

Non-Structural Mitigation for Flood Risk Reduction

If Structural Mitigation Is Infeasible, Other Work Can At Least Minimize Disaster Recovery Costs and Needs

In our “Structural Mitigation for Flood Risk” factsheet, we briefly review structural mitigation options. These may not work for

many homeowners, especially in the New York City area. There are non-structural projects that can limit displacement for long periods and at significant cost, and minimize NFIP insurance claim issues. These options will not lower flood insurance rates. They are also not a substitute for disaster planning (moving personal property to a higher floor, deploying sandbags, and other avoidance work (Coverage C covers \$1,000; see our factsheet), etc.).



Utilizing Flood-Resilient Structural Materials Below the DFE

Once you are aware of the Design Flood Elevation (this is your home’s Base Flood Elevation on the currently effective Flood Insurance Rate Map (FIRM) plus two feet of freeboard, as required by New York City and State), structural components of the home—wall framing, joists and sub-floors, sheathing, etc.—can be altered to become more resilient to future coastal flooding. A helpful starting point is FEMA’s [2008 overview of these materials](#); hopefully New York City will soon publish guidance on this.

- These alterations generally mean using stone, brick, cement, and treated-wood products for these elements of your home. Cost will depend on the material and quantity used.
- As we are mostly discussing coastal flooding that produces [black or Category 3 water](#), it is helpful to understand how materials you are considering will respond to these waters.

Utilizing Flood-Resilient ‘Finishing’ Materials & Mechanical Elements Below the DFE

‘Finishing’ materials include doors, insulation, floor coverings (tile, for example), cabinets, partitions (including drywall), and even paint. The FEMA guide above is a good start. Using these materials can be particularly helpful for flood recovery, as **NFIP insurance does not cover finishes in a basement or lowest-level enclosure** (see our separate factsheet). Consider also installing:

- **A sump pump** to remove water from subgrade areas. This can work alone or with other mitigation, but will not limit major flooding. Note that pumps mostly run on electricity, so operation may vary during a storm. Cost: \$5,000-\$20,000.
- **A backflow preventer** to limit black water backflow into your home. Cost: \$3,000- \$7,000.
- **New utility elements** (e.g., outlets/switches, heating elements) **above the DFE**. Cost: varies.

NYLAG’s Storm Response Unit is available to assist homeowners. Contact us at (212) 381-0701 or StormHelp@nylag.org