

Response to Gerry Connick's public comment on 9/25/2024

When Article 69, the proposed bylaw for Coastal Resilience Districts (CRDs), was approved at Town Meeting in May 2024, that directed Mr. Murphy to start working on it. The group working on this consists of staff from the Town, Arcadis, and KP Law.

Response to Gerry Connick's public comment on 10/4/2024

How the Coastal Resilience Advisory Committee (CRAC) members prepare for meetings and offer input on voluntary homework is up to them and their responses at the meeting are at their discretion. From the email thread between Leah Hill and yourself, you clarified that you meant Chapter 139 zoning code section 8 residential development options, not Chapter 138, which was in your original email. The committee has been and will be spending several meetings discussing potential amendments to incorporate coastal resiliency into Nantucket's zoning bylaw and Ch. 139, Section 8 will be included in these discussions.



DRAFT

Nantucket Coastal Resilience Advisory Committee: Floodplain Discussion

October 22, 2024

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Cape Cod Cooperative Extension
Woods Hole Oceanographic Institution Sea Grant

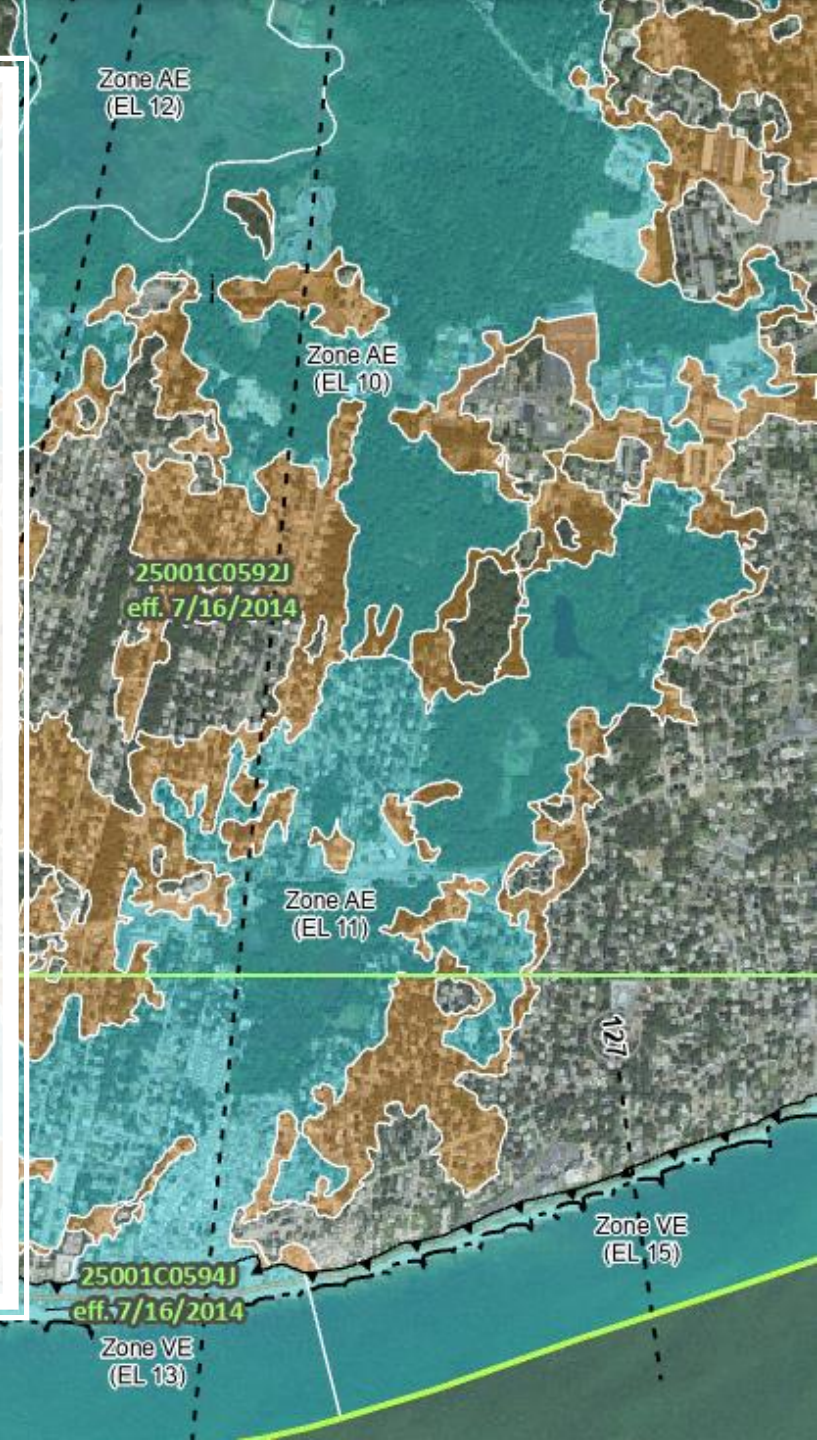
ACK
CRAC

Flood Maps Overview



Flood Insurance Rate Maps: What are they?

- Until 2022, were used to set flood insurance rates
- Delineate the regulatory floodplain for the National Flood Insurance Program federal regs
 - Where flood insurance is required for properties with a federally-backed mortgage
 - Where floodplain building code provisions apply
 - Where forthcoming DEP Wetlands Land Subject to Coastal Storm Flowage regulations apply
 - Where regs that will be added to updated town bylaws will apply
- Created by FEMA and FEMA-hired consultants
- Funded by Congress
- Next update: maybe 2027????



Flood Insurance Rate Maps: How are they made?

- 1% and 0.2% annual chance floodplains
 - Broken down by zones that include areas without waves (A zones), areas with waves 1.5' – 3' high (Coastal A Zones), and waves 3' and higher (V Zones)
- Incorporate into a model:
 - Historical storm surge and flood observations
 - Simulated storms based on past storms
 - Waves
- Data collected on the ground at transects (dashed lines on the map here)



Floodplain Regulations



Building Codes

- Dictate how a building is constructed
- Materials, minimum elevations
 - Allowed use of lowest level below flood elevations: storage, building access, and parking
- A Zones
 - Solid wall foundations with flood vents, no basements, all utilities elevated to design flood elevations, 2' freeboard (NEW)
- Coastal A Zones: ***THIS IS BRAND NEW***
 - Meet V Zone standards
- V Zones
 - Build on pilings only, elevate utilities, no structural fill, limited enclosures allowed below flood elevation, 3' freeboard (NEW)
- Coastal dunes
 - Open piles only, no obstructions, no footings
- No new construction seaward of high tide, limited exceptions for Historic Structures



Floodplain Zoning

- Catch-all for all NFIP regs that didn't fit into the building code or wetlands regulations
 - Some of these fit better in General Bylaws
- Laying out how the Town's floodplain program will be administered
 - Designating Floodplain Administrator
 - Determining what the floodplain permit
 - Identifying workflow to pass all relevant departments
 - What happens when BCAB issues a variance for building
- Limited additional regulations (e.g. RVs)
- 2020 State Model Floodplain Bylaw (pending 2025 update)

New State Level Floodplain Regulations



2020 State Model Floodplain Bylaw

- Things that will change
- When it needs to be adopted by
- 2025 pending update

Discussion of mandatory additions to current bylaw

- Certain protective legal language
- Designation of Floodplain Administrator
- Submit new technical data
- Variances to the National Flood Insurance Program
- Floodplain permits
- Unnumbered A Zones
- AO and AH drainage requirements
- Recreational Vehicles
- Enforcement

New LSCSF Regulations

Cape Cod Model Resiliency Bylaws



Cape Cod Model Resiliency Bylaws

- Cape Cod Commission, Cape Cod Cooperative Extension and partners
- LSCSF + Zoning/General
- Historic Structures

MODEL REGULATIONS

Key Regulatory Tools

- Includes performance standards for work within LSCSF
- Expands regulatory jurisdiction beyond LSCSF (horizontally and vertically) by creating Coastal Resilience Zone (CRZ)
 - Potential to regulate new area anticipated to be vulnerable in the future
 - *Land subject to 1% annual storm per **Best Available Coastal Flooding Model** [model adopted by Town, such as MC-FRM] for **Target Year** [e.g. 2050, 2070] and Special Transition Areas*
 - ***Design Flood Elevation (DFE)**: The predicted elevation of water resulting from sea level rise and coastal storms caused by the 1% annual storm for the Target Year.*
- Intended to be added to existing bylaws but allows for adapting the new standards to local needs

MODEL WETLANDS REGULATIONS

General Performance Standards

- Shall not increase flood elevation or velocity
- Shall not increase flows or cause channelization
- Shall avoid or mitigate adverse flooding effects on nearby properties ensuring return flow will not be prevented (i.e. ponding)
- Shall preserve existing soils, vegetation, and other natural conditions that serve as buffers to coastal flooding and storm surges



A background image showing a beach scene with several houses built on wooden stilts. The sky is overcast, and the water is visible in the foreground.

MODEL WETLANDS REGULATIONS

Other Performance Standards

Provisions that Apply to Entire District

Coastal A and V Zones

A Zones

Coastal Resilience Zones

MODEL WETLANDS REGULATIONS

V Zone

- Prohibits new construction and expansion of buildings, sheds, garages, pools, septic systems or other structures
Exceptions: relocation of utilities, roads, and Redevelopment Sites
- Repetitive Loss (Substantial Damage twice): Structure must be moved landward beyond V zone or demolished. Vacated site returned to vegetated state; cannot rebuild.
- Substantial Repair or Improvement: Must elevate building to Design Flood Elevation (DFE).
Exceptions: historic buildings
- Stairs, boardwalks, docks, etc: Remove before storms or anchor, spacing for water to pass through. Components marked with contact information of owner.



MODEL WETLANDS REGULATIONS

A Zone

Special Transition Areas

A Zone (MoWA and MiWA)

- New construction / expansion of buildings allowed: Must elevate to DFE.

Exception: historic buildings

- Substantial Repair similar to V zone
- Stairs, boardwalks, docks, etc: Similar to V zone

Special Transition Areas

- Cannot impede Predicted Path of Wetland Migration, new structures or expansions must be elevated to DFE

Exception: historic buildings

- Fences, gates, sheds installed with opening to allow water to pass under and through. Cannot be rebuilt if damaged by migration of wetland resource area.



MODEL WETLANDS REGULATIONS

Redevelopment Sites

Enforcement

Redevelopment Sites

- No expansion of existing structures
- New construction/reconstruction limited to existing footprint. Must be elevated per underlying zone requirements
- Must reduce impervious surfaces and/or create compensable flood storage or wetlands resources
- Elevation of existing seawalls or placement of fill for flood control allowed with conditions

Enforcement

- Segmenting a project
- Rebuilding after required demolition
- Restoring ground level in elevated building
- Allowing dislodged stairs, decks, etc. to damage wetland resources



An aerial photograph of a coastal town, showing several large, multi-story houses with light-colored siding and dark roofs. The houses are built on a slight rise above a sandy beach. The ocean is visible in the foreground, with gentle waves washing onto the shore. The sky is clear and blue.

MODEL ZONING REGULATIONS

Outline

Provisions that Apply to Entire District

Coastal A and V Zones

A Zones

Coastal Resilience Zones

An aerial photograph of a beachfront property. The property features a large, multi-story house with a swimming pool and a covered patio area. The house is situated on a sandy beach, and the ocean waves are visible in the foreground. The image is partially obscured by a dark blue overlay on the left side, which contains the text for the presentation.

MODEL ZONING REGULATIONS

Development Regulations

- Limitations on development in A, Coastal A, and V zones
- Limits on redevelopment
- Limits on expansion of structural footprint
- Lot coverage limits
- Limitations on reconstruction after Substantial Damage
- Considerations for historic structures
- Prohibition/limits on fill
- Prohibition on storage of hazardous materials

MODEL ZONING REGULATIONS

Other Provisions

Provisions Applicable to the Entire District

- No retaining walls, fences, or other structures that might redirect floodwaters without a Special Permit
- Building height measured from DFE
- Use assessed value and cumulative data for Substantial Improvement/Damage designations
- Historic Structures must attempt full compliance; only when historic designation is precluded may exemption be pursued
- Reconstruction may be pursued after Substantial Damage no more than two (2) times
- Non-Conversion Agreement
- Limitations on storage of hazardous materials



MODEL ZONING REGULATIONS

Coastal A and V Zones

- No new structures or expansions (except for utility elevation bumpouts and building access)
- No new pools or other hardscape; modifications to existing need a Special Permit
- Secure items stored underneath a structure
- For all Substantial Improvements, the lowest horizontal structural member must be elevated to the design flood elevation from either the building code or the best available flood model data, whichever is higher
- Repair or replacement of pre-existing accessory structures cannot exceed 120 sq ft and must be anchored and elevated



MODEL ZONING REGULATIONS

A Zones

- Option for no new structures
- Option for no expansions except for utility elevation bumpouts or relocation of structures from Coastal A or V Zones
- Special Permit for specific actions that a town might want to allow, such as outdoor landscape features
- For all Substantial Improvements, the first floor must be elevated to the design flood elevation from either the building code or the best available flood model data, whichever is higher
- Any land removed from a floodplain using a LOMR-F must adhere to underlying building regs (e.g. no basement)
- Accessory structures must be anchored and wet-floodproofed or meet building code standards



MODEL ZONING REGULATIONS

Coastal Resilience Zones

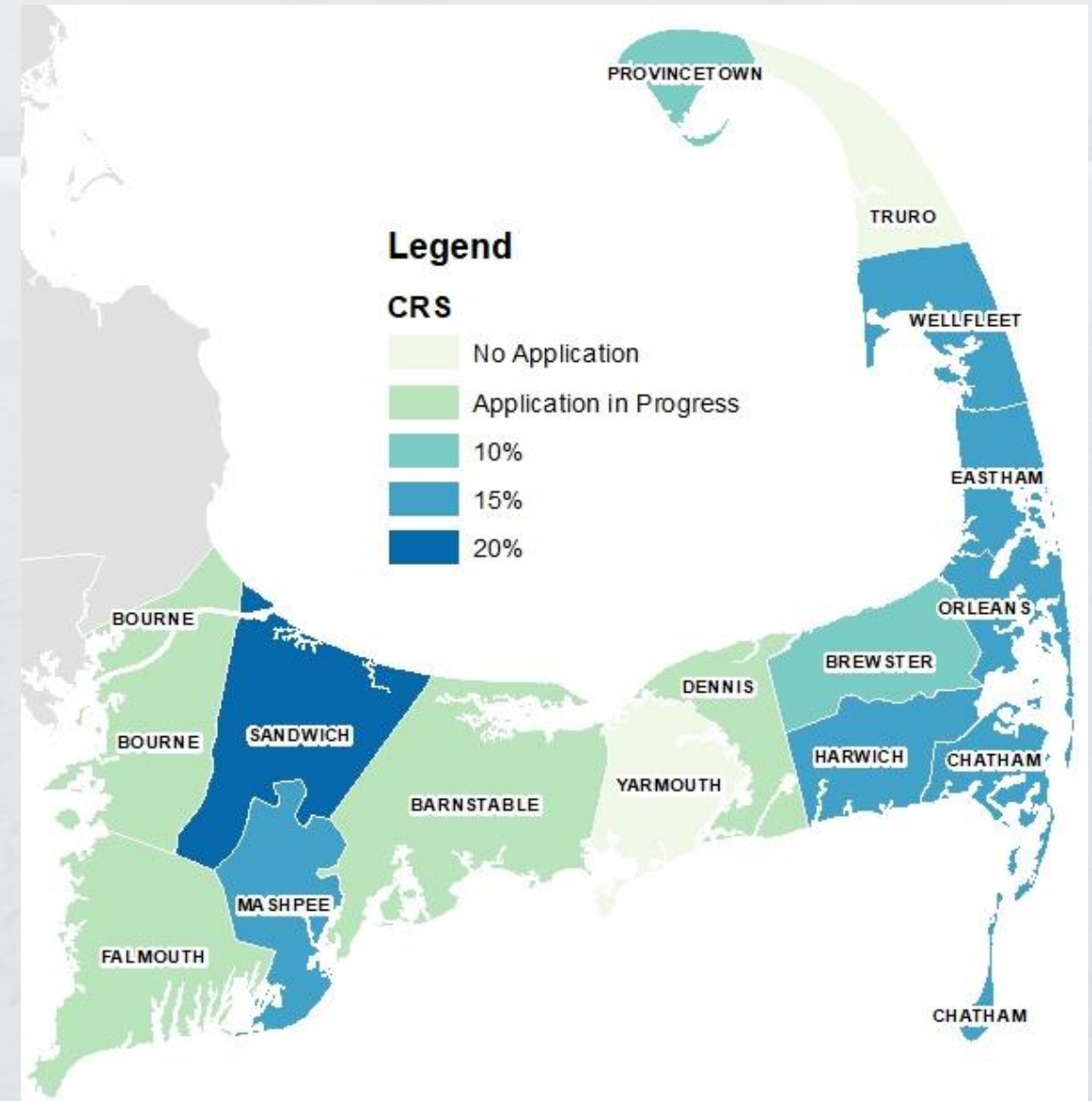
- Mimic Wetlands bylaw: use best available data for the 1% chance floodplain for the Target Year
- Elevate structures to DFE
- No restrictions on new development or expansions

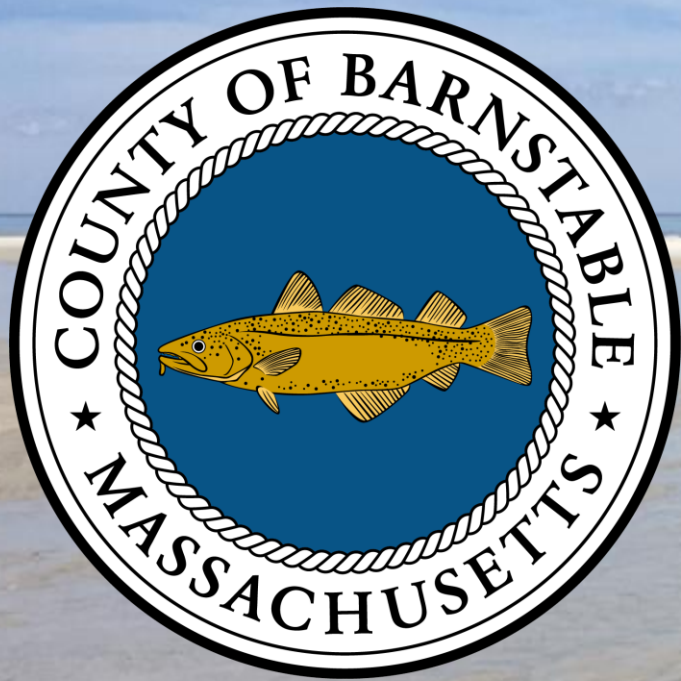


Discussion of CRAC proposed changes document

CRS on Cape Cod

Community	Discount	Annual Savings	Policyholders
Brewster	10%	\$4,000	120
Chatham	15%	\$62,000	420
Eastham	15%	\$20,000	175
Harwich	15%	\$86,000	675
Mashpee	15%	\$68,000	450
Orleans	15%	\$15,000	190
Provincetown	10%	\$130,000	1110
Sandwich	20%	\$112,000	400
Wellfleet	15%	\$33,000	190
TOTAL	NA	\$530,000	3,700





Sea 
Grant

WOODS HOLE
OCEANOGRAPHIC
INSTITUTION

Thank You!

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