

Re: Flood Safety

Background:

As an electrical contractor, you may be called to a flood site — whether it's caused by severe weather, burst or damaged pipes, firefighting efforts, or other events — to assess damage and replace or repair equipment prior to re-energizing circuits. But before any of that, it's critical to think about your own safety when entering the scene, as well as the safety of others when re-energizing equipment that has been water damaged.

When Entering the Scene:

Never enter a basement or any other area if the water level is above electrical outlets or equipment. If the water is that high, always confirm that power has been disconnected by the utility before entering.

When Assessing Equipment for Damage:

Be sure to follow ESA's safety guidelines in the event of flooding, water ingress or damage (ESAsafe.com/floodsafety/). Determine whether equipment has been sprayed with water or fully submerged. That will guide your decision on whether it needs to be replaced or can be safely repaired.

Field Example:

In 2011, an owner of an apartment building plugged in a sump pump to drain a flooded basement. When the sump pump made a strange noise, the owner assumed something was stuck and tried to investigate. What they didn't realize, however, was that the neutral and bond conductors to the disconnect switch, along with the main ground conductor, had been stolen. As a result, when the owner reached in, they received a life-threatening shock.

Checklist from ESA's Flood Safety Guidelines

Equipment	Replace when submerged	Replace when sprayed	Requires additional testing	Notes
ELECTRICAL DISTRIBUTION EQUIPMENT				
Molded-case circuit breakers	✓	✓		
Fuses	✓	✓		
Switches	✓	✓		
Busway (Mylar wrapped bars)	✓	✓		
Busway (powder-coated bars)			✓	
Residential panelboards	✓	✓		
Commercial panelboards			✓	Replacement of interior components.
Switchboards			✓	Testing to confirm suitability based on construction

Sump Area After Flood (2011 Field Example)

