

TOWN OF BOXBOROUGH



CONSERVATION COMMISSION

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Regulations

for

The Wetlands Bylaw

Regulations Adopted: November 14, 2001

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SECTION 1. GENERAL PROVISIONS.

1.1. Introduction.

A non-zoning wetland town bylaw (under the general Home Rule powers expressed in G.L. Chapter 40, Section 21) gives a municipality the authority to regulate activities in or near wetlands or water bodies by imposing stronger protective measures than the Massachusetts Wetlands Protection Act (G.L. Chapter 131, Section 40). Because the Massachusetts Wetlands Protection Act was designed to be used throughout the State and because by necessity Acts by the State Legislature often must balance conflicting interests, the special needs and circumstances of specific municipalities may not be adequately addressed.

This additional protection is important to Boxborough for several reasons:

- 1) All Boxborough residents are served by private wells and septic systems. Unlike cities/towns with a few municipal wells which have protection zones around them, each one of our private wells must be protected.
- 2) All of the streams and brooks in Boxborough are headwater streams that feed into large streams within or beyond the town boundaries.
- 3) Almost one-fifth of the land in Boxborough consists of bordering vegetated wetlands.

1.2. Authority.

These rules & regulations are promulgated by the Town of Boxborough Conservation Commission pursuant to the Authority granted to it under the Town of Boxborough Wetland Bylaw (Section 7).

1.3. Purpose.

The purposes of these rules and regulations are to administer and effectuate the provisions of Town of Boxborough Wetlands Bylaw (hereafter referred to as the "Bylaw"). The Bylaw sets forth a public review and decision making process to protect wetlands and adjoining land areas by controlling activities deemed likely to have a significant (or cumulative) impact on wetland values, including but not limited to the following:

- a) protection of public and private water supply
 - b) protection of groundwater
 - c) flood control
 - d) erosion control
 - e) storm damage control and prevention
 - f) prevention of pollution
 - g) protection of land containing wildlife (wildlife habitat)
 - h) recreation
 - i) protection of aesthetics
- (to be referred to collectively as "the interests" of the bylaw and the "resource area values")

1.4. Areas Subject to Protection under the Bylaw.

The following Resources Areas are subject to protection under the Bylaw:

- a) freshwater wetlands
- b) marshes
- c) wet meadows
- d) bogs
- e) swamps
- f) lakes
- g) ponds
- h) rivers
- i) streams
- j) any land within 100 horizontal feet of above resource areas (a through i). (Hereto known as the Adjacent Land Resource Area; referred to in Section 2.2 as Buffer Zone)

1.5. Definitions.

Except as otherwise provided in these regulations, the definition of terms set forth in M.G.L. (Chapter 131, Section 40 and Regulations 310 CMR 10.00 are incorporated by reference.

As used in these regulations, the following terms shall have the meanings indicated.

- 1.5.1. Adjacent Land Resource Area: Defined in Section 2.0 of the Bylaw as “Buffer Zone”, this area includes the land area within 100 feet of any fresh water wetland; marshes; wet meadows; bogs; swamps; vernal pools; banks; reservoirs; lakes; ponds; rivers; streams; creeks; beaches; land under water bodies; land subjected to flooding or inundation by ground or surface water.
- 1.5.2. Alter: As defined in Section 2.0 of the bylaw.
- 1.5.3. Bank: Shall include the land area which normally abuts and confines a water body; the lower boundary being the mean annual low flow level, and the upper boundary being the 1st observation break in the slope or the mean annual flood level.
- 1.5.4. Bog: As defined in Section 2.0. of the bylaw.
- 1.5.5. Bordering: Touching
- 1.5.6. Bordering Land Subject to Flooding: An area with low flat topography adjacent to and inundated by flood water from streams, rivers, ponds or lakes. The boundary of bordering land subject to flooding is the one-hundred-year flood plain. It extends from the outer edge of a bank or bordering vegetated wetland.
- 1.5.7. Creek: Means same as a stream.
- 1.5.8. Groundwater: Water below the earth’s surface in the zone of saturation.
- 1.5.9. Isolated Land Subject to Flooding: Any isolated depression without an inlet or outlet where surface or ground water is at or near the surface of the ground for at least 8 weeks during the year to support wetland vegetation.
- 1.5.10. Lake: Any open body of fresh water with a surface area of ten (10) acres or more, and shall include great ponds.
- 1.5.11. Marsh: As defined in Section 2.0 of the bylaw.
- 1.5.12. Meadow, Wet: As defined in Section 2.0 of the bylaw.
- 1.5.13. Pond: Any open body of fresh water, either naturally occurring or man-made by impoundment or excavation, which is never without standing water due to natural causes except in periods of extended drought. Basins or lagoons which are part of wastewater treatment plants, swimming pools or other impervious man-made retention basins shall not be considered ponds.
- 1.5.14. Private Water Supply: Any source or volume of surface or groundwater demonstrated to be in any private use or shown to have potential for private use.
- 1.5.15. Public Water Supply: Any source or volume of surface water or groundwater demonstrated to be in public use or approved for water supply pursuant to G.L. Chapter 160 by the Division of Water Supply of the Department of Environmental Protection or shown to have a potential for public use.

- 1.5.16. Rare Species: Listed by the Massachusetts Natural Heritage and Endangered Species Program as “Special Concern”, “Threatened”, or “Endangered” pursuant to the Massachusetts Endangered Species Act.
- 1.5.17. Recreation: The term recreation means passive recreation activities that do not conflict with or diminish other wetland values and functions. Examples include without limitation, bird watching, and other nature activities, walking and hiking, canoeing, and as appropriate fishing, etc.
- 1.5.18. Riverfront Area: As defined by 310 CMR 10.58(2) as amended.
- 1.5.19. River: As defined by 310 CMR 10.58(2) as amended.
- 1.5.20. Stream: A body of running water including brooks and creeks which moves in a definite channel in the ground due to hydraulic gradient. Streams may be intermittent or permanent.
- 1.5.21. Swamp: See Section 2.0 of the bylaw.
- 1.5.22. Vernal Pool: Confined basin depression which holds water in most years for two (2) continuous months in Spring or Summer, does not support adult fish populations and provides breeding habitat for mole salamanders, wood frogs, other amphibians and invertebrates which can only successfully breed in ponds not colonized by fish. It shall be presumed that pools meeting the above characteristics provide vernal pool habitat regardless of whether the site has been certified by the Massachusetts Natural Heritage & Endangered Species Program (MNHESP).
- 1.5.23. Wetland: See Section 2.0 of the Bylaw.
- 1.6. Exceptions: Exceptions from the Bylaw are set forth in Section 3.0 of the Bylaw. Anyone seeking authorization of the Commission for an emergency project pursuant to Section 3.2 (a) of the Bylaw, shall be required to give oral or written notice of said emergency to the Commission either prior to, or within 24 hours after, commencement of work.

SECTION 2. PERFORMANCE STANDARDS.

2.1. Introduction.

In addition to the performance standards stated in 310 CMR 10.51 – 10.60, the performance standards and presumptions listed below shall apply to projects in Boxborough.

2.2. Limited Projects.

The Commission may allow limited projects (e.g. new roadways or driveways accessing uplands of the same owner) as identified in 310 CMR 10.53.

2.3. Wetland Resource Areas.

2.3.1. Presumption. Where a proposed activity involves removing, filling, dredging, or altering of a wetland resource area, the Commission shall presume that such area is significant to the interests specified in 1.3 of these regulations and 1.0 of this bylaw. The Commission shall also presume that any work in a Wetland Resource Area will degrade the ability of areas to provide the wetland functions and values. It shall be the responsibility of the applicant to overcome these presumptions.

2.3.2. General Performance Standards.

2.3.2.1. Any proposed work in a wetland resource area shall not destroy, impair or degrade any portion of said area.

2.3.2.2. No Activity shall be permitted in a wetland resource area that supports documented rare species.

2.3.3. Wetland Replication.

The history of wetland replication is mixed. Scientific reviews¹ conclude that for the most part replications fail to reproduce the range of values – in quantity and quality - of the wetlands they are intended to replace, in particular, difficulties in replicating proper hydrological conditions in a consistent and enduring fashion seem to be a major source of the problem.

The Commission shall strongly discourage any plan that requires wetland replication.

In those instances where replication is approved by the Commission the following conditions must be met:

2.3.3.1 The replicated wetland must be constructed in full and conditionally approved prior to construction of any structures.

2.3.3.2 At minimum the replicated wetland must reproduce all the values and functions of the original wetland as determined by the Conservation Commission. The Commission may require that additional values and functions be incorporated into the replication design.

In particular, in circumstances where replacement of specific functions and values would require substantial amounts of time before being completely replicated (for example, those provided by large mature trees) the Commission may require additional compensation of area, functions, values, etc. beyond those required in other sections of the Bylaw and its regulations.

2.3.3.3 The area of replication must be at least as large as the area of the original resource that Will be destroyed.

The actual area ratio of replacement shall be decided on a case-by-case basis in accordance with 2.3.3.2

2.3.3.4 The top 12” of soil from the original wetland must be transplanted with soil structure – especially lamination and density profile – intact to the replication.

This is intended to preserve plant, invertebrate, and planktonic communities of the wetland and inhibit the blossoming of invasive species.

2.3.3.5 Any replication or restoration work that creates a resource or abutting properties shall require an easement from the abutting property owner covering the full extension of the resource on that property prior to commencement of the work.

2.3.3.6 A bond shall be posted that will enable the Commission to complete the replication should the applicant fail to fulfill obligations set forth in the Order of conditions.

Standards for the replication shall be specified and verified in terms of functions, values, and actual performance. Technical and engineering specifications used for design and construction shall be considered approximate. Criteria for acceptance and approval shall be based solely on function and performance as specified in the Order of Conditions. In other words replications will be evaluated on what they are expected to do, not how closely actual construction matched the plan.

For example, although elevations may be used for design and planning of a pond the standards shall be set in terms of volume and depth of water over the course of a year.

¹ Brown, S&P Veneman. 1998 Compensatory Wetland Mitigation in Massachusetts. Mass. Agricultural Experiment Station, University of Massachusetts, Amherst, Research Bulletin 746.

Replications that do not properly perform the approved functions and values as specified in the order of conditions will not be deemed acceptable no matter how closely they adhere to approved engineered plans.

The Commission may set other conditions on a project/site specific basis.

2.4 Vernal Pools.

2.4.1. Presumption of Vernal Pool Habitat:

There is a presumption that vernal pool habitat exists if a wetland's physical characteristics conform with those defined for vernal pools in Section 1.5 (Definitions) of these regulations. It shall be the applicant's responsibility to indicate the location of possible vernal pools and vernal pool habitats on the subject property.

2.4.2. Demonstrating that a Ponding Area is Not a Vernal Pool.

For the purposes of overcoming the presumption of a vernal pool habitat the Commission will consider:

2.4.2.1. Evidence that the ponding area does not hold water for at least two continuous months in most years. As a rule of thumb the term "most years" shall mean three out of five consecutive years.

2.4.2.2. Evidence that vernal pool species do not breed or have not bred in the ponding area.

2.4.2.3. Evidence that the ponding area could not be a viable breeding site for vernal pool species due to incompatible physical, chemical, biological, or other persistent conditions at the site in most years.

2.4.3. Timing of Evidence Collection.

Many of the indicators of vernal pool habitat are seasonal. For example, certain salamander egg clusters are only found between late March and late May. Wood frog chorusing only occurs between late March and May, and then only at night. Consequently, failure to find evidence of breeding must be tied explicitly to those periods during which the evidence is most likely to be available.

Accordingly, in the case of challenges to the presumption of vernal pool habitat the Conservation Commission may require that the determination be postponed until the appropriate time period consistent with the evidence being presented. The Commission may also require its own site visits as necessary to confirm the evidence.

2.4.4. Performance Standards. There shall be no alteration to any vernal pool which either (a) is located within a Wetland as defined under the Bylaw; or (b) is located within an Adjacent Land Resource Area.

There shall be no alteration of any wetland or any Adjacent Land Resource Area within 100 feet of any such vernal pool.

2.5. Adjacent Land Resource Area.

2.5.1. Introduction. Although referred to as "Buffer Zone" in the Bylaw, all land within 100 feet horizontally landward from the perimeter or outer border of any wetland is subject to

protection as resource area under the Bylaw. The Buffer Zone under the Bylaw differs from the buffer zone designated in 310 CMR 10.00 in area and function, and is referred to in these Regulations as “Adjacent Land Resource Area.” The functions of this resource area include but are not limited to: 1) protecting the resource area it surrounds, i.e., by reducing pollutants (such as salts, pesticides, herbicides and fertilizers); filtering stormwater runoff (as in reducing turbidity), by shading, reducing noise and wind; 2) providing wildlife habitat (food, shelter, migration, and breeding); 3) providing traversable recreation areas; 4) improving or adding to the aesthetics of the area and 5) allowing for wetland plant growth and wetland expansion.

2.5.2. Presumption.

The Commission presumes that activities in lands within 100 feet of the above listed resources will result in alteration of protected resource areas. This presumption can be overcome only when the applicant demonstrates by a preponderance of the credible evidence that the proposed use or activity will not have an adverse effect on this or any other resource areas ability to protect wetland resource area values.

2.5.3. Performance Standards.

2.5.3.1 In order to provide for the protection of this adjacent land resource area (lands within 100 feet) the following activities are prohibited:

- Underground fuel storage;
- Underground or outside storage of hazardous materials;
- Parking lots;
- Dumpsters or refuse containers;
- Any part of a new sanitary waste disposal system including the grading required for these systems;
- Permanent structures including but not limited to buildings, barns, garages, or structures attached to same.
- The disturbance of any existing vegetation in the 50 feet of buffer zone closest to the wetlands.
- Stump pits or burial of any other type of construction refuse.
- Work in an adjacent land resource area which supports documented rare species.

2.5.3.2 The following activities or uses may be allowed only with appropriate conditions:

- The repair to an existing sanitary waste disposal system where concrete evidence is presented that shows no area outside the adjacent land resource area is available which meet the Board of Health regulations;
- Wells and waterlines only when it can be shown that no other location outside the adjacent land resource area zone is possible due to other town regulations;
- Grading required for roadways and house construction in the outer 25 feet furthest from the wetland.
- The construction and maintenance of a new roadway or driveway of minimum legal and practical width acceptable to the Planning Board where reasonable alternative access from a public way to an upland area of the same owner is unavailable. It shall be incumbent on the applicant to prove that the location of the roadway and driveway in the adjacent land resource area was not caused by the land division plan.
- Lawn in the outer 25 feet of the Adjacent Land Resource Area (furthest from wetland).
- Decks and enclosed porches without foundations in the outer 25 feet of the resource area.
- Dry wells for roof runoff in the outer 25 feet of this resource area.

2.5.3.3 The following minor activities may be exempt from formal application requirements providing that the activity complies with all other provisions of these regulations and providing that the Commission approves the exemption in writing:

- 2.5.3.3.1 Unpaved pedestrian trails or walkways not to exceed five feet in width for non-motorized private use, provided the activity does not involve the removal of overstory trees;
- 2.5.3.3.2 Installation of fencing where no filling, grading, or substantial vegetation cutting is involved, provided it will not constitute a barrier to wildlife; uncemented stonewalls up to four feet in height; stacks of cordwood;
- 2.5.3.3.3 Vista pruning, provided the activity is located more than 50 feet from the mean annual high water line within a Riverfront Area or from a Wetland Resource Area, whichever is farther;
- 2.5.3.3.4 Plantings of native species of trees, shrubs, or groundcover, but excluding turf lawns (no invasive species shall be introduced);
- 2.5.3.3.5 The conversion of impervious to vegetated surfaces, provided erosion and sedimentation controls (satisfactory to the Conservation Commission) are implemented during construction;
- 2.5.3.3.6 Activities that are temporary in nature, have negligible impacts, and are necessary for planning and design purposes (e.g. soil testing for septic systems) provided erosion controls satisfactory to the Conservation Commission are first installed.

2.6 Other.

- 2.6.1. In all cases, it shall be the applicant that bears the burden of proving that the activity or use proposed will not harm any of the interests protected by the Bylaw.
- 2.6.2. The presumptions for resource areas can be overcome only when the applicant demonstrates by a preponderance of credible evidence that:
 - a. The State-of-the-art engineering solution proposed will protect the Bylaw interests, or
 - b. The activity or use proposed will improve a resource area that has suffered degradation, or
 - c. The resource area affected by the proposed use or activity is not significant to the Bylaw interests.

Summary of Activities Allowed in Various Resource Areas.

Activity	Wetland Resource Area	Conservation Commission Exceptions
Roads and driveways	Not allowed	Yes*
Parking lots	Not allowed	
Detention basins	Not allowed	
Buildings and structures	Not allowed	
Decks and porches	Not allowed	
Swimming pools	Not allowed	
Fuel storage	Not allowed	
Hazardous materials	Not allowed	
Dumpsters	Not allowed	
Wells and water lines	Not allowed	Yes**
Sanitary waste systems	Not allowed	
Dry wells	Not allowed	
Utilities	Not allowed	Yes*
Lawns	Not allowed	
Wetland vegetation disturbance	Not allowed	Yes*
Stump pits	Not allowed	

Activity	Distance into Adjacent Land Resource Area	Conservation Commission Exceptions
Roads and driveways	Not allowed	Yes*
Parking lots	Not allowed	
Detention basins	Not allowed	Yes**
Buildings and structures	Not allowed	
Decks and porches	Outer 25 feet	
Swimming pools	Not allowed	
Fuel storage	Not allowed	
Hazardous materials	Not allowed	
Dumpsters	Not allowed	
Wells and water lines	Not allowed	Yes**
Sanitary waste systems	Not allowed	Yes**
Dry wells	Outer 25 feet	
Utilities	Not allowed	Yes*
Lawns	Outer 25 feet	
Wetland vegetation disturbance	Outer 50 feet	
Stump pits	Not allowed	

*The Commission may allow an exception under limited project provision of State Wetland Law.

**The Commission may allow if applicant can show by preponderance of credible evidence that the activity will not harm wetlands interests and that there is not a suitable alternative location.

The Later List:

These are issues we will deal with later:

1. Fee Schedule
2. Agricultural Exemption
3. Horses & Horse related activities (including manure)
4. Any changes to Riverfront Area to better fit Boxborough
5. Relief for pre-1982 houses – legal?
6. Dry wells for water softener effluent.