



Town of Harwich Board of Health

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TOWN OF HARWICH FERTILIZER POLICY GUIDELINES FOR NUTRIENT CONTROL

I. RATIONAL

The Massachusetts Estuaries Project (MEP) has found that fertilizers account for an important portion of controllable nitrogen load in Cape Cod watersheds. Excessive nitrogen from fertilizers and other watershed sources leads to eutrophication of marine embayment. Other studies have demonstrated that phosphorus from fertilizers can lead to eutrophication in freshwater ponds causing algae blooms.

Public health risks from excessive loading of nutrients to water resources may include direct detrimental effects on drinking water sources by increased concentrations of nitrates that can violate safe drinking water standards.

The Town has significant amounts of glacially deposited coarse, sandy soils that are subject to rapid water infiltration, percolation and leaching of nutrients.

Chapter 262 of the Acts of 2012 (An Act Relative to the Regulations of Plant Nutrients) amended various sections of **Chapter 128 of the Massachusetts General Laws (MGL)**. The Act directed the **Department of Agriculture Resources (MDAR)** to **develop regulations (330 CMR 31:00)** to ensure plant nutrient application if applied in an effective manner to provide sufficient nutrients to maintain healthy agricultural and non-agricultural land (turf and lawns), while minimizing impacts on surface and ground water resources. These Regulations apply to anyone who applies plant nutrients to agricultural and non-agricultural land. MDAR will work in conjunction with the University of Massachusetts Amherst Extension to ensure any regulations of the department relative to plant nutrients are consistent with the program's published information, educational materials, and other public outreach.

II. GUIDELINES FOR PLANT NUTRIENT (FERTILIZER) APPLICATION

- Phosphorus-containing fertilizer may only be applied when a soil test indicates that it is needed or when turf or lawn is being established, patched, or renovated.
- When applying plant nutrients, such as animal manure, fertilizer, organic compost, natural organic fertilizer, biosolids, agricultural byproducts, digestate, or combination thereof, the following shall apply:
 - The amount of nitrogen and phosphorus must be known and accounted for,
 - soil test is available for the application site; and
 - The application of these materials shall not exceed the phosphorus rates for maintenance or renovation of turf or lawn as specified in UMass Guidelines.
 - These requirements shall not apply to:

- a single application made within a 12-month period at an application rate not to exceed 0.25 lbs of P₂O₅ per 1,000 square feet; or
 - any product used to contain 0.67% or less available P₂O₅.
- No applications of plant nutrients shall be made:
 - between December 1 and March 1
 - to frozen and/or snow covered soil;
 - to saturated soil, or soils that are frequently flooded;
 - within 20 feet of waterways if using a broadcast method, or 10 ft if using a ore targeted application method, such as a drop spreader;
 - within a Zone I of a public water supply well or within 100 feet of surface waters that are used for public drinking water supply;
 - in amounts that exceed UMass Guidelines for plant nutrient application rates to turf; or
 - to drought dormant, cold dormant, inactive, or otherwise brown turf.
- Application of biosolids shall comply with the regulatory requirements for land application of such materials (330 CMR 32.00).
- Soil tests for nutrient analysis shall be obtained from the UMass Extension Soil Testing Lab or a laboratory using methods and procedures recommended by UMass. A soil test is valid for 3 years.
- Record keeping of plant nutrient applications to lawns and turf is ONLY required for professional applicators.

III. PURPOSE

It is the goal of the Town of Harwich to provide **Guidelines** to our citizens that help reduce the nutrient loading from the application of fertilizers by:

- A. Ensuring application of fertilizers is performed in a manner consistent with the ACT 2012 Massachusetts Legislature, *An Act Relative to the Regulations of Plant Nutrients* (Act). Chapter 262 of the ACT amended various sections of Chapter 128 of the MGL.
- B. To help achieve the goals of the Harwich Wastewater Management Plan, the Cape-Wide Fertilizer Management DCPC, and the Local Comprehensive Plan.

IV. AUTHORITY

These Guidelines are adopted by the Town of Harwich Board of Health pursuant to and authorized by the Fertilizer Management District of Critical Planning Concern designation, Barnstable County Ordinance 13-07, and by Section 9 of Chapter 262 of the Acts of 2012.

V. APPLICABILITY

- A. These Guidelines apply to any and all applications of nitrogen and phosphorus from fertilizer within the Town of Harwich on non-agriculture lawn or turf.
- B. MDAR has the authority to regulate and enforce the regulations from which these Guidelines are adopted, as well as agricultural uses.
- C. Homeowners and professionals are required to obey plant nutrient application restrictions, (including fertilizer and various other plant nutrient materials) to both agricultural and non-agricultural land (lawns and turf) and follow the

University of Massachusetts Amherst Extension Guidelines (**UMass Guidelines**) for nutrient management when applying plant nutrients on non-agricultural turf or lawn. Record keeping for non-agricultural applications **ONLY** applies to professional applicators.

VI. RETAILER REQUIREMENTS

Retailers who sell phosphorus-containing fertilizer are required to:

- Display phosphorus-containing fertilizer products separate from non-phosphorus fertilizer products; and;
- Post a sign displaying language informing the consumer about phosphorus-containing fertilizer restrictions for turf and lawns.

VII. ENFORCEMENT

MDAR has the statutory enforcement authority and may impose an administration penalty for violations of any provisions in their regulations.

VIII. DEFINITIONS

Agricultural Land. Land used for agricultural or farming as defined in M.G.L., c 128, 1A

Fertilizer. Commercially produced fertilizers used as soil and plant amendments, containing a guaranteed analysis of primary nutrients; does not include a product blended from organic compost or natural organic fertilizer.

Frequently Flooded Soil. A frequency class in which flooding, ponding, or saturation is likely to occur often under usual weather conditions (more than 50% chance in any year, or more than 50 times in 100 years).

Frozen Soil. Soil that is frozen at least two inches deep.

Heavy Rains. Rainfall greater than or equal to two inches in a 24-hour period and the weather forecast keywork is “likely”.

Impervious Surface. 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. 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 MGL c. 128 ??2(k) and 65(A), as amended by Chapter 262 of the Acts of 2012, 330 CMR 31.00.

Non-agricultural Turf or Lawn. Any non-agricultural land area that is covered by any grass species, EXCLUDING flower or vegetable gardens, pasture, hay land, trees, shrubs, turf grown on turf farms or any form of agricultural production or use.

Non-professional. Any person who applies a plant nutrient and is not for-hire or does not perform the application as part of his or her employment.

Nutrient Application Rate. The quantity of primary nutrients, expressed as total nitrogen(N), available phosphate(P_2O_5), and soluble potash (K_2O), used to supply crop or plant nutrient needs.

Nutrient Content. The percentage y weight of any primary nutrient, expressed as total nitrogen(N), available phosphate(P_2O_5), or soluble potash (K_2O), in any type or source of plant nutrient.

Plant Nutrient. Substance that contains one or ore of the primary nutrients of nitrogen, phosphorus, or potassium, including but not limited to, animal manure, fertilizer, organic compost, natural organic fertilizer, agricultural byproducts, digestate, biosolids or combination thereof.

Primary Nutrient. The macro-nutrients elements for plant growth which are total nitrogen (N), phosphorus (P) and potassium (K).

Phosphorus Containing Fertilizer. Fertilizer labeled for use on lawn or non-agricultural turf in which the available phosphate is greater than 0.67% by weight, excluding organic compost and natural organic fertilizer.

Saturated Soil. Soil soaked with moisture to the point that it cannot absorb any more liquid.

Snow Covered Soil. Soil covered by one inch or more of snow or by 1/2 inch or more of ice.

Soil Test. Technical analysis of soil conducted by a laboratory using methods and procedures recommended by UMass as appropriate for Commonwealth soils.

Surface Waters. As defined by 314 CMR 4.00: *Massachusetts Surface Water Quality Standards*, all wars other than groundwaters within the jurisdictions of the Commonwealth, including, without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, coastal waters, and vernal pools. For the purpose of 330 CMR 31.00, surface waters shall not include areas where the sole purpose is to grow crops, including but not limited to interior ditches, channels, canals, irrigation ponds or tailwater recovery ponds, provided that the applications of plant nutrients are done in accordance with *UMass Guidelines* for such crop growing system.

Turf. Any non-crop land area that is covered by any grass species, excluding meadows, grasslands, flower

Waters of the Commonwealth. All waters within the jurisdiction of the Commonwealth, including, without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, coastal waters, ground waters, and vernal pools, as defined by 314 CR 5.00: *Ground Water Discharge Permit Program*.

Zone A. The land area between the surface water source and the upper boundary of the bank; the land area within a 400 foot lateral distance from the upper boundary of the bank

of a Class A surface water source, as defined in 314 CMR 4.05(3)(a): *Class A*; and the land area within a 200 foot lateral distance from the upper boundary of the bank of a tributary or associated surface water body, as defined by 310 CMR 22.00: *Drinking Water*.

Zone 1 of a Public Water Supply Well. The Protective radius required around a public water supply well or wellfield regulated by 310 CMR 22: *Drinking Water*. For public water system wells with approved yields of 100,000 gpd or greater, the protective radius is 400 feet. Tubular wellfields require a 250-foot protective radius. Protective radii for all other public water system wells are determined by the following equation: Zone I radius in feet = $(150 \times \log \text{ of pumping rate in gpd}) - 350$. This equation is equivalent to the chart in the Guidelines and Policies for Public Water Systems. A default Zone I radius or a Zone I radius otherwise computed and determined by the Department shall be applied to transient non-community (TNC) and non-transient non-community (NTNC) wells when there is not metered rate of withdrawal or no approved pumping rate. In no case shall the Zone I radius be less than 100 feet.