



## Comparison of LSCSF and Building Code Performance Standards

**Background:** Proposed revisions to the Massachusetts Wetlands Protection Act (WPA) regulations (see [310 CMR 10.36](#)) published on December 22, 2023 include performance standards for Land Subject to Coastal Storm Flowage (LSCSF), which promote resilience by preserving and restoring the natural floodplain functions of this area. In certain flood zones, proposed LSCSF standards require additional protections, such as elevating structures on open piles to preserve floodplain function and prevent damage. A comparison of the proposed LSCSF standards and the current and proposed Building Code Standards are outlined in the table below.

LSCSF Area <sup>1</sup>	Proposed LSCSF Standard <sup>2</sup>	Current Building Code Standard	Proposed draft 10 <sup>th</sup> Edition Building Code Standard
<b>Velocity Zone</b>  (Area within the Special Flood Hazard Area where base flood wave heights exceed 3 feet)	<b>New Development</b>		
	Prohibited	Elevate structures on open piles above FEMA BFE <sup>3</sup> plus at least 2 feet freeboard <sup>4</sup>	Elevate structures on open piles above the FEMA BFE <sup>3</sup> plus at least 3 feet freeboard <sup>4</sup>
	<b>Redevelopment (substantial damage or improvement)</b>		
	<ul style="list-style-type: none"> <li>Elevate structures on open piles.</li> <li>Must allow flood water to flow unobstructed under structure during 1% annual chance storm with min of 2 feet above 1% annual chance BFE<sup>6</sup></li> </ul>	<i>Same as new development</i>	<i>Same as new development</i>
<b>Moderate Wave Action Zone (MoWA)</b>  (Coastal A Zone; the portion of the Special Flood Hazard Area with base flood wave heights between 1.5 and 3 feet)	<b>New Development</b>		
	<ul style="list-style-type: none"> <li>Elevate structures on open piles.</li> <li>Must allow flood water to flow unobstructed under the structure during 1% annual chance storm with min of 2 feet above 1% annual chance BFE<sup>3, 6</sup></li> </ul>	Elevate structures on open piles or solid foundation above the FEMA BFE <sup>3</sup> plus at least 1 feet freeboard <sup>5</sup>	Elevate structures on open piles above the FEMA BFE <sup>3</sup> plus at least 3 feet freeboard <sup>5</sup>
	<b>Redevelopment (substantial damage or improvement)</b>		
	<i>Same as new development</i>	<i>Same as new development</i>	<i>Same as new development<sup>7</sup></i>
<b>Minimal Wave Action Zone (MiWA)</b>  (A and AE Zone; the portion of the Special Flood Hazard Area with base flood wave heights less than 1.5 feet)	<b>New Development</b>		
	<ul style="list-style-type: none"> <li>Elevation on piles or solid foundation per Building Code.</li> <li>Waves and fast-moving flood waters within the 100-foot Buffer Zone of a coastal Resource Area <u>may</u> require open piles at least 2 feet above 1% annual chance BFE or open foundation<sup>3, 6</sup></li> </ul>	Elevate structures on open piles or solid foundation above the FEMA BFE <sup>3</sup> plus at least 1 feet freeboard	Elevate structures on open piles or solid foundation above the FEMA BFE <sup>3</sup> plus at least 2 feet freeboard
	<b>Redevelopment (substantial damage or improvement)</b>		
	<i>Same as new development</i>	<i>Same as new development</i>	<i>Same as new development</i>

<sup>1</sup> Land Subject to Coastal Storm Flowage (LSCSF) = Land subject to any inundation caused by coastal storms up to and including that caused by the 100-year storm, surge of record or storm of record, whichever is greater.

<sup>2</sup> Water dependent industrial uses in DPA excluded.

<sup>3</sup> FEMA Base Flood Elevation

<sup>4</sup> measured from the lowest horizontal structural member

<sup>5</sup> measured from the top of the lowest floor surface

<sup>6</sup> Two feet may be waived in rare cases.

<sup>7</sup> Substantial improvement to existing commercial/mixed-use multi-story buildings are not required to elevate on open piles.

**NOTE:** Elevation requirements for the State Building Code have been generalized for this handout and reflect the Class 2 building requirements for ASCE 24-14. Class 2 is the reference standard for flood zone in Code and includes the majority of buildings and structures including residential, commercial, and industrial buildings. Refer to [ASCE 24-14](#) for other design classes.