

# Raise Electrical System Components

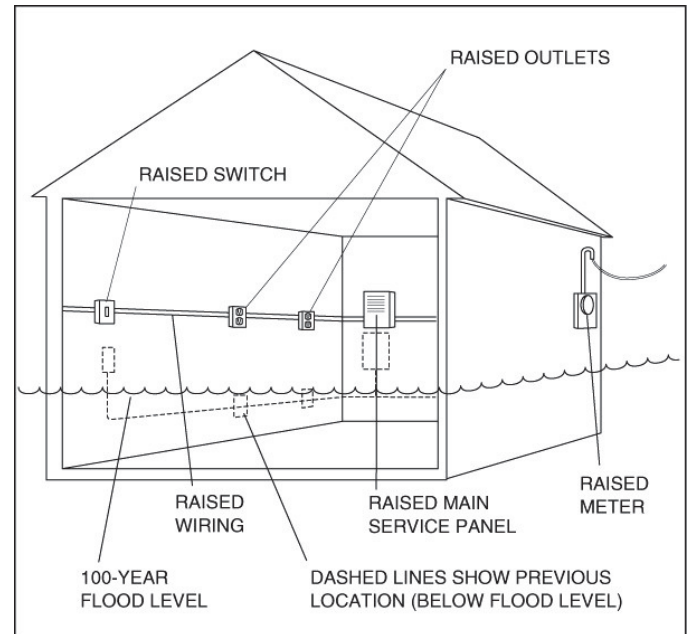


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## PROTECTING YOUR PROPERTY FROM FLOODING

Electrical system components, including service panels (fuse and circuit breaker boxes), meters, switches, and outlets, are easily damaged by flood water. If they are inundated for even short periods, they will probably have to be replaced. Another serious problem is the potential for fires caused by short circuits in flooded systems. Raising electrical system components helps you avoid those problems. Also, having an undamaged, operating electrical system after a flood will help you clean up, make repairs, and return to your property with fewer delays.

As shown in the figure, all components of the electrical system, including the wiring, should be raised at least 1 foot above the 100-year flood level. In an existing structure this work will require the removal of some interior wall sheathing (drywall, for example). If you are repairing a flood-damaged structure or building a new structure, elevating the electrical system will be easier.



Any electrical system components that are the minimum necessary to meet safety requirements can be below the flood level if energized from a distribution panel located above the flood level and supplied by branch circuits originating from ground-fault circuit-interrupter breakers.

## BENEFITS OF UTILIZING THIS MITIGATION STRATEGY

- Helps to prevent damage to electrical system components, resulting in faster cleanup and repairs
- Helps to prevent fires

## TIPS

Keep these points in mind when you have your electrical system components raised:

- ✓ Electrical system modifications must be done by a licensed contractor who will ensure that the work is done correctly and according to all applicable codes. This is important for your safety.
- ✓ Your contractor should check with the local power company about the maximum height to which the electric meter can be raised.
- ✓ If your property is equipped with an old-style fuse box or low-amperage service, you may want to consider upgrading to a modern circuit breaker system and higher-amperage service, especially if you have large appliances or other electrical equipment that draws a lot of power.

## ESTIMATED COST

Raising the electrical service panel, meter, and all of the outlets, switches, and wiring in a 1,000-square-foot, single-floor structure will cost about \$1,500 to \$2,000. If this work is performed during the repair of a damaged structure or construction of a new structure, the cost may be much lower.

## OTHER SOURCES OF INFORMATION

FEMA 348, *Protecting Building Utilities from Flood Damage*, Chapter 3, November 1999, <http://www.fema.gov/library/viewRecord.do?id=1750>.

FEMA P-499, *Home Builder's Guide to Coastal Construction*, "Protecting Utilities," Technical Fact Sheet No.8.3, December 2010, <http://www.fema.gov/library/viewRecord.do?id=2138>.

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