Title V Rules and Regulations Exclusive to Pembroke, MA

15.002: DEFINITIONS

Failed Subsurface Sewage Disposal System or Failed System - A system that fails to protect public health and safety or the environment as set forth in 310 CMR 15.303 or 15.304. **A septic system shall be considered to have failed when any component does not function as intended. Any septic system that causes effluent to be discharged to the surface of the ground, stream, etc. or has the septic tank pumped to remove septage more than twice in thirty (30) days or any three (3) times in a twelve month period shall be considered to have failed.**

Frimpter Method - A formula for groundwater adjustment. See High Ground Water Elevation. See Appendix B.

High Ground Water Elevation - As determined in accordance with 310 CMR 15.103, 15.104, and 15.107.

(a) Inland - The elevation above which in eight out of ten consecutive years the ground-water table does not rise. This elevation is commonly, but not invariably, reached during the months of December through April **and allowances shall be made to the ground water elevations established in "Sand and Gravel" during the time of testing in order to estimate the probable high ground level. Sand and gravel shall be defined in this regulation as a soil which during testing has a percolation rate of less than seven (7) minutes per inch. The formula for the ground water adjustment shall be as follows:**

Sh=Sc-Sr (OWc-OWmax) Owr where

Sc	**measured depth to water at the site (measured from ground surface to water level at site)**
Sh	**estimated depth to probable high water level at site.**
Owc	**measured depth to water in the observation well, which is used to correlate with the water levels of the site (Sc and OWc shall be measured in the same month. Owc is from ground level to water table and is taken from Summary of Ground Water Levels, U.S. Department of the Interior Geological Survey, Water Resource Division. The observation well which is chosen to correlate with the water levels at the site shall be located in the same type of climate and hydrogeologic environment as the site.**
Owmax	**depth to recorded maximum water level at the observation well which is recorded to correlate with the water levels at the site. (OWmax is taken from the Table of Observation Well Data prepared by the U.S. Geological Survey WRI 80-1205).**
Owr	**recorded maximum value of annual range of water level at the observation well which is used to correlate with**

the water levels at the site. (OWr is taken from Table of Observation Well Data prepared by the U.S. Geological Survey WRI 80-1205).

Sr range of water level where site is located.

The value of Sr within the formula for Sand and Gravel deposits on terraces and hillsides, and sand and gravel deposits in valley flats shall be based on a 10(0/0) percent exceedence value as determined from Figures 11 and 12 in the "Probable High Ground-Water Level in Massachusetts" publication. (See appendix "C").

For an in-depth discussion on the derivation of this formula and its use see: "Probable High Ground-Water Level in Massachusetts". U.S. Geological Survey Water Resource Investigations, Open-File report 80-1205 by Michael H. Frimpter. The required publications may be obtained from the U.S. Geological Survey - l-6l7- 565-6872.

Ground water levels in till - till shall be defined by this regulation as a soil - which during testing has a percolation rate of seven (7) minutes per inch or greater, shall be determined from ground water observation wells placed during the time of percolation tests.

The observation well shall consist of 4 inch schedule 40 PVC pipe (both solid and perforated). The observation well section placed within the ground water shall be perforated and wrapped with a filter material or backfilled with crushed stone, sand etc. which will not allow the fine soil material (silts and clay) from clogging the well. Ground water levels within the observation well shall be observed for a period of a minimum of six (6) months, of which three (3) months the groundwater levels must be measured shall be February, March and April. Measurements shall be taken by the design engineer every two (2) weeks during the six (6) month period. The observation well must have the lot number and the elevation at the top of the well printed on the well with a water resistant marker. A table showing the dates the ground water was measured, the individual conducting the measurements, the depth to the ground water from the top of the well, the elevation of the top of the well and the elevation of the ground water during each of the measurements shall be submitted to the Board of Health upon submission of the design plan and disposal works construction permit. If it is found during any time that the observation well had been damaged or vandalized a new

observation well shall be placed and measurements shall continue until the end of the observation period. Maximum high ground water elevation will then be established by the highest ground water readings encountered during the six (6) month monitoring period. If no ground water is encountered during the monitoring period, maximum high ground water will then be the bottom elevation of the pipe.

Portable Toilets - Self contained temporary toilet facilities.

Zabel Filter - A septic tank outlet tee, which consists of a series of plastic disc dam filter plates.

15.019 - DISPOSAL SYSTEM INSTALLER'S PERMIT

No person shall engage in the construction, upgrade or expansion of any on-site system without first obtaining a Disposal System Installer's Permit from the approving authority. Disposal System Installer Permits shall be issued for a period on not more than one year. The local approving authority shall issue Disposal System Installer Permits only to those persons who have demonstrated capacity or knowledge of the proper construction and installation of systems in accordance with 310 CMR 15.000. **The Board of Health will issue the Disposal System Installer Permits upon receipt of an application together with the proper fee for same**.

15.020 - DISPOSAL SYSTEM CONSTRUCTION PERMITS

(4) **No Disposal System Construction Permit will be issued for new construction unless evidence that a self-contained and properly maintained temporary toilet facility will be on site or that toilet facilities are available. Permits for the self-contained units must be obtained from the Board of Health. Written evidence that other toilet facilities are available must be approved by the Board of Health.**

(5) **Any changes made to a Disposal Works Construction Permit after approval by the Board of Health will necessitate filing a new permit and paying a new fee.**

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15.029 - CONSTRUCTION OF WELLS NEAR EXISTING SYSTEMS

(1) Before any water well, regardless of intended use, is installed or repaired in the Town of Pembroke, a well installation or repair application must be filed with the Pembroke Board of Health.

(2) No work shall commence on the proposed well or well to be repaired until a permit is issued by the Pembroke Board of Health.

(3) No one shall install or repair a water well in the Town of Pembroke unless authorized by the Pembroke Board of Health and licensed by the Comm _of Mass.

(4) No well shall be installed closer than 100 feet to any leaching facility, privy or grey water dry well.

(5) All well installation or repair applications must include a scale drawing showing the location of the proposed or present well on the lot, all septic tanks, leaching field, sewers or privies for a distance of 200 feet and all buildings for a distance of 100 feet.

(6) Before any well is connected to any building or put into use for any purpose, it shall be tested by a laboratory approved by the Commonwealth of Massachusetts for the following contaminants:

Coliform Count	**Total Alkalinity (CaCO3)**
S.P.C./ml	**Free CO2**
Total Hardness	**(CACO3)**
Color (APC units)	**Calcium (Ca)**
Sediment	**Magnesium (Mg)**
Turbidity (NTU)	**Sodium (Na)**
Odor	**Potassium (K)**
Taste	**Total Iron (Fe)**
Ph	**Manganese (Mn)**
Specific Conductance	**Silica (Si02)**
micromhos/cm	**Sulfate (SO4)**
	Chloride (Cl)
	Nitrogen - Ammonia
	Nitrogen - Nitrite
	Nitrogen - Nitrate
	Copper (Cu)

(7) The results of said test must be submitted to the Pembroke Board of Health.

(8) A permit must also be obtained from the Electrical Inspector prior to hook-up of the pump.

(9) The installation of each well must be inspected by the Health Agent before approval by the Pembroke Board of Health.

(10) All registered wells must be tested each year and the results of same must be furnished to the Pembroke Board of Health prior to July l. Failure to comply with this order will result in a fine of_$100.00 per month that the test results are not received.

(11) In addition no well of any kind (other than the replacement of a household drinking water supply well that has failed and for which town water is not available) will be permitted within the Zone II Aquifer area as identified by the IEP report and the Pembroke Department of Public Works.

(12) All new wells must show evidence that the water is of drinking quality even if intended for irrigation use only. New wells cannot draw down neighboring properties water supplies. New wells cannot pump more than 20 gallons of water per minute.

15.203 - SYSTEM SEWAGE FLOW DESIGN CRITERIA

TYPE OF ESTABLISHMENT	UNIT	GPD	MINIMUM ALLOWABLE GPD FOR SYSTEM DESIGN
(2) RESIDENTIAL			
Bed & Breakfast	per b/r	**150**	**450**
Bed & Breakfast	per b/r	**150**	1000
with restaurant open to public add	per seat	35	
Camp, resident, mess hall	per person*	10	
Camp, day, washroom and toilets	per person	10	
Camp, day, mess hall	per person	3	
Campground, showers and toilets	per site	90	
Family Dwelling, single	per b/r	**150**	**450****
Family Dwelling, multiple	per b/r	**150**	***
Family Mobile Home Park	per **b/r**	**150**	
Motel, Hotel, Boarding House	per b/r	**150**	
Retirement Mobile Home Park	per site	150	
Housing for the Elderly	per unit	150	
Work/Construction Camp	per person	**75**	

* Person in the context of 310 CMR 15.203 shall mean an individual.

** A system may be designed for flows of 300 gpd, if a restriction limiting use of the dwelling to two bedrooms is provided, as described in the definition of "bedroom" in 320 CMR 15.002.

*** The number of bedrooms in a condominium shall be as specified in the Master Deed. Establishment of bedrooms in excess of the specified number shall be considered an increase in design flow.

TYPE OF ESTABLISHMENT	UNIT	GPD	MINIMUM ALLOWABLE GPD FOR SYSTEM DESIGN
(3) COMMERCIAL			
Amusement Center	per sq.ft	2	1000
Airport	per pass.	5	150
Barber Shop/Beauty Salon	per chair		100
Bowling Alley	per alley	100	
Country Club, dining room	per seat	10	
Country Club, snack bar or lunch room	per seat	10	
Country Club, lockers and showers	per locker	20	
Doctor Office	per MD	250	
Dentist Office	per chair	200	
Factory/Industrial Plant without cafeteria	per pers.	15	
Factory/Industrial Plant with cafeteria	per pers.	20	
Gasoline Station	per isld****	75	300
with service bays	per bay	125	
Kennel/Veterinary Office	per knl	50	
Lounge/Tavern	per seat	20	
Marina	per slip	10	500
Movie Theater	per seat	5	
Non-single family/ automatic clothes wshr	per wshg machine	400	
Office building	per 1000 sq.ft.	75	200
Retail Store	per 1000 sq.ft	50	200
Restaurant	per seat	35	1000
Restaurant, thruway service area	per seat	150	1000
Restaurant, Fast Food	per seat	150	1000
Restaurant, kitchen flow (for sizing of grease trap only)	per seat	15	
Service Station/no gas	per bay	150	450
Skating Rink	per seat	5	3000
Swimming Pool	per pers.	10	
Tennis Club	per court	250	
Theater, Auditorium	per seat	3	
Trailer, dump station	per trlr	75	

*** Plus flows for bays, if any

TYPE OF ESTABLISHMENT	UNIT	GPD	MINIMUM ALLOWABLE GPD FOR SYSTEM DESIGN
(4) INSTITUTIONAL			
Church or Temple	per seat	3	
Correctional Facility	per bed	200	
Function Hall	per seat	15	
Gymnasium	per participant	25	
Gymnasium	per spectator	3	
Hospital	per bed	200	
Nursing Home/Rest Home	per bed	150	
Public Park, toilet waste only	per pers	5	
Public Park, bathhouse, showers, flush toilets	per pers	10	
(5) SCHOOLS			
Elementary School w/o cafeteria, gymnasium or showers	per pers	5	
Elementary School w/cafeteria but no gymnasium w/showers	per pers	8	
Elementary School w/cafeteria, gymnasium and showers	per pers.	10	
Secondary/Middle School w/o cafeteria, gymnasium or showers	per pers.	10	
Secondary/Middle School w/cafeteria but no gymnasium or showers	per pers	15	
Secondary/Middle School w/cafeteria, gymnasium and showers	per pers	20	
Boarding Schools, Colleges	per pers.	65	

15.211 - MINIMUM SETBACK DISTANCES

	Septic Tank	Soil Absorption System
Property Line	10	10
Cellar Wall or Swimming Pool (inground)	10	20
Slab Foundation	10	10
Water Supply Line (pressure)	10(1)	10(1)
Surface Waters (except wetlands)	25	**75**
Bordering Vegetated Wetland(BVW), Salt Marshes, Inland and Coastal Banks	25	**75(5)**

Surface Water Supply, Reservoirs and Impoundments	400	400
Tributaries to Surface Water Supplies	200	200
Wetlands bordering Surface Water Supply or Tributary thereto	100	100
Certified Vernal Pools	50	100(2)
Private Water Supply Well or Suction Line	50	100
Public Water Supply Well	(2)	(2)
Open, Surface or Subsurface Drains which discharge to Surface Water Supplies or tributaries thereto	50	100
Other Open, Surface or Sub surface Drains (excluding foundation drains) which intercept seasonal high groundwater table (3)	25	50
Other Open, Surface or Sub- surface Drains (excluding foundation drains)	5	10
Leaching Catch Basins/Dry Wells	10	25
Downhill Slope	n/a	15(4)

(5) Distance to wetlands must be observed as required in the "rules". 75 feet from house sewage system and 100 feet from commercial or multiple dwellings of more than two units. If less than 100 feet or any work within 100_feet of the wetlands a Notice of Intent must be filed

15.220 - PREPARATION OF PLANS AND SPECIFICATIONS

(1) Every system shall be designed by a Massachusetts Registered Professional Engineer or a Massachusetts Registered Sanitarian provided that such Sanitarian shall not design a system designed to discharge more than 2,000 gallons per day pursuant to 310 CMR 15.203. Any other agent of the owner may prepare plans for the repair of a system designed to discharge not more than 2,000 gallons per day pursuant to 310 CMR 15.203 provided they are **reviewed by a Massachusetts Registered Professional Engineer** or by a Massachusetts Registered Sanitarian and approved by the approving authority.

(2) Every plan submitted for approval must be dated and bear the stamp and signature of the designer. **Four (4) plans shall be submitted for approval of new septic systems to the Board of Health. All septic plans that are submitted for approval will require that photographs of the lot and perc holes accompany said submission. The Health Agent will advise at time of percolation what photographs are required to be submitted by either the design engineer or the developer. Upon review the Board of Health may require on new construction to have the property corners, the house corners, and the septic system clearly indicated at the site by survey**

stakes (extending above the ground surface and marked accordingly) prior to the permit being issued.

(4) Every plan for a system shall be of suitable scale **(one inch = 20 feet or fewer for details of system components)** and shall include depiction of: …..

(u) the street number and lot number, if any, **to be marked on a two (2) square foot sign for identification** of the facility; and

15.221 - GENERAL CONSTRUCTION REQUIREMENTS FOR ALL SYSTEM COMPONENTS

(5) All piping shall be a minimum of Schedule **40 PVC except Schedule 20 PVC may be used inside leaching components.**

(8) Where any portion of any component is to be placed at or below the ground-water table, all system tankage, including the septic tank, distribution box, dosing chamber or grease trap, shall be designed with counter weights, or ballast **(no metal ties to be allowed)** and a buoyancy calculation for the entire volume of each component, when empty, shall be performed and submitted with the system plans and specifications.

15.222 - BUILDING SEWERS

(3) The building sewer shall be constructed of corrosion resistant material and equipped with watertight joints; schedule 40 PVC pipe or the equivalent. **Cast-iron will not be allowed in residential applications.**

(6) The building sewer shall be designed to provide a minimum velocity of sewage flow of two feet per second when flowing full. This requirement is met when a four-inch building sewer is laid at a **slope of 0.02 (1/4 inch per foot).**

15.223 - SEPTIC TANKS

(4) Vertical cylindrical tanks shall have a minimum diameter of **eight** feet.

(5) Horizontal cylindrical tanks shall have a minimum length of **eight** feet and a minimum width at the liquid surface of three feet.

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15.227 - PLACEMENT AND CONSTRUCTION OF TEES

(1) Inlet tee shall be of cast-iron, Schedule 40 PVC, or cast-in-place concrete and shall extend a minimum of six inches above the flow line of the septic tank and be on the centerline of the septic tank located directly under the clean-out manhole. **The outlet tee shall consist of a Zabel Filter Model_A100 or equal**

(2) **In septic tanks with a liquid depth greater than six feet** the minimum separation between inlet and outlet tees shall be no less than the liquid depth of the septic tank and shall be the longest direction (which shall not include the diagonal distance) across the tank in plan view

(6) The inlet tee shall extend a minimum of ten inches below the flow line. The outlet shall be provided with a tee extending below the flow line in accordance with the following table:

Liquid Depth in Septic Tank	Depth of Outlet Tee below Flow Line *

*** Zabel Filter will require extender to meet the above requirements**

15.230 - PRETREATMENT UNITS - GREASE TRAPS

(5) The inlet tee shall extend to the mid depth of the tank. The outlet tee shall **consist of a Zabel Filter for grease with extender** within 12 inches of the bottom of the tank. Tees shall be cast-iron or Schedule 40 PVC and properly supported by a hanger, strap or other device.

(13) All new construction that requires a grease trap must use a grease separator system or equal. If a repair requires updating of the grease system it will be the determination of the Health Agent if a grease separator system will be required.

(14) Grease traps shall be inspected monthly and shall be cleaned when the level of grease is 25 percent of the effective depth of the trap or at least every 3 months.

15.231 - DOSING CHAMBERS AND PUMPS

(9) All pumps must be equipped with an alarm (**audible and light**) located in the building served which is powered by a circuit separate from the circuit to the pumps.

(10) Minimum size of the force main shall be two (2) inches but the last ten (10) feet before the Distribution Box shall be no less than three inches

15.232 - DISTRIBUTION BOXES

(3) The distribution box shall conform to the following design specifications:

(c) Outlet distribution lines shall be level for a minimum of the first two feet of their length. **There shall be at least two more outlets than the required number to feed each distribution line individually.**

15.241 - SYSTEM VENTING

Systems to be located either in whole or in part under driveways, parking or turning areas or other areas of impervious material shall be designed to achieve proper venting of the system according to the following criteria:

(a) …..

(b) the vent pipe shall be designed to prevent entrance of animals or precipitation **by use of stainless steel or aluminum screen located within the horizontal portion** and shall be backfilled tightly to prevent seepage of surface water into the system;

15.247 – AGGREGATE

(2) A minimum of a **three** inch layer of double washed stone ranging from 1/8 to l/2 inch diameter and free from iron, fines and dust in place shall cover the base aggregate to prevent intrusion of fine textured soils to the system.

15.252 – TRENCHES

(4) The area between trenches may **not** be designated as system reserve area. **A reserve area sufficient to replace the capacity of the original leaching area must be provided. The reserve area must be located a minimum of 10 feet from primary area**.

(7) Minimum diameter of each distribution line shall be **four** inches.

(10) Distribution lines connecting the distribution box or pump chamber to the soil absorption system distribution lines shall be unperforated with watertight connections and joints. **The ends of the pipe shall be capped with a watertight cover unless the pipes are vented**.

15.252 - BEDS OR FIELDS

(2) Bed or field specifications:
(h) Distribution lines - refer to 310 CMR 15.251(5) through (**11**) (Trenches).

15.253 - PITS, GALLERIES, OR CHAMBERS

(1) Pit, Gallery or Chamber design specifications:
(b) Surrounding Aggregate - 1 foot minimum per side
4 feet maximum per side
6 inch minimum below unit

15.290 - SHARED SYSTEMS

(2) Any application for use of a shared system shall include the following:
(g) **Each individual unit must have their own 1500 gallon septic tank with Zabel Filter or equal, and distribution box although may share a common leaching area**.

15.303 - SYSTEMS FAILING TO PROTECT PUBLIC HEALTH AND SAFETY AND THE ENVIRONMENT

1. If one or more of the following conditions exist as documented by inspection by an approved System Inspector, or determined by the local approving authority or the Department, the system is failing to protect public health and safety and the environment and shall be upgraded in accordance with the timeframes of 310 CMR 15.305(1) and the standards of 310 CMR 15.404 and 15.405:
   5. the septic tank or cesspool requires pumping **three** times a year or more;

(b) Criteria applicable to cesspools and privies:

1. A cesspool or privy is located:
   c) within **100** feet of a private water supply well;

2. Evaluation of cesspools and privies near water resources:
A cesspool or privy is failing to protect public health and safety and the environment if any portion of it is within any of the dimensional criteria below…..
   (a) within **75** feet of a surface water
   (b) within **75** feet of a bordering vegetated wetland or a salt marsh

(c) Evaluation of systems with septic tanks and soil absorption systems near drinking water supplies:
   3. within **100** feet of a private water supply well;

15.340 - APPROVAL OF SYSTEM INSPECTORS

(9) System Inspectors performing system inspections in the Town of Pembroke must be licensed by the Board of Health and are subject to a fee for such license. License to be renewed on a yearly basis.

15.351 - SYSTEM PUMPING AND ROUTINE MAINTENANCE

(1) Every septic tank or cesspool shall be pumped whenever necessary to ensure proper functioning of the system. Pumping is required whenever the top of the sludge or solids layer is within 12 inches or less of the bottom of the outlet tee or the top of the scum layer is within two inches of the top of the outlet tee or the bottom of the scum layer is within two inches of the bottom of the outlet tee. Pumping frequency is a function of use, although pumping is typically necessary at least once every three years and recommended on an annual basis for a system with a domestic garbage grinder. Without limiting the foregoing, a septic tank or cesspool shall be pumped when the owner or operator is required to do so by the local approving authority or the Department. Whenever a septic tank or cesspool is pumped, its condition shall be noted on a system pumping form approved by the Department, and the results shall be submitted to the local approving authority. Such notation of the system's condition on the system pumping form shall not constitute a System Inspection Report submitted to the local approving authority in accordance with 310 CMR 15.340. **A septic system that is pumped more than three times in one year is considered a failed system.**

(2) Grease traps shall be inspected monthly and shall be cleaned by a licensed septage hauler whenever the level of grease is 25% of the effective depth of the trap, or at least every three months, whichever is sooner**. Reports of the**

pumping of all grease traps must be sent to the Board of Health on a monthly basis by the septage hauler.

15.502 – TRANSPORTATION

(7) **All licensed septage haulers must submit monthly lists of all septage pumped in the town by location and number of gallons and indicate if pumped from a septic tank or a cesspool.**

Appendix D -

SEPTIC SYSTEM CERTIFICATION LETTERS

If a septic system is to be placed within an excavation and fill area, then the Design Engineer must certify that the excavation and fill has been completed in accordance with the approved plans. This certification must be received by the Board of Health of its Agent before beginning the construction of the leaching facility. The certification letter shall be as follows:

> "I certify that all impervious material under and within _____ feet of the leaching area as shown on the approved plans has been removed and replaced with clean sand having a percolation rate of less than 2 minutes per inch."

Upon completion of the septic system, the Design Engineer shall certify that the septic system has been constructed in accordance with the approved plans and all State and local regulations. This certification must be submitted to the Board of Health or its Agent before a final inspection of the septic system is completed. The certification letter shall be as follows:

> "I certify that the septic system installed at the above location has been constructed in accordance with Title V of the State Sanitary Code – The Board of Health Rules and Regulations of the Town of Pembroke – and the plans approved by the Board of Health."

Appendix G –

BOARD OF HEALTH REGULATION - 95-03-27A

The Board of Health, Town of Pembroke, Massachusetts, as authorized by Chapter 111, Section 31, General Laws, as amended hereby adopts the following regulation to become effective immediately:

STUMPS

No stumps shall be buried on any lot for any reason. All stumps must be removed from site and disposed of at a proper disposal area.

Proof of disposal must be furnished to the Board of Health before a Certificate of Compliance can be issued.

BOARD OF HEALTH
Wilson E. Whittaker Chairman
Frederick A. Leary - Clerk
Margaret Balzotti

Appendix H –

BOARD OF HEALTH REGULATION - 95-03-27B

The Board of Health, Town of Pembroke, Massachusetts, as authorized by Chapter 111, Section 31, General Laws, as amended hereby adopts the following regulation to become effective immediately:

BARBER SHOPS/BEAUTY SALONS

All barber shops and beauty shops/salons must install a chemical rinse sink with a holding tank as approved by the Department of Environmental Protection to contain the chemical waste produced by solutions used in hair perming, etc.

All waste collected must be disposed of by a licensed industrial/chemical waste hauler at a proper facility for such waste and notice of same must be furnished to the Board of Health.

BOARD OF HEALTH
Wilson E. Whittaker - Chairman

Title V Rules and Regulations Exclusive to Pembroke, MA

Frederick A. Leary - Clerk
Margaret Balzotti

Addendum –

BOARD OF HEALTH REGULATION 97-10-27

The Board of Health, Town of Pembroke, Massachusetts, as authorized by Chapter 111, Section 31, General Laws, as amended hereby adopts the following regulation to become effective November 15, 1997:

The Board of Health and its Agent must be notified in advance of the address and date of all Title 5 inspections scheduled to be done in the town of Pembroke. Failure to notify the Board of Health and its Agent will result in non-acceptance of the Title 5 inspection report by the Pembroke Board of Health.

BOARD OF HEALTH REGULATION 97-08-05

The Board of Health, Town of Pembroke, Massachusetts, as authorized by Chapter 111, Section 31, General Laws, as amended hereby adopts the following regulation to become effective August 25, 1997:

"FAILED" TITLE 5 INSPECTIONS

In the case of a septic system that has been determined to have failed an inspection by a state certified and locally licensed Title 5 inspector, the inspector must request the presence of the Pembroke Health Agent to confirm the failure.

Rationale: It has come to the attention of the Pembroke Board of Health that some homeowners have been told that their septic system is a failed system without a complete and thorough inspection.

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BOARD OF HEALTH REGULATION 97-04-07

The Board of Health, Town of Pembroke, Massachusetts, as authorized by Chapter 111, Section 31, General Laws, as amended hereby adopts the following regulation to become effective April 7, 1997:

GROUNDWATER MONITORING WELLS

At the discretion of the Health Agent, installation of a monitoring well may be required during percolation tests or observation holes for the purpose of monitoring groundwater levels between the time of the tests and septic system installation.

Also, with the permission of the Town and/or homeowner and at the discretion of the Health Agent, monitoring wells may be installed at strategic locations in town to monitor groundwater levels. Wells will be maintained b the Town of Pembroke.

BOARD OF HEALTH REGULATION 96-12-16

The Board of Health, Town of Pembroke, Massachusetts, as authorized by Chapter 111, Section 31, General Laws, as amended hereby adopts the following regulation to become effective February 1, 1997:

SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION

Necessary repairs must be completed **before** the transfer of property when a Subsurface Sewage Disposal System Inspection Report results in a “Conditional Pass”.

BOARD OF HEALTH REGULATION 96-09-30

Effective for all plans for new construction and repairs received on or after November 1, 1996:

310 CMR SECTION 15:220: PREPARATION OF PLANS AND SPECIFICATIONS

(4) Every plan for a system shall be of suitable scale (<u>one inch = 20 feet or fewer for details system components</u>) and shall include depiction of:

<u>(w) location of roof drains and any dry wells for house drainage. Also, perimeter and subdrains within and abutting the house foundation and discharge points.</u>

Title V Rules and Regulations Exclusive to Pembroke, MA

BOARD OF HEALTH REGULATION 96-04-29

The following is an addition to CMR 15.220 (Title 5) and is effective for all plans for new construction received on or after July 15, 1996:

(1)…**All plans for "new construction" subsurface disposal systems shall be stamped by both a Registered Land Surveyor as well as either a Registered Professional Engineer or Registered Sanitarian in the Commonwealth of Massachusetts. The following note should be included on every "new construction" plan: "A property line survey and topographic survey of the entire lot has been completed by (name of RLS), a Registered Land Surveyor, within the last six months**.

BOARD OF HEALTH REGULATION 95-07-24
(AMENDED TO REGULATION 97-07-14)

The Board of Health, Town of Pembroke, Massachusetts, as authorized by Chapter 111, Section 31, General Laws, as amended hereby adopts the following regulation to become effective immediately:

PRIVATE WELL TESTING

To ensure the proper installation and maintenance of private water wells in the town of Pembroke in order to protect the public health, the following well installation regulations was adopted September 22, 1987 and amended July 24, 1995 under the authority granted by M.G.L. 111:31; 122A; 160; and also 310 CMR 15.029 and 310 CMR 14.07-14.22:

1) Before any water well, regardless of intended use, is installed or repaired in the Town of Pembroke, a well installation or repair application must be filed with the Pembroke Board of Health. **All permits will be issued in the name of the licensed well installer.**

2) No work shall commence on the proposed well or well to be repaired until a permit is issued by the Pembroke Board of Health.

3) No one shall install or repair a water well in the Town of Pembroke unless authorized by the Pembroke Board of Health and licensed by the Commonwealth of Massachusetts.

4) No well shall be installed closer than 100 feet to any leaching facility, privy or grey water dry well.

5) All well installation or repair applications must include a scale drawing showing the location of the proposed or present well on the lot, all septic tanks, leaching fields, sewers or privies for a distance of 200 feet and all buildings for a distance of 100 feet.

6) Before any well is connected to any building or put into use for any purpose, it shall be tested by a laboratory approved by the Commonwealth of Massachusetts for the following contaminants:

Coliform Count	Total Alkalinity (CaCo)
S.P.C./ml	Free CO
	Total Hardness (CACO)
Color (APC units)	Calcium (Ca)
Sediment	Magnesium (Mg)
Turbidity (NTU)	Sodium (Na)
Odor	Potassium (Mg)
Taste	Total Iron (Fe)
PH	Manganese (Mn)
Specific Conductance	Silica (SiO)
Michromhos/cm	Sulfate (SO)
	Chloride (CI)
	Nitrogen – Ammonia
	Nitrogen – Nitrite
	Nitrogen – Nitrate
	Copper (Cu)

7) The results of said test must be submitted to the Pembroke Board of Health.

8) A permit must also be obtained from the Electrical Inspector prior to hook-up and operation of pump.

9) The installation of each well must be inspected by the Health Agent before approval by the Board of Health.

10) All private wells must be tested each year and the results of same must be furnished to the Pembroke Board of Health prior to September 1. Failure to comply with this order will result in a fine of $100.00 per month that the test results are not received.

Title V Rules and Regulations Exclusive to Pembroke, MA

BOARD OF HEALTH REGULATION – 94-12-05A

The Board of Health, Town of Pembroke, Massachusetts, as authorized by Chapter 111, Section 31, General Laws, as amended hereby adopts the following regulation to become effective immediately:

LOT IDENTIFICATION

Each lot for which an application is submitted shall be identified by a sign of a minimum size of two square feet. The sign shall be conspicuously posted on the property, identifying the lot number so that it is legible from the street.

BOARD OF HEALTH
Wilson E. Whittaker – Chairman
Frederick A. Leary – Clerk
Margaret Balzotti

BOARD OF HEALH REGULATION – 94-12-05B

The Board of Health, Town of Pembroke, Massachusetts, as authorized by Chapter 111, Section 31, General Laws, as amended hereby adopts the following regulation to become effective immediately:

SUBSURFACE SEWAGE DISPOSAL PLAN

Each subsurface sewage disposal plan submitted to the Board of Health for review shall be drawn on a 1” = 2’ scale.

BOARD OF HEALTH
Wilson E. Whittaker – Chairman
Frederick A. Leary – Clerk
Margaret Balzotti

Title V Rules and Regulations Exclusive to Pembroke, MA

BOARD OF HEALTH REGULATION – 94-12-05C

The Board of Health, Town of Pembroke, Massachusetts, as authorized by Chapter 111, Section 31, General Laws, as amended hereby adopts the following regulation to become effective immediately:

PICTURES WITH PLANS

All future septic plans that are submitted for approval will require that photographs of the lot and perc holes accompany said submission. The Health Agent will advise at time of percolation what photographs are required to be submitted by either the engineer or developer.

BOARD OF HEALTH
Wilson E. Whittaker – Chairman
Frederic A. Leary – Clerk
Margaret Balzotti

BOARD OF HEALTH REGULATION – 94-11-10

The Board of Health, Town of Pembroke, Massachusetts, as authorized by Chapter 111, Section 31, General Laws, as amended hereby adopts the following regulation to become effective immediately:

PORTO-POTTIES

Effective immediately on any new construction the builder or developer must have a porto-pottie or similar approved facility installed on site until the completion of the project. All such temporary facilities must be licensed and registered with the Board of Health.

BOARD OF HEALTH
Wilson E. Whittaker – Chairman
Frederick A. Leary – Clerk
Margaret Balzotti

BOARD OF HEALTH REGULATION – 94-03-14

Title V Rules and Regulations Exclusive to Pembroke, MA

The Board of Health, Town of Pembroke, Massachusetts, as authorized by Chapter 111, Section 31, General Laws, as amended hereby adopts the following regulation to become effective immediately:

SEPTIC SYSTEMS

No septic system shall be located on any other lot than that parcel which the system is intended for.

BOARD OF HEALTH
Joseph P. Keegan – Chairman
Wilson E. Whittaker – Clerk
Frederick A. Leary – Member

BOARD OF HEALTH REGULATION – 93-08-23

The Board of Health, Town of Pembroke, Massachusetts, as authorized by Chapter 111, Section 31, General Laws, as amended hereby adopts the following regulation to become effective immediately:

REPAIRS TO SEPTIC SYSTEMS

All as-builts for repairs to septic systems must contain the following information:

- Lot lines and street lines
- All existing wells within 100 feet of the septic system
- Grades and inverts at the D-box, septic tanks and house
- Length of all pipes and slope of all pipes
- Any wetlands within 100 feet of the septic system should be noted.

BOARD OF HEALTH
Joseph P. Keegan – Chairman
Wilson E. Whittaker – Clerk
Stanley R. Fogg – Member

BOARD OF HEALTH REGULATION – 90-06-04

The Board of Health, Town of Pembroke, Massachusetts, as authorized by Chapter 111, Section 31, General Laws, as amended hereby adopts the following fee schedule for Disposal Works Permits and Septic Plan Review to become effective immediately:

FLOW RATE Gallons per day	FEE
Up to 1000	$ 75.00
1000 up to 5000	150.00
5000 up to 10,000	300.00
10,000 and over	600.00

BOARD OF HEALTH
Phillip H. Spath – Chairman
Eugene V. O'Connor – Clerk
Albert E. Wood – Member

BOARD OF HEALTH REGULATION – 89-09-13

The Board of Health, Town of Pembroke, Massachusetts, as authorized by Chapter 111, Section 31, General Laws, as amended hereby adopts the following regulation effective immediately:

Any resident applying for a building permit for any improvements must provide proof that the current septic tank or cesspool has been pumped within the last two years. The Board of Health will not review the application until such time as this information is furnished together with a diagram of the property with ties showing location of tank or system.

BOARD OF HEALTH
Phillip H. Spath – Chairman
Priscilla A. Beck – Clerk
Eugene V. O'Connor – Member

BOARD OF HEALTH – 88-01-12

Change #1 **Water Use** to read: 200 gallons per day per **bedroom**.

(Change voted by Board 1/19/88)

Title V Rules and Regulations Exclusive to Pembroke, MA

BOARD OF HEALTH REGULATION – 88-01-12

SEPTIC SYSTEM REQUIREMENTS FOR MULTI-UNIT DEVELOPMENTS

NOTE: All terms defined here are printed in **BOLD TYPE.**
All septic systems must meet any and all requirements of Title 5 and Pembroke Regulations, which are not specifically addressed in this regulation, such as perc rates, water table elevations, etc.

DEFINITIONS:

ACRE 40,000 square feet of land – "a builder's acre"

BEDROOM An sleeping room or other room such as a den, library, play room, sitting room or family room, which is or could easily be used as permanent sleeping quarters

BUILDING A single structure containing at least one **unit**

COMPLEX One or more **buildings** comprising an entire multi-unit development

DEVELOPMENT SITE A parcel of land under one ownership, dedicated to a multi-unit **complex**, comprising <u>one lot</u> of land as described within its recorded deed, which can never be separated from said **complex**, subdivided or modified in an way which could create additional demands on ground water

DRY ACRE An acre of real estate which does not contain any **wet area**

LEACHING ACRE A **dry acre**, basically rectangular in shape, approximately three times as long as wide, with the length running parallel to the flow of ground water, designed to support one **shared leaching facility** located in the upstream (ground water) end of said acre, installed perpendicular to ground water flow

LEACHING AREA 200 square feet per **bedroom** with a minimum size of 1000 square feet

RESIDENTIAL UNIT OR UNIT One single family dwelling

SEPTIC TANK One (1) 1500-gallon tank per **unit**

SHARED LEACHING FACILITY A leaching facility (pits, galleys, trenches, field or other such device) serving more than one **residential unit** with a maximum capacity of twenty (20) **bedrooms** (4,000 square feet **leaching area** and 2,200 gallons of water per day)

WATER USE 150 gallons per day per **bedroom**

WET AREA Any area of real estate determined by the Pembroke Conservation Commission as being in wetlands, watershed protection district or flood plain.

SYSTEM REQUIREMENTS

Total septic system density or impact on ground water is not to exceed five (5) **bedrooms** per **dry acre** within the **development** site.

The area within a **leaching acre**, which is outside the distances as described in 310 CMR 15.03 (7) or Pembroke Regulations may be utilized as defined.

EXAMPLES:

If there are 40 **dry acres** on a **development site** then the site would support a **complex** with a total of 200 **bedrooms** and require 10 **leaching acres**.

A 70-**acre** parcel that contains 30 **acres** of **wet area**:

70	Total **acres** of **development site**
-30	**Acres wet area**
40	**Dry acres** available for development
X5	**Bedrooms** per **dry acre**
200	Total **bedrooms** in **complex**
/20	Maximum of 20 **bedrooms** per **shared leaching facility**
10	**Leaching acres**

A 150-acre parcel that contains 35 **acres** of **wet area**:

150	Total **acres** of **development site**
-35	**Acres wet area**
115	**Dry acres** available for development
X5	**Bedrooms** per **dry acre**
575	Total **bedrooms** in **complex**
/20	Maximum of 20 **bedrooms** per **shared leaching facility**
28.75	(29) **Leaching acres**

Title V Rules and Regulations Exclusive to Pembroke, MA

A developer could build any combination of **units**, which would total the maximum number of **bedrooms** in any configuration acceptable to zoning and/or other regulations.

This regulation becomes effective immediately.

BOARD OF HEALTH REGULATION – 87-11-03

Effective December 1, 1987, any changes made on Disposal Works Permits after approval by the Board of Health will necessitate filing a new permit and paying a new fee.

Rationale: Many permits are being issued in the name of one installer and when the inspection is done by the Health Agent, it is found that a new installer has done the system and that the Board of Health is not being informed of changes prior to the start of same. This means that much additional paperwork has to be done.

BOARD OF HEALTH REGULATION – 99-09-28

Effective October 1, 1999, if the Health Agent or a Board member upon inspection of a failed septic system determines at that time that even one more “accidental” overflow could be a public health threat, he may issue orders that system repairs begin immediately and forego the *two (2) years with pumping* as per Title V regulations.