

## TOWNSHIP FIRE DEPARTMENT CHAPTER 2: SUGGESTED OPERATING GUIDELINES

Part 8: Strategic Guidelines

Subject: Natural Disaster

Page 1 of 9

Effective Date: 07-01-95

Section: 2-8-11

Reviewed/Revised Date: 06-28-10

- 11.01 Purpose. To identify items concerning natural disasters which affect fire response strategy.
- 11.02 Goal. Develop response strategies which recognize the problems associated with natural disasters.
- 11.03 Natural Hazards.
- A) The following types of natural hazards present a threat to the area.
- 1) Tornado (Windstorm).
  - 2) Blizzard.
  - 3) Extreme Cold (pro-longed).
  - 4) Extreme Heat (pro-longed).
  - 5) Snow/Ice.
  - 6) Flooding.
  - 7) Drought.
  - 8) Landshift.
    - a) earthquake.
    - b) earthslide.
    - c) erosion.
- B) The degree of threat is measured by assessing the following:
- 1) How often does the hazard pose a threat?
  - 2) What is the total population that could be seriously affected by the hazard?
  - 3) What is the duration of impact to be expected from the hazard?
  - 4) What is the intensity of impact to be expected from the hazard?
  - 5) What is the scope of damage to be expected?
  - 6) How predictable is the threat from the hazard?
  - 7) How easy is it to reduce the effects of the hazard?

**Subject: Natural Disaster**

**Date: 07-01-95**

**Page 2 of 9**

11.04 Special Problems.

A) Access.

- 1) Normal access routes may be blocked by debris.
- 2) Roads, bridges may be damaged beyond safe use.

B) Communications.

- 1) Communications equipment may be damaged by the event, making them unusable.
- 2) In disasters, what are thought to be communications "problems" are often coordination problems in disguise.
- 3) Communications may be overloaded by increased use.
  - a) Survivors contacting or being contacted by relatives.
  - b) Increased system use by responding agencies.

C) Resource Shortage.

- 1) Department resources may have been damaged.
- 2) Mutual aid resources may be committed to response in home communities.
- 3) Over-response of resources creates coordination problems.
  - a) Persons and organizations arrive at the scene without having been requested.
  - b) Multiple organizations independently request resources without informing the other organization.
  - c) Responsibility for tracking resources is not assigned.
  - d) It is not clear to arriving resources who is responsible for site coordination.

D) Size-up.

- 1) Type and extent of damage and the secondary threats (leaking gas, downed power lines) are not immediately apparent.
- 2) Initial actions may be started with vague and inaccurate information.
- 3) Disasters are "fluid" in nature with needs changing minute by minute.

E) Financial.

- 1) Natural disasters can require extensive amounts of personnel time and materials.

**Subject: Natural Disasters**

**Date: 07-01-95**

**Page 3 of 9**

- 2) Expenses can easily exceed funds available within the Department's operating budget.
- 3) Tracking response expenses will be a critical function if the community applies for State or Federal disaster assistance.

F) Disruption.

- 1) Electrical outage.
- 2) Natural gas outage.
- 3) Telephone service outage.

G) Evacuation.

- 1) Panic is not a common problem in disasters; getting people to evacuate is.
- 2) Even if people have been convinced to evacuate, inhabitants may return while the threat is still present.
- 3) Why do people hesitate to evacuate?
  - a) Not convinced that a risk actually exists.
  - b) Wish to stay and protect their property.
  - c) Wanting to assure the safety of other family members before leaving.

H) Large Loss Potential.

- 1) Property damage can vary from slight to complete; from localized to area wide.
- 2) Injuries can vary in severity and number.
- 3) Fatalities.

I) Complexity.

- 1) Fires (multiple locations, types, lack of resources).
- 2) Medical needs (number of injuries, type).
- 3) Adverse weather conditions.
- 4) Impact may create other hazards. (Example - LP Gas storage damaged during windstorm.)

J) Inter-Agency Operations.

- 1) Organizations are accustomed to operating autonomously and fail to change in a disaster.

**Subject: Natural Disaster**

**Date: 07-01-95**

**Page 4 of 9**

- 2) Terminology and procedures may vary between organizations.
- 3) Hesitancy to depend on other organizations.
- 4) Persons (organizations) possessing information do not realize that another person (organization) needs it.

K) Safety of Personnel.

- 1) Size-up may not identify all potential safety hazards.
- 2) Urgency to act may lead to disregard for safety practices or use of protective clothing.
- 3) Command structure may not provide adequate supervision.

L) Specialized Equipment/Supply Needs.

- 1) Heavy Equipment (lifting, debris removal).
- 2) Sand, sandbags and other expendibles.
- 3) Test instruments (toxicity, flammability, etc.).

M) 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.

N) Handling of the Dead.

- 1) Activity under direction of Medical Examiner.
- 2) Mark location of bodies and body parts using survey flags.
- 3) Protect human remains - leave in position found.
- 4) All body pieces are important for identification process.
- 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.

**Subject: Natural Disaster**

**Date: 07-01-95**

**Page 5 of 9**

- d) area for examination/autopsy.
- 6) Cover signs of commercial trucks used for storing bodies.

O) Valuables.

- 1) Security must be provided.
- 2) Coroner is responsible for valuables of deceased.

P) Public.

- 1) Expect that The Curious, The Morbid, The Looters will rush to the scene.
- 2) Crowds will hinder movement of emergency equipment and operations.
- 3) Crowds can be in danger if too close.
- 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.

Q) Relatives.

- 1) Will be frantic with worry and grief.
- 2) Need central meeting point.
  - a) Assign liaison to coordinate.
  - b) Assign Chaplains.
- 3) Casualty and relocation lists will reduce problems.

R) Weather.

- 1) Temperature extremes will affect survivors and responders.
- 2) Snow or rain will complicate access and movement of equipment.

S) 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 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.

**Subject: Natural Disaster**

**Date: 07-01-95**

**Page 6 of 9**

T) Psychological Impact on Response Personnel.

- 1) Concern for own family/property.
  - a) Provide information concerning status of families.
  - b) Provide way for members to contact families.
  - c) Provide shelter or meeting place for families to assemble.
- 2) 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).
- 3) Limit assignment of personnel to only those needed.  
Rotate often to remote Rehab or Staging areas.
- 4) Assign observer to detect signs/symptoms of personnel at scene (consider as assignment for Safety Officer).
- 5) Post-incident support must be provided.

U) Media.

- 1) Providing accurate information in a timely fashion is a Command concern.
- 2) Expect to be overloaded 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 media to complete their job.
  - a) Regular updates.
  - b) Guided tours of area.

11.05 Strategic Considerations.

A) Pre-Planning.

- 1) Review mutual aid assignments.
  - a) Major fire/search and rescue capability.
  - b) Mass casualty capability.
- 2) Maintain map books, aerial photos, full-size maps.
  - a) Access.
  - b) Staging for many vehicles.
  - c) Maps of adjacent communities.
  - d) Copies of city-wide map.

**Subject: Natural Disaster**

**Date: 07-01-95**

**Page 7 of 9**

- e) Water, sewer, drainage systems.
- 3) Review multi-mass casualty protocols.
  - a) Training for personnel.
  - b) Review EMS system capability.

**B) Inter-Agency.**

- 1) Fire department is responsible for search, rescue and hazard control.
- 2) Emergency Medical Service is responsible for triage, treatment and transportation of injured.
- 3) Law Enforcement is responsible for impact site security, pedestrian and traffic control.
- 4) Medical Examiner is responsible for collection, identification and disposition of the dead.
- 5) Red Cross is responsible for shelter and care of persons displaced by accident (damaged homes, evacuated areas).
- 6) DNR is responsible for environmental protection.

**C) Command Function.**

- 1) Need for very visible, strong command.
- 2) Fill staff positions early - consider priority order of Liaison, Safety, Public Information.
- 3) Collect situation and resource status information.
- 4) Expand management system anticipating the potential problems.
- 5) Provide LEADERSHIP when hazard calls for FD to be lead agency.

**D) Operations Function.**

- 1) Reliable information is critical.
  - a) Perimeter of impact area.
  - b) Extent of damage/exposures.
  - c) Number and type of injures; fatalities.
- 2) Anticipate need to address the following.
  - a) Fire control.
  - b) Rescue.
    - 1) Access.
    - 2) Extrication.
  - c) Medical.
    - 1) Triage.
    - 2) Treatment.

**Subject: Natural Disaster**

**Date: 07-01-95**

**Page 8 of 9**

- 3) Transportation
  - d) Hazardous Materials.
- 3) Conditions may indicate need for separate fire/hazard, and medical branches.
- 4) Rotate personnel on regular basis. Remove unassigned personnel from inner-perimeter to Rehab or Staging area.
- 5) All personnel must go through exit de-briefing.
- 6) Decontamination.

E) Logistics Function.

- 1) Supplies.
  - a) Anticipate supply shortages (long boards, casualty bags, foam concentrate).
    - 1) County FD resources.
    - 2) 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.
  - 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 area stricken.
  - b) Use aerial photographs to plot perimeter.



**Subject: Natural Disaster**

**Date: 07-01-95**

**Page 9 of 9**

- 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.
- 5) Responder log.
  - a) Exposure to hazardous materials.
  - b) Critical incident stress follow-up.

G) Finance Function.

- 1) Track cost of supplies from response agencies and private sources (foam concentrate, mass casualty supplies).
- 2) Track cost of contracted equipment (heavy equipment, buses, lighting, etc.).
- 3) Track personnel time.