

Orchard Farm Fire Protection District Standard Operating Procedure

Division: 200 Emergency Operations
Section: 202 Fire & Rescue
Subject: 202.17 Power Lines & Transformer Emergencies



Supersedes: N/A

Approved By: 

Date: 05/22/2013

Date Last Reviewed: N/A

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PURPOSE:

To define the District's response to power lines down and transformer emergencies

RESPONSIBILITY:

All District Personnel

PROCEDURES:

The unit should be positioned so as to be out of danger of electrical contact. The minimum safe distance shall be two utility poles away from the line break. If the officer in charge finds that electrical equipment is involved, he shall notify the control station and have the appropriate electric company dispatched immediately. Primary responsibility is to insure the safety of citizens and firefighters. Make sure that no one is allowed to get close enough to come in contact with electrical lines or equipment. Electricity always seeks its lowest level or ground. It will travel any path it can as it seeks a ground. When power lines are down they will energize the ground around them. For Example: point of ground contact could be 700 volts. This voltage will lessen as it radiates out from this point; for example, 400 volts. If your feet are in areas where there is a voltage difference, you could complete the circuit and be the source to ground. This is called "step potential." This danger could be indicated by a tingling sensation in the feet and serve as a warning to back away from the area.

Key Points

Lock out of down power lines generally occurs after three (3) operations or attempts to re-energize. Even though you may hear this, do not assume the line is dead or de-energized. **Downed lines must always be considered energized with potentially lethal current.** Lines can reset and become "hot" or "energized" again by manual operation of a switch, by automatic reclosing methods (either method from short or long distances away), by induction where a de-energized line can become hot if it's near an energized line, or through back feed conditions. Power line tends to have "Reel Memory" and may curl back or roll on itself when down. Use caution when spraying water on or around energized electrical equipment. Hose streams conduct current! Never spray directly into

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the power lines. Use a fog spray at the base of the pole. Your primary responsibility is to protect the surrounding area.

RESPONSE TO POWER LINES DOWN

Request the utility company to respond. Consider all down wires as "energized." Place apparatus away from "down lines and power poles." Locate both ends of downed wires. Secure the area/deny entry. Periods of high activity; company officer may choose to leave one (1) crew member on-scene with a radio to wait for utility company. In the event of multiple lines/poles down over a large area, call additional resources. In the event of a large storm with multiple lines/poles down, fire companies may use cones or caution tape and move to the next emergency. The purpose of this is to warn and protect as many bystanders as possible.

DOWN POWER LINES AND VEHICLES

Request the utility company to respond. Do not touch vehicle. Have occupants remain inside the vehicle. Place apparatus a safe distance away from down lines. If occupants must leave the vehicle (fire or other threat to life) instruct them to open the door, not step out! They should jump free of the vehicle without touching vehicle and ground at the same time.

SUB-STATION, TRANSFORMER, ELECTRICAL VAULT AND MANHOLE FIRES

Request utility company to respond and clear the area. Be aware of explosion potential. Place apparatus in a safe location away from overhead power lines. Protect exposures. Do not make entry until above electrical equipment has been de-energized. PCB hazards: Smoke potentially fatal; avoid and contain pools of oil around transformers. This unit shall not leave the scene until electric company personnel are on the scene unless directed otherwise by the Officer in charge.