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Decision of the Martha's Vineyard Commission Designating the Martha's Vineyard Lawn Fertilizer Control District as a District of Critical Planning Concern

1. General

As authorized by Chapter 831 of the Acts of 1977 ("the Act"), as amended, the Martha's Vineyard Commission ("the Commission") hereby designates as a District of Critical Planning Concern ("a District"), the specific geographical area hereafter described, to be known as the "Martha's Vineyard Lawn Fertilizer Control District".

The Commission received nominations from the Edgartown and Oak Bluffs Boards of Health on February 13, 2014, and from the Tisbury Board of Health on February 14 for inclusion of virtually the entire Island into a District. During the February 20, 2014 Meeting, the Commission voted to accept the nominated area for consideration. The Commission received nominations from the Chilmark Board of Health on February 21 and from the West Tisbury Board of Health on February 24.

Copies of the nominations and documents relating thereto are on file at the Commission Offices, Stone Building, 33 New York Avenue, Oak Bluffs, Massachusetts.

The Commission held a Public Hearing at 7:00 P.M. on March 27, 2014, at the at the Commission offices, Stone Building, 33 New York Avenue, Oak Bluffs, Massachusetts, on the proposed Martha's Vineyard Lawn Fertilizer Control District and on proposed regulations after due public notice to the municipalities, publication and notice required under Massachusetts General Laws, Chapter 30A, Section 2 (in 1977). The Public Hearing was held as required under the Act to permit the Commission to receive testimony relating to whether it should designate the proposed District as a District of Critical Planning Concern and whether regulations proposed to govern the District conform to the Commission's Designation.

On Thursday, March 27, 2014, the Commission voted to designate the area under consideration as a District of Critical Planning Concern. Sections 8 through 10 of the Act provide the process for setting and amending the boundaries, adoption of development guidelines to which development must conform, and regulation of the District.

2 Area Designation

Upon consideration of information submitted, the Commission's familiarity with the lands and waters of the District, and pursuant to the Act and the Commission's Critical Planning District Qualifications (the "Qualifications") adopted under the Act, the Commission hereby designates the **Martha's Vineyard Lawn Fertilizer Control District** as follows:

The six towns, comprising the entirety of the Island of Martha's Vineyard, except for the Indian Common Lands – generally known as the Clay Cliffs, the Cranberry Bogs and the Herring Creek – and the Settlement Lands, and excluding Nomans Land Island.

3. Why the Area Has Been Designated

3.1 Need for Designation

When designating a District, Section 8 of the Act requires the Commission to specify why the area is of critical concern to the region, the problems associated with uncontrolled or inappropriate development, and the advantages to be gained by the development of the area in a controlled manner. Information available supports a finding by the Commission that the Martha's Vineyard Lawn Fertilizer Control District is of regional importance, that potential problems of uncontrolled or inappropriate development exist within the District, and that there are advantages to be gained by development of the area in a controlled manner.

In designating a District, the Commission must also consider the standards identified in the "Qualifications". The General Qualifications require the Commission to address itself to the need for designation, and to that end, the Commission finds that there exists a regional need for special regulations and planning to protect the District and its people from damage or loss resulting from inappropriate development. The Commission also finds, after its review, that present private and public regulations in the District cannot assure protection and that damage to the District or impediments to proper development will be a substantial loss to the region or to two or more towns on the Island.

Nitrogen moves readily through groundwater and remains a threat to water quality as it moves through the ground and eventually surfaces in a pond, stream or the ocean. Although nitrogen is an important nutrient to support life, nitrogen in excess negatively impacts water quality. The nominations detail the progress of the Massachusetts Estuaries Project (MEP) assessments and the regulatory limits associated with those assessments.

Reports¹ have been completed for Edgartown Great Pond, Farm Pond, Lagoon Pond, Sengekontacket Pond and Tisbury Great Pond. *"The MEP studies document that lawn fertilizers partly contribute to the eutrophication of our estuaries"*. According to the MEP reports, nitrogen from inappropriate fertilization of lawns account for 5 to 12 percent of the excess controllable nitrogen in Vineyard ponds. MEP studies are currently underway for Cape Poge Bay, Chilmark Ponds, Katama Bay and Lake Tashmoo.

The Massachusetts Department of Environmental Protection (Mass DEP) has issued Total Maximum Daily Loads (TMDLs) for each of the water resources with completed MEP reports. In due course, TMDLs will be established for all of these participating water resource areas. Eventual Commonwealth enforcement of TMDLs will require measures to reduce nitrogen levels. Available tools for reducing nitrogen include regulatory requirements such as growth management through zoning regulation, and structural solutions including management of tidal flow and municipal sewer service. Sewer service is cost-effective in areas of dense development, such as the town centers, but less cost-effective for the Vineyard's widely scattered smaller neighborhoods and subdivisions. Without adequate regulation to limit overall nitrogen input, the towns may be forced to rely more on expensive infrastructure solutions. According to the nominations², *"Adding sewers to reduce nitrogen that is attributable to excessive fertilizer use rather than using proper fertilizing practice could increase long-term Clean Water Act compliance costs to the Vineyard community by \$10-20 million or more"*.

In 2012, the Commonwealth set out to develop statewide regulations of fertilizer use, reserving unto itself the ability to further regulate the use of fertilizers. The Cape and Islands communities were provided a window of opportunity to adopt regulations through the special legislative authority of their regional planning agencies. The window expires the latter of January 1, 2015 or one year after the commonwealth promulgates its statewide fertilizer regulations. Without adoption of District of Critical Planning Concern fertilizer regulations, the towns would be reliant upon the Commonwealth's regulations. Fertilizer regulations will provide the towns with a low-cost option for addressing the 5 to 12% of excess controllable nitrogen attributed to lawn fertilizer. Part of the enabling legislation of the Martha's Vineyard Commission directs the Commission to promote the "enhancement of sound local economies".

The Commission notes the widespread concern reflected in the cooperation among the towns to submit nominations from five of the six towns, with support of the sixth town. There is clearly an impact to more than one town.

¹ Massachusetts Estuaries Project reports <http://www.oceanscience.net/estuaries/reports.htm>

² Nominations by Five Boards of Health

The Commission finds that so important is excellent drinking water quality, and so important are the fishing resources and habitats supported by high quality surface waters, that special development controls within the District must be adopted.

3.2 Size and Shape of District

The "Qualifications" direct that the District shall consist of the lands and waters which reasonably belong therein for the three following reasons:

- *It is the critical area or critical resource which is in need of protection.*
- *It is the logical planning area which should be considered in adopting a coordinated system of regulations to protect the critical resource or critical area.*
- *The dimensions or landmarks which form the boundary of the district are convenient and recognizable.*

The Island's Boards of Health envisioned a *"common, Island-wide regulation that establishes a sustainable standard of lawn care, one that promotes the responsible use of fertilizers for lawns and other turf, in order to prevent harm to water resources from application of nitrogen in excess of what the soil and turf area are able to utilize"*. Only a common island-wide regulatory approach is capable of fully addressing the 5% to 12% of the controllable nitrogen that enters the Vineyard's ponds and harbors from landscape fertilizer.

Some watersheds drain directly into the ocean, rather than to a pond or harbor. In the five nominations, the nominating boards acknowledged that nitrogen from fertilizer may have little impact in the ocean, but nevertheless asked for a unified designation and regulation for the benefits of standardization *"Applying the fertilizer regulations across the Vineyard would also significantly aid administration of the regulations and their objectives. Education and training efforts can be shared among towns. Landscapers would only need to know a single set of standards for anywhere on the Island. A common standard would also eliminate potential confusion for landowners with properties in more than one Island town. This ease of understanding and administration is also a compelling argument for including areas of the towns that drain directly to the ocean."*

There is clearly an advantage to Island-wide designation, as the Commission has found appropriate for the Coastal District, Island Road District and Special Places District. The very nature of groundwater movement ensures that it will cross town boundaries. Of the 14 coastal ponds and harbors for which MEP assessments have been completed, 8 lie within watersheds that span one or more neighboring towns. The boundary excludes certain lands for specific reasons. The Commission does not regulate certain named Wampanoag lands that have been excluded from the nomination. The Settlement Lands

are also excluded because of limitations on town regulations there. Nomans has also been excluded, because it is a National Wildlife Refuge. Finally, the Commission finds that the boundaries of the District as established are both convenient and recognizable.

4. Kind of District

Section 8 of the Act permits the Commission to designate a District only for:

- a) an area which possesses unique natural, historical, ecological, scientific or cultural resources of regional or Statewide significance;
- b) an area which possesses marginal soil or topographic conditions which render it unsuitable for intense development; or
- c) an area significantly affected by, or having significant impact on, on existing or proposed major public facility or other area of major public investment.

Specifically, with respect to the first element of Section 8 of the Act, concerning unique natural, historical, ecological, scientific or cultural resources of regional or statewide significance, the Martha's Vineyard Lawn Fertilizer Control District qualifies.

Further, the District meets the Specific Qualifications of the "Qualifications" for a Drinking Water Resource District, for a Fishing Resource District, and for a Wildlife, Natural Scientific or Ecological Resource District.

4.1 Compliance with Specific Qualifications

4.1.1 Drinking Water Resource District

Significant portions of the Island rely on on-site drinking water wells for potable water and other areas zoned for residential use are occupied by Zone II recharge areas for municipal public water supplies. Nitrogen is essential for all living things, as it is an essential component of protein. Excessive concentrations of nitrate-nitrogen in drinking water can be hazardous to health, especially for infants, nursing mothers, and pregnant women. Limiting the amount of nitrogen applied in the form of fertilizer is protective of drinking water quality and will complement other nitrogen limiting measures.

Based on density of development, several of the towns have constructed public water supply systems. Others rely more on private wells. All rely on good water quality, which may be at least partly determined by another town's nitrogen inputs. Regarding specifics of drinking water needs, the nominations include separate descriptions of each town's drinking water needs. The nominations individually state:

- *"With the exception of the small area served by the Menemsha Water Company, the*

town of Chilmark is served entirely by on-site drinking water supply wells. Constructing drinking water wells in significant parts of town can present challenges due to complex geology and associated limited water supply. Protecting Chilmark's drinking water quality due to the complexity and limits connected with establishing a source includes protecting its quality... Additionally, Chilmark's geology supports many streams and ponds which in some cases are closely related to surrounding potable water supplies. Protecting surface water quality simultaneously protects drinking water quality in Chilmark.

- *Significant portions of the Town of Edgartown rely on on-site drinking water wells for potable water, including Chappaquiddick and Katama. Additionally, the Zone II recharge areas for the municipal public water supply wells occupy approximately 25% of the area zoned for residential use. Two separate neighborhoods have experienced elevated nitrate levels in drinking water (perhaps caused by septic systems).*
- *The majority of the Town of Oak Bluffs relies on municipal public water for its potable water supply. Municipal public water supply Zone II's cover approximately 50% of the areas zoned for residential and/or business use. Oak Bluffs' public water supply Zone II's span into neighboring towns as well.*
- *A review of private well tests in Tisbury have shown some elevated nitrogen levels. Tisbury has also seen slightly elevated nitrogen levels in the Sanborn Well.*
- *The Town of West Tisbury relies on private wells for potable water. Several abutting towns have Municipal public water supply Zone II's that encompass a portion of West Tisbury."*

4.1.1 Fishing Resource District

According to Martha's Vineyard Commercial Fishing Survey³, the ponds and harbors around Martha's Vineyard produce commercial harvest of soft shell clams, scallops, quahogs, and oysters. The ponds figure in the life cycles of other commercial species such as winter flounder, eels, herring and alewives. Aquaculture represents a significant monetary contribution to the Vineyard economy; one that is on the rise. Recreational fishing is a significant leisure activity.

Although fertilizer is not applied directly to the surface waters, the MEP studies⁴ document the contribution of excess nitrogen that leaches into the groundwater and migrates to great ponds. The excess nitrogen stimulates algal growth to the detriment of other plants and shellfish. Reducing nitrogen loading, of which fertilizers are one source, can restore healthy habitat for fish.

³ Martha's Vineyard Commercial Fishing Survey, 1994, Jo-Ann Taylor, MVC

⁴ Massachusetts Estuaries Project reports <http://www.oceanscience.net/estuaries/reports.htm>

4.1.1 Wildlife, Natural Scientific or Ecological Resource District

Regulating the appropriate application of fertilizer used for lawns and other turf will have positive impact on the health, vitality and appearance of the Island's great ponds. The great ponds are critical components of the Vineyard's natural ecosystems and iconic resources for recreation and enjoyment – as already recognized by the Commission's 1975 designation of the Coastal District⁵, *"The very factors which make the marine environs around Martha's Vineyard so valuable as a fishing resource, also lend themselves to maintaining a wide diversity of marine life. The adjacent shoreline also provides a myriad of ecological habitats for a wide variety of animals and plants. Although these particular habitats relate to the sea and land, the focus of many of the fragile ecological systems is the estuarine pond area."*

⁵ Decision of the Martha's Vineyard Commission Designating the Coastal District a District of Critical Planning Concern, 1975

5. Guidelines

The Commission adopts the following guidelines ("the Guidelines") for the development of the Martha's Vineyard Lawn Fertilizer Control District. In adopting the Guidelines, the Commission has evaluated each of the considerations enumerated by Section 8 of the Act and, in addition, has considered other relevant matters.

Towns shall, in the manner required by the Act, adopt Regulations for the development of the Martha's Vineyard Lawn Fertilizer Control District. The Commission draws the towns' attention to Section 10 of the Act which in part provides, "In adopting such regulations, each municipality shall have all of the powers it otherwise had under the General Laws". The Commission also finds a compelling need for the towns to adopt compatible regulations within the Martha's Vineyard Lawn Fertilizer Control District. As used herein, the term "regulations" shall have the same meaning as in the Act.

5.1 Goals

5.1. a To improve, restore and protect the quality of Martha's Vineyard's groundwater and water bodies by:

- Reduction of nitrogen entering Martha's Vineyard's groundwater and water bodies by means of an organized system of education, regulation of practice, and enforcement.
- Promoting lawn and turf fertilization practices appropriate to the Island's climate and environment.
- Adoption of standards that may be more stringent or otherwise differ from those that may be promulgated by the Commonwealth of Massachusetts

5.1. b To contribute to the towns' ability to achieve compliance with any water quality standards prescribed by the Commonwealth for controllable nitrogen in water bodies.

5.2 Establishment of Guidelines

The towns shall adopt regulations of the types described in the Act, which conform to these Guidelines, to control development within the Lawn Fertilizer Control District.

5.3 Guidelines

5.3.1 General Standards for Lawn and Non-agricultural Turf

Fertilizer Application: The towns shall adopt regulations addressing the appropriate application of fertilizer for growing lawns and other non-agricultural turf, taking into consideration the need for Martha's Vineyard to maintain surface water quality primarily through regulating inputs to groundwater.

5.3.1. a Intensity of Fertilizer Application: Regulations shall limit the amount of nitrogen, by setting standards for concentration and frequency of application, and may limit the amount of other nutrients that may be applied to lawns and other non-agricultural turf. Such limits may be tailored to various situations.

5.3.1. b Timing of Fertilizer Application: Regulations shall stipulate time periods when fertilizers should or should not be applied, based on optimizing plant utilization of the fertilizer and preventing migration of the fertilizer to areas not intended to be fertilized. Short-term time periods may also be defined with regard to episodic circumstances such as the imminent passing of a heavy rainstorm.

5.3.1. c Considerations for Siting: Regulations shall include specialized standards for particularly sensitive areas which may include water bodies, wells, and the Buffer Zone defined in the town's Wetland Protection By-Law. Regulations shall address impervious surfaces and ensure that stormwater runoff shall not carry fertilizer to public roads or stormwater collection systems. Regulations may vary for different types of turf, such as sports turf or golf courses.

5.3.1. d Exemptions: Regulations may include exemptions based on the specialized character of particular types of lawn or turf, or based on the proficiency of a person applying fertilizer.

5.3.1. e Adherence to Academic Standards: Regulations should be consistent with the requirements and guidance contained

in the UMass Best Management Practices for Soil & Nutrient Management in Turf Systems published by the University of Massachusetts Amherst Extension Center for Agriculture.

5.3.2 Administration: The towns shall administer these regulations with clearly defined standards and procedures for promoting and certifying proficiency in fertilizer application. Based on that proficiency requirement, it should not be necessary for each individual application of fertilizer to require a permit.

5.3.2. a Education and Assessment: Regulations shall provide for a general program of fertilizer education and establish assessment of proficiency for potential commercial practitioners following completion of the program.

5.3.2. b Authorization to Apply Fertilizer: Regulations shall establish a structured system of accreditation that requires commercial practitioners to achieve sufficient proficiency to apply fertilizer appropriately, and to be so documented by certificate, license or other mechanism. Regulations shall prohibit commercial practitioners from fertilizer application without the appropriate License, Certificate, or other such authorization from the town.

5.3.2. c Effective Date of Enforcement: In order to accommodate the educational component integral to the effectiveness of this regulation, a town may defer enforcement to a date other than adoption of this regulation but no later than March 1, 2015.

5.4 Complementary Programs across Town Boundaries: Regulations in the towns shall be the same or substantially similar to each other in order to enable coordinated administration and to promote understanding by the public.

By vote of the Martha's Vineyard Commission, March 27, 2014
Written decision confirmed by vote on April 3, 2014



Fred Hancock, Chairman

REFERENCES

Chapter 831, Acts of 1977 as amended (the "Act")

Critical Planning District Qualifications (the "Qualifications")

Massachusetts Estuaries Project reports

<http://www.oceanscience.net/estuaries/reports.htm>

Decision of the Martha's Vineyard Commission Designating the Coastal District as a District of Critical Planning Concern

Nomination by Chilmark Board of Health

Nomination by Edgartown Board of Health

Nomination by Oak Bluffs Board of Health

Nomination by Tisbury Board of Health

Nomination by West Tisbury Board of Health

Martha's Vineyard Commercial Fishing Survey, 1994, Jo-Ann Taylor, MVC