

ACRP Synthesis 60

Airport Emergency Post-Event Recovery Practices

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- Practical studies driven by airports' needs
- Funded by congress through the FAA
- Administered by TRB of the national academies
- Each project guided by a panel of experts
- 3 types of ACRP studies
 - Research
 - Synthesis
 - Legal

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ACRP Syntheses

- Focus on existing practices
- Seek effective procedures, policies, etc.
- Use surveys, interviews and/or case examples
- Must be non-prescriptive
- Short-term (less than 9 months)
- Often serve as exploration leading to major ACRP research project in subsequent year

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ACRP S04-16

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Purpose:

To report on experiences and effective practices in communications planning in preparing for, working through, and learning from actual airport emergencies.

Major topics addressed:

- Types of plans (single, multi, in AEP, referenced)
- Typical communications planning processes
- Contact list maintenance
- Social media use
- Trends in airport emergency communications planning



Case Examples of Airport Emergency Communications Planning

1. Rochester (MN) International Airport (RST)
 - As referenced in Nov/Dec *Airport Improvement*
2. Dallas-Ft. Worth International Airport (DFW)
3. Denver International Airport (DEN)
4. Boise Airport (BOI)
5. Watsonville Airport (WVI)

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Airport Emergency Post-Event Recovery Practices

Panel

Hilary Fletcher

Alex M. Kashani

Toshia Shavies Marshall

Elaine S. Potoker

Steven E. Runge

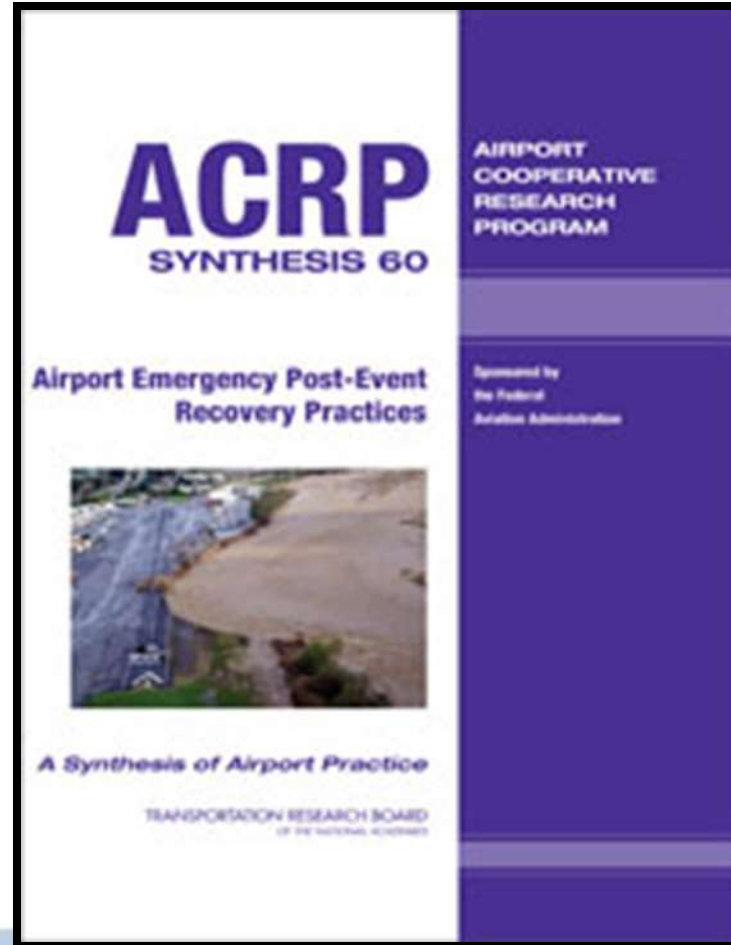
Meaghan Smalley

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Findings – An airport emergency communications plan

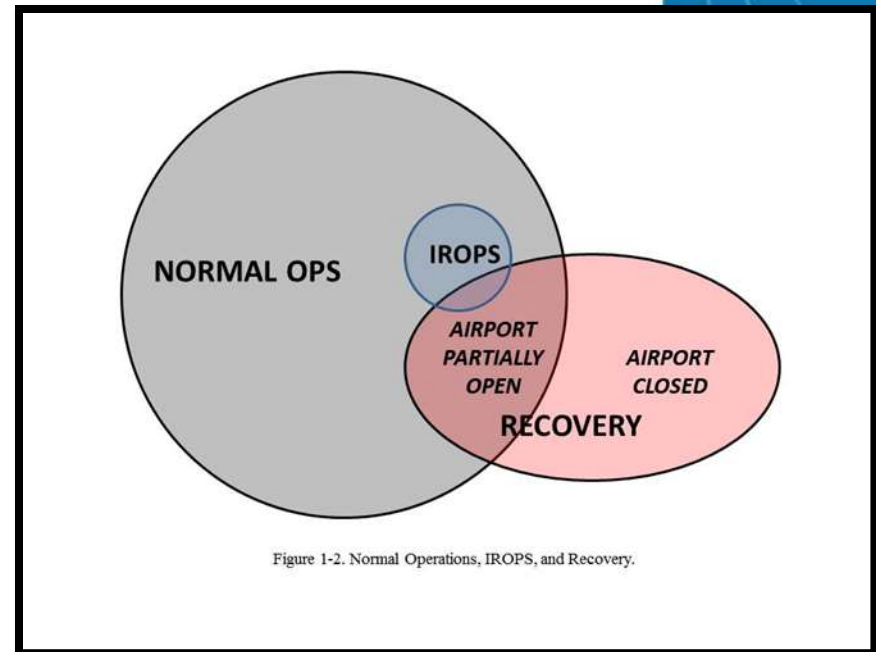
- 1) Needs to provide simple, clear, scalable, implementable procedures.
- 2) Is not static but requires review, training, exercising, and continuous improvement.
- 3) Is being replaced by a comprehensive crisis communications plan at many airports – if staff numbers permit
- 4) Works better when separate from AEP but incorporated by reference.
- 5) Need to be based on NIMS and ICS and prepare for use of Joint Information System (JIS).
- 6) Can connect safety to enhanced customer service: WIN-WIN-WIN.

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DATA COLLECTION

- Selected 37 airports that we believed had had major disruptions in past 10 years
- Excluded IROPS
- Airports of all types and sizes sought
- All types of disruptions sought
- Interviewed all 37 airports
- Performed 4 detailed case studies – one for each of four archetypical incidents



INCIDENT TYPOLOGY

- Aircraft incidents
- Natural disasters
- Criminal acts including terrorism
- Systems failures including industrial accidents

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AIRPORTS IN STUDY

APA	DFW	JAX	MSP	SFO
ASE	DVT	JFK	MSY	STL
BJC	EWR	JLN	MTV	STP
BOI	GPT	LAX	NYL	SXQ
BOS	HDN	LEX	ORK	SZP
BUF	IAD	LGA	OWA	
BUR	IAH	MCO	PGA	
DEN	ISN	MEM	SAV	

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- We have an obligation to include airports of all types and sizes.
- Big airports with many flights and more varied passenger needs tend to experience a wider variety of incidents.
- Small airports are often highly innovative, often in response to constrained resources (budget and staff).
- Experiences from an airport of any size can be adapted by any other airport if there is information transfer.

Why do I mention this now?



4 CASE EXAMPLES

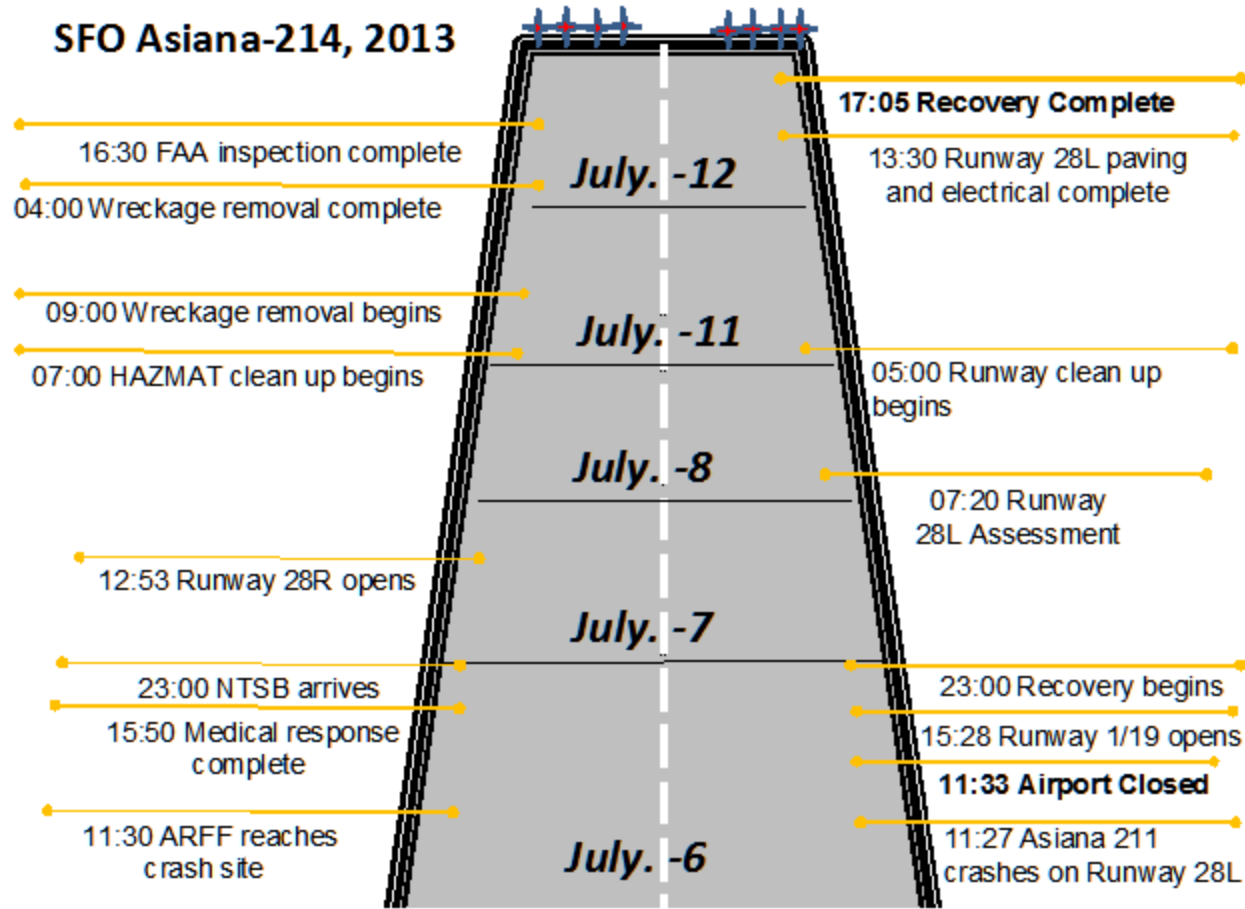
Case examples are riveting, largely because of their fine-grained detail. They illustrate some major themes very well, but other important findings came from the other 33 airports.

Case Study 1: SFO - Crash



(<http://qzprod.files.wordpress.com/2013/07/asiana-214-crash.jpg?w=880>)

SFO Asiana-214, 2013



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MAJOR LESSONS LEARNED AT SFO

- Recovery ops create intense safety & health risks.
- Comprehensive crisis communications plan is needed, including a COP.
- NIMS & ICS should be continued into recovery and be more inclusive of partners.
- Logistics & resource management are essential.
- Proactive coordination with investigators speeds recovery.
- Customer service remains crucial during recovery.

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Case Study 2: DFW – Ice storm

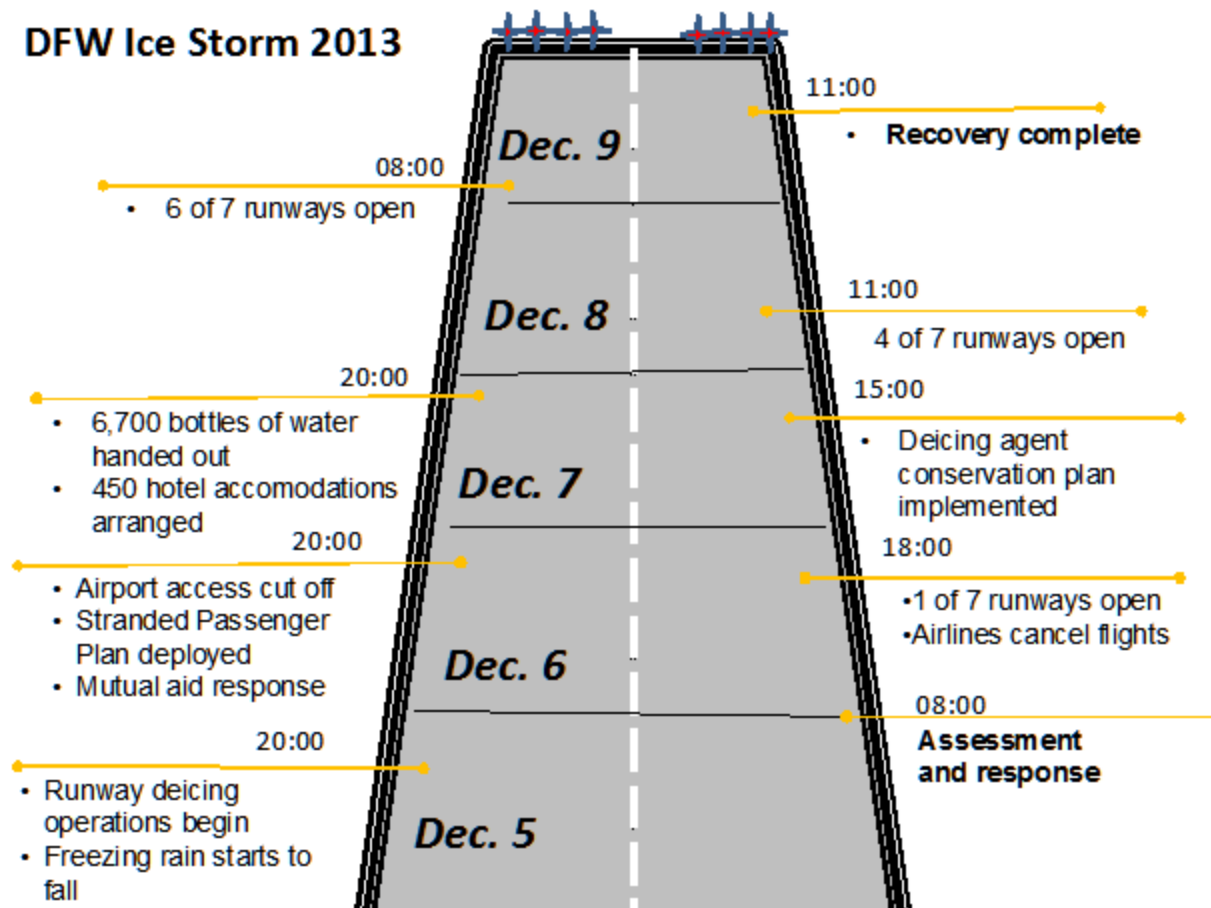
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(DFW photo)

DFW Ice Storm 2013



MAJOR LESSONS LEARNED AT DFW

- Customer & employee care matter greatly.
- More inclusive EOC works better.
- Documentation of asset and resource management must be done accurately.
- Lessons learned must be adopted and tested with exercises promptly and often.

Case Example 3: LAX Shooting



(LAWA photo)

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LAX Active Shooter 2013



MAJOR LESSONS LEARNED AT LAX

- All of the airport's public notification systems must be working and under the airport's full control in an emergency.
- Airport must be able to communicate with self-evacuees.
- "Bench strength" matters if recovery lasts beyond 8-12 hours.
- Mutual aid worked well.
- Crime scene perimeter control requires coordination with badging and security access.
- Communications interoperability can always be improved.
- Post-event employee care is essential.

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Case Study 4: EWR Electrical Outage

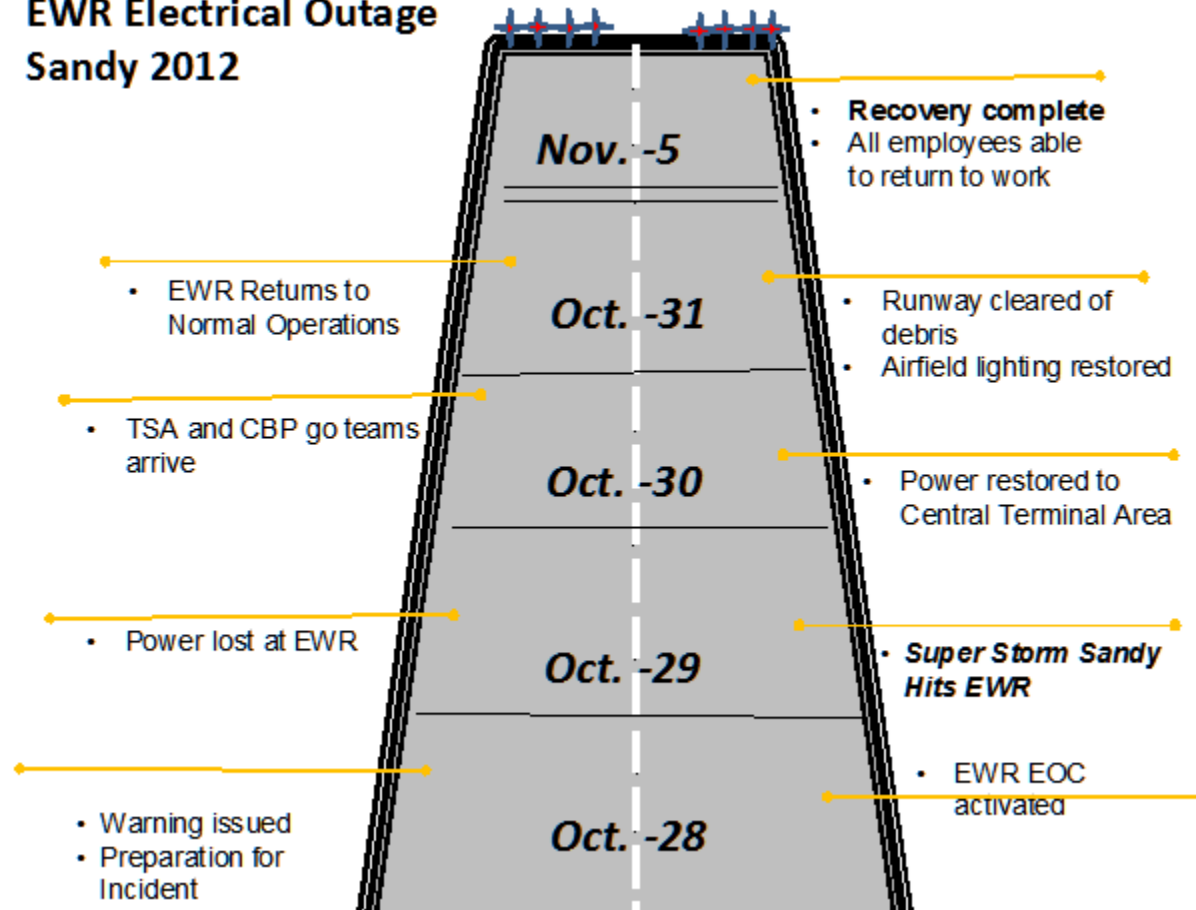
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(PANY&NJ photo)

EWR Electrical Outage Sandy 2012



MAJOR LESSONS LEARNED AT EWR

- NIMS & ICS work, and they work better when you have all the right people at the table in the EOC.
- Comprehensive crisis communications plan must exist and be followed.
- Auxiliary generators must be sufficient to run all people movers, escalators, elevators, etc. to evacuate terminals.
- Nothing trumps great preparation.
- Do realistic risk analysis and plan mitigation measures to reduce amount of recovery needed.

FINDINGS

There are two major findings and a great many specific findings spread among 10 functional areas.

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Major Finding #1

“Airport Closed” and “Airport Open”

- This seems intuitive and maybe self-evident, but it isn’t, and it’s a crucial issue.
- Operations aren’t the only thing involved in recovery.
- Recovery is often phased and may overlap response.

“The decision to open, close, or reopen an airport begins and ends with the airport operator or certificate holder. However, these decisions must consider a number of jurisdictional authorities as well as binding agreements and approvals that have been incorporated in the airport’s ASP and ACM. Airport Operators have the responsibility to ensure that effective corrective actions are carried out when deemed necessary or required. They also must ensure that agencies having an interest or legal jurisdiction, such as FAA, TSA, CBP, FBI, and CDC, are respected, involved, and informed throughout the decision processes leading to recovery” (Synthesis 60, pp. 36-37).

Major Finding #2

A Major Culture Shift Has Occurred

Airports have begun to share their experiences freely rather than hiding problems from the public, the media, and peer airports, and this appears to be a very recent change.

- The four case studies in Synthesis 60 caught a snapshot of this change in progress and show the benefits of the change.
- The interviews at all 37 airports showed an openness to sharing experiences, a willingness to share documents and plans, and a commitment to continuous improvement.

Other Major Findings


- NIMS and ICS are highly effective for managing recovery.
- Airport EOCs help and shouldn't be stood down too soon after recovery begins.
- A comprehensive crisis communications plan is desirable.
- Customer service remains critical, and an airport's reputation can be heightened by effective recovery.
- Effective recovery saves money.
- The complexity of airports, no matter their size, means that staged recovery is always an important option to consider.

Effective Management Practices and Lessons Learned

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Findings Have Been Converted into a Handy Tool for Recovery Planning

Appendix A to Synthesis 60 is a checklist of recovery practices found to be effective by the airports in the study.

- Based on more than 1300 data points from the airports
- Organized by the 10 functional areas
- Each section goes from most generally applicable to most specialized.
- Few airports will use every idea in the checklist but most will want to consider all of them for local applicability.

Sample Checklist Page

Part V. OPERATIONS & LOGISTICS		
Effective Practice	Does It Apply ?	Done
Concept of phased recovery always considered		
Warm start preparations for recovery begun during response phase		
Clear information and warning provided when airport is closed (for non-towered airports: UNICOM message and temporary Xs on runways)		
Damage assessment guided by detailed plans and priorities stated in recovery plan		
Maintenance and engineering staff (or consultants) used for inspections		
Building inspection and code enforcement (BICE) teams used for inspections		
Inspectors with airport-oriented training from mutual aid partners used		
Attention paid to environmental concerns to avoid safety issues, environmental contamination, and delays in recovery from belated requests for clean-up or remediation		
Sufficient fuel supplies on hand for duration for recovery		

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AND 21 MORE ITEMS IN PART V.

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Sample Checklist Page

Part VII. CUSTOMER CARE

Effective Practice	Does It Apply?	Done
Terminal Incident Response Plan to guide evacuation, sheltering-in-place, and repopulation, and have it continue through both response and recovery phases		
Family Assistance Plan that continues through recovery		
Recovery phase included in Survivor Support Plan (e.g., housing) that continues through recovery		
Transportation plan for passengers while airport closed		
Cooperation with hotels to create and implement housing plan for passengers while airport closed		
Passenger and survivor communications incorporated in comprehensive crisis communications plan		

(Source: Smith, Kenville & Sawyer data)

A Word on Metrics

- None of the 37 airports reported having or using any quantitative metric for the effectiveness of recovery plans and procedures.
- Nearly everyone would like to have a metric or several.
- The bottom line now is the subjective assessment in the after action review and follow-up.

Gaps Identified = Further Research Needs

- Comprehensive crisis communications planning and implementation (S04-16)
- Airport family assistance planning (ACRP 06-03)
- Further development of common operating picture systems especially as applicable to recovery and after action reviews (S04-16)
- Use of and commitment to NIMS and ICS in recovery efforts (S04-16)
- Commitment to use of airport EOC in recovery efforts including ways to improve integration of other partners in the EOC, NIMS, and ICS during recovery
- EOCs or EOC alternatives for resource-constrained airports
- Collection of data on specific elements, processes, stages, and phases of recovery, and associated terminology and concepts
- A complementary study that integrates lessons learned from this report, but focuses on airports that primarily serve cargo or are major cargo hubs
- Creation of a template for recovery plans, with the template scalable to serve airports of all types and sizes
- Airport-specific NIMS and ICS forms and checklists to guide recovery efforts
- Metrics and other methods for self-evaluating recovery procedures and plans, ideally associated with a template for recovery plans

ACRP Synthesis 60 is available at:

http://onlinepubs.trb.org/Onlinepubs/acrp/acrp_syn_060.pdf

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Questions?

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