WAYLAND BOARD OF HEALTH
"REGULATIONS FOR ON-SITE SUBSURFACE SEWAGE DISPOSAL SYSTEMS"

SECTION I. GENERAL REQUIREMENTS FOR WASTEWATER TREATMENT OR DISPOSAL SYSTEMS

No system or facility to be used for treating, neutralizing, stabilizing, or disposing of waste water from homes, public buildings, commercial or industrial buildings, or any other types of establishments, shall be located, constructed, altered, repaired or installed until a permit for such location, construction, alteration, repair or installation shall have been issued by the Board of Health. No building permit shall be issued until the Board of Health has approved the proposed lot and plan as suitable for human habitation and a Disposal Works Construction Permit submitted on a form supplied by the Board of Health.

No occupancy permit shall be issued for any dwelling or other building to be inhabited until the Board of Health has approved such dwelling or other building, and the lot, as suitable for human habitation.

A. In order for the Board of Health to take action on an application for a permit for the construction of such a facility or system, it is necessary that the applicant take the following steps:

1. Submit completed application for Disposal Works Construction Permit and fee payment to the Board of Health.

2. Applicant's engineer or Registered Sanitarian shall contact the Board of Health to schedule a soil testing date.

3. Submit four (4) copies of the design engineer's prepared plans and reports which include all of the data listed in Section II of these regulations. Six (6) copies of the plans and reports must be submitted if a variance from Title 5 is being requested.

4. Following Board of Health review of the plans, the applicant will be notified. If approved, one copy of the Disposal Works Construction Permit and three stamped (Board of Health Approval) copies of the plans will be returned to the applicant. If the plans are disapproved, the applicant will be notified in writing of the reason(s) for disapproval.

5. Construction of such systems or facilities shall be made by firms or individuals who have obtained a Disposal Works Installer's Permit from the Board of Health to perform such services. The installer is responsible for constructing from a Board of Health-approved plan. The installer is also responsible <u>for the quality of all work performed and for the quality of the materials used in the construction of the disposal system</u>. Inspections shall be requested by the installer through the Board of Health office. The installer shall notify the Board of Health at least one working day prior to the start of construction to arrange a preconstruction conference.

B. Prior to any construction of a septic system (for new construction or for a replacement of an existing structure), the location and elevation of the top of the foundation shall be located by a Registered Land Surveyor or Registered Professional Engineer,and shall be submitted to the board of Health on a plan bearing the seal and signature of the Registered Land Surveyor (or Registered Professional Engineer).

It is strongly recommended that this be accomplished when the foundation forms are in place in order to minimize the expense and inconvenience of correcting an improper installation.

C. Prior to the issuance of a Certificate of Compliance, a certification by the Engineer or Registered Sanitarian shall be submitted stating that the construction of the disposal system and the final grading have been done in conformance with the final approved plans and that the materials used conform to the plan specifications and all applicable regulations.

For repairs of septic systems associated with single family dwellings an as-built plan may be prepared by the installer. A construction certification shall be provided by the installer and shall accompany the as-built plan on a form provided by the Board of Health.

D. <u>DEFINITIONS:</u>

1. ALTERATION OF AN EXISTING BUILDING

The term "alteration" shall refer to either:

1. the replacement of an existing building which does not result in an increase in daily sewage flow.
2. the addition to an existing building of not more than sixty (60) percent, which may or may not result in an increase in daily sewage flow and does not change the use of the building.

2. NEW BUILDING CONSTRUCTION

The term "New Building Construction" shall refer to either:

1. the construction of a new building(s)
2. the construction of a new building to replace an existing structure
3. the change of use of an existing building
4. the construction of new addition(s) greater than sixty (60) percent of the current living space, any of which will result, in the opinion of the Board of Health, in an increase in daily sewage flow from the previous use of the property.

3. GROUND WATER TESTING SEASON

Ground water testing for subsurface soil absorption systems may be performed year round, weather permitting, using the soil testing requirements of 310 CMR for new subdivisions of less than three lots, as well as for new construction as defined in Section I. D. 2 for properties and for subdivisions of less than three lots.

In all other cases, the ground water testing season for new construction is the period between March 1st and May 31st of each year. The testing season may be extended or closed by the Board of Health as conditions allow or require. The Board of Health

reserves the right to modify test periods as conditions allow, exceptions will be made for repair of failed systems and upgrade of other existing systems. Applications for soil testing for new construction shall be received at the Board of Health office no later than April 30th of the year. Additional requests may be honored by the Director after that date only as scheduling allows.

4. PERIODIC FLOODING

Periodic flooding shall mean the flood elevation or the elevation of the accumulation of surface water in any area (isolated or bordering a resource area). The elevation shall be determined for the 100 year storm event as outlined in 310 CMR 10.57(2) or in areas of a detailed study, as indicated on the Flood Insurance Rate Maps.

5. REPAIR TO AN EXISTING SEPTIC SYSTEM

The upgrade or replacement of a subsurface disposal system or its components accepting waste water from an existing dwelling.

SECTION II. DESIGN REQUIREMENTS FOR SEPTIC SYSTEMS

THE BASIC DESIGN REQUIREMENTS FOR SEPTIC SYSTEM DESIGNS SHALL BE TITLE 5 OF THE STATE ENVIRONMENTAL CODE, 310 CMR 15.000, EXCEPT AS PROVIDED OTHERWISE IN THESE RULES AND REGULATIONS, WHICH INCLUDE MORE STRINGENT REQUIREMENTS

A. PLAN REQUIREMENTS

1. Four copies of all plans and specifications must be submitted to the Board of Health for review. Six copies of plans and specifications are required if a variance(s) from Title 5 is necessary. All plans must be stamped and signed by a Registered Professional Engineer, Registered Sanitarian or Registered Land Surveyor. This stamp and signature shall serve as the certification that the plans and specifications (including data compiled in support thereof) reasonably represent existing and proposed conditions and the plans and specifications have been completed in accordance with local and state regulations.

Plans and specifications will be accepted for review by the Board of Health only if the plans are complete and at a minimum include the following:

a. Lot or street number, street name and town atlas page and lot number

b. Designs shall include:

   1. A detail of the leaching facility layout (if needed)

   2. A locus plan from the town atlas 1,000' diameter

c. Direction of north at the top of the plan

d. Names of abutters from recent tax map including lot and/or street numbers

e. Name, address and telephone number of the designer

f. Date on which the plan is drawn and date of any revisions (list all revisions in title box of plan)

g. Existing detail (streams, open and subsurface drains, wetlands, wells, stone walls, streets, etc.) within 200 feet of the disposal system

h. Where a pump is required pump specification shall be detailed including manufacturer and model number

i. Location and elevation of foundation drain (if applicable)

j. Location, elevation and details of interceptor drains (if applicable)

2. Sufficient additional elevations shall be shown, including final grades at each of the four corners of the building, to indicate clearly how the surface drainage is to be handled. In some cases it shall be necessary to consider the effect of nearby properties. No "low spots" that allow "ponding" of rainfall runoff shall be permitted.

B. SEPTIC TANKS AND DISTRIBUTION BOXES

1. SEPTIC TANK CAPACITY

a) For multiple unit buildings (including a single family dwelling with an accessory apartment), the septic tank capacity shall be the sum of the required capacity for each dwelling unit as determined from the following table. In no case shall the septic tank capacity for each building be less than 1500 gallons.

Each Dwelling Unit:

No. of Bedrooms	Minimum Liquid Capacity (gallons)
1	500
2	750
3	900
4	1000
5	1200

For each additional bedroom, add 200 gallons

b) Tanks under pavement shall be capable of withstanding H-20 wheel loads definition as per 310 CMR 15.000, and shall be provided with heavy duty cast iron manhole frames and covers raised to finished grade.

2. ADDITIONAL SEPTIC TANK REQUIREMENTS (FOR REPAIRS TO EXISTING SEPTIC SYSTEMS ONLY):

The minimum storage capacity for a tight tank shall be 2,500 gallons. Septic tanks shall be sized to meet the tight tank requirements when the leaching facility is proposed at an elevation below an established

100 year Flood Plain as defined in the Zoning Bylaws of the town of Wayland, Section III A1.

3. DISTRIBUTION BOXES

Access: All covers shall be raised to within twelve inches of finished grade. For distribution boxes located under pavement or other permanent surface, an eighteen inch diameter cast iron manhole frame and cover raised to finished grade shall be provided. For distribution boxes located under an area subject to vehicular traffic, the boxes shall be capable of withstanding H-20 wheel loads and shall be provided with heavy duty cast iron manhole frames and covers raised to finished grade and sealed to prevent the entrance of surface water intrusion.

C. LEACHING FACILITIES:

1. Volume of Sanitary Sewage: The volume of daily sewage flow shall be determined in accordance with 310 CMR 15.203, with the following exceptions:

New Construction: Single and Multiple Dwelling Units (per bedroom)	165 Gal/day
New Construction: Full Food Service Establishments	70 Gal/seat

2. Minimum Leaching Area: The minimum leaching area to be installed for residential uses shall be determined from the following chart:

3 BEDROOMS	800 S.F.
4 BEDROOMS	900 S.F.
5 BEDROOMS	1000 S.F.

For each additional bedroom, add two hundred square feet of leaching area.

Minimum leaching area for commercial, business or industrial uses:	600 S.F.

Leach fields, leaching trenches, leaching pits and leaching galleys may be designed to Title 5 standards with the approval of the Director of the Board of Health.

3. A minimum six inch layer of sharp, coarse sand or sharp, medium gravel shall be installed in the bottom of all leaching areas when the natural material does not meet this criteria. This layer is the intermediate filter layer.

4. For systems designed to receive more than 1000 gallons per day the bottom of the leaching facility shall be at least four feet above the maximum ground water elevation and any mounding of the maximum ground water elevation which may result by an addition of the wastewater flow. Groundwater mounding calculations shall be submitted to the Board of Health for review.

5. Expansion Area and Trench Spacing: The minimum clear distance between leaching trenches shall be ten feet when the area between the trenches is utilized for the expansion area.

D. DISTANCES:

The location of disposal facilities shall be in accordance with 310 CMR 15.03(7), Title 5, and also in accordance with the following:

1. No sewage disposal system leaching area having a design flow of 1000 gallons per day or less, shall be constructed within 75 feet of any pond, stream, brook, river, swamp or wetland. The distance shall be 100 feet for a facility having a design flow of greater than 1000 gallons per day.

Such distances are considered minimum and may be increased for multiple Dwellings or higher volume sewage discharges. These distances shall be determined by the Board of Health on an individual basis, depending upon the particular circumstances.

E. FLOOD PLAINS AND LAND SUBJECT TO FLOODING:

1. For new construction, no basement floor shall be constructed less than two (2) feet above the high water level in any area subject to periodic flooding or less than two (2) feet above the maximum high ground water elevation.

2. The bottom of the leaching facility shall be constructed above the high water level in any area subject to periodic flooding.

3. No building permit, for new construction, shall be issued for any lot until the Board of Health has reviewed the proposed lot grading. All lots shall be graded so that surface water does not accumulate around a building or impact the performance of the septic system. Surface water should not be directed onto abutting property as to create an adverse drainage condition.

F. REVISIONS TO DESIGN:

The "septic system" shall be constructed in strict accordance with the approved plan. No changes may be made without prior approval of the Board of Health or its agent.

G. PUMP DESIGNS:

1. Dosing Tanks and Pump Chambers: A dosing tank or pump chamber shall be provided for all leaching systems where the volume of waste to be disposed of is in excess of 1000 gallons per day. Dosing shall alternate to separate disposal areas of equal size.

2. Volume of Dose: Each dose shall cover the bottom of the leaching facility with no more than one (1) inch of effluent. A void ratio of 50% shall be used when determining this volume.

3. Pump Chambers: For single family dwellings, pump chambers shall be sized to provide 24 hour storage capacity above the "pump on" elevation. Chambers shall be supplied with all the necessary equipment to provide for a completely automatic operation. Equipment shall include but is not limited to pumps, float switches, high water alarms and manual operating switches.

4. Forcemains: Forcemains shall be of watertight construction and shall have a minimum diameter of two (2) inches. A fluid velocity of 2 to 5 feet per second is desirable. Forcemains may need to be equipped with ball and check valves. Four (4) feet of cover over the forcemain shall be provided. Insulation shall be provided around the forcemain in areas where cover is less than four feet. When less than four feet of cover is proposed over a portion of the forcemain, the main shall be drained to the pump chamber. Thrust blocks shall be provided at all bends. Cleanouts shall be provided in forcemains longer than 100 feet.

5. Venting: The end of the leaching facility shall be vented. Vents shall be supported at the base with concrete or by other appropriate means. Distribution boxes shall be "back vented" to the pump chamber with a minimum two (2) inch PVC schedule 40 pipe.

H. SPLASH PADS:

A concrete pad shall be placed under the inlet pipe of all leaching chambers and leaching pits. A tee shall also be placed at the end of the inlet pipe.

I. WATER LINE OR SERVICE:

Water lines or services shall be located outside the over excavation of the topsoil and subsoil. Where a sewer line crosses a water line, the sewer line shall be located beneath the water line. Where this is not feasible, the Director shall determine which line shall be encased in six inches of concrete or sleeved in schedule 40 PVC pipe for a minimum of ten feet on each side of the crossing. If a PVC sleeve pipe is used the pipe shall be solvent welded to prevent infiltration.

J. CONSTRUCTION EASEMENTS:

If all required excavations, construction, fill material and grading required to comply with the state and local regulations cannot be contained within the boundaries of the lot to be serviced by the disposal system, then permanent easements on adjacent land encompassing the limits of construction shall be obtained and provided to the Board of Health before approval and final certification.

K. INSPECTIONS:

Notification to the Board of Health by the installer shall be made in accordance with Section I of these specifications. Ordinarily, there shall be an inspection upon excavation of the leaching area, when the construction has been completed except for the backfilling, and in some cases when the finished grading of the lot is completed. The entire system, including the building sewer, shall remain exposed for the second inspection, and the

distribution box shall be filled with water. In addition, a five-gallon container of water shall be available at the site of the distribution box for testing purposes.

Prior to issuance of a certificate of compliance for a subsurface sewage disposal system, a final as-built plan shall be submitted to the Board of Health. This plan shall show as a minimum:

1. Lot lines and locations of all of the buildings (including ties to lot lines) on the lot from foundation plan or certified plot plan

2. Dimension of system with ties to lot line or building

3. Location of disposal system with relation to deep test holes and percolation tests

4. Elevations of the disposal system including the top of foundation elevation

5. Location of any wells, drains or watercourses within 100 feet of disposal system and the relative distances to the disposal system shown

In the case of systems having a design flow greater than 1000 gallons per day, or for systems associated with new building construction, an as-built plan shall be prepared by the designer. A certification that such construction and final grading has been done in accordance with the approved plans and specifications shall also be submitted to the Board of Health prior to the issuance of a Certificate of Compliance.

L. HYDROGEOLOGICAL EVALUATION:

Development projects which will generate wastewater flows of 9,000 gallons per day or greater shall be required to have a hydrogeological evaluation performed by a qualified engineer or geologist, at the expense of the applicant. This evaluation will be reviewed by the Board of Health to determine that the ground and surface water is not compromised.

M. LICENSING OF INSTALLERS:

Any person intending to install a septic system in the Town of Wayland must be licensed by the Wayland Board of Health. A license will be issued by the Board to any person deemed qualified to perform such work in a responsible manner by the Board of Health Director or a majority vote of approval by the Board of Health. Qualifications shall be based on the following:

1. a minimum grade of 80% on a written test administered by the Wayland Board of Health;

2. previous experience; and

3. recommendations from other Boards of Health.

The license is renewed annually unless revoked for cause by the Director. A petition for reinstatement can be brought before the Board of Health.

SECTION III: SEVERABILITY

If any part or portion of these Rules and Regulation be adjudicated as invalid, the adjudication shall apply only to the provision(s) so adjudged, and the remaining Rules and Regulation shall be deemed valid and in full force and effect.

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