Coastal Hazards Management

Table of Contents

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Introduction

There are many things that communities as well as individuals or property and business owners can do to help manage coastal hazards. The sections listed below address immediate and short term actions or issues, and where appropriate, longer term actions or strategies. Also included are numerous links to examples, ideas, and samples that may be useful to the process.

Hazard Management

Connecticut's Coastal Management Act (CCMA) is an essential tool that helps plan for and avoid damage to life and property resulting from major coastal storm events, as well as reducing public cost in protecting future development. The CCMA encourages pro-active planning, rather than solely focusing on cleaning up the post-disaster aftermath.

Coastal Goals & Policies

CCMA Legislative Goals and Policies prescribe that:

- Residential structures be located out of V-zones (the flood hazard area where high-velocity waves compound coastal flooding impacts) if a reasonable alternative location exists;
- Dunes be preserved so they can protect whatever is located behind them;
- Barrier beaches be preserved and protected so they can freely migrate landward without stranding coastal structures;
- Coastal homes are set back from the coastal jurisdiction line as far as possible (and not built out over the water) to eliminate the need to build a new seawall;
- Coastal septic systems be properly designed and located so they don't break out of the ground during flooding events, and that material contained in the septic system doesn't leave the system and mix with flood waters;
- Conversions of summer vacation homes to year-round residences be avoided in order to reduce the density of the coastal population during severe winter storms;
- Existing population density in coastal flood hazards areas is not increased during renovations by adding more bedrooms to existing homes;
- Hotels, assisted living facilities, and other residential-type uses that house vulnerable populations or visitors unfamiliar with the area (both of which need evacuation assistance) be avoided in coastal hazard areas; and
- Development in coastal flood hazard areas provide detailed evacuation plans, ensuring that evacuation routes themselves are not subject to severe flooding during storm events.

Of course, no one expects owners to allow their properties to fall into the sea. Many nonstructural options may be available, and coastal management standards do allow for the authorized repair of existing structures and construction of the measures necessary to protect existing homes. However, a new bulkhead or seawall designed to expand a backyard is counter to CCMA policies and, therefore, unlikely to be permitted. Connecticut law has long recognized that natural coastal processes change property boundaries. Accordingly, a property owner is not automatically entitled to build protective structures simply to expand or preserve a boundary.

For additional information concerning flood and erosion control structures, See the Battling Erosion section of the Coastal Hazards Primers information and the Shoreline Flood and Erosion Control Structures Fact Sheet within the Connecticut Coastal Management Manual.

Individuals and Property/Business Owners

Ready for the Next Hazard Event

The following sections provide useful guidance to assist you in being hazard-ready. Some activities are one-time items, while others may require revisiting over time.

Individual Preparation

✓ Keep you and your family safe. Familiarize yourself with your town's natural disaster plan or emergency operations plan. Knowing the "big picture" can assist you, such as knowing where the nearest shelters are or which routes are designated as evacuation routes. Then make sure that you and your family have your own Emergency Plan and Emergency Supply Kit as recommended by the Connecticut Guide to Emergency Preparedness

✓ Also visit the FEMA Ready✓ website for information on personal emergency strategies. You can also download the CTPrepares Mobile App to receive real-time emergency notifications and public safety messages.

Property Preparation

⇨ Keep your property safe. Flooding is a significant risk to Connecticut's coastal property owners, so you should understand your risk. Enter your address at the FEMA Flood Map Service Center to see if your property is in a flood zone. Most homeowner insurance policies DO NOT cover flooding, so you may want to consider purchasing flood insurance through the National Flood Insurance Program if you haven't already.

⇨ The Connecticut Insurance Department's Be Prepared page offers numerous resources that address the risks of storm hazards.

⇨ Here are a few more resources for information and guidance to protecting property on the shoreline:

- Federal Alliance for Safe Homes (FLASH): a nongovernmental organization dedicated to promoting disaster safety and property loss mitigation.
- DisasterSafety.org features projects to help home and business owners protect their property from damage caused by natural disasters. This site is a product of the Insurance Institute for Business & Home Safety (IBHS).

Business Preparation

The Ready✓ Business site is a useful source of information specifically designed for business. It provides practical steps and easy-to-use templates to help you plan for your company's future. The recommendations reflect the Emergency Preparedness and Business Continuity Standard (NFPA 1600) developed by the National Fire Protection Association and endorsed by the American National Standards Institute and the Department of Homeland Security. It also provides useful links to resources providing more detailed business continuity and disaster preparedness information. Ready✓ Business includes resources and strategies to help owners address continuity of operations, involve and assist employees, and protect investments.

Weathering the Storm

Regardless of whether you are an individual property owner or a business owner, these common-sense approaches can help you to stay safe during a hazard event:

1. Remain calm, and don't panic;
2. Follow the advice of state and local emergency official;
3. Implement your Personal Emergency Plan;
4. Gather your Emergency Supply Kit;
5. If told to evacuate, do it! Evacuations are not called for lightly and are done with careful consideration of a number of factors. Remaining in place during an evacuation can place extra burden on emergency officials whose capacities may be limited or are required elsewhere;
6. Monitor official emergency alert notifications. In Connecticut, these can include (but are not limited to) the Emergency Alert Systems (EAS), the Division of Emergency Management and Homeland Security (DEMHS), the Department of Public Health (DPH), the National Weather Service (NWS), or NOAA Weather Radio.

Municipal Officials

Responsible land use and floodplain management is one of the best ways to make your community ready for coastal hazards. Smart, safe development in areas prone to flooding, erosion, and high winds saves lives and money by mitigating damages and making response and recovery safer and

less costly. Examine how your community manages land and infrastructure; explore ways to minimize exposure to hazards and mitigate damage from storms; and define and implement adaptation strategies to build coastal resilience.

Emergency Response Planning

Every community should have an Emergency Operations Plan (EOP) in place to be ready for immediate threats and future storm events. According to FEMA's Strategic and Operational Planning, an EOP:

- Assigns responsibility to organizations and individuals for carrying out specific actions at projected times and places in an emergency that exceeds the capability or routine responsibility of any one agency.
- Sets lines of authority and organizational relationships, and shows how all actions will be coordinated.
- Describes how people and property will be protected in emergencies and disasters.
- Identifies personnel, equipment, facilities, supplies, and other resources available--within the jurisdiction or by agreement with other jurisdictions--for use during response and recovery operations.
- Identifies steps to address mitigation during response and recovery activities.
- Cites its legal basis, states its objectives, and acknowledges assumptions.

If you don't have an EOP, the DEMHS Planning for All Hazards site provides several local and regional planning resources, including a Local EOP Template. Additional planning tools developed specifically for coastal planning needs and issues can be found in the Association of State Floodplain Managers Coastal No Adverse Impact Handbook.

Communities that already have an EOP in place should consider updating it on a regular basis. An EOP should be considered a "living document" that evolves to reflect the level of risks and types of emergencies. Remember, even if the type of hazard doesn't radically change (e.g., coastal storm frequencies or intensities), the risk it represents might (e.g., if more people and property are concentrated in flood prone areas).

Once your community has an EOP, make it available and consider educating your community about the types of coastal hazards they face and the risks they pose. The Massachusetts StormSmart Coasts website has ideas and resources for training, outreach, and education materials.

As EOPs are reviewed and updated, consider conducting drills. These may be formal activities involving a live scenario and many personnel, or they can be "table-top" exercises with top-level officials working through a hypothetical scenario to ensure that the response is reasonable and workable.

Beyond Emergency Management

While an EOP is important, it is not the only piece of planning required. According to the FEMA Guide for All-Hazard Emergency Operations Planning, an EOP is not an appropriate vehicle for all aspects of emergency management. Rather, communities should also have:

- *Administrative plans*: to describe basic governmental policies and procedures.
- *Mitigation plans*: to address how communities can mitigate hazards. These are relevant to EOPs particularly in short-term recovery decision-making.
- *Preparedness plans*: that cover maintaining existing emergency management capability; preventing emergency management capabilities from falling victim to emergencies; and, if possible, augmenting emergency management capability.
- *Recovery plans*: Typically EOPs do not address recovery beyond rapid measures to ensure immediate life support. Beyond that lies long-term recovery. Here emergency management planning can intersect community development planning of other agencies.

Helpful Resources

The following tools and information is provided to assist in all phases of community hazard management.

- Guidance on P.A. 12-101, An Act Concerning the Coastal Management Act and Shoreline Flood and Erosion Control Structures, describes initiatives to address sea level rise and revisions to regulatory procedures applicable to shoreline protection.
- DEMHS provides resources and tools on how to safely weather hurricanes and other natural disasters.
- The StormSmart Connect site connects a network of coastal hazard decision makers.
- The StormSmart Coasts Network is a resource for coastal decision makers looking for the latest and best information on how to protect their communities from weather and climate hazards.
- Enroll your community in the National Flood Insurance Program (NFIP) Community Rating System which can reduce flood insurance costs in your community in exchange for certain floodplain management policies and activities. Due to programs already in place (e.g., the Dam Safety Program) all Connecticut towns qualify for a 5% discount.
- FEMA grant programs provide funds to assist communities with addressing hazard events:
  - *Hazard Mitigation Grants*: Provides grants to implement long-term hazard mitigation measures after a major disaster declaration.
  - *Pre-Disaster Mitigation*: Provides funds for hazard mitigation planning and implementing mitigation projects prior to a disaster.
  - *Flood Mitigation Assistance*: Provides funding to reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other HFIP insurable structures.
  - *Repetitive Flood Claims*: Provides funds to reduce/eliminate the long-term risk of damage to NFIP insured structures with one or more flood damage claims, which cannot meet the requirements of the Flood Mitigation Assistance for either cost share or capacity to manage activities.
  - *Severe Repetitive Loss*: Provides support to reduce or eliminate the long-term risk of flood damage to residential properties insured under the NFIP that meet the definition of severe repetitive loss and to reduce losses to the National Flood Insurance Fund (NFIF).
- The DEMHS Strategic Planning and Community Preparedness site provides links to both federal and state grant programs.
- The American Planning Association (APA) Hazards Planning Center provides a wealth of resources to support the development of resilient communities that can minimize losses and efficiently recover from disasters.
- The Association of State Floodplain Managers NAI-No Adverse Impact Floodplain Management site provides a set of legally defensible floodplain policies and regulations that encourage communities to go beyond the minimum standards of the NFIP. The Coastal NAI Handbook is a resource for communities to implement these concepts. Also included are case studies and documents that investigate legal and liability issues.
- The Nature Conservancy has developed a Coastal Resilience toolkit to provide communities, planners, businesses, and officials with easy access to information on projected changes in sea level and coastal storm impacts in order to assist in coastal planning and management decisions.
- NOAA Digital Coast provides several hazard-related resources:
  - *Adaptation Planning for Coastal Communities*: a training course that teaches foundations and practical skills for incorporating adaptation strategies into planning processes.
  - *Coastal Inundation Toolkit*: Developed to help communities understand and address coastal inundation. It provides the context and guidance for connecting resources in the Digital Coast to managers.
  - *Coastal County Snapshots*: A tool that provides local officials with a quick look at a county's demographics, infrastructure, and environment within the flood zone.
  - *Self-Guided Resources*: provides a wealth of guidance for all types of coastal management challenges.

Post-Storm Response

Resources

After a storm, important steps in post-storm management include ensuring safety, accessing necessities, and addressing damages. The Departments of Public Health, Transportation, Insurance, and local utilities (Eversource and United Illuminating) have resources available:

- Public Health – Drinking Water, Beaches, Food and Water Safety, Flood and Storm Water Advisory for Public Water Systems
- Transportation – CT Travel Conditions
- Insurance - Homeowners, Flood
- Utilities – Eversource Storm Preparedness, United Illuminating Storm Safety Information

The American Red Cross also provides an abundance of information for Disaster Relief & Recovery.

Additionally, DisasterAssistance.gov provides numerous online resources designed to provide information on how you might be able to get help from the U.S. Government before, during, and after a disaster.

Regulatory Information

When a storm causes damage to coastal property, resources, and infrastructure there is always a need to clean up and begin the repair and rebuilding process. The following post-storm relative information is provided as guidance for properly conducting repair and rebuilding activities within coastal areas.

Coastal Permits

For activities conducted within coastal, tidal, and navigable water or within tidal wetlands:

General Permits for Coastal Activities
- ➢ Coastal Storm Response
- ➢ Coastal Maintenance
- ➢ Minor Coastal Structures

Short-term Authorizations
- ➢ Emergency Authorization
- ➢ Temporary Authorization

Inland Resources Permits

For activities conducted within non-tidal and non-navigable waterways:

Permit Categories
- ➢ 401 Water Quality
- ➢ Diversion of Water for Consumptive Use
- ➢ Dam Safety Repair and Alteration

Emergency or Temporary Authorization

Authorization for an eligible activity can usually be issued within 24-hours by contacting appropriate Land & Water Resources Division (LWRD) staff and subsequently submitting a written request to the LWRD Director.

Debris Management

The State Disaster Debris Management Plan establishes the framework for proper management of debris generated by a natural disaster, with the goal of facilitating prompt and efficient recovery that is cost effective, eligible for FEMA reimbursement, and protective of the environment. The Plan applies to all levels of government and describes the contracts in place to use in response to a catastrophic natural disaster; both for debris removal and monitoring of these types of operations. It also outlines the planning and operation functions for Temporary Debris Storage and Reduction Sites and the two phases of clean-up. See DEEP's Disaster Debris Management Preparedness page for more information.