

# OCTOBER 22, 2007 FALL TOWN MEETING WARRANT (CONT'D)

## ARTICLE 37

To see if the Town will vote to amend the general By-laws of the Town of Wareham by inserting at DIVISION VI, ARTICLE III the following:

### 1.0 Purpose and Intent:

When bogs are constructed on mineral soils with low organic matter content, there is an increased risk of fertilizer and pesticide leaching as water moves downward through the soils. To permit the use of conventional management operations (such as maintaining a flooded bog), and to protect the public health and welfare of its citizens, and to minimize quantifiable impacts to groundwater, drinking water, fresh and coastal water quality and natural resources, the construction of new bogs in the Town of Wareham must meet the performance standards established in this section. These standards may require manipulation of the water table, soil permeability, soil texture, and soil organic carbon content to minimize the release of contaminants. This bylaw is adopted pursuant to the home rule amendments of the Massachusetts Constitution.

### 2.0 Performance Standards and Applicability

The construction of new cranberry bogs and expansion of existing bogs into upland areas shall follow the principals established in the "BEST MANAGEMENT PRACTICES GUIDE FOR MASSACHUSETTS CRANBERRY PRODUCTION Mineral Soil Bog Construction" prepared by the University of Massachusetts Cranberry Experiment Station, and dated 2000. Specific standards that must be met for this bylaw include:

2.1 The water table must be modified to establish an artificially 'perched' water table above the seasonal high naturally occurring water table at the site. This water table manipulation may not be achieved by utilizing the natural water table, but must instead be achieved by the construction of two confining layers.

2.2 The two confining layers shall consist of a "water confining layer" between the bog and the native soils (and above the seasonal naturally occurring high water table of the site), and an "organic confining layer" between the cranberry bog root zone and the water confining layer.

2.3 Tailwater recovery and or holding ponds are required to conserve water and help meet holding times for pesticides.

### 3.0 Exemptions

Any bog expansion exempt from the Wetlands Protection Act and its regulations 310 CMR 10.00.

### 4.0 Definitions

4.1 New cranberry bog: any new cranberry bog growing area not exempted in section 3.0.

4.2 Perched water table: A local zone of groundwater saturation held above the main body of ground water by an impermeable water confining layer or stratum, and separated from the main body of ground water by an unsaturated zone.

4.3 Water confining layer: A continuous, slowly permeable confining layer of sufficient density and thickness to restrict water permeability below the root zone of the cranberry bog,

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drainage ditches, and into the interior of the dikes to achieve flood for winter protection and harvest, to hold soil moisture reserves in the summer, and to minimize leaching. The layer may consist of fine-textured subsoil (loam, clay loam, silty clay loam, clay), with added fine-textured materials to ensure the necessary permeability. In some areas, relatively impermeable sub-soil, such as dense basal glacial till, glacio-fluvial clays, and ironstone ("bog ore") hardpans occur naturally and can be utilized as a confining layer, as long as Section 2.1 is met.

4.4 Organic confining layer: This layer must be a minimum of 12 inches thick with at least 5% organic carbon (8.5% organic matter) in order to confine fertilizers and pesticides within the bog. The organic layer is located between the confining layer and the cranberry root zone. Un-decomposed organics such as leaf litter and sawdust may not be used for this layer.

4.5 Seasonal High water table: the average annual high water level as determined by the Board of Health.

### 5.0 Application and Enforcement

5.1 New bog construction not exempted under section 3.0 requires approval from the Board of Health. Prior to commencement of the work, the property owner and or the grower shall notify the Board of Health in writing of the work and provide test pit, soil logs, and elevation data of the site. Work shall not commence unless the Board of Health approves the planned construction.

5.2 The Board of Health may adopt rules regulations in support of this bylaw. Failure to adopt such rules and regulations shall not invalidate the provisions of this bylaw.

### 6.0 Variances

The Board of Health may issue variances from this bylaw for designs that provide equal or greater protection.

### 7.0 Severability

In case any section, paragraph or part of this by-law is for any reason declared invalid or unconstitutional by any court, every other section, paragraph or part shall continue in full force and effect.

Explanation: The Town of Wareham recognizes the importance of the cranberry industry to the community and economy of Wareham. These regulations will help ensure that any new bogs constructed in the town are built to the standards recommended by the University of Massachusetts Cranberry Experiment Station in order to minimize the release of fertilizer and pesticides to the environment, and to help meet future nitrogen loading goals for the Town of Wareham. This bylaw exempts existing cranberry bogs, and those bog expansions exempted by the state Wetlands Protection Act.

or to do or act in any manner relative thereto.

Inserted by the Board of Selectmen