

TOWNSHIP FIRE DEPARTMENT CHAPTER 2: SUGGESTED OPERATING GUIDELINES

Part 8: Strategic Guidelines

Subject: Aircraft Incidents

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Section: 2-8-9

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- 9.01 Purpose. To identify items concerning aircraft accidents which impact on fire response strategy.
- 9.02 Goal. Develop response strategies that recognize hazards and conditions associated with aircraft accidents.
- 9.03 Aircraft Accident General.
- A) Township Fire Department's Area lies within ten miles of the Chippewa Valley Regional Airport. The flight paths for this airport include the airspace over this area. This airport services private, commercial and military aircraft.
 - B) Department planning will emphasize hazards and conditions associated with an off-field accident.
 - 1) The FAA and the NTSB anticipate the chance of passenger survival after an off-field crash to be 10% or less.
 - 2) Because of the many variables (location of crash, structure involvement, etc.), off-field planning will be outlined using general terms.
 - C) Department resources may also be called to support an on-field operation. This support would most likely involve logistical support (mass casualty supplies, foam concentrate, etc.).
- 9.04 Special Problems.
- A) Large Life-Loss Potential.
 - 1) Passengers.
 - 2) Persons on the ground.
 - 3) Firefighters and other responders.

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B) Large Injury Potential.

- 1) Passengers.
- 2) Persons on the ground.
- 3) Firefighters and other responders.

C) Fuel and Hazards.

- 1) Large commercial aircraft (747) can have up to 22,000 gallons of fuel on-board.
- 2) Common jet fuel has an ignition temperature of 464 degrees F. (JP 4 will flash at -10° F, gasoline will flash at -45° F.).
- 3) Ammunition aboard military aircraft.
- 4) Ejection seats aboard military aircraft.
- 5) The potential that a light aircraft or even an ultra light aircraft may have a BRS (Ballistic Recovery System) or other systems like it.

D) Crash with Ignited Fuel.

- 1) Extinguish all fires.
- 2) May require large quantities of foam - master stream application.
- 3) May lead to multiple structure fires - (example: crash in residential or commercial area).
- 4) Could produce severe brush fire.
- 5) Could produce conflagration conditions.

E) Crash with Un-ignited Fuel.

- 1) Severe flash and fire potential.
- 2) Spill must be secured with foam - and maintained. Need for large quantities of foam concentrate.
- 3) Need for non-sparking rescue tools.
- 4) Eliminate ignition sources.
- 5) Potential for surface and ground water contamination.

F) Remote Area (wooded areas, farm fields, marshes).

- 1) Control of access roads will be critical.
- 2) Heavy equipment may be needed to clear access path.
 - a) Highway Departments (city, county, township).
 - b) Private contractors.

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- 3) Wreckers may be needed to remove stuck response vehicles, or remove vehicles blocking access.
- 4) Anticipate time delays in setting up operations.
- 5) Consider school bus transport of personnel (especially relief crews) leaving apparatus in staging areas.

G) Water Supply.

- 1) Large fire (aircraft fuel, structures) will tax water system capacity.
- 2) Traffic (ambulance, civilian) may hinder tanker shuttle.

H) Transportation of Injured.

- 1) Triage will be critical.
 - a) Do not overload transportation with low priority patients.
 - b) Patients must be routed to appropriate facility according to type/extent of injury and hospital capability/capacity.
- 2) As the distance to the hospital increases, the number of ambulances needed will increase.
- 3) Helicopter support is an advantage, but must be rigidly controlled.
 - a) Landing zone must not risk patients or responders.
 - b) Down-blast will scatter debris, triage tags, blankets.
 - c) Noise will complicate communications.

I) Handling of the Dead.

- 1) Activity under direction of Medical Examiner.
- 2) Bodies and body parts will be flagged using survey flags.
- 3) Protect human remains - leave in position found.
- 4) All pieces of bodies are important to Medical Examiner; fingers being the most important for identification purposes.
- 5) For temporary storage of dead, a minimum of four refrigerated trucks will be needed.
 - a) one for male.
 - b) one for female.
 - c) one for children.
 - d) area for examination/autopsy.
- 6) Cover signs of commercial trucks used for storing bodies.

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J) Valuables.

- 1) Secure the area.
- 2) Do not remove anything except to protect it from loss.
- 3) Anticipate looting.
- 4) Medical Examiner is responsible for valuables of deceased.

K) Safety Considerations.

- 1) Do nothing impulsively.
- 2) Do not manipulate handles, switches or any equipment unless you are positive what the resulting action will be and the action is absolutely necessary to rescue or protect personnel.

L) Inter-Agency.

- 1) Anticipate over response; fire departments, EMS and law enforcement agencies responding without being requested.
- 2) Fire department is responsible for inner-perimeter of crash site.
- 3) Law Enforcement is responsible for outer-perimeter.
- 4) Liaison will be critical.
 - a) Federal Aviation Administration (FAA).
 - b) National Transportation Safety Board (NTSB)
 - c) Red Cross (and other welfare agencies).
 - d) Airline company.
 - e) Medical Examiner.
 - f) Department of Natural Resources (environmental protection).
 - g) Military.
 - h) Emergency Government.

M) Multi-Jurisdictional.

- 1) Crash may occur on (or spread beyond) community boundary.
- 2) Command/control and strategy must adjust to phases of incident: impact, rescue and hazard control, body recovery, investigation, clean up.

N) Public.

- 1) Expect that the curious, the morbid, the looters will rush to the scene.
- 2) Crowds will hinder movement or emergency equipment and

operations.

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- 3) Crowds can be in danger if too close to spilled fuel or other hazards.
- 4) Crowds may abandon vehicles in traffic and walk to scene to get better view - compounding traffic problems.
- 5) Use barrier tape to identify hazard areas. Law Enforcement is responsible for outer-perimeter.

O) Relatives.

- 1) Will be frantic with worry and grief.
- 2) Need central meeting point.
 - a) Assign liaison to coordinate.
 - b) Assign Chaplains.

P) Weather.

- 1) Aircraft accidents can happen in all types of weather.
- 2) Temperature extremes will affect survivors and responders.
- 3) Snow or rain will complicate access and movement of equipment.

Q) Prolonged Operations.

- 1) Need for relief crews (continued fire/hazard control, body removal, support of clean up).
- 2) Food and fluids needed for large crews.
- 3) Lighting (football field dimensions minimum) will be needed.
- 4) Fuel will be needed for vehicles/equipment.
- 5) Fatigue of responders will increase safety problem.
- 6) Toilet facilities (portable) must be provided.

R) Psychological Impact on Response Personnel.

- 1) Direct all personnel to attend an exit de-briefing.
 - a) Explain signs/symptoms of critical incident stress.
 - b) Identify contact for support (telephone counseling source at minimum).
- 2) Limit inner-perimeter assignment of personnel to only those needed. Rotate often to remote Rehab or Staging areas.
- 3) Assign observer to detect signs/symptoms of personnel at scene (consider as assignment for Safety Officer).
- 4) Post incident support must be provided.

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S) Media.

- 1) Providing accurate information in a timely fashion is a Command concern.
- 2) Expect to be over-loaded by media requests for information.
- 3) Remember - if the information is not provided - it will be found somewhere, from someone.
- 4) Media personnel will also be affected by the incident - expect unexpected behavior.
- 5) One way to avoid "interference" is to provide a means for the media to complete their job.
 - a) Regular updates.
 - b) Guided tours of area.

9.05 Strategic Considerations.

A) Pre-Planning.

- 1) Review mutual aid assignments.
 - a) Major fires/flammable liquid capability.
 - b) Mass casualty capability.
- 2) Maintain map books and aerial photos.
 - a) Access.
 - b) Staging for many vehicles.
- 3) Review multi-mass casualty protocols.
 - a) Training for personnel.
 - b) Review EMS system capability.

B) Inter-Agency.

- 1) Fire department is responsible for inner-perimeter of crash site.
- 2) Emergency Medical Service is responsible for triage, treatment, and transportation of injured.
- 3) Law Enforcement is responsible for outer-perimeter of crash site.
- 4) Medical Examiner is responsible for collection, identification and disposition of the dead.
- 5) FAA, NTSB is responsible for crash investigation.
- 6) Red Cross is responsible for shelter and care of persons displaced by accident (damaged homes, evacuated areas).
- 7) DNR is responsible for environmental protection.

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C) Command Function.

- 1) Need for very visible, strong command.
- 2) Fill staff positions early - consider priority order of Safety, Liaison, Public Information.
- 3) Collect situation and resource status information.
- 4) Expand management system anticipating the potential problems.
- 5) Medical and EMS
 - a) Triage.
 - b) Treatment.
 - c) Transportation.

D) Operations Function.

- 1) Anticipate need to address the following.
 - a) Fire control.
 - b) Rescue.
 - 1) Access.
 - 2) Extrication.
 - c) Hazardous Materials.
- 2) Conditions may indicate need for separate fire/hazard, and medical branches.
- 3) Rotate personnel on regular basis. Remove unassigned personnel from inner-perimeter to Rehab or Staging area.
- 4) All personnel must go through exit de-briefing.
- 5) Decontamination if needed.

E) Logistics Function.

- 1) Supplies.
 - a) Anticipate supply shortages (long boards, casualty bags, foam concentrate).
 - 1) County FD resources.
 - 2) Airport stockpiles.
 - 3) Private contractors.
 - b) Anticipate transport problems because of access.
- 2) Personnel Support.
 - a) Food and fluids for many persons.
 - b) Sanitary facilities.
 - c) Shelter (weather extremes - hot or cold).
- 3) Maintenance/Support.

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- a) Fuel/Fluids for vehicles and equipment.
- b) Mechanical service and repair.
- c) Consider calling for repair specialists (rescue tools, etc.).
- 4) Need for specialized equipment.
 - a) Lighting.
 - 1) FD lighting units.
 - 2) Construction lighting towers.
 - b) Street barricades.
 - c) Excavation equipment.
 - d) Wreckers.
 - e) Rescue tools.
 - 1) Hydraulic spreaders, cutters and rams.
 - 2) Non-sparking equipment.

F) Planning Function.

- 1) Situation Status.
 - a) Perimeter of crash site.
 - b) Use aerial photographs to plot perimeter.
 - c) Monitor local television (views from live broadcasts).
- 2) Resource Status.
- 3) Documentation.
 - a) Written log of activity.
 - b) Photographic log.
 - 1) Operations.
 - 2) Location of debris, injured, deceased.
- 4) Casualty log.
 - a) Passenger/crew (airline, owner best source).
 - b) On-ground casualties.
- 5) Responder log.
 - a) Exposures to hazardous materials.
 - b) Critical incident stress follow-up.

G) Finance Function.

- 1) Track cost of supplies and services.
- 2) Track cost of contracted equipment.

H) Telephone Numbers

- 1) Milwaukee FAA Flight Standards: 1-414-486-2920
- 2) FAA Regional Operations Center: 1-800-762-1457
- 3) Green Bay Flight Service Station: 1-920-431-5925
or: 1-920-431-5960