

Recommended Shoreland Zoning Amendments to Protect Upland Habitat Adjacent to Significant Wetlands

Note: The below suggestions for strengthening local shoreland zoning requirements are intended to better safeguard natural resources from potential development impacts and impacts from conversion to uses that would diminish effectiveness in protecting water quality. The Beginning with Habitat program is not advocating changes to the Maine Forest Service's standards for timber harvesting as currently included in MDEP's Chapter 1000 minimum guidelines for shoreland zoning.

II. Overview of Potential Additional Provisions

A. Amend the Municipal [Shoreland] Zoning Ordinance to include a 250-foot Resource Protection District adjacent to significant freshwater wetlands of any size. Significant freshwater wetlands should include:

1. wetlands containing significant wildlife habitat as defined and mapped by the Maine Department of Inland Fisheries and Wildlife;
2. significant vernal pools (as defined as Significant Wildlife Habitat under Chapter 335 of the Natural Resources Protection Act, and, where appropriate, significant vernal pools defined and identified by a municipal wetlands inventory and characterization);
3. wetlands that normally contain at least 20,000 square feet of aquatic vegetation, emergent marsh vegetation, or open water (unless the 20,000 square feet is the result of an artificial pond or impoundment);
4. peatlands; and
5. wetlands identified as locally significant by [a municipal wetlands inventory and characterization or comprehensive plan reference to the State Planning Office wetlands characterization].

[Explanatory Note: Most SLZ Ordinances do not apply to wetlands that are less than 10 acres in size, or forested wetlands. The wetlands listed above include some of the most significant freshwater wetlands for wildlife habitat and other resource values, and include wetlands that are less than 10 acres. The value of these wetlands do not exist in isolation, but are largely tied to surrounding upland. The Department of Inland Fisheries and Wildlife promotes a 250-foot no development buffer around high value wildlife habitats (and in some cases defines this buffer as part of the significant wildlife habitat pursuant to NRPA Section 480-B paragraph 10). Vernal pools are vital to several species of amphibians and reptiles. These small wetlands were recently included as Significant Wildlife Habitat under the MDEP Natural Resources Protection Act. However, given their small size and somewhat ephemeral nature, these significant wetlands can slip through the regulatory cracks. Protection at the local level, especially during the individual building permit review process, may be the best approach for their effective conservation as not all projects receive State-level NRPA review.

B. Amend the Municipal [Shoreland] Zoning Ordinance to add a 100-foot Trout Stream District adjacent to streams identified by the Maine Department of

Inland Fisheries and Wildlife identified by regional offices as supporting populations of native brook trout (*Salvelinus fontinalis*).

Trout Stream Protection District. The Trout Stream Protection District includes all land areas within one-hundred (100) feet, horizontal distance, of the normal high-water line of a stream identified by the Maine Department of Inland Fisheries and Wildlife as supporting populations of native brook trout, exclusive of those areas within two-hundred and fifty (250) feet, horizontal distance, of the normal high-water line of a great pond, or river or saltwater body, or within two hundred and fifty (250) feet, horizontal distance, of the upland edge of a freshwater or coastal wetland. Where a stream and its associated shoreland area are located within two-hundred and fifty (250) feet, horizontal distance, of the above water bodies or wetlands, that land area shall be regulated under the terms of the shoreland district associated with that water body or wetland.

C. Amend the Municipal [Shoreland] Zoning Land Use Standards (and Table 1. Land Uses in the Shoreland Zone) to address activities adjacent to significant freshwater wetlands.

1. Activities within 250 feet of significant vernal pools should
 - a. not result in disturbance within the vernal pool depression;
 - b. maintain a minimum setback of 100 feet and maintain a minimum of 75% of the critical terrestrial habitat as unfragmented forest with at least a partly closed canopy of overstory trees to provide shade, deep litter and woody debris;
 - c. maintain or restore forest corridors connecting wetlands and significant vernal pools;
 - d. minimize forest floor disturbance; and
 - e. maintain native understory vegetation and downed woody debris.

[Explanatory Note: “Significant vernal pools” were recently added to DEP’s list of Significant Habitat types regulated under the Natural Resources Protection Act. Although formal protection for these resources will begin at the State level in September 2007, it may be prudent for municipalities to adopt local protection measures for regulatory consistency and to be best prepared to offer guidance during local building permit review that may not otherwise trigger State level NRPA review.]

2. Clearing of vegetation for development should not be allowed within 100 feet of the edge of a significant freshwater wetland.

[Explanatory Note: Presently, under the minimum State Shoreland Zoning Guidelines, development (any structure) is subject to a 100-foot setback from a great pond classified as GPA, and a 75-foot setback from any wetland. This 75-foot setback applies whether or not the wetland is significant or in a Resource Protection District. Even though development is restricted significantly in a Resource Protection District, single-family dwellings may be permitted by special exception - Section 16.E. of the state minimum shoreland zoning guidelines, DEP Rules, Chapter 1000, if adopted into a municipal Shoreland Zoning Ordinance, would allow a maximum total ground floor area of 1,500 square feet for principal and accessory residential structures within a Resource

Protection District, but only if there is no other building site on the lot that is not within a Resource Protection District. Minimal development of recreation-related structures is also allowed, provided the development is not within 75 feet of the wetland. It is recommended that the setback for structures allowed in a Resource Protection District adjacent to significant wetlands, including those structures allowed by special exception, be increased to 100 feet. This is consistent with the recommended practice of leaving a 100-foot undisturbed buffer around significant vernal pools (see notes under items 1 and 2 above). Further, the Department of Inland Fisheries and Wildlife promotes a 250-foot no development buffer around high value wildlife habitat; given that most significant freshwater wetlands are also high value wildlife habitat, a 100-foot buffer is reasonable and defensible.]

3. Certain agricultural activities, specifically tilling of new land or establishment of new livestock grazing areas, should be regulated when adjacent to significant freshwater wetlands. New tilling should be prohibited within 100 feet of a significant freshwater wetland, and new livestock grazing areas should be prohibited within 100 feet of a significant vernal pool.

[Explanatory Note: This amendment would maintain a 100 foot vegetative buffer between new tilled areas and significant wetlands to minimize the adverse effects on the adjacent wetlands resulting from increased runoff (potentially carrying fertilizers and pesticides) and sedimentation from adjacent new tilled fields, and to maintain the critical upland habitat adjacent to significant vernal pools. New livestock grazing areas would also be prohibited in the 100-foot critical habitat zone around significant vernal pools, due to the potential damage to understory vegetation and leaf litter which are vital to pool breeding amphibians.]

III. Recommended Amendments to a municipal Shoreland Zoning Ordinance or Shoreland Zone Provisions in a Combined Zoning and Shoreland Zoning Ordinance

A. Amend Section 13. Establishment of Districts, Part A. Resource Protection District. paragraph (1), or the equivalent section of a municipal shoreland zoning or town-wide zoning ordinance, as follows:

- (1) Areas within 250 feet, horizontal distance, of the upland edge of freshwater wetlands, salt marshes and salt meadows, which are rated “moderate” or “high” value waterfowl and wading bird habitat, including nesting and feeding areas, by the Maine Department of Inland Fisheries and Wildlife (MDIF&W) that are depicted on a Geographic Information System (GIS) data layer maintained by either MDIF&W or the Department as of May 1, 2006, (and) areas within 250 feet of significant freshwater wetlands as defined by this Ordinance.

[Explanatory Note: This amendment clarifies the correct source of data for IF&W mapped WWH's as recently amended, and expands the Resource Protection District to include “significant freshwater wetlands” defined below.]

B. Amend Section 17. Definitions, to change the definition of Freshwater wetlands as follows:

Freshwater wetland – freshwater swamps, marshes, bogs and similar areas, ~~other than forested wetlands~~, which are inundated or saturated by surface or ground water at a frequency and for a duration sufficient to support, and which under normal circumstances do support, a prevalence of wetland vegetation typically adapted for life in saturated soils and which include:

1. Wetlands, other than forested wetlands, which are of ten or more contiguous acres; or less than 10 contiguous acres and adjacent to a surface water body, excluding any river, stream or brook, such that in a natural state, the combined surface area is in excess of 10 acres; and
2. ~~Inundated or saturated by surface or ground water at a frequency and for a duration sufficient to support, and which under normal circumstances do support, a prevalence of wetland vegetation typically adapted for life in saturated soils.~~
2. Significant Freshwater Wetlands - Wetlands, including forested wetlands, which have significant wildlife or resource values and may be less than 10 acres in size, including:
 - a. wetlands containing significant wildlife habitat as defined and mapped by the Maine Department of Inland Fisheries and Wildlife;
 - b. freshwater wetlands which are rated "moderate" or "high" value by the Maine Department of Inland Fisheries and Wildlife (MDIF&W);
 - c. significant vernal pools;
 - d. wetlands that normally contain at least 20,000 square feet of aquatic vegetation, emergent marsh vegetation, or open water (unless the 20,000 square feet is the result of an artificial pond or impoundment);
 - e. peatlands; and
 - f. wetlands identified as locally significant by [a municipal wetlands inventory and characterization or comprehensive plan].

[Explanatory Note: This amendment adds “Significant Freshwater Wetlands” as a class of Freshwater Wetlands included in the shoreland zone, and identifies characteristics that trigger “significance”. These characteristics are largely based on DEP’s Chapter 310 definitions of Wetlands of Special Significance. If a community decides to add “locally significant” wetlands to the list (f), we recommend starting with the State Planning Office Wetland Characterization results for your town as included on BwH Supplementary Map 7.]

Amend Section 17. Definitions, to change the definition of Stream as follows:

~~Stream—a free flowing body of water from the outlet of a great pond or the confluence of two (2) perennial streams as depicted on the most recent edition of a United States Geological Survey 7.5 minute series topographic map, or if not available, a 15-minute series topographic map, to the point where the body of water becomes a river or flows to another water body or wetland within the shoreland area.~~

Stream- A channel between defined banks created by the action of surface water and has two (2) or more of the following characteristics.

1. It contains or is known to contain flowing water continuously for a period of at least 6 months of the year under normal seasonal rainfall conditions.
2. The channel bed is primarily composed of mineral material such as sand, scoured silt, gravel, clay, or other parent material that has been deposited or scoured by water.
3. The channel contains aquatic animals such as fish, aquatic insects or mollusks in the water or, if no surface water is present, within the streambed.
4. The channel contains aquatic vegetation and is essentially devoid of upland vegetation.

This definition is based on physical characteristics that in case of development need to be field verified. Bordering wetlands that are not separated from the stream channel by a distinct change in elevation (such as hillside groundwater seeps), barrier, or berm, that are subject to periodic flooding or soil saturation as a result of high stream flows are considered part of the stream. Where these wetlands are present, the normal high water line of the stream is measured from the upland / wetland transition of bordering wetlands subject to periodic stream water flooding or saturation, or where changes in wetland vegetation, soil characteristics, or topography clearly demonstrate wetland hydrology not associated with associated with periodic flood flows.

Natural and artificial impoundments at the source and along the course of the stream are considered to be part of the stream.

Stream does not mean a ditch or other drainage way constructed, or constructed and maintained, solely for the purpose of draining storm water or a grassy swale.

[Explanatory Note: This amendment would provide local shoreland zoning protections for first order streams in your town by adopting the current DEP definition of a stream as incorporated into NRPA regulations. Additionally, this definition helps to clarify that

local setbacks should not simply be measured from the stream centerline, or channel bank as often occurs, but should be measured to include small floodplain shelves along the stream that provide vital water quality protections.]

C. Amend Section 17. Definitions, to add the following definition:

Significant vernal pool identification criteria. Vernal pool significance must be determined and documented by an individual who has experience and training in either wetland ecology or wildlife ecology and therefore has qualifications sufficient to identify and document a significant vernal pool.

- (1) Abundance. Any one of or combination of the following species abundance levels, documented in any given year, determine the significance of a vernal pool.

Species	Abundance Criteria
Fairy shrimp	Presence in any life stage.
Blue spotted salamanders	Presence of 10 or more egg masses.
Spotted salamanders	Presence of 20 or more egg masses.
Wood frogs	Presence of 40 or more egg masses.

- (2) Rarity. A pool that has documented use in any given year by state-listed rare, endangered or threatened species that commonly require a vernal pool to complete a critical portion of their life-history is a significant vernal pool. Examples of vernal pool dependent state-listed endangered or threatened species include, but are not limited to, Blanding's turtles, Spotted turtles, and Bog haunter dragonflies.

[Explanatory Note: This definition has been crafted to be consistent with the recently adopted Significant Vernal Pool definition as incorporated into DEP Significant Wildlife Habitat rules.]

D. Amend Section 15. Land Use Standards as follows:

Amend Section 15 B. Principal and Accessory Structures, subsection (1) as follows:

- (1) All new principal and accessory structures shall be set back at least one hundred (100) feet from the normal high-water line of great ponds classified GPA and rivers that flow to great ponds classified GPA, and from significant freshwater wetlands, and seventy-five (75) feet from the normal high-water line of other water bodies, tributary streams, or the upland edge of a wetland, except that in the General Development District the setback from the normal high-water line shall be at least twenty-five (25) feet, and in the Commercial Fisheries/Maritime Activities District there shall be no minimum setback.
- (2) Activities within 250 feet of significant vernal pools should
- not result in disturbance within the vernal pool depression;
 - maintain a minimum setback of 100 feet and maintain a minimum of 75% of the critical terrestrial habitat as unfragmented forest with at

- least a partly closed canopy of overstory trees to provide shade, deep litter and woody debris;
- c. maintain or restore forest corridors connecting wetlands and significant vernal pools;
 - d. minimize forest floor disturbance; and
 - e. maintain native understory vegetation and downed woody debris.

[Explanatory Note: This definition has been crafted to be consistent with the recently adopted Significant Vernal Pool habitat management standards as incorporated into DEP Significant Wildlife Habitat rules.]

Amend Section 15 M. Mineral Exploration and Excavation as follows:

Except within Resource Protection Districts adjacent to significant freshwater wetlands, or salt marshes or salt meadows which are rated "moderate" or "high" value by the Maine Department of Inland Fisheries and Wildlife (MDIF&W) that are depicted on a Geographic Information System (GIS) data layer maintained by either MDIF&W or the Department as of May 1, 2006, ~~M~~mineral extraction may be performed under the following conditions:

[Explanatory Note: The DEP shoreland zoning guidance rules (Chapter 1000) includes a qualification for mineral extraction in Resource Protection Districts in Table 1. Land Uses in the Shoreland Zone, as footnote 3, which states mineral extraction is "not permitted in areas so designated because of wildlife value." This proposed amendment adds that qualification to Section 15. Land Use Standards, subsection M., incorporating amendments to definitions suggested elsewhere in this document to protect buffer areas around significant wetlands including wetlands designated as significant for wildlife habitat which are less than 10- acres in size or are forested wetlands.]

Amend Section 15 N. Agriculture as follows:

- (4) There shall be no new tilling of soil within one-hundred (100) feet, horizontal distance, of the normal high-water line of a great pond classified GPA, or a significant freshwater wetland; within seventy-five (75) feet, horizontal distance, from other water bodies and coastal wetlands; nor within twenty-five feet, horizontal distance, of tributary streams, and wetlands not considered significant freshwater wetlands. Operations in existence on the effective date of this ordinance and not in conformance with this provision may be maintained.
- (5) Newly established livestock grazing areas shall not be permitted within one hundred (100) feet, horizontal distance, of the normal high-water line of a great pond classified GPA, or within one hundred (100) feet, horizontal distance of a significant vernal pool; within seventy-five (75) feet, horizontal distance of other water bodies and coastal wetlands; nor within twenty-five (25) feet, horizontal distance, of tributary streams, and

freshwater wetlands. Livestock grazing associated with ~~ongoing~~ farm activities that are ongoing as [the date of amendment], and which are not in conformance with the above setback provisions may continue, provided that such grazing is conducted in accordance with a Conservation Plan.

Amend Section 15 P. Clearing of Vegetation for Development, as follows:

- (1) Within a shoreland area zoned for Resource Protection abutting a great pond, there shall be no cutting of vegetation within the strip of land extending 75 feet, horizontal distance, inland from the normal high-water line, and there shall be no cutting of vegetation within the strip of land extending 100 feet horizontal distance, inland from the normal high-water line, within the Resource Protection Zone adjacent to a significant freshwater wetland except to remove safety hazards.
- (6) The vegetation clearing standards of this ordinance can be exceeded on a temporary basis with prior written approval of the Codes Enforcement Officer under the following conditions:
 - a. The work shall be completed by a qualified professional under the supervision of a public natural resource agency or municipal department exclusively for the purpose of controlling the spread of invasive species and restoring natural areas.
 - b. Woody species removed that exceed the required stand scoring limits are nonnative invasive species including: Norway Maple (*Acer platanoides*), Japanese barberry (*Berberis thunbergii*), Asiatic bittersweet (*Celastrus orbiculata*), glossy buckthorn (*Frangula alnus*), Morrow's honeysuckle (*Lonicera morrowii*), Japanese honeysuckle (*Lonicera japonica*), Tartarian honeysuckle (*Lonicera tatarica*), multiflora rose (*Rosa multiflora*), or other species identified as woody invasive plants by the Maine Natural Areas Program (MNAP).

If removal of these species exceeds the required stand scoring limits, native species will be planted to return the area to compliance with the "well distributed stand" definition as specified in this section prior to the start of the next growing season.
 - c. Non-native invasive woody species under three (3) feet in height and herbaceous invasive species including Japanese knotweed (*Fallopia japonica*), purple loosestrife (*Lythrum salicaria*), and other species identified as invasive plants by the Maine Natural Areas Program (MNAP) can be removed if the area is replanted and monitored for the successful establishment of native species at an equal or greater density than the species removed.
 - d. Temporary erosion control measures shall be installed prior to the start of the activity if the invasive species removal effort has the potential to result in erosion of soil into the resource.

e. All disturbed areas shall be permanently stabilized.

[Explanatory Note: Strict reading of the Shoreland Zoning guidelines would preclude habitat restoration activities along shorelines over taken by invasive species. As is true of any proposed amendments to shoreland zoning guidelines, incorporation of this section will require approval by DEP. Restoration of native vegetation within riparian corridors can improve recreational use and scenic values provided by these shoreline areas, but can also have significant habitat benefits.]

TABLE 1. LAND USES IN THE SHORELAND ZONE

<u>LAND USES</u>	<u>DISTRICT</u>					
	<u>SP</u>	<u>RP</u>	<u>LR</u>	<u>LC</u>	<u>GD</u>	<u>CFMA</u>
<u>LR</u>						
1. Non-intensive recreational uses not requiring structures such as hunting, fishing and hiking	yes	yes	yes	yes	yes	yes
2. Motorized vehicular traffic on existing roads and trails	yes	yes	yes	yes	yes	yes
3. Forest management activities except for timber harvesting	yes	yes	yes	yes	yes	yes
4. Timber harvesting	yes	CEO	yes	yes	yes	yes
5. Clearing of vegetation for approved construction and other allowed uses	CEO	CEO ¹	yes	yes	yes	yes
6. Fire prevention activities	yes	yes	yes	yes	yes	yes
7. Wildlife management practices	yes	yes	yes	yes	yes	yes
8. Soil and Water conservation practices	yes	yes	yes	yes	yes	yes
9. Mineral exploration	no	yes ²	yes ²	yes ²	yes ²	yes ²
10. Mineral extraction including sand and gravel extraction	no	PB ³	PB	PB	PB	PB
11. Surveying and resource analysis	yes	yes	yes	yes	yes	yes
12. Emergency Operations	yes	yes	yes	yes	yes	yes
13. Agriculture	yes	PB ¹⁰	yes	yes	yes	yes
14. Aquaculture	PB	PB	PB	yes	yes	yes
15. Principal structures and uses						
A. One and two family residential	PB ⁴	PB ⁹	CEO	CEO	CEO	no
B. Multi-unit residential	no	no	PB	PB	PB	no
C. Commercial	no	no	no	PB	PB	PB ⁵
D. Industrial	no	no	no	no	PB	PB ⁵
E. Governmental and Institutional	no	no	no	PB	PB	PB ⁵
F. Small non-residential facilities for educational, scientific, or nature interpretation purposes	PB ⁴	PB ⁹	CEO	CEO	CEO	PB ⁵
16. Structures accessory to allowed uses	PB ⁴	PB ⁹	CEO	CEO	yes	yes
17. Piers, docks, wharfs, bridges and other structures and uses extending over or below the normal high-water line or within a wetland						
a. Temporary	CEO	CEO	CEO	CEO	CEO	CEO
b. Permanent	PB	PB	PB	PB	PB	PB ⁵
18. Conversions of seasonal residences to year-round residences	LPI	LPI	LPI	LPI	LPI	no
19. Home occupations	PB	no	PB	CEO	yes	yes
20. Private sewage disposal systems for allowed uses	LPI	LPI	LPI	LPI	LPI	LPI
21. Essential services	PB ⁶	PB ⁶	PB	PB	PB	PB
22. Service drops, as defined, to allowed uses	yes	yes	yes	yes	yes	yes
23. Public and private recreational areas involving minimal structural development	PB	PB ⁹	PB	CEO	CEO	CEO ⁵
24. Individual, private campsites	CEO	CEO	CEO	CEO	CEO	CEO
25. Campgrounds	no	no ⁷	PB	PB	PB	no
26. Road & driveway construction	PB	no ⁸	PB	PB	PB	PB ⁵
27. Parking facilities	no	no ⁷	PB	PB	PB	PB ⁵
28. Marinas	PB	no	PB	PB	PB	PB
29. Filling and earth moving of <10 cubic yards	CEO	CEO	yes	yes	yes	yes
30. Filling and earth moving of >10 cubic yards	PB	PB	CEO	CEO	CEO	CEO
31. Signs	yes	yes	yes	yes	yes	yes
32. Uses similar to allowed uses	CEO	CEO	CEO	CEO	CEO	CEO
33. Uses similar to uses requiring a CEO permit	CEO	CEO	CEO	CEO	CEO	CEO
34. Uses similar to uses requiring a PB permit	PB	PB	PB	PB	PB	PB

¹In RP not permitted within 75 feet of the normal high-water line of great ponds, or within 100 feet of a significant vernal pool or other significant freshwater wetlands, except to remove safety hazards. See Section 15(P).

²Requires permit from the Code Enforcement Officer if more than 100 square feet of surface area, in total, is disturbed.

³In RP not permitted in areas so designated because of wildlife value or in RP zones adjacent to significant freshwater wetlands. See Section 15(M).

⁴Provided that a variance from the setback requirement is obtained from the Board of Appeals.

⁵Functionally water-dependent uses and uses accessory to such water dependent uses only (See note on previous page).

⁶See further restrictions in Section 15(L)(2) on page 20.

⁷Except when area is zoned for resource protection due to flood plain criteria, in which case a permit is required from the PB. However, parking areas are not allowed within 100 feet of a significant vernal pool.

⁸Except to provide access to permitted uses within the District, or where no reasonable alternative route or location is available outside the RP area, in which case a permit is required from the PB; Additional restrictions apply when in a RP zone adjacent to a significant vernal pool. See Sections 15(H) and 15(Q).

⁹Single family residential structures may be allowed by special exception only according to the provisions of Section 16E, Special Exceptions. Two-family residential structures are prohibited. Additional restrictions apply for accessory infrastructure

and lighting, and erosion control and storm water runoff, if in a RP zone adjacent to a significant vernal pool. See Sections 15(B), 15(J), and 15(Q).

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No new tilling within 100 feet of a great pond classified as GPA, or in a RP zone adjacent to a significant freshwater wetland; no new livestock grazing areas in a RP zone within 100 feet of a significant vernal pool. See Section 15(N).

NOTE: A person performing any of the following activities shall require a permit from the Department of Environmental Protection, pursuant to Title 38 M.R.S.A., Section 480-C, if the activity occurs in, on, over or adjacent to any freshwater or coastal wetland, great pond, river, stream or brook and operates in such a manner that material or soil may be washed into them:

- A. Dredging, bulldozing, removing or displacing soil, sand, vegetation or other materials;
- B. Draining or otherwise dewatering;
- C. Filling, including adding sand or other material to a sand dune; or
- D. Any construction or alteration of any permanent structure.