

TOWN OF CHILMARK BOARD OF HEALTH REGULATIONS
Board of Health Regulation, Section 9

THE CONTENT AND APPLICATION OF FERTILIZER FOR TURF
ON MARTHA'S VINEYARD, TOWN OF CHILMARK

SECTION 1. FINDINGS

1.1 This Section details the public health and ecological foundations for the regulation of the use of fertilizer on turf in Chilmark.

1.2 In appropriate concentrations, nitrogen in the form of oxides plays a critical role in the nitrogen cycle and is essential to life. In excess, these forms of nitrogen represent an environmental pollutant that has the potential to harm our water resources, and ultimately damage human health. Excessive amounts of nitrogen, as well as phosphorus, contribute to undesirable algal and aquatic plant growth, and degrade the water used for drinking and shellfishing as well as swimming and boating.

1.3 Algal blooms cause our ponds and harbors to become increasingly anaerobic, with seabeds robbed of oxygen and devoid of aquatic life, and cloudy water columns filled with dense algal and aquatic plant growth. The algal bloom brings with it human health risks. Depending on the type, quantity and route of exposure, symptoms from algae blooms vary from skin and eye irritations to gastrointestinal and asthma-like symptoms, with children and pets being particularly susceptible.

1.4 Chilmark's groundwater is also at risk from nitrogen infiltration. Rising nitrogen levels in our Island ponds are caused in major part by rising nitrogen content in our groundwater. The groundwater/aquifer underlying Chilmark is the source of its existing and future drinking water supply and should be preserved and protected from excess nitrate infiltration. Ingested nitrates are converted by the body into nitrites, which are capable of converting hemoglobin into an oxidized form that does not bind tightly to blood oxygen. Infants, young children, pregnant women and some people with compromised immune systems who drink water with nitrate/nitrite in excess of established Safe Drinking Water Standards are particularly vulnerable and may become seriously ill if untreated. The Island's municipal and well water supply is an outstanding asset, one that is safe now and should be protected going forward.

1.5 The Island of Martha's Vineyard in its entirety has significant amounts of glacially deposited coarse, sandy soils that are subject to rapid water infiltration, percolation, and leaching of nutrients into its groundwater that flow ultimately into the Island's harbors, embayments, salt ponds and coastal resources, including the water and wetland resources of Chilmark. Additionally, soils associated with terminal moraine and glacial till contribute to rapid runoff into streams feeding coastal water bodies. These unique geologic, topographic and hydrographic characteristics require innovative soil management practices. The adoption of specific turf and soil fertilization requirements

across the Island, including Chilmark, is necessary to protect the water and wetland resources of the Island, including Chilmark's.

1.6 The six towns comprising Martha's Vineyard have engaged the Massachusetts Estuaries Project ('Estuaries Project') to undertake analyses of many of the harbors, embayments, salt ponds and coastal resources in the Island towns and to prepare reports detailing the nutrient loading from multiple sources, including fertilizers. The Estuaries Project considers fertilizers a locally controllable source of water degradation. This is very significant as it is anticipated that the State will require all Massachusetts towns to bring the nutrient levels of their coastal ponds, harbors and other water resources to within recognized acceptable water quality standards established in the federal Clean Water Act.

1.7 As of the date of the enactment of this Regulation, Estuaries Project reports have been completed for Edgartown Great Pond, Farm Pond, Lagoon Pond, Sengekontacket Pond and Tisbury Great Pond. In addition, the Massachusetts Department of Environmental Protection has established the maximum amount of a pollutant that four of these ponds can receive and still safely meet water quality standards (known as "Total Maximum Daily Loads" or "TMDLs"). (TMDLs for Tisbury Great Pond are under consideration as of the date of the enactment of this Regulation.) Similar studies are currently underway for Cape Pogue, Chilmark Pond, Katama Bay, Menemsha Pond, Oak Bluffs Harbor, Oyster Pond, Pocha Pond, Squibnocket Pond and Tashmoo Pond. In due course, TMDLs will be established for all of these participating water bodies.

1.8 Of the fourteen coastal ponds and harbors participating in the Estuaries Project, eight have watersheds that encompass portions of more than one town, suggesting that an Island-wide, coordinated approach is necessary for effective management of water quality in these ponds.

1.9 The responsible application of fertilizers rests not only with property owners, but also with professional landscapers whose work takes them across the Island without regard to town or watershed boundaries. Coordinated regulation of fertilizers across the Island will facilitate the educational process for landscapers and will avoid confusion that might arise if fertilizer regulations were materially different from town to town.

1.10 The Chilmark Board of Health, recognizing that excessive use of fertilizers is part of the overall problem of nutrient pollution, promulgates this Regulation regarding the use of fertilizer on turf. As a parallel effort, the BMPs Working Group has assisted the Island town Boards of Health in drafting the *Best Management Practices for Landscape Fertilizer Use on Martha's Vineyard*, which is based on the *UMass Amherst Extensions' Best Management Practices for Soil and Nutrient Management in Turf Systems*, both of which from time to time may undergo changes in response to scientific research.

1.11 The practices and standards set out herein are deemed necessary to protect the public health, including the maintenance of drinking water quality and the preservation of our water and wetland resources. They also represent an early step in achieving compliance with applicable water quality standards. This Regulation is intended to allow our Island's

waters to be both sustainable and sustaining, while affording reasonable use of fertilizers for the enhancement of lawn quality.

1.12 It is anticipated that compliance with this Regulation will be achieved primarily as a community responsibility and as consequence of the adoption of a common standard of turf care in respect of both the sale and application of Fertilizer. This regulation provides for educational initiatives to enable this process to occur. To supplement these community-based activities, this Regulation also provides for an enforcement process applicable to those who apply Fertilizer in violation of the standards set out in this Regulation.

SECTION 2. PURPOSE

This Regulation provides for a reduction of nitrogen and phosphorus going into Chilmark's Water Resources by means of an organized system of education, licensure, regulation of practice, and enforcement. The Regulation is intended to contribute to Chilmark's ability to protect, maintain, and ultimately improve the water quality in all its Water Resources and assist in achieving compliance with any applicable water quality standards relating to controllable nitrogen and phosphorus.

SECTION 3. AUTHORITY

This Regulation is adopted by the Chilmark Board of Health as authorized by Massachusetts General Laws, Chapter 111, Section 31 and is further authorized pursuant to the Fertilizer Management District of Critical Planning Concern designation, [detail authority], and by section 9 of Chapter 262 of the Acts of 2012, as amended.

SECTION 4. DEFINITIONS

For the purposes of this Regulation, the following words shall have the following meanings unless the context clearly indicates a different meaning:

"Agriculture" means farming in all of its branches and the cultivation and tillage of the Soil, the production, cultivation, growing, and harvesting of any agricultural, floricultural or horticultural commodities. For the purposes of this Regulation, agriculture means production for commercial sale.

"Application Fee" means a fee in the amount of \$100.

"Best Management Practices for Landscape Fertilizer Use on Martha's Vineyard" or "Martha's Vineyard BMPs", means a sequence of activities designed to minimize Fertilizer use while also promoting healthy vegetative growth, as prepared by a working group of Island landscape professionals, golf course superintendents, Health Agents, landscape retailers, and conservationists.

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"Board of Health" means the Chilmark Board of Health whose members are elected by the voters of Chilmark to oversee public and environmental practices through the actions of its Health Department.

"Buffer Zone" means the area abutting a Resource Area within which no alteration (as that term is defined in Commonwealth's Wetland Protection Act or the Chilmark Wetland Protect Bylaws and Regulations)¹ is permitted without an Order of Conditions or a Negative Determination from the Chilmark Conservation Commission.

"Compost Tea" means a liquid infusion of Organic Compost but, for the purposes of this Regulation, is not considered a Slow Release Fertilizer.

"Fertilizer" means a substance that enriches the Turf or Soil with elements essential for plant growth, such as nitrogen, phosphorus, or other substances. Fertilizer also includes 'combination products', sometimes referred to as 'weed and feed', which contain Fertilizer in combination with pre- or post-emergence herbicides, insecticides, other pesticides or plant growth regulators. Fertilizer does not include those substances that are normally excluded from Fertilizer such as dolomite, limestone, or lime.

"Golf Course" means the managed (i.e. mowed and fertilized) Turf at each of Chappaquiddick Golf Club, Farm Neck Golf Club, Edgartown Golf Club, Mink Meadows Golf Club, and Vineyard Golf Club.

"Health Agent" means the individual who has direct oversight of the daily activities of the Board of Health.

"Horticulture" is a general term meaning plant science and plant products. For the purposes of this Regulation, horticulture means the raising of flowers, fruits, vegetables, berries, herbs, nuts, and other similar products for commercial sale.

"Impervious Surface" means a surface that has been compacted or covered with a layer of material so that it is highly resistant to infiltration by water, but does not include compacted areas on athletic fields, such as baseball infields, and intensely trafficked Turf.

"Landscape Professional" means a person, either as a sole proprietor or as an employee of a company or a municipality, who in exchange for money, goods, services, or other consideration applies Fertilizer to Turf. A Landscape Professional includes Turf management staff at a Golf Course.

"License" means that documentation issued by Chilmark authorizing the individual or commercial entity holder to apply Fertilizer in Chilmark.

"Licensee" means a Landscape Professional who has a valid License.

¹ Note: these vary from Town to Town Bill: cant we delete this now?.

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“Liquid Fertilizer” means a form of Fertilizer which typically is sprayed directly onto a plant.

“Martha’s Vineyard Lawn Fertilizer Working Group” means the group of individuals from the six Island towns, including landscape professionals, golf course superintendents, Conservation Commissioners, Selectmen, Board of Health Commissioners and Health Agents, and Martha’s Vineyard Commission members, who met and consulted with members of the public representing these and other constituencies to draft this Regulation.

"Organic Compost" is a Slow Release form of Fertilizer comprised of the biologically stable, non-pelletized, humus-like material derived from composting or the aerobic, thermophilic decomposition of organic matter.

“Participating Town” means an Island town that has voted to adopt regulations governing the use of Fertilizer that are substantially similar to this Regulation.

“Property Owner” means the owner of record of the Turf or Soil to which Fertilizer is applied (and, for the avoidance of doubt, includes Chilmark).

“Relevant Employee” means a person engaged (as an employee, agent, contractor or otherwise) by a Landscape Professional who applies Fertilizer to Turf or Soil.

“Resource Area” means an area subject to protection under the Commonwealth’s Wetland Protection Act or the Chilmark Wetland Protection By-Laws or Regulations.

"Slow Release" in relation to nitrogen, means nitrogen in a form that delays its availability for uptake and use after application, and is not rapidly available to Turf. Slow Release is also sometimes referred to as ‘controlled-release’, ‘timed-release’ or ‘slowly soluble/available’.

"Soil" means the upper-most layer of the earth's surface, comprised of mineral and organic matter, which can host biological communities.

"Soil Test" means a technical analysis of Soil conducted by a Soil testing laboratory that measures extractable nutrient values using a Modified Morgan soil testing procedure and making recommendations based on values as determined by the University of Massachusetts Extension Soil and Plant Tissue Testing Lab.

"Chilmark" encompasses the land and water of the Town of Chilmark on the island of Martha’s Vineyard, County of Dukes County.

“Turf” means grass-covered Soil held together by the root system, and includes turf used for sports and recreational activities as well as for lawns and utility areas.

"Water Resource" includes, without limitation, groundwater, streams, including intermittent streams, creeks, rivers, freshwater and tidal wetlands, ponds, lakes, marine

waters, canals, lagoons, embayments, estuaries and all waters defined in Massachusetts General Laws, Chapter 131, Section 40 and the Chilmark Wetland By-Laws or Regulations.

SECTION 5. TURF PERFORMANCE STANDARDS

5.1 General Turf Performance Standards

5.1.1 No person shall apply Fertilizer between November 15th and the following April 15th.

5.1.2 No person shall apply Fertilizer to Turf or Soil immediately before or during heavy rainfall when the Lawn or Soil is likely to be saturated with water, when the Turf or Soil has the characteristics of an Impervious Surface or when they are showing signs of stress due to drought, or any other time when the Fertilizer is unlikely to be taken up by the Turf root structure.

5.1.3 No person shall apply or deposit Fertilizer on any Impervious Surface or on any place or in such a manner as would allow the Fertilizer to enter into storm drains or other storm flowage receptacles and/or channels. If a person inadvertently applies or deposits Fertilizer to an Impervious Surface by spill or otherwise, or applies or deposits Fertilizer as prohibited in this section, that person must immediately remove the Fertilizer.

5.1.4 No person shall apply Fertilizer containing more than 0.5 pounds of nitrogen per 1000 square feet of Turf *per application*. (provided, however, that a single application of Fertilizer between April 15 and June 1 and a single application of Fertilizer in September may contain up to .75 pounds of nitrogen per 1000 square feet of Turf). Cumulative applications of Fertilizer must not exceed 3.0 pounds of nitrogen per 1000 square feet of Turf per year Fertilizer shall not be applied within 4 weeks of a prior application. For the purposes of this Regulation, Fertilizer applied by all persons to the same Turf will be aggregated.

5.1.5 No person shall apply Fertilizer unless it contains at least 50% of its nitrogen in the Slow Release form. Compost Tea and Liquid Fertilizer are exempt from this standard, provided that no single application exceeds 0.1 pounds of nitrogen per 1000 square feet over a 4-week period.

5.1.6 No person shall apply Fertilizer that contains phosphorus, unless a Soil Test taken within the prior 3 years indicates a phosphorus deficiency of less than 14ppm, in which case phosphorus may only be applied in accordance with the applicable UMass Extension guidelines. A Soil Test is not required for the application of:

(a) Organic Compost;

(b) specially labeled ‘starter’ Fertilizer products intended for use in establishing Turf or in repairing damaged Turf when applied in conjunction with Turf seed;

(c) Compost Tea; and

(d) pelletized organic Fertilizer whose phosphate content by weight is no greater than 25% of its nitrogen content by weight.

5.2 Fertilizer in the Buffer Zone

5.2.1 The Turf performance standards set out in Sections 5 (not including Section 5.1.4) apply to the Buffer Zone, except as modified in this Section 5.2.

5.2.2 No Fertilizer may be applied in the 10-foot wide strip running parallel and immediately adjacent to a Resource Area. In the remainder of the Buffer Zone, no person shall apply Fertilizer containing more than 0.25 pounds of nitrogen per 1000 square feet of Turf *per application*, with cumulative applications not to exceed an annual maximum of 0.5 pounds of nitrogen per 1000 square feet of Turf, except that where there is a continuous 25-foot wide strip of Fertilizer-free, non-Turf vegetation running parallel to the Resource Area, Fertilizer may be applied to the area beyond the 25 foot strip to an annual maximum of 1.0 pound of nitrogen per 1000 square feet of Turf.

5.2.3 No person shall apply Fertilizer that contains phosphorus in the Buffer Zone, unless a Soil Test taken within the prior 3 years indicates a phosphorus deficiency of less than 14ppm, in which case phosphorus may only be applied in accordance with the applicable UMass Extension guidelines.

5.3 Fertilizer on Golf Courses

5.3.1 The performance standards set out in Section 5 (not including Section 5.1.6) apply to Fertilizer applied on Golf Courses except as modified in this Section 5.3.

5.3.2 Applications of Fertilizer to Golf Courses shall not be made between December 15 and the following April 15th.

5.3.3 Liquid Fertilizer may not be applied more often than biweekly, provided that it is applied at a rate not to exceed 0.1 pound of nitrogen per 1000 sq. ft. per application.

5.3.4 The performance standards set out in Section 5.2.2 do not apply to putting greens and tee boxes in the Buffer Zone in existence at the effective date of this Regulation.

5.4 Exemptions: The following activities are exempt from Section 5:

5.4.1 Application of Fertilizer to home vegetable and flower gardens, landscape ornamentals, shrubs, trees, bushes, and container plants.

5.4.2 Application of Fertilizer for Agricultural or Horticultural use.

5.5 **Precedence:** To the extent that the Commonwealth of Massachusetts or Chilmark has enacted, enacts, or issues any law, regulation, bylaw, order or permit concerning the application of Fertilizer containing phosphorus or nitrogen on Turf or Soil which is more stringent than the performance standards set in this Section 5, those more stringent standards take precedence.

SECTION 6. EDUCATION, LICENSURE AND ADMINISTRATION.

6.1 Education and Assessment

6.1.1 The Board of Health shall:

- (a) maintain and offer for a fee a general program of Fertilizer education for Property Owners and Landscape Professionals that is based on this Regulation and the Martha's Vineyard BMPs; and
- (b) administer an assessment to determine a Professional Landscaper's or a Property Owner's proficiency with respect to this Regulation and the Martha's Vineyard BMPs following completion of the general education program.

6.1.2 The Board of Health shall make available to the public, including Property Owners, Landscape Professionals and Fertilizer retailers a summary of the Section 5 performance standards, as well as a copy of this Regulation, as amended from time to time.

6.2 Licensure

6.2.1 No Landscape Professional shall apply Fertilizer in Chilmark without a License issued by the Board of Health in accordance with this Regulation. A Property Owner is not required to obtain a License, but may apply for one on the same terms as a Landscape Professional.

6.2.2 Subject to Section 6.2.3, an application for a License shall be accompanied by the Application Fee and documentation that the applicant has both completed the general program of Fertilizer education referred to in Section 6.1.1(a) and achieved proficiency as set forth in Section 6.1.1(b).

6.2.3 Upon issuance of a License to an applicant, Chilmark shall forward a "Notice of Issuance of Fertilizer License" to each other Participating Town nominated by the Applicant.

6.2.4 When Chilmark receives a "Notice of Issuance of Fertilizer License" from any Participating Town, the Board of Health shall issue and mail (or email or otherwise forward) a License to the applicant. The payment of a fee and the production of additional documentation shall not be required.

6.2.5 A License shall indicate the License number and expiration date and shall be signed by the Licensee.

6.2.6 Licenses shall be effective on issue and shall continue in effect for three calendar years, expiring on the third December 31 after being issued.

6.2.7 Licenses may be renewed on application. Applicants for renewal must provide documentation of either re-completion of the general program of Fertilizer education or proficiency, as set out in Section 6.1.1, and pay the Application Fee.

6.2.8 A Landscape Professional licensed under this Regulation shall keep his/her License in their possession and shall display the License when requested to do so by any Chilmark enforcement officer.

6.2.9 A Relevant Employee does not need to obtain a License, provided his/her employer maintains a ratio of not less than 1 Licensee to 8 non-Licensed Relevant Employees (the License held by the employer/owner being included for this purpose) and:

(a) the employer has provided the Relevant Employee with training sufficient to ensure that the employee fully understands this Regulation and the Martha's Vineyard BMPs;

(b) the Relevant Employee has demonstrated proficiency with respect to this Regulation and the Martha's Vineyard BMPs in accordance with an assessment tool provided by the Board of Health and administered by the employer;

(c) the employer provides supervision appropriate to ensure that the Relevant Employee complies with this Regulation; and

(d) the employer retains documentation sufficient to establish compliance with subsections (a), (b) and (c).

These requirements set out in (a) and (b) above must be complied with not less often than every three years and within 6 months after any material amendments to this Regulation for each Relevant Employee.

6.3 Services to be Performed by a Third Party: The Board of Health may appoint from time to time a third party to perform on its behalf the responsibilities and services set out above in Sections 6.1 and 6.2.

6.4 Liability

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6.4.1 A Property Owner is liable for violations of this Regulation by a Landscape Professional or its Relevant Employees, provided that the Property Owner knew or should reasonably have known that a violation would occur.

6.4.2 A Landscape Professional is liable for violations of this Regulation by its Relevant Employees.

6.4.3 Notwithstanding Sections 6.4.1 and 6.4.2, any person who applies Fertilizer in violation of this Regulation may be held liable.

6.5 Enforcement

6.5.1 The Health Agent and the Board of Health may enforce this Regulation or enjoin violations thereof through any lawful process, and the election of one remedy by the Board of Health shall not preclude enforcement through any other lawful means.

6.5.2 Subject to Section 6.5.3, a person who violates any provision of this Regulation is subject to:

- (a) in the case of a first violation within a consecutive 36-month period, a written warning;
- (b) in the case of a second violation within a consecutive 36-month period, a fine in the amount of \$50.00;
- (c) in the case of three or more violations within a consecutive 36-month period, a fine in an amount of \$300.00 per violation, unless the Town proceeds by criminal complaint or indictment under Section 6.5.6, in which case the maximum fine for the third and subsequent violations is provided therein; and
- (d) in the case of a Licensee (or a Relevant Employee), and subject to the notice and hearing provisions of Section 6.5.4, suspension of the License (or that of his/her employer, as the case may be) for 180 consecutive days or revocation of that License.

6.5.3 A person who applies Fertilizer without having a valid License is subject to:

- (a) in the case of a first violation within a consecutive 36-month period, a written warning;
- (b) in the case of two or more violations within a consecutive 36-month period, a fine in the amount of \$300.00 unless the Town proceeds by criminal complaint or indictment under Section 6.5.6, in which case the maximum fine for the second and subsequent violations is provided therein;

6.5.4 The Board of Health may suspend or revoke a License issued pursuant to this Regulation or any other applicable law. Such revocation or suspension may only take place after a hearing held by the Board of Health of which the Licensee shall be given seven (7) days written notice. Such notice shall be deemed given upon certified return receipt mailing same to the address listed on the License application.

6.5.5 The Board of Health is authorized to penalize any person who violates these regulations by issuing a ticket under the noncriminal disposition process provided for in Massachusetts General Laws Chapter 40, Section 21D, and the Town's noncriminal disposition by-law, Sections 1-2, 1-3, 1-4, 1-5 and 1-6 of the Code of the Town of Chilmark. If noncriminal disposition is elected, then any person who violates any provision of this Regulation shall be subject to the penalties provided in Sections 6.5.2 and 6.5.3, as applicable, per violation or, in the case of a continuing violation, per day for each day of violation. Each day or portion thereof shall constitute a separate offense. If there is more than one violation, each shall constitute a separate offense.

6.5.6 A person who violates any provision of this Regulation may be penalized by indictment or on complaint brought in the district court. Except as may be otherwise provided by law, the maximum penalty for each violation or offense shall be one thousand dollars (\$1,000). Each day or portion thereof shall constitute a separate offense. If there is more than one violation, each shall constitute a separate offense.

SECTION 7. SEVERABILITY CLAUSE

If any section, part or provision of this Regulation is deemed invalid or unconstitutional by a court of competent jurisdiction, that decision shall not affect the validity of the remaining terms of this Regulation as a whole or any part thereof, other than the section, part or provision held invalid or unconstitutional.

SECTION 8. AMENDMENTS

8.1 This Regulation was developed by a broad group of stakeholders representing diverse interests and has been reviewed by soil and turf scientists and educators. Therefore, notwithstanding the requirements of G.L. c. 111, §31, no amendment to this Regulation shall be adopted until such time as the Board of Health shall hold a public hearing thereon, notice of the time, place and subject matter of which, sufficient for identification, shall be given by publishing in a newspaper of general circulation in the Town and County once in each of two successive weeks, the first publication to be not less than fourteen days prior to the date set for such hearing. No such amendment shall be effective unless the proposed amendment has been reviewed and commented upon by soil and turf scientists and educators and it is passed by the Board of Health.

8.2 Further, since these Regulations are also under Chapter 831 of the Acts of 1977, as amended, any amendments to the Regulations shall first be approved by the Martha's Vineyard Commission, as conforming to the guidelines for the Fertilizer Management District of Critical Planning Concern.

SECTION 9. EFFECTIVE DATE

This Regulation shall take effect on January 1st 2015 and upon publication pursuant to G.L. c. 111, §31.

SECTION 10. INTERIM PROVISIONS

Landscape Professionals may apply Fertilizer without a license during the interim period between the effective date of this Regulation and the development of a licensing program by the Board of Health, provided that they comply with Section 5 of this Regulation.