



Outsmarting the Storm

The Massachusetts StormSmart Coasts Program

By Wes Shaw, CZM

Every year storms pummel the coast of Massachusetts. While many of us equate the term “storm damage” with legendary once-a-century storms, it doesn’t take a major storm to wreak havoc—a relatively minor storm hit Cape Cod in April of 2007 and opened up a breach in a protective barrier beach.

The growing breach has already claimed half a dozen structures (and hasn’t stabilized as of the time of this writing). Some towns on the South Shore flood during occasional extreme high tides if there’s even a moderate wind pushing water towards the shore.

Storms in Massachusetts aren’t new, nor are the problems that come with them, but as the coast becomes increasingly developed, more and more homes and other buildings are in harm’s way. There is more than \$660 billion of insured property in Massachusetts coastal areas—the third highest of any state in the United States susceptible to hurricanes. Some climate change computer models

suggest that predicted changes in global climate will increase both the frequency and strength of storms in coastal regions of the world, and that rising sea levels will worsen their damage.

While these challenges are enormous, the most powerful means of addressing them—careful land use—is in the hands of local governments in a home rule state like Massachusetts.

StormSmart Coasts

In the spring of 2008, after more than a year of development, Massachusetts launched the StormSmart Coasts program (mass.gov/czm/stormsmart) to help communities find ways

It has been predicted by climate change scientists that both the frequency and severity of storms in coastal areas will increase in the future.



When development is planned using the No Adverse Impact (NAI) approach, property is less likely to suffer severe storm damage.

Outdated and poorly designed shoreline protection strategies have caused beaches to shrink in many areas of the Bay State.

to address coastal storms and flooding. While the program was developed with extensive input from municipal officials (conservation commissions, boards of health, zoning boards, departments of public works, planning boards, and others) and targets those who work at the municipal level, it also provides information for anybody interested in making their coastal homes, neighborhoods, and communities safer.

Instead of reinventing the proverbial wheel, StormSmart Coasts is designed to tap into existing information and tools from around the country and to gather real-world solutions that have been tested in other areas facing similar challenges. In some cases, innovative (but generally unpublicized) solutions come from other coastal communities within Massachusetts.

Rather than providing a prescriptive set of rules and regulations, StormSmart Coasts offers communities a menu of options from which to choose. Options range from information on existing legal requirements to links providing examples of progressive regulatory language that has been tested (and upheld) in court.

No Adverse Impact (NAI)

The cornerstone of StormSmart Coasts is the concept of No Adverse Impact (NAI). NAI was first articulated by the Association of State Floodplain Managers, a national non-profit organization of floodplain experts. The group was struggling with how to help communities protect people and property from flooding and erosion while respecting public and private property rights. NAI is not a set of laws or rules, but a simple “good neighbor” or “do no harm” approach to land management that communities can embrace in various regulatory or non-regulatory ways (including planning, zoning, and permit review). Essentially, it says that no person may use his or her land in a way that causes harm to anyone. A simple idea, but one with many benefits, including that it:

- **Reduces risk to people and public and private property:** Better planned and designed development and public infrastructure is less likely to cause and suffer damage during storms and flooding. An NAI approach can help protect the beaches that are critical to many communities’ economies.

- **Lowens flood insurance rates:** Many NAI-type activities help reduce flood risks, and some of these can lead to significant reductions in flood insurance premiums. For example, elevating buildings higher than the minimum height requirements of the National Flood Insurance Program (a federally administered program) can save homeowners thousands of dollars in insurance costs while adding only minimally to construction costs.
- **Saves money:** Less damage means lower post-storm community cleanup costs, fewer demands on limited public officials’ time, and reduced strains on public resources.
- **Reduces conflicts with property owners:** NAI doesn’t say “no” to development. It says “yes, if you design and build it in such a way that it doesn’t increase the risk to other properties.” It is a common-sense approach that seeks to protect everyone’s property by only allowing projects that eliminate or mitigate their impacts.



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An ounce of prevention is worth a pound of cure...

- **Increases the capacity to bounce back after a storm:** Less storm damage means less downtime and less costly clean up, which is especially important for small, locally owned businesses that may otherwise struggle to stay solvent during frequent or prolonged closures.
- **Clarifies land-use objectives:** By adopting NAI principles, communities can articulate their overarching goals and help bring consistency and predictability to permitting.
- **Preserves quality of life:** The NAI approach can help preserve the quality of life in communities by ensuring that community resources, including beaches, public parks, and other open spaces, are there to be enjoyed by future generations.

The NAI approach is also legally robust. The legal system has long recognized that one of the primary functions of government is to protect people and property. (See *The Public Trust Doctrine in Massachusetts Coastal Law* on page 81 for more.) Courts at all levels agree that nobody ever has the

right to use his or her property in a way that harms others. Consequently, when a regulation is designed to prevent harm it is not taking away rights because the right to cause harm never existed. Courts have upheld this logic even when regulations drastically reduce the market price of a piece of property.

For example, a 2005 ruling by the Massachusetts Supreme Judicial Court found that the town of Chatham had the right to prevent a land owner from building a home in an area that was likely to flood and require evacuation, especially after the town testified that such an evacuation would put not only the residents, but also the town's emergency response teams, at risk. Additionally, concerns were voiced that the home, if built, could be destroyed by a storm and floated into other surrounding properties, increasing damage there. The court's decision noted that the legal system "was never intended to compensate property owners for property rights they never had." (For more information on this case, see *StormSmart Coasts Fact Sheet 3: A Cape Cod Community Prevents New Residences in Floodplains*, available on the StormSmart Coasts website).

In an interesting accompanying trend, communities are increasingly being sued and held liable for permitting development that ends up causing harm (e.g., inadequate stormwater systems that increase flooding on other properties). Courts seem to be suggesting that communities not only have the right to prevent potentially harmful development—they have the responsibility to do so.

Despite all the storms and the problems that arise from them, coastal communities are here to stay. The question is not if but how people are going to be able to safely live near the sea. While it's unlikely that we will ever find simple answers, there are many things that communities can do, and do now, to make living and working in coastal areas safer. The StormSmart Coasts program will continue to gather the best ideas from around the world so that local officials have answers to that age old question, "What can I do?"

For more information, see the StormSmart Coasts website at mass.gov/czm/stormsmart.

