



# TOLEDO FIRE & RESCUE DEPARTMENT



## C-115 Adverse Weather Operations

### Emergency Manual

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### Definition

Adverse weather is considered to be any weather conditions which create an increased risk when responding to or operating at an incident. This includes, but is not limited to: fog, heavy rain, hail, flooding, lightning, high winds, and tornadoes.

### Purpose

This Standard Operating Procedure (SOP) provides guidance for personnel encountering severe weather conditions during field operations. This SOP assists us in meeting the recommendations of NFPA 1451 Standard for a Fire Service Vehicle Operations Training Program 2013 Edition, 4.3.2\*

"The fire department shall establish written policies for variations from standard operations. A.4.3.2 These variations include but are not limited to responding in congested areas, driving in adverse weather conditions, natural disasters, and civil unrest or disorders." It also serves as a component of occupational safety and risk management strategies (see NFPA 1500 Standard on Fire Department Occupational Safety and Health Program 2013 Edition).

### Scope

This procedure shall act as a guide for all personnel whenever inclement weather potentially impacts the safety or efficacy of operations.

### Procedure

Recommended procedures vary with the type of weather problems encountered. Heavy rain, hail, flooding, lightning, high winds, ice, snow, and tornadoes are each considered. Officers should consider risk versus benefit when making decisions regarding operations that expose personnel to adverse

weather conditions. Officers must be prepared to alter, suspend or terminate operations should conditions change rapidly.

### **Ice/Snow**

When encountering icy or snow covered roads, drivers should drive with extreme caution.

### **Fog**

Fog is of concern mainly due to limited visibility during response to an incident scene, although sometimes heavy fog can contribute to slick road conditions. Apparatus operators should remember that emergency lights and apparatus will be less visible to other drivers, and should use due caution in regard to both limited visibility and slick roadways, remembering that other drivers may present a greater than normal hazard to responding apparatus during fog conditions. Heavy fog which restricts visibility may also present a safety hazard when during aerial operations around overhead wires or objects.

### **Heavy Rain**

Heavy rain should not have any effect on fire or rescue functions except for an increased caution during response due to flooded streets. Care should be taken to protect patients or victims.

### **Hail**

When encountering hail conditions, all personnel will wear protective clothing, including eye protection, and company officers should use discretion to determine if the company should seek shelter.

### **Flooding**

Company officers must exercise considerable judgment and discretion relative to personnel safety when entering flooded areas. In rapidly moving water more than two (2) feet deep, personnel should use a lifeline and wear Personal Flotation Devices (PFDs). In any water over two (2) feet, deep, or where the water depth cannot be determined, PFDs shall be used. Particular care should be taken to avoid run-off areas, drains, open manholes, and ditches. See Procedure C-102 Water Rescue for further direction on rescue operations of this type.

**Vehicles should not be driven into areas where water depth cannot be reliably determined.**

### **Lightning**

Personnel not actively involved in emergency operations should remain inside apparatus or structures during frequent local lightning. In addition, personnel should adhere to the following safety rules:

- When there is no shelter, avoid the highest object in the area. If only isolated trees are nearby, the best protection is to crouch in the open, keeping twice as far away from isolated trees as the trees are high;
- Aerial, ground ladder and other elevated (including rooftop) operations should be halted during lightning conditions;
- Avoid hilltops, open spaces, wire fences, metal clothes lines, exposed sheds, and any electrically

conductive, elevated objects;

- Avoid carrying or using long or metallic tools;
- Pump operators should seek shelter in a fully enclosed cab. If it is imperative to remain at the pump panel, do not lean against the apparatus and minimize physical contact with the apparatus.

## Wind

Sustained wind conditions can be very hazardous. Personnel operating out in sustained wind conditions or gusts above 30 miles per hour (mph) shall wear helmets, bunker coats and eye protection for protection from flying debris.

Personnel shall comply with apparatus manufacturer recommendations, if any, concerning high wind operations. In the absence of manufacturer recommendations, the following guidelines for vehicle operation during high wind operations shall be followed:

- **At sustained wind speeds above 50 mph, aerial operations shall be halted.**

Driver-Operators and officers must recognize that wind speeds are difficult to estimate and may vary depending upon location, geography and structure density. Wind gusts may be sudden and substantially higher than sustained wind conditions. In addition to the guidelines listed above, the decision to alter, suspend or terminate operations should include consideration of the following factors:

- Flying debris
- Vehicle stability while driving, ability to stay within the driving lane
- Personnel footing and stability outside the vehicle
- Diminished visibility
- Proximity to power lines
- Presence of downed power lines

Whenever an officer or chief makes the determination to discontinue operations and shelter all vehicles and personnel, Dispatch shall be notified immediately.

Driver-Operators and officers must further realize that the risk to personnel increases in the presence of a combination of adverse conditions (such as high wind, lightning, localized flooding). At all times, personnel must weigh the benefits of a given operation against the risks presented by adverse weather conditions.

## Tornadoes

When a tornado or funnel cloud is observed in the field, apparatus should move away from it at right angles to its direction of travel, if possible. If proximity to the tornado prevents escape, the apparatus should be abandoned and personnel should seek shelter in a sturdy building or a ditch or culvert and keep together. If a tornado is observed from quarters, personnel should respond to the apparatus and relocate as indicated above, provided it is safe to do so. If time does not permit escape, personnel should seek shelter in a predetermined "safe room" within the fire station.

## General

All severe weather conditions encountered should be reported immediately to Dispatch. Safety of personnel and members of the public must be the first priority of officers commanding crews in the field. Attention to debris, downed power lines, drainage collection, and blocked accesses is required. Damage to equipment and apparatus due to weather shall be documented.

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See Also:

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