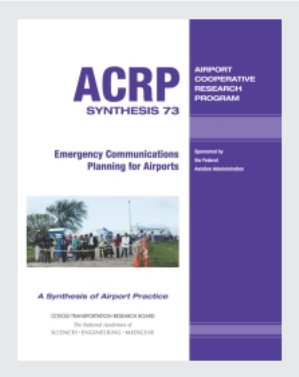

Emergency Communications Planning for Airports

DETAILS

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AIRPORT COOPERATIVE RESEARCH PROGRAM

ACRP SYNTHESIS 73

Emergency Communications Planning for Airports

A Synthesis of Airport Practice

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AIRPORT COOPERATIVE RESEARCH PROGRAM

Airports are vital national resources. They serve a key role in transportation of people and goods and in regional, national, and international commerce. They are where the nation's aviation system connects with other modes of transportation and where federal responsibility for managing and regulating air traffic operations intersects with the role of state and local governments that own and operate most airports. Research is necessary to solve common operating problems, to adapt appropriate new technologies from other industries, and to introduce innovations into the airport industry. The Airport Cooperative Research Program (ACRP) serves as one of the principal means by which the airport industry can develop innovative near-term solutions to meet demands placed on it.

The need for ACRP was identified in *TRB Special Report 272: Airport Research Needs: Cooperative Solutions* in 2003, based on a study sponsored by the Federal Aviation Administration (FAA). ACRP carries out applied research on problems that are shared by airport operating agencies and not being adequately addressed by existing federal research programs. ACRP is modeled after the successful National Cooperative Highway Research Program (NCHRP) and Transit Cooperative Research Program (TCRP). ACRP undertakes research and other technical activities in various airport subject areas, including design, construction, legal, maintenance, operations, safety, policy, planning, human resources, and administration. ACRP provides a forum where airport operators can cooperatively address common operational problems.

ACRP was authorized in December 2003 as part of the Vision 100—Century of Aviation Reauthorization Act. The primary participants in the ACRP are (1) an independent governing board, the ACRP Oversight Committee (AOC), appointed by the Secretary of the U.S. Department of Transportation with representation from airport operating agencies, other stakeholders, and relevant industry organizations such as the Airports Council International-North America (ACI-NA), the American Association of Airport Executives (AAAE), the National Association of State Aviation Officials (NASAO), Airlines for America (A4A), and the Airport Consultants Council (ACC) as vital links to the airport community; (2) TRB as program manager and secretariat for the governing board; and (3) the FAA as program sponsor. In October 2005, the FAA executed a contract with the National Academy of Sciences formally initiating the program.

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Cover figure: Triennial Exercise at Rochester International Airport, August 2015 (*photo*: Peggy Gray).

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The researchers wish to acknowledge the generous sharing of time and experience by the airport experts who contributed to this study by responding to the survey, being interviewed, or providing documentation:

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Aspen/Pitkin County Airport	John Kinney, CM
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Blue Grass Airport (Lexington)	Scott Lanter, AAE
Blue Ridge Regional Airport	Jason Davis
Boise International Airport	Sarah Demory, AAE
Burbank Bob Hope Airport	Lucy M. Burghdorf
Cecil Airport	Justin Fletcher
Centennial Airport	Lorie Hinton
Colorado Springs Airport	Brett Miller, ACE
Denver International Airport	Heath Montgomery, Laura Coale, Jason Taussig, Steve Lee, AAE
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Fort Lauderdale–Hollywood International Airport	Michael Nonnemacher, AAE
Grove Regional Airport	Lisa Jewett, Mike Reed
Hartsfield–Jackson Atlanta International Airport	Gus Hudson
Hector International Airport (Fargo)	Darren Anderson, CM, David Bush
Jacksonville International Airport	Meaghan Smalley
Joplin Regional Airport	Steve Stockam, Peter Kaufmann
Lakeland Linder Regional Airport	Nan Walsh, CM, Adam Lunn, CM, ACE, Brett Fay, CM, John Maddox
Lambert–St. Louis International Airport	Elizabeth Smart, AAE
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Throughout the study, the topic panel and the ACRP project officer provided sound advice, practical assistance, and encouragement.

FOREWORD

Airport administrators, engineers, and researchers often face problems for which information already exists, either in documented form or as undocumented experience and practice. This information may be fragmented, scattered, and unevaluated. As a consequence, full knowledge of what has been learned about a problem may not be brought to bear on its solution. Costly research findings may go unused, valuable experience may be overlooked, and due consideration may not be given to recommended practices for solving or alleviating the problem.

There is information on nearly every subject of concern to the airport industry. Much of it derives from research or from the work of practitioners faced with problems in their day-to-day work. To provide a systematic means for assembling and evaluating such useful information and to make it available to the entire airport community, the Airport Cooperative Research Program authorized the Transportation Research Board to undertake a continuing project. This project, ACRP Project 11-03, "Synthesis of Information Related to Airport Practices," searches out and synthesizes useful knowledge from all available sources and prepares concise, documented reports on specific topics. Reports from this endeavor constitute an ACRP report series, *Synthesis of Airport Practice*.

This synthesis series reports on current knowledge and practice, in a compact format, without the detailed directions usually found in handbooks or design manuals. Each report in the series provides a compendium of the best knowledge available on those measures found to be the most successful in resolving specific problems.

PREFACE

By Gail R. Staba
Senior Program Officer
Transportation Research Board

All airports are faced with the challenges of dealing with the flow of accurate information during emergencies—flows within the airport's organization, between the airport and its response partners, and between the airport and the public, either directly or through the media. Changing technology affects all these flows, and airports are challenged to acquire and effectively use the technology.

Many airports find benefits from going beyond regulatory minima for communication plans. This is true of the FAR Part 139 airports as well as for the general aviation airports. An effective communication plan enhances not only safety but also customer service. The focus of the report is on emergency communications planning and is specifically designed for use by airport senior management, public information officers, and first responders and emergency managers.

The most direct and useful parts of this report are the sample communication plan tables of contents, field operations guides, and the checklist of effective communications plans. These materials were derived from a survey of 60 U.S. airports regarding their specific communications plans and procedures as well as from five highly detailed case examples and five additional focused interviews. The checklist is designed to assist airport managers, emergency managers, and planners in the development, implementation, and evaluation of effective communications plans or crisis communications plans.

James F. Smith, Smith–Woolwine Associates Inc.; Kimberly A. Kenville, University of North Dakota; John M. Sawyer, JMS Airfield Safety Consulting LLC; and Ricardo E. Garcia, collected and synthesized the information and wrote the report. The members of the topic panel are acknowledged on the preceding page. This synthesis is an immediately useful document that records the practices that were acceptable within the limitations of the knowledge available at the time of its preparation. As progress in research and practice continues, new knowledge will be added to that now at hand.

CONTENTS

Note: Photographs, figures, and tables in this report may have been converted from color to grayscale for printing. The electronic version of the report (posted on the web at www.trb.org) retains the color versions.

EMERGENCY COMMUNICATIONS PLANNING FOR AIRPORTS

SUMMARY

All airports face serious challenges when dealing with the flow of accurate information during emergencies—communication within the airport's organization, between the airport and its response partners, and between the airport and the public, either directly or through the media. Changing technology affects all these interactions, and airports must address the acquisition and effective use of new technologies. What is possible today is illustrated by the triennial exercise carried out at Rochester (Minnesota) International Airport in August 2015, when the airport and its partners incorporated the airport's comprehensive crisis communications plan and social media into the exercise.

The focus of this report is on emergency communications planning that can be used by airports of any type or size. It is specifically designed for use by airport senior management, public information officers (PIOs), and first responders and emergency managers. The most directly accessible parts of this report are the sample communication plan tables of contents, field operations guides (Appendices D–L), and the checklist of effective communications plans, designed to assist airport managers, emergency managers, and planners in the development, implementation, and evaluation of effective communications plans or crisis communications plans, which appears as Appendix M. These materials were derived from a survey of 60 U.S. airports regarding their specific communications plans and procedures, as well as from five detailed case examples and five additional focused interviews, detailed in chapter one and Appendix C.

Most airports in the study found that going beyond minimum regulatory requirements for communication plans offered substantial benefits. Many also reported that an effective communication plan enhances not only safety but also customer service.

A few airports have transitioned from a traditional airport emergency communications plan (ECP) to a comprehensive crisis communications plan (CCP) with the difference being that the CCP deals with mission-critical events not covered by the airport emergency plan (AEP). There is evidence in the survey data that many airports are considering this change.

Analysis of the data for this synthesis led to 12 conclusions:

1. It is important that an effective AEP/CCP be flexible enough to deal with fast-evolving technological change.
2. The process of creating an ECP has benefits beyond its implementation, especially when the planning process includes stakeholders (on and off the airport) and is based on a frank hazards analysis covering both emergencies and "mission-critical" systems failures and events.
3. An effective AEP/CCP requires clear and scalable implementation procedures that promote the accurate and timely exchange of information within the airport and between the airport and its partners and customers.
4. A continually improving communications/crisis communications plan is not a static document, but evolves through exercises, evaluations, and application of lessons learned.
5. Training on the coordinated and effective use of communications tools is essential.
6. Airports benefit from doing more emergency communications planning than is required in an AEP or comparable for non-Part 139 airports.
7. Many airports in the study are moving in the direction of a single comprehensive EOP that incorporates communication planning.

8. A comprehensive stand-alone plan is best when incorporated in the airport's AEP and firmly anchored in the National Incident Management System (NIMS) and Incident Command System (ICS).
9. An airport's public information officer can manage the development, maintenance, and monitoring effort of the comprehensive emergency/crisis communications plan, but this requires close collaboration with airport operations, emergency management, and first responders.
10. Redundant and interoperable means of communications are essential.
11. Airports of any type or size can profitably leverage the communications capabilities of their emergency partners using NIMS and ICS as bases.
12. Effective emergency communications can make a conduit from safety to improved customer service. This is especially true regarding the fast-evolving use by airports of social media for emergencies and other crises.

The synthesis also suggested possible topics of further research, described in more detail in chapter nine, Conclusions and Suggestions for Further Research, including:

1. Use of social media in airports for communicating emergency information to passengers and the public.
2. Data-mining techniques for social media that airport emergency managers can use to improve situational awareness.
3. Automated methods of maintaining and updating contact lists consistent across all airport platforms.
4. Training for the development, implementation, and evaluation of AEP/CCPs.
5. Public information roles and the training to fulfill them.
6. Models of AEP/CCP language for the accommodation of people with disabilities or who are non-English speakers.
7. Development of performance metrics for emergency communication.
8. Methods of training airport employees and partners in supplemental roles in emergency communications.
9. Methods of promoting ADA compliance for all emergency communications including websites and social media.
10. Customer service-related or financial benefits that may accrue from airports' incorporating emergency management and communications into their strategic or business plan.

CHAPTER ONE

STATE OF THE PRACTICE

Emergency communications and crisis communications are essential tools for airports to stay in contact with employees, airlines, tenants, customers, first responders, mutual aid partners, and communities. Perhaps more than any other area of airport operations, emergency communications is being revolutionized by rapid technological and cultural change. This study will seek to answer four overarching questions about emergency and crisis communications planning at airports:

1. What is the planning process for emergency communications?
2. What is the resulting plan like?
3. How satisfied is the airport with the results?
4. What future directions or trends does the airport anticipate in its emergency communications plans and planning process?

During final data collection for this synthesis, the authors found a report on a full-scale exercise at Rochester (Minnesota) International Airport (RST) that was highly innovative and that showed the benefits pre-planning and imagination can yield for an airport's exercise program. RST's experience provides a snapshot of what was possible in August 2015. Furthermore, it illustrates the relationships linking airport emergency communications planning, training, exercising, continuous improvement, customer service, and resiliency. The following case example was developed for this study and also for ACRP Synthesis S04-17, *Tabletop and Full-Scale Emergency Exercises for General Aviation, Non-hub and Small Hub Airports.*

This case example is based on an article by Kristin Shaw, featured in the November/December 2015 issue of *Airport Improvement* magazine; and follow-up interviews with Tiana Rossow, RST's marketing and communications manager; and Ken Jones, the City of Rochester's emergency manager.

With permission of the author and publisher of *Airport Improvement* magazine, the article was slightly amended to delete any explicit or implied endorsement of specific commercial products as dictated by the policies of the TRB. The original article can also be viewed online at http://www.airportimprovement.com/article/emergency-drill-rochester-intl-includes-social-media-simulation.

2015 RECERTIFICATION FULL-SCALE EXERCISE WITH EMPHASIS ON SOCIAL MEDIA USE, ROCHESTER, MINNESOTA (RST)—NAVIGATING SOCIAL MEDIA WITHIN AN AIRPORT EMERGENCY EXERCISE

Rochester International Airport (RST) recently enhanced its training regimen by adding crisis communication components to its latest full-scale safety exercise. Aircraft rescue and firefighting staff, ramp workers and other frontline employees were under scrutiny during the Minnesota airport's four-hour mock disaster; but employees handling media relations were also put to the test (Figure 1). To increase realism, RST added the wildcard factor of social media.

To put it mildly, social media has turned the field of crisis communications on its head. Whether an event is caused by a hurricane, inflight incident or trouble in the terminal, the public expects information and updates much faster and more often than it did just a few years ago. Typically, people learn details and see photos through Facebook, Instagram, and Twitter before airports issue official statements—often well before reliable facts and information are available.

Allowing RST's communications staff to experience the breakneck speed of social media during a staged training scenario helped them understand how news of airport disasters literally races forward.

FIGURE 1 Triennial exercise at Rochester International Airport, August 2015 (Peggy Gray photo).

Firsthand experience trying to keep pace with a story—and possibly get ahead of it—was deemed highly beneficial.

"We knew it would be a very good learning experience," says Rossow, the airport's marketing and communications manager. "In the real world, we needed to know how the communication would be conveyed."

Facebook Factor

Having conducted tabletop exercises in 2013 and 2014, the airport staged a full-scale training event in September that simulated an aircraft crash. For the media relations element, RST not only included its own communications staff, the airport also included employees from local fire and police departments; Red Cross; Mayo Clinic; Rochester Airport Company (the airport's management company, a subsidiary of Mayo Clinic); Rochester Emergency Management, and various city departments. To ensure it could mobilize even wider resources during an actual emergency, the airport also invited representatives from a variety of other organizations. The multi-agency communications team used a cloud-based application simulation [from a vendor] to train privately on social media tools without compromising security and safety. The system replicates the functionality of Facebook, Twitter, Instagram, YouTube, and web blogs, as well as more traditional media such as television, newspapers, and radio.

"Social media and other emerging digital technologies are playing an increasingly essential role in responses to natural disasters, terrorist attacks, civil and political unrest, criminal investigations, and military operations," says Mark Amann, senior vice president and chief executive officer of [the vendor] that RST utilized. "These technologies not only provide a unique opportunity for organizations to communicate directly with the public, but they also are a source for previously unavailable situational awareness and intelligence."

Down to the Nitty-Gritty

In addition to social media, RST's training scenario addressed scene command operations, triage and transport of victims, scene investigation, fatality management operations, family assistance, and joint information system operations (including mass-alerting public messages in multiple languages).

"In 2012, the triennial airport exercise tried to accomplish unified scene command, public information and family assistance, and we were partially successful," recalls Rochester emergency manager Jones. "For 2015, our goal was to emphasize the need for true unified operations at the scene, comprehensive family assistance operations, and joint public information center activities."

The exercise specifically tackled the common issues of conflicting command teams and uncoordinated public messages. When command teams did not appear to be working together, trainers used

"injects" to steer teams together and force them to work in a unified command structure. Family assistance center operations were extended to the community Emergency Operations Center (EOC) and hospital family support center. A new fatality management plan that was created after the 2012 exercise provided a live playing field to train medical examiner staff and police department investigators.

"This exercise was deeper and more challenging, and the teams benefited greatly," Jones reports.

Although the previous full-scale exercise identified one person as the sole public information officer, this year's exercise used a community team to coordinate scene communications with social media messages and press releases.

"Tiana (Rossow) is the only person on the airport staff who handles communications, so in an emergency situation we would rely on the surrounding community to act as public information officers," explains Jones. "When you thrust people into an emergency situation, it's hard to get everyone together. In the exercise, we wanted to get them used to working together."

During the 2012 exercise, the team discovered that the public information officer became so engrossed in some aspects of rescue duty it became difficult to provide timely information to the media. In that case, Mayo Clinic was forced to handle media inquiries, which proved to be inefficient.

"With such a small staff, it's important for us to have community helpers in a case like this," says Rossow. "This simulation helped us get to know each other and ensure we have each other's contact information so we know who to rely on."

Given the opportunity to learn how to respond during an airport emergency, community resources outside of airport operations, such as personnel from the library or public utilities, could be great assets if we understand how to work together, Rossow elaborated.

During the exercise, the RST team established a Joint Information Center, which was specifically designated for members of the airport/community communications team, as well as a separate media center for outside newsgatherers on airport grounds. Team members also held a simulated press conference, with mock media members trained to ask tough questions like real reporters.

Facts & Figures

Project: Full-scale emergency simulation
Location: Rochester (MN) International Airport
Timeline: Planning began in spring for September drill.
New Strategy: Communications staff practiced using social media during an emergency and leveraging local public information resources from outside the airport.
Primary Exercise Participants: Airport personnel; fire and police departments; Red Cross; various city departments; Mayo Clinic; Rochester Emergency Management
Other Participants: Public works; public library; public utilities; public schools; Minnesota Department of Transportation; Department of Public Health, county sheriff's office
Unique Dynamic: City-owned airport is managed by Rochester Airport Company, a subsidiary of Mayo Clinic

"Using the simulation product, we could respond to radio and TV reports, and we got to follow Twitter and Facebook posts to practice how to respond after the incident," recalls Rossow. "Very quickly, you see how the airport can be affected by the public perception."

One of the biggest lessons was learning how to ensure a good flow of information without communicating too much. "Everything happens so quickly that you have to be able to react quickly, but not with anything that could be inaccurate," she explains. "You have to be able to confirm details before you put them out."

Not speaking on behalf of the airline was another key takeaway. "As the airport operator, there is very limited information we can speak about," Rossow relates. "We just want the public to know that we're communicating and involved."

[The simulation] also prompted the communications team to consider logistic details such as information technology resources necessary to operate remotely. "If I don't have access to my office, I need to know how to respond," she explains. "What would I need? Where is that backup location? How do I get more hands on deck to help with the fast-paced information that is flowing? Taking the time to think about that is important."

Navigating New Media

Following RST's full-scale exercise complete, participants are still reflecting on lessons learned in September. The power and speed of social media made an impression on the communications team. It is important that each airport undertaking its full-scale and tabletop exercises go beyond the usual training requirements under FAR Part 139, and really strive to incorporate new issues (social media) into their usual scenarios of aircraft incidents. This exercise has undoubtedly provided some impressive skill growth for RSA.

"Better decisions help us save lives and protect our employees and customers. These exercises are a great opportunity to fail in a risk-free event. We had a chance to make mistakes in a good way, and we learned so much from our mistakes. In the case of a real disaster, we are as prepared as we can be, and that's important," said Jones.

In follow-up interviews, synthesis authors reached out to Shaw, Rossow, and Jones.

Shaw is a staff writer for *Airport Improvement* magazine with experience in social media and marketing airport technology. When asked what words of advice she would give airports working with social media, she cautioned that an airport should not allow untrained personnel to respond using the airport's social media channels. With inexact procedures in place, communications could load one disaster on top of another. From her perspective working in the aviation industry, she thought a comprehensive crises communications plan (CCP), such as the one Rochester has put into place, would be most advantageous to airports with single point of contact. "It would prove difficult for airports to have multiple plans, especially when they have limited staff to deploy those plans."

Shaw also thought it would be much easier for airports to drill using a single plan rather than multiple CCPs, and where mutual aid is initiated, a single plan and single point of contact would appear to be the most efficient use of resources. The main factors Shaw thought were important concerning the RST exercise included: (1) the airport has a plan; (2) it is involving the community and has the community's support; (3) it is daring to drill on new and difficult topics in order to "get it right" when the time comes; and (4) it is very clear concerning duties and what staff will answer communication media.

Rossow indicated that as she was relatively new to the marketing/communications position, she had very little time to be a major part of the exercise planning team, and that Jones took the lead by introducing the simulation of social media into the exercise. The city purchased the simulation in conjunction with the local healthcare system that is the management company of the airport, Mayo Clinic. Rossow suggested that important aspects to think about in the planning stages are that an airport has a limited amount of staff that can be utilized: When mutual aid is activated, there will be a Unified Command (UC) and Joint Information Center (JIC), so the better prepared the non-airport personnel can be, the better off the airport will be in the long run. Airport employees were manning the simulated disaster itself, while other city/county/Mayo employees were manning the UC/JIC, so "this exercise allowed us to make connections and build our recovery team."

Airport Demographics
NPIAS category: Non-hub primary airport
FAR Part 139: Yes
Number of passengers (2014): 237,341
Amount of cargo (2014): 25,000,000 pounds
Number of operations (2014): 107/day
Number of airport employees: 18
Number of airport employees (person-years) devoted to exercise development and execution: divided between planners and players; two planners on the airport side of the house and two–three on the city EM side
Budget for exercises: No official budget, so items, mobile trainer for exercise, and equipment had to be purchased on the day.
Governance: City-owned but operated by subsidiary of Mayo Clinic

Discussing the role of social media and emergency management, Jones indicated that people will seek substantiation when they hear a warning or find out that some sort of disaster has occurred. "When people hear a siren, they usually don't take cover but instead go outside to see what's going on" in order to validate what they have just heard. In the past, "people would ask friends or neighbors, but in today's world people want to sort out what they've heard and they turn to social media to validate the information. Therefore, the emergency manager has an opportunity to provide meaningful, credible information, and will have to utilize all types of social media; it is simply another communication tool."

The goal of this exercise was to improve upon the 2012 exercise, which Jones thought was adequate; but to further the goal of continuous improvement, he wanted to improve the medical examiner's fatality management plan, coordinate with the airlines' family assistance plan, and the public information plan. The 2012 exercise indicated that having one person at the airport acting as a public information officer (PIO) in addition to other duties was not sufficient; so another goal was to broaden the Joint Information System (JIS) with city, county, and Mayo employees and their respective resources.

Jones purchased a one-year subscription to the simulation product for public information; including social media. The vendor came in on separate occasions to train on the product and run small scenarios during the year leading up to the airport's triennial exercise. Since then, the healthcare system in the city of Rochester has purchased the simulation software and is now the lead in a regional JIS effort.

In designing the exercise, RST and the city emergency manager used the DHS Homeland Security Exercise and Evaluation Program (HSEEP) as a guide, but adapted it where necessary. When asked if the exercise had an assessment component, Jones said scoring an exercise would be judgmental. "It is about continuous improvement;" and evaluating such exercises should be more realistic and concentrate not on a particular "score" but on continuously improving the training and exercising until the group feels confident with the item being tested, and then move to another item to refine.

SUMMARY

RST's example shows what any airport can do with emergency communications and exercises if it applies imagination, innovation, and careful pre-planning in an atmosphere of collegial cooperation with its emergency response partners and major stakeholders. RST has taken the maximum advantage of its relationships with the city and a famous medical institution, both of which have reputations for forward-looking applications of technology and training to emergency preparedness. The exercise was also exemplary in its extensive use of social media—both incoming and outgoing. Furthermore, the RST example shows the extensive benefits that using a comprehensive crisis communications planning process can give.

The RST example points toward future developments in crisis communications planning and the role of social media in emergency management at airports. RST used one tool that facilitates using of social media in emergencies, and recent history suggests that technology will continue to create such tools with ever-increasing capabilities. Social media will provide increased methods for monitoring, gathering, and analyzing data for situational awareness; and for acquiring actionable intelligence allowing response. Coordinating comprehensive CCPs and social media will yield major benefits to airport leadership teams, emergency responders, and to those responsible for public information.

CHAPTER TWO

COMMUNICATION AND INFORMATION AT AIRPORTS

When an airport emergency occurs, airport staff must communicate both internally and externally, usually beginning well before a senior manager or designated public information office (PIO) can arrive on scene. When an incident occurs at one airport, it can often affect the entire air transport system as well as other organizations. All airports with commercial air service are required to have an emergency communications plan as part of their AEP that addresses response capabilities and interoperability. However, many communication sections of AEPs do not address the intense demand for real-time information from media, passengers, employees, surrounding communities, and other stakeholders impacted by emergencies on or within the immediate vicinity of the airport. *ACRP Synthesis 60: Airport Emergency Post-Event Recovery Practices*, found that many airports desire improved CCP, in particular, comprehensive CCP, particularly for issues pertaining to non-aircraft incidents. The specific finding was, "Airports that have and use comprehensive crisis communications plans find them indispensable during both response and recovery, and incorporate real-world experience into their plans. This planning on the part of communications really indicates an airport's commitment to being resilient and to customer service. Airports without such plans may want to develop them" (Smith et al. 2015, p. 50).

Comprehensive emergency communication plans and comprehensive crisis communication plans are often considered to be synonymous. However, there is a distinction: An emergency communication plan deals strictly with "life safety" type of communications, when police and fire are responding with airport resources providing support. A crisis communication plan covers both life safety and business continuity events, such as an airport train failure, unprecedented weather events, system failures, terminal evacuations, and other "mission critical" system failures and massive customer service disruptions. In terms of communications, airports respond to life safety and mission critical events in the same way. With the evolution of the National Incident Management System (NIMS) and the Incident Command System (ICS) at airports, the communications procedures and management systems for both emergency and crisis communication and response are often the same. This is why in some cases ECPs have evolved into CCPs.

Managing communications that connect to all stakeholders is essential at any airport experiencing an emergency. The framework of the communications-dependent cascade that leads to action appears as Figure 2. This synthesis addresses how some airports' current practices promote the efficient, accurate, and deliberate use of communications within an airport and to its internal and external stakeholders during an emergency.

COMMUNICATIONS AND INFORMATION

In their 2008 book, *Behavior in Organizations*, Greenberg and Baron define communication as "the process by which a person, group, or organization (the sender) transmits some type of information to another person, group or organization (the receiver)" (p. 334). The basic process requires the information, which is processed data, to be encoded into a form recognizable by the receiver, then transmitted through a channel (e.g., telephone or internet) to the receiver who decodes it. Typically, the communication process continues with a feedback loop that verifies receipt of the information or requests further information. The largest source of error in communication is "noise" in any part of the process. Noise may enter during encoding, decoding, or transmission through the channel, according to the transmission theory first stated by Shannon and Weaver (1948).

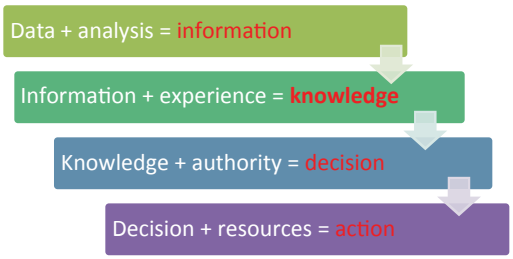

FIGURE 2 Communications-dependent cascade that leads from data to action.

Managing noise is essential in emergency communications. One example of efforts to manage noise is the NIMS requirements to use plain language, to avoid speculation, and to use a single trained spokesperson; another is the algorithms used by data-mining programs to filter out extraneous or erroneous data in social media.

The problem is that modern technology and cultural practices have changed the linearity of communications that was the basic assumption underlying the transmission theory. Instead of linearity, communications is now dominated by multi-pathway and simultaneous formats of communication (Chandler, n.d.; J. Greenberg, personal communication, Nov. 17, 2015). Chandler refers to the new model of communication as "constructivist" to emphasize that meaning is no longer created at one end and transmitted to the recipient; rather, "meanings are actively constructed by both initiators and interpreters rather than simply 'transmitted'." Noise is still an important factor, but the technologies that allow simultaneous, multi-pathway communications are important. This matters to emergency and crisis communications planning for airports because simple procedures and policies based on linear transmission of mostly unambiguous data do not adequately deal with information flow today.

ACCIDENTS, EMERGENCIES, DISASTERS, AND CRISES

It is important that airports be prepared to deal with accidents, emergencies, disasters, and crises. An accident is an unplanned event that results in personal injury or property damage. An emergency is any occasion or instance that warrants action to save lives and protect property, public health, and safety. A disaster is an occurrence of a natural catastrophe, technological accident, or human-caused event that has resulted in severe property damage, multiple injuries, and/or deaths (Blanchard 2006). A crisis is "an event and/or a situation which endangers the established system, the health, life, and property of its members. . . . The term 'crisis' is treated as being separated from . . . other concepts based on the intensity and scope of influence. The terms disaster, hazard, accident, etc., refer to only one event and/or situation, while crisis includes the concepts of natural disasters, man-made/technological disasters, and social disasters" (Kim and Lee 2011, p. 502, as quoted in Blanchard).

Accidents and emergencies are topics explicitly addressed in the requirements of FAR Part 139 and Advisory Circular (AC) 150/5200-31C. However, the regulations focus on "on the airport" and "near the airport" incidents. Other disasters, particularly regional disasters that indirectly affect an airport, and crises such as technological system failures at an airport lie outside those requirements.

NATIONAL INCIDENT MANAGEMENT SYSTEM (NIMS) AND THE INCIDENT COMMAND SYSTEM (ICS)

NIMS is the national standard for planning and implementing emergency management including emergency communications. Compliance with NIMS is mandatory for all federally funded facilities, which includes any airport that receives funding from federal appropriations such as the Airport Improvement Program. This means that essentially every public use airport in the United States must use NIMS. Accordingly, this report is premised on all communications plans being NIMS-based.

ICS is the predominant model for organizing for emergency response and recovery activities. Unless otherwise noted, ICS is presumed to be used by all airports for emergency management and emergency communications.

IMPORTANCE OF COMMUNICATIONS IN AIRPORT EMERGENCIES

Airports use many different means of communications in the course of normal daily activities. FAA AC 150/5200-31C defines the FAA's requirements for airport emergency plans. Chapter six of the AC addresses three separate sections of emergency communications: emergency communications, alert notifications and warnings, and emergency public information. These three sections cover all the areas required within a comprehensive emergency communication plan. Each section covers situations and assumptions, operations, organization and assignment of responsibilities, administration and logistics, plan development and maintenance, and authorities and references.

Section 2, "Communications," describes requirements for providing information on establishing, using, maintaining, augmenting, and providing redundancy for all types of communication devices needed during emergency response operations.

Section 3, "Alert Notifications and Warnings," addresses the processes to be used to notify and warn emergency response agencies, airport employees and tenants, and the general public of potential or actual emergencies. The alert and warning process is described as "essential" to ensure timely notification to emergency organizations and the response of emergency forces as well as ensuring that the public has adequate time to take appropriate protective actions to avoid death, injury, and/or damage to property.

Section 4, "Emergency Public Information," defines the FAA's requirements for describing the means, organization, and processes by which the airport will provide timely, accurate, and useful information and instruction to the public throughout the emergency.

Although approximately 500 airports in the United States are subject to the requirements in FAR Part 139 and AC 150/5200-31C, more than 2,900 public-use reliever and general aviation (GA) airports are not required to have AEPs or emergency communications plans. However, many reliever and GA airports voluntarily develop emergency communications plans, either as stand-alones or part of a voluntary AEP, or even a comprehensive CCP. Some reliever and GA airports are parts of multi-airport systems that contain a Part 139 airport, and thereby benefit from the network's ECP.

Regardless of its regulatory status, an airport is required to be prepared for an onslaught of information requests when an emergency happens, and establishing a solid emergency or crisis communications plan can help the airport deal with such a surge.

AIRPORT EMERGENCY COMMUNICATIONS AND TECHNOLOGICAL CHANGE

Media PR call volume related to LAX T3 November 2013 active shooter incident:
11/1/13 – 631 calls
11/2/13 – 175 calls
Average August–October 2013 – 5.4 calls/day
(LAWA data)

The past half-century has seen quick and unsettling changes in communications technology, and the trend is accelerating (Tsang et al. 2011). The pace of technological change is a major challenge for transportation planning and management (Beimborn and Sponholz 1998). Airports are under pressure to keep up or catch up. As a result, airport emergency communications planning and training need to be nimble, adaptive, and flexible (J. Greenberg, personal communications, Nov. 17 and Dec. 17, 2015).

TYPES OF AIRPORT EMERGENCY COMMUNICATIONS PLANS

Three basic types of airport emergency communications plans exist:

- An ECP written directly into the airport's AEP, which requires FAA approval for a FAR Part 139 airport. AEPs are not required for GA or reliever airports, but many of them have voluntary AEPs. Thirteen airports of all types and sizes in the study have ECPs.

- A stand-alone ECP that is incorporated into the AEP by reference, allowing continual updating without the FAA approval process. For example, the Metropolitan Washington Airports Authority, which operates Ronald Reagan National Airport and Dulles International Airport, have stand-alone ECPs that are referenced in each airport's AEP.
- Stand-alone comprehensive CCPs from which the required emergency items are incorporated into the AEP by reference. Examples of airports with standalone comprehensive CCPs include Denver International Airport (DEN), Dallas/Ft.Worth International Airport (DFW), Boise (Idaho) International Airport (BOI), and Watsonville (California) Municipal Airport (WVI).

When an airport is required to have an AEP, any change to the AEP requires approval by the FAA Compliance and Safety Inspector. Because communications plans (e.g., contact lists) change frequently, incorporating them by reference avoids the need for frequent resubmissions of the AEP to the inspector for approval.

When an airport chooses to create and use a comprehensive CCP, that plan still must address the FAR Part 139 and AC 150/5200-31C requirements and be referenced in the airport's AEP.

When a reliever or GA airport voluntarily chooses to have an emergency communications plan or a comprehensive CCP, it is important that the plan's nature be appropriate to the operations, hazards, risks, and other crisis-type situations affecting that airport.

DETERMINING WHAT IS NEEDED IN THE EMERGENCY COMMUNICATIONS PLAN

An airport can determine what to include in its ECP or CCP by using several sources of information. The most obvious guidance is in FAR Part 139 and AC 150/5200-31C. Other essential sources of information are the airport's hazard and risk analyses, continuity of operations plans, continuity of business plans, and after-action review (AAR) and improvement plans subsequent to exercises or actual events. An airport's emergency communications process does not occur in a vacuum but in the context of its other contingency planning processes. The single most important factor is that an airport's crisis or emergency communications planning attempt to gain synergistic benefits from all the tools available to the airport and its partners.

Communication tools—social media, website, contact list, etc.—all are to be coordinated; redundancy is important and needs to be emphasized in the plan.

USING AIRPORT EMERGENCY COMMUNICATIONS PLANS FOR NON-EMERGENCIES

A good ECP—and even more so, a good comprehensive CCP—helps to execute any large event and to recover from it. If NIMS and ICS are written into the plan, they not only can guide the airport's management of large events but also turn such events into opportunities to practice for emergencies and disasters. An example where an airport's use of its comprehensive CCP to manage a major event was Los Angeles International Airport's use of its plan to carry out and recover from the opening of its expanded Tom Bradley International Terminal (M. Grady, personal communication, Nov. 17, 2015).

CHAPTER THREE

SCOPE AND METHODOLOGY

The objective of this study is to report on experiences and effective practices in communications planning in preparing for, working through, and learning from actual airport emergencies. The audiences for this synthesis are airport leadership teams, emergency responders, and those responsible for public information.

SELECTION OF AIRPORTS

Sixty-four (64) U.S. airports were invited to participate in the survey. Airports in the sample were selected because they were known to either the consultants or topic panel members as having exemplary emergency exercise programs or ECPs; and represented the full range of types and sizes of airports, a wide variety of geographic regions, and a broad representation of FAA regional offices. Nearly half the airports are city departments, about two-fifths (42%) are authorities, 8% are county departments, one has a joint board, and one is privatized. The lack of randomization and relatively small sample sizes preclude the generalizability of the statistical results beyond descriptive statistics.

LITERATURE REVIEW

Available literature on topics associated with airport emergency communications was reviewed using searches in both the open web (using Google.com) and the deep web (using the TRB database, ProQuest, EBSCO, LexisNexis, and LLIS). Peer-reviewed literature in the field of emergency communications specifically related to airports is limited, but the literature review also sought information on resources in organizational communications in general. Special attention was given to previous TRB reports concerning mass transit, highway transportation, and aviation to seek practices and techniques that can be applied to emergency communications at airports.

SURVEY AND RESPONSE DATA

Software provided by TRB was used to set up a web-based survey, detailed in Appendix A. The survey was unusual in that it used the same set of airports and a combined questionnaire designed to serve both this survey and ACRP Synthesis S04-17, *Tabletop and Full-Scale Exercises for General Aviation, Non-Hub and Small Hub Airports*, as it was believed that these two topics are closely linked. Using a single survey reduced the number of questionnaires sent to any one airport and allowed the inclusion of more airports in the study. It also allowed the exploration of possible interrelationships of airport emergency communications and emergency response and recovery exercises.

Fifty-one (51) airports submitted complete responses, four airports responded via an emailed memo, four airports submitted partial responses, and two airports declined to participate. The overall response rate to the survey was 94%. The 59 airports that submitted complete or partial responses, plus Rochester International, later identified as an important case example, are listed in Appendix B.

Appendix B also gives the major characteristics of each airport's location, structure, and operational profile. Table 1 shows the distribution among the seven National Plan of Integrated Airport Systems (NPIAS) categories of the 61 airports in the study; it also shows the proportion of all U.S. public use airports that are represented in the study. The responding airports are widely distributed geographically (Figure 3). Twenty-eight (28) states and all nine FAA regions are represented in the sample.

TABLE 1
TYPES AND SIZES OF AIRPORTS RESPONDING TO SURVEY

NPIAS Category	Airports in Study	Airports in U.S.	Percentage in Study
Large Hub Airports	14	30[1]	46.7%
Medium Hub Airports	6	33[1]	18.2%
Small Hub Airports	8	71[1]	11.3%
Non-Hub Primary Airports	7	250[1]	2.8%
Commercial Service Airports (non-primary)	3	117[1]	2.6%
Total of Service Airports	38	501[1]	7.6%
Reliever Airports	11	268[2]	4.1%
General Aviation Airports (public use airports only)	10	2,563[2]	0.4%

Source: Smith, Kenville, Sawyer and Garcia data.
[1]FAA, CY13 enplanements (2014).
[2]FAA, National Plan of Integrated Airport Systems (2014).

Airports in two multi-airport systems (i.e., Miami and Phoenix) were included to explore possible interactions among airports within a single system. In data displays except Table 1, only one airport from the Miami–Dade system is included (Miami International Airport, or MIA); the other four Miami–Dade airports (Miami Executive Airport, Miami Opa Locka, Dade–Collier Training and Transition Airport, and Miami Homestead General Aviation Airport) have the same data profiles and were excluded from the survey data. All three Phoenix airports—Phoenix Sky Harbor International Airport (PHX), Phoenix Deer Valley Airport, and Phoenix Goodyear Airport—are included, as each of the three had distinctly different responses to the survey.

CASE EXAMPLES

Case examples were created to attempt to answer four primary questions:

1. What is the planning process for emergency communications?
2. What is the resulting plan like?
3. How satisfied is the airport with the results?
4. What future directions or trends does the airport anticipate in its emergency communications plans and planning process?

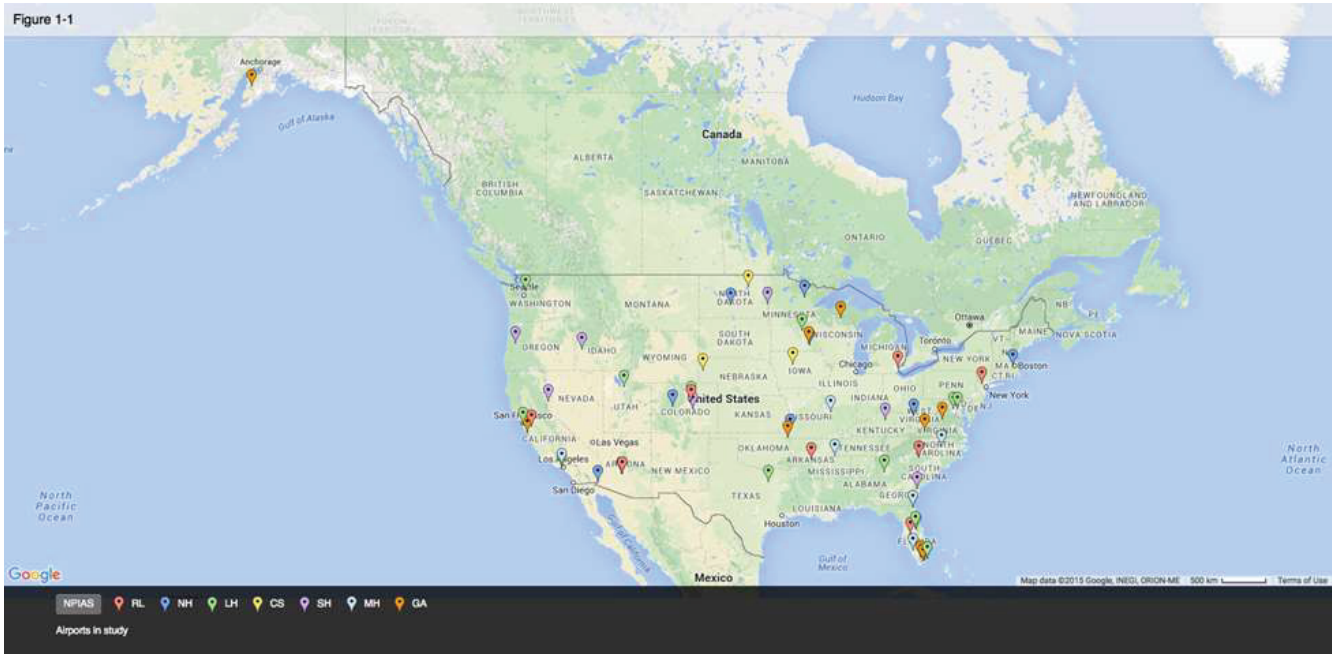

FIGURE 3 Location of airports in the study.

To identify case examples that illustrate approaches to these four subjects that may be useful to airports of any type or size, the following criteria were applied:

- The airport's reported use of various communications methods in emergencies
- Whether there was a single comprehensive plan or many separate plans
- Innovative measures used
- The nature of administrative management of an airport's emergency communications
- The extent to which NIMS and ICS were used by an airport in emergency communications
- The completeness of the airport's documentation of its emergency communications plans and planning process
- The scalability or generalizability of the airport's emergency communications planning process
- The airport's willingness to serve as a case example
- The airport's willingness to share its emergency communications planning materials and resources.

The survey results aligned strongly with the data and conclusions in *ACRP Synthesis 60* (Smith et al. 2015), leading to the selection of airports with single comprehensive crisis communications plans or single comprehensive emergency communications plans. This biased the selection of case examples against airports with multiple ECPs or with traditional plans written in their AEPs. Appendix C of this study presents four case examples of actual airport emergency communications planning practices and outcomes:

- Case Example 1: Dallas/Fort Worth International Airport (DFW)
- Case Example 2: Denver International Airport (DEN)
- Case Example 3: Boise Airport (BOI)
- Case Example 4: Watsonville Airport (WVI).

Follow-up interviews and document reviews allowed an in-depth examination of how the case example airports developed their emergency communications plans and how effective the resulting plans have been in practice. In addition, interviews were conducted with five airports that did not have single comprehensive plans but reported having them under development at the time of the survey (June–August 2015).

As noted in chapter one, after data collection for this study had been completed, an exemplary exercise featuring a comprehensive CCP and the use of social media was described in a magazine article, giving a de facto fifth case example, Rochester International Airport.

In addition to the full write-ups of the case examples in chapter one and Appendix C, key points from the case examples appear in textboxes throughout this report.

DATA ANALYSIS

The survey results, interviews with case example airports, and analysis of reports, plans, and other documents supplied by airports were used in the study to identify effective approaches to emergency communications planning, to evaluate the suitability of various types of plans, to identify gaps, and extract lessons learned.

Pertinent findings from the interviews, case examples, literature review, and data analysis are presented in four formats:

1. Overview of survey data (Appendix A)
2. Five case examples with expanded information on highly effective exercise programs (chapter one and Appendix C)
3. Sample tools for implementing comprehensive emergency/crisis communications plans (Appendices D through L)
4. Checklist of effective planning practices for creating and sustaining effective emergency communications plans for airports (Appendix M).

CHAPTER FOUR

EMERGENCY AND CRISIS COMMUNICATIONS PLANNING AND PLANS

As noted in chapter three, this study has sought information on current practices regarding emergency communications planning from airports of all types and sizes. Furthermore, the study also analyzed these practices to identify effective concepts, tools, and procedures that airports can use in the development of communications plans. This chapter presents the information gained through the survey.

MANAGEMENT OF AIRPORT EMERGENCY COMMUNICATIONS

Six different organizational levels were reported by the surveyed airports as being in charge of emergency communications, where "in charge" explicitly meant having decision-making authority over the airport's emergency communications plans. Nearly half (46%) of the airports said that a division or department head played this role. Smaller airports appear more likely to include this in duties of the airport director or assistant airport director. The largest airports tended to have a manager within a department carry out this role.

The two categories where the management of emergency communications is split with another agency or lies outside the airport entirely reflect the importance of the ties between airports and their city or county sponsors. The two Phoenix GA airports, Phoenix Deer Valley (DVT) and Phoenix Goodyear (GYR) reflect how the largest airport in a multi-airport system (in this case, Phoenix Sky Harbor International) assists with communications during emergencies.

STAFFING AND TRAINING FOR NATIONAL INCIDENT MANAGEMENT SYSTEM AND INCIDENT COMMAND SYSTEM

The survey for this study did not directly ask if the airports found NIMS or ICS to be important for the creation and maintenance of effective emergency communications plans. However, *ACRP Synthesis 60* (Smith et al. 2015) examined post-event recovery practices at 37 airports, showing that the airports overwhelmingly found that application of NIMS and ICS aided their emergency management efforts. The data for Question 9 in Appendix A show a major commitment by more than 80% of the airports in this study to the NIMS and ICS doctrine.

> DEN's advice to an airport just creating its emergency communications plan or considering a CCP is to start by building on NIMS and ICS. (DEN case example)

FEMA (2007) has provided basic guidance of PIOs operating in the NIMS environment. Examining the nature of specialized training for NIMS and ICS for PIOs at the surveyed airports provided the results shown in Table 2, which is an extract of the general table in Appendix A for Question 9.

Comparison of Table 2 with the results for all positions involved in emergency response and recovery at airports indicates that only a slightly lower percentage of PIOs have had NIMS and/or ICS training than such positions as emergency managers, firefighters, risk managers, and operational evaluators.

NATURE OF AIRPORT EMERGENCY COMMUNICATIONS PLANS

The survey asked four questions (Questions 17–20) designed to gain a better understanding of the general nature of airport emergency communications plans and the airports' current efforts or intentions toward amending and housing those plans.

TABLE 2
NIMS AND ICS TRAINING OF AIRPORT PUBLIC INFORMATION OFFICERS

	Both NIMS and ICS Training		NIMS Training Only		ICS Training Only		Neither NIMS nor ICS Training		Don't Know		Total	
Public Information Officer (PIO)	31	66.0%	2	4.3%	2	4.3%	9	19.1%	3	6.4%	47	100%

Source: Smith, Kenville, Sawyer and Garcia data.

Seventy-four percent (74%) of the surveyed airports have a single written comprehensive emergency communications plan (Question 17). Of these, 42% are totally within the airport and its departments, and 32% are joint or shared with non-airport departments or agencies. Eighteen percent (18%) of the airports responded that they do not have a single written comprehensive emergency communications plan but are in the process of developing one. The final 8% of the surveyed airports do not have a single written comprehensive emergency communications plan and are not in the process of developing one.

All airports surveyed in the final group, and some in the 18%, are GA or reliever airports that are not required to have an emergency communications plan. It is possible that an airport might have multiple emergency or crisis communications plans and so answer "No" to this question because it asked if the airport has a single written comprehensive plan. Even allowing for this slight uncertainty, it is clear that 92% of the surveyed airports have active emergency communications planning or crisis communications planning processes underway, which illustrates the dedication to response and recovery by the airports surveyed.

Surveyed airports were asked to differentiate more specifically between single CCPs and multiple plans. Forty-four percent (44%) have a single written emergency communications plan; 16% have multiple plans with a single "owner," for example, multiple airport SOPs; and 20% have multiple plans each with a different owner; for example, the owners being operations, fire, police, etc. The 20% with multiple plans with different owners comes from across the whole size spectrum of FAR Part 139 airports; 2% responded "Don't know." All of the airports that reported not having a written emergency communications plan, but having one under development are GA or reliever airports.

Traditionally, airport emergency communications plans were written directly into AEPs. In recent years, many airports have begun having the emergency communications plans separate from the AEP but incorporated by reference. Question 19 asked the airports to state how their ECP related to the airport's AEP. Two-thirds (66%) of the surveyed airports have their emergency communications plans written directly into their AEPs. Twenty percent (20%) have the emergency communications plans separate from the AEP but incorporated therein by reference. The 14% answering "No" were all GA or reliever airports that are not required to have an AEP. However, many such airports in this study voluntarily have developed AEPs and ECPs, as will be seen in the case example of Boise Airport. This shows a laudatory dedication to safety, and usually translates to better airport preparedness through an intensive training and exercise program. Unfortunately, many of these airports and their management have learned the hard way—after aircraft accidents.

Eighty percent (80%) of the airports have ECPs that are part of their sponsor's plans, and 14% are entirely separate. The 80% figure is not surprising since nearly all airports in the United States are operated either by their sponsor (authorities) or as a department of their sponsor (city, county, or state). The 80% figure could also be explained by the airport's being able to afford the resources in manpower and specialized training such as NIMS and ICS through city fire or law enforcement departments.

The final question (Question 21) about the general nature of the ECP explored how it related to that of the airport's sponsor. The 80% whose ECP is part of the sponsor's overall plan indicated that their ECP might be incorporated in the sponsor's plan by reference or actually be written into the sponsor's plan. The 16% answering "No" were all large hub airports.

MODELS OF AIRPORT EMERGENCY COMMUNICATIONS PLANNING

Among the surveyed airports, two basic models with three variations each were found:

- Airport-only plan (24 reported)
  - A single plan: 15 found, with two (BOI, DEN) incorporated into AEP by reference and 13 written directly into AEP
  - Multiple plans with single owner: Seven found, with three (DFW, Raleigh–Durham International, and Salt Lake City International) being incorporated into AEP by reference and three written directly into AEP.
  - Multiple plans with separate owners: Two found, with one (DCA) being incorporated into AEP by reference and one (New River Valley, Virginia) written directly into AEP.
- Joint plan with airport sponsor or other outside agency (15 reported)
  - Single plan: 10 found, with one (Minneapolis–St. Paul International) being incorporated into AEP by reference and nine written directly into AEP.
  - Multiple plans with single owner: One found (Fort Lauderdale–Hollywood International) that is incorporated into AEP by reference.
  - Multiple plans with separate owners: Four found, three (JAX, LEX, and MIA) being incorporated into AEP by reference and one (JLN) written directly into AEP.

In addition, nine airports with ECPs of various types reported that they were in the process (as of June–August 2015) of developing comprehensive emergency communications plans for instance, Hartsfield–Jackson Atlanta International Airport (ATL) or comprehensive CCP, including San Francisco International Airport (SRO) and PHX. Some of these transitioning airports are discussed in the following section.

No matter which type of emergency communications plan is chosen, the airport stands to gain the same benefits as described by Krock (2011) for the telecommunications industry:

> A documented, tested emergency plan, combined with one or more mutual aid agreements, offers the communications provider the best chance of withstanding the inevitable disaster, and providing its customers and community with the reliable communications that are so imperative in times of crisis (p. 50).

AIRPORTS DEVELOPING AND CREATING COMMUNICATIONS PLANS

Airports that reported a comprehensive emergency communications plan CCP to be under development at the time of the survey (June–August 2015) offer important insights into the advantages, barriers, costs, and benefits of such plans. Follow-up interviews were conducted with five airports now developing comprehensive crisis communications plans.

Fort Lauderdale–Hollywood International Airport (FLL)

FLL currently has an array of specialized plans in addition to its AEP, and many of them contain communications plans. FLL is currently combining that "array of plans . . . into one shortened version that is more useable and understandable for our field personnel. Components of the airport emergency plan will be included." Recovery from emergencies and mission-critical systems failures will be a focus in the new plan. No specific emergency triggered the change by FLL: "We just strongly believe we have to be prepared for any eventuality and include plans that go beyond compliance with FAA, TSA, and DOT requirements" (M. Nonnemacher, personal communication, Nov. 18, 2015). In addition, FLL's recent and ongoing changes in operations to become a much busier connecting hub has reinforced the need to evolve: "Therefore, we need to be forward thinking in how we respond to any loss of service. The industry has a low tolerance for downtime or reduced capacity and the cost can escalate quickly" (M. Nonnemacher, personal communication, Oct. 16, 2015).

Hartsfield–Jackson Atlanta International Airport (ATL)

ATL has its emergency communications plan written into its AEP, as well as a number of separate plans and SOPs for crisis communications. ATL is in the early stages of creating a single written comprehensive CCP, a process that represents a major commitment of effort and funding. ATL expects major advantages from greater consistency of communications, especially with passengers and the public (R. McCranie, personal communication, Oct. 15, 2015).

Jacksonville International Airport (JAX)

JAX has its communications plan written into its AEP but also has joint plans with several other departments and agencies. JAX is developing a standalone comprehensive CCP that will be incorporated into its AEP by reference (M. Smalley, personal communication, Oct. 20, 2015).

Lambert–St. Louis International Airport (STL)

STL is in the process formulating a consolidated ECP. Several factors led to this decision: the desire to combine siloed policies into a larger plan; the need to increase the quality of information disseminated to executive/internal staff; and the need to better ensure consistent messaging to internal staff and external customers. The trend toward comprehensive plans appears to be driven in part by changes in technology, the rise of social media as an information platform, and the 24-hour news cycle (E. Smart, personal communication, Oct. 22, 2015).

San Francisco International Airport (SFO)

SFO began developing a comprehensive crisis communications plan in February 2013, several months prior to the Asiana accident in which three Chinese girls were killed and 187 passengers injured. The use of social media and updates to the plan have been further incorporated, following the crash of flight #214 on July 6, 2013, as part of SFO's business continuity (D. Yakel, personal communication, Oct. 2015; ICF 2013; Smith et al. 2015).

ASPECTS ADDRESSED BY EMERGENCY COMMUNICATIONS PLANS

When asked what aspects of internal communications during emergencies are addressed in plans (Question 21), emergency notification is the most frequently reported (in 86% of plans) but the second highest-reported item is the role of the PIO (76%), which most likely reflects the use of ICS by the airports. The reference to social media use (50%) reflects the emerging nature of those technologies, but is particularly interesting in that this question specifically asked about internal use of social media. The importance of public address (PA) systems was considered important by 58%, but was perhaps rated lower than might be appropriate considering issues with using the PA system during the 2013 active shooter incident at LAX)(LAWA 2014). The one item that was rated surprisingly low is common operating picture (COP) at 22%, but this is an expensive emerging technology that is gradually being adopted by the largest airports first (Smith et al. 2015). Smaller airports may simply be unaware of the growing trend toward using COPs and/or may not have had large multi-agency responses as in the LAX active shooter incident. Detailed data on internal communications aspects are given in Appendix A.

When asked what aspects of external communications during emergencies are addressed in plans (Question 22), the most frequently reported reflect the contents of traditional airport emergency communications plans in AEPs: communications to federal agencies, communications to mutual aid partner, communications to the public, and media relations. Some items such as JIC and JIS reflect the growing use of NIMS in airports and especially in airport EOCs. Many of the low frequency aspects are new technologies. Detailed data on external communications aspects are given in Appendix A.

PLANNING PROCESSES AND PROCEDURES

Value of Pre-planning for Emergency Communications

Medford–Davis and Kapur (2014), looking at ways to make communications more effective in health emergencies, concluded:

> Recommendations to build communications capacity prior to a disaster include pre-writing public service announcements in multiple languages on questions that frequently arise during disasters; maintaining a database of statistics for different regions and types of disaster; maintaining lists of the locally trusted sources of information for frequently affected countries and regions; maintaining e-mail listservs of employees, international media outlet contacts, and government and non-governmental organization contacts that can be used to rapidly disseminate information; developing a global network with 24-h cross-coverage by participants from each time zone; and creating a central electronic sharepoint where all of these materials can be accessed by communications officers around the globe.

Many techniques that Medford–Davis and Kapur describe for health emergencies are directly applicable to airport emergencies.

Another excellent example of a pre-planning is Tool 13—Communications Plan in *ACRP Report 65: Guidebook for Airport Irregular Operations* (*IROPS*) *Contingency Planning* (Nash et al. 2012, p. 177). IROPS is an example of a massive customer service crisis that sometimes requires special communications efforts by airports.

Roles of Partners and Stakeholders

Ninety percent (90%) of the surveyed airports reported involving stakeholders in the development of emergency or crisis communications plans, with 58% saying they always involved stakeholders and 32% saying they sometimes involved stakeholders. The survey question (Question 23) did not distinguish between all stakeholders sometimes, some stakeholders all the time, and some stakeholders some of the time.

> Because Boise is a small hub, it has the ability to talk individually with all stakeholders about any changes in their comprehensive communications plan. (BOI Case Example)

The surveyed airports have predictable stakeholders involved in their emergency communications planning efforts (Question 24). In today's world, where one agency or organization may not have the depth of personnel and capabilities to respond to an emergency or crisis on the airport, the natural path to leverage resources would be to involve the airport's stakeholders more fully. The likeliest first partners in this response would be ARFF and law enforcement officers (LEO). As previously stated, airports utilize the NIMS platform along with police and fire, so the collaboration is the strongest between these groups; the LEO/ARFF are very often an employee group of the airport. As part of NIMS training, it is paramount to determine what other agencies are needed and to bring them into the process very early—in the planning and exercise phase, this is often referred to as mutual aid. This also applies to air traffic control (ATC), although the survey did not explicitly address it.

Another very important aspect of communications is customer service. Therefore, it is important to involve all of the airport tenants in the communications process—to manage the message—in times of crisis. In the end, the passenger, itinerant GA pilot, or citizen is the airport's customer. One airport responded that stakeholders would be involved if the airport had a stand-alone emergency communications plan but that they had not been involved to date because the communications plan is written into the AEP.

The surveyed airports were asked to describe how they involved stakeholders in the development of their emergency communications plans and notification plans (Question 25). This was an open-ended question, so most of the 41 airports that answered it listed only one most favored method or at most two methods. This may have depressed the frequencies shown for Question 25 in Appendix A. Of particular interest is the importance of exercise and exercise-related methods to the stakeholder involvement in airport emergency communications planning: TTX, full-scale exercises, workshops, seminars, and after-action reports.

EVALUATION OF EFFECTIVENESS OF EMERGENCY COMMUNICATIONS PLANS

FAR Part 139.326 Section G requires that each airport with commercial air service and have an AEP review the plan, which would include an emergency communications plan, a notification plan, and a public notification plan, at least once every 12 months. The 37 FAR Part 139 airports in this study are required to review the emergency communications plan contained in their AEPs annually. The survey results (Question 26) show this, but the data also reflect that many airports—both FAR Part 139 and general aviation—choose to review their AEPs and communications plans more often than annually. None of the 50 airports that answered this question said that they never reviewed their plans.

Most airports review their plans in conjunction with communications tests or exercises, or both, because it is both efficient and economical to plan reviews, communications tests, and exercises at a time when the airport staff's attention is focused on emergency and crisis communications and overall response.

FAA AC 150/5200-31C requires the AEPs and exercises to address 10 functions, one of which is communications. Not counting the mandatory daily test of FAR Part 139 airports' crash (Alert III) phone, the most common frequency for testing an airport's emergency communications plan is annually (56%), which seems low. However, the 56% represents 100% of the FAR Part 139 airports in the study. Furthermore, some airports that review and test their emergency communications plans more frequently than once a year may not have marked the "annually" option, just the higher frequency choice, although the question asked the airport to mark all frequencies and occasions that applied.

The "Other" category included biannually; when incidents happen; and as part of annual TTX. When all the more frequent than annual responses are combined, they outnumber "annually." Airports are typically exceeding the minimum requirements for testing their emergency communications plans.

When the surveyed airports were asked (Questions 41 and 42) what functions they tested in exercises, communications was the most frequently tested in TTX (90%) and the third most frequently tested function in full-scale exercises (76%) behind command and control (80%) and fire and rescue (80%). The data in Appendix A for Question 46 show who participated in full-scale exercises; the profile of participation was similar for TTX.

TRAINING

The surveyed airports, when queried whom they train on the airport emergency communications plan (Question 28), reported that airport employees were the main group trained. However, nearly half the airports train airline, FBO, agency, tenant, and concession employees. The distribution of frequencies, especially of airlines and FBOs, reflects that nearly 40 of the respondents were GA or reliever airports. Other groups receiving emergency communications training from airports included all first responders; community emergency management agencies; mutual aid partners; EMS; local governments; local chambers of commerce; airport meeters and greeters; and volunteers. Only 4% of the airports reported training no personnel in emergency communications.

"Fight how you train and train as you fight." (Mary Jo Polidore, DFW Case Example)

BARRIERS AND CHALLENGES TO EFFECTIVE EMERGENCY COMMUNICATIONS PLANNING

None of the survey questions directly sought information on barriers and challenges faced by airports in developing effective emergency communications plans and procedures. However, the case examples in chapter one and Appendix C reflect barriers and challenges those airports overcame. The two primary challenges are funding and staff time. Based on results in prior ACRP syntheses (e.g., *ACRP Synthesis 50*—Smith 2014), commitment by senior management may be an issue at some airports. However, nothing in the case examples or survey data suggested that this is a factor for emergency communications planning. Moreover, the responses to Question 11, where 52% of the airports reported that either the senior manager or a manager who reports directly to the senior manager is in charge of emergency communications, indicate broad awareness of the issues of emergency communications and commitment to their resolution.

CHAPTER FIVE

ROLES OF THE PRIMARY AUDIENCES FOR THIS STUDY

Almost certainly, the greatest challenge faced by airports in connection with emergency and crisis communications is how to manage the facility in the face of a flood of information. Especially in the early stages of an emergency, some reports generated will be valid and many may be misleading or wrong. It is essential that senior airport management, the airport public information officer, airport emergency managers, and first responders work cooperatively to winnow the flood and act on the right facts. The airport's emergency or CCP can be the primary guidance for this collaboration (K. Gibbs, personal communication, Nov. 17, 2015).

SENIOR AIRPORT MANAGEMENT

Senior airport managers—airport directors, chief executive officers, chief operating officers, aviation directors, airport managers—all bear responsibility for the safe and sustained operation of their airports. However, the operational and organizational complexity of airports, regardless of type or size, means that senior management need to delegate and trust other airport staff members during emergency response and recovery operations. One of the main responsibilities of senior management is to ensure that the right people are assigned the right duties at the right time. Ensuring that the most capable people available are tasked with the appropriate duties and that they have all the necessary resources and support to succeed in those duties is a primary responsibility of airport senior management. This is true in day-to-day management but is especially critical when managing an emergency situation.

Within an emergency command and control environment, the IC is the final word on all direction and communication surrounding the event. It is essential that all others, including senior managers, support the IC in carrying out his or her directions and decisions. The Incident Commander is accountable to the executive/senior official, but has complete authority in directing the operation. The IC is to take policy direction from senior officials, provide overall leadership over the event, delegate authority to others, ensure incident safety, provide communications to internal and external stakeholders, liaison with other agencies, establish incident objectives, and develop an incident action plan. All internal communication regarding the event is to be consistent with and support the incident action plan (IAP) developed by the IC, and all external communication be approved by him/her. Fulfilling this mission requires accurate, timely, reliable communications up and down the chain of command.

One of the guiding principles of NIMS and ICS is the fact that day-to-day organizational rank is "checked at the door" of an EOC or command post. ICS uses unique position titles and organizational structures. There is no correlation with the administrative structure of any other agency or jurisdiction. ICS command assignments are to be given to the most capable, qualified available person to handle the specific tasks required. The IC is usually the senior most qualified person at the scene. This may not be the airport manager or director. Indeed, it may be a front line supervisor who is the most qualified for the role. In addition to being highly qualified to manage the incident scene, the IC is tasked with keeping senior management informed and up to date on all important matters pertaining to the incident. Ultimately, senior management should have complete confidence and trust in this person's abilities and supports this person implicitly. Accurate, precise, and timely communications are essential to the maintenance of this confidence and trust. The IC, as well as any other core ICS positions, may change as needed as the event evolves, but the support provided by the senior airport management would remain consistent.

An executive/senior official's task is to ensure that the command team is informed and that the IC is functioning in a responsible manner. Senior management sets policy, establishes the mission to be

accomplished, shapes the overall direction, and gives the trained responders the authority to accomplish the incident objectives (ICS-420). The IC may establish vertical communication via a member of senior management, who then acts as a single point of contact between the IC and management team, protecting the IC from being overwhelmed by the needs of senior management. These communications relationships can effectively be incorporated into an airports emergency/crisis communications plan.

Other senior airport management personnel will respond to the EOC and support the incident command efforts. ICs with strong EOC support may delegate significant levels of responsibility to the EOC, making "span of control" more manageable. Vertical communications with elected officials and the media are just some of the tasks generally delegated to an EOC and senior management. The PIO plays a key role and should to be closely tied to both the IC and the senior management group. An airport's EOC can either serve as a primary command post or, in cases where a field command post is established, can provide logistical and administrative support to a field command. In both cases the EOC supports the IC and his/her approved incident action plan.

There are communication information systems that can provide a common operating picture to all command and coordination sites. NIMS describes the requirements necessary for a standardized framework for communications and emphasizes the need for a common operating picture. NIMS is based on the concepts of interoperability, reliability, scalability, portability, and the resiliency and redundancy of communications and information systems (ICS-420).

As described in this section, effective emergency management using NIMS and ICS requires the IC (or UC) and the senior management group to respect each other's roles and the boundaries between them. Effective communications between the two entities will involve boundary spanning; that is, ensuring that information flows without violating the boundaries or being disrupted by them (Ackney and Curtin 2002; Lowrey et al. 2007). Emergency communications require timeliness and clarity to be useful to senior managers.

Although the primary role of senior managers in emergency response and recovery is resource mobilization and allocation, good two-way communications with first responders and emergency managers is essential. The airport PIO, when the airport has one, is typically the most qualified staff member to implement boundary spanning; but that cannot happen without strong leadership and support from senior management.

MODERN AIRPORT PUBLIC INFORMATION OFFICERS (PIOs)

At an airport, the handling of emergency communications involves the intersection of the airport's senior management team's efforts and those of the emergency management specialists. The airport's senior PIO, while part of the management team, can also be a key player and an asset to emergency managers. As part of the management team, the PIO is a strategist and advisor. The PIO is typically the main person who can accomplish the boundary spanning necessary during disaster response and recovery. The role of PIOs is changing very rapidly, especially in the aspects of mediating interactions and diplomacy among stakeholders (J. Greenberg, personal communication, Nov. 17, 2015). A PIO operating a JIS/JIC can be the public face of an IC, UC, or airport EOC that is managing the emergency. In addition, the PIO can manage incoming and outgoing communications, including use of social media; monitor social media feeds for situational awareness; and create and maintain an airport's comprehensive emergency or crisis communications plan. At most airports, the professional expertise in communicating with stakeholders, the media, and the public resides with the PIO. The team managing an emergency or disaster can benefit by building the PIO's capabilities fully into the emergency response and recovery as well as in planning and training for emergency or crisis communications.

DEN's plan is flexible, providing for a small-scale Joint Information Center for small events and a large-scale JIC for large incidents, making the airport's communications posture highly nimble. The airport's communications structure with its clearly defined roles and responsibilities allows PIOs from other agencies to step in when needed. (DEN case example)

PIOs can generate tools to implement comprehensive emergency/crisis communications plans, both directly for the public information staff and in cooperation with first responders and emergency

managers for all persons with internal or external communications duties. The standard ICS tool for implementation is the field operations guide (FOG), which is a concise notebook or card that lists the tasks in sequence necessary to carry out duties. Sample FOGs for the PIO-controlled emergency communications duties at a large airport are reproduced as Appendices D through L. The number of FOGs and the range of tasks included on them reflect the complexity of communications during an emergency at an airport. A smaller airport will have most of the same tasks but fewer, often far fewer, staff members, so some functions may be contracted to other agencies or companies.

PIO is no longer a case of one-size-fits-all, at least in the case of most FAR Part 139 airports that are small hubs or larger and in the case of very active reliever and general aviation airports. PIO functions are now distributed throughout organizations. PIOs may "wear many faces and need training in many facets of information" (M. Grady, personal communication, Nov. 17, 2015).

FIRST RESPONDERS AND EMERGENCY MANAGERS

In an emergency, overall communications affects first responders and emergency managers. Emergency communications can be an issue between incident command posts and the EOC, and how the issue is resolved through planning, training, exercising, and policy will either help or hinder response and recovery. Most importantly, communications directly involving first responders and emergency managers are most effectively managed in a comprehensive plan that also addresses communications among and between senior managers, PIOs, stakeholders, mutual aid partners, the media, and the public. The communications issues for each type of interaction overlap and require coordinated planning (M. Grady, personal communication, Nov. 17, 2015).

ROLE OF THE EMERGENCY OPERATIONS CENTER

In general, EOCs are the most common type of operations/coordination center across the nation. An EOC is a pre-designated facility established by a jurisdiction or organization to provide centralized and coordinated support to tactical incident management. An EOC is used primarily for consolidating and exchanging information, supporting decision-making, and coordinating resource management. The EOC supports those personnel and other incident management organizations that are tactically engaged in managing the incident (i.e., closer to the incident). Examples of organizations that may receive support from an EOC include the Incident Command Post (ICP), Unified Command Post, or another EOC such as another department's EOC or a city, county, or state EOC (J.G. Featherstone, personal communication, Oct. 13, 2015; *ACRP Synthesis 60*—Smith et al. 2015).

Among the functions of EOCs is the coordination of crisis communications. EOCs are typically organized around one of four systems (FEMA/EMI 2012):

- Incident Command System (ICS), where a PIO on the command staff serves as the conduit for public crisis information to and from internal and external stakeholders. Under ICS, three general staff sections are involved in communications: operations, planning, and logistics. NIMS does not require an EOC to be organized using ICS.
- Emergency Support Functions (ESF), where ESF #2 is the communications group and ESF #15 is the external affairs group. The external affairs group supports the PIO and JIC (if any). ESF #2—Communications include
  - Coordination with telecommunications and information technology industries;
  - Restoration and repair of telecommunications infrastructure;
  - Protection, restoration, and sustainment of cyber and information technology responses; and
  - Oversight of communications within the incident management and response structures (DHS 2008).

  ESF #15—External affairs include
  - Emergency public information and protective action guidance,
  - Media and community relations,
  - Congressional and international affairs, and
  - Tribal and insular affairs (DHS 2008).

- Organizing by Major Management Activities (FEMA/EMI 2012).
- Hybrid, which is a combination of ICS and ESF to fit the local situation (J.G. Featherstone, personal communication, Oct. 13, 2015).

ICS is not necessarily the most efficient way to organize an EOC to coordinate emergency communications: "Incident response is a complex issue that defies easy blanket solutions; and, important policy and programme decisions related to ICS ought not to be made within closed management systems or in the absence of empirical research to inform those decisions" (Jensen and Waugh 2014, p. 14). In other words, an airport and its partners can decide which management structure best fits their situation.

Increasingly, airports of all types and sizes are establishing EOCs that follow NIMS practices and procedures. However, with or without an EOC, an airport will typically use a unified command-like organization to coordinate the response to an accident, emergency, or crisis. This coordination includes all aspects of communication during various phases of the event. Each organization that has an employee representative in the EOC should be fully trained on NIMS/ICS; this would include airlines, FBOs, air traffic control, and outside agencies as well.

Examples of airport EOCs where organization is based on ICS include Southwest Florida International Airport (RSW), Salt Lake City International Airport (SLC), and Phoenix Sky Harbor International Airport (PHX). Organizing by major management activities might be useful for small airports, with smaller numbers of employees to wear the many hats required to populate an ICS structure. DFW uses a hybrid organization for its EOC. No examples were found of airport EOCs organized on the ESF principle. This organizational structure is not commonly used in EOCs today, with notable exceptions being at the federal level, some states, and within larger communities that can experience complex events impacting large populations (FEMA/EMI 2012).

TRANSPARENCY DILEMMA IN A COMMAND AND CONTROL ENVIRONMENT

Emergency response and recovery are activities that require clear command and control, and this includes all aspects of communications associated with emergency management activities. Consistent application of NIMS and ICS doctrine and practices promote this clarity. However, social media, especially in the era of so-called citizen journalism, cannot be controlled, only managed. A major issue in the management of social media for senior managers, PIOs, and first responders and emergency managers is how to deal with the transparency dilemma (Adler 1999); this refers to the potential interference in emergency management activities that require precise communications from interference—public or political pressure—generated by the airport's or civilian's postings on social media. The airport's benefits from situational awareness and even intelligence through social media needs to be balanced against the need to evaluate information from social media for validity, accuracy, and timeliness and to protect the precision of internal communications from disruption by outside noise.

The advantages to airports of practicing transparency after the response to and recovery from an emergency were well established by *ACRP Synthesis 60* (Smith et al. 2015). The general case for the value of transparency in emergencies was made by O'Malley et al. (2009), who urge organizations "to put in place practical mechanisms to encourage open . . . communication for emergencies." The implication is that transparency has benefits that make it worth an airport's effort to overcome any problems it may create.

CHAPTER SIX

ROLE OF SOCIAL MEDIA

Social media have become a go-to destination for information. In airport emergencies, both internal and external constituencies use social media as their only source, or as one of their primary sources, of information. This includes airport senior managers, first responders, emergency managers, other airport employees, stakeholders at the airport such as airlines and tenants, local government, the media, and the public. Increasingly, people not only seek out information from social media after they become aware of an incident but pre-program their social media applications to alert them when certain types of events happen. For example, Twitter has become a major news-breaking platform. This was emphatically demonstrated by its use by LAX as the airport's official source of information during the November 2013 active shooter incident (LAWA n.d.; Bernstein and Bernstein 2013; Burns 2013; Francheschi–Bicchierai 2013; Gattiker 2013; McKenzie 2013; Mitchell and Takahara 2013; Oliver 2013; Wellmeier 2013; Wilson 2013).

Technologies that enable people to interact and share information through social media—blogs, chat rooms, discussion forums, wikis, YouTube Channels, LinkedIn, Facebook, Twitter, Instagram, Periscope (the video version of Twitter), etc.—were nonexistent or not widely available 15 years ago. Social media can be accessed by computers, tablets, smart and cellular phones, and mobile phone text messaging (Lindsay 2011). Social media continue to evolve very quickly, and the public generally adopts them faster than do institutions. The fast evolution of social media suggests that any airport comprehensive emergency/crisis communications plans that seek to manage social media use be "nimble, adaptive, and flexible in order to sustain the plan's effectiveness in an increasingly networked and fragmented communications and cultural environment" (J. Greenberg, personal communications, Nov. 17 and Dec. 17, 2015).

Airports are keenly aware of the value of social media as a marketing and customer service tool. Airports have incorporated social media platforms or channels into their marketing and communication strategies because they provide a very effective way to reach out to the local community (*ACRP Synthesis 65*—Elliot et al. 2015). With this social media evolution, airport emergency managers are now incorporating the use of social media into their emergency communications. Incorporating social media into an airport's CCP can provide relevant and timely processes for identifying, assessing, mitigating, resolving, and preventing negative impacts resulting from emergencies and mission-critical system failures. Social media can be used to push emergency notification as well as monitor and track the mood and requirements of the impacted public.

In many cases, social media provide emergency managers with their first eyes on the scene of an accident or emergency situation. Often moments after an event occurs, people at the scene acting as "citizen journalists" will be streaming video and posting text messages from the emergency site as was the case with the Asiana crash at SFO (ICF 2013). During the response phase of the emergency, information from social media can provide emergency managers and responders with the environmental and situational awareness needed to provide the appropriate levels of response. During the recovery phase, social media can be used to manage the reactions and needs of the impacted passengers, families, and the public.

There are a number of approaches to analyzing the information coming from social media, including commercially available tools. The primary advantage of such tools is their ability to provide near real-time analytical results. However, no-cost or low-cost local manual systems can suffice at smaller airports and for less complex incidents at large airports (S. Cusson, personal communication, Nov. 17, 2015).

ACRP Synthesis 56: Understanding the Value of Social Media at Airports for Customer Engagement (Perry et al. 2014), also looked at extending use of social media beyond marketing to emergency management:

> The successful use of social media during recent unfortunate events such as the LAX active shooter, the Asiana Flight 214 incident at San Francisco International Airport (SFO), the Boston Marathon bombing, and Hurricane Sandy, have all shown the importance of social media, in particular Twitter, when providing information real time during a crisis and has raised public expectations regarding the sharing of real-time information.
>
> Social media play an important role in providing real-time information about airport operations, including posting alerts about airport closures resulting from inclement weather, network outages, airline computer system failures, air traffic control system delays, and ground traffic delays (pp. 133–134).

ACRP Synthesis 56 suggested further research to identify crisis management strategies and policies for social media.

Tools to facilitate the use of social media in emergency management are being developed. One example is the social media widget for emergency response proposed by Banerjee et al. (2013). Their widget scans Twitter for certain emergency-related topics and sorts them by web-based mapping info, then delivers the results to the emergency managers (pp. 292–295).

Emergency responders are continually seeking ways to quickly monitor and leverage social media information to assist in the response and recovery phases of an emergency. "Beacon" technology is a means of using an airport's WiFi and social media to connect with passengers at the airport or approaching it. New beacon technologies are being developed and deployed that could allow airports to own, operate, or subscribe to systems that will push emergency notifications to social media devices within predefined zones providing time-critical information to the public, for example, shelter in place or evacuation orders. ATL is already using beacon technologies for such purposes (R. McCranie, personal communication, Oct. 15, 2015). Beacon technologies usually require people to opt in to receive the messages. Beacon and similar notification systems are examples of "leveraging commercial infrastructure and technology as much as possible" (Peha 2013, p. 40).

Internal stakeholder notifications through social media are also an area of focus for emergency managers. Social media can be an especially valuable tool for smaller airports with limited funds and available resources. Twitter and Facebook sites can be configured to share notifications among predefined groups of people. Innovative airports have established accounts on these sites specifically for the purpose of sharing critical information, and have encouraged their key stakeholders to configure their personal apps to provide pop-up alerts when any new airport post is made. This essentially provides a low- to zero-cost notification network for the airports.

However, social media use is a double-edged sword. They are a powerful resource for monitoring situations and disseminating information, but can also create an organizational crisis. An airport should be prepared to protect itself from threats presented by the new media (Siah et al. 2010). A deluge of social media "hits" can overload an airport's IT system, freezing the system because of inadequate bandwidth. That was a concern regarding the airport's website in the LAX active shooter incident (LAWA 2014).

In general, the same social media best practices applied to marketing and customer service issues can also be applied to emergency plan communications through social media. Some of these practices might address the following issues:

- Awareness: Identifying potential social media trending as it develops;
- Timeliness: Responding quickly to social media concerns;
- Proper use of resources: Employing factual responses; utilizing subject matter experts as needed;
- Appropriate tone: Showing empathy by using appropriate level of (in)formality in response;
- A consistent channel: Responding to/resolving the crisis in the originating social media channel (SFO 2013).

ACRP Synthesis 56 details additional details on airport social media best practices.

When asked what social media they used most frequently in emergencies (Question 29), the airports surveyed responded that Facebook and Twitter were the most used. This reflects the dominance of Facebook and Twitter with the general public, but differs somewhat from social media use by teenagers and adults under 30 (Duggan et al. 2015). Instagram and Periscope were quickly expanding in the fall of 2015, as was shown by their predominance in use by "citizen journalists" during the Paris terrorist attacks (M. Grady, personal communication, Nov. 17, 2015). Instagram was specifically listed as an option in Question 29, but Periscope was not. This illustrates how fast both the technology of social media and the sociocultural aspect of their adoption by different segments of the public can affect which social media airports should consider.

One major caveat regarding the use of data-driven social media platforms in emergencies is that the major delivery systems—cellular phone service and the Internet—may be overwhelmed to the point of becoming slow, erratic, or even totally unavailable. This may result from sudden surges in posts or physical damage to the cell towers. In general, both the public and emergency managers access social media by means of cell phones.

Social media can be an airport's ally in an emergency or the source of significant problems. It is important that airport emergency/crisis communications plans direct how the airport will use social media and who is in charge of using it, both outgoing and incoming. Social media engages the public through conversation during a crisis, not merely pushing information outwards. Initial impressions from social media can be tested through analytics and metrics.

CHAPTER SEVEN

ISSUES WITH CONTACT LISTS

One of the crossover areas between this study and ACRP Synthesis S04-17, *Tabletop and Full-Scale Emergency Exercises for General Aviation, Non-hub and Small Hub Airports*, concerns emergency contact lists. The survey obtained data on how the airports keep their contact lists updated (Question 30), whether the airports were satisfied with their method of updating contact lists (Question 31), and whether the airports' contact lists were consistent across all plans and documents that contain contact lists such as AEPs (Question 32).

A crucial yet often overlooked part of the emergency planning process is emergency contact list preparation. Even with today's technology, telephones (both land lines and cell phones) are still most often utilized as the primary method to reach people in times of emergency, as they are reliable and recordable. Nearly 86% of the airports surveyed rely on manual updating of their emergency contact lists. Only 8% use any type of electronic or technologically-enhanced system of updating their lists. It might be possible to determine whether a more systematic, exact nature of creating electronic databases exists, one that is tied to a fixed schedule of modification or "updating" much like cellular phones on a nightly basis. Thirty-eight percent (38%) of the airports surveyed say they are on a fixed schedule, but that may be semiannual at best. Forty-two percent (42%) were not sure if their lists were current and consistent at the time of the survey and would likely welcome a solution to ensure their lists are accurate and up-to-date at all times. It appears a natural extension of this study would be a recommendation that airports utilize technology to keep their lists as current as possible. Whether using a manual or automated process, it is essential that call lists be kept up to date so that the call reaches the appropriate party in time of peril.

Half the airports said that they were satisfied with the method they use to maintain their contact lists, while 32% said they were dissatisfied (Question 31). Exercises can be a successful way for airports to test the accuracy and usefulness of their emergency contact lists, but may not be performed frequently enough to ensure that contact lists are adequate if an actual incident occurs. Some airports may simulate using the actual emergency call list and not actually place a call to know if a number is active or out of service. Functional exercises (e.g., call-downs) are the most common test used. In addition, problems with contact lists may emerge during the response to actual emergencies (Smith et al. 2015).

On the issue of whether airports' contact lists are consistent across AEPs and other plans and documents (Question 32), 54% of the airports reported consistency, 24% said the lists were not consistent, and 18% did not know.

The similarity of the response pattern for whether an airport is satisfied with its contact list maintenance method to that for whether the contact lists at the airport are consistent across plans suggests that inconsistency in lists may have created issues during exercises and real emergency responses, but the survey data are insufficient to test this hypothesis.

CHAPTER EIGHT

EVALUATING THE EFFECTIVENESS OF EMERGENCY AND CRISIS COMMUNICATIONS

EVALUATION

The evaluation of airport emergency or crisis communications plans is most often described in qualitative terms during a hot wash and the after-action review/report. The feedback or change loop is often not actually measured. Measuring communications effectiveness is difficult, as communications is just one element that employees, tenants, and passengers experience in emergency response or a mission-critical event. For example, more attention is given to how long and how thorough a terminal evacuation is and how smoothly terminal repopulation proceeds afterwards is (Griffith et al. 2014). Good communications can promote those outcomes but are hard to measure in the process.

> To evaluate the emergency communications plan, Watsonville airport holds two airport-specific exercises a year, and one of them is a surprise drill arranged in partnership with the city fire department. After each exercise there is an after-action review with broad participation by stakeholders, and the plan is tweaked as needed. (WVI Case Example)

During the course of this study, the main metrics encountered were for social media, and those were mostly for marketing, not for emergencies. However, Palttala and Vos (2012) have developed and tested a set of quality indicators—a scorecard—for crisis communications to support emergency management by public authorities. Their tool's framework, based on the concepts of institutional learning, is described as an audit instrument that facilitates learning, supports the continuous improvement processes for crisis communications, and gives insights into the performance measures by which efficiency can be measured (pp. 39–40). The scorecard is notable for tracking on-going communications through all the stages of emergency management (p. 40). It is strongly oriented toward the information needs and reactions of stakeholders, the media, and the public (pp. 41–42).

> The @LAX_Official account tweeted approximately 500 times [on Nov. 1–2, 2013] and generated more than 260 million impressions. The equivalent media value for this activity is more than $2,000,000. The value is based on $8.43 CPM (cost-per-thousand impressions). (Karz 2013)

A notable exception to the lack of quantitative measures of the effectiveness, or at least the effects, of the use of social media during an emergency at airport came during and immediately after the Nov. 1, 2013, active shooter incident at LAX. The Los Angeles Visitors and Convention Bureau, having appropriate data analysis tools, analyzed the social media traffic, particularly Twitter, to look for engagement—that is, conversations that resulted when the airport's tweets were responded to by members of the public (LAWA n.d.; M. Grady, personal communication, Nov. 17, 2015). The partnership of the airport and the visitor's bureau to evaluate social media effectiveness can be copied by nearly any U.S. airport, as most airports already work with their local visitors or tourism bureaus. Burns (2013) evaluated LAX's emergency use of Twitter by tracking the increase in the number of Twitter followers the airport had, a number that nearly doubled from October 2013 to November 2013. Oliver (2013) tracked responses to LAX commenting on the quality and usefulness of the airport's use of Twitter. A final important aspect of evaluation of social media was also illustrated by LAX in November 2013: The airport included expert verification, usually from senior law enforcement officials, in its tweets, even as those senior officials emphasized that the LAX Twitter account was the official source of information (Wilson 2013).

As noted in *ACRP Synthesis 60*, airports are becoming more transparent in their sharing of experiences dealing with emergencies and crises, including AARs and lessons learned, with other

airports. This is another way that an airport can evaluate its emergency and crisis communications plan. Perhaps the most useful part of the Palttala and Vos scorecard is the generic outline/matrix that relates the stages of crisis and emergency management activities to specific communications tasks and with stakeholder groups (p. 45). The tasks are phrased as statements that can be rated on a fixed scale (p. 46). In the water contamination emergency example, Palttala and Vos use a scale of 1 to 5:

1 = This is completely not taken care of;
2 = The importance has been recognized, but no action is taken;
3 = We have started to manage/act on this;
4 = This is part of the action, but non-systematic; and
5 = This is a systematic (and expected) part of the action.

Applying this scale to the crisis phrases/stakeholder matrix allowed the computation of scores (p. 47) that help in spotting strengths and weaknesses in the communications plan. It looks quantitative, but in reality it is not substantially different than the HSEEP ratings of how well an exercise's capability targets are performed, defined as:

P—Performed without challenge
S—Performed with some challenges
M—Performed with major challenges
U—Unable to be performed (FEMA 2015).

The Palttala and Vos scorecard approach may be very helpful for making sure that an airport's emergency or crisis communications plan addresses the right types of activities and the right stakeholders, but it will probably be cumbersome to apply. This scorecard could easily accompany the information that was learned in the airport's after-action report/hotwash meeting and become part of the overall documentation of the event.

APPLICATION OF LESSONS LEARNED

Lessons learned from real incidents and from exercises about communications need to be captured during the evaluation phase and reported in a manner that allows for follow-up. Unless action items are assigned and progress on them is tracked, the lessons learned are likely to be lost. If the communications lessons learned from an airport's emergency activities are not applied to future behavior and investments, the airport is wasting a major opportunity for self-improvement.

> During a recent (2015) after-action review meeting, an important lesson was learned as a result of CCP activation dealing with an aircraft crash. The review revealed that the use of telephones for "critical information" such as runway opening/closure was essential versus other mediums of communication to avoid confusion to ensure that vital information was clear to all parties involved. The second critical change was to have a single point of contact in airport operations and air traffic control, so that the messages were not a point of confusion between different employees. (BOI Case Example)

Lessons learned can involve things that went wrong and systemic failures. These are the most important kind of lessons learned as they can lead to corrective actions through the continuous improvement process. Ideally, such lessons learned are garnered through exercises so that the consequences of actual emergencies can be mitigated by appropriate preparedness measures. In a way, exercises may be visualized as experiments to test plans (here, crisis/emergency communications plans), and failures can be invaluable as learning opportunities (Edmondson 2011).

> Every event or exercise is followed by post event debriefs and evaluations of what went right, what went wrong, and how we can improve and incorporate these lessons learned immediately into our plan, processes and procedures. (DFW Case Example)

The airports were specifically asked if they had a formal process for incorporating lessons learned from exercises into their written plans and procedures such as AEPs, SOPs, or communications plans (Question 53). Nearly half (48%) of the surveyed airports have a formal system, but an equal number do not; 4% skipped the question. About one-fifth of the airports (22%) have a written process for capturing and applying lessons learned.

Ten (10) of the surveyed airports—all among the 22% that reported having a written process for applying lessons learned—reported the use of one or more of five basic tools (Question 54):

- After-action reviews (AARs)
- Improvement plans
- Explicit provisions in the AEP specifying process and individual responsibilities
- HSEEP AAR/Improvement Plan Matrix (DHS 2013)
- Active tracking of the implementation of lessons learned, either by a committee or by assigned individuals.

The survey results show that these tools are sometimes used in combination; this is also the recommendation of HSEEP (DHS 2013).

It is important that airports continue the final process of assessment with metrics that can be implemented and used to improve the level of compliance gained in the next exercise; otherwise the planning effort could be viewed as futile and a waste of resources (Smith et al. 2016).

CHAPTER NINE

CONCLUSIONS AND SUGGESTIONS FOR FURTHER RESEARCH

SUCCESSFUL PRACTICES AND LESSONS LEARNED

One of the most successful management practices discovered at an airport in this study is the use of field operations guides (FOGs) that direct the nature and sequence of activities that specific individuals with communications duties need to carry out in typical emergency situations. FOGs turn a comprehensive airport emergency plan (AEP) or crisis communications plan (CCP) into actionable items, typically in checklist format. Appendices D through L present a typical array of such FOGs. The array shown pertains only to the public information officer (PIO) and PIO staff; similar FOGs can productively be used for other personnel with communications functions in the airport's emergency operations command, unified command structure, incident command post, or elsewhere in the airport's organization for emergency response and recovery. Another pertinent model for an easy to use tool is the "Emergency Event . . . Initial Actions" checklist shown in Case Example 4: Watsonville Municipal Airport in Appendix C.

> The Initial Actions document is a one-page tactical/operational tool for airport employees. Laminated copies are in every airport vehicle, fuel truck, fire department rig as well as in the Unified Command room and at various on-field locations. Additionally, each employee has a copy in his or her personal vehicle. (WVI Case Example)

The checklist of essential and desirable elements for enhancing the planning processes and outcomes for AEP/CCP can be found in Appendix M of this report. It addresses nine stages of the planning process:

1. Pre-planning
2. Planning
3. Nature of the plan
4. Internal aspects of communications to include
5. External aspects of communications to include
6. Training
7. Exercises
8. Evaluation
9. Continuous improvement.

Examination of items in the checklist reveals the overwhelming importance of pre-planning in having a successful emergency/crisis communications plan. Most importantly, an airport needs to know itself, its partners, and the possible hazards they face.

CONCLUSIONS

Analysis of the data for this synthesis led to 12 major findings:

1. An effective AEP/CCP needs to be nimble enough to deal with fast-evolving technological change.
2. Many benefits are gained from the process of emergency communications planning, not just from having a plan. The benefits are greatest when the planning process is inclusive of stakeholders (on and off the airport) and is based on an honest hazards analysis that includes both

emergencies and "mission-critical" systems failures and events. This is supported by Schraagen and van de Ven (2011), who found that planning "good communications supports human adaptation and decision-making in crises" (p. 184).

3. An effective AEP/CCP is to provide simple, clear, scalable, implementable procedures that will promote the accurate and timely passing of information within the airport and between the airport and its partners and customers.
4. A communications or crisis communications plan is not a static document. It requires exercising, evaluation, and an application of lessons learned from actual incidents, exercises, and reviews. This application of the continuous improvement process is essential, and the review process works most effectively when it is purposeful and scheduled periodically.
5. Training on the coordinated and effective use of communications tools is essential.
6. Airports benefit from doing more emergency communications planning than required in an AEP (or comparable for non-Part 139 airports).
7. Many airports in the study are moving in the direction of a single comprehensive plan. This trend will probably increase pressure for clear, effective use of airport EOCs with regard to communications.
8. It is important that a single comprehensive stand-alone plan be incorporated in the airport's AEP by reference and be firmly anchored in the National Incident Management System (NIMS) and Incident Command System (ICS) with a strong focus on the role of the Joint Information System, Joint Information Center, and PIO.
9. An airport's PIO can manage the development, maintenance, and continuous improvement effort of the comprehensive emergency plan and CCP, but this requires close collaboration and cooperation with operations, emergency management, and first responders. This will most effectively mobilize knowledge of the tools and coordination while helping the airport keep up with technological innovation in communications.
10. Redundant and interoperable means of communications are essential. Effective emergency communications enhance the resiliency of airports and their communities.
11. Airports of any type or size can profitably leverage the communications capabilities of their emergency partners; NIMS and ICS are the essential tools for coordinating with partners.
12. Effective emergency communications can make a conduit from safety to improved customer service. This is especially true in regards the fast-evolving use by airports of social media for emergencies and other crises.

SUGGESTIONS FOR FURTHER RESEARCH

Based on the results of this synthesis, there are a number of topics that could be investigated to assist airports in creating and improving CCPs:

1. The use of social media in airports for communicating emergency information and mission-critical crisis information to passengers and the public. *ACRP Synthesis 56* stated this research need as "identifying crisis management strategies and policies for social media" (Perry et al. 2014, p. 143).
2. Data-mining techniques that could be applied to social media for situational awareness by airport emergency managers.
3. Automated methods of maintaining and updating contact lists and making them consistent across all airport plans and standard operating procedures.
4. Training doctrine and materials for the development, implementation, and evaluation of comprehensive AEP/CCPs.
5. PIO roles and the training is required to be able to fulfill these roles.
6. Models of AEP/CCP language or plan sections for the accommodation of people with disabilities or those who speak languages other than English.
7. Development of a performance scorecard or other metrics for airport emergency/crisis communications.

8. Methods of identifying capable and interested airport employees and partners who can be trained to perform back-up and supplemental roles in emergency communications during prolonged or large incidents.
9. Methods to promote ADA compliance for all emergency communications including websites and social media.
10. Customer service-related benefits will accrue if airports make intentional efforts to plan emergency management including emergency communications into their strategic or business plan. Such intentional efforts might include budgeting for strategic training efforts, or acquiring assets, or both.

ACRONYMS

AAR	After action review
AAR/IP	After action review/improvement plan
A-CERT	Airport Community Emergency Response Team
ACI	Airports Council International
AEP	Airport emergency plan
AirTap	Airport Technical Assistance Program (Minnesota)
AOA	Air operations area
APA	Centennial Airport
API	Airport Performance Indicator
ARFF	Aircraft Rescue and Fire Fighting
ASE	Aspen/Pitken County Airport
ASP	Airport security program
ATC	Air traffic control
ATCT	Air traffic control tower
ATL	Hartsfield–Jackson Atlanta International Airport
AVSEC	Aviation Security
BFF	Western Nebraska Regional Airport
BOI	Boise Airport
BUR	Bob Hope Airport
CBP	U.S. Customs and Border Protection
CCP	Crisis communication(s) plan
CERT	Community Emergency Response Team
CFR	Code of Federal Regulations
COMM	Communications
COP	Common operating picture
COS	Colorado Springs Municipal Airport
CRW	Yeager Airport
CS	Non-primary commercial service airport in Essential Air Service program
DCA	Washington Ronald Reagan National Airport
DEN	Denver International Airport
DFW	Dallas/Fort Worth International Airport
DHS	Department of Homeland Security
DIA	Denver International Airport (acronym used by airport and city)
DIKW	Data-to-wisdom model
DVL	Devils Lake Regional Airport
DVT	Phoenix Deer Valley Airport
EAS	Essential Air Service
ECP	Emergency communication(s) plan
EGV	Eagle River Union Airport
EM	Emergency management
EMI	Emergency Management Institute (of FEMA)
EMP	Emergency Management Plan
EOC	Emergency operations center
EPG	Executive Policy Group
EPM	Emergency Procedures Manual
ESF	Emergency Support Function
EUG	Eugene Airport
EXPLAN	Exercise plan
FAR	Federal Aviation Regulation
FAR	Hector International Airport
FBO	Fixed base operator
FEMA	Federal Emergency Management Agency
FLL	Fort Lauderdale-Hollywood International Airport

FOD	Fort Dodge Regional Airport
FOG	Field Operations Guide
FOUO	For official use only
FSD	Federal Security Director
GA	General aviation
GMJ	Grove Regional Airport
GYR	Phoenix Goodyear Airport
HAZMAT	Hazardous materials
HIB	Range Regional Airport
HSEEP	Homeland Security Exercise and Evaluation Program
IAD	Washington Dulles International Airport
IAEM	International Association of Emergency Managers
IAP	Incident action plan
IC	Incident commander
ICP	Incident command post
ICS	Incident Command System
IMT	Incident Management Team
IP	Improvement Plan
IROPS	Irregular operations
IT	Information technology
IWA	Phoenix–Mesa Gateway Airport
JAX	Jacksonville International Airport
JIC	Joint information center
JLN	Joplin Regional Airport
LAL	Lakeland Linder Regional Airport
LAWA	Los Angeles World Airports
LAX	Los Angeles International Airport
LEO	Law enforcement officer, law enforcement organization
LEX	Blue Grass Airport
LH	Large hub airport
LVK	Livermore Municipal Airport
MAC	Metropolitan Airports Commission
MACC	Multi-agency coordination center
MCO	Orlando International Airport
MDAD	Miami–Dade Aviation Department
MDFR	Miami–Dade Fire Rescue
MDPD	Miami–Dade Police Department
MEM	Memphis International Airport
MH	Medium hub airport
MIA	Miami International Airport
MMU	Morristown Municipal Airport
MSEL	Master Scenario Events List
MSP	Minneapolis-St. Paul International Airport
MTV	Blue Ridge Airport
MVY	Martha's Vineyard Airport
MWAA	Metropolitan Washington Airports Authority
NAS	National Airspace System
navaid	Navigation aid
NH	Non-hub primary airport
NIMS	National Incident Management System
NOTAM	Notice to Airmen
NPIAS	National Plan of Integrated Airport Systems
NTSB	National Transportation Safety Board
NYL	Yuma International Airport
O&M	Operations and maintenance
OPF	Miami–Opa Locka Executive Airport
ORK	North Little Rock Municipal Airport

OWA	Owatonna Degner Regional Airport
PA	Public address
PHX	Phoenix Sky Harbor International Airport
PIO	Public information officer
PR	Public relations
PSK	New River Valley International Airport
RDU	Raleigh–Durham International Airport
RL	Reliever airport
RNO	Reno–Tahoe International Airport
RST	Rochester (MN) International Airport
RSW	Southwest Florida International Airport
SAV	Savannah/Hilton Head International Airport
SEA	Seattle–Tacoma International Airport
SFO	San Francisco International Airport
SH	Small hub airport
Simcell	Simulation cell
SLC	Salt Lake City International Airport
SME	Subject matter expert
SOP	Standard operating procedure
SSI	Sensitive Security Information
STL	Lambert–St. Louis International Airport
SXQ	Soldotna Airport
TMB	Miami Executive Airport
TNT	Dade–Collier Training and Transition Airport
TSA	Transportation Security Administration
TTX	Table top exercise
UC	Unified command
UZA	Rock Hill–York County Airport
VQQ	Cecil Airport
W.E.A.C.T.	Watsonville Emergency Airlift Command Team
WVI	Watsonville Municipal Airport
X51	Miami Homestead General Aviation Airport
YIP	Willow Run Airport

GLOSSARY

Advisory Circular	Instructions from the FAA on how to comply with federal aviation laws and regulations.
After-action review	A review, usually internal, conducted after response and recovery from an incident are complete for the purpose of evaluating performance and fine-tuning plans and procedures for future incidents.
Air traffic control	The process by which aircraft are safely separated in the sky as they fly and at the airports where they land and take off.
Airport emergency plan	A comprehensive plan for dealing with all hazards reasonably expected to affect a given airport, required for all Part 139 airports and recommended for all other airports.
Common operating picture (COP)	A single identical display of relevant operational information sharing by more than command.
Communication	The transmission of thoughts, messages, or information.
Community Emergency Response Team (CERT)	A key component of Citizen Corps, the CERT program trains citizens to be better prepared to respond to emergency situations in their communities. When emergencies occur, CERT members can provide critical support to first responders, provide immediate assistance to victims, and organize volunteers at a disaster site.
Departmental operations center	The operations center that supervises normal operations, emergency operations, or both for a department of a larger organization.
Drill	A coordinated, supervised activity usually used to test a single specific operation or function in a single agency.
Emergency	Any occasion or instance that warrants action to save lives and protect property, public health, and safety.
Emergency management	The coordination and integration of all activities necessary to build, sustain, and improve the capabilities to prepare for, respond to, recover from, or mitigate against threatened or actual disasters or emergencies, regardless of cause.
Emergency operations center	A protected site from which emergency officials coordinate, monitor, and direct response activities during an emergency.
Exercise	A planned, staged implementation of the critical incident plan to evaluate processes that work and identify those needing improvement.
Federal Aviation Regulation	Rules prescribed by the Federal Aviation Administration (FAA) governing all aviation activities in the United States; the FARs are part of Title 14 of the Code of Federal Regulations (CFR).
Field Operations Guide	A pocket-size manual of instructions on the application of the Incident Command System.
Full-scale exercise	The most complex and resource-intensive type of exercise. They involve multiple agencies, organizations, and jurisdictions and validate many facets of preparedness. FSEs often include many players operating under cooperative systems such as the Incident Command System (ICS) or Unified Command.
Functional exercise	An exercise that is designed to validate and evaluate capabilities, multiple functions and/or sub-functions, or interdependent groups of functions.
General aviation airport	An airport that does not meet the criteria for classification as a commercial service airport may be included in the NPIAS as a general aviation airport if they account for enough activity (having usually at least ten locally-based aircraft) and are at least 20 miles from the nearest NPIAS airport.
Hub	A very busy commercial service airport.
Incident	An occurrence or event, natural or man-made, that requires a response to protect life or property.

Incident action plan	An organized course of events that addresses all phases of incident control within a specified time. An IAP is necessary to effect successful outcomes in any situation, especially emergency operations, in a timely manner.
Incident command post	The physical location of the Incident Commander.
Incident Command System	A standardized organizational structure used to command, control, and coordinate the use of resources and personnel that have responded to the scene of an emergency.
Incident Commander	The individual responsible for all incident activities, including development of strategies and tactics and ordering and release of resources.
Incident Management Team	An Incident Commander and the appropriate Command and General Staff personnel assigned to an incident; the level of training and experience of the IMT members, coupled with the identified formal response requirements and responsibilities of the IMT, are factors in determining "type," or level, of IMT.
Interoperability	The ability of systems, personnel, and equipment to provide and receive functionality, data, information, and/or services to and from other systems, personnel, and equipment, between both public and private agencies, departments, and other organizations, in a manner enabling them to operate effectively together.
Joint Information Center	A central location that facilitates the operation of the Joint Information System.
Joint Information System	The JIS provides the mechanism to organize, integrate, and coordinate information to ensure timely, accurate, accessible, and consistent messaging across multiple jurisdictions and/or disciplines, including the private sector and NGOs.
Large hub airport	An airport with at least 1 percent of total U.S. passenger enplanements.
Law enforcement officer	A government employee responsible for the prevention, investigation, apprehension, or detention of individuals suspected or convicted of offenses against the criminal laws.
Medium hub airport	An airport with between 0.25 percent and 1 percent of total U.S. passenger enplanements.
Mutual aid	Reciprocal assistance by emergency services under a predetermined plan.
Mutual aid agreement	A voluntary, non-contractual arrangement to provide emergency or disaster assistance between two or more entities. It typically does not involve payment, reimbursement, liability, or mandatory responses.
National Incident Management System	A systematic, proactive approach guiding government agencies at all levels, the private sector, and nongovernmental organizations to prepare for, prevent, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life and property and reduce harm to the environment.
National Plan of Integrated Airport Systems (NPIAS)	A national airport plan prepared by the FAA in accordance with Section 47103 of Title 49 of the United States Code; NPIAS includes as primary and commercial service airports selected general aviation airports as well as all general aviation airports designated as reliever airports by the FAA.
Non-hub primary airport	An airport that enplanes less than 0.05 percent of all commercial passenger enplanements but has more than 10,000 annual enplanements.
Non-primary Commercial Service airport	A non-hub airport with at least 2,500 and no more than 10,000 passengers a year; typically an airport with commercial passenger service subsidized by the Essential Air Service Program.
Notice to Airmen	A notice or advisory distributed by means of telecommunication containing information concerning the establishment, conditions or change in any aeronautical facility, service, procedure, or hazard, the timely knowledge of which is essential to personnel and systems concerned with flight operations.

Part 139 airport	An airport that serves scheduled and unscheduled air carrier aircraft with more than 30 seats, serves scheduled air carrier operations in aircraft with more than nine seats but less than 31 seats, and is required by the FAA Administrator to have a certificate for operation.
Primary airport	Public airports receiving scheduled passenger service and having more than 10,000 annual passenger enplanements.
Public address system	An electronic amplification system used as a communication system in public areas.
Public information officer	The person responsible for communicating with the public, media, and/or coordinating with other agencies, as necessary, with incident-related information requirements.
Public relations	The practice of managing the dissemination of information between an individual or organization and the public.
Reliever airports	A high-capacity general aviation airport in a major metropolitan area; such airports have 100 or more based aircraft or 25,000 annual itinerant operations; the FAA officially designates reliever airports.
Risk analysis	The systematic objective examination or reexamination of the risks and hazards that may affect a facility, program, operation, or procedure.
Seminar (exercise)	A discussion-based exercise to orient participants or provide an overview of authorities, strategies, plans, policies, procedures, protocols, resources, concepts, and ideas.
Simulation cell (Simcell)	A separate group at an exercise that provides injects and reactions to the actions of the participants.
Small hub airport	An airport with 0.05 percent to 0.25 percent of total U.S. passenger enplanements.
Tabletop exercise	An activity that involves key personnel discussing simulated scenarios in an informal setting. This type of exercise can be used to assess plans, policies, and procedures or to assess the systems needed to guide the prevention of, response to, and recovery from a defined incident. TTXs are typically aimed at facilitating understanding of concepts, identifying strengths and shortfalls, and generating positive changes in attitude. Participants are encouraged to discuss issues in depth and develop solutions through slow-paced problem solving as opposed to the rapid, spontaneous decision making that occurs under actual or simulated emergency conditions.
Transparency Dilemma	The condition that results when full disclosure of information conflicts with the needs for rigorously precise use of information within an operation.
Unified Command	The Unified Command organization operating within NIMS consists of the Incident Commanders from the various jurisdictions or organizations operating together to form a single command structure.
Workshop (exercise)	A discussion-based exercise similar to a seminar except that participant interaction is increased, and the focus is placed on achieving or building a product.

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APPENDIX A

Survey Questions

This appendix presents the questions and responses from the joint ACRP S04-16 and ACRP S04-17 survey that are pertinent to S04-17. Analytical results and interpretations are presented in chapters two through six.

(Questions 1–7 gathered information on the airport name and person completing the survey.)

Question 8: What is the structure of your airport? (Table A1)

TABLE A1
QUESTION 8: WHAT IS THE STRUCTURE OF YOUR AIRPORT?

Governance Structure	Percent in Study	Number
City department (including enterprise department or revenue department)	46.0%	23
County department	8.0%	4
Joint city–county department (e.g., KSFO)	0.0%	0
State (e.g., KBWI)	0.0%	0
Authority within one state	40.0%	20
Multi-state authority	2.0%	1
Private corporation/privatized/concessioned	2.0%	1
Joint board	2.0%	1
Total		50
(Smith, Garcia, Sawyer & Kenville data)		

Question 9: Which of the following positions are staff positions at your airport (FT or PT), or are staff positions supported with airport funds to another agency (FT or PT). The two "current duties" choices pertain to an airport manager or operations supervisor, or comparable department head position. If a position exists but is vacant, please mark it in the appropriate column. (Table A2)

TABLE A2
QUESTION 9: PIO STAFFING CHARACTERISTICS OF SURVEYED AIRPORTS

	Have FT on airport staff		Have PT on airport staff		Pay FT at other agency		Pay PT at other agency		FT role part of current duties		PT role part of current duties		Total	
Public information officer (PIO)	26	54.2%	2	4.2%	4	8.3%	3	6.3%	6	12.5%	7	14.6%	48	100%
Emergency manager	14	32.6%	1	2.3%	3	7.0%	1	2.3%	9	20.9%	15	34.9%	43	100%
Emergency planner	7	17.5%	1	2.5%	2	5.0%	0	0.0%	12	30.0%	18	45.0%	40	100%
Training officer	14	35.9%	1	2.6%	1	2.6%	1	2.6%	10	25.6%	12	30.8%	39	100%
Exercise designer	5	12.5%	1	2.5%	2	5.0%	2	5.0%	11	27.5%	19	47.5%	40	100%

(*continued on next page*)

TABLE A2
(*continued*)

	Have FT on airport staff		Have PT on airport staff		Pay FT at other agency		Pay PT at other agency		FT role part of current duties		PT role part of current duties		Total	
Exercise evaluator	5	12.5%	0	0.0%	4	10.0%	3	7.5%	9	22.5%	19	47.5%	40	100%
Operational program planner	7	18.4%	2	5.3%	3	7.9%	1	2.6%	9	23.7%	16	42.1%	38	100%
Operational evaluator	6	15.4%	1	2.6%	3	7.7%	1	2.6%	9	23.1%	19	48.7%	39	100%
Risk/hazard manager or equivalent role	15	35.7%	2	4.8%	4	9.5%	3	7.1%	7	16.7%	11	26.2%	42	100%
ARFF Training Officer	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100%
Airport Manager	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	100%
Aviation Director	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100%
Deputy Aviation Director	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100%
Emergency Manager Position Vacant	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100%
Fire Chief	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	100%

Question 10: Of your staffed positions which level of training applies—Both NIMS and ICS training, NIMS training only, ICS training only, neither NIMS nor ICS training, don't know? (Table A3)

TABLE A3
QUESTION 10: NIMS AND ICS TRAINING FOR AIRPORT STAFF MEMBERS

	Both NIMS and ICS training		NIMS training only		ICS training only		Neither NIMS nor ICS training		Don't know		Total	
Public information officer (PIO)	31	66.0%	2	4.3%	2	4.3%	9	19.1%	3	6.4%	47	100%
Emergency manager	35	81.4%	0	0.0%	1	2.3%	6	14.0%	1	2.3%	43	100%
Emergency planner	30	76.9%	1	2.6%	1	2.6%	6	15.4%	1	2.6%	39	100%
Training officer	26	65.0%	3	7.5%	2	5.0%	6	15.0%	3	7.5%	40	100%
Exercise designer	30	73.2%	1	2.4%	1	2.4%	6	14.6%	3	7.3%	41	100%
Exercise evaluator	32	78.0%	0	0.0%	0	0.0%	6	14.6%	3	7.3%	41	100%

TABLE A3
(*continued*)

	Both NIMS and ICS training		NIMS training only		ICS training only		Neither NIMS nor ICS training		Don't know		Total	
Operational program planner	28	71.8%	2	5.1%	0	0.0%	5	12.8%	4	10.3%	39	100%
Operational evaluator	30	76.9%	0	0.0%	0	0.0%	5	12.8%	4	10.3%	39	100%
Risk/hazard manager or equivalent role	26	63.4%	3	7.3%	1	2.4%	6	14.6%	5	12.2%	41	100%
Airport Firefighter	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100%
Airport Manager	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	100%
Aviation Director	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100%
Deputy Aviation Director	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100%
Emergency Manager position is vacant	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	100%
Fire Chief	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	100%
GAA Supervisor	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	100%
Manager	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	1	100%
Operations	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	1	100%
All directors and senior mgrs	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100%
Anyone who works in ECC/EOC	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100%

(Smith, Garcia, Sawyer & Kenville data)

Question 11: Where in your airport's organizational structure is the person in charge of your emergency communications (i.e., has decision-making authority over program)? (Table A4)

TABLE A4
QUESTION 11: WHO IS IN CHARGE OF EMERGENCY COMMUNICATIONS?

Position in Charge of Emergency Communications	Percent	Count
C-level (e.g., CEO, COO, CIO, CFO, etc.)	14.0%	7
Direct report to C-level manager (e.g., division head, department head)	48.0%	24
Manager within a department but not a direct report to a C-level manager	18.0%	9
Non-manager/subject matter expert	0.0%	0
Outside the airport's organization - in airport sponsor's organization (e.g., city or county)	4.0%	2
Outside the airport's organization - contractor	0.0%	0
Emergency communications duties are split (either internally or with another partner, please describe in question 12.)	16.0%	8
Total		50
(Smith, Garcia, Sawyer & Kenville data)		

Question 12: If you answered "Emergency communications duties are split" in question 11, please describe the arrangement at your airport and/or between your airport and any outside partners in emergency communications. (Table A5)

TABLE A5
QUESTION 12: IF COMMUNICATIONS DUTIES ARE SPLIT, HOW ARE THEY SPLIT?

Response	Count
Coordination with Department of Public Safety and Corporate Communication	1
GYR supported by extensive staff at PHX	1
Internally Emergency Comms is split between our Airport Comms Center and 9-1-1 dispatch	1
PIO for the City of Joplin	1
The County's Emergency Management Coordinator and Airport Manager share the role.	1
I am in charge of direct airport related incidences but emergency response and coordination is with the City as well.	1
I would handle smaller emergency communications, but if anything major happened, the city's communications director would probably take over.	1
Airport Manager has authority over program with respect to department and AEP. Airport Manager in this case is also a part time local firefighter and NIMS/ICS trained with ARFF certification. Therefore work closely with and split many responsibilities with City Emergency Manager.	1
Various staff are responsible including C-level; Direct reports to C-level; Manager w/in a dept. (Emergency Manager, etc.); and SMEs (PIO, etc.).	1
Specialized skill positions organic to Authority; however, full time posting is at the other airport administered in the Authority Structure.	1
Emergency communications are through an emergency management system with Yuma County and MCAS Yuma depending on the emergency issue. The Marine Corps is our primary airfield responder. The exercises run annually are led by MCAS Yuma and the airport also attend the crisis management and emergency response with the City/County of Yuma.	1
(Smith, Garcia, Sawyer & Kenville data)	

(Questions 13–16 collected responding individual's contact information if it was different from that for the overall survey response.)

Question 17: Does your airport have a single written comprehensive emergency communications plan? (Table A6)

TABLE A6
QUESTION 17: DOES YOUR AIRPORT HAVE A SINGLE WRITTEN COMPREHENSIVE EMERGENCY COMMUNICATIONS PLAN?

Single Written Comprehensive Emergency Communications Plan?	Percent	Count
Yes, totally within the airport and its departments	42.0%	21
Yes, joint or shared with non-airport departments or agencies (e.g., police)	32.0%	16
No, but we're in the process of developing an emergency communications plan	18.0%	9
No, and none are in the process of being developed	8.0%	4
Don't know	0.0%	0
Total		50
(Smith, Garcia, Sawyer & Kenville data)		

Question 18: Does your airport have multiple emergency communications plans? (Table A7)

TABLE A7
QUESTION 18: DOES YOUR AIRPORT HAVE MULTIPLE EMERGENCY COMMUNICATIONS PLANS?

Multiple emergency communications plans?	Percent	Count
Yes, multiple plans with a single "owner" (e.g., multiple airport SOPs)	16.0%	8
Yes, multiple plans each with a different "owner" (i.e., multiple owners being operations, fire, police, etc.)	20.0%	10
We have a single written emergency communications plan	44.0%	22
No, we don't have any written stand-alone communications plan	18.0%	9
Don't know	2.0%	1
Total		50
(Smith, Garcia, Sawyer & Kenville data)		

Question 19: Is/are your airport's emergency communications plan/plans part of the Airport Emergency Plan (AEP)? (Table A8)

TABLE A8
QUESTION 19: IS YOUR AIRPORT'S EMERGENCY COMMUNICATIONS PLAN PART OF THE AIRPORT EMERGENCY PLAN (AEP)?

Part of AEP?	Percent	Count
Yes, written into the plan	66.0%	33
Yes, incorporated by reference to a separate plan/plans	20.0%	10
No	14.0%	7
Don't know	0.0%	0
Total		50
(Smith, Garcia, Sawyer & Kenville data)		

Question 20: Is/are your emergency communication plan/plans part of the airport sponsor's emergency communications plan, where "sponsor" is the owner of the airport (e.g., city, county, authority, etc.)? (Table A9)

TABLE A9
QUESTION 20: IS YOUR EMERGENCY COMMUNICATION PLAN PART OF THE AIRPORT SPONSOR'S EMERGENCY COMMUNICATIONS PLAN?

Plan Part of Airport's Sponsor's Plan?	Percent	Count
Yes	80.0%	40
No	16.0%	8
Don't know	4.0%	2
Total		50
(Smith, Garcia, Sawyer & Kenville data)		

Question 21: What aspects of internal communications during emergencies does your plan address? (Please mark all that apply.) (Table A10)

TABLE A10
QUESTION 21: ASPECTS OF INTERNAL COMMUNICATIONS ADDRESSED IN AIRPORT EMERGENCY COMMUNICATIONS PLANS

Table A10. Question 21		
Internal Communication Aspects Addressed in Plan(s)	Percent	Count
Emergency notification	86.0%	43
Role of PIO	76.0%	38
Chain-of-command communications	72.0%	36
Landline telephone	72.0%	36
Cell phone	72.0%	36
Radio	68.0%	34
Communications in ICS environment	62.0%	31
Communications procedures within Emergency Operations Center (EOC) or Departmental Operations Center (DOC)	60.0%	30
Communications in NIMS environment	58.0%	29
Public address system	58.0%	29
Joint Information Center (JIC)	52.0%	26
Social media	50.0%	25
Web-based communications	48.0%	24
Message discipline	36.0%	18
Dedicated communications circuits	36.0%	18
Location and procedures for JIC	34.0%	17
Joint Information System (JIS)	30.0%	15
Flight Information Display System (FIDS)	30.0%	15
Human traffic directors	28.0%	14
Alternative communications systems	26.0%	13
Baggage Information Display System (BIDS)	24.0%	12
Movable signs	24.0%	12
Movable barriers	24.0%	12
Common operations picture (COP)	22.0%	11
Runner/messenger	22.0%	11
Non-verbal visual indicators	22.0%	11
HAM radio	20.0%	10
Satellite phone	20.0%	10
Reverse 911	18.0%	9
Programmable signage other than FIDS/BIDS	16.0%	8
None of the above	4.0%	2
Total		50
(Smith, Garcia, Sawyer & Kenville data)		

Multiple answers were accepted.

Question 22: What aspects of external communications during emergencies does your plan address? (Please mark all that apply.) (Table A11)

TABLE A11
QUESTION 22: ASPECTS OF EXTERNAL COMMUNICATIONS ADDRESSED IN AIRPORT EMERGENCY COMMUNICATIONS PLANS

External Communication Aspects Addressed in Plan(s)	Percent	Count
Joint Information Center (JIC)	56.0%	28
Joint Information System (JIS)	34.0%	17
Communications to airport sponsor	58.0%	29
Communications to mutual aid partners	84.0%	42
Communications to federal agencies	86.0%	43
Communications with airlines	68.0%	34
Communications with concessionaires	54.0%	27
Communications to other external stakeholders	68.0%	34
Communications to the public	76.0%	38
Media relations	76.0%	38
Location and procedures for media center	54.0%	27
Prepared press releases and statements	42.0%	21
Social media - outgoing	54.0%	27
Social media - monitoring posts for situational awareness	42.0%	21
Social media - data mining of public posts for situational awareness	34.0%	17
Responses to "citizen journalism" (social media)	26.0%	13
Off-airport programmable signage	20.0%	10
Wireless Emergency Alert (WEA) system	22.0%	11
Reverse 911	22.0%	11
None of the above	6.0%	3
Total		50
(Smith, Garcia, Sawyer & Kenville data)		

Multiple answers were accepted.

Question 23: Do you involve stakeholders in the development of your emergency communications plan/plans? (Table A12)

TABLE A12
QUESTION 23: DO YOU INVOLVE STAKEHOLDERS IN THE DEVELOPMENT OF YOUR EMERGENCY COMMUNICATIONS PLAN?

Stakeholders Involved in Communications Planning?	Percent	Count
Yes, always	58.0%	29
Yes, sometimes	32.0%	16
No	8.0%	4
Don't know	0.0%	0
Total		50
(Smith, Garcia, Sawyer & Kenville data)		

Multiple answers were accepted.

Question 24: Which of the following groups have you involved in the development of your emergency communications plan/plans? (Table A13)

TABLE A13
QUESTION 24: WHICH OF THE FOLLOWING GROUPS HAVE YOU INVOLVED IN THE DEVELOPMENT OF YOUR EMERGENCY COMMUNICATIONS PLAN?

Planning Participants	Percent	Count
Law enforcement	88.0%	44
Fire	88.0%	44
Tenant agencies (e.g., city police, FBI, CDC, TSA, CBP, etc.)	78.0%	39
Airlines	56.0%	28
FBO(s)	56.0%	28
Other tenants (not public agencies)	50.0%	25
Concessionaires	42.0%	21
Airport service providers	40.0%	20
Volunteers (e.g., ambassadors, traveler's assistance, info booth personnel, etc.)	28.0%	14
Military	28.0%	14
Cargo handlers	20.0%	10
Guest services	2.0%	1
Regional emergency manager	2.0%	1
Regional public safety communicators	2.0%	1
Total		50
(Smith, Garcia, Sawyer & Kenville data)		

Multiple answers were accepted.

Question 25: Briefly describe how you involve stakeholders in the development of your emergency communications plan/plans and notification plan/plans? (Table A14)

TABLE A14
QUESTION 25: METHODS OF INVOLVEMENT OF STAKEHOLDERS

Method of Stakeholder Involvement	Count
Periodic plan emergency communications plan and/or AEP review	16
Discussions/meetings	15
Table top exercises	13
Full-scale exercises/triennials	6
Monitor tenant plans	4
Airport emergency working group/airport preparedness group	3
Coordinate through sponsor (city or county) emergency communications plan	3
Notification system	3
Training	3
Workshops	3
After action reviews	2
Mutual aid meetings	2
Plan development	2
Contact information updates	1
Continuous open review process	1
JIC	1
JIS	1
Lessons learned sharing	1
Memoranda of agreement/memoranda of understanding	1
Regional emergency management planning group	1
Roundtable	1
Seminars	1
Table top planning	1
(Smith, Garcia, Sawyer & Kenville data)	

Question 26: How frequently do you review your emergency communications plan/plans? (Please mark all that apply.) (Table A15)

TABLE A15
QUESTION 26: HOW FREQUENTLY DO YOU REVIEW YOUR EMERGENCY COMMUNICATIONS PLAN?

Frequency or Occasion for Communications Plan Review	Percent	Count
Weekly	4.0%	2
Monthly	4.0%	2
Quarterly	18.0%	9
Annually	66.0%	33
Bi-annually	2.0%	1
Occasionally (not specific)	2.0%	1
After an incident/accident	2.0%	1
Part of every AAR	2.0%	1
When something changes	34.0%	17
Never	0.0%	0
Other	22.0%	6
Total		50
(Smith, Garcia, Sawyer & Kenville data)		

Multiple answers were accepted.

Question 27: Which of the following do you train regarding your emergency communications plan/plans? (Please mark all that apply.) (Table A16)

TABLE A16
QUESTION 27: WHICH OF THE FOLLOWING DO YOU TRAIN REGARDING YOUR EMERGENCY COMMUNICATIONS PLAN?

Group Trained	Percent	Count
Airport employees	88.0%	44
Agencies	46.0%	23
Airlines	38.0%	19
Fixed base operator (FBO)	36.0%	18
Other tenants	30.0%	15
Concessionaires	22.0%	11
All first responders (fire, LE, EMS)	4.0%	2
Mutual aid partners	4.0%	2
Volunteers (airport ambassadors)	4.0%	2
Community emergency manager	2.0%	1
Local government	2.0%	1
None of the above	6.0%	3
Total		50
(Smith, Garcia, Sawyer & Kenville data)		

Multiple answers were accepted.

Question 28: Excluding daily crash phone tests with the air traffic control tower, how often do you test or exercise your emergency communications plan/plans? (Please mark all that apply.) (Table A17)

TABLE A17
QUESTION 28: EXCLUDING DAILY CRASH PHONE TESTS WITH THE AIR TRAFFIC CONTROL TOWER, HOW OFTEN DO YOU TEST OR EXERCISE YOUR EMERGENCY COMMUNICATIONS PLAN?

Frequency	Percent	Count
Daily	2.0%	1
Weekly	10.0%	5
Monthly	10.0%	5
Quarterly	22.0%	11
Annually	56.0%	28
When something changes	18.0%	9
Never	6.0%	3
Other (required)	18.0%	9
Total		50
(Smith, Garcia, Sawyer & Kenville data)		

Multiple answers were accepted.

Question 29: Which social media platforms does your airport now use for outgoing communications in emergency situations? (Please mark all that apply.) (Table A18)

TABLE A18
QUESTION 29: WHICH SOCIAL MEDIA PLATFORMS DOES YOUR AIRPORT NOW USE FOR OUTGOING COMMUNICATIONS IN EMERGENCIES?

Social Media	Percent	Count
Facebook	66.0%	33
Flickr	2.0%	1
Geofence	0.0%	0
Instagram	2.0%	1
LinkedIn	2.0%	1
Snapchat	2.0%	1
Twitter	62.0%	31
Vimeo	2.0%	1
YouTube	12.0%	6
Other	16.0%	8
None of the above	28.0%	14
Total		50
(Smith, Garcia, Sawyer & Kenville data)		

Multiple answers were accepted.

Question 30: How do you keep your contact lists updated? (Please mark the primary method that you use.) (Table A19)

TABLE A19
QUESTION 30: HOW DO YOU KEEP YOUR CONTACT LISTS UPDATED?

Contact List Update Method	Percent	Count
Manually on a fixed schedule	38.0%	19
Manually after periodic scheduled tests of emergency communications plan	32.0%	16
Manually after an incident or exercise reveals an issue	16.0%	8
Manually and continuously	2.0%	1
Automated in connection with badging system (IT)	2.0%	1
Automated in connection with personnel, human resources, or payroll (IT)	2.0%	1
Other type of web-based software	4.0%	2
Several of the above methods	2.0%	1
None of the above	2.0%	1
Total		50
(Smith, Garcia, Sawyer & Kenville data)		

Question 31: Are you satisfied with the method you use to maintain your contact lists? (Table A20)

TABLE A20
QUESTION 31: ARE YOU SATISFIED WITH THE METHOD YOU USE TO MAINTAIN YOUR CONTACT LISTS?

Satisfied with Contact List Update Method?	Percent	Count
Yes	50.0%	25
Yes, but want to add identity management system	2.0%	1
Yes, but want to enhance	2.0%	1
Yes, but too time consuming so would like automated update by individuals and automated verification	2.0%	1
Yes, system has capability to push updates out to users but we don't now use this feature	2.0%	1
No	32.0%	16
Don't know	10.0%	5
Total		50
(Smith, Garcia, Sawyer & Kenville data)		

Question 32: Are your airport's contact lists consistent for content and accuracy across all plans and documents that contain contact lists (e.g., AEPs, emergency communications plans, notification systems, etc.)? (Table A21)

TABLE A21
QUESTION 32: ARE YOUR AIRPORT'S CONTACT LISTS CONSISTENT FOR CONTENT AND ACCURACY ACROSS ALL PLANS AND DOCUMENTS THAT CONTAIN CONTACT LISTS?

Consistency Across Plans	Percent	Count
Yes	54.0%	27
For the most part/somewhat	4.0%	2
No	24.0%	12
Don't know	18.0%	9
Total		50
(Smith, Garcia, Sawyer & Kenville data)		

(Questions 33–40, 43–45, and 47–52 pertained to ACRP S04-17, *Table Top and Full-scale Emergency Exercises for General Aviation, Non-hub and Small Hub Airports*, and are addressed in the synthesis report for that project.)

Question 41: What functions were addressed in your airport's table top exercises in the past three years? (Please mark all that apply.) (Table A22)

TABLE A22
QUESTION 41: WHAT FUNCTIONS WERE ADDRESSED IN YOUR AIRPORT'S TABLE TOP EXERCISES IN THE PAST THREE YEARS?

Function	Percent	Count
Command and control	80.0%	40
Communications	90.0%	45
Alert & warning	74.0%	37
Emergency public information	66.0%	33
Protective actions	50.0%	25
Law enforcement	80.0%	40
Fire & rescue	84.0%	42
Health & medical	62.0%	31
Resource management	58.0%	29
Operations & maintenance	78.0%	39
Security	74.0%	37
Safety	74.0%	37
Utilities	32.0%	16
Crowd control	54.0%	27
Friends & family center	4.0%	2
Mass care and uninjured care	4.0%	2
Airlift of Red Cross supplies	2.0%	1
Social media	2.0%	2
None of the above	8.0%	4
Total		50
(Smith, Garcia, Sawyer & Kenville data)		

Multiple answers were accepted.

Question 42: What functions were addressed in your airport's most recent full-scale exercise? (Please mark all that apply.) (Table A23)

TABLE A23
QUESTION 42: WHAT FUNCTIONS WERE ADDRESSED IN YOUR AIRPORT'S MOST RECENT FULL-SCALE EXERCISE?

Function	Percent	Count
Command and control	82.0%	41
Communications	78.0%	39
Alert & warning	70.0%	35
Emergency public information	62.0%	31
Protective actions	40.0%	20
Law enforcement	76.0%	38
Fire & rescue	82.0%	41
Health & medical	62.0%	31
Resource management	52.0%	26
Operations & maintenance	74.0%	37
Security	68.0%	34
Safety	68.0%	34
Utilities	20.0%	10
Crowd control	50.0%	25
Airlift of Red Cross supplies	2.0%	1
EOC activation	2.0%	1
Helicopter operations	2.0%	1
Mass care /uninjured care	2.0%	1
Mutual aid capabilities	2.0%	1
Social media	2.0%	1
Volunteer management	2.0%	1
None of the above	14.0%	7
Total		50
(Smith, Garcia, Sawyer & Kenville data)		

Multiple answers were accepted.

Question 46: Who participated in your most recent triennial/recertification or full-scale exercise? (Please mark all that apply.) (Table A24)

TABLE A24
QUESTION 46: WHO PARTICIPATED IN YOUR MOST RECENT TRIENNIAL/RECERTIFICATION OR FULL-SCALE EXERCISE?

Participants	Percent	Count
Airport operations	82.0%	41
Fire	82.0%	41
Airport management	80.0%	40
Emergency medical services	80.0%	40
Law enforcement	80.0%	40
Maintenance	74.0%	37
PR/media relations/public information	72.0%	36
American Red Cross	66.0%	33
Hospital	66.0%	33
Airline(s)	64.0%	32
Medical transportation providers	64.0%	32
Local government emergency management agency	58.0%	29
TSA	58.0%	29
Airport tenants and concessionnaires	40.0%	20
IT	40.0%	20
Cleric/churches/chaplains	32.0%	16
Fixed base operator (FBO)	30.0%	15
FBI	28.0%	14
Local government Community Emergency Response Team (CERT)	24.0%	12
Local health department	22.0%	11
CBP	20.0%	10
Air National Guard (joint use airport)	18.0%	9
Other airports not in your system	18.0%	9
Airport Community Emergency Response Team (A-CERT)	16.0%	8
Municipal utilities or public works	14.0%	7
U.S. Coast Guard	10.0%	5
Air Marshals	8.0%	4
State health department	6.0%	3
Airport-to-airport mutual aid (SEADOG, WESTDOG, CARST, etc.)	4.0%	2
CDC	4.0%	2
Other airports in your multi-airport system	4.0%	2
Regular military (joint use airport)	4.0%	2
U.S. Marshals Service	4.0%	2
City department on disabilities	2.0%	1

(*continued on next page*)

TABLE A24
(*continued*)

Participants	Percent	Count
Electric utility company	2.0%	1
Family Assistance Foundation/Aviem	2.0%	1
Fusion center	2.0%	1
NTSB	2.0%	1
University	2.0%	1
Not applicable - our airport is not required to perform full-scale exercises	10.0%	5
Total		50
(Smith, Garcia, Sawyer & Kenville data)		

Multiple answers were accepted.

Question 53: Do you have a formal process for implementing lessons learned from exercises into your written plans and procedures (AEP, SOPs)? (Table A25)

TABLE A25
QUESTION 53: DO YOU HAVE A FORMAL PROCESS FOR IMPLEMENTING LESSONS LEARNED FROM EXERCISES INTO YOUR WRITTEN PLANS AND PROCEDURES?

Formal Process for Implementing Lessons Learned from Exercises	Percent	Count
Yes, a written process	22.0%	11
Yes, an unwritten process	26.0%	13
No	48.0%	24
Don't know	4.0%	2
Total		50
(Smith, Garcia, Sawyer & Kenville data)		

Question 54: If you have a formal process for implementing lessons learned from exercises, please describe it. If you have a written policy or procedure, please give the title of the document. (Table A26)

TABLE A26
QUESTION 54: IF YOU HAVE A FORMAL PROCESS FOR IMPLEMENTING LESSONS LEARNED FROM EXERCISES, PLEASE DESCRIBE IT.

Nature of Formal Process for Implementing Lessons Learned	Count
After Action Report and Improvement Plan (AAR/IP)	3
After action reviews result in AEP changes.	2
Airport Emergency Plan (AEP) has written process for revisions on basis of lessons learned from exercises and actual incidents	2
HSEEP AAR/IP Improvement Matrix	2
After action meeting with participants and then creating an after action report	1
(Smith, Garcia, Sawyer & Kenville data)	

APPENDIX B

Participating Airports

Airport	Code	NPIAS (2013)	Governance	State	FAA Reg	FAA Passenger Enplanements CY14	Total Cargo (pounds) CY14	Daily Ops
Aspen/Pitkin County Airport	ASE	NH	County	CO	NM	217,648	—	97
Bismarck Municipal Airport	BIS	NH	City	ND	GL	248,316	—	141
Blue Grass Airport	LEX	SH	Authority	KY	SO	595,083	—	180
Blue Ridge Airport	MTV	GA	Authority	VA	EA	—	—	66
Boise Airport	BOI	SH	City	ID	NM	1,378,352	343,847,570	325
Burbank Bob Hope Airport	BUR	MH	Authority	CA	WP	1,928,491	—	329
Cecil Airport	VQQ	GA	Authority	FL	SO	—	—	286
Centennial Airport	APA	RL	County	CO	NM	—	—	825
Colorado Springs Municipal Airport	COS	SH	City/Lease to Military	CO	NM	624,317	108,568,776	350
Dade–Collier Training and Transition Airport	TNT	GA	County	FL	SO	—	—	40
Denver International Airport	DEN	LH	City & County	CO	NM	26,000,591	1,314,752,910	1,575
Devils Lake Regional Airport	DVL	CS	Authority	ND	GL	3,050	—	64
DFW International Airport	DFW	LH	Authority/Corp.	TX	SW	30,766,940	3,140,733,270	1,848
Eagle River Union Airport	EGV	GA	City	WI	GL	—	—	55
Eugene Airport	EUG	SH	City	OR	WP	440,198	—	171
Fort Dodge Regional Airport	FOD	CS	City	IA	CE	3,083*	—	55
Fort Lauderdale–Hollywood International Airport	FLL	LH	County	FL	SO	11,987,607	508,118,870	734
Grove Regional Airport	GMJ	GA	City	OK	SW	—	—	81
Hartsfield–Jackson Atlanta International Airport	ATL	LH	City	GA	SO	46,604,273	2,262,892,910	2,549
Hector International Airport	FAR	SH	Authority	ND	GL	456,372	—	220
Jacksonville International Airport	JAX	MH	Authority	FL	SO	2,589,198	395,653,090	241
Joplin Regional Airport	JLN	NH	City	MO	CE	26,380	—	73
Lakeland Linder Regional Airport	LAL	RL	City	FL	SO	—	—	283
Lambert–St. Louis International Airport	STL	MH	City	MO	CE	6,108,758	381,204,028	362
Livermore Municipal Airport	LVK	RL	City	CA	WP	—	—	394
Los Angeles International Airport	LAX	LH	City	CA	WP	34,314,197	4,297,359,912	1,741
Martha's Vineyard Airport	MVY	NH	County	MA	NE	52,362	—	128
Memphis International Airport	MEM	MH	Authority	TN	SO	1,800,268	23,760,172,569	604
Miami Executive Airport	TMB	RL	County	FL	SO	—	—	531
Miami Homestead General Aviation Airport	X51	GA	County	FL	SO	—	—	210
Miami International Airport	MIA	LH	County	FL	SO	19,468,523	7,192,790,882	1,188
Miami–Opa Locka Executive Airport	OPF	RL	County	FL	SO	—	—	331
Minneapolis–St. Paul International Airport	MSP	LH	Authority	MN	GL	16,972,678	972,664,080	1,130
Morristown Municipal Airport	MMU	RL	Privatized	NJ	EA	17,136	—	189
New River Valley International Airport	PSK	GA	Authority	VA	EA	—	—	29
North Little Rock Municipal Airport	ORK	RL	City	AR	SW	—	—	88
Orlando International Airport	MCO	LH	Authority	FL	SO	17,278,608	756,120,798	905
Owatonna Degner Regional Airport	OWA	GA	City	MN	GL	—	—	82
Phoenix Deer Valley Airport	DVT	RL	City	AZ	WP	—	—	956
Phoenix Goodyear Airport	GYR	RL	City	AZ	WP	—	—	331
Phoenix Sky Harbor International Airport	PHX	LH	City	AZ	WP	20,344,867	1,436,921,968	1,183
Phoenix–Mesa Gateway Airport	IWA	SH	Authority	AZ	WP	669,807	—	625

Airport	Code	NPIAS (2013)	Governance	State	FAA Reg	FAA Passenger Enplanements CY14	Total Cargo (pounds) CY14	Daily Ops
Raleigh–Durham International Airport	RDU	MH	Authority	NC	SO	4,673,869	439,980,600	251
Range Regional Airport	HIB	NH	Authority	MN	GL	11,617	—	83
Reno–Tahoe International Airport	RNO	SH	Authority	CA	WP	1,611,572	467,324,320	202
Rochester International Airport	RST	NH	City/Privatized	MN	GL	119,874	25,000,000	107
Rock Hill–York County Airport	UZA	RL	City	SC	SO	—	—	99
Ronald Reagan Washington National Airport	DCA	LH	Authority	VA	EA	10,057,794	—	847
Salt Lake City International Airport	SLC	LH	City	UT	NM	10,139,065	962,293,488	895
San Francisco International Airport	SFO	LH	City & County	CA	WP	22,756,008	1,245,416,930	1,183
Savannah–Hilton Head International Airport	SAV	SH	Authority	GA	SO	932,416	—	226
Seattle–Tacoma International Airport	SEA	LH	Authority	WA	NM	17,888,080	1,574,603,394	932
Soldotna Airport	SXQ	GA	City	AK	AL	—	—	41
Southwest Florida International Airport	RSW	MH	Authority	FL	SO	3,942,387	119,577,700	236
Washington Dulles International Airport	IAD	LH	Authority	VA	EA	10,415,948 1	479,925,622	845
Watsonville Municipal Airport	WVI	GA	City	CA	WP	—	—	178
Western Nebraska Regional Airport	BFF	CS	Authority	NE	CE	5,594	—	79
Willow Run Airport	YIP	RL	Authority	MI	GL	—	194,188,703	172
Yeager Airport	CRW	NH	Authority	WV	EA	241,566	—	323
Yuma International Airport	NYL	NH	Joint City/USMC	AZ	WP	90,732	—	550

Sources: FAA (2014), FAA (2015a, b), www.airnav.com.
*FOD passenger data for CY13, change in aircraft size for scheduled service removed them from FAA (2015a).

APPENDIX C
Case Examples

INTRODUCTION TO CASE EXAMPLES

The four case examples in this appendix illustrate effective comprehensive communications planning for emergencies and crises from three very different airports. Case examples 1 and 2, Dallas/Fort Worth International Airport (DFW) and Denver International Airport (DEN), respectively, represent an optimal approach: a full, aggressive engagement with all types of communications for all types of emergencies, mission-critical systems failures and crises, and a rigorous process of applying lessons learned. A handful of other airports, mostly large hubs but also a few medium hubs, can probably match or approach this level of communications planning; however, the methods used by DEN and DFW are scalable, so an airport of any size of type can adapt them.

Case Example 3 is drawn from a small hub, Boise Airport (BOI). Like DFW and DEN, BOI demonstrates the power of collaborating with other city departments and community partners as well as of taking a comprehensive crisis approach. As with DFW and DEN the tools and procedures used by BOI are scalable and adaptable, even to large and medium hubs. As noted by Smith, Kenville, and Sawyer (2015), small airports are often freer to innovate. Indeed, they are sometimes driven to innovation by staffing and funding constraints. In addition, smaller airports may be more likely to involve external partners in all aspects of emergency management to leverage the needed aspects and resources (Smith 2014).

Case Example 4 came from a general aviation (GA) airport, Watsonville (California) Municipal Airport (WVI). It demonstrates that even small airports with small staffs can accomplish highly effective emergency communications given clear goals, leadership, and cooperation with community partners.

CASE EXAMPLE 1: DALLAS/FORT WORTH INTERNATIONAL AIRPORT (DFW)

Dallas/Fort Worth International Airport (DFW) is the ninth busiest airport in the world for passenger travel and the third busiest for operations, hosting 1,850 flights a day and serving more than 63 million customers a year. The airport is a major economic driver for the Dallas/Fort Worth region, generating about $37 billion in economic impact each year.

The primary source for this case example was an interview with Mary Jo Polidore, Vice President for Corporate Communications at DFW, conducted on October 26, 2015.

DFW utilizes a stand-alone crisis communication plan that is an appendix to their Airport's Emergency Plan (AEP). The plan was developed by the airport corporate communications staff and addresses all aspects of notification to both internal and external airport stakeholders. DFW has always had a crisis communication plan (CCP), but in the last five years the plan has expanded to be more comprehensive and goes through annual updating to incorporate lessons learned from emergency management exercise and real-time events. With 16 years of experience leading corporate communications for several divisions of a leading U.S. aerospace and defense company, including its $11 billion aeronautics businesses, Polidore has been able to apply lessons learned into the DFW's CCP, with the focus on preparing, responding, and recovering from crisis situations.

The current DFW CCP is a 24-page document that details responsibilities, policies, teams, checklists, communications infrastructure, and redundancy. The plan, which is very much in line with National Incident Management System (NIMS) and Incident Command System (ICS) protocols, also includes sample statements, press releases, incorporation of social media, etc. The corporate communications staff is trained in working within DFW's Emergency Operations Center (EOC). Although their plan is called a crisis communications plan, the operational responsibilities and functions within the plan are also used for major events, not just emergencies or crisis situations, which is evidence of the DFW commitment to NIMS and ICS. Anytime the airport activates its EOC, the corporate communications team acts to support the incident command and control by staffing the communications section of the EOC and managing all of the internal and external public communications. Generally, two people are sent to the EOC, and one communications professional is sent to the Mobile Command Center at the scene. The EOC Communications manages public communications and serves in a policy role at the EOC. For larger emergencies, the policy role is accomplished by the communications vice president working in collaboration with executive vice presidents and the CEO looking ahead at public perception, expectations, and communication needs from a strategic level. The second communications staffer at the EOC monitors and manages social media and responses, and the third serves as the on-site media relations spokesperson. For larger emergencies and those

impacting employees as well as customers and/or stakeholders, an internal communications professional is added to the EOC team and additional supporting communications personnel, including outside public relations and social media contractors, are brought in.

DFW responds to special events in the same way it does to a crisis. Polidore stated, "just as in the military, you fight how you train and you train as you fight." Using the CCP for major events helps DFW ensure proficiency when and if a major crisis occurs. DFW also reviews and exercises its plan on a regular basis. "Every event or exercise is followed by post-event debriefs and evaluations of what went right, what went wrong, and how we can improve and incorporate these lessons learned immediately into our plan, processes and procedures."

One noteworthy event for DFW occurred in September 2014, when Thomas Duncan became the first person in the United States to die of the Ebola virus. Duncan had traveled through DFW days prior to being admitted to a hospital. This event quickly triggered global media attention and put DFW in the spotlight. Concern on traditional media, social media and public skyrocketed. The corporate communications team quietly began monitoring media and managing the social media channels, and determined that in cases of public health, the Center for Disease Control (CDC) and local health departments have the primary responsibility for public communications while the airport had supportive responsibilities. Consequently, the team's strategy was to help others understand who had the primary responsibility for communication and then to support those efforts in the interest of public health and safety. The DFW communications team set up direct links with the CDC and Tarrant County Public Health Department in an effort understand and align with their actions. It quickly learned that their airport stakeholder groups, such as the airlines, TSA, Customs and Border Patrol, concessioners, etc., as well as internal employee groups, needed information. DFW gathered as much information from experts as possible pertaining to medical facts about the real risks involved. Monitoring and assessing traditional and social media helped DFW to determine what operational actions would assist health authorities in speaking with confidence about precautionary measures performed at DFW and other places in order to quell public concerns. Some of these actions were not due to actual need, but were triggered by the public perception of the risk. An example was the cleaning and disinfecting of the restrooms and paths that Duncan may have travelled on his way through the terminal: This may not have been necessary, but it demonstrated DFW's commitment to doing whatever was necessary to ensure a safe environment for customers.

DFW activated its EOC for this event and focused primarily on its crisis communication functions. This was the first time the EOC had been activated to support what was primarily a communications emergency rather than an operational emergency, and all departments of the airport mobilized at the EOC to support this effort.

DFW's corporate communications team has learned the importance of bench strength capabilities. Its commitment to staff the EOC's communication functions has brought with it the need to establish internal backup. It has also identified additional public/media relations personnel in the community that can provide EOC support in the event that trained communications employees need relief or are unavailable. This support includes 24-7 social media monitoring and extended crisis communications and traditional media monitoring and support.

CASE EXAMPLE 2: DENVER INTERNATIONAL AIRPORT (DEN)

DEN is the 17th busiest airport in the world and the fifth busiest airport in the United States. With more than 53 million passengers traveling through the airport each year, DEN is one of the busiest large hub airports in the United States, which is the world's largest aviation market and is the primary economic engine for the state of Colorado, generating more than $26 billion for the region annually. The primary source for this case example was an interview Heath Montgomery, DEN's communications strategist and media relations director, on Oct. 26, 2015, supplemented by correspondence with Stephen Lee, the airport's director of operations–support, and training and exercise manager Jason Taussig.

DEN has a single comprehensive crisis communications plan—the Denver International Airport Crisis Communication Manual—that guides all aspects of internal and external communications (Figure C1). The crisis communications manual was developed by the airport's global communications department (GC), then the public relations group, based on the needs it perceived. It received positive support because all airport departments saw the value that an incident management team receives from well-handled communication. The positive support entailed "suggesting items and encouraging." When the EOC is activated and the incident involves intelligence-gathering and analysis, GC feeds what essential information it has to the EOC (S. Lee, personal communication, Oct. 21, 2015).

The GC department trains the crisis communications procedures in-house, but the airport's exercise, evaluation, and training group uses exercises to evaluate how well it works and how well it applies the results. For example, in DEN's last full-scale exercise, a simulation EO cell made calls to GC to see

DENVER INTERNATIONAL AIRPORT
TOGETHER WE SOAR

Crisis Communication Manual Table of Contents

Summary of Initial Procedures

Organizational Charts and Staffing Matrix

Communication Roles

- -Information Gathering and Production Group
- -Information Dissemination Group
- -Field Operations
- -Additional Roles

Contacts

- -Global communications and marketing (GCM) phone extensions
- -Dept. of Aviation key extensions
- -GCM and Customer Service
- -Senior Staff and Divisions
- -Denver Agency PIOS
- -Airline Communications Offices
- -Airline Station Managers
- -Food and Beverage tenants

Maps

Notification Procedures (Everbridge)

Technology

- -Press Room Setup in Terminal
- -GCM Conference Room manual
- -Recording Television

Telephone Team

PIO Tips

Templates

- -Press Release
- -Media Callback Form
- -Media Monitor Incorrect Information Form

Radio Call Signs

FIGURE C1 Denver International Crisis Communication Manual table of contents (rev. Sept. 2015).

if it was giving appropriate information; the GC was also required to put together a press conference (Figure C2). PIOs from other agencies and the state played the role of news media and peppered staffers with demands for answers and speculation (Figure C3) (Lee).

DEN's summer 2015 Active Shooter Functional Exercise focused on the communication team's role to a large degree. The airport purchased a service that allowed simulation of social media, website searches, and e-mails. "The exercise team hit them and our call center with hundreds of calls, e-mails, tweets, etc. Combining that information with phone calls from the Simcell allowed the airport to see if the GC and the call center were giving out accurate and consistent information that matched what was coming from the EOC. The exercise also tested to see if the GC picked up on some small intelligence

FIGURE C2 Simulated press conference at DEN full-scale exercise (Denver International Airport photo).

items in all of the noise. DEN wanted to see if the communications group passed the relevant information to the EOC" (S. Lee, personal communication, Nov. 21, 2015).

DEN's CCP follows NIMS, making the airport align with the EOC command structure of the airport, city-county, state, and nation. It enables a predesignated flow of information to the Joint Information Center (JIC) and EOC. Having the CCP managed by the GC office makes the best use of all information assets and personnel. The Denver CCP model enables instant play-in so that incoming and outgoing communications are optimized for the EOC, the JIC, the PIO, the airport, and the community. The CCP is flexible, providing for a small-scale JIC for small events and a large-scale JIC for large incidents, making the airport's communications posture highly nimble. The airport's communications structure, with its clearly defined roles and responsibilities, allows PIOs from other agencies to step in when needed (Montgomery).

When the CCP was first launched under the aegis of GC, the main hurdle could have been turf concerns with other airport departments. That was avoided by open communications, transparency, collaboration, and cooperation with other airport departments. Inadequate bench depth would have been a barrier to implementation, but GC has an active program to train key personnel in all airport departments on the communications plan. DEN was willing to invest in communications redundancies, which avoided many typical barriers to good crisis communications (Montgomery).

DEN's advice to an airport just creating its emergency communications plan or considering a CCP is to start by building on NIMS and ICS, an approach that is especially important for a small airport. After the NIMS/ICS-based start, the airport can leverage assets of community partners by building good relationships. "The important thing is to have people with an understanding of the professional role of communicators and how it fits into an EOC and NIMS environment" (Montgomery).

DEN's GC office provides intelligence data and analysis to the airport EOC when called upon to do so. DEN aggressively uses social media. The airport's exercise, evaluation and training group regularly

FIGURE C3 PIOs from other agencies playing media roles at simulated press conference at DEN full-scale exercise (Denver International Airport photo).

includes communications in exercises. Finally, the GC office applies the lessons learned from actual events, exercises, and interactions with stakeholders through a formal program for continuous improvement.

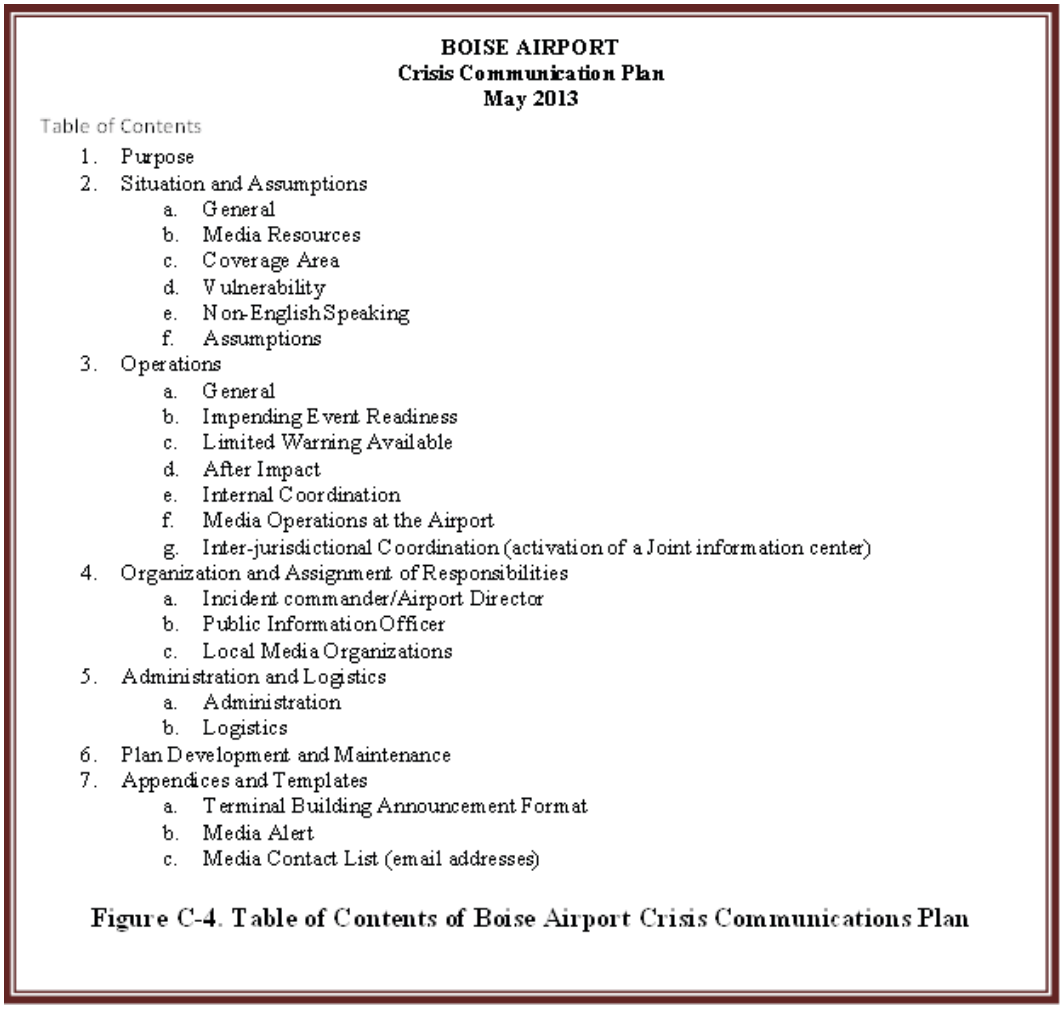
CASE EXAMPLE 3: BOISE AIRPORT (BOI)

Boise Airport (BOI), though a small hub facility, is the main airport for the state of Idaho, served by six legacy and low-cost air carriers. The city-owned airport has two parallel runways with an ILS Category III landing system.

BOI's CCP was developed and is maintained by the airport marketing manager, who also acts as the PIO when the plan is activated. The most remarkable aspect of the plan is that it is scalable in terms of the level of crisis. In a full-scale crisis, the airport follows NIMS/ICS protocol and will operate a JIC with the City of Boise. The CCP is a single plan that is referenced in the airport's AEP (Figure C4). It is typically updated whenever it is utilized, so the airport feels the plan is better housed outside the AEP and merely referenced (S. Demory, personal communication, Sept. 30, 2015).

The CCP is reviewed and trained annually as per the airport's FAR Part 139 requirements, and the airport stakeholders are involved in the process. BOI evaluates possible changes to its CCP after an activation, through its internal emergency operations team (Operations, LEO, ARFF) where review and decisions are based on concurrence and consensus. Depending on the significance of the change, it will either be made immediately or after the next scheduled review date of the CCP.

During a recent (2015) AAR, an important lesson was learned as a result of CCP activation dealing with an aircraft crash. The review revealed that the use of telephones for "critical information" such as runway



BOISE AIRPORT
Crisis Communication Plan
May 2013

Table of Contents

Figure C-4. Table of Contents of Boise Airport Crisis Communications Plan

FIGURE C4 Boise Airport Crisis Communication Plan table of contents.

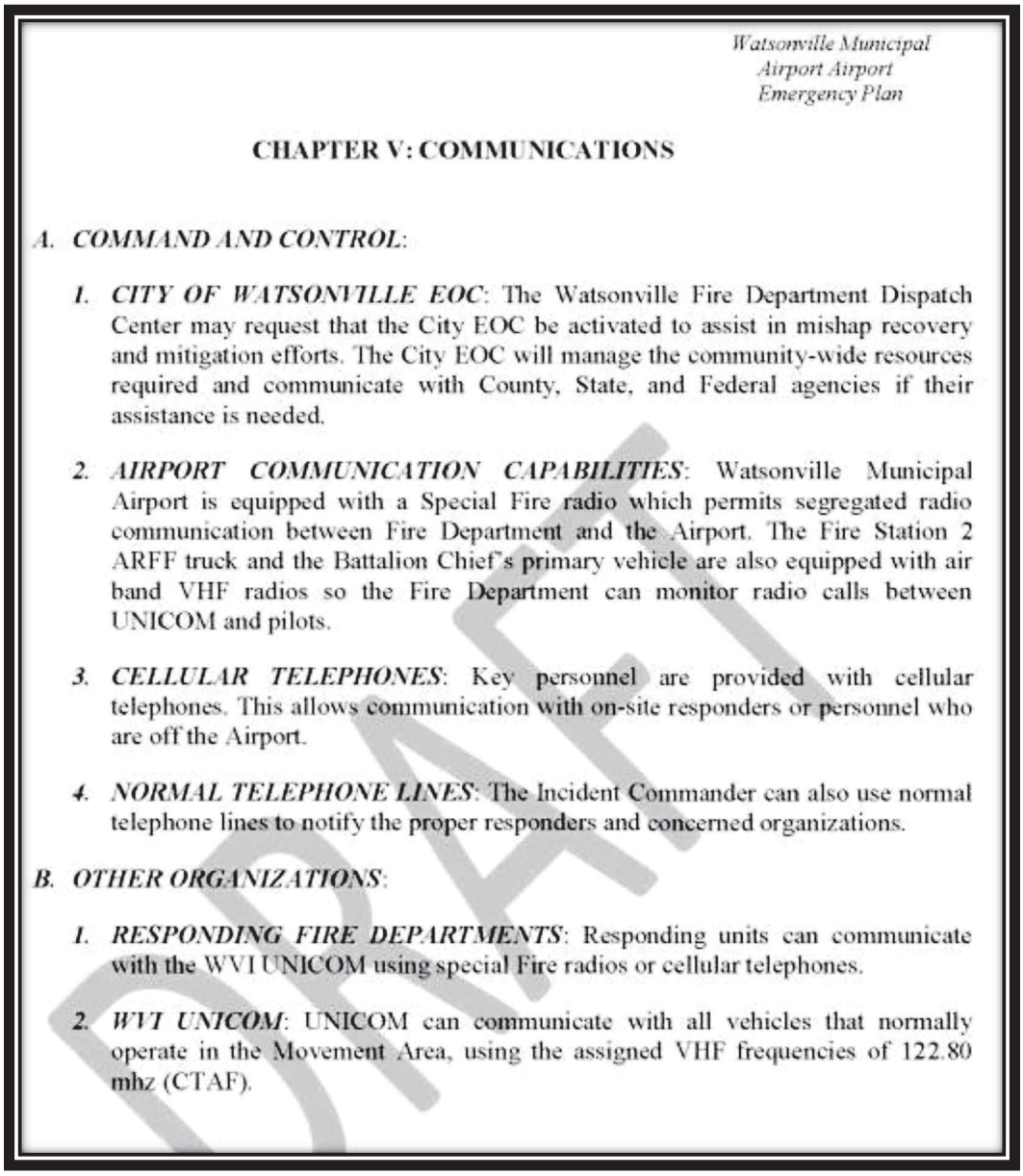
opening/closure rather than other media was essential to avoid confusion and ensure that vital information was clear to all parties involved. The second critical change was to have a single point of contact in airport operations and air traffic control, so that the messages were not a point of confusion between employees.

One important factor to note is that since Boise is a small hub, it has the ability to talk individually with all stakeholders about any changes in its CCP. Boise's advice to other airports developing a CCP is to learn from their peers and gather as much information as possible and then customize a plan that addresses its unique situation (size, governance, mutual aid, etc.).

The BOI CCP is considered sensitive security information and can be available upon request to Boise Airport by another airport.

CASE EXAMPLE 4: WATSONVILLE AIRPORT (WVI)

WVI is a GA airport owned by the City of Watsonville, California. The airport is currently (as of October 2015) developing its emergency communications plan as part of a CCP in conjunction with the city. The communications plan is Chapter 5 in the AEP (Figure C5), which is voluntary for a GA airport. Development of the plan is being led by the airport manager; the emergency communications planning group



Watsonville Municipal Airport Airport Emergency Plan

CHAPTER V: COMMUNICATIONS

A. ***COMMAND AND CONTROL:***

1. ***CITY OF WATSONVILLE EOC***: The Watsonville Fire Department Dispatch Center may request that the City EOC be activated to assist in mishap recovery and mitigation efforts. The City EOC will manage the community-wide resources required and communicate with County, State, and Federal agencies if their assistance is needed.

2. ***AIRPORT COMMUNICATION CAPABILITIES***: Watsonville Municipal Airport is equipped with a Special Fire radio which permits segregated radio communication between Fire Department and the Airport. The Fire Station 2 ARFF truck and the Battalion Chief's primary vehicle are also equipped with air band VHF radios so the Fire Department can monitor radio calls between UNICOM and pilots.

3. ***CELLULAR TELEPHONES***: Key personnel are provided with cellular telephones. This allows communication with on-site responders or personnel who are off the Airport.

4. ***NORMAL TELEPHONE LINES***: The Incident Commander can also use normal telephone lines to notify the proper responders and concerned organizations.

B. ***OTHER ORGANIZATIONS:***

1. ***RESPONDING FIRE DEPARTMENTS***: Responding units can communicate with the WVI UNICOM using special Fire radios or cellular telephones.

2. ***WVI UNICOM***: UNICOM can communicate with all vehicles that normally operate in the Movement Area, using the assigned VHF frequencies of 122.80 mhz (CTAF).

FIGURE C5 Emergency communications plan in WVI AEP.

includes airport staff, city fire department, city EOC, and the Watsonville Emergency Airlift Command Team (W.E.A.C.T.). The WVI case example is based on an interview with airport manager Rayvon Williams and on documents that he provided.

The emerging plan is bifurcated depending on the type and severity of the emergency or crisis; and whether the event is solely the airport's to manage or whether the airport is part of a larger effort.

If the event is the airport's to manage:

> Based on the historical pattern incidents and accidents. Watsonville has developed an "Initial Action Plan" which serves as a first response guidance for staff and instructions to work with Watsonville City resources, local FAA (NorCal TRACON and San Jose FSDO), FAA Region and the NTSB. This plan is primarily aircraft accident/incident specific. We do take care to be mindful of local media also. The communications element of the Initial Actions Plan is simple and straight forward (R. Williams, personal communication, Oct. 10, 2015).

The section of the Watsonville city plan for the airport, reproduced as Figure C6, is a one-page tactical/ operational tool for airport employees. Laminated copies are in every airport vehicle, fuel truck, fire

Watsonville Municipal Airport Airport Emergency Plan

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FIGURE C6 Communications plan for airport in "part-of-the-larger" city plan.

department rig, as well as in the Unified Command room and at various on-field locations. Additionally, each employee has a copy in his/her personal vehicle.

If it is "Part of the larger" effort:

> Based on the lessons learned from the 1989 Loma Prieta earth quake and the 2008 Wildfires, the Municipal Airport has taken a seat at the city Emergency Operations Center instituted by the Watsonville Fire Department.
>
> WVI's emergency communications does go beyond the airport and City when a larger effort requires the Airport to be used for airlift capabilities. As such I have worked to develop a separate, all volunteer, group to formalize the lessons learned during Loma Prieta.
>
> This group is W.E.A.C.T. and was formed over a two year period. The Municipal Airport sponsored the group (established an area on the field, provided storage facilities, supplies, tools, etc.) and synced them with Watsonville EOC, County OES and the local American Red Cross (R. Williams).

To evaluate the emergency communications plan, the airport holds two airport-specific exercises a year, and one of them is a surprise drill arranged in partnership with the city fire department. After each exercise, there is an AAR with broad participation by stakeholders, and the plan is tweaked as needed.

According to Williams, WVI's initial communications challenge is "ensuring our communication, our desired message, matches the 'emergency.' As noted we have at least two types of emergencies. . . . what we call 'Minor' and 'Major' [see Figure C7]. Within each is a sub-category; i.e., airport-specific or Airport as part of the Larger Community where we provide support. As we have had relatively few actual emergencies over the last four years, it seems the first challenge is just getting the type of emergency defined and then acting accordingly. We are working to define simple metrics to communicate and follow up."

The main value added by the comprehensive CCP and the exercise program associated with it is that the airport can access facts and act more quickly. As Williams notes, "I've learned sometimes the 'best' first action is not to immediately act. . . . we need a minute to 'wind the proverbial watch'— think, then act. We have run a few exercises that have helped us improve here."

WVI's advice to an airport starting to develop its emergency communications plan is to start with simple, more likely events and determine the "why/what/how . . . you need to communicate and to whom." Furthermore, the airport needs to look to leverage existing relationships and processes (R. Williams, personal communication, Oct. 19. 2015). A good airport emergency communications plan provides "simple, clear, implementable procedures that get the right information to the right people at the airport and in the community, thereby improving the resiliency of both" (R. Williams, personal communication, Oct. 20, 2015).

The Watsonville plans—the airport's and the city's—are notable for their concise nature. Their formats are essentially those of an SOP.

Watsonville Municipal Airport
"*EMERGENCY EVENT… INITIAL ACTIONS*"

READ THIS BEFORE THE INCIDENT OR ACCIDENT…There are various roles for various players:

Municipal Airport manages on-going operations, notifies FAA/NTSB if warranted and addresses the media.
Police Department makes initial assessment; if required secures the area, engages with Airport Staff
First Alarm supplements Police to keep on-lookers and spectators at safe distances.
Fire Department prevents or suppresses fires; keep area contained and safe for recovery.
Paramedics (may be with Fire Dept.) deal with injuries; medical is their responsibility.

If runway is affected: clearing and reopening the runway as soon as possible, upon FAA/NTSB release of the aircraft, is **MANADATORY.** On field FBOs may handle aircraft retrieval, but also accept potential liability.

WHEN EMERGENCY EVENT OCCURS:

(1) **Call 911;** if position known report via Airport Grid Map (reverse) and **GIVE GRID LOCATION**
(2) First deal with the emergency (injuries, rescue, fire, etc.)
(3) **Call Airport Mgr/Airport Ops Sup (see numbers below)**
(4) Can't contact Airport Management? Call **FAA Duty Officer (310) 725-3300.** Explain situation; request Duty Officer alert FSDO and NTSB.
(5) Access the **EMRG EVENT KIT** (in Airport Vehicles and Unicom Room).
(6) Be sure you have: Handheld Radio, Emergency Vest, Camera, Flashlight and Fire Extinguisher(s).
(7) Divide initial response team effort into **two (2) roles: On-Site and Unicom;** see below.
(8) **On-Site Personnel** (goes to accident site)
   a. Use Airport Vehicle (EMRG EVENT KIT accessible?)
   b. City Agencies play a defined role; know them! (You did read the **Red Section** above, correct?)
   c. Evaluate: **Minor** is non-life threatening, no injuries, no fire; ***MAJOR*** is injuries, potential fire.
   d. Take notes for **First Responders;** brief them on arrival; assist as requested

Unicom Personnel (stays in office)
   e. CTAF announcement if appropriate (i.e. runway closure)
   f. **Issue NOTAM**, (877) 487-6867, if appropriate
   g. Contact FBOs, if appropriate, for potential recovery team
   h. Ensure on-going operations continue as best as possible
   i. Prepare for Media questions (refer them to web site for basic info)

AIRCRAFT RECOVERY GUIDELINES

(1) Five things must happen before aircraft removal:
   I. Call FAA (310 725-3300) **to confirm removal** of a damaged aircraft is approved.
   II. Fire Department **must give OK** to remove aircraft.
   III. On-Site Airport Personnel must **take photos, before any aircraft is relocated.**
   IV. **Owner/Operator must indicate** when, how, and where the aircraft will be moved and stored.
   V. If aircraft is going into a building on the field, **fuel must be drained and verified as drained.**
(2) **Only after FAA/NTSB clearance** does aircraft move.
(3) The **aircraft operator responsible for aircraft removal** and agreement with FBO moving aircraft.
(4) Emergency Responders (Fire and Police) **stay on site until released** by Airport Management.

NUMBERS:

Rayvon Williams	[redacted]	United Flight Services	[redacted]
Rob Robertson		Ocean Air Flight Services	
Maria Carranco		Specialized Aviation	

Revision: July 2015

FIGURE C7 Watsonville Community Emergency Classification Grid.

APPENDIX D

FOG1—Lead PIO Functions and Duties

The Field Operations Guides (FOGs) reproduced here are actual FOGs from a U.S. airport. At the airport's request, they have been anonymized and several that are classified as Sensitive Security Information (SSI) have been omitted.

FIELD OPERATIONS GUIDE 1

Lead PIO Functions and Duties

Location: Incident Command/Unified Command, accompanied by the Airport Police PIO

Functions

- Supports incident responders with public dissemination of information regarding life safety procedures, public health advisories, passenger assistance.
- Serves as primary point for gathering information on incident with emphasis on current status as it impacts stakeholders.
- Activates and manages the Joint Information System.
- Activates and assigns personnel to the Joint Information Center (JIC), a physical location for several PIOs to coordinate public information efforts.
- Ensures compliance with City ADA guidelines regarding production and dissemination of public messages that are inclusionary, accessible, and effectively communicated to persons with disabilities and others with access or functional needs.
- Contributes to rumor control.
- Disseminates information to media (via passenger information/assistance staffs, public service announcements, airport website and social media sites, and media).
- Plans and executes media relations, including: news conferences, media center, media tours, and media briefings.

General Responsibilities

- Determines from Incident Command if there are any limits on information release.
- Provides situational awareness content information to other PIOs.
- Develops materials for use in media briefings.
- Coordinates and validates information with PIOs at airport EOC, JIC, other locations in the field, and City Emergency Operations Center (if activated) to ensure consistency of messages.
- Obtains Incident Command/Unified Command approval of all public information content to be released to airport-wide stakeholders, the media, and the public.
- Informs media and conducts media briefings.
- Arranges tours, interviews or briefings that may be required.
- Obtains media information that may be useful to incident planning.
- Maintains current information summaries and/or displays on the incident and provides information on status of incident to assigned personnel.
- Maintains Public Information Unit Log.
- Relay info back to PIOs assigned to responding directly with stakeholders:
  a. **Passengers—**Visitor Information Professionals, Customer Service Representatives, Airport Response Team, and General Information Operator.
  b. **General public via media and social media sites—**PIOs assigned to PR Office handling incoming media and general public calls, to media assembly site, and to EOC.
  c. **Elected officials and airport senior executives—**Government Affairs Director, Mayor's PIOs, City Councilmembers' PIOs.
- Coordinates with other PIOs from emergency responding agencies to ensure "one voice."
- Serves as resource to IC/UC to notify public through media and passenger information/assistance staffs of special safety and operational considerations or other instructions to public and media.
- Coordinates with other agency PIOs to ensure information is approved before public release by Incident Commander, Airport senior management, Mayor's PIO, City Emergency Operations Center (if activated).
- Serves as primary point for writing (or delegating to support staff) news releases, news conference talking points and other public information materials.
- Reports back on briefings provided to elected officials at Incident Command Post.

Checklist

Beginning of Incident

- Check out vehicle from vehicle pool.
- Bring equipment:
  - Laptop and/or iPad with wireless connection
  - Communications equipment: cellphone, extra battery, car charging cord and portable radio
  - Emergency Public Information Plan Notebook and/or blank Incident Information Data forms and checklists
  - Bullhorn
  - Jacket or inclement weather outerwear
  - PIO vest
  - Extra maps and Incident Data Sheets
  - Water and snacks
  - Hat, sunblock
  - Report/sign-in at IC/UC Post.

During Incident

- Gather information on impacts on flights, facilities, vehicular traffic, ground transportation operations and convey information to EOC PIO.
- Direct call into **Teleconference Bridge** (conduct update teleconference call every 60 to 90 minutes) to update public statement on current airport conditions. Participants on the internal teleconference bridge call include all PIOs performing functions/duties in the Joint Information System. Include PIOs of elected officials' offices and non-governmental agencies.
- If City Emergency Operations Center is activated, obtain approval of all information to be disseminated to the general public and media.
- If necessary, direct call into **Media Teleconference Bridge** to conduct periodic updates to media.
- Notify airport senior executives and PR staff of any briefings planned for appointed/elected officials and other VIPs.
- Update airport senior executives of content of briefings provided to elected officials who arrive at Incident Command.
- Coordinate with Joint Information Center PIOs, airport senior executives, offices of Mayor and other City elected officials to determine location and time of news conference.
- Ensure all airport PIOs are aware of news conference location and time.
- Coordinate with Joint Information Center PIOs:
  a. Message development (See Message Development Sheet) and talking points
  b. Joint situational updates to general public via the media
  c. Agenda of news conference.
- Maintain Public Information Unit log including time and activity.

After Incident Is Secured

- Sign-out from ICP
- Based upon Public Information Unit Logs prepared by the various section supervisors of the Joint Information Center, prepare after-action information for debriefing during hot-wash, on PIO function.
- If necessary, report areas of media operations concerns for resolution and recommendations to be integrated into PR Emergency Public Information Plan.

APPENDIX E

FOG2—Deputy Lead PIO Functions and Duties

FIELD OPERATIONS GUIDE 2

Deputy Lead PIO Functions and Duties

Location: Emergency Operations Center (EOC) and/or Joint Information Center (JIC)

The airport emergency operations center provides support to the Incident Command/Unified Command and liaises with the City's Emergency Operations Center, if it has been activated. If the City's EOC is activated, ALL statements and updates made to the public and the media MUST be approved by the City EOC's Joint Information Center or the EOC's Lead PIO.

Functions:

- Supports Lead PIO in the IC/UC as manager of PIO functions in the airport EOC.
- If the Lead PIO activates the JIC, the Deputy Lead PIO manages the JIC operations.
- Assists Lead PIO in ensuring compliance with City guidelines regarding production and dissemination of public messages that are inclusionary, accessible, and effectively communicated to persons with disabilities and others with access or functional needs.
- Serves as PIO liaison between airport EOC or JIC and the Lead PIO in the IC/UC, contributing to situational awareness among PIOs.

Checklist

Beginning of Incident

- Report to the EOC
- Bring equipment
  - Emergency Communications Plan/Notebook
  - Portable radio
  - Cellphone charging cord.
- Laptop and/or iPad
- PIO vest
  - Food and drink.
- Sign in on ICS Form 211 (Check-in/Check-out Sheet).
- Log in to the PC designated for PIO and set up your individual Outlook e-mail account by logging on as you would at your regular workstation.
- Begin an ICS Form 214 that appears on the desktop screen and begin the Unit Log for your shift. Record ALL activities on the log. Since the ICS 214 form MUST be turned in at the end of a shift, keep the form open and log activities throughout the shift. The log is especially important during a significant airport emergency when after-action reports are required and the logs become extremely useful for helping reconstruct activities for an after-action report. Also, retain all e-mails, which will be helpful in filling in any blanks on the ICS Form 214.
- Familiarize yourself with the layout of the EOC: what other EOC sections are staffed; what information is displayed or being logged on video screens and the whiteboards; maps; printers; etc. The information displayed on the video screens and the whiteboards are often logs of what is being heard over the portable radios and can provide facts on current status that will with information gathering.

During Incident

- Establish major goals for the PIO(s). This will help PIO(s) stay focused on priorities during a chaotic environment.
- Share PIO goals with EOC Manager during the first EOC meeting, when the manager outlines goals for the operational period.
- Establish communications with other PIOs:
  - Share EOC phone number assigned to you by e-mail with:
    - △ PR Division office
    - △ PIOs in the Incident Command
    - △ City EOC JIC (if activated)
    - △ City department PIOs or their offices, such as Police and Fire

△ Federal and state agency PIOs, such as TSA, CBP, CDC, FBI
△ Airline PIOs if an incident involves specific airline(s) or their terminals.

- Gather information
- Use a "Public Information Data Sheet" to help collect facts that MUST be gathered. This does not preclude publicizing important, relevant information that comes up during the incident.
  – Use several yellow sheets as information changes during the incident.
  – Record facts that are too technical, too statistical, or too confusing for the general public. However, they are unnecessary in the public messages. Focus on the impacts to airport stakeholders, passengers, employees, and the surrounding communities.
- Add any public-safety or operational instructions the IC/UC and EOC have asked to be provided to the general public. (Examples: "roads closed, don't drive to the airport" etc.).
  (1) Constantly ask during the incident whether there are any public-safety instructions to give.
- Obtain phone numbers for airline, American Red Cross, or other mutual-aid organization's Family or Public Assistance Centers.
  (1) Federal law requires airlines to disseminate contact info for their Family Assistance Center within 15 minutes.
    – Check e-mails often.
    – Contact ADA Coordinator for any specific information or instructions available specific to persons with disabilities.
- Analyze and draft statements:
- Prepare initial statement.
- Build upon initial statement by numbering updates. Previous updates are dated and given a time it was originally released. To avoid confusing the public on what actions are still valid, each statement should be written as a complete stand-alone statement. All information from earlier statements that are still in effect should be repeated in the latest statement.
- Ensure any information on assistance to or specific instructions to persons with disabilities is included in each statement.
- Each statement should contain introductory sentence indicating this is an official statement from airport and asking recipients to forward the statement as needed.
- Each statement should contain the airport Twitter, Facebook and airport website addresses—as the official sources of information about airport conditions.
  – Lead PIO must review and obtain approvals of all draft statements from the Incident Commander.
  – EOC Manager must review and approve all statement(s) approved by Lead PIO.
  – If City EOC activated, PIO at EOC approves ALL statements.
    (1) ALWAYS call City EOC PIO after sending draft statement(s) to City EOC to ensure they review and obtain approvals.
  – Dissemination
- Check off all pertinent distribution lists on "Airport News Release Distribution Request Form." Using this distribution list template for the duration of the incident ensures updates/statements are disseminated consistently to these lists.
  (1) ALL statements MUST be disseminated to the following lists:
    △ Executive Notification
    △ Emergency Response PIOs
    △ Airport Station Managers
    △ Airline PR Reps
    △ ADA
    △ Local Media—Daily/Emergency.
  (2) Selection of other lists is based upon nature of the incident. If significant flight delays/cancellations or traffic congestion impacting neighboring communities, add to distribution:
    △ Travel—Hotels
    △ Media—Travel Writers
    △ Travel—Agents
    △ Travel—Blogs
  (3) If you receive e-mail bounce backs, print out the initial bounce back e-mail and delete subsequent ones. You will continue to receive e-mail bounce backs during the incident. Following the incident, lists can be updated.
  (4) If you get requests to be added to PR's distribution lists during the incident, print out the request and create a separate group list for them to receive statements during the rest of the incident.
- Post statement(s) on Internet news release web page.
- Post items on airport Social Media platforms. When using social media, alternative methods of communicating timely information to persons with disabilities must be considered. Some specific tips for making social media information accessible:
  (1) Put a link to an accessible "Contact Us" form
  (2) For photos, video and audio, put the following prefixes before tweets that have photos, videos, or audio. This allows people using screen readers to know what to expect before it is read out loud:
    (i) Photos: [PIC]
    (ii) Videos: [VIDEO]
    (iii) Audio: [AUDIO]
  (3) Provide closed-captioning for YouTube videos.

- Continuously monitor airport social media sites for incorrect information and questions from the general public. If questions or requests for assistance appear from passengers, respond to or notify the EOC Manager so response personnel can be dispatched from the ICP.
- Constantly ask during EOC meetings if the information you are disseminating is being given to passengers already at the airport.

Throughout the Operating Period

- Ensure your work station telephone is covered at all times.
- Be prepared to give concise update reports or bring up issues during EOC briefings. This is the place to resolve any media questions that come up.
- Briefly summarize highlights of the regularly scheduled EOC briefings and e-mail them to all PIOs staffing the incident. Indicate "BACKGROUND INFORMATION ONLY—NOT FOR PUBLIC DISSEMINATION."

After Incident Is Secured

- Close out, print, and turn in Unit Log ICS Form 214. Also e-mail it to designated Emergency Management employee for their records.
- Log off the PC.
- Sign out on the Check-in/Check-out Sheet.

APPENDIX F

FOG3—Functions and Duties of PIO Coordinator for Social Media

FIELD OPERATIONS GUIDE 3

Functions and Duties of PIO Coordinator for Social Media

Location: Emergency Operations Center (EOC) or Joint Information Center (JIC)

During an airport emergency, PR will rely heavily on the airport social media sites to disseminate public information to a wide range of stakeholders, as well as to monitor public inquiries and requests for assistance from follower's located on-airport. Updates on airport conditions prepared by the EOC/JIC and approved for public dissemination or coming directly from the Lead PIO in the IC/UC will be posted on the airport Internet website at:

_____

_____.

Other airport social media sites may be used during airport emergencies. These sites will be publicized as the official sites where the general public may turn to for information on the current status of airport operations. These social media URLs will be publicized in all advisories, updates, news releases, news conferences, and media briefings.

Functions

- Ensures timely and accurate postings of initial pre-scripted emergency tweets and pre-determined emergency specific hashtag (#), emergency notifications, public-safety announcements, and current airport conditions on airport social media sites.
- Ensures postings on airport social media channels comply with "City ADA Guidance: Inclusionary, Accessible Messaging and Effective Communication" policy.
- Monitors social media sites for inquiries from the public for information and assistance.
- Responds to inquiries from the public for information and assistance.
- Contributes to rumor control by monitoring what social media are reporting "from the scene," correct inaccurate information and rumors (if PIO knows correct information), and forwards rumor or inaccurate information to Lead PIO at IC/UC and to Deputy Lead PIO in the EOC for follow-up.

Checklist

Beginning of Incident

- Bring individual equipment
  - Communications equipment: cellphone, extra battery, and portable radio
- Airport Emergency Public Information Plan containing forms

During Incident

- Serve as airport spokesperson on airport social media sites.
- Regularly check with Lead PIO at IC/UC or Deputy PIO at EOC/JIC for current airport status.
- Relay questions, issues, and rumors to Lead PIO and Deputy Lead PIO to obtain clarification and report back to social media followers.
- Maintains Public Information Unit Log for staff activities on airport social media sites.

After Incident Is Secured

- Review and turn in Public Information Unit Log to Lead PIO for hot-wash debriefing.
- Download and save postings on airport social media sites during airport emergency to accompany Public Information Unit Log (see above).
- If necessary, report areas of media operation concerns for resolution and recommendations to be integrated into airport Emergency Public Information Plan.

APPENDIX G

FOG4—Functions and Duties of PIO in PR Office or 24-Hour Duty Officer

FIELD OPERATIONS GUIDE 4

Functions and Duties of PIO in PR Office or 24-Hour Duty Officer

Notification

- Provides notification of a general nature to: Executive Notification to airport senior executives, division chiefs, Airport Police, Airport Operations, Mayor's Office, City Councilmembers' offices, and other elected local, state, and federal officials about incident and initial response.
  – Notify Public Relations Division staff about incident and initial response.
- Within 10 to 15 minutes of initial notification, obtain enough information to prepare a brief statement for senior management approval that confirms incident, provides initial assessment (from Airport Police and/or Airport Operations) and initial emergency response, and indicates media assembly site.
- Inform senior executives of PR Division next steps (will release statement, called in staff, will coordinate (see next steps).
- Functions
- Make assignments to PR Division administrative staff and deploy.
- Request assistance from Lead PIO, as necessary.
- Contact stakeholders' PIOs, multi-agency responders, airlines, etc.
- Ensures PR Office is adequately staffed to respond to media and public inquiries.
- Ensures compliance with City ADA Guidance: Inclusionary, Accessible Messaging and Effective Communication.

Duties

- As 24-hour PIO, reports to IC/UC first to perform Lead PIO duties until Airport Police PIO (or designate) reports to IC/UC.
- Manages PR staff in the office by responding to media inquiries, providing guidance and information to support staff in responding to public inquiries.
- Reports unanswerable inquiries from media and general public to Airport Police PIO in the IC/UC and to Deputy Lead PIO in the EOC/JIC so answers can be obtained and included in the next situational update to media and the general public.
- Assigns administrative support staffer to monitor media coverage and report inaccurate information, rumors, etc., so they can be corrected.

APPENDIX H

FOG5—Functions and Duties of PIO at Media Assembly Site

FIELD OPERATIONS GUIDE 5

Functions and Duties of PIO at Media Assembly Site

Location: Pre-determined Media Assembly Site(s)

Functions

- Ensures set up and efficient operations at Media Assembly Site.
- Monitors media at Media Assembly Site.
- Serves as on-site Airport spokesperson for media (may/may not be authorized to speak on-camera, but for informational purposes only).
- Contributes to rumor control by monitoring what media are reporting "from the scene," advise media of correct information (if PIO knows correct information), and forwards rumor or inaccurate information to Lead PIO at IC/UC and to Deputy Lead PIO in the DOC for follow-up.
- Ensures compliance with City ADA Guidance: Inclusionary, Accessible Messaging and Effective Communication.

Checklist

Beginning of Incident

- Request Airport Police assistance if necessary for media assembly and news conference site.
- Check out vehicle from airport vehicle pool.
- Bring individual equipment
  Communications equipment: cellphone, extra battery, and portable radio
- Emergency Communications Plan containing forms
- Bullhorn
- Jacket or inclement weather outerwear
- Ensure vehicle is loaded with equipment needed to set up Media Assembly Site.
- Upon arriving at Media Assembly Site, check in with Airport Police officers assigned to the site.
- Report arrival at Media Assembly Site to all other PIOs participating in the Joint Information System.
- Set up Media Assembly Site with yellow tape or other delineator material, if necessary.
- Post directional signs leading to Media Assembly Site.
- Sign in media and issue "Media" armbands, if necessary.

During Incident

- Serve as on-site spokesperson for media (may/may not be authorized to speak on-camera, but for informational purposes only).
- Regularly check with Lead PIO at IC/UC or Deputy PIO at JIC for current airport status.
- Relay media questions, media issues and rumors to Lead PIO and Deputy Lead PIO to obtain clarification and report back to media.
- Organize media (let them select among themselves) for media pool to access incident site (NO access to incident site until approved by IC/UC and Airport Police escort has been arranged).
- Drive and or accompany media to incident site for crowd control. Ensure instructions are given to media on access restrictions at incident site.
- Call for water and food for staff located at the Media Assembly Site.
- Maintain Public Information Unit Log for staff activities at the Media Assembly Site.

After Incident Is Secured

- Close Media Assembly Site with Airport Police.
- Review and turn in Public Information Unit Log to Lead PIO for hot-wash debriefing on PIO function.
- If necessary, report areas of media operation concerns for resolution and recommendations to be integrated into Airport Emergency Public Information Plan.

APPENDIX I

FOG6—Functions and Duties of PIO at News Conference Site

FIELD OPERATIONS GUIDE 6

Functions and Duties of PIO at News Conference Site

The incident news conference site is only expected to be a temporary location for the first day. The location of follow-on news conferences describing the status of investigations into the incident will be determined by the investigative agencies. Such agencies include the National Transportation Safety Board, the Federal Bureau of Investigation, Transportation Security Administration, or the U.S. Department of Homeland Security.

Refer to map of listing pre-determined Airport Media Assembly and News Conference Sites.

Functions

- Handles logistics for set-up and tear-down of the incident news conference site.
- Coordinates arrivals of designated speakers—notifies Lead PIO which speakers and officials have arrived at news conference site.
- Prepares and distributes news conference agenda listing order of speakers, their titles, and their agencies (or write them on an easel) to media.
- Ensures media are apprised of Federal Communications Commission regulations requiring closed captioning and/or inclusion of sign-language interpreter of all news conferences related to public-safety situations.
- Ensures news conference site is compliant with City ADA Guidance: Inclusionary, Accessible Messaging and Effective Communication.
- Ensures new conference site is compliant with City ADA Guidance: Press Conference and Interpreter Checklist.

Checklist

Beginning of Incident

- Monitor situation to determine if or when a news conference will be called.
- If news conference will be called, request additional staff for news conference set-up if necessary.
- If news conference will be called, request an American Sign Language Interpreter through the _____.
- Ensure Lead PIO at IC/UC has notified Airport Police for crowd control assistance at designated news conference site.
- Check out vehicle from airport vehicle pool. Determine who will drive equipment to site.

During Incident

- Bring individual equipment
- Communications equipment: cellphone, extra battery, portable radio, and megaphone
- Emergency Public Information Plan containing forms
- Bullhorn
- Jacket or inclement weather outerwear
- Point-and-shoot camera and/or video camera
- Set up news conference site (see Airport News Conference Set-up Checklist).
- Ensure news conference site is compliant with City ADA Guidance: Press Conference and Interpreter Checklist
- Notify Lead PIO in IC/UC and Deputy Lead PIO in DOC of status of news conference logistics.

During News Conference

- Sign-in media.
- Prepare and distribute news conference agenda with order of speakers, their titles and agencies to media (or write on easel).
- Monitor audio quality during news conference.

- If video camera is available, record the news conference, and forward video to the PIO coordinating social media.

After Incident Is Secured

- Tear-down news conference site operations.
- Review and turn in Public Information Unit Log to Lead PIO for Lead PIO's hot-wash for debriefing on PIO function.
- If necessary, report areas of media operations concerns for resolution and recommendations to be integrated into Airport Emergency Public Information Plan.

APPENDIX J

FOG7—Functions and Duties of Airport Photographer

FIELD OPERATIONS GUIDE 7

Functions and Duties of Airport Photographer

Functions

- Airport Photographer provides photographic support to document airport response to incident.

Beginning of Incident

- Airport photographer prepares photographic equipment for possible deployment to airport emergency (as needed by Incident Command-Joint Information Center).

During Incident

- Perform duties as necessary.

After Incident Is Secured

- If necessary, report areas of media operations concerns for resolution and recommendations to be integrated into Airport Emergency Public Information Plan.

APPENDIX K

FOG8—Functions and Duties of Airport Videographer

FIELD OPERATIONS GUIDE 8

Functions and Duties of Airport Videographer

Functions

- Airport Videographer provides video graphic support to document airport response to incident (arrange through Airport Information Management & Technology Group).
- Ensures finished products are in compliance with City ADA Guidance: Inclusionary, Accessible Messaging and Effective Communication.

Beginning of Incident

- Staff videographer prepares videographer equipment for possible deployment to airport emergency (as assigned by Lead PIO).

During Incident

- Perform duties as necessary.

After Incident Is Secured

- If necessary, report areas of media operations concerns for resolution and recommendations to be integrated into Airport Emergency Public Information Plan.

APPENDIX L

FOG9—Functions and Duties of Airport Graphic Designers

FIELD OPERATIONS GUIDE 9

Functions and Duties of Airport Graphic Designers

Functions

- Graphic designers provide graphics support for signage, flyers, information materials for posting onto Airport Internet website or for dissemination by e-mail, and other materials as necessary (arrange through Airport Environmental Graphics Section/Facilities Planning Group.
- Ensures finished products are in compliance with City ADA Guidance: Inclusionary, Accessible Messaging and Effective Communication.

Beginning of Incident

- Graphic designers prepare materials as requested by emergency responders and by Lead PIO.

During Incident

- Graphic designers ready maps and other graphics that have been prepared for airport emergencies.

After Incident Is Secured

- If necessary, report areas of media operations concerns for resolution and recommendations to be integrated into Airport Emergency Public Information Plan.

APPENDIX M

Checklist for Effective Planning Practices for Creating and Sustaining Effective Emergency Communications Plans for Airports

Stage	Action	Applies to Airport	Done
Pre-planning	Senior airport leaders have bought into the emergency communications or crisis communications planning process.		
Pre-planning	Realistic funding has been provided for planning and implementation.		
Pre-planning	A clear assignment of the task leader and emergency (or crisis) communications planning committee has been made.		
Pre-planning	A clear decision and assignment has been made about the role of the airport PIO in the development, maintenance, and improvement of the emergency/crisis communications plan and planning process.		
Pre-planning	A comprehensive crisis communications plan that includes mission-critical system failures and events as well as emergencies is evaluated for appropriateness and cost-effectiveness at the airport before the planning process begins.		
Pre-planning	Single plan versus multiple plans and/or SOPs has been considered; i.e., consolidation of all fractional plans for emergency and/or crisis communications has been evaluated and decided.		
Pre-planning	Use of outside consultant or facilitator is considered for appropriateness and cost-effectiveness.		
Pre-planning	Plans have been requested from other airports, especially airports in the same state and/or of similar type and size.		
Pre-planning	A timetable or schedule has been set for completion of the new plan or revision.		
Pre-planning	Airport EOC, unified command, or equivalent mechanism is prepared to coordinate communications during emergencies and mission-critical crises. Most appropriate EOC organization system (ICS, ESF, Major Management Activities, or hybrid) has been installed and practiced.		
Pre-planning	NIMS fully installed at airport.		
Pre-planning	Assessment of needs for communications has been completed.		
Pre-planning	Priorities for emergency/crisis communications have been established by matching needs to risks (priority based on Likelihood x Severity x Operational Impact).		
Pre-planning	Development of readily accessible database of key facts keyed to incident type or airport system or characteristic for fast preparation of briefings, press releases, social media, and communications with partners. Sample data would be as-built plans of terminals, airline contact numbers, etc.—things that a PIO might provide to operations or responders.		
Pre-planning	Assessment of capabilities in communications has been completed. This assessment includes interoperability and redundancy. Development of local matrix of interoperability vs. redundancy may be useful.		
Planning	Planning process is inclusive of stakeholders for inputs.		
Planning	Planning process is inclusive of stakeholders for reviews.		
Planning	Planning process is based on an honest hazards analysis that includes both emergencies and "mission-critical" systems failures and events.		

(*continued on next page*)

Stage	Action	Applies to Airport	Done
Planning	Planning process is driven by the application of the continuous improvement process, i.e., the continuous cycle of plan, train, exercise, evaluate, and improve.		
Planning	Planning process uses hot wash summaries and after action reviews/reports (AARs) from actual events and exercises.		
Planning	Planning process uses the improvement plan (IP) or after action report/improvement plan (AAR/IP) to guide contents or revisions.		
Planning	Planning process is iterative.		
Planning	Seminars (discussion-based exercises) are used to develop plan.		
Planning	Workshops (discussion-based exercises) are used to develop plan.		
Nature of the Plan	Emergency communications plan is separate from AEP and incorporated into the AEP by reference.		
Nature of the Plan	Coordination of airport plan with sponsor's emergency communications plan has been worked out, if required.		
Nature of the Plan	SOPs have been prepared to put specific appropriate extracts of plan at workstations and in hands of mutual aid and airport community partners.		
Internal and External Aspects of Communications to Consider for Inclusion in Plan			
Internal	A clearly designated single point of contact between airport operations and air traffic control		
Internal	Alert procedures for ATCT and other partners		
Internal	Alternative communications systems		
Internal	Baggage Information Display System (BIDS)		
Internal	Cell phone		
Internal	Chain-of-command communications		
Internal	Common operating picture (COP)		
Internal	Communications in ICS environment		
Internal	Communications in NIMS environment		
Internal	Communications procedures within EOC		
Internal	Cybersecurity		
Internal	Dedicated communications circuits		
Internal	Emergency notification		
Internal	Flight Information Display System (FIDS)		
Internal	HAM radio		
Internal	Human traffic directors		
Internal	Joint Information Center (JIC)		
Internal	Joint Information System (JIS)		
Internal	Landline telephone		

Stage	Action	Applies to Airport	Done
Internal	Location and procedures for JIC		
Internal	Message discipline		
Internal	Movable barriers		
Internal	Movable signs		
Internal	Non-verbal visual indicators		
Internal	PIO's role		
Internal	Programmable signage other than FIDS/BIDS		
Internal	Public address system		
Internal	Radio		
Internal	Reverse 911		
Internal	Runner/messenger		
Internal	Satellite phone		
Internal	Social media—incoming		
Internal	Social media—outgoing		
Internal	Web-based communications		
External	Communications to airport sponsor		
External	Communications to federal agencies		
External	Communications to mutual aid partners		
External	Communications to other external stakeholders		
External	Communications to the public		
External	Communications with airlines		
External	Communications with concessionaires		
External	Communications with passengers and employees in unusual situations such as terminal evacuations, sheltering-in-place, or electrical outages when normal communication means are inoperable or not installed (e.g., on road in front of terminal, in parking deck, or on apron during and after a terminal evacuation)		
External	Cybersecurity		
External	Interoperability with partners including mutual aid partners		
External	Joint Information Center (JIC)		
External	Joint Information System (JIS)		
External	Location and procedures for media center		
External	Media relations		
External	Mutual aid agreements and airport emergency/crisis communications plan match.		

(*continued on next page*)

Stage	Action	Applies to Airport	Done
External	NOTAM procedures		
External	Off-airport programmable signage		
External	Pre-scripted press releases, website, and social media releases		
External	Prepared press releases and statements		
External	Responses to "Citizen journalism" (social media)		
External	Reverse 911		
External	Social media—data mining of public posts for situational awareness		
External	Social media—monitoring posts for situational awareness		
External	Social media—outgoing		
External	WEA alerts		
External	Wireless Emergency Alert (WEA) system		
Implementation			
Training	Airport emergency/crisis communications plan is shared as widely as possible given the constraints of SSI—consider posting non-SSI version of plan on airport public website.		
Training	Airport employees have been trained on plan and procedures.		
Training	Airline station managers and employees have been trained on plan and procedures, including fire responder training where appropriate (e.g., terminal incident management).		
Training	Tenant and concessionaire employees have been trained on plan and procedures.		
Training	FBO employees have been trained on plan and procedures.		
Training	Tenant agency employees have been trained on plan and procedures.		
Training	Mutual aid partners have been trained on plan and procedures.		
Training	Contractors including construction and maintenance contractors have been trained on plan and procedures.		
Training	PIO has been trained in NIMS including PIO duties.		
Training	PIO has been trained in JIS and JIC procedures.		
Training	Airport EOC participants have been trained and drilled on communications procedures.		
Exercises	Communications are included in airport's exercise plan.		
Exercises	One or more aspects of communications are included in every table top exercise.		
Exercises	Major portions of airport emergency/crisis communications plan are included in every full-scale/triennial exercise.		
Exercises	Functional exercises are used to test airport emergency/crisis communications plan periodically and when indicated by AAR/IP.		
Exercises	A communications section is included in every AAR for exercises or actual events.		
Exercises	Communications are included in the improvement plan (IP or AAR/IP) when appropriate.		

Stage	Action	Applies to Airport	Done
Exercises	Contact lists are exercises at least once a month even if automatically updated through airport HR or badging systems.		
Exercises	Airport-ATCT Alert phone (Red phone) is exercised daily.		
Exercises	Lessons learned from previous exercises or actual incidents are soon included in an exercise to see if the lesson has been applied and the gap or deficiency corrected.		
Evaluation	Peer review by comparable airports is a way to evaluate an airport's plan.		
Evaluation	Airport seeks to develop metrics for effectiveness of its plan.		
Continuous Improvement	Airport has a formal program for capturing and applying lessons learned from communications in actual events, exercises, plan reviews, peer reviews, and other airports.		
Continuous Improvement	Airport conducts reviews of emergency/crisis communications plan periodically on a written schedule.		
Continuous Improvement	A person or committee is assigned to track actions to apply communications lessons learned and correct deficiencies revealed by hot washes, after action reports, and inspections.		

Abbreviations and acronyms used without definitions in TRB publications:

A4A	Airlines for America
AAAE	American Association of Airport Executives
AASHO	American Association of State Highway Officials
AASHTO	American Association of State Highway and Transportation Officials
ACI–NA	Airports Council International–North America
ACRP	Airport Cooperative Research Program
ADA	Americans with Disabilities Act
APTA	American Public Transportation Association
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
ATA	American Trucking Associations
CTAA	Community Transportation Association of America
CTBSSP	Commercial Truck and Bus Safety Synthesis Program
DHS	Department of Homeland Security
DOE	Department of Energy
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FAST	Fixing America's Surface Transportation Act (2015)
FHWA	Federal Highway Administration
FMCSA	Federal Motor Carrier Safety Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
HMCRP	Hazardous Materials Cooperative Research Program
IEEE	Institute of Electrical and Electronics Engineers
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
ITE	Institute of Transportation Engineers
MAP-21	Moving Ahead for Progress in the 21st Century Act (2012)
NASA	National Aeronautics and Space Administration
NASAO	National Association of State Aviation Officials
NCFRP	National Cooperative Freight Research Program
NCHRP	National Cooperative Highway Research Program
NHTSA	National Highway Traffic Safety Administration
NTSB	National Transportation Safety Board
PHMSA	Pipeline and Hazardous Materials Safety Administration
RITA	Research and Innovative Technology Administration
SAE	Society of Automotive Engineers
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (2005)
TCRP	Transit Cooperative Research Program
TDC	Transit Development Corporation
TEA-21	Transportation Equity Act for the 21st Century (1998)
TRB	Transportation Research Board
TSA	Transportation Security Administration
U.S.DOT	United States Department of Transportation

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