fact sheet 4

stormsmart coasts

Case Study: Massachusetts Communities Reduce Storm Risk in Developed Areas

While reducing potential storm damage to existing development can be challenging, coastal communities are busy disproving the assumption that once an area has been developed, it's too late to reduce risk. This case study presents the stories of two Massachusetts communities that are using federal funds to make existing homes safer.

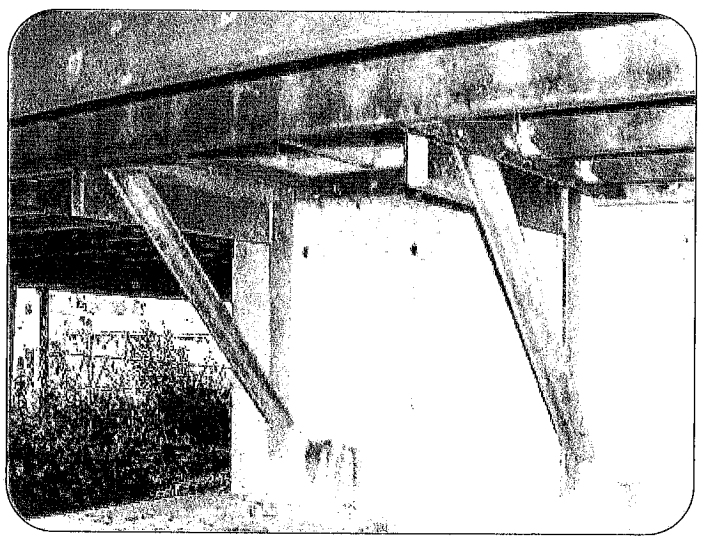
QUINCY

Located within the greater metro-Boston area, much of Quincy's floodplain has been densely developed for decades. The city's mapped floodplain, which stretches from the Blue Hills to Boston Harbor, is crowded with more than 4,400 structures. Historically, flood damage in Quincy has been both common and expensive. From 1978 to 2003, there were only three years without approved flood insurance claims in the city; and from 1978 to November 2007, National Flood Insurance Program participants in Quincy received more than $5 million in claims.

This small addition, built with FEMA assistance, holds a Quincy home's utilities and appliances above projected floodwaters. Thanks to innovative braces, the addition doesn't increase the building's footprint.

The city is actively working to reduce flood damages. Since 1993, Quincy has been using federal money from two Federal Emergency Management Agency (FEMA) programs to help property owners elevate either utilities or entire homes above mapped flood elevations (see FEMA Flood Mitigation Programs box on following page). Quincy has created a program where funding from FEMA's Pre-Disaster Mitigation and Flood Mitigation Assistance grant programs are used to pay for up to half of the engineering fees and three-quarters of the total costs of these elevation projects. The maximum award per property is $20,000, with the remainder paid by the property owner. Between 2003 and 2007 alone, Quincy received almost $1 million in federal funds to reduce storm damage risk at 46 properties.

The timing and logistics of the Quincy program differ from year to year, based on funding levels and the budget cycle for the FEMA grants. In general, the city places advertisements in local newspapers in October, announcing that funding may be available to help protect properties from flood damage (see example advertisement on following page). Additionally, every other year the



Photos: City of Quincy

city sends program announcements directly to owners of repetitive-loss properties (properties that have received flood insurance claim payments greater than $1,000 twice in any 10-year period). Interested property owners are encouraged to contact Quincy's Office of Housing Rehabilitation, which manages the city's storm damage prevention efforts.

Municipal officials work together with interested property owners to determine the best means of reducing potential damage at each property. Quincy's Program Manager of Housing Rehabilitation visits the site and discusses options with the owner. The city's Assistant Planner helps the homeowner fill out a preliminary application that provides figures for a benefit-cost analysis required by FEMA.

About 90 percent of the time, the city and homeowner agree that the most cost-effective approach is to elevate the home's utilities and appliances (rather than the entire structure). In areas where only stillwater flooding is predicted, elevating utilities is a less expensive option that is relatively easily implemented when space is available on upper floors for relocating water heaters and circuit boxes. When upper-floor space is unavailable, the city works to find other creative solutions, including small additions to hold elevated utilities (see photographs on previous page). Whenever possible, additions are designed within the home's existing footprint, minimizing environmental impact and greatly simplifying permitting. The Quincy Conservation Commission is happy with the work because it's mostly inside homes and does not increase building footprints. This less expensive approach also maximizes the number of homes that Quincy can cover with available funding.

When the city finalizes plans with all interested homeowners, it gives the bundled applications to the Massachusetts Emergency Management Agency (MEMA), which reviews them before sending them on to FEMA for final processing. Waiting for FEMA to make a funding decision can be challenging, especially if the waiting coincides with bad weather. The city tries to discourage anxious homeowners from starting projects before they have FEMA's explicit approval—if they begin without it, the owner forfeits any chance of financial assistance.

The payoff, though, generally proves worthwhile. Elevated utilities, appliances, and homes are less likely to be damaged during floods. The FEMA funds offset thousands of dollars that would otherwise be the responsibility of the property owner. One program participant wrote a letter to the Mayor praising the program, saying that without the city's help there was no way she could have done the work. Perhaps even more telling of the program's appeal is how quickly it spreads through a neighborhood. Once one home on a street participates, others often quickly follow.

FEMA FLOOD MITIGATION PROGRAMS

Flood Mitigation Assistance (FMA) funds efforts that reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other structures insurable under the National Flood Insurance Program.

Pre-Disaster Mitigation (PDM) provides funds for hazard mitigation planning and the implementation of mitigation projects prior to a disaster event. Funding these plans and projects reduces overall risks to the population and structures, while also reducing reliance on funding from actual disaster declarations.

Hazard Mitigation Grant Program (HMGP) provides grants to implement long-term hazard mitigation measures after a major disaster declaration. The purpose of the HMGP is to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster.

Severe Repetitive Loss Program (SRL) provides funding to reduce or eliminate the long-term risk of flood damage to severe repetitive-loss structures insured under the National Flood Insurance Program.

ATTN: QUINCY RESIDENTS
FEMA GRANT APPLICATION TO PREVENT FLOOD DAMAGE

The City of Quincy is in the process of preparing an application to the Federal Emergency Management Agency (FEMA) for a Pre-Disaster Mitigation (PDM) and Flood Mitigation Assistance (FMA) grant. Residential projects may include, but are not limited to, elevating utilities, elevating entire residential structures, or constructing new utility rooms. If your property has suffered from repetitive flood losses, you may be eligible to apply for one of these FEMA grants. For more information, please call the City's Office of Housing Rehabilitation at 617-376-1054 or email alosordo@ci.quincy.ma.us.

A newspaper advertisement that Quincy ran to promote their program.

Photo: Massachusetts Office of Coastal Zone Management.

Overwash rushes under elevated homes in Humarock during the Patriot's Day Storm of April 2007. In this setting, elevating only utilities would be insufficient.

SCITUATE

With approximately 18,000 people, Scituate has only about a quarter of Quincy's population, but still has enormous flood challenges. Scituate's long, open coastline is more exposed to coastal storms than Quincy's more sheltered shore. In areas like Humarock, waves flow underneath homes during even moderate storms, and some low-lying properties flood during strong tides. These and other factors combine to give Scituate 500+ repetitive-loss properties—more than any other community in Massachusetts.

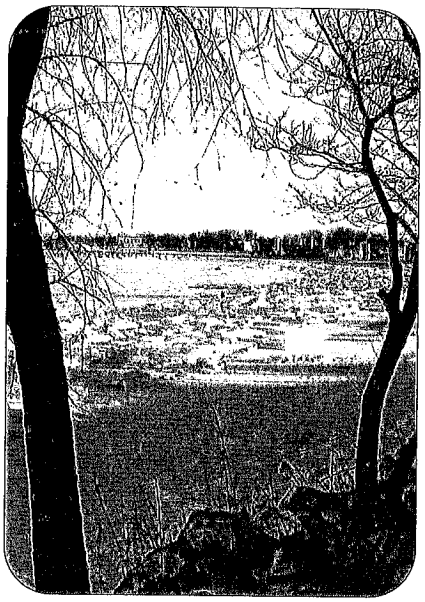
Many repetitive-loss property owners were unaware that multiple flood insurance claims had been filed on their property, reported Scituate's Town Planner and coordinator for the town's FEMA-funded elevation efforts. Massachusetts law doesn't require property sellers to disclose past storm damage or flood insurance claims, so many property owners purchase property without understanding their risk and storm-damage history.

To address this issue, in 2006, Scituate sent out letters to all of their repetitive-loss properties announcing their new program to help people protect their homes. In this program, FEMA funding pays up to 75 percent of the costs of elevation projects, not to exceed $40,000 for any property. Because many properties in Scituate are exposed to open ocean waves, most of the projects involve elevating entire structures—not just utilities—hence the higher upper limit of funding.

The response to the letters was strong, and as of 2008, the town has used federal dollars to help elevate approximately 50 homes.

GENERAL MITIGATION GRANT PROCESS

1. Municipality designs a program with assistance from MEMA
2. Municipality advertises to find interested property owners
3. Municipality works with each applicant to find best mitigation option & assembles joint application
4. Municipality submits application to MEMA, where it is reviewed and sent to FEMA
5. FEMA determines whether or not project will be funded
6. Selected projects are funded



Coastal communities like Quincy and Scituate are finding creative and effective ways to protect seaside properties from storm damage.

FOR MORE INFORMATION...

- FEMA programs in Massachusetts are administered by MEMA, www.mass.gov/mema, and the Department of Conservation and Recreation (DCR), www.mass.gov/dcr. If your community would like to receive FEMA mitigation grants, contact DCR's Acting State Hazard Mitigation Officer Richard Zingarelli at (617) 626-1406 or Richard.Zingarelli@state.ma.us, or MEMA's Mitigation Grants Manager Scott MacLeod at (508) 820-1445 or Scott.MacLeod@state.ma.us.
- The four most popular FEMA mitigation grant programs are:
  - Hazard Mitigation Grants - www.fema.gov/government/grant/hmgp/index.shtm.
  - Flood Mitigation Grants - www.fema.gov/government/grant/fma/index.shtm.
  - Pre-Disaster Mitigation Grants - www.fema.gov/government/grant/pdm/index.shtm.
  - Severe Repetitive Loss Grants - www.fema.gov/government/grant/srl/index.shtm.
- For questions on Quincy's efforts, contact Tony Losordo, Program Manager for the Quincy Housing and Rehabilitation Program in the Planning and Community Development Department, at (617) 376-1054.
- For examples of documents filed by Quincy, see the StormSmart Coasts website at mass.gov/czm/stormsmart.
- For more information on funding projects in Massachusetts coastal areas, see the StormSmart Coasts funding page at mass.gov/czm/stormsmart/other/funding.htm.

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For further information on StormSmart Coasts, visit www.mass.gov/czm/stormsmart.

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