

**Fact Sheet**  
**Nonstructural Measures**  
**(Building Retrofit)**

**Option: Utilities Protection**

- Description:** Eliminating flood risk to building utilities such as electrical panels, HVAC units, and hot water heaters through in-place protection (placing utilities in flood-proof enclosure) or elevating utilities above flood height, often by placing utilities in an addition to the original building. This option does not reduce flooding in portions of building below flood level, such as basements or crawlspaces. Also includes retrofit and protection of neighborhood utility systems, such as power lines or well fields.
- Example(s):** Enclose utilities in floodproof concrete chamber; relocate utilities from flood-prone basement to a location above base flood elevation; replacing above-ground power lines with buried distribution system.
- Benefits:** Reduced flood risk to utilities; depending on technique, may not require substantial alteration to building or additional land; flood waters entering basements or crawlspaces reduce hydrostatic pressure on foundation. Most effective in areas with frequent low-level flooding below the main floor.
- Challenges:** Continued basement flooding; post-flood basement cleanup will be necessary; does not reduce vulnerability to high-velocity flow; may require property owner intervention to install risk management features (e.g., flood gates or shields) in advance of flooding. Does not protect overall building from flooding.

