

# MILLIS BOARD OF HEALTH

## PUBLIC AND ENVIRONMENTAL HEALTH REVIEW

### REGULATIONS AND STANDARDS

#### Section I. AUTHORITY

Adopted: January 10, 1990

This regulation is adopted under M.G.L. Chapter 111, Section 31, which gives the Board of Health (hereafter designated as "the Board") authority to make reasonable health regulations, violations for which shall be punished by a fine of not more than \$300.00. This regulation is also adopted under M.G.L. Chapter 111, Section 122, which directs the Board of Health to examine into all nuisances, sources of filth and causes of sickness within its town, which may, in its opinion, be injurious to the public health and to destroy, remove or prevent the same as case may require. This regulation is also adopted under M.G.L. Chapter 111, Section 143; and M.G.L. Chapter 538 of 1989.

#### Section II. PURPOSE

These regulations are intended to protect the public and environmental health, provide adequate water supply and wastewater treatment and ensure that there will be adequate protection against flooding, siltation and other drainage problems.

These regulations are also intended to make certain that earth removal projects will maintain a depth to groundwater which is adequate for the construction of septic systems under both Title 5 and local regulations.

#### Section III. JURISDICTION

##### 1. Environmental Health Impact Report

The applicant for any proposed project of four (4) or more dwelling units, whether in a subdivision or on an approved roadway, or any commercial or industrial development with a gross floor area exceeding 3,000 square feet, or a design sewage flow of 2,200 gallons per day or greater, or any Planned Unit Development (PUD), or any earth removal project exceeding 175 cubic yards of material per lot, or 500 cubic yards of material per project, shall submit an ENVIRONMENTAL HEALTH IMPACT REPORT (EHIR) to the Board of Health. The report shall meet the criteria required by this and all other applicable Board of Health regulations, and shall provide specific information relative to the operation of the proposed sewage treatment and disposal systems, including soil conditions, surface drainage calculations, hydrogeologic descriptions of groundwater resources and movement, effects of precipitation, and wastewater treatment methodology. The applicant shall also estimate the impact of the project on public and private water supply resources.

##### 2. Environmental Health Permit

The applicant for any project which meets the criteria stated above shall be required to obtain an ENVIRONMENTAL HEALTH PERMIT from the Board of Health.

##### 3. All Other Projects

All other projects within the jurisdiction of the Board of Health and which require approval from the Board of Health shall be required to meet the standards and criteria which are set forth in Sections VIII, XII, and XIII.2.

#### Section IV. BURDEN OF PROOF

Any applicant required to file an EHIR with the Board shall have the burden of proving by submission of clear and convincing evidence that the proposed work shall not have unacceptable, significant individual or cumulative effect upon the public or environmental health and such evidence shall be included in EHIR.

#### Section V. DEFINITIONS

Person: Every individual, partnership, corporation, firm, association, group, or governmental entity, owning property or carrying on an activity subject to this regulation.

#### Section VI. APPLICATIONS FOR PERMITS

##### 1. General

Written application shall be filed with the board of Health or Town Clerk's office for all activities which come under the jurisdiction of this regulation. The application shall include such information and plans as are necessary by the Board to describe the proposed activities and their effects upon the public health and the environment. No such activities shall commence without receiving and complying with permit a permit issued by the Board pursuant to these regulations.

The EHIR shall be filed with the Board of Health within 24 hours of any other filings or applications to any municipal boards or commissions. (See Section VI.2)

##### 2. Other applications

The board may, in appropriate cases, accept as the application and plans under this regulation, the following filings provided to other municipal boards or commissions:

- A. Notice of Intent filed with the Conservation Commission.
- B. Building Permit application filed with the Building Inspector.
- C. Earth Removal Permit application filed with the Special Permit Granting Authority.
- D. Preliminary and Definitive Plans and Planned Unit Development applications filed with the Planning Board.

In such case, additional information shall be required when applicable to provide the complete submittal requirements of this regulation.

##### 3. Fees

At the time of application or request to the Board, the applicant shall pay a filing fee as may be set from time to time by the Board.

In addition to the filing fee, the Board shall require the applicant to pay reasonable costs and expenses borne by the Board of Health or other town agencies for specific expert engineering and consultant services deemed necessary by the Board to review the applications. Said payment can be required at any point in the deliberations prior to a final decision being rendered. Said services may include, but are not necessarily restricted to general engineering analysis, hydrogeologic and drainage analysis, and legal advice including public health and environmental land use law.

#### **Section VII. WATER SUPPLY**

The proposed source of water supply shall provide water of a quantity and quality in accordance with Town, State and Federal water supply standards for domestic use. In the case of sites to be served by on-site wells, a hydrogeological evaluation showing groundwater flow directions and the proposed placement of wells and septic systems. Zones of Contribution to wells shall be delineated except for the following: a. Single or two-family dwellings; b. Single family residential subdivisions; or c. Projects where the required well yield is 1,375 gallons per day or less. This evaluation shall be performed by a qualified engineer or geologist, at the expense of the applicant, to be reviewed by the Board of Health for this determination.

#### **Section VIII. SEWAGE DISPOSAL**

The applicant shall submit evidence that:

1. The proposed location of the project has soil conditions suitable for the subsurface disposal of sanitary or other applicable types of wastewaters in accordance with the regulations of the Board of Health along with all applicable state and federal regulations.
2. Wastewater disposal shall meet the strictest minimum standards of current Commonwealth of Massachusetts or Federal regulations of surface or groundwaters.

For any subdivision having four (4) or more dwelling lots or any project having a minimum design wastewater flow of 2,200 gallons per day, a hydrogeological evaluation shall be performed by a qualified engineer or geologist, at the expense of the applicant, to be reviewed by the Board of Health for this determination.

Hydrogeological evaluations shall include determination of geologic stratigraphy, determination of groundwater flow directions, determination of maximum groundwater elevation, determination of minimum groundwater elevation when relevant, evaluation of water table mounding, and prediction of downgradient water quality impacts. Maximum groundwater elevation shall be determined by direct observation during the season of the year when the water table is high as determined by the Board and as , adjusted by the method described in "U.S. Geological Survey, Water Resources Investigations, Open File Report 80-1205 - Probable High Groundwater Levels in Massachusetts", or subsequent revisions thereof.

**Section IX. (Reserved) .**

**Section X. (Reserved) .**

**Section XI. (Reserved) .**

## Section XII. DRAINAGE

1. The proposed drainage for the subdivision or project shall not cause an increase or decrease in either the total volume of runoff discharged offsite, or total rate of runoff discharged offsite, as compared with the respective discharge offsite prior to the development. Such condition shall be required for storms of 1, 10, 50 and 100-year frequency events.

2. No channelization of surface runoff shall be allowed offsite without the written consent of the owner of the land affected, in the form of a permanent grant of easement, recorded at the Registry of Deeds.

3. In cases where runoff infiltration cannot, in the opinion of the Board of Health, be appropriately implemented because of the possibility of contamination of water supply, or because of extremely poor infiltrative and permeability characteristics of the soil, the requirement as regards volume may be waived by the Board of Health, provided the applicant provides such additional preventive measures to prevent any increase in elevation or duration of downstream flood elevations. Such additional measures may be, but are not restricted to, the construction of compensatory flood storage facilities and/or the creation of additional wetlands.

4. If detention or retention ponds are utilized, slopes shall be no steeper than 4 horizontal to 1 vertical, and design water depth shall not exceed three (3) feet. Minimum bottom slope for "dry" detention areas shall be two (2) percent.

5. Poor infiltrative and permeability conditions are defined as a soil permeability of less than  $1 \times 10^{-4}$  centimeters per second. Unless, in the opinion of the Board of Health, such testing is not applicable for a particular site, all permeability tests shall be in-situ field bore hole tests for permeabilities in the acceptable range as specified above. If permeability testing is desired to be performed in soils of lesser permeability, laboratory tests for hydraulic conductivity shall be performed on undisturbed samples by the Falling Head Permeability Test using flexible membrane triaxial test cells with back pressure (Army Corps of Engineering Manual EM 1110-2-1906 Appendix VII).

## Section XIII. EARTH REMOVAL STANDARDS

### 1. Submittal Requirements

Plans for any proposed earth removal operation exceeding 175 cubic yards of material per lot or 500 cubic yards per project, shall be filed with the Board of Health and shall contain the following information and meet the following criteria:

- a. An EARTH REMOVAL RESTORATION PLAN, prepared by a Registered

Engineer or Registered Land Surveyor, at a scale of eighty feet to the inch or larger, containing all information necessary to evaluate the site, the proposed earth removal operation, and the

proposed restoration of the site after the operation is complete, including the following:

- b. Location of the perimeter of the proposed excavation.
- c. Property lines, abutting owners of record, and buildings or other structures on the property or within two hundred feet of the site boundaries or within five hundred feet of the earth removal operation site.
- d. Private wells within 1,000 feet and public wells with 2,640 feet of the earth removal operation site.
- e. Location of walls, fences, test pits, test borings, observation wells with logs, streams and pools, and wetlands on the site.
- f. At least three permanent bench marks, with elevations thereon, used in topographical surveying, and referenced to the N.G.V.D. datum.
- g. Adjacent public streets, private ways and service roads.
- h. The perimeter and topography of any existing excavation as of the date of the application.
- i. Depth of removal within the area, shown by five-foot contours or other contour interval found to be appropriate by the Board, and final spot elevations.
- j. Proposed lateral support to all adjacent property.
- k. Proper provision for safe and adequate water supply and sanitary sewage disposal, and for temporary and permanent drainage on the site.
- l. Topography shown by five-foot contours or other contour interval found to be appropriate by the Board, and spot elevations of the area of removal as restored and to at least two hundred feet beyond the perimeter of that area.
- m. The location and method to be used in providing permanent drainage and erosion and sediment control.
- n. Location of proposed lot lines, if any, as shown on a preliminary or definitive subdivision plan filed with the Planning Board of the Town.
- o. Evidence that health and safety concerns have been adequately addressed with provisions which shall be maintained throughout the proposed operation.

## 2. Standards

- a. In order to provide for potential subsurface sewage disposal systems, no excavation shall occur closer than 7.5 feet from the maximum groundwater elevation as determined by the procedure described in Section VIII of this regulation.
- b. There shall be no increase or decrease of surface water flow off the site.
- c. There shall be no potential adverse effect on public health or safety, or the health or safety of persons living, working, or otherwise present in the neighborhood, due to excessive noise, dust, or any other condition which may result from the proposed operation.
- d. There shall be no potential adverse impact on surface waters, public or private wells, as a result of the proposed operation.
- e. Lateral support shall be maintained for all adjacent properties, and no banks shall be left after completion of operations with a slope which exceeds one foot vertical rise in four feet of horizontal distance.
- f. Any access to an excavated area or areas shall be adequately posted with "Keep Out" and "Danger" signs.
- g. During operations, any excavation, quarry, bank, or work face having a depth of ten feet or more and/or creating a slope of more than thirty degrees downward shall be fenced. Such fence shall be located ten feet or more from the upper edge of the excavation and shall be at least six feet in height.
- h. No boulders in excess of a volume of 20 cubic yards and no trees or stumps or demolition or construction waste materials shall be buried on-site.
- i. Notwithstanding any standard otherwise required in this regulation, the operation and restoration shall comply with the standards contained in the Massachusetts Conservation Guide, Volumes I, and II, United States Department of Agriculture, Soil Conservation Service.
- j. At the time of restoration, the areas subject to this regulation shall be covered with a minimum of four inches of compacted topsoil and seeded with an appropriate grass or legume.

#### **Section XIV EHIR SCOPE AND GENERAL SUBMITTAL REQUIREMENTS**

Plans submitted pursuant to this regulation shall include but not be limited to the following:

- a. Proposed source of water supply.
- b. Data for a sufficient number of test holes, soil logs, maximum groundwater elevations, and properly conducted percolation tests to:
  - 1. Demonstrate clearly that the soil conditions are

generally suitable for subsurface sewage disposal and will meet the needs of the project.

2. To determine the pattern of groundwater flow.

c. A topographical map of the property, with contours referring to Mean Sea Level, showing the location and elevation of all test holes, how the surface drainage is to be handled, including nearby affected areas, and all pertinent physical features, including ponds, swamps, wetlands, water supplies, seasonal watercourses, swales, areas of ledge and rock. Also, an overlay of Flood Plain, Drainage Watershed areas, USDA Soil Map Characterization for soil type and hydrologic group, USDA Soil Limitations for Septic Tank Sewage Disposal, and Aquifer Designation where applicable.

d. Sufficient data to demonstrate no deleterious individual or cumulative impact of subsurface sewage disposal upon groundwater quality. Failure to do so may result in findings by the Board of Health that such affected lots cannot be used for building sites without injury to the public health.

e. Hydrologic and hydraulic calculations and data to support the proposed design for the runoff drainage system. Both volume and flow rate of runoff, before and after development, must be clearly stated and shall be in accordance with the specifications previously designated herein. Calculations shall be performed using the most recent procedures of the U.S.D.A. Soil Conservation Service such as are described in TR-20 (Computer Program for Project Formulation-Hydrology" (SCS 1983), National Engineering handbook-Section 4-Hydrology (SCS 1985), and Technical Release No. 55 "Urban Hydrology for Small Watersheds" (SCS 1986). Additional design guidelines may be on file with the Board of Health.

f. Infiltration and detention structure design shall be according to procedures acceptable to the Board of Health such as are described in the publications entitled "Underground Disposal of Storm Water Runoff - Design Guidelines Manual", February, 1980, of the Federal Highway Administration - Department of Transportation, which is similar to "Recharge Basins for Disposal of Highway Storm Drainage", Research Report 69-2, of the New York State Department of Transportation and "Controlling Urban Runoff - A practical manual for planning and designing urban BMP's -Department of Environmental Programs - Metropolitan Washington Council of Governments" and "Erosion and Sediment Control in Site Development -Massachusetts Conservation Guide - Volume 1".

g. Evidence to demonstrate clearly to the Board of Health that water supply shall be adequate as previously designated herein.

h. Evidence to demonstrate clearly to the Board of Health that the effect on ground and surface waters shall be in accordance with the specifications previously designated herein.

i. In order for a plan subject to these regulations to be considered "complete", it shall include all items required by these regulations, including an appropriate fee which may be set from time to time by the Board of Health. Incomplete submittals shall be returned as incomplete forthwith to the applicant, following a vote

of disapproval by the Board of Health, without review. The plan must then be resubmitted and be subject to Board of Health review to demonstrate that it meets all Board of Health requirements before it shall be considered approved.

j. Failure to submit adequate or correct data or information as required will constitute grounds for Board of Health denial of the permit for the project site as a whole or of individual lots or portions therein.

#### **Section XV. OTHER PERMITS**

No well permits or Disposal Works Construction Permits shall be granted for any project subject to this regulation until the Board has issued the Environmental Health Permit.

#### **Section XVI. FINDINGS REQUIRED**

Prior to granting a permit under these regulations, the Board shall make findings with supporting documentation. The Board may issue the Environmental Health Permit, based on the review of the impacts of the project documentation as specified in this regulation, if said Board finds that the proposed project will comply with all of the standards of this regulation.

#### **Section XVII. SEVERABILITY**

If any portion, or sentence, clause or phrase of this regulation shall be held invalid for any reason, the remainder of this regulation shall continue in full force and effect.

#### **Section XVIII. ENFORCEMENT**

The Board of Health, its agents, officers, and employees, shall have the authority to enter upon privately owned land for the purpose of performing their duties for the administration and review of this regulation, and may make or cause to be made such examinations, surveys, or samplings as the Board of Health deems necessary.

The Board shall have the authority to enforce these regulations and permits issued thereunder by violation notices, administrative orders, and civil and criminal court actions.

Any person who violates any provision of this regulation or permits issued hereunder, shall be subject to a fine of not more than three hundred dollars (\$300.00). Each day or portion thereof during which a violation occurs or continues shall constitute a separate offense, and each provision of the regulation or permit that is violated shall constitute a separate offense. As an alternative to criminal prosecution in a special case, the Board may elect to utilize the non-criminal disposition procedure set forth in M.G.L. Chapter 40, Section 21D. For the purpose of this provision, the penalty to apply in the event of a violation shall be as follows: First offense, Warning; Second offense, Fifty Dollars (\$50.00); Third offense and all subsequent offenses, Fifty Dollar (\$50.00) increments with a maximum of Three Hundred Dollars (\$300.00) per day per violation.

#### **Section XIX. APPEALS**

The applicant may appeal the choice of consultant to the selectmen. The grounds for such an appeal "shall be limited to claims that the consultant selected has a conflict of interest or does not possess the minimum required qualifications", i.e., "either an educational degree in or related to the field at issue or three or more years of practice in the field at issue or a related field".

Pending the outcome of the appeal, the time limits for Board of Health regulatory action are extended, and if the selectmen do not act within one month, the Board of Health's choice of consultant stands by default. This law does not give the selectmen authority to appoint a different consultant, merely to reject for the above-stated reasons the consultant which was chosen.

Any person aggrieved by the decision of the Board of Health may seek relief there-from in any court of competent jurisdiction as provided by the laws of the Commonwealth of Massachusetts.

**Section XX. EFFECTIVE DATE**

This regulation shall take effect February 1, 1990. As required by the Massachusetts General Laws, Chapter 111, Section 31, an attested copy has been filed with the Massachusetts Department of Environmental Protection and has been filed with the Town Clerk.

**FEB 1, 1990**