Aircraft Emergency Preparedness and Response

Aircraft Builders Council, Inc.
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Thomas J. Kinton, Jr.
Kinton Aviation Consulting
CONTENTS

• Assessing Risk

• Airport 101

• Reducing Risks

• Effecting Change

• High Performance Response
EVOLUTION OF ARFF

Requirements & Priorities

• Regs., Standards, Advisories

• Life Safety

• Property Preservation

• Environmental Conservation

• Recovery – Restore Ops
RISK METHODOLOGY

Airport Environment & Operations

• A/C Fleet, A/C Configuration, PAX/Cargo LD Factors
• Climate, Water Environment, Coastal Airport
• Cargo and Fuel Loads
• Worst Case Accident Scenario
• Risks to Aircraft Occupants
• Aircraft Accident Patterns-Logan’s History
• Growth Projections-Flight Operations
TARGET HAZARDS

• Communicable disease

• Criminal related events (IED-shooting in terminal)

• New large aircraft

• Cargo aircraft

• Runway incursions
Aircraft Emergency Preparedness and Response

**BOS**

- 6 runways
- 4 terminals-97 gates
- 28 million pax
- 700 mil. lbs. cargo
- 1200 daily a/c ops
diverse fleet mix
- 60 airlines/10 cargo
BOS

- Multi-modal
- Multi-disciplines (18K employees)
- Multi-jurisdictional
- Multiple risks and threats
- Transportation-people
- Economic engine-8 billion dollars
Boston Logan is the Premier Transportation Facility for New England…

- 28 Million Annual Pax
- Over $8 Billion in Annual Economic Impact
- Over 10,000 Direct Jobs
  - 80% Private Sector
- 82,000 Total Direct/Indirect Jobs
ASSUMPTIONS

- A/C Size - PAX/Cargo Loads

- O & D Airport - Life Hazard

- PAX Demographic

- PAX Capacity = Casualty Profiles
LOGAN AIRPORT MITIGATION STRATEGY
Systematic, Risk Based – All Hazard Planning

1. **Prevention**
   - Proactive Safety Initiatives
   - Intelligence – Information Sharing

2. **Preparedness**
   - Training & Drills
   - Support Agreements
   - Multi-agency Exercises

3. **Response**
   - Time Sensitive Actions
   - Optimize Life Safety & Survival
   - Reduce Secondary Damage

4. **Recovery**
   - Damage Assessments
   - Debris Removal
   - Crisis Counseling

Aircraft Emergency Preparedness and Response
PROACTIVE - *Reduce Risks*

- Airport Community Oriented Safety
- Logan Airport Safety Alliance
- Airport Emergency Planning Group
- Fire Safety Audits/Joint Training
- Daily Airport Security Meeting (“8:30”)
- Performance Measures
EFFECTING CHANGE

GO TEAM
GOAL:

Improve preparedness by raising levels of situational awareness for all stakeholders within the Metro Boston region relative to an aircraft crash in the water and the emergency management challenges inherent in a marine environment.
SCENARIO

• 747 ditches in Boston Harbor on approach
• Survival factors – 335 passengers and crew
  235 fatal
  100 injured
  -priority 1 (35)
  -priority 2 (40)
  -priority 3 (25)
• No fire
• Dangerous goods on board
• 15,000 pounds of fuel
• Executives from Fidelity Investments
• Federal Air Marshals (UK)
• Harvard University sports team
• Foreign nationals
• 2 companion animals
DISASTER DRILL
RUNWAY COLLISIONS

1977

Tenerife: 1977
583 Fatalities

8 Fatalities
Detroit: December 1990

14 Fatalities
Quincy, IL: 1996

122 Fatalities
Milan: October 2001

1990

Detroit: December 1990

8 Fatalities

Quincy, IL: 1996

14 Fatalities

Milan: October 2001

122 Fatalities

1991

Los Angeles: February 1991

34 Fatalities

North Las Vegas: Sept. 2003

2 Serious Injuries
Vertical Separation 000 Feet
Lateral Separation 69000 Feet
SCENARIO:

• Aircraft Collision – 777 and 757

• Survival Factors – 532 PAX
  • 50 fatal
  • 482 injured
    - priority 1 (110)
    - priority 2 (176)
    - priority 3 (196)

• Fidelity Investments & State Street Bank

• Federal Air Marshals

• Boston University Hockey Team

• Unaccompanied minor

• Foreign nationals

• U. S. Secret Service Agents
DEMAND BASED RESPONSE

• Proportioned Fire/EMS Response

• Resource Capacity Analysis

• Resources Scaled to A/C Size

• Crosswalk Multi-disciplinary Response
  – Fire Alarm Running Card
  – MCI Phases
  – Hospital Levels
Questions?

Thank you!

Thomas J. Kinton, Jr.
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