

Flood | Systems Inspections (Electrical Equipment)

 community.fema.gov/ProtectiveActions/s/article/Flood-Systems-Inspections-Electrical-Equipment

Do not touch electrical equipment if it is wet or if you are standing in water

Phase:

After

Validity Rating:

Robust/Sufficient

Protective Actions

Do not touch electrical equipment if it is wet or if you are standing in water. If it is safe to do so, turn off electricity at the main breaker or fuse box to prevent electric shock. If the area around the service equipment is wet or the service equipment itself is wet, have a qualified professional address the situation. Turn off electricity if you smell hot insulation or see damaged wires. If you are unfamiliar with your home's electrical systems, contact the local power company or a qualified electrician for assistance.

Supporting Research

- “Wet conditions hazards: Working in wet conditions is hazardous because you may become an easy path for electrical current. If you touch a live wire or other electrical component—and you are standing in even a small puddle of water—you will receive a shock. Damaged insulation, equipment or tools can expose you to live electrical parts. A damaged tool may not be grounded properly, so the housing of the tool may be energized, causing you to receive a shock. Improperly grounded metal switch plates and ceiling lights are especially hazardous in wet conditions. If you touch a live electrical component with an uninsulated hand tool, you are more likely to receive a shock when standing in water. But remember: you don't have to be standing in water to be electrocuted. Wet clothing, high humidity, and perspiration reduce resistance and increase your chances of being electrocuted. You need to recognize that all wet conditions are hazards.” [1]
- Of 13 flood events in Europe and the United States 68% of deaths were due to drowning, 12% trauma, 6% heart attack, 4% fire, 3% electrocution, 1% carbon monoxide poisoning, and 7% other/unknown. [2]
- Water is a good conductor of electricity. This chemical action in the form of energy is frequently fatal in floods and has the potential to produce electrochemical reactions. [3]

Contribute to Research

There are no further research recommendations at this time.