

TOWNSHIP FIRE DEPARTMENT CHAPTER 2: SUGGESTED OPERATING GUIDELINES	
Part 8: Strategic Guidelines Subject: Conflagration Page 1 of 6 Effective Date: 07-01-95	Section: 2-8-6 Reviewed/Revised Date: 05-24-10

- 6.01 Purpose. To identify items concerning conflagrations which affect fire response strategy.
- 6.02 Goal. Develop response strategies which recognize hazards and conditions associated with conflagrations.
- 6.03 Conflagration Defined. The term conflagration is usually applied to fires that extend over considerable area and destroy many buildings. For this guideline, conflagrations will involve the following situations.
- A) Fires involving deteriorated or abandoned buildings in congested areas. These fires usually spread in more than one direction before adequate resources are organized to bring them under control.
 - B) Fires involving residential buildings which spread beyond control because of combustible construction (wood wall and roof surfaces).
 - C) Brush fires that spread over a wide front and cause damage to, or destroy structures.
 - D) Explosion causing individual fires to ignite over a large area. (Example: Crash of large aircraft in built up area)
 - E) Multiple location fires caused by natural disaster evolving into one large fire.
- 6.04 Special Problems. Understanding the reasons why fires can develop into a conflagration will emphasize that the potential is found in all communities.
- A) Exposures.
 - 1) Most conflagrations involve a multitude of exposures.
 - 2) Exposure problems do not suddenly appear. These situations have pre-existed or developed gradually.
 - a) Closeness of structures.
 - b) Combustible exteriors (primarily roofs).
 - c) Abandoned buildings.

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- 3) Key factors that allow fire to spread to exposed buildings.
 - a) Radiated heat.
 - b) Convection.
 - c) Flying brands.
 - d) Wind conditions.

B) Rapid Fire Development.

- 1) Fire spreads quicker than the ability of fire department to control it.
(Inadequate on-scene resources)
- 2) Multi-front situation.
 - a) May spread simultaneously to more than one exposure or in more than one direction.
 - b) Fire spreads in one direction but quickly involves large area (wind effect).
- 3) Delayed alarm and situation is out of hand upon arrival of first units.

C) Life Safety/Evacuation.

- 1) Safety of building occupants should be priority.
 - a) Fire moves quickly.
 - b) Buildings may collapse.
- 2) Evacuation may be required in immediate or extended area.
 - a) Decision to combat or evacuate?
 - b) Use non-fire personnel for evacuation if available.
- 3) Vacated buildings pose a security problem.
 - a) Law enforcement responsibility.
 - b) Establish liaison early.

D) Communications.

- 1) Often difficult because of rapidly developing situation and number of units involved.
- 2) Radio communication with mutual aid and support agencies is important.
- 3) Face to face contact often impossible because of fire perimeter.

E) Duration.

- 1) Size of fire or number of structures involved can mean long-term operation.

- 2) Final extinguishment and overhaul may require commitment of many hours or even days (need for relief, extensive use of mutual aid).

F) Water Supply.

- 1) Amount of firefighting activity can quickly diminish water supply.
 - a) Multiple fire locations.
 - b) Fully involved structures.
 - c) Heavy stream appliances.
 - d) Supply not based on conflagration conditions.
- 2) Water supply may be non-existent.
 - a) New system not fully in service (new construction).
 - b) System may have been disconnected (demolition).
 - c) Rural operation with inadequate tender shuttle operations.

G) Resources.

- 1) Large resource commitment needed in short time period.
 - a) Need to get ahead of fire.
 - b) Multiple operating positions.
 - c) Potential for large fire perimeter.
- 2) Congestion problems are common.
 - a) Many vehicles in confined area.
 - b) Civilian traffic can complicate access problems.
- 3) Personnel relief requirements must be considered.
 - a) Fatigue.
 - b) Duration of incident.

H) Containment. Often difficult because of rate of spread or lack of access to structures.

- 1) Unable to get resources quickly.
- 2) Building collapse or volume of fire can complicate efforts.

7.05 Strategic Considerations.

A) Pre-Planning.

- 1) Situations or conditions that lead to conflagration are often obvious.
 - a) Lack of adequate fire separations.
 - b) Combustible exteriors.
 - c) Inadequate water supplies.

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- 2) Plans must consider maximum commitment of resources.
 - a) Resource availability and response times (day/night).
 - b) Supplemental water supply.
 - c) Communications.

B) Inter-agency.

- 1) Support assistance will maximize use of fire personnel.
- 2) Request mutual aid promptly.
- 3) Coordination and communication with other agencies is essential.
 - a) Common radio frequencies.
 - b) Early assignment of Liaison Officer.

C) Command Function.

- 1) Position command post upwind and use natural fire breaks.
- 2) Determine direction and rate of fire spread.
- 3) Collect (Immediately) situation and resource status information.
- 4) Consider potential when determining resource needs.

D) Operations Function.

- 1) Rapid fire development/multiple operating positions.
 - a) Rate of spread can overtake placement of companies.
 - b) Consider need to give up a few structures to save many.
 - c) Consider immediate downwind brand (ember) patrol.
- 2) Reliable information is critical.
 - a) Perimeter of fire and direction of fire spread.
 - b) Number of exposures.
 - c) Potential for further spread.
 - d) Consider use of reconnaissance officer.
- 3) Mobility.
 - a) Rate of spread may require hit-and-run tactics.
 - b) Companies should be aware of need to move quickly.
 - c) Critical in areas with combustible roofs and wind blown fire.
- 4) Rescue/Evacuation and medical emergency.
 - a) Could be major problem in inhabited area.
 - b) If available, use non-fire personnel for evacuation.
 - c) Select safe locations for injured and displaced persons.

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- 5) Use of Resources.
 - a) Do not commit all companies until extent of problem is determined.
 - b) Maintain reserve force for contingencies.
 - c) Consider use of task force organization.

- 6) Safety (personnel and apparatus).
 - a) Potential for injuries to personnel is great.
 - 1) Collapsing buildings.
 - 2) Radiant heat.
 - 3) Fatigue.
 - 4) Confusion.
 - 5) Inadequate water supply.
 - 6) Test atmosphere - CO.
 - b) Apparatus placement is important.
 - 1) Building collapse.
 - 2) Changing fire conditions.

E) Logistics Function.

- 1) Resources.
 - a) Maintain reserve.
 - b) Fatigue will be a factor.
 - c) Relief companies required for extended operations.
- 2) Water Supply.
 - a) Common problem at most conflagration incidents.
 - b) Increase or supplement existing supply.
 - 1) Assign water supply officer.
 - 2) Request maximum pumpage from utility.
 - 3) Emergency inter-connect with adjoining utility.
 - 4) Use of available static sources (swimming pools, etc.).
- 3) Maintenance/Support.
 - a) Extended operations will require special support.
 - 1) Food.
 - 2) Fuel.
 - 3) Mechanical service and repair.
 - b) Need for specialized equipment.
 - 1) Aircraft.
 - 2) Street barricades.
 - 3) Lighting equipment.

4) Excavation equipment.

4) Communications.

- a) May require more than one tactical channel.
- b) Consider separate command channel.
- c) Use cellular and commercial telephone service.

F) Planning Function.

1) Strategy.

- a) Determine perimeter, amount of fire, and potential.
- b) Have a contingency plan.
- c) Pick spot to hold and control fire.

2) Reflex Time.

- a) Large resource commitment takes time to arrive.
- b) Base plans on resources available on-scene.

3) Situation/Resources status.

- a) Immediate and accurate status display critical.
- b) Need reliable information.
- c) Plan ahead.
- d) Do not waste resources..

4) Documentation.

- a) Needed to support request for disaster assistance.
- b) Log of decisions considered to be minimum.

G) Finance Function.

1) Track cost of specialized equipment.

2) Track cost of supplies and services.