

R:1-3 RULES AND REGULATIONS RELATIVE TO THE INSTALLATION AND MAINTENANCE OF STORM DRAINS.¹

R:1-3.1 Authority. In accordance with the provisions of GLc III~31 as amended, the Topsfield Board of Health adopts the following rules and regulations governing the installation and maintenance of storm drains serving residential and commercial premises in Topsfield.

R:1-3.2 Applicability. Every person who proposes to install or construct a storm drain serving any residential or commercial lot in Topsfield shall first obtain a permit for such storm drain from the Board of Health.

R:1-3.3 Site Plan. Every applicant to the Topsfield Board of Health, hereinafter called the Board, for a permit to install a storm drain serving any lot fronting on a public way or a lot subdivided under the provisions of GLc 41~81P shall submit to the Board a plan for the orderly disposal of storm water runoff from that lot. Said plan shall at a minimum contain the following information:

a. A plan showing the location of all storm water control installations inclusive of dry wells, catch basins, culverts, and surface channels (swales, ditches, etc.) as well as discharges and connections to existing storm drains that abut the lot to be drained.

b. Plans to be submitted in a. above shall be scaled no larger than 1" equals 20' and shall show profiles of culverts and ditches. The latter, moreover, shall be shown in cross sections at stations indicated on the site plan. All plans shall bear the seal and signature of a civil engineer registered to practice in the Commonwealth.

c. Calculations that compare the storm water runoff from that lot in a ten (10) year, twenty-five (25) year, and a one-hundred (100) year design storm in its undeveloped condition. The calculations shall compare the two hydrographs at the locus of discharge of the storm water runoff into any contiguous lot or the way on which the lot has frontage. Said calculations shall take into account any storm water runoff that traverses the lot from sources upstream of that lot. In the event drainage is divided such that it flows from the site in more than one direction under existing or proposed conditions, calculations shall be submitted for each subcatchment.

d. Calculations that show the storm water control installations to have sufficient capacity to dispose of on-site or convey off the lot the maximum storm water runoff as computed in c. above.

e. In the event that the storm water runoff is conveyed off the lot, calculations shall show that said runoff does not have any adverse effects upon the abutting area or the drainage system into which the runoff is discharged. Said calculations shall take into account the runoff discharged into that site or drainage system from all other sources at rates commensurate with the design storms cited in paragraph c. Unless it can be demonstrated to the satisfaction of the Board of Health that off-site drainage or flooding conditions will not be worsened, the plans must include means for attenuating flows so that post-development peak flows will be no greater than pre-development peak flows at return periods up to and including twenty-five (25) years. Storm duration shall be taken into account in a technically sound manner, and the design shall be based on the storm duration yielding the largest required storage capacity for each return period. The Board of Health may require that the applicant use a second method to check the calculations. Measures to prevent construction sediments from reducing the effectiveness of attenuation devices shall be indicated on the plans and supported by appropriate calculations.

f. Where the storm water runoff is conveyed into an abutting site, the applicant shall submit to the Board a drainage easement executed by both parties named in the easement.

g. The one-hundred (100) year flood plain elevation shall be shown on all lots located in areas within the bounds described in Art. VI, s. 6.03 of the Topsfield Zoning By-Law as amended. Wherever a lot may contain wetlands, the bounds of these shall be shown on the plan together with a statement that said bounds are subject to endorsement by the Topsfield Conservation Commission upon the filing of a request for a Determination of Applicability as required by 310 CMR, 10.00 and the Topsfield General Wetlands By-Law as amended.

R:1-3.4 Permit Conditions. The Board shall issue a permit for the construction of the storm water runoff control system as proposed for lots that are subject to conditions specified in subsection R:1-3.3, provided that the applicant has submitted plans that meet the requirements of subsections R:1-3.3, R:1-3.8 and/or R:1-3.9, as applicable.

Where applicable, the Board may waive the requirements contained in subsection R:1-3.3 either upon its own motion or a written request from the applicant wherein the reasons for such a waiver are stated. A copy of said permit shall be submitted to the Town Clerk and the Inspector of Buildings within seven (7) days of the approval of the drainage plans. In the event that the Board approved the plans subject to any waivers, the Board shall also submit a list of waivers approved by the Board.

R:1-3.5 Failure to Obtain a Permit. In the event that an applicant for a septic system serving a lot subject to the conditions stated in subsection R:1-3.3 fails to submit plans as specified in subsection R:1-3.3 within seven (7) days of the date of submission of the septic system plans, the Board shall notify the Town Clerk and the Inspector of Buildings of said failure within twenty-four (24) hours of the regularly scheduled meeting following the date on which the drainage plans were done.

R:1-3.6 Maintenance of Storm Drains. Storm drainage systems constructed under these provisions shall be maintained by the owner in such a manner that they function substantially in accordance with their design capacity as set forth in subsection R:1-3.3.

R:1-3.7 Investigation. All complaints about storm water runoff received by the Board from abutters to or persons residing across a public way from a lot served by a storm water runoff control system subject to the conditions of subsection R:1-3.3 shall be investigated by the Board or its designated agent provided, however, that such complaints are received by the Board in writing and are dated and signed by the plaintiff.

Within sixty (60) days of receipt of said complaint, the Board shall issue a determination of facts concerning the source of the storm water runoff and its adverse effects upon plaintiff's premises.

In the event that allegations are substantiated, the Board shall order the owner of record of the lot to take such action as is deemed necessary by the Board to repair or improve the drainage system within thirty (30) days of the issuance of that order.

R:1-3.8 Leaching Systems. Leaching trenches, leaching catch basins, and other means of subsurface attenuation or disposal of storm water runoff may be proposed, and must be submitted to the Board of Health for approval. The following requirements of this Section shall apply.

a. Subsurface leaching facilities shall satisfy the same minimum distance requirement of on-site wastewater disposal systems, as stated in Title 5 and as supplemented by the Board of Health's Supplementary Regulations to Title 5, for all except watercourses and subsurface drains. Except as noted hereinafter or as approved by the Board of Health, all other requirements for subsurface storm water leaching facilities shall be the same, except where obviously not applicable, as those for septic tank leaching facilities as stated in the aforementioned Regulations.

b. In cases where storm water and septic tank leaching facilities are to be installed on the same lot, they shall be considered separate facilities, individually subject to the aforementioned Regulations.

c. Subsurface leaching facilities shall be regarded as subsurface drains in establishing distance requirements from on-site wastewater disposal system components.

d. Mounding analyses may be required by the Board of Health if, in the Board's judgment, groundwater levels on adjacent properties could be adversely affected.

- e. No reserve area will be required for storm water leaching facilities.
- f. Dimensions of leaching facilities shall be based on hydraulic attenuation considerations; there will be no requirements for leaching area as such.
- g. Soil with a percolation rate of greater than twenty (20) minutes per inch is considered unsuitable for subsurface disposal of storm water.
- h. In order to assure reasonable longevity of subsurface storm water leaching facilities, suitable methods shall be employed to minimize entry of sediment into the leaching facility so as to limit reduction of void space provided for attenuation storage and to minimize clogging of the leaching area. Such measures shall include but not be limited to the following:
 - 1. Sedimentation facilities upstream of the storm water leaching facilities; calculations indicating the basis for design shall be submitted.
 - 2. Provision of four hundred (400) cubic feet per tributary acre of dead storage space for long-term sedimentation.
 - 3. Measures to effectively preclude construction sediments from entering the storm water leaching facilities; such measures shall be indicated on the plans.
 - 4. A maintenance schedule inclusive of but not limited to periodic street sweeping and cleaning of sedimentation facilities and catch basins, and a written agreement to carry out all provisions set forth in the schedule.
 - 5. A written annual report of inspections of the drainage facilities conducted by persons approved by the Board.

R:1-3.9 Administration of Subdivision Rules and Regulations Pertaining to Drainage. Those aspects of the Rules and Regulations Governing the Subdivision of Land in the Town of Topsfield, as most recently amended, pertaining to drainage, shall apply and the Board of Health shall have full jurisdiction to administer their application for the prevention of nuisances in cases not otherwise subject to some or all of those Rules and Regulations.

¹Editor's Note: Adopted by the Board of Health on January 6, 1986.