Introducing the new MAPC web resource

METROPOLITAN AREA PLANNING COUNCIL

Climate Resilient Land Use Strategies

Regulatory Language and Policy Examples

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Examples of Climate Resilient Regulatory Language

Click below to see specific examples in each category.

Floodplain Overlay Districts	**Floodplain Zoning Relief**	**Stormwater Regulations**
Wetlands Regulations	**Site Plan Review**	**Water Conservation Regulations**
Tree Protection Regulations	**Design Standards & Guidelines**	**Other Zoning Districts**

Additional Resources

Resilience Checklists	Trainings/Videos	Glossary of Terms

Floodplain Overlay Districts

New construction and substantial improvement prohibited in the Floodplain District

- Rockport, Lynnfield

Incorporate Sea Level Rise

- Swampscott

Special Permit required

- Wakefield – review by local boards and commissions
- Salem, Wilmington, Woburn

Limits on expansion of existing structures

- Lynnfield – no expansion of existing dwellings
- Salem – limits residential expansion to 15% of lot coverage

Encourage Floodplain Elevation

Existing structures allowed to elevate above height limit

- Scituate, Dennis (by right)
- Hull (Special Permit)

Measure building height from base flood

- Dennis, Nantucket

Allow setback encroachment for utilities

- Hull

March 2010

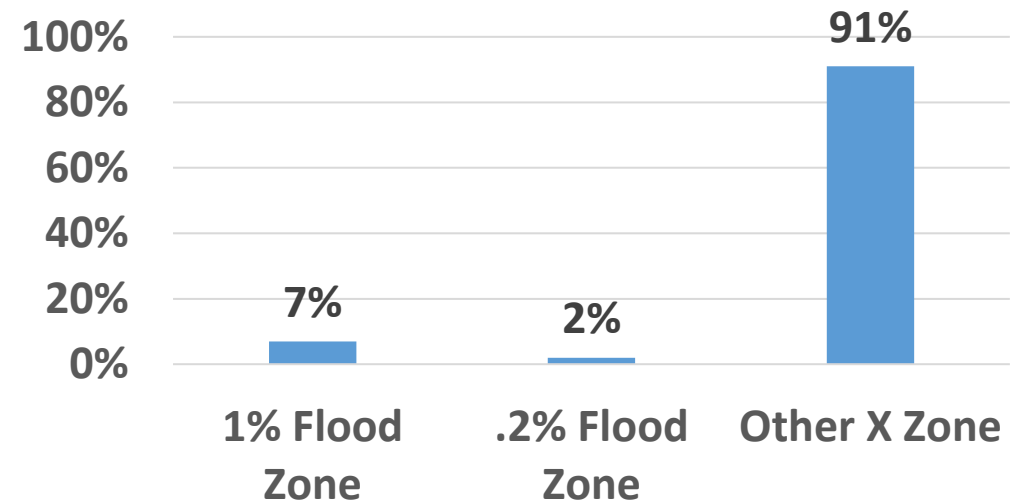Rainfall recorded at the Blue Hill Observatory

March 13-15: 9.41 inches
March 23-24: 2.65 inches
March 29-31: 5.64 inches

17 days   17.7 inches

Location of Disaster and Flood Insurance Claims

	1% Flood Zone	.2% Flood Zone	Other X Zone
	7%	2%	91%

In MAPC region: 19,222 disaster and insurance claims
93% were *not* in the FEMA 1% flood zone

Stormwater Bylaws

Apply regulations to less than one-acre

- Apply to 500 square feet – Winchester, Dedham, Arlington
- Many communities apply bylaws to 5,000, or 10,000 sq/ft

Update rainfall rates

- Cambridge – uses NOAA 14 upper 90% confidence level
- Woburn, Braintree, Millis – Use NOAA 14 rainfall rates

Increase infiltration requirements

- Dedham – requires 2" x impervious surfaces
- BWSC – 1.25" for projects greater than 100,000 sq/ft
- Cambridge - difference between the post-project discharge for the 25-year 24-hour rainfall event and the 2-year 24-hour rainfall event pre-project discharge.

10-year, 24-hour storm	
Woburn	Inches
NOAA Atlas 14	5.20
NOAA Atlas 14 +	5.79
NOAA Atlas 14 ++	6.43

Wetland Bylaws

Performance standards for LSCSF

- Duxbury, Hingham, Kingston, Marshfield, Scituate

Buffer zone for LSCSF

- Lynn, Marblehead, Saugus, Revere

Buffer zone for LSF

Hamilton, North Reading, Peabody, Wenham

Lower minimum for Isolated Land Subject to Flooding

- Gloucester, Lynn, Saugus, North Reading

Protect compensatory storage

- Arlington, Dedham 2:1 ration
- Marblehead – authority to require additional storage

Water quantity protection

- Medway, Sharon

Wetland regulations updated to include Climate Resilience

Arlington, Boston

Site Plan Review

Design guidelines require consideration of future sea level rise
- Hull

Require incorporation of sustainability and resiliency principles
- Concord

Address heat islands, minimize water use, energy efficiency
- Watertown

Drought

- Water use restrictions apply to private wells (Wenham and Topsfield)

- Prohibit use of public water supply for irrigation systems (Scituate, Pembroke)

- Automatic irrigations systems must have moisture sensors and timing device to comply with water use restrictions (Concord**)**

- New development fee to mitigate water demand with 2:1 ratio (Danvers, Wenham)

- Require installation of water efficient faucets and utilities (Danvers, Wenham)

- Require analysis of cost savings and implementation of water conservation strategies (Natick)

Ipswich River, 2016

Tree Protection and Heat Reduction

- Two shade trees required for every 5 parking lot spaces (Bedford, Somerville)

- Trees in setback area are protected, removal prohibition extends to 12 months before building permit, removal requires replanting or payment to town fund (Concord)

- Landscape regulations protect trees, tree canopy, and encourage shading structures, paving, and pedestrians (Maynard)

- Wetland permit required for tree removal in resource areas and buffers (Bedford)

- Design review standards address heat islands, green roofs, solar reflectance (Watertown, Somerville)

Boston.com

Questions?

Feedback?

[Climate Resilient Land Use: Site Plan Review – MAPC](#)

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