

2017

# Municipal Climate Adaptation Guidance Series: Shoreland Zoning

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This guidance document is one of a series that was developed collaboratively by the Municipal Planning Assistance Program of the Maine Department of Agriculture Conservation and Forestry, and the following regional planning organizations:

- Androscoggin Valley Council of Governments
- Greater Portland Council of Governments
- Hancock County Planning Commission
- Kennebec Valley Council of Governments
- Lincoln County Regional Planning Commission
- Midcoast Council of Governments
- Mid-Coast Regional Planning Commission
- Northern Maine Development Council
- Southern Maine Planning and Development Commission

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*This guidance document is comprised of suggested revisions that can be made to a local Shoreland Zoning Ordinance which reflect the need for, and promote, greater climate resiliency among Maine municipalities. As a convenience to the user, the suggested revisions are presented within the context of the Maine Department of Environmental Protection's Rules [Chapter 1000: Guidelines for Municipal Shoreland Zoning](#), however, the suggested revisions are NOT part of Chapter 1000 and, prior to incorporating any of them into a local ordinance, municipal officials should first consult with the MDEP Shoreland Zoning Program*

*Suggested new language is blue and underlined, while suggested deletions are noted in the right margin.*

**Proposed Guidance for Changes to Local Ordinances Adopted Pursuant to  
Chapter 1000: GUIDELINES FOR MUNICIPAL SHORELAND ZONING ORDINANCES  
To Adapt to Sea Level Rise**

## 15. Land Use Standards

### A. Minimum Lot Standards

- (2) Land within the 100-year floodplain, land below the normal high-water line of a water body or upland edge of a wetland and land beneath roads serving more than two (2) lots shall not be included toward calculating minimum lot area.

### B. Principal and Accessory Structures

- (1) All new principal and accessory structures shall be set back at least one hundred (100) feet, horizontal distance, from the normal high-water line of great ponds classified GPA and rivers that flow to great ponds classified GPA, and seventy-five (75) feet, horizontal distance, from the elevation of the 100-year floodplain in tidal areas, and the normal high-water line of other water bodies, tributary streams, or the upland edge of a wetland, except that in the General Development I District the setback from the normal high-water line shall be at least twenty five (25) feet, horizontal distance, and in the Commercial Fisheries/Maritime Activities District there shall be no minimum setback. In the Resource Protection District the setback requirement shall be 250 feet, horizontal distance, except for structures, roads, parking spaces or other regulated objects specifically allowed in that district in which case the setback requirements specified above shall apply. In no event shall any new principal structure in the Resource Protection District be located within the limits of moderate wave action (LiMWA) landward of Coastal A or V zones.

**Deleted:** , as defined in Federal Emergency Management Agency Procedure Memorandum #50, (Buckley 2008).

**In addition:**

- (c) For principal structures, water and wetland setback measurements shall be taken from the top of a coastal bluff that has been identified on Coastal Bluff maps as being “highly unstable” or “unstable” by the Maine Geological Survey pursuant to its “Classification of Coastal Bluffs” and published on the most recent Coastal Bluff map. If the applicant and the permitting official(s) are in disagreement as to the specific location of a “highly unstable” or “unstable” bluff, or where the top of the bluff is located, the applicant may at his or her expense, employ a Maine Registered Professional Engineer, a Maine Certified Soil Scientist, a Maine State Geologist, or other qualified individual to make a determination. If agreement is still not reached, the applicant may appeal the matter to the board of appeals. In the Limited Residential District, in areas subject to shoreline erosion for which an annual erosion rate has been established by the Maine Geological Survey, the set back shall be either seventy-five (75) feet, horizontal distance, or seventy (70) times the measured annual erosion rate, whichever is greater. Such areas shall be shown on the Official Shoreland Zoning Map

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**NOTE:** A municipality may choose not to adopt subparagraph B(1)(e) below. However, if a municipality elects to adopt a provision similar to that subparagraph, it must be no less restrictive.

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- (d) For principal structures located adjacent to tidal waters, water and wetland setback measurements shall be taken from the contour line at the elevation of the 100 year floodplain.

- (e) On a non-conforming lot of record on which only a residential structure exists, and it is not possible to place an accessory structure meeting the required water body, tributary stream or wetland setbacks, the code enforcement officer may issue a permit to place a single accessory structure, with no utilities, for the storage of yard tools and similar equipment. Such accessory structure shall not exceed eighty (80) square feet in area nor eight (8) feet in height, and shall be located as far from the shoreline or tributary stream as practical and shall meet all other applicable standards, including lot coverage and vegetation clearing limitations. In no case shall the structure be located closer to the shoreline or tributary stream than the principal structure.

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**NOTE:** All tidal land which is subject to tidal action during the highest annual tide is coastal wetland. In tidal areas, the shoreline position, defined as the upland edge of the coastal wetland, may be established on the official shoreland zoning map by utilizing LiDAR data available from the Maine Office of GIS (MEGIS) to locate the contour line at the height of the maximum spring tide. Municipalities who wish to depict a more accurate shoreline in this manner should consult with their Regional Planning Commission or other mapping professionals.

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- (3) The lowest floor elevation or openings of all buildings and structures, including basements, shall be elevated at least three feet above the elevation of the 100 year flood in a shoreland zone of a coastal wetland, and at least one foot above the elevation of the 100 year flood in shoreland zone of a water body or freshwater wetland, the flood of record, or in the absence of these, the flood as defined by soil types identified as recent flood-plain soils. In those municipalities that participate in the National Flood Insurance Program and have adopted the April 2005 version, or later version, of the Floodplain Management Ordinance, accessory

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structures may be placed in accordance with the standards of that ordinance and need not meet the elevation requirements of this paragraph.

- (4) Within any frontal or back dune areas in the Resource Protection District, as designated by the Department of Environmental Protection Sand Dune Rules, the total footprint of all structures as defined by this ordinance, and parking lots and other non-vegetated surfaces shall not exceed fifteen (15) percent of the lot or portion thereof, located in said areas. With the exception of General Development Districts located adjacent to coastal wetlands and rivers that do not flow to great ponds, and Commercial Fisheries/Maritime Activities Districts, non-vegetated surfaces shall not exceed a total of twenty (20) percent of the portion of the lot located within the shoreland zone. This limitation does not apply to public boat launching facilities regardless of the district in which the facility is located.

In a General Development District located adjacent to coastal wetlands, or rivers that do not flow to great ponds, or in a Commercial Fisheries/Maritime Activities District, non-vegetated surfaces shall not exceed a total of seventy (70) percent of the portion of the lot located within the shoreland zone.

For the purposes of calculating lot coverage, non-vegetated surfaces include, but are not limited to the following: structures, driveways, parking areas, and other areas from which vegetation has been removed. Naturally occurring ledge and rock outcroppings are not counted as non-vegetated surfaces when calculating lot coverage for lots of record on March 24, 1990 and in continuous existence since that date. Land within the 100-year floodplain and land below the normal high-water line of a water body or upland edge of a wetland shall not be included toward calculating the maximum allowable footprint of non-vegetated surfaces.

**H. Roads and Driveways.** The following standards shall apply to the construction of roads and/or driveways and drainage systems, culverts and other related features.

- (5) In no event shall a new road or driveway be located within a 100 year floodplain, except for crossings where no reasonable alternative exists as determined by the Planning Board. A road over a 100 year floodplain shall be elevated three feet above the height of the 100 year flood as determined by the latest FEMA flood insurance rate map, or by a professional engineer, where no flood height has been determined.

- (6) Road and driveway banks shall be no steeper than a slope of two (2) horizontal to one (1) vertical, and shall be graded and stabilized in accordance with the provisions for erosion and sedimentation control contained in Section 15(T).

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- (7) Road and driveway grades shall be no greater than ten (10) percent except for segments of less than two hundred (200) feet.

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- (8) In order to prevent road and driveway surface drainage from directly entering water bodies, tributary streams or wetlands, roads and driveways shall be designed, constructed, and maintained to empty onto an unscarified buffer strip at least (50) feet plus two times the average slope, in width between the outflow point of the ditch or culvert and the normal high-water line of a water body, tributary stream, or upland edge of a wetland. Surface drainage which is directed to an unscarified buffer strip shall be diffused or spread out to promote infiltration of the runoff and to minimize channelized flow of the drainage through the buffer strip.

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- (9) Ditch relief (cross drainage) culverts, drainage dips and water turnouts shall be installed in a manner effective in directing drainage onto unscarified buffer strips before the flow gains

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sufficient volume or head to erode the road, driveway, or ditch. To accomplish this, the following shall apply:

- (a) Ditch relief culverts, drainage dips and associated water turnouts shall be spaced along the road, or driveway at intervals no greater than indicated in the following table:

Grade (Percent)	Spacing (Feet)
0-2	250
3-5	200-135
6-10	100-80
11-15	80-60
16-20	60-45
21 +	40

- (b) Drainage dips may be used in place of ditch relief culverts only where the grade is ten (10) percent or less.
- (c) On sections having slopes greater than ten (10) percent, ditch relief culverts shall be placed at approximately a thirty (30) degree angle downslope from a line perpendicular to the centerline of the road or driveway.
- (d) Ditch relief culverts shall be sufficiently sized and properly installed in order to allow for effective functioning, and their inlet and outlet ends shall be stabilized with appropriate materials.

(10) Ditches, culverts, bridges, dips, water turnouts and other storm water runoff control installations associated with roads and driveways shall be maintained on a regular basis to assure effective functioning.

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## 16. Administration

### E. Special Exceptions.

- (3) All proposed buildings, sewage disposal systems and other improvements are:
- (a) Located on natural ground slopes of less than 20%; and
- (b) Located outside the floodway of the 100-year flood-plain along rivers and artificially formed great ponds along rivers and outside the velocity zone in areas subject to tides, based on detailed flood insurance studies and as delineated on the Federal Emergency Management Agency's Flood Boundary and Floodway Maps and Flood Insurance Rate Maps; all buildings, including basements, comply with the structure elevation requirements of Section 15.B(3); and the development is otherwise in compliance with any applicable municipal flood-plain ordinance.

Deleted: are elevated at least one foot above the 100-year flood-plain elevation

If the floodway is not shown on the Federal Emergency Management Agency Maps, it is deemed to be 1/2 the width of the 100-year flood-plain.

## H. Appeals

(2) **Variance Appeals.** Variances may be granted only under the following conditions:

(e) Notwithstanding the requirements of Section 16(H)(2)(c)ii. above, the Board of Appeals may grant a variance to exceed the maximum height requirement of Section 15.B.2 to the owner of a residential dwelling provided that:

(i) the residential dwelling was in existence prior to January 1, 2017;

(ii) the dwelling is subject to the structure elevation requirements of Section 15.B.3; and

(iii) the increase in height is no more than the distance that the lowest floor elevation (including basement) is raised above its original elevation to comply with but not exceed the minimum structure elevation requirements of section 15.B.3.

(fe) The Board of Appeals shall limit any variances granted as strictly as possible in order to ensure conformance with the purposes and provisions of this Ordinance to the greatest extent possible, and in doing so may impose such conditions to a variance as it deems necessary. The party receiving the variance shall comply with any conditions imposed.

(gf) A copy of each variance request, including the application and all supporting information supplied by the applicant, shall be forwarded by the municipal officials to the Commissioner of the Department of Environmental Protection at least twenty (20) days prior to action by the Board of Appeals. Any comments received from the Commissioner prior to the action by the Board of Appeals shall be made part of the record and shall be taken into consideration by the Board of Appeals.

## 17. Definitions

Limits of Moderate Wave Action (LimWA) – As defined in FEMA Memorandum #50 (Buckley, 2008), the landward limit of the 1.5-foot breaking wave during a 100 year flood event.

**Lot area** - The area of land enclosed within the boundary lines of a lot, minus:

- (1) land below the normal high-water line of a water body or upland edge of a wetland;
- (2) land within the 100 year floodplain; and
- (3) areas beneath roads serving more than two lots.

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