## FEMA P-348, PROTECTING BUILDING UTILITY Systems From Flood Damage, 2nd Edition



## Principles and Practices for the Design and Construction of Flood Resistant Building Utility Systems

The FEMA Building Science Branch is pleased to announce the release of the second edition of Protecting Building Utilities from Flood Damage, FEMA P-348. The overall objective of this updated publication is to assist in the repair, reconstruction, and new construction of buildings with building utility systems and equipment that are designed and built for maximum flood resiliency.

The updated publication illustrates design and construction of utility systems that comply with the National Flood Insurance Program (NFIP) requirements for new or Substantially Improved residential and non-residential structures in flood-prone areas. It is also useful when evaluating structures for utility system upgrades or replacement, guiding users to meet floodplain management regulations and building code requirements. Even if NFIP compliance is not required, many building owners may find that applying the mitigation measures described in this publication will not only reduce future flood damage, but also facilitate faster recovery after flooding.



## Protecting Building Utility Systems From Flood Damage

Principles and Practices for the Design and Construction of Flood Resistant Building Utility Systems FEMA P-348, Edition 2 / Rebruary 2017



Key document features include:

- Updated materials to reflect the latest versions of the International Code Council<sup>®</sup> codes and building standards;
- Improved photographs, schematics, and graphics;
- Expanded sections to address specific mitigation measures both residential and non-residential building utility systems and equipment; and
- Tools to assist the building owner in determining the best mitigation option for a particular building type and condition.

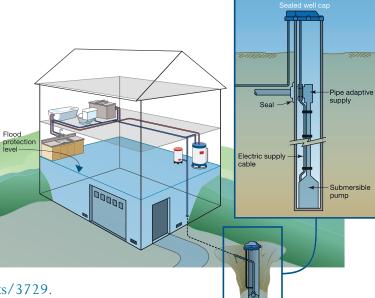
## To download a copy of FEMA P-348 go to https://www.fema.gov/media-library/assets/documents/3729.

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