



International Parking & Mobility Institute

EMERGENCY PREPAREDNESS MANUAL



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PREFACE

Parking and transportation professionals go to work every day knowing in any given moment an emergency could turn things upside-down.

A vehicle fire could require rapid evacuation of an underground parking garage. Mother Nature could decide to throw an earthquake, tornado, flash flood, or other unexpected natural event near a facility. Then, there are the emergencies we usually get a little warning about — hurricanes, tornadoes, and blizzards.

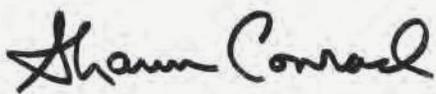
We all live with heightened awareness that a terrorist could wreak havoc without warning. Images from such attacks are indelibly marked into our collective memory: from Oklahoma City to the Boston Marathon in 2013.

As parking and transportation professionals charged with the safety and welfare of our customers and stakeholders, we have only one responsible choice: prepare and plan.

This Emergency Preparedness Manual is a great example of how committees work to anticipate members' needs. The **IPMI** Safety & Security Committee created a parking and transportation-specific reference tool that will directly benefit you in your operations.

There's no question we in parking touch lives: those of our employees, our parking customers, our transportation system users, and many others. Parking and mobility management play an important role in every community, and our professionals stand front and center when emergencies arise.

Let's make sure we do the best we can to be prepared. And on behalf of **IPMI**, my thanks to the Safety & Security Committee for its valuable work toward that goal.



Shawn Conrad, CAE
Executive Director

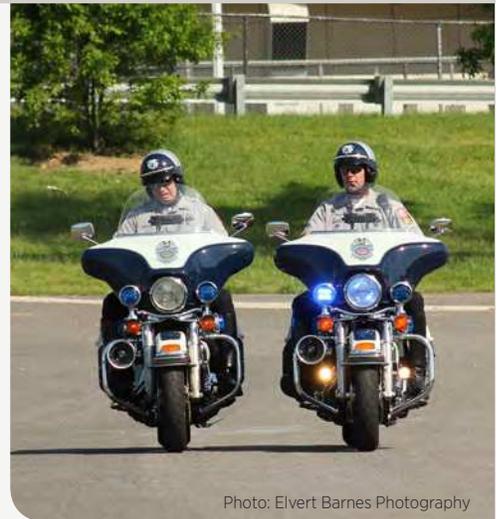


Photo: Elvert Barnes Photography

FOREWORD

As co-chairs of the Safety & Security Committee, we are proud to have been involved in the development of this Emergency Preparedness Manual. Emergency planning is vital for all segments of the parking industry. The development and subsequent implementation of a sound emergency plan is critical to the successful response and mitigation of an event.

As parking and transportation professionals, both of us arrived at an intimate understanding of the role emergency planning and management plays through different — but equally consequential — paths in our careers. We present to you the following insights gleaned from our own experiences.

Bruce Barclay, CAPP, Operations Manager,
Salt Lake City Department of Airports

Geary L. Robinson, PhD, CAPP, Director, Parking &
Transportation Services, University of North Texas

INTRO LETTERS

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The need for a solid emergency plan did not hit home for me until a day that changed my life and the lives of many other Americans: the tragedy of Sept. 11, 2001. I had been in the parking profession for about eight years at the time and didn't realize the effect an emergency situation could have on a city/airport/university until then.

On Sept. 11, 2001, I was general manager for the parking contract at Newark International Airport. My client was the Port Authority of New York and New Jersey. I attended regular meetings at 1 World Trade Center — known then as the North Tower, the first building hit by the hijackers, at 8:46 a.m. Eastern time. The South Tower was hit at 9:03 a.m. and burned until it collapsed at 9:59 a.m. The North Tower was in flames until 10:26 a.m. — 102 minutes. Then it collapsed.

Ironically, the North Tower's collapse severely damaged World Trade Center Building 7, one of whose tenants was the New York City Office of Emergency Management. Imagine living through the onset of the world's largest human disaster and not having the technical infrastructure required to coordinate rescue and recovery efforts.

When events unfolded in Lower Manhattan, we experienced major disruptions at Newark International. After the planes hit the towers, reports came in about bombs set to explode in one of Newark's terminals. The terminals were evacuated. People fled to their parked cars and scrambled to leave, but the exit plaza was clogged with vehicles queued well back into the parking lots. In the interest of public safety, we opened the gates and allowed everyone to exit without charge. (Port Authority staff was tied up with immediate events but later concurred with our decision.) At 9:40 a.m., the Federal Aviation Administration grounded all U.S. aircraft, which precipitated another mass exodus of passengers, many of whom were in a state of panic and shock.

Rumors spread like wildfire that morning. No one knew what was truth and what were rumors surrounding the attacks or the events unfolding at Newark. One rumor claimed that flights were grounded because there were bombs on additional planes at Newark International. Indeed, many assumed that the massive fireballs generated during the crashes into the Twin Towers came from explosives on those aircraft. This fed the rumors of other planes with bombs.

Two memories from that day will stay with me forever: first, the crystal-clear blue sky and the smoke rising from the towers to the east. Second, the eerie silence of no planes taking off and landing as the day wore on.

Bruce Barclay, CAPP, Operations Manager,
Salt Lake City Department of Airports



Photo: Penn State



Photo: Michael B.

As I wrote in the opening paragraphs of my doctoral dissertation (*Disaster Preparedness For University/Community Transit Systems, Clemson University, May 2011*), public transportation, along with parking assets and their open access, creates an opportunity for masses of people to be hurt during human-made or natural disasters.

My doctoral research focused on two questions:

1. How are universities/communities planning on using and protecting transit systems in a disaster event?
2. How are universities/communities planning on using and protecting transit assets in a disaster event?

My hypothesis at the outset of that research was that university/community transit systems do have appropriately prepared emergency operating plans. The research I conducted, however, did not support my hypothesis.

During my dissertation research, my analysis of survey results showed that university/community transit systems do not comply with the National Incident Management System (NIMS) and do not have appropriately prepared emergency operating plans. All institutions of higher education, other post-secondary educational institutions, transit and parking organizations, as well as private/public and non-governmental/governmental organizations, should develop comprehensive and holistic emergency operations.

Public and private transportation assets have been designated as a part of the nation's critical infrastructure and key resources (CIKR), which includes university and community transit systems owned by or used to provide transit services to post-secondary

institutions of higher education. The transit industry's lack of involvement with emergency management agencies and the lack of disaster/emergency experience within the transportation community have caused some of the nation's most knowledgeable and useful resources for information regarding the use of transportation resources for emergency conditions to be underutilized (Wolshon 2009).

Additionally, Directive 8 of the Homeland Security Act of 2002 (6 U.S.C. 101) mandates the use of NIMS for all local, state, or federal agencies receiving federal funding, while the Federal Transit Administration (FTA) only provides recommendations in the form of a technical resource for its grantee transit agencies. This FTA assistance may also be used by non-federally funded transit systems.

This manual includes an overview of NIMS and provides references so readers can avail themselves of further information resources provided by the U.S. Department of Homeland Security and others.

As I concluded from my research, the following key issues need to be kept in mind when developing or revising a university/community transit system emergency operating plan:

1. Senior management of all participating organizations must not only be committed to the effort but also dedicate the needed resources, including funding.
2. Those involved with the implementation of the plan, including the transit system's director or designee, must be part of the planning process.
3. The plan must incorporate the university/community transit system(s).
4. Training in various forms (tabletop exercises, drills, etc.) needs to be part of the plan.
5. A comprehensive assessment process must be included as an essential part of the plan.

This emergency preparedness manual includes as one of its appendices an outline (i.e., the table of contents) of the emergency operations plan I drafted as part of my dissertation. I hope it serves as a useful guide to the many elements such a plan may contain as you explore an appropriate emergency planning process for your institutions of higher education, other post-secondary educational institutions, transit and parking organizations, as well as private/public and non-governmental/governmental organizations.

Geary L. Robinson, PhD, CAPP, *Director, Parking & Transportation Services, University of North Texas*

INTRODUCTION

Who Needs this Manual?

The U.S. Department of Homeland Security (DHS) and Federal Emergency Management Agency (FEMA) define preparedness as “a continuous cycle of planning, organizing, training, equipping, exercising, evaluating, and taking corrective action in an effort to ensure effective coordination during incident response. This cycle is one element of a broader National Preparedness System to prevent, respond to, and recover from natural disasters, acts of terrorism, and other disasters.” (Source: dhs.gov/topic/plan-and-prepare-disasters)

FEMA released its National Preparedness Goal in September 2011 to define what it means for the whole community to be prepared for all types of disasters and emergencies.

The National Preparedness Goal (included in the appendix of this manual) identified five mission areas and 31 core capabilities, defined as the distinct critical elements needed to achieve the goal.

This manual was developed as a hands-on preparedness tool for parking and transportation professionals. Regardless of your title or experience level, you have organizational and individual responsibilities to fulfill during an emergency.

Organizationally, professionals own specific functions and tasks during an emergency event. A department director will need to do x, y, and z, while a shuttle bus driver will attend to a, b, and c. Job-specific tasks ensure that the entire parking and transportation operation functions appropriately and effectively in an emergency.

Individually, emergency situations require quick action. For example, the first person on-scene at a garage fire needs to know what to do — and then do it — when someone stumbles out of the smoke and collapses.

Being prepared for an emergency requires having the knowledge, skills, policies, and procedures in place to not only fulfill departmental roles but also function professionally and sensibly in unexpected scenarios.

The parking industry is ever-changing and subject to ongoing changes (e.g., building relocations, new construction, etc.), it is recommended that you reevaluate your plan on an annual or regular basis with those who are directly involved or affected.

IPMI adopted a broad approach in developing this manual. This is a tool intended to emphasize practical and actionable steps, rather than theory. Moreover, IPMI recognizes that planning specifics will



vary depending on the differing environments and roles of parking and transportation departments. Responses to emergencies affecting freestanding garages, for example, will vary from responses to emergencies affecting underground garages.

An emergency preparedness plan should be part of an institution's larger safety and security plan. This manual is best used as a resource for making your own plan. It might also spark other conversations about overall safety, security, and continuity of operations..

Here are 10 suggestions for making the most of this manual:

1. Review it thoroughly, considering your operation.
2. Identify the elements that apply to your operation.
3. Share those elements with your colleagues and your organization's Emergency Management Team.
4. Compare the sector-specific sample plan with the roles and people in your own operation.
5. Establish a schedule to develop your own plan.
6. Arrange for your team to own specific preparedness planning tasks.
7. Involve other internal and external stakeholders in the plan's development and review.
8. Implement the plan.
9. Practice the plan and evaluate practice sessions after they occur.
10. Update the plan annually.

Learning about the National Incident Management System (NIMS)

As you begin to think about emergency preparedness planning for your parking and transportation operation, the Safety & Security Committee recommends becoming familiar with the National Incident Management System (NIMS).

Created by DHS and FEMA, NIMS is, in FEMA's words, "a comprehensive, national approach to incident management. NIMS provides the template for incident management, regardless of cause, size, location, or complexity. NIMS is applicable at all jurisdictional levels and across functional disciplines."

According to FEMA, the benefits of NIMS include:

- Standardized approach to incident management that is scalable and flexible.
- Enhanced cooperation and interoperability among responders.
- Comprehensive all-hazards preparedness.
- Efficient resource coordination among jurisdictions or organizations.
- Reflects best practices and lessons learned.

NIMS focuses on five key components:

- Preparedness.
- Communications and information management.
- Resource management.
- Command and management.
- Ongoing management and maintenance.

The NIMS Resource Center (fema.gov/national-incident-management-system) offers online resources to implement and maintain NIMS concepts and principles. Coordinating with other NIMS stakeholders is imperative for proper preparedness. A parking and transportation department at a university, for example, will need to coordinate with campus security or its police department and the emergency management team, as well as specific administrators who have public safety and public communication responsibilities, along with off-campus

stakeholders such as fire/EMS and transit. A municipal parking department would need to coordinate with police, fire/EMS, transit, and likely the municipality's public information officer at a minimum.

Each region handles emergency operations and incident management in its own way, in coordination with state and federal stakeholders, depending on the nature and scope of the emergency. Your parking and transportation operation might also factor into those plans, depending on the scenario.

At the heart of NIMS is communication and adaptability. If you haven't already, you will need to assert your voice, provide your expertise, and candidly discuss your available assets and level of readiness with NIMS stakeholders — preferably before any emergency scenario arises.

Parking Facility Roles during Emergencies

While parking facilities can be the focus of specific emergencies, lots and garages can also serve as vital assets and resources for first responders and others:

Staging Area

An open parking lot can be a critical asset for firefighters, police, and/or National Guard units while responding to a large event that requires staging of personnel, materials, and vehicles. Knowing and communicating the availability of and access to parking areas during different times of the day or night can help on-site incident commanders make quick decisions about storing and deploying resources.

Temporary Shelter

A parking garage can serve as an effective temporary shelter in the event of certain forms of inclement weather. A basement garage could prove to be a lifesaver during a tornado or violent wind event. Certain floors of an above-ground garage could provide refuge during a severe thunderstorm, hail storm, or flash flood. Law enforcement officials may decide that a garage is a suitable impromptu holding area to isolate the public from an active shooter situation or other public safety hazard in which quick access to cover could save lives and prevent injury.

Anticipating and planning for the potential use of parking areas as temporary shelter will position your operation to better serve the public and first responders.

EMERGENCY PREPAREDNESS PLAN ELEMENTS

Identifying Applicable Vulnerabilities and Scenarios

One of the first steps in preparing your plan will be identifying the likely — and even not-so-likely — events that could affect your parking operation, either directly or indirectly. What threats do you face? What threats do your institution, your community, your region, and your state face? While your planning will focus primarily on your own operation, that operation exists in a larger context, and it's important to consider how you might figure into someone else's larger plan.

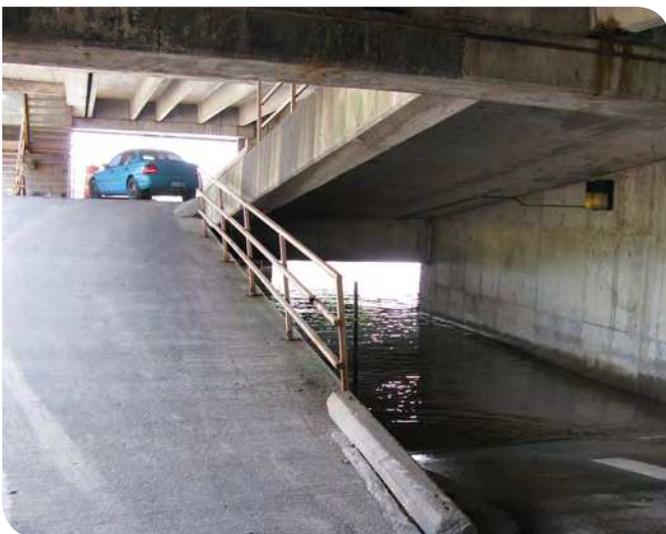
The main task of your plan is answering this question: What must be done, when, and by whom, if this particular event occurs?

Natural Risks

Examples of natural risks include (but are not limited to):

- Earthquake
- Extreme cold weather
- Fire
- Flood
- Lightning
- Mudslide
- Sinkhole
- Snow/ice
- Solar flares/electrical disruption
- Tornado
- Tsunami/storm surge
- Wind

Photo: /dave/null



Man-made Risks

Examples of man-made risks include (but are not limited to):

- Active shooter
- Biological attack
- Bomb threats/explosions
- Broken pipe (water, gas, fuel, oil, etc.)
- Building condemnation/collapse
- Chemical attack
- Combustible gas leak
- Computer virus/DDoS attack
- Crowd stampede
- Employee actions (labor strikes, etc.)
- Environmental failure (frozen pipes, HVAC issues, etc.)
- External accidents (plane crash, train derailment, etc.)
- External actions (civil unrest, terrorism)
- Fire
- Hazardous material spills
- Hijacking
- Internal accidents
- Nuclear material/facility accident
- Nuclear device/bomb attack
- Plane crash
- Sabotage/vandalism
- Security breach evacuation
- Service failure (electrical, phones, Internet)
- Theft/fraud/embezzlement

Other Risks

Other risks that necessitate preparation include:

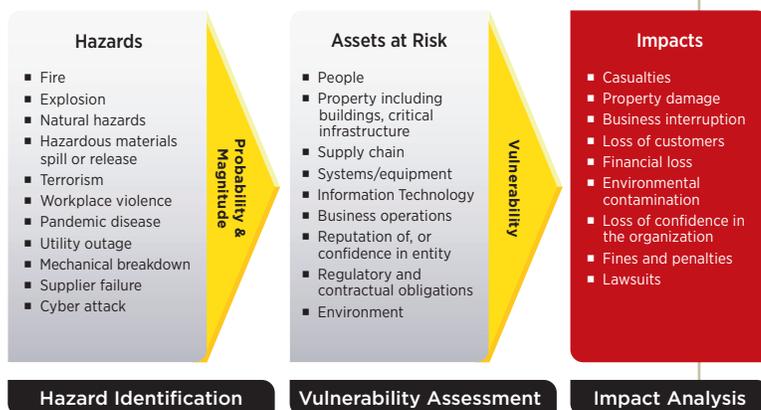
- Cell signal blocking by law enforcement during incident
- Denial of access
- Disease/epidemic/pandemic
- Equipment failure
- Governmental shutdowns/policy changes
- Loss of critical staff
- Loss of lease/agreement/contract
- Other nearby facilities issues
- Power failure
- Power surge
- Transportation disruption

Identifying Critical Operational Functions, Systems and Supplies

An emergency forces us to prioritize. A “must” on an ordinary day can suddenly become optional in an emergency.

You can save your entire operation time and heartburn by identifying the critical functions, systems, and supplies that will likely be affected in an emergency. This is very much a team exercise; no single individual can think of everything, and no single individual can anticipate how every aspect of an operation might be affected.

A useful first step in this process can be creating a spreadsheet of all key elements of your operation. Consider using a budget as an accurate guide. Once that’s been created, referencing the applicable vulnerabilities and risk scenarios discussed above, assess the degree (e.g., high, medium, low; or use a quantitative 1-10 scale) to which each element would be affected by each risk. The illustration below offers a model¹.



Once you have identified the degree to which a program element is likely to be affected, you can then focus on how each high-priority threat would ripple through your operation. That way, your emergency preparedness plan can address actions required in an appropriate level of detail.

In the simple example above, the parking and transportation operation would want its plan to thoroughly explain how the shuttle buses would be affected by a snow/ice event and provide specific guidance to staff for appropriate preparation and response. The plan would focus on specifics that might include modified shuttle schedules, fuel supplies, snow tires or chains, cold-weather engine maintenance, reviewing snow/ice vehicle handling with drivers, and other issues.

While identifying critical functions, systems, and supplies that will likely be affected by various types of emergencies, your preparedness plan should include steps to address three essentials: resilience, redundancy, and restoration.

Resilience

Resilience is a key concept in emergency preparedness. As Christopher Neuwirth wrote in “Reducing Uncertainty from Inevitability” at EmergencyMgmt.com, “Resiliency is the ability of a society, or the parts thereof, to absorb the impact of a disaster and readily return to a pre-disaster state. ... Resiliency is, itself, a measure of emergency preparedness. ... It is a ready-state that demonstrates exemplary preparedness and not a coincidental experience. ... If emergency preparedness is not done well, or in isolation of other considerations and factors, resiliency may become minimized, limited, or — worse yet — not experienced at all.”

Emergency preparedness means asking what you need to do today to ensure the survival (or restoration) of essential operational elements should an emergency strike tomorrow. Securing vital records, for example, must be addressed in advance of an event; failure to do so could mean their total loss.

Redundancy

Building redundancy — backups — into your operation allows you to continue functioning during an event or return to normal more quickly afterward. Ideally, redundancy has to become as automatic as possible in an operation. It might mean automating data backup, for example.

Part of redundancy might entail stockpiling vital supplies to ensure their availability during an emergency and for a length of time thereafter. Stockpiling will likely require requisitioning an extra quantity of certain supplies or equipment for your operation on a regularly scheduled basis.

Redundancy and stockpiling are simple ideas but not always easy to turn into action. Budget constraints, competing priorities, distractions, and procrastination can all conspire to foil good intentions. They should, therefore, be a standard part of someone’s job.

Restoration

Restoring vital equipment and systems as quickly as possible after they’ve been affected by an emergency requires advance planning and thorough training. In fact, some equipment and systems must be shut down prior to the arrival of an expected event, such as a hurricane or flood, to prevent or limit their damage.

Your emergency preparedness plan should include specific steps and assigned responsibilities to ensure the safe powering down/up of your operation’s equipment and systems. These might include computers, electronic parking meters, garage gates and payment systems, vehicles and fueling stations, and others. A complete set of equipment documentation (start-up, operating, and shut-down procedures) should be updated regularly and be easily accessible to all staff trained and cleared for its use.

¹ <http://www.ready.gov/risk-assessment>

Excerpts from the Salt Lake City Department of Airports Basic Emergency Plan

Levels of Emergencies (Non-Airport/ FAA categories)

Following are three categories of emergencies, which are primarily useful for assessment purposes. These correspond with the levels of emergencies as defined in the SLC Corporation Emergency Plan.

Level III

Any emergency that is capable of being handled using local resources, such as a routine medical emergency, traffic accident, etc.

1. Emergency occurs.
2. The Airport Control Center is notified.
3. First responders go to the scene/establish command.
4. Recovery efforts take place.

Level II

Any emergency where one or more of the following criteria are present:

1. The emergency is not routine in nature.
2. Notifications to administration are required.
3. There is extraordinary media coverage.
4. The emergency results in a fatality.
5. There is a situation where 1-9 individuals have sustained moderate injuries.
6. Significant damage to a single structure is sustained.
7. Additional resources from other agencies are requested.
8. If necessary, a PIO is made available for media inquiries.
9. Staging areas are identified by command staff when required.

Level I

Any emergency where any Level II elements are present and:

1. There are mass casualties (10 or more).
2. Resources available on airport are insufficient to effectively handle the situation.
3. Two or more airport structures have sustained significant damage
4. If necessary, the EOC is activated.
5. Additional notifications of airport employees/EOC staff are made by the Control Center.

Sections of the Airport Emergency Plan

Basic Plan	Provides an overview of general philosophies pertaining to disaster management and contains general guidelines pertinent to all functional sections, and hazard-specific annexes. Unlike the rest of the plan, which contains security sensitive information, this basic plan can be shared with the general public.
Hazard Analysis	The hazard analysis is a document intended to look at the potential emergencies that could occur at or impact the SLC International Airport; to assess, then prioritize each based upon likelihood of occurrence, historical precedence, and other factors.
Functional Sections	A functional section describes a series of general actions that are applicable to multiple disaster situations. For example, an adequate management structure and communications system must exist in every disaster; therefore, functional sections have been created which focus on how both may be established under a variety of circumstances.
Hazard Specific Annexes	Those emergency actions that are applicable to only one or a few types of disasters are placed in hazard-specific annexes.
Checklists	Checklists are summaries of functional sections and hazard-specific annexes, condensed in such a way that they may be immediately useful to field personnel facing emergency situations.
Agreements	This is a listing of memorandums of understanding and letters of agreement between the Department of Airports and organizations willing to provide assistance not found elsewhere in the certification manual.
Glossary	The glossary is a centralized listing of definitions used throughout the Airport Emergency Plan.
Training & Testing	This section provides an indication of the testing/review schedule for various components of the AEP and training methods.
Maps & Resources	This section contains various maps of the airport and surrounding areas, as well as a snapshot list of non-traditional airport resources that will assist the airport in managing an incident/event.

Functional Sections in the AEP

- Alert and Warning
- Direction and Control
- Emergency Communications
- Emergency Personnel, (including Search and Rescue)
- Emergency Public Information
- Health and Medical
- Public Protection (Evacuation and Shelter in Place)

Specific Situations Addressed by the AEP

- Airfield power failure
- Aviation accident
- Bomb threat (terrorism)

- Combustible gas
- Crowd management
- Earthquake
- Flooding
- Hazardous materials (terrorism)
- Hijacking (terrorism)
- Terrorism, (chemical, biological)
- North Support Business (maintenance and fueling facilities)
- Security breach evacuation
- Structure fire

Used by permission. Source: Bruce Barclay, CAPP, Operations Manager, Salt Lake City Department of Airports. Copyright © Salt Lake City Department of Airports

Louisiana State University

As Antonio Casas, director of parking services at the LSU Health Sciences Center in New Orleans, told *The Parking Professional* in March 2013, “Each storm presents its own challenges and is unique.”

Casas said the effect depends on how a storm hits the region. Hurricane Isaac in August 2012 was primarily a wind-and-rain event for the campus, he explained, while Hurricane Katrina’s biggest effect in 2005 was flooding.

“Katrina pretty much wiped us out,” he said. At that time, most of the department’s computer servers were on the ground floor, which meant having to almost completely start over after the storm.

“Katrina taught us that when we do a new equipment installation or renovation, we raise the parts and the electrical usually four feet up off the ground and use weatherproof boxes. Our IT department hosts all of our servers now on an elevated floor. Once electrical equipment goes in the water it’s shot.”

While those steps add resilience to systems, storms have their own way of finding weak points. Lightning and electrical surges during Hurricane Isaac blew out the controls in a couple of the campus’s parking areas, and wind-driven rain found its way past weather stripping around doors.

“Card reader parts got water damage and became inoperable even after the power came back,” said Casas. “In one of our lots, we had gate operators that had their entire circuit boards fried, either by lightning or when nearby transformers blew.”



USDA photo by Dave Kosling

Another lesson learned from Katrina, and applied during Isaac and Gustav, was to have an emergency plan that governs a campus-wide shutdown process. As a storm approaches, the plan details and prioritizes actions to be taken 72 hours out, then 48, then 24. Shutdown begins between 48 and 24 hours in advance, powering down all controls, IT, and parking areas.

“By shutting it all down proactively, we hope to avoid some of the failures and damage from power surges, wind, etc.,” said Casas. The buildings have top priority, then parking. Disconnecting equipment from electrical power where possible helps to protect it.

“We were able to recover a lot quicker after Isaac,” thanks to all the prep work, he said.

The Parking Professional, March 2013

Identifying Roles and Responsibilities

Even the best-planned, best-organized, and most effectively coordinated responses during an emergency can seem chaotic in the moment. Being crystal clear in advance about roles and responsibilities while preparing (and drilling) your plan helps counteract that sense of chaos.

It's important to integrate your operation into the larger structure of a multi-agency response to an emergency event, and your plan should reflect that.

According to FEMA:

Emergency management and incident response activities require carefully managed resources (personnel, teams, facilities, equipment and/or supplies) to meet incident needs. Utilization of the standardized resource management concepts, such as typing, inventorying, organizing, and tracking will facilitate the dispatch, deployment, and recovery of resources before, during, and after an incident.

Resource management should be flexible and scalable in order to support any incident and be adaptable to changes. Efficient and effective deployment of resources requires that resource management concepts and principles be used in all phases of emergency management and incident response.

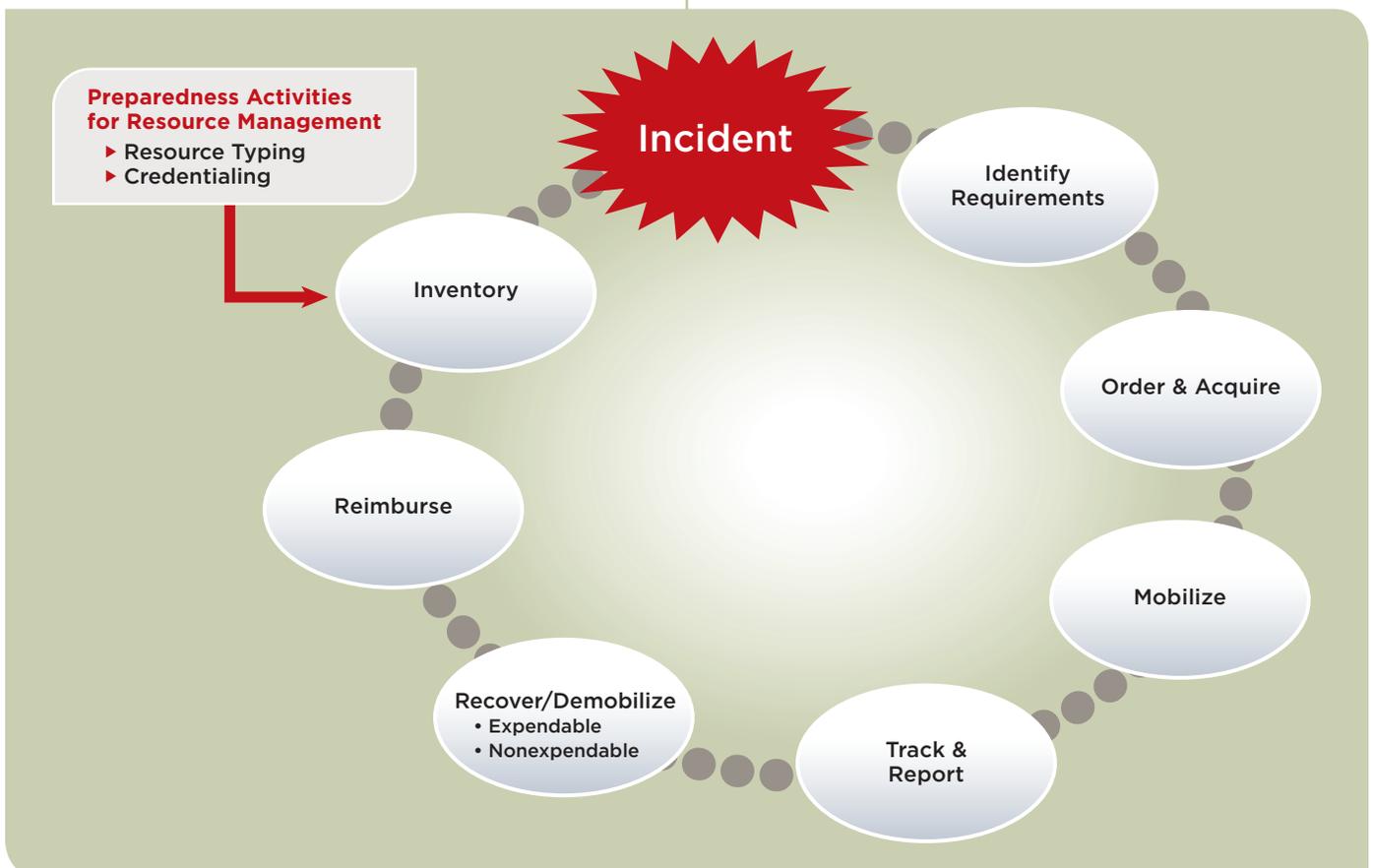
The resource management process can be separated into two parts: resource management as an element of preparedness and resource management during an incident. The preparedness activities (resource typing, credentialing, and inventorying) are conducted on a continual basis to help ensure that resources are ready to be mobilized when called to an incident. Resource management during an incident is a finite process, as shown in the below figure, with a distinct beginning and ending specific to the needs of the particular incident.

(Source: fema.gov/resource-management)

Disaster Response/Management Team

This team will be specific to your community and institution. The composition of this team will vary for each parking sector. IPMI suggests using FEMA's Incident Command System (ICS). FEMA explains that it:

- Allows for the integration of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure.
- Enables a coordinated response among various jurisdictions and functional agencies, both public and private.
- Establishes common processes for planning and managing resources.



ICS is flexible and can be used for incidents of any type, scope, and complexity. ICS allows its users to adopt an integrated organizational structure to match the complexities and demands of single or multiple incidents.

ICS is used by all levels of government — federal, state, tribal, and local — as well as by many nongovernmental organizations and the private sector. ICS is also applicable across disciplines. It is typically structured to facilitate activities in five major functional areas: command, operations, planning, logistics, and finance/administration. All of the functional areas may or may not be used based on the incident needs. Intelligence/investigations is an optional sixth functional area that is activated on a case-by-case basis.

As a system, ICS is extremely useful; not only does it provide an organizational structure for incident management, but it also guides the process for planning, building, and adapting that structure. Using ICS for every incident or planned event helps hone and maintain skills needed for the large-scale incidents.

FEMA explains why ICS is needed:

When an incident requires response from multiple local emergency management and response agencies, effective cross-jurisdictional coordination using common processes and systems is critical. The Incident Command System (ICS) provides a flexible, yet standardized core mechanism for coordinated and collaborative incident management, whether for incidents where additional resources are required or are provided from different organizations within a single jurisdiction or outside the jurisdiction or for complex incidents with national implications.

In addition:

The ICS is a widely applicable management system designed to enable effective, efficient incident management by integrating a combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure. ICS is a fundamental form of management established in a standard format, with the purpose of enabling incident managers to identify the key concerns associated with the incident — often under urgent conditions — without sacrificing attention to any component of the command system. It represents organizational “best practices” and, as an element of the Command and Management Component of NIMS, has become the standard for emergency management across the country. Designers of the system recognized early that ICS must be interdisciplinary and organizationally flexible to meet the following management challenges:



Photo: Brussels Airport

- Meet the needs of incidents of any kind or size.
- Allow personnel from a variety of agencies to meld rapidly into a common management structure.
- Provide logistical and administrative support to operational staff.
- Be cost effective by avoiding duplication of efforts.

ICS consists of procedures for controlling personnel, facilities, equipment, and communications. It is a system designed to be used or applied from the time an incident occurs until the requirement for management and operations no longer exists.

Chain of Command

The process of developing your emergency preparedness plan must include discussion of and clarity about the specific positions in your community and at your institution that would participate in various types of incidents and how specific personnel in your parking and transportation operation fit into that command structure.

FEMA says:

A basic premise of NIMS is that all incidents begin and end locally. NIMS does not take command away from state and local authorities. NIMS simply provides the framework to enhance the ability of responders, including the private sector and NGOs, to work together more effectively. The federal government supports state and local authorities when their resources are overwhelmed or anticipated to be overwhelmed. Federal departments and agencies respect the sovereignty and responsibilities of local, tribal, and state governments while rendering assistance. The intention of the federal government in these situations is not to command the response but, rather, to support the affected local, tribal, and/or state governments.

Lines of Communication

Communication is one of the most challenging elements of any incident response. The 9/11 terrorist attacks, hurricanes Katrina (2005) and Sandy (2012), the loss of the Granite Mountain

Hotshots in an Arizona wildfire, the Washington, D.C., Navy Yard shooter in 2013, and Malaysian Airlines Flight 370 lost in 2014 all demonstrate how problems with communication have compounded catastrophe.

Photo: Penn State



Communication problems can be technological or result from human error. Regardless, prudence dictates anticipating communication difficulties and preparing contingency plans and back-up systems.

As the U.S. Department of Education's Office of Safe and Healthy Students explains in "Developing an Emergency Communication Plan for an Institution of Higher Education," an emergency communication plan serves a number of purposes:

- Prepares the institution to effectively manage emergency communication.
- Identifies possible gaps in warning, notification, response, and resource requests.
- Provides an inventory of all existing communication technologies and a guide for how to activate, use, and deploy these devices.
- Helps staff to respond in an accurate, professional, and timely manner.
- Manages the distribution of critical/sensitive information to the media, students, faculty and staff, and the general public.
- Demonstrates a proactive commitment by the campus to prepare for a crisis before it happens.
- Empowers staff to know what to do, what steps to take, and how to prioritize key functions in crisis.

(Source: rem.s.ed.gov/docs/FY10EMHE_FGM_ATGA_EmergencyCommPlanIHE.pdf)

Internal

Start with your own operation. Decide whether you need a hierarchical command-tree model of communication, a flat horizontal approach that empowers each team member, or a hybrid of the two. You might decide that if one of your team

members spots a vehicle fire in a parking facility, he or she should dial 911 first and then call a supervisor. On the other hand, if one of your team members encounters a television news crew that asks for guidance on where to set up their coverage about a nearby shooting, you might decide the team member should first consult with someone in your operation's management structure or public relations.

An emergency preparedness plan provides a vehicle for you to think in advance about different scenarios and take stock of your current communication systems and policies. If those systems need upgrading or those policies need changing or clarifying, be sure to update your preparedness plan accordingly.

External

An emergency preparedness plan should clarify the "who, what, when, where, and how" of communication with all of your stakeholders. How will you respond to inbound communication? How will you coordinate outbound messaging? Such questions must be thought through carefully, thoroughly, and in coordination with both internal and external stakeholders. In particular, you will want to involve your institution's public information staff in this planning.

"Developing an Emergency Communication Plan for an Institution of Higher Education" outlines the following questions:

- Who are your key audiences?
- What are your key messages at various stages of the emergency?
- How will you communicate the message and the facts?
- How will you activate crisis website, social media, and crisis hotline?
- What type of guidance will you provide to the public?
- How will you control the message?
- How will you control the flow of information?

(Source: rem.s.ed.gov/docs/FY10EMHE_FGM_ATGA_EmergencyCommPlanIHE.pdf)

The Centers for Disease Control and Prevention (CDC) offers the Crisis and Emergency Risk Communication (CERC) training program, which "draws from lessons learned during public health emergencies and incorporates best practices from the fields of risk and crisis communication. With this comprehensive training program, CDC has moved forward in meeting the needs of partners and stakeholders in preparing for, responding to, and recovering from the threat of bioterrorism, emergent diseases, and other hazards." (Source: bt.cdc.gov/CERC/)

Coordinating/Integrating

Identify and Communicate with Related Entities/Departments

Because no department or organization exists in a vacuum, an emergency preparedness plan should include guidance on working with other entities so relationships and contacts are clear in advance. Parking and transportation will have relationships with any number of related departments, and these will likely be different for campuses versus airports versus other environments.

Review and Reference Emergency Preparedness Plans

In addition to identifying and guiding communication with other departments or entities, the parking and transportation department's emergency preparedness plan should reference and integrate with those other entities' own plans. Ideally, this would involve in-depth discussions and clear agreements with the principals representing those other entities.

Communicate and Ensure Staff Understanding

All parking and transportation staff should be well-versed in the details of the emergency preparedness plan. While not all staff will participate to the same degree in the plan's development, all should have an equal understanding of its details and recognize not only their own roles and responsibilities in an emergency but those of all other team members as well.

Training and Inspection Support from Local First Responders

Local first responders should serve as vital resources and partners for emergency preparedness planning. Be sure to ask them about available training and on-site inspection assistance.

Partnering with first responders not only helps parking and transportation staff get up to speed on how to prepare and react in an emergency but also aids the first responders in better understanding how to interact and work with your department, including possible assets during an emergency.

As Safety & Security Committee Co-Chair Geary Robinson, PhD, CAPP, observed in his doctoral dissertation, "Emergency management agencies should extend their training to include transportation agencies responsible for providing transit assets during disaster events. The goal should be the development of a dialogue to define expectations for the full utilization of transportation systems and their employees during a disaster event."

Robinson also noted that DHS "lists five strategic goals of national concern: awareness, prevention, protection, response, and recovery. Transportation assets and transit operations should be considered in relation to each of these goals."

Annual inspections co-supervised by first responders can help the parking and transportation staff and other relevant departments maintain a higher level of readiness and awareness. Coordinating with first responders in advance on an inspection checklist would be wise and might include:

- Emergency exit access and signage checks and changes.
- Smoke/heat/CO detector and alarm checks.
- Flammable/explosive/noxious chemical and equipment storage (paints, thinners, etc.).



National Guard photo by Laura L. Lopez

Ready.gov provides a handy overview that might inform your training decisions:

WHO NEEDS TRAINING?	WHAT TRAINING SHOULD BE PROVIDED?
All employees	<ul style="list-style-type: none"> ■ Protective actions for life safety (evacuation, shelter, shelter-in-place, lockdown) ■ Safety, security, and loss prevention programs
Emergency Response Team (evacuation, shelter, shelter-in-place)	<ul style="list-style-type: none"> ■ Roles and responsibilities as defined in the plan ■ Training as required to comply with regulations or maintain certifications (if employees administer first aid, CPR, or AED or use fire extinguishers or clean up spills of hazardous chemicals) ■ Additional training for leaders, including incident management
Business Continuity Team	<ul style="list-style-type: none"> ■ Roles and responsibilities as defined in the plan ■ Additional training for leaders, including incident management
Crisis Communications Team	<ul style="list-style-type: none"> ■ Roles and responsibilities as defined in the plan ■ Additional training for leaders, including incident management ■ Training for spokespersons

(Source: ready.gov/business/implementation/training)

FEMA offers a free independent study program for all staff, featuring NIMS-compliant courses at <http://training.fema.gov/IS/NIMS.aspx>. These classes include:

- ICS 100: Introduction to ICS.
- ICS 200: Basic ICS.
- ICS 700.A: National Incident Management System (NIMS) — An Introduction.
- ICS 800.B: National Response Framework — An Introduction.

Locally offered classes can supplement FEMA's offerings.

Evacuation vs. Refuge in an Emergency

Decision Making

Because the parking and transportation function is a key asset in an institution's (or community's) ability to prepare and respond — particularly in facilitating mobility or refuge — parking and transportation management must participate in decision-making during planning and preparation and certain types of emergencies.

Coordination between Parking and Transportation

In the event that your institution or community splits parking and transportation into separate departments, coordinating in advance becomes all the more important.



Photo: Steve Schaaf

MONTHLY PLANNER TOOL

Purpose

An emergency preparedness plan needs to be a living, often-used document to remain relevant and current for your parking/transportation operation. This monthly planner tool is one example of how you can integrate emergency preparedness planning into your staff meetings on a regular basis.

Annual Emergency Preparedness Planner

Depending on the type of parking venue you operate (airport, hospital/medical center, university, stadium, municipal, or commercial), what kinds of issues or threats can you anticipate — and integrate into your emergency preparedness planning — throughout the year?

Nature (1)	Events (2)	Org'l Changes (3)	HR/Budget Changes (4)	Tech Changes (5)	Infrastructure Changes (6)
Jan					
Feb					
Mar					
Apr					
May					
Jun					
Jul					
Aug					
Sep					
Oct					
Nov					
Dec					

Category Examples:

- (1) Seasonal, earthquakes, hurricanes, thunderstorms, hail, lightning, severe winds, flooding, snow/ice, fires, etc.
- (2) Large gatherings, fairs, games, races, other crowd generators
- (3) New management, new policies, new reporting structures, new departments, eliminated departments, etc.
- (4) Planned furloughs, fleet vehicle reductions/maintenance
- (5) New computers/software, mobile devices, parking meters, security systems, fire alarm/sprinkler systems, etc.
- (6) Planned work on nearby roads/bridges, electrical, water, etc. affecting access/egress from facility

Anticipate, Update, and Drill

Your planning and the resulting documentation should help you and your team think ahead. What seasonal threats might you face (e.g., weather)? What about event-related threats (e.g., large crowds during football games or parades)?

Ideally, you and your team will have a master calendar to use for anticipating both what's planned and what's possible far in advance. Then you can update that forward view on a regular basis and schedule drills and exercises, both internally and in cooperation with outside partners, to run through likely scenarios and identify changes that need to be made to keep your preparedness level sharp.



Photo: Brussels Airport

EXERCISES

Sourced verbatim from Ready.gov.

Post-incident critiques often confirm that experience gained during exercises was the best way to prepare teams to respond effectively to an emergency. Exercises should be designed to engage team members and get them working together to manage the response to a hypothetical incident. Exercises enhance knowledge of plans, allow members to improve their own performance, and identify opportunities to improve capabilities to respond to real events.

Exercises are a great method to:

- Evaluate the preparedness program.
- Identify planning and procedural deficiencies.
- Test or validate recently changed procedures or plans.
- Clarify roles and responsibilities.
- Obtain participant feedback and recommendations for program improvement.
- Measure improvement compared to performance objectives.
- Improve coordination between internal and external teams, organizations, and entities.
- Validate training and education.
- Increase awareness and understanding of hazards and the potential impacts of hazards.
- Assess the capabilities of existing resources and identify needed resources.

Types of Exercises

There are different types of exercises that can be used to evaluate program plans, procedures, and capabilities.

- Walkthroughs, workshops, or orientation seminars.
- Tabletop exercises.
- Functional exercises.
- Full-scale exercises.

Walkthroughs, workshops, and orientation seminars are basic training for team members. They are designed to familiarize team members with emergency response, business continuity, and crisis communications plans and their roles and responsibilities as defined in the plans.

Tabletop exercises are discussion-based sessions where team members meet in an informal classroom setting to discuss their roles during an emergency and their responses to a particular emergency situation. A facilitator guides participants through a discussion of one or more scenarios. The duration of a tabletop exercise depends on the audience, the topic being exercised and

the exercise objectives. Many tabletop exercises can be conducted in a few hours, so they are cost-effective tools to validate plans and capabilities.

Functional exercises allow personnel to validate plans and readiness by performing their duties in a simulated operational environment. Activities for a functional exercise are scenario-driven, such as the failure of a critical business function or a specific hazard scenario. Functional exercises are designed to exercise specific team members, procedures, and resources (e.g., communications, warning, notifications, and equipment set-up).

A full-scale exercise is as close to the real thing as possible. It is a lengthy exercise that takes place on location using, as much as possible, the equipment and personnel that would be called upon in a real event. Full-scale exercises are conducted by public agencies. They often include participation from local businesses.

Cities Readiness Initiative

Local and state agencies conduct joint Cities Readiness Initiative Full-Scale Exercises around the U.S. to assess the ability of personnel from different departments and agencies to collaborate in mass-dispensing of medications operations, implement a traffic control and security plan, and assess the ability of mass dispensing staff to receive on-site training.

The Centers for Disease Control and Prevention (CDC) Cities Readiness Initiative (CRI — <http://www.bt.cdc.gov/cri/>) is a federally funded program designed to enhance preparedness in the nation's largest cities and metropolitan statistical areas, where more than 50 percent of the U.S. population resides. Through CRI, state and large metropolitan public health departments have developed plans to respond to a large-scale bioterrorist event by dispensing antibiotics to the entire population of an identified Metropolitan and Micropolitan Statistical Areas MSA² within 48 hours.

Developing an Exercise Program

Develop an exercise program beginning with an assessment of needs and current capabilities. Review the risk assessment and program performance objectives. Conduct a walkthrough or orientation session to familiarize team members with the preparedness plans. Review roles and responsibilities and ensure everyone is familiar with incident management. Identify probable scenarios for emergencies and business disruption. Use these scenarios as the basis for tabletop exercises. As the program

² This data is used to count the number of people living in a geographical area and or other data about a specific population. From the U.S. Census Bureau "A metro area contains a core urban area of 50,000 or more population, and a micro area contains an urban core of at least 10,000 (but less than 50,000) population". <https://www.census.gov/population/metro/>

matures, consider holding a functional exercise. Contact local emergency management officials to determine if there is an opportunity to participate in a full-scale exercise within your community.

Evaluating Exercises

Exercises should be evaluated to determine whether exercise objectives were met and to identify opportunities for program improvement. A facilitated “hot wash” discussion held at the end of an exercise is a great way to solicit feedback and identify suggestions for improvement (e.g., discuss what went right, what went wrong, what assets were sufficient, what were deficient, what can be done better, and other points) and allows the organization to update the plan more effectively.

Evaluation forms are another way for participants to provide comments and suggestions. An after-action report that documents suggestions for improvement should be compiled

Photo: Jacinta Quesada



following the exercise, and copies should be distributed to management and others. Suggestions for improvement should be addressed through the organization’s corrective action program.

Texas A&M Buses Helped Relocate Hurricane Victims

Following Hurricane Katrina in 2005, Transportation Services at Texas A&M University used 10 of its buses to carry arriving Hurricane Katrina evacuees from Kelly Air Force Base to shelters in San Antonio. The effort included a team of 23 student drivers, four managers, and four university police department representatives.

According to the *Aggie Hotline*, Rod Weis, who was director of transportation services, said his department quickly took action after receiving word that the Federal Emergency Management Agency (FEMA) needed assistance with the evacuation of 25,000 people from New Orleans to San Antonio. After receiving approval from the Texas governor’s office, the buses departed to meet the first four plane loads of evacuees.

Source: Peter W. Lange, VP, Administration, Executive Director for Transportation Services; based on article in *Aggie Hotline*, Sept. 2, 2005. Full article: http://transport.tamu.edu/About/news/2005/05_9_2AggieKatrina.aspx

“Transportation, especially at an airport, can have a huge effect on an emergency situation. Our shuttle fleet is on standby for many in-flight emergencies. In any circumstances where there is a possibility of passenger evacuation, shuttle operations are placed on standby or into action. Examples of such circumstance include landing gear issues, smell of smoke in the cockpit or galley, flat tires, and even bird strikes.”

Bruce Barclay, CAPP, Operations Manager, Salt Lake City Department of Airports

“The U.S. Federal Emergency Management Agency and Public Safety Canada have worked diligently since 2001 to develop standardized emergency management systems for both countries, with well-defined roles for emergency planners

and responders. One of the outgrowths of this effort is a growing recognition of the critical role of support functions in emergency preparedness and response.

One of the most important support functions needed in an emergency is transportation. Without transportation, first responders can’t respond, supplies can’t be delivered, victims can’t be evacuated, people can’t be moved, and business can’t operate. That simple fact makes fleet management a critical support function in an organization’s emergency operations plan. As fleet managers, we all share a responsibility to help guide our organizations successfully through emergencies.”

Bryan Flansburg, CAFM, Director, Transportation Services, University of Colorado at Boulder

RESOURCES & REFERENCES

Federal

- National Preparedness Goal
 - Online overview: <http://www.fema.gov/national-preparedness-goal>
 - Manual (PDF): http://www.fema.gov/media-library-data/20130726-1828-25045-9470/national_preparedness_goal_2011.pdf
- NIMS (<http://www.fema.gov/national-preparedness/national-incident-management-system>)
- FloodSmart (<http://www.floodsmart.gov/>)
- NFIP (<http://www.fema.gov/national-flood-insurance-program-2/garages>)
- <http://www.fema.gov/library/viewRecord.do?id=1719>
- <http://www.fema.gov/protecting-your-businesses>
- <http://www.ready.gov/business-continuity-planning-suite>
- <http://www.ready.gov/campus>

- <http://www.dhs.gov/topic/plan-and-prepare-disasters>
- <http://www.dhs.gov/national-infrastructure-protection-plan>
- <http://www.dhs.gov/transportation-systems-sector>
- <http://www.fema.gov/national-response-framework-0>
- <http://www.phe.gov/preparedness/Pages/default.aspx>
- <http://www.dhs.gov/how-do-i/prepare-my-business-emergency>
- <http://emergency.cdc.gov/planning/>

Private

- <http://www.nfpa.org/aboutthecodes/AboutTheCodes.asp?DocNum=1600>
- <http://www.scnus.org/page.aspx?id=104616>
- <http://www.disasters.org/deralink.html>
- http://www.wbdg.org/design/park_surface.php
- http://www.wbdg.org/design/secure_safe.php
- http://www.wbdg.org/design/park_basement.php
- http://www.wbdg.org/design/park_outside.php
- <http://www.redcross.org/prepare/location/workplace>

APPENDIX and SAMPLE PLAN EXCERPTS

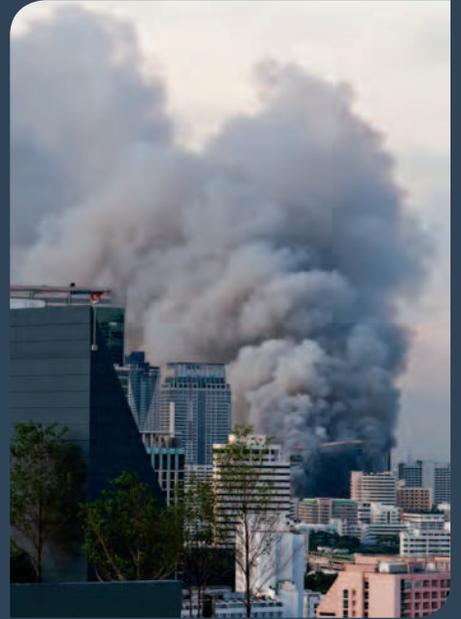
- National Preparedness Goal (PDF) (Source: http://www.fema.gov/media-library-data/20130726-1828-25045-9470/national_preparedness_goal_2011.pdf)
- Federal Aviation Administration Sample Airport Emergency Plan (pages 1–40)
- Clemson University Draft Emergency Operations Plan Table of Contents (Source: Doctoral dissertation © of Geary L. Robinson, PhD)
- The University of Texas at Austin Severe & Inclement Weather Response Annex 2013 (draft) (Source: Gerald R. Harkins, Associate Vice President, Campus Safety and Security, the University of Texas at Austin)
- Ready Business ERP Form



Photo: Brussels Airport

Photo: Seaman Barry Riley





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