

## Flood Resistant Design and Construction

ASCE 24, *Flood Resistant Design and Construction*, is a referenced standard in the IBC and IRC. The IBC requires buildings and structures in flood hazard areas to be designed and constructed in accordance with ASCE 24 and to resist flood loads in accordance with Chapter 5 of ASCE 7.

The IRC requires dwellings in floodways to be designed in accordance with ASCE 24. The 2009 edition of the IRC includes an alternative that allows communities to require homes in coastal high hazard areas (V zones) to be designed in accordance with ASCE 24.

ASCE 24 includes some specific requirements and limitations that a committee of experts deemed appropriate, including some provisions that exceed the NFIP minimum requirements. Notably, ASCE 24 requires the lowest floors of buildings to be above the Base Flood Elevation. Order copies at [www.asce.org](http://www.asce.org).

Highlights of ASCE 24 can be found at [www.floods.org](http://www.floods.org) (under "Mitigation").

## Want to Learn More?

**Reducing Flood Losses Through the International Codes: Meeting the Requirements of the National Flood Insurance Program** was developed jointly by the International Code Council and FEMA.



To order copies of the booklet, go to [www.iccsafe.org](http://www.iccsafe.org) and click on the ICC Store



# FEMA

Go to <http://www.fema.gov/library> and search for "Reducing Flood Losses" to download the booklet for the 2003 and 2006 I-Codes.

# Reducing Flood Losses Through the International Codes

## Meeting the Requirements of the National Flood Insurance Program



# FEMA





Counties, cities and towns across the U.S. participate in the National Flood Insurance Program (NFIP). These communities adopt regulations and flood hazard maps in order to guide development in ways that reduce future flood damage. Insurance records show that buildings that meet minimum flood-resistance requirements sustain about 80% less damage.

Federal flood insurance, purchased through insurance agents, is available only in communities that participate in the NFIP.



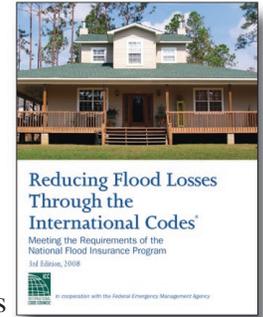
anticipated conditions without causing structural collapse or major damage.

The International Codes® (International Building Code®, International Residential Code®, and the International Existing Building Code®) includes requirements related to high winds, seismic activity, poor soils, and flood hazards. FEMA has determined that the I-Codes® and the NFPA 5000® include provisions that are consistent with the NFIP.

Many states and communities adopt and enforce building codes. The purpose of building codes is to safeguard the public health, safety and general welfare through sound building practices.

Model building codes have always included some requirements to reduce damage to buildings due to weather and natural hazards. New buildings are to be designed and constructed to withstand most

The primary purpose of **Reducing Flood Losses Through the International Codes: Meeting the Requirements of the National Flood Insurance Program** is to help communities decide how to coordinate the I-Codes with their floodplain management programs and land development procedures. This will minimize conflicts and streamline review procedures.



Some communities take a comprehensive approach by adopting comprehensive plans, zoning ordinances, subdivision ordinances, and environmental regulations to achieve multiple goals, including managing flood hazard areas. Other communities adopt a “stand-alone” floodplain management ordinance. For either approach, the flood-resistant provisions of the I-Codes offer a new and effective tool to minimize flood damage when buildings are proposed to be constructed in a floodplain.

The booklet includes:

- The benefits of disaster-resistant codes
- Community responsibilities under the NFIP
- The benefits of adopting standards that exceed the minimum
- Worksheets to help communities coordinate the I-Codes and other regulations
- Crosswalks of the NFIP regulations and the I-Codes
- Sample plan review/inspection checklists

In 2009, FEMA is developing a model companion ordinance that suggests one way to coordinate all NFIP floodplain management requirements and the flood-damage resistant provisions of the I-Codes.