

CHAPTER 107 – MASHPEE NITROGEN CONTROL BYLAW

§107-1. Purpose

A Town Bylaw to conserve valuable waterways and other resources that increase our property values, that protect our unique environment vital to our economy, and that reduce the financial burden on taxpayers and property owners by regulating the outdoor application of nitrogen on turf. The regulation of nitrogen applications will reduce the overall amount of excess nitrogen entering the town's Resource Areas as defined in The Mashpee Wetlands Protection Bylaw (Chapter 172; Section 2) and Regulations. Reducing excess nitrogen helps protect and improve the water quality of Mashpee's two valuable estuaries—Waquoit Bay and Popponesset Bay—and their associated bays, coves and waterways; as well as Mashpee's many ponds and streams.

This Town Bylaw is also critical to reducing Mashpee's Total Maximum Daily Load (TMDL) of nitrogen. Mashpee is presently in violation of the Clean Water Act because of excess nitrogen entering the town's estuaries. The Cape Cod Commission has estimated that reducing nitrogen from outdoor lawn applications to coastal estuaries and embayments by fifty percent (50%) could save the taxpayers of Mashpee \$40 million dollars in sewerage and other wastewater treatment expenses. Scientifically we know this can be done without affecting the quality of turf in Mashpee.

§107-2. Applicability

This Bylaw shall apply to and regulate any and all applications of nitrogen through fertilizer on managed turf areas within the Town of Mashpee.

§107-3. Definitions

"Agriculture" includes farming in all its branches, generally as the cultivation and tillage of the soil, dairying, the production, cultivation, growing and harvesting of any agricultural, floricultural, viticultural or horticultural commodities, and shellfishing, including preparations and delivery to storage or to market or to carriers for transportation to market.

"Best Management Practices" (BMP), means a sequence of activities designed to limit a nonpoint pollution source. For the purposes of this By-law, BMP means the most current edition of "Best Management Practices for Soil and Nutrient Management in Turf Systems," prepared by University of Massachusetts Extension, Center for Agriculture, Turf Program.

"Certified Fertilizer Applicator" means a person certified by the Cape Cod Commission, Cape Cod Cooperative Extension, or town of Mashpee departments, or any combination thereof, to apply fertilizer and manage turf in conformance with the BMP.

"Compost" or "Organic Compost" means the biologically stable, humus-like material derived from composting or the aerobic, thermophilic decomposition of organic matter.

"Fertilizer" means a substance that enriches the soil with elements essential for plant growth, such as nitrogen, phosphorus, potassium or other substances; fertilizer does not include those

nutrients that are normally excluded from fertilizer such as chemicals that are part of horticultural gypsum, dolomite, limestone, lime, Jersey greensand, grass clippings, or compost topdressing; compost tea and liquid seaweed, as defined and applied in accordance with standards in Section 5(f), is also excluded from the definition of fertilizer.

“Heavy rain” is a rainfall greater than 0.25 inches per hour during the next 24 hour period or a rainfall of greater than one inch total in the next 24 hour period.

“Impervious surface” means any structure, surface, or improvement that reduces or prevents absorption of storm water into land, and includes concrete, asphalt, paver blocks, gravel, decks, patios, elevated structures, and other similar structures, surfaces, or improvements.

“MDAR Fertilizer Regulations” means the most recent regulations of the “Plant Nutrient Application Requirements for Agricultural Land and Land Not Used for Agricultural Purposes”, developed by the Massachusetts Department of Agricultural Resources (MDAR) pursuant to its authority under G.L. c. 128, Sections 2(k) and Section 65(A), as amended by St. 2012, c. 262. 330 CMR 31.00. The application of phosphorus in fertilizer is regulated, for the purposes of this Bylaw, by the MDAR Fertilizer Regulations.

“Naturally Vegetated Buffer Zone” means areas of indigenous vegetation. Plantings may be considered as naturally vegetated if they meet the standards of the Mashpee Conservation Commission and include a low-growing herbaceous layer of vegetation, which includes grassland, heathland or meadow plantings.

“Nitrogen” means an element essential to plant growth. For the purposes of the Bylaw, nitrogen may be available as slow-release, controlled-release, timed-release, slowly available, or water insoluble nitrogen, which means nitrogen in a form that delays its availability for plant uptake and use after application and is not rapidly available to turf and other plants; and/or quick-release, water-soluble nitrogen which means nitrogen in a form that does not delay its availability for turf and other plant uptake and is rapidly available for turf and other plant uptake and use after application.

“Saturated ground” means soil soaked with moisture so that it cannot absorb any more liquid.

“Turf, Lawn, or Sod” means any non-crop land area that is covered by any grass species, excluding meadows, grasslands, flower or vegetable gardens, pasture, hay land, trees, shrubs, turf grown on turf farms or any form of agricultural production or use.

§107-4. Performance Standards

All application of nitrogen to turf shall comply with the following standards:

- A. The application of nitrogen is prohibited between October 30th and April 14th unless specifically permitted by the Town Board of Health, the Town Conservation Commission or the Board of Selectmen, as set out below. Based on early spring or fall weather conditions, soil temperature and degree of turf emergence from dormancy, or other relevant condition, and using the guidelines of the BMP, the Town Board of Health, the Town Conservation Commission, or the Board of Selectmen may permit earlier or later application of nitrogen, in which case such extended period shall be announced by

notice or publication. A working group may be established by the Board of Selectmen to assist in undertaking the duties referenced in this paragraph.

- B. No person shall cause nitrogen from any fertilizer application to apply to, or otherwise be deposited on any impervious surface including parking lot, driveway, roadway, sidewalk, frozen soil or ice. Any fertilizer applied, spilled, and/or deposited on any impervious surface, either intentionally or accidentally, must be immediately and completely removed and contained and either legally applied to turf or any other legal site or returned to an appropriate container.
- C. No person shall apply nitrogen 24 hours before or during a heavy rain event or apply nitrogen onto saturated ground. An application of nitrogen should be watered in with no more than one-quarter inch (0.25 inch) of irrigation or natural rain within the next 24 hour period.
- D. The application of nitrogen is prohibited within 100' of the following Resource Areas, as defined in The Mashpee Wetlands Protection Bylaw, Section 2 and Regulations: any freshwater or coastal wetlands; marshes; wet meadows; bogs; swamps; vernal pools; lakes; ponds; rivers, streams; creeks; and estuaries. Notwithstanding the above, where there is a 50' naturally vegetated buffer zone to any freshwater or coastal wetlands; marshes; wet meadows; bogs; swamps; vernal pools; ponds; lakes; and estuaries, an application of nitrogen is prohibited within 50' of that protected Resource Area. An application of nitrogen is prohibited within 100' of any rivers; streams; and creeks, as defined in the Rivers Protection Act, Chapter 258 of the Acts of 1996. There are alternative methods of enhancing turf within these prohibited areas without application of nitrogen; see Sections 5(e) and 5(f). A Certified Fertilizer Applicator may apply to the Town Conservation Commission for approval to authorize limited applications of nitrogen on turf within these prohibited areas. A working group may be established by the Town Conservation Commission to assist in undertaking the duties referenced in this paragraph.

§107-5. Exemptions

The following activities shall be exempt from Section 4:

- A. Application of nitrogen for agriculture and horticulture uses; these applications are regulated by the MDAR Fertilizer Regulations.
- B. Application of fertilizer to golf courses, except that any application of nitrogen on greens or fairways within Resource Areas referenced in Section 4(d) shall comply with the Recommendations set forth in Section 6, and shall use 85% or higher slow-release, water-insoluble nitrogen, in organic or inorganic form applied with drop spreaders or spreaders with side guards to prevent application onto Resource Areas and other non-turf areas. Golf courses with liners installed adjacent to ponds and other Resource Areas to prevent leaching of nitrogen are exempt from Section 4(d) in those areas where such liners are installed.

- C. Application of nitrogen to gardens, including vegetable and flower, trees, shrubs and indoor applications including greenhouses; these applications are regulated by the MDAR Fertilizer Regulations,
- D. Application of nitrogen for the establishment of new vegetation in the first growing season, or repairing of turf in the first growing season, after substantial damage, with the restrictions described in Section 5 (b) for applications in the buffer zone of regulated Resource Areas referenced in Section 4(d).
- E. Application of compost or other similar materials that are primarily organic in nature and are applied to improve the physical condition of the soil,
- F. Compost tea and liquid seaweed applications, including formulas with less than 5% total nitrogen, if and only if applied in a manner that follows label recommendations and/or standard industry recommendations for a foliar application to the point of leaf runoff. No root drenching of compost tea or liquid seaweed with nitrogen is permitted within the buffer zone of regulated Resource Areas referenced in Section 4(d).

§107-6. Recommendations

The Town of Mashpee strongly recommends that nitrogen should be applied to turf and other plants at the lowest rate necessary, as is described in the BMP. Any single application of nitrogen should not exceed 0.5 pounds of nitrogen per 1000 square feet, and the annual aggregate total application of nitrogen should not exceed 1.0 pound per 1000 square feet. The application of any nitrogen should be of a natural-organic, slow-release, water-insoluble form.

§107-7. Enforcement Authority

The enforcement authority for Performance Standards 4(a-c) shall be the Agents of the Board of Health or his or her designees. Enforcement of the provisions in Section 4(d) shall be the Agents of the Conservation Commission or his or her designees.

The fine for the first offense shall be no greater than \$150. A warning in lieu of a fine or other enforcement action for the first offense can be issued at the discretion of the enforcement authority. The fine for a second offense shall be \$250. The fine for each subsequent offense shall be \$300.

§107-8. Severability Clause

Should any Section, part or provision of this by-law be deemed invalid or unconstitutional, such decision shall not affect the validity of the remaining terms of this by-law as a whole or any part thereof, other than the Section, part or provision held invalid or unconstitutional.