  - Initiating safety and security measures
  - Ordering or initiating evacuation

SECURITY: procedures for isolation of the disaster scene.

EXTERNAL RESPONSE: protocols.

## COMMUNICATIONS:

Priority and procedures for restoration of internal communications.

Plan for external restoration of communications services.

Plan for backup communications for each business function.

CORPORATE COMMUNICATIONS: restoration plan.

FAMILY COMMUNICATIONS: individual responsibilities plan.

## EMERGENCY NOTIFICATIONS:

- List of employee addresses, telephone and pager numbers.
- Procedures for notification of local, State and Federal agencies.
- Scripted public address systems announcements.

WARNINGS: system description.

## LIFE SAFETY:

### EVACUATION:

- Conditions under which an evacuation would be necessary.
- Establishment of a clear chain of command.
- Personnel and procedures to shutdown critical operations.
- Post evacuation procedures.
- Security to prevent unauthorized access into an incident area.

- Identification of personnel for access control.
  - Rescue of persons trapped or unable to evacuate.
  - First aid for persons injured in the incident or evacuation.
- ROUTES AND EXITS: primary and alternate.
- ASSEMBLY AREAS AND ACCOUNTABILITY: areas and procedures.
- SHELTER:
- Conditions for taking shelter, shelter locations and managers.
  - Identification of hazardous areas to be avoided when sheltering.
- TRAINING: program and responsibility.
- INFORMATION: route maps displayed; plan for visitors and customers.
- FAMILY PREPAREDNESS: plans for employee transportation needs.

#### PROPERTY:

PROTECTIVE SYSTEMS: plans and procedures:

- Fighting fires
- Containing material spills.
- Closing or barricading doors and windows.
- Shutting down equipment.
- Covering, securing or relocating equipment.
- Identification of backup equipment, parts and supplies.

FACILITY SHUTDOWN: Responsibility for non-structural mitigation:

- Securing items that could fall or shake loose in an emergency.
- Moving heavy or breakable objects to low shelves.
- Ensuring moveable items are above potential flood levels.
- Moving workstations away from windows.
- Wrapping electronic equipment in plastic.

RECORDS PRESERVATION: Identification and labeling vital records:

- Financial and insurance information
- Engineering plans and drawings
- Product lists and specifications
- Employee, customer and supplier databases
- Formulas, proprietary information and trade secrets
- Personnel files
- Backing up computer systems.
- Copies of records.
- Storing tapes and discs off-site or in insulated containers.
- Evacuation of records to backup facilities.
- Arrangements for backup power.

#### COMMUNITY OUTREACH:

INVOLVING THE COMMUNITY: plans for interagency coordination.

MUTUAL AID AGREEMENTS: government and volunteer agencies.

COMMUNITY SERVICE: relationship to corporate responsibilities.

PUBLIC INFORMATION AND MEDIA RELATIONS:

- Designation of a primary and alternate spokesperson.

- Designation of a media briefing area.
- Establishment of security procedures.
- Procedures to ensure media releases are complete, accurate and approved.
- Plan for effectively communicating technical information.
- Background information about the facility.

RESUMPTION:

CONTINGENCY CONTRACTS:

- Arrangements for record preservation, equipment repair, earthmoving equipment or engineering resources.
- Property and business resumption policies.
- Plan for bringing critical systems back on-line.
- Responsibility for photographs or videotape of the facility.

CONTINUITY OF MANAGEMENT:

- Chain of command
- Lines of succession
- Relocation to alternate headquarters.

INSURANCE: Values, conditions, applicability and adequacy.

EMPLOYEE SUPPORT: plans and procedures:

- Cash advances
- Salary continuation
- Flexible work hours
- Reduced work hours
- Crisis counseling
- Care packages
- Day care.

RESUMING OPERATIONS:

- Recovery team priorities
- Hazard assessment and security.
- Employee briefing.
- Provisions for insurance documentation:
  - Audio recording decisions.
  - Photographs or video of damage.
  - Damage related cost inventory and accountability.
  - Assessment of damaged property values.

ADMINISTRATION AND LOGISTICS:

ADMINISTRATION: assignment of responsibility for:

- Maintaining telephone logs.
- Keeping detailed records of events.
- Maintaining a record of injuries and follow-up actions.
- Accounting for personnel.
- Coordinating notification of family members.
- Issuing press releases.

- Managing finances.
- Coordinating personnel services.
- Documenting incident investigations and recovery operations.

LOGISTICS: assignment of responsibility for preparing:

- A resource inventory.
- Utility maps to emergency responders.
- Material safety data sheets to employees.
- Backup equipment.
- Repair parts.
- Medical support, food and transportation.
- Shelter facilities.
- Backup power.
- Backup communications.

# CEO'S DISASTER CHECKLIST

PURPOSE: To provide abbreviated guidelines and checklists to assist the CEO through the first hours of a disaster. To provide reminders for:

- The questions that should be asked
- Immediate steps to take.
- Key points to remember.

## CEO SURVIVAL KIT CONTENTS:

- Information:
  - Emergency plan
  - Checklists
  - Maps of facility and area
- Supplies:
  - Tape recorder
  - Notebook or log book
  - Spare pencils & pens
- Identification:
  - Vest or arm-band
  - Photo ID
- Contact lists:
  - Peers (Names, home & office numbers)
  - Other experts
  - Clothing:
    - Raincoat
    - Windbreaker
    - Boots
- Options:
  - Portable 2-way radio & batteries
  - Flashlight & Batteries
  - Cell or mobile phone
  - Change of clothing
  - Personal comfort items

## BACKGROUND INFORMATION CHECKLIST:

- Notified By: \_\_\_\_\_
- Time: \_\_\_\_\_
- Type Emergency: \_\_\_\_\_
- Location:
  - CEO Reporting Point: Clarify whether to go to the EOC, an alternate EOC or other reporting point.

- Open Routes: Determine the best travel route and means of transportation. Will you be picked-up or met?
- Available Communication: Confirm primary and back-up means of communications (radio, cell phone, land-line, secure communications, etc.)
- Incident Size-up:
  - Type Incident: This may be obvious or complex; i.e., hazmat, toxic release or both.
  - Magnitude: Try to pin down the size, scope and extent of the incident to include its status.
  - Best/Worst Case: How clear a picture of the incident has developed?
- Damage:
  - Injuries/Deaths
  - Area (size) if known
  - Property Damage
  - Other Impacts such as environmental damage or economic factors
- Resources:
  - Incident Command Status: Who is in charge of the incident and at the EOC?
  - Interior/Exterior Resources Committed: What response agencies are involved and their level of commitment
  - Interior/Exterior Resources Required: Are there any shortages or anticipated shortages? Can you help alleviate the problem?
  - EOC Status and Location: Is the EOC operational? Is an alternate required?
  - Other Authorities Notified: Who has been informed of the incident? Does anyone else need to be notified?

#### CHECKLIST 1, IMMEDIATE ACTION

- Begin Personal Log: Include all key info, decisions & background
- Establish Contact with CEMA
- Direct staff to provide an initial situation report that includes an assessment & report on problems, status of field forces, resource shortfalls, policy needs & options.
- Chair Assessment Meeting: Address:
  - Who is in charge? Where? Of what?
  - Has there been a proper vesting of authority?
  - Is continuity of operations assured?
  - What is the status of intergovernmental cooperation?
  - Availability of support from utilities, local/state agencies & private organizations?
  - What options are open to deal with shortfalls?

- What financial issues are surfacing?
- What parameters should be followed contacting local public officials?
- Is there a need to place other personnel on alert?
- What is the status of the EOC? Should it be open, closed or relocated?
- Issue Emergency Declarations as Needed: Ensure a document log is in place or initiated to record decisions.
- Set Reporting Procedures: Establish a briefing and report schedule.
- Remind Staff to Maintain Logs of Actions & Financial Records: As well, any deviation from policy should be noted and the rationale for that decision.
- Begin Liaison with Other Officials: Coordinate with elected officials.

#### CHECKLIST 2, PERSONAL

- Tell your family your destination and how to contact you.
- Take medications, toiletries and clothes
- List of peers to contact for advice
- Remember, your role is policy, not operations
- Take a personal tape recorder
- Other things to remember???

#### CHECKLIST 3, LEGAL

- Establish communications with legal advisors
- Review legal responsibilities and authorities:
  - Emergency declarations
  - Chain of succession
  - Inter-governmental aid
  - Social controls
  - Price controls
  - Other restrictions
- Monitor equity of service based on needs and risks: maintain a balance between public welfare and citizens rights.
- Have status of contracts reviewed.

#### CHECKLIST 4, POLITICAL

- Recognize accountability
- Check provisions for public officials:
  - Space at EOC
  - Periodic updates
  - Sensitive issue updates: life & property loss, service interruptions, etc.
- Establish and evaluate policy decisions throughout the incident.
- Confer with elected officials when problems arise.

- Use the Chatham Emergency Management Agency to request assistance from public and private agencies.

#### CHECKLIST 5, PUBLIC INFORMATION

- Check plans to inform the public through the media:
  - Designate or reaffirm a single Public Information Officer and one or two alternates or back-ups.
  - Evaluate media capabilities and alternate sources of public information. Monitor media activity and messages.
  - Establish a media center.
  - Establish a press release approval process such as channeling all press releases through the CEO in the EOC.
  - Establish a media update and access policy.

## EMERGENCY PHONE NUMBERS

American Red Cross	(912) 651-5310
Police, Fire or Medical Emergency	911
Bell South Commercial Accounts	(800) 247-2020
Building Manager	_____
Building Security Manager	_____
Chatham Emergency Management Agency	(912) 201-4500
EPD Air Protection Branch	(404) 656-6905
EPD Emergency Response Team	(912) 353-3225
EPD Hazardous Waste Compliance Div.	(404) 657-8831
Insurance Agent	_____
National Flood Insurance Program	(800) 427-4661
Savannah Electric	(800) 437-3890
Small Business Administration	(800) 359-2227
US Coast Guard	(912) 652-4353

## BIBLIOGRAPHY

Action Plan for Disaster. SunGard Recovery Services Inc., SRS-013, 1995.

Disaster Planning Guide for Business and Industry. Defense Civil Preparedness Agency, CPG 2-5, July 1978.

Disaster Preparedness for People with Disabilities. American Red Cross, ARC 5091, June 1997.

Disaster Recovery Made Easy. SunGard Recovery Services Inc., SRS-201, 1998.

Disaster Recovery Journal. John M. Hayes., Systems Support, Inc., St. Louis, MO, Volume 13, Issue 1, Winter 2000.

Emergency Management, A Legislator's Guide. Laura Hagg Nelson, Energy, Science and Natural Resources Program., Washington, D. C., July 1997.

Emergency Management Guide for Business and Industry. American Red Cross, ARC5025, November 1993.

Guide for All-Hazard Emergency Operations Planning. Federal Emergency Management Agency, SLG 101, September 1996.

Industrial Protection Guide. Scientific Services, Inc., August 1985.

Planning Guide and Checklist for Hazardous Materials Contingency Plans. Federal Emergency Management Agency, FEMA-10, July 1981.

Preparedness Programs for Emergency Operations in Banking. Department of Defense, FG-F-3.25.

Small Business Disaster Planning Guide. Orange County Emergency Management, Orange County Government, Florida.

The CEO's Disaster Survival Kit: A Common-Sense Guide for Local Government Chief Executive Officers. Federal Emergency Management Agency, FA-81, October 1988.

The Threat of a Hurricane. Allstate Insurance Company, 1992.

Note: Special thanks and acknowledgement is given to the American Red Cross for their excellent publication: Emergency Management Guide for Business and Industry.