STORMS & CODES: THE IMPACT TO YOUR RECOVERY EFFORTS

As homeowner's and business's begin to assess damages, the picture becomes murky as they analyze their restoration needs. Having the correct information is paramount in securing a safe structure for years to come.

Both National and Local codes are in place to foster proper guidance to ensure safe structures they are there to protect you, your home, family & the public. A preventative measure, a standard which is followed to reduce risk.

Therefore from an electrical perspective, we at IES in simplfied terms attempt to make sense of what is required as a result of flood related damages to your electrical infrastructure and/or equipment.

YOUR PATH TO YOUR LCEC CERTIFICATION

ELECTRICAL EQUIPMENT

Electrical distribution equipment usually involves switches and low-voltage protective components such as molded case circuit breakers and fuses, within assemblies such as enclosures, panelboards, and switchboards. These assemblies can be connected to electrical distribution systems using various wiring methods.

The protective components are critical to the safe operation of distribution circuits, their ability to protect these circuits is adversely affected by exposure to water and to the minerals and particles which may be present in the water. In molded case circuit breakers and switches, such exposure can affect the overall operation of the mechanism through corrosion, through the presence of foreign particles, and through removal of lubricants. The condition of the contacts can be affected and the dielectric insulation capabilities of internal materials can be reduced. Further, some molded case circuit breakers are equipped with electronic trip units and the functioning of these trip units might be impaired. For fuses, the water may affect the filler material. A damaged filler material will degrade the insulation and interruption capabilities.

Distribution assemblies contain protective components together with the necessary support structures, buswork, wiring, electromechanical or electronic relays and meters. Exposure to water can cause corrosion and insulation damage to all of these areas. In the case of exposure of distribution assemblies to water.

Items Requiring Complete Replacement:

- Electronically controlled and solid state contactors and starters
- Components containing semiconductors and transistors
- Overload relays
- Molded case circuit breakers and molded case switches—reference NEMA Standards Publication AB 4-2003, Guidelines for Inspection and Preventive Maintenance of Molded Case Circuit Breakers Used in Commercial and Industrial Applications, para 2.2
- Fuses

RESTORE POWER

STAYING SAFE FOR YEARS TO COME

INTERIOR WIRING

NEC Reference: 314.15 334.12(A)-334.12(B)

When any wire or cable product is exposed to water, any metallic component (such as the conductor, metallic shield, or armor) is subject to corrosion that can damage the component itself and/or cause termination failures. If water remains in medium voltage cable, it could accelerate insulation deterioration, causing premature failure. Wire and cable that is listed for only dry locations may become a shock hazard, when energized, after being exposed to water. The following recommended actions are based upon the concept that the water contains no high concentrations of chemicals, oils, etc. If it is suspected that the water has unusual contaminants, such as may be found in some flood water, the manufacturer should be consulted before any decision is made to continue using any wire or cable products.

Items Requiring Complete Replacement:

- Any wire or cable that is listed for dry locations only, such as type NM-B cable, should be replaced if it has been exposed to water.
- Any cable that contains fillers, such as polypropylene, paper, etc., should be replaced if the ends of the product have been exposed to water.

WIRING DEVICES, GROUND FAULT CIRCUIT INTERRUPTERS (GFCI), AND SURGE PROTECTORS

Sediments and contaminants contained in water may find their way into the internal components of installed electrical products and may remain there even after the products have been dried or washed by the user. These may adversely affect the performance of those products without being readily apparent to the user community. Also, electrical products, such as GFCIs and surge protective devices, contain electronic circuitry and other components which can be adversely affected by water resulting in the device becoming non-functional or a hazard to the user.

As a result, such products subjected to or believed to be subjected to water damage are not suitable for continued use and must be replaced with new undamaged products. Air drying and washing of water damaged products of this type should not be attempted.

While the list is not exhaustive, it does provide guidance to follow to ensure a safe operating electrical system. A state certified electrician can and should provide you with the proper code references to assist you in the recovery process. For further information contact us at 772 206 1819 or contact your local building dept that operates in your local jurisdiction.

NEC Reference: 314.15-334.12(A)-334.12(B)

IES Electrical
Trusted Professionals

FOR MORE INFORMATION REGARDING THE NEC OR NATIONAL ELECTRIC CODE VISIT

www.nfpa.org NFPA