TECHNICAL BULLETIN

Community Development & Planning, Building Inspections
TOPIC:
Water Damaged Electrical Components
September 16, 2010

This Technical Bulletin contains detailed information regarding the proper disposition and repair/replacement procedures for electrical wiring and components that have been exposed to water through flooding, fire fighting activities or other exposure to water. Electrical equipment that has been exposed to water can be extremely dangerous if reenergized without proper reconditioning or replacement. Water and moisture can reduce the integrity of insulation. Flood waters contain silt and debris that can also damage equipment and affect the integrity of the performance. Listed below are the appropriate actions for the various types of electrical equipment and devices that have been subject to flooding and/or submersion.

Important: Prior to energizing any electrical system previously inundated by water, The City of Arlington recommends that a licensed electrical contractor be present to monitor and verify the proper operation of electrical equipment.

Devices (switches, plugs, etc.)

Switches, plugs and receptacles must be removed and replaced.

Lighting Fixtures and Ballasts

All lighting fixtures and associated equipment must be replaced.

Panelboards and Distribution Panels

All molded case circuit breakers must be removed and replaced. The disposition of buses in panelboards and distribution panels must be assessed by qualified electricians. After consultation with the product manufacturer the reconditioning of buses in panelboards and distribution panels may be possible. The electrical contractor must provide a written certification that the panelboards or distribution panel has been reconditioned in accordance with manufacturer's instructions. Otherwise, replacement of the load panels and/or distribution panels is required.

Fuses

Where fuses have been subjected to flood water they must be replaced.

Aluminum Wiring

Where aluminum wiring has been installed and the water damaged plugs and switches have been "pigtailed," the following procedure must be followed:

1. Remove and discard the devices (switch, receptacle) and remove and discard all wire nuts.
2. Remove all exposed aluminum conductor used to make the original termination, this conductor will corrode quickly after exposure to moisture.
3. Replace the receptacles and/or switches with CO/ALR listed devices that connect the aluminum wiring directly to the device.
4. In the event “pigtailing” is required to lengthen the conductor wire connectors listed for the purpose must be used.
5. Due to the unique nature of aluminum wiring, only trained electricians should perform this work.