

# Mitigate Disaster Damage with FEMA Public Assistance

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The Federal Emergency Management Agency (FEMA) recognizes that after a disaster, the best time to protect a facility from future damage is during the recovery period.

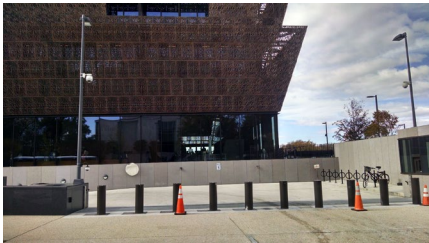
Mitigation projects done during disaster recovery reduce overall cost and construction efforts associated with retrofitting a repaired facility.

If you qualify for repairs through FEMA's Public Assistance (PA) Program under the Robert T. Stafford Disaster Relief and Emergency Act Section 406, then you may also be eligible for additional funding to protect your facility through PA Mitigation (formerly referred to as 406 Mitigation).

Eligibility requirements are detailed in the Public Assistance Program and Policy Guide (PAPPG).

During the recovery process, FEMA will assist you with assessing damage, identifying potential mitigation measures, developing a Hazard Mitigation Proposal (HMP), and evaluating the cost-effectiveness of proposed mitigation.

## Examples of Mitigation Projects Funded by Public Assistance



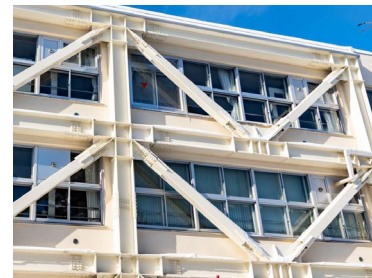
**A self-rising flood barrier protects structures by automatically raising the barrier when floodwaters rise.**



**Adding hurricane shutters protects windows against flying debris during high wind events such as hurricanes, tropical storms, or severe storms.**



**Adding noncombustible roof coverings can help protect roofs from wildfires.**



**Retrofitting a building by adding a steel brace frame to a structure's exterior helps prevent movement and building collapse during an earthquake.**



# FEMA

Lourdes Hospital, a critical care hospital in Binghamton, New York, is on the banks of the Susquehanna River. In 2006, the river flooded, forcing the hospital to evacuate its patients and close for two weeks. In addition, the disaster caused \$20 million in damages to the facility.

After deciding that relocating to avoid future damage was not an option, the hospital incorporated a mitigation project into its repairs. A floodwall was built around the facility and in the event of flooding, entry-point gates would automatically trigger from floodwater pressure and raise to completely seal the property.

The hospital used PA Mitigation funding from FEMA and New York State to fund the floodwall, which was completed in 2010, four years after the initial flood event.

Just a year later in 2011, Tropical Storms Irene and Lee made landfall within 10 days of each other, causing the Susquehanna River to crest at over 25 feet—nearly twice the level necessary to declare a flood in that area. Because floodwaters never breached Lourdes Hospital’s floodwall (see photo below), the facility was able to remain fully operational.

### How Can Public Assistance Mitigation Benefit You?



Prevents or reduces loss of function for public services



Helps avoid repetitive damage from disasters



Provides a long-term solution to a problem

## Who Pays for Your Public Assistance Mitigation Project?

Projects are funded by a combination of federal and non-federal sources. The federal share is determined by FEMA and may be used to pay a minimum of 75 percent of eligible costs. Any remaining eligible costs are derived from non-federal sources (e.g., state, community).

## Eligibility Requirements

FEMA will verify damage if it is the result of a declared disaster and that mitigation measures do not negatively impact the facility’s operation or make it susceptible to damage from another hazard.

FEMA evaluates proposed PA Mitigation measures for four main factors: risk reduction, cost-effectiveness, technical feasibility and effectiveness, and compliance with applicable laws and regulations (described on the following page).

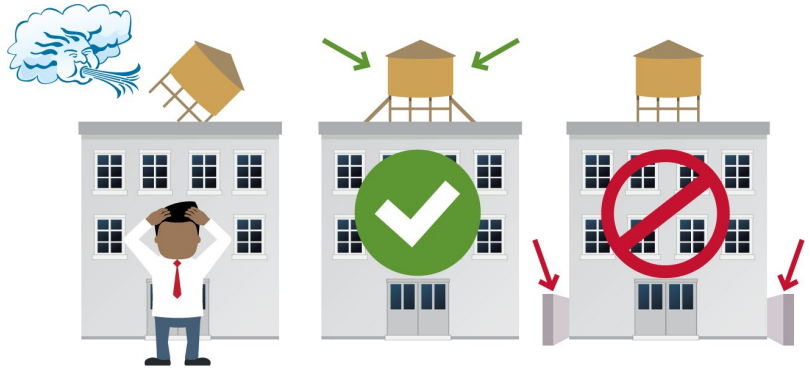


**Lourdes Hospital, Binghamton, New York, 2011**

# The Four Main Factors Required for Proposed PA Mitigation

1

The proposed mitigation must reduce the impact of future damages to the damaged portion of the facility.



2

The proposed mitigation must be cost-effective (see page 4).



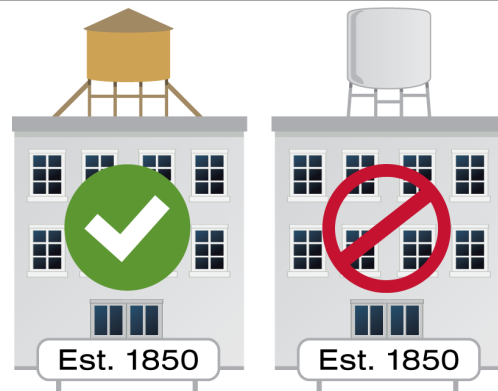
3

The proposed mitigation must be technically feasible and effective.



4

The proposed mitigation must comply with applicable laws, regulations, and Executive Orders, including Environmental Planning and Historic Preservation review.



PA Mitigation measures must meet one of the following tests of cost-effectiveness:

- The mitigation measure is specifically listed in “Appendix J: Cost-Effective Public Assistance Hazard Mitigation Measures” of the PAPPG V4, AND the cost of the mitigation measure does not exceed 100 percent of the damaged facility’s repair cost to which the mitigation measure applies; OR
- The cost for the mitigation measure does not exceed 15 percent of the damaged facility’s repair cost to which mitigation measures apply; OR
- The applicant demonstrates that a mitigation project is cost-effective with FEMA’s Benefit-Cost-Analysis (BCA) Toolkit.

The following are examples of cost-effective PA Mitigation measures under the 100 percent Rule listed in the PAPPG Appendix J:

- Replace drainage structure with a larger structure
- Install submersible pumps in water or wastewater plants
- Elevate equipment vulnerable to flood damage
- Anchor storage tanks to prevent movement
- Install shut-off valves on underground pipes
- Elevate or dry floodproof buildings
- Replace damaged power poles with higher-rated poles

## Examples of Cost-Effective Mitigation Measures Listed in Appendix J



**A flood door is an example of dry floodproofing a building.**



**An elevated heat pump is an example of elevating equipment to prevent flooding damage.**



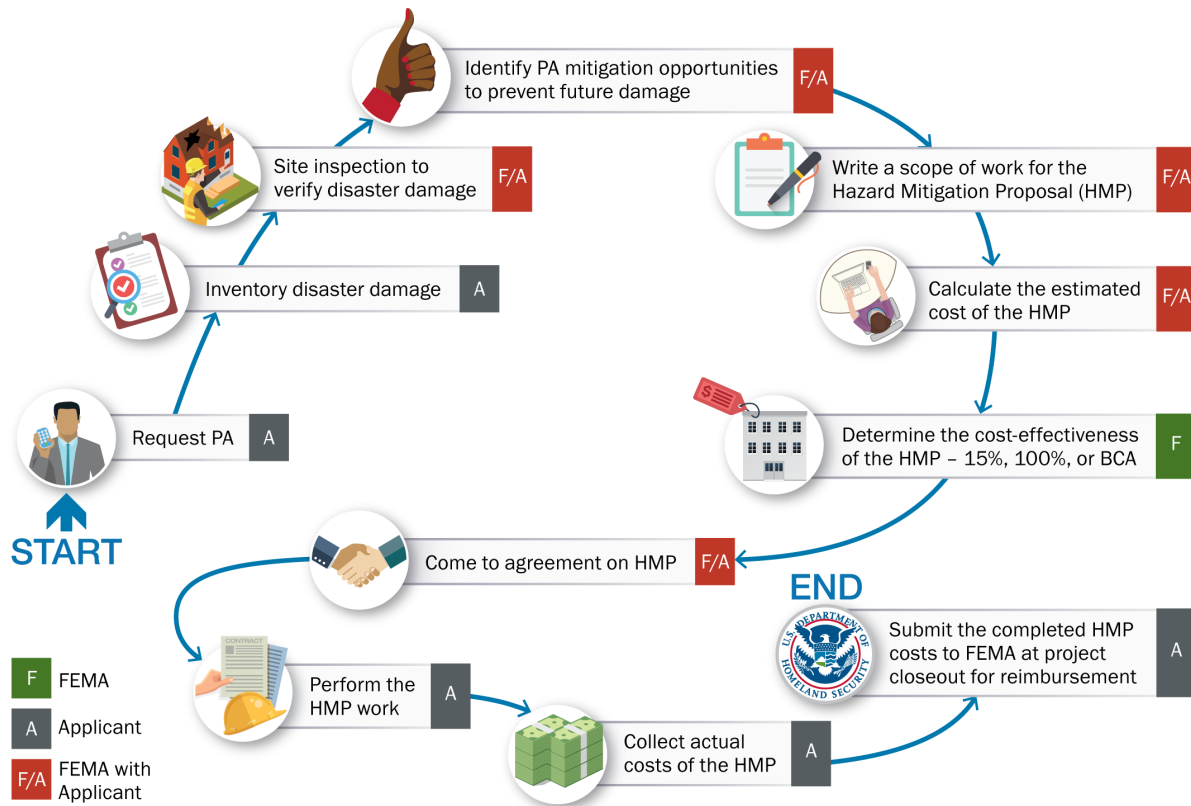
**Replacing power poles with higher-rated poles prevents future damage.**



**To prevent flooding and erosion this culvert was replaced with a larger culvert and additional wingwalls.**



## Public Assistance Process Flowchart



### Where can you find further guidance?

- Public Assistance Program and Policy Guide, Version 4 <https://www.fema.gov/public-assistance-policy-and-guidance>. Appendix J lists mitigation measures that can be utilized for cost-effectiveness calculations.
- Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 100-707), <https://www.fema.gov/media-library/assets/documents/15271>
- Office of Environmental Planning and Historic Preservation, <https://www.fema.gov/office-environmental-planning-and-historic-preservation>

If you are currently recovering from a disaster, contact your assigned FEMA Public Assistance Program Delivery Manager. You can find contact information in your Applicant Event Profile in FEMA's [Public Assistance Grants Portal](#).