

COMMONWEALTH OF MASSACHUSETTS

TOWN OF DUXBURY

1.0 SUPPLEMENTARY RULES & REGULATIONS TO THE STATE ENVIRONMENTAL
CODE:
TITLE 5, 310 CMR 15.000

“STANDARD REQUIREMENTS FOR THE SITING, CONSTRUCTION, INSPECTION, UPGRADE AND EXPANSION OF ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS AND FOR THE TRANSPORT AND DISPOSAL OF SEPTAGE.”

1.01 AUTHORITY TO PROMULGATE AND OTHER PROVISIONS

- (1) In accordance with the provisions of 310 CMR 11.02 of the State Environmental code and under the authority of M.G.L. c. 111, s. 31, the Board of Health of the Town of Duxbury hereby adopts these Supplementary Rules and Regulations to the State Environmental Code: Title 5, 310 CMR 15.00, “Standard Requirements for the siting, construction, inspection, upgrade and expansion of on-site sewage treatment and disposal systems and for the transport and disposal of septage.”
- (2) The provisions of these Supplementary Rules & Regulations shall be read together with the provisions of 310 CMR 15.000.
- (3) These regulations are to be prospective. Their purpose is to require precautions to avoid potential dangers and to restrict conditions proven to be harmful. The precautionary principle is to protect even the threat of harm to the environment. The precautionary principle says that decision-makers have a general duty to take preventive action to avoid harm before scientific certainty has been established.
- (4) The effective date of these Supplementary Rules and Regulations is July 1, 2000.

1.02 DEFINITIONS

Bedroom - Any unfinished room, libraries, studies, studios, or other easily converted rooms, which provide privacy, shall be considered bedrooms for the purpose of design flow. These rooms shall consist of all of the following:

- a. floor space of no less than 70 square feet
- b. for new construction, a ceiling height of no less than 7'3",
- c. for existing houses, a ceiling height of no less than 7',
- d. an electrical service and ventilation; and
- e. at least one window.

Living rooms, dining rooms, kitchens, halls, bathrooms, unfinished cellars and unheated storage areas over garages are not considered bedrooms. Where the total number of rooms exceeds eight, not including bathrooms, hallways, unfinished cellars and unheated storage areas, the number of bedrooms presumed shall be calculated by dividing the total number of rooms by two then rounding down to the next lowest whole number.

Major Additions That Do Not Increase Flow – Includes attached and detached garages, enclosed porches, in-ground swimming pools, and any addition to any existing structure greater than 50 square feet.

Major Additions That Increase Flow – Any addition of bedrooms.

Minor Additions - Includes decks, above ground swimming pools, movable sheds, and additions of less than 50 square feet.

Mounded System – A system shall be considered mounded when any portion of the 2” of pea stone as required in 310 CMR 15.247(2) breaks the original existing grade.

1.03 GENERAL REQUIREMENTS

- (1) Fees for permits, site tests, construction inspections and review of plans and specifications shall be as established by the Town of Duxbury in accordance with the General By-laws of the Town. The appropriate fee shall accompany all applications at the time of filing.
- (2) If plan review by an outside consultant is deemed necessary, the cost of that review shall be borne by the applicant.

1.04 DISPOSAL SYSTEM INSTALLER’S PERMIT

- (1) Application for a Disposal System Installer’s Permit shall be filed on a form provided by the Board of Health. The permit shall be valid for one year.
- (2) The Disposal System Installer shall notify the Board of Health at least three business days prior to the date construction is to begin so that a representative of the Board of Health can be onsite for the required construction inspections.
- (3) The Disposal System Construction Permit and a copy of the signed approved plans shall be on site at all times while the construction is being done.
- (4) The holder of the Disposal System Installer Permit shall be directly responsible for all work done under a Disposal System Construction Permit issued by the Board of Health.

1.05 DISPOSAL SYSTEM CONSTRUCTION PERMIT

- (1) Application for a Disposal System Construction Permit shall be signed by the owner or a contractor hired by the owner of the property and filed with the Board of Health by the owner or contractor hired by the owner.
- (2) Upon approval of the submitted plans and specifications for a disposal system, a Disposal System Construction Permit shall be issued in the name of the owner of the property. The name and address of the Disposal System Installer constructing the system shall be included on the permit.

- (3) Minor adjustments to an approved septic plan that do not affect the design of any component or relocation of the soil absorption system, may be made in the field with the prior approval of the Duxbury Health Agent and when the Health Agent deems necessary, with the prior approval of the Design Engineer or Sanitarian.

1.06 CERTIFICATES OF COMPLIANCE AND “AS-BUILT” DRAWINGS

- (1) A Certificate of Compliance shall be issued by the Board of Health to the owner of the property when the requirements of 310 CMR 15.021(2) and (3) have been met and two (2) copies of “as-built” drawings have been submitted to the Board of Health. Both copies of the as-built shall bear the original stamp and signature, of the designer and the date.
- (2) Ties from at least two permanent points to the septic tank, the distribution box, the corners of all soil absorption areas, and observation ports and an elevation schedule of each component shall be provided on the “as-built” drawings along with the closest distance to wetlands from the soil absorption system. The designer and installer’s name and address, plus the dates of construction inspections and the names of those conducting the inspections shall also appear on the as-built. The “as-built” shall contain the statement “all pre-existing systems have been crushed, removed or filled.” The reserve area shall also be shown on the “as-built”.
- (3) “As-built” drawings are to be prepared, stamped and signed by the Design Engineer or Sanitarian and filed at the Board of Health office within ten (10) calendar days of the end of construction.

1.07 ENFORCEMENT

- (1) Violation of the provisions of these Supplementary Rules & Regulations or violations of the provisions of 310 CMR 15.000, shall be considered to be violations of the Disposal Works Construction Permit issued and/or a violation of a Disposal System Installer’s Permit, or a Septage Hauler’s Permit issued by the Duxbury Board of Health.
- (2) Upon any violation of these Supplementary Rules & Regulations or violations of the provisions of 310 CMR 15.000, a written “Notice of Non-Compliance”, including the correction to be taken within a specific period, shall be issued on behalf of the Board of Health. The “Notice of Non-Compliance” may be issued to the owner of the property, the Design Engineer or Sanitarian, the Disposal System Installer or Septage Hauler. “Notices of Non-Compliance” shall be part of the file of any permit holder. (15.025(4))
- (3) Failure to respond to a “Notice of Non-Compliance” and/or failure to take corrective action required by the “Notice of Non-Compliance” shall result in a show cause hearing before the Board of Health.

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- (4) Any person violating the provisions of these Supplementary Rules & Regulations or the provisions of 310 CMR 15.000 may be subject to a fine through the process of non-criminal disposition after a written warning has been issued. Each day of non-compliance shall constitute a separate violation. A "Notice of Non-compliance" shall be considered a written warning for the purpose of this section.
- (5) The Duxbury Board of Health after a written warning and a show cause hearing may revoke a Disposal System Installer's Permit for cause, if a permit holder fails and/or refuses to follow the provisions of Duxbury Rules & Regulations or the provisions of 310 CMR 15.00. A "Notice of Non-compliance" shall be considered a written warning for the purpose of this section.

1.08 SOIL ABSORPTION SYSTEM RESTORATION

- (1) It shall be a violation of Duxbury Supplementary Rules & Regulations for any approved System Inspector, Soil Evaluator, Licensed Installer or Septage Hauler to introduce or to recommend the use of any physical, chemical or biological treatment process to restore or condition a soil absorption system.

1.09 SOIL EVALUATION & PERCOLATION TESTING

- (1) Applications to conduct Soil Evaluation Criteria tests under 310 CMR 15.101 shall be filed by the Massachusetts Registered Professional Engineer, Massachusetts Registered Sanitarian or a Department of Environmental Protection approved Soil Evaluator conducting the required field tests. The property owner may also file the application.
- (2) The Board of Health may discontinue site investigations, including groundwater determination, based on weather conditions or factors considered significant with regard to these investigations. Prior notice shall be provided for curtailment of testing periods.
- (3) Twenty-four hour notice, written or verbal is required to cancel any previously scheduled soil evaluation or percolation test.
- (4) The Board of Health will not witness soil evaluations and percolation testing for unbuildable lots. The Director of Inspectional Services shall determine lots buildable for the purposes of zoning however if the applicant pays Board of Health engineering consultant fees then it will be observed.
- (5) The Board of Health will not witness percolation tests conducted as part of a subdivision plan approval unless such subdivisions has 3 lots or less.
- (6) Should there be a question by either the applicant or the Health Agent concerning adequacy of the submitted soil evaluations the adequacy shall be determined by a vote of the Board of Health.

1.10 MINIMUM SETBACK DISTANCES

- (1) All systems must conform to the minimum setback distance for septic tank and soil absorption systems, including reserve area, measured in feet and as set forth below. Where more than one setback applies, all setback requirements shall be satisfied.

	Septic Tank	Soil Absorption System
(a) Bordering Vegetated Wetlands (BVW), Salt Marshes, Inland and Coastal Banks		150'
(b) Private Water Supply Well or Suction Line		150'
(c) Irrigation Well	50'	100'

1.11 DEPTH TO GROUNDWATER

- (1) The minimum vertical distance from the bottom of the stone underlying the soil absorption system to the maximum high groundwater elevation shall be:
- (a) five (5) feet in soils with a recorded percolation rate of more than two (2) minutes per inch;
 - (b) six (6) feet in soils with a recorded percolation rate of two (2) minutes or less per inch.

1.12 NITROGEN LOADING LIMITATIONS

- (1) For the purposes of calculating nitrogen loading only upland area shall be used. Drainage easements, paved areas, cranberry bogs and wetlands shall not be used when calculating nitrogen loading.
- (2) Aggregate flow calculations shall be used for cluster developments only.

1.13 PREPARATION OF PLANS AND SPECIFICATIONS

- (1) All plans and specifications for a disposal system, including upgrading and repairing of an existing disposal system, shall be designed, prepared, stamped and signed by a Massachusetts Registered Professional Engineer or a Massachusetts Registered Sanitarian employed by the owner of the property. The name, address, and telephone number of the designer shall be included in the title block of the plans.

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- (2) Three copies of the proposed septic plan shall be submitted to the Board of Health. Eight copies of the plan shall be required when variances are requested. Three copies of the plan shall bear the original stamp and signature of the designer along with the date. Revised plans shall also bear the original stamp and signature of the designer along with the date.
- (3) A Massachusetts Licensed Land Surveyor must stamp every septic plan for a new dwelling. Every septic plan for an upgrade or expansion shall reference a certified plot plan stamped by a Massachusetts Licensed Land Surveyor. If reference cannot be made to a certified plot plan, a Massachusetts Licensed Land Surveyor must stamp the plan. The Land Surveyor shall certify all property lines, including easements and the location of all permanent structures on the lot. Three copies of the plan shall bear the original stamp and signature of the land surveyor along with the date. Revised plans shall also bear the original stamp and signature of the land surveyor along with the date. A Massachusetts Licensed Land Surveyor must stamp all plans requesting setback variances.
- (4) Every plan for a system shall be of a scale not smaller than 1"=30' and shall include the following:
 - (a) Floor plans of all dwelling(s) or building(s) existing and proposed on the facility that will be connected to the septic system. (15.202(c))
 - (b) The locations of all water supplies both public and private or a note "no wells within 150 ft." and/or "the system is not located within a Zone I or Zone II of a well head protection area." (15.220(k))
 - (1) A list of all parcel numbers and street addresses of any parcels which lie within 150' of the proposed soil absorption system and a statement next to each of whether it is connected to town water or has a potable well.

EXAMPLE:
000-032-001 223 Main Street- Town water
001-098-003 227 Main Street- Town Water
003-050-213 231 Main Street- Potable Well
 - (2) Potable wells for all **properties** that lie within 150' of the proposed soil absorption system shall be shown on the septic plan. The potable well owners shall be notified by the applicant through certified mail and asked to verify the location of their well.
 - (c) The location of all irrigation wells or a note "no irrigation wells within 100 ft. of the system".
 - (d) The location of any wetland as defined in 310 CMR 10.00 and/or Town of Duxbury Wetlands Protection Bylaw, Chapter 9, Conservation Commission Rules & Regulations or a note stating "no wetlands within 150 ft." (15.220(l))

(e) Flood Zone designation and elevation or a note “system is not located within a flood zone.” (15.220(l))

(f) A note on the plan listing all variances to the provisions of 310 CMR 15.00 and local requirements sought in conjunction with the plan or a note stating “no variances are requested from Title 5 or Duxbury Rules and Regulations.” (15.220(p))

(g) The location and elevation of one benchmark on National Geodetic Vertical Datum (N.G.V.D) plane within 50 to 75 feet of the septic system which is not subject to dislocation or loss during construction of the septic system. (15.220(q))

1.14 PLACEMENT OF EFFLUENT FILTER

- (1) A “Zabel Filter A100, “ or its equal, shall be installed on the outlet tee of a septic tank for all new construction or when an upgrade occurs and a “Zabel Filter A1800”, or its equal shall be installed in an existing system when a repair occurs unless the dwelling contains five or more bedrooms in which a “Zabel A100” or its equal shall be installed. Commercial filters shall be installed for all commercial applications.

1.15 CONSTRUCTION IN FILL

- (1) No soil absorption system or reserve area for new construction, as defined in Title 5 310 CMR 15.002, shall be allowed in areas where fill material would bring the system above the original existing grade.
- (2) Any exposed retaining wall for the purpose of septic system design shall have a soil, vegetative or textured covering. Specifications for the covering of the retaining wall shall be included on the engineered plan.

1.16 CRITERIA FOR INSPECTION

- (1) The inspector shall make reasonable professional efforts to locate and inspect all of the system components. All seepage pits shall be located and inspected.
- (2) Groundwater determination for the purpose of Title 5 inspections shall be accomplished in the following ways:
 - (a) Hand auguring below the deepest leaching component.
 - (b) Using soil evaluation data derived after January 1, 1996.
- (3) The Board of Health or Health Agent may request a soil evaluation by a State Certified Soil Evaluator for any Title 5 inspection.

1.17 SYSTEM FAILURE CRITERIA

- (1) Additional failure criteria for seepage pits: the liquid depth in a seepage pit is less than six inches from the inlet pipe invert or the remaining available volume within the leaching system above the liquid depth is less than ½ of one day’s design flow.

- (2) All cesspool systems shall constitute an automatic failure.

1.18 BUILDING PERMITS

- (1) The Board of Health will not sign off on any building permit for any major alteration to a property until a Sewer Entrance Permit or a Disposal System Construction Permit has first been obtained from the Board of Health or the Board of Health has determined that the existing disposal system is adequate for the proposed alteration. At a minimum, the Board of Health defines an adequate system as having a septic tank, distribution box, and one or more trenches, beds, fields, pits, galleries or chambers. The Board of Health may request a Title 5 inspection prior to a building permit being issued.
- (2) The Board of Health will not sign off on any building permit for a swimming pool either inground or above ground until a plan showing the existing septic system including the reserve area, and the location of the proposed swimming pool is submitted to the Board of Health.
- (3) Minor additions shall require an approved Disposal System Construction Permit with an approved As-built on file with the Board of Health or a system assessment by a certified Title 5 inspector to determine the location of all system components, including reserve area, in order to ensure that the proposed construction will not be placed upon any of the system components.
- (4) Major additions that do not increase flow shall require an approved Disposal Works Construction Permit with an Engineered Plan and an approved As-built on file with the Board of Health. Cesspools will constitute an automatic upgrade. A valid Title 5 Inspection or Certificate of Compliance will be required.
- (5) Major additions that increase flow shall require an approved Disposal Works Construction Permit with an Engineered Plan and an approved As-built on file with the Board of Health. Cesspools will constitute an automatic upgrade. Existing approved design flow shall be used to determine potential number of bedrooms. Systems with a leaching areas designed for 1000 gallons shall be approved for a maximum of 5 bedrooms with a 1500-gallon septic tank, 4 bedrooms with a 1000-gallon septic tank. A valid Title 5 inspection or Certificate of Compliance will be required.
- (6) Increase of flow will not be approved if a variance to wetlands or separation to groundwater were required for the original permit. The Board of Health or Health Agent may ask the Conservation agent to concur that there are no wetlands within 150' of the existing soil absorption system for a building permit for a major addition increasing flow.

1.19 VINYL-LINED ASBESTOS CEMENT (VLAC) WATER MAINS

- (1) The possibility of adverse health effects or increased cancer risks cannot be ruled out for certain individuals in certain locations exposed to tetrachloroethylene/perchloroethylene (PCE) from drinking water from VLAC pipes. The EPA & DEP health goal for PCE in drinking water is zero. Therefore,

no plan for a development that increases the number of dwellings exposed to the risks associated with VLAC pipes will be approved by the Board of Health.

1.20 VARIANCES

- (1) Variances shall be granted only when the Board of Health finds that the applicant has established that enforcement of the provision of Town of Duxbury Supplementary Rules & Regulations from which a variance is sought would be manifestly unjust, considering all the relevant facts and circumstances of the individual case **and** the applicant has established that a level of environmental protection that is at least equivalent to that provided by Town of Duxbury Supplementary Rules & Regulations can be achieved without strict application of the provision of Town of Duxbury Supplementary Rules & Regulations from which a variance is sought.
- (2) In granting variances to Duxbury Rules & Regulations where full compliance with Duxbury Rules & Regulations is not feasible, the Duxbury Board of Health shall consider the impact of the proposed system and shall vary to the least degree necessary the requirements of Duxbury Rules & Regulations so as to allow for both the best feasible upgrade within the borders of the lot, and have the least effect on public health, safety and the environment. (15.405(1))
- (3) The Duxbury Board of Health may grant variances from the provisions of 1.10(1)(a),(b),(c) MINIMUM SETBACKS, 1.11(1)(a),(b) DEPTH TO GROUNDWATER, 1.15(1) CONSTRUCTION IN FILL and 1.18(5) BUILDING PERMITS.
- (4) The Duxbury Board of Health will not grant a variance to 1.15(1) CONSTRUCTION IN FILL for new construction on vacant lots.
- (5) A request for a variance shall be in writing and submitted by a design Engineer or Sanitarian and shall make reference to the specific provision of these Supplementary Rules and Regulations for which a variance is being sought and a statement that the person requesting the variance has established that the best possible environmental protection has been achieved.
- (6) When a variance from Title 5 or Duxbury Rules & Regulations is requested the Board of Health may require the Engineer or Registered Sanitarian whose stamp appears on the plan to appear before the Board of Health at the public hearing to present the plan.
- (7) When a variance to 1.15(1) CONSTRUCTION IN FILL is requested all other provisions of 310 CMR 15.00 and Duxbury Rules & Regulations must be met. If a retaining wall is proposed, abutters shall be notified by certified mail 10 days prior to the date of the hearing. The notification shall reference the standards set forth in 1.15(2) and indicate the date, time and place where the variance will be discussed.

- (8) When a variance to 1.10(1)(b) DISTANCE TO PRIVATE WATER SUPPLY OR SUCTION LINE or 1.10(1)(c) DISTANCE TO AN IRRIGATION WELL is requested, abutters affected by the variance shall be notified by certified mail 10 days prior to the date of the hearing. The notification shall reference the standards set forth in 1.10(1)(b) DISTANCE TO PRIVATE WATER SUPPLY OR SUCTION LINE or 1.10(1)(c) DISTANCE TO AN IRRIGATION WELL and indicate the date, time and place where the variance will be discussed.
- (9) The Board of Health may continue any hearing to a certain date announced at the hearing, for reasons stated at the hearing, which may include timely receipt of additional information from the applicant or others deemed necessary by the Board in its discretion to make a determination including comments, recommendations, or action of another Department or Board.

1.21 TRANSPORTATION

- (1) Application for a Septage Hauler's Permit shall be filed on a form provided by the Board of Health and accompanied by the appropriate fee. The Duxbury Board of Health or the Agent of the Board shall issue Septage Hauler's Permits.
- (2) A Septage Hauler's Permit shall be issued upon the condition the holder of the permit shall file at the Board of Health Office reports of all pumping conducted within the Town of Duxbury providing the address of the premises pumped, the name of the owner, the date and time pumping occurred, the number of gallons pumped, the component pumped; and the date and location of the final disposal at a DEP and Duxbury Board of Health approved facility. Reports shall be on a weekly or monthly basis.
- (4) Any DEP approved septage disposal facilities used by holders of Septage Hauler's Permits issued by the Duxbury Board of Health shall provide the Duxbury Board of Health with reports giving each source of septage, the amount of septage, and the date of disposal. Reports shall be on a weekly or monthly basis.
- (5) A Septage Hauler utilizing a transfer location, as defined in 310 CMR 15.503, shall file with the Duxbury Board of Health the location, description and a copy of the written approval of the DEP and of the Board Health of the community where the transfer facility is located as part of an application for a Septage Hauler's Permit.
- (6) No transfer location or tanker storage containers shall be located within the Town of Duxbury.
- (7) The Duxbury Board of Health shall maintain a list of disposal facilities approved by both DEP and the Duxbury Board of Health. The Marshfield Wastewater Treatment Facility, a DEP approved facility constructed for use by the Town of Marshfield and the Town of Duxbury under an EPA approved grant for the co-treatment of septage, is a facility approved by the Duxbury Board of Health and

is available for disposal of septage from the Town of Duxbury by holders of Septage Hauler's Permits issued by the Duxbury Board of Health.

1.22 SEVERABILITY

If any regulation, paragraph, sentence, clause, phrase or word of these regulations shall be declared invalid for any reason whatsoever, that decision shall not affect any other provisions of these Supplementary Rules & Regulations which shall remain in full force and effect, and to this end the provisions of these Supplementary Rules & Regulations are declared severable.