### GENESEE COUNTY SEWAGE DISPOSAL CONSTRUCTION STANDARD



### PLEASE NOTE: MAJOR CHANGES ARE HIGHLIGHTED IN YELLOW.

#### TABLE OF CONTENTS

Section	Desci	ription	Page
1.0	Introd	duction and Purpose	04
Section Section	1.1 1.2	Introduction Purpose	04 04
2.0	Autho	ority and Administration	04
Section	2.1	Authority	04
3.0	<u>Requ</u>	irements for On-Site Disposal Systems	05
Section	3.1	Specification	05
Section	3.2	Site Plan Requirements	05
Section	3.3	Septic Tanks (General)	05
Section	3.31	Additional requirements for Concrete Tanks	06
		(Pre-Cast)	
Section	3.32	Polymer or Plastic Tanks	06
Section	3.33	Special Tanks	07
Section	3.34	Minimum Capacities	07
Section	3.4	Dosing Tanks	07
Section	3.5	Final Disposal Piping	08
Section	3.6	Aggregate	09
Section	3.7	Final Disposal Area	09
Section	3.8	Minimum Isolation Distances	09
Section	3.9	Construction and Installation Practice/	
		Procedure	10
4.0	Gene	ral Requirements for Pressure Distribution	13
Section	4.1	Plans Submitted	13
Section	4.2	Reduced Size and Maximum loading rate	13
Section	4.3	Land Division/Site Condominiums/Parcels	
		Less than 1 acre	13

5.0	Gene	eral Requirements For Alternative Technology	13
5.1	5.1	Experimental Sewage Disposal Facilities	14
6.0	<u>Privi</u>	es and Similar Toilet Devices	14
Section	6.1	Location	14
Section	6.2	Depth	14
Section	6.3	Construction	14
Section	6.4	Maintenance	15
7.0	Com	posting Toilets	
Section	7.1	General	15
Glossary o	of Defin:	itions	16

### GENESEE COUNTY SEWAGE DISPOSAL CONSTRUCTION STANDARD

#### SECTION 1.0 – INTRODUCTION AND PURPOSE

#### **SECTION 1.1 INTRODUCTION**

The most common method of on-site subsurface sewage disposal in Genesee County is the septic tank and drain field system. The proper function of a septic system depends on many variables, such as soil condition, depth, rainfall, grading, surface vegetation, design, operation, and family size.

These requirements cover aspects of system planning, materials, sizing, design, construction, and other factors influencing the system, such as maintenance and water conservation. All septic tank and disposal field systems shall be constructed in accordance with accepted public health practice, be of durable, serviceable materials and be installed in a workmanlike manner.

#### **SECTION 1.2 PURPOSE**

It shall be the purpose of these standards to set forth design and construction criteria for on-site sewage disposal systems based upon commonly recognized engineering and public health practices to ensure that systems when installed are sound, functional, meet minimum acceptable requirements, and protect the public health.

#### **SECTION 2.0 - AUTHORITY AND ADMINISTRATION**

#### **SECTION 2.1 AUTHORITY**

On-site sewage disposal systems approved for installation under authority of Chapter VI of the Genesee County Environmental Health Regulations ("the Regulations") shall meet the construction standards and criteria as set forth herein. These criteria, standards and specifications are hereby adopted pursuant to Section 6.60 of Chapter VI of the Regulations and pursuant to authority conferred upon local health departments by the Public Health Code, and are incorporated by reference into the Regulations.

The purpose of the survey and permit program is to determine and develop specifications that will result in satisfactory performance throughout the life of the system permitted by the Health Department. Construction standards shall be the general requirements.

#### SECTION 3.0 -REQUIREMENTS FOR ON-SITE DISPOSAL SYSTEMS

#### **SECTION 3.1 SPECIFICATION**

The following specifications shall be the design, sizing, and construction criteria for sewage disposal systems for private single and two-family dwellings. Sewage disposal systems for multiple, or commercial establishments shall conform to the "Michigan Subsurface Sewage Disposal Criteria. Parcels less than one acre, Condominiums, and Platted Subdivisions shall conform to the Michigan Department of Environment, Great Lakes and Energy Administrative Rules (R. 560.401 to 560.428) which are incorporated by reference in these standards. Plans, specifications, and other data required by these Standards or by the Department for any sanitary waste disposal system shall be submitted for approval to the Genesee County Health Department prior to obtaining a building permit and shall be the responsibility of the installer.

#### SECTION 3.2 SITE PLAN REQUIREMENTS

A site plan of the proposed development approved by the Health Department is required prior to issuing the permit. The site plan shall be drawn to scale and include lot size, location of house, septic system, well, any adjacent wells, other landmarks, any surface waters, and location of tile field reserve area. Slope and direction of surface water runoff, if known, shall be included. The Health Department may require data on any other proposed features, such as outbuildings, pools, patios, etc. In cases where, in the judgment of the Health Officer, geological, topographical or structural features require a unique design or site development characteristic, a site plan prepared by a professional engineer, architect or sanitarian registered in the State of Michigan, may be required.

#### SECTION 3.3 SEPTIC TANKS (General)

<u>Compartmentalization</u> - Septic tanks shall be compartmentalized, or installed in series, with the first compartment affording two-thirds (2/3) of total capacity. The tank shall have a liquid depth of not less than 4'. The entire primary treatment system shall permit at least a 24-hour retention time. Septic tanks shall have a lid over each compartment large enough to facilitate cleaning of the tank. If the septic tank manhole exceeds 18" below finish grade, a manhole riser must be provided to bring the clean out cover to finished grade.

<u>Design and Construction Methods</u> - Septic tank design, construction methods and material used in fabricating the septic tank shall be approved by the Health Department prior to installation. In general, design specifications found in the current edition of the "NPCA" Best Practices Manual for Precast Concrete onsite Wastewater Tanks and American Society for Testing and Materials specifications for pre-cast concrete septic tanks, ASTM C 1227-07c, will apply as a guide. Septic tanks are to be installed in a level position and rendered watertight. Septic tanks used in Genesee County shall be legibly marked with its liquid capacity readily visible, or the installer shall provide the Health Officer with a copy of the septic tank purchase receipt indicating the tank's liquid capacity prior to the Health Department's final approval.

<u>Maintenance</u> - Septic tanks shall be pumped periodically and as necessary to minimize accumulations of sludge and scums which, when carried over into the tile field, reduce the life of the system. Under normal conditions, it is recommended that septic tanks be inspected annually and pumped at least every three years.

<u>Inlets and Outlets</u> - Sewer lines from the building to a septic tank shall be under the authority of the Plumbing Inspector. The bottom of the inlet into the septic tank shall be at least two (2) inches above the operating water level of the tank. The inlet must be so designed to permit gas above the liquid level to pass through the line and out the vent pipe servicing the sewer line leading to the tank. A straight inlet shall be provided to prevent clogging. The inlet to a septic tank shall be designed in such a manner as to prevent turbulence and pass-through velocities, which would result in carry-over of particulates. All pipe connections to a septic tank shall be sealed watertight with roofing tar or equivalent. The outlet shall be designed and constructed to permit withdrawal of liquid from the middle third of the depth of the liquid in the tank. The outlet shall be a minimum of 4" in diameter. The pipe from the septic tank outlet, through the header shall be glued Schedule 40 pipe and fittings, laid on compacted ground. (SDR 35 may be used for the header).

<u>Effluent Filter</u> - The outlet of the septic tank shall be fitted with an effluent filter, which is readily accessible for routine maintenance.

<u>Location</u> - No septic tank shall be located where it is inaccessible for cleaning or inspection purposes, nor shall any structure be placed over any existing tank making the same inaccessible for cleaning and inspection purposes. Septic tanks shall be located on the same side of a building that the sewer line leaves the wall of the structure, if possible. If not, no more than two 45 degree elbows or, one long sweeping 90 degree elbow shall be used to reach the inlet of the septic tank. Health Department approval is required for any special circumstances.

# SECTION 3.31 ADDITIONAL REQUIREMENTS FOR CONCRETE TANKS (Pre-Cast)

Design of baffles and compartments in a concrete multi-chambered tank shall permit only the middle third of the contents of the first compartment to enter the second compartment.

#### SECTION 3.32 POLYMER OR PLASTIC TANKS

Tanks constructed of fiberglass, polyethylene, or other materials shall not be installed without prior approval from the Health Department and should only be considered in

situations where the installation of a conventional concrete tank is impractical or impossible. Data showing characteristics of longevity and decay resistance, tightness of construction, puncture and impact resistance, structural stability under load, antiflotation, size to meet local needs, adaptability for compartmentalization, and internal configuration with respect to design and dimensions, must be submitted to the Health Department with the request for using a plastic or polymer septic tank.

#### SECTION 3.33 SPECIAL TANKS

Aerated tanks or package treatment plants of a household size shall meet National Sanitation Foundation (NSF) criteria or equivalent, and must include a maintenance contract as part of the installation of the system. See Section 4 of this Standard for the requirements for alternative technology.

#### SECTION 3.34 MINIMUM CAPACITIES

<u>Minimum Capacities</u> - The following minimum capacity for a septic tank is hereby established and required:

Number	Minimum Capacities		
Of Bedrooms	for Septic Tanks		
1 0	1.250		
1 or 2	1,250		
3	1,250		
4	1,500		
5	1,750		

<u>Additional Bedrooms/Garbage Grinder</u> - Each additional bedroom shall require 250 additional gallons of septic tank capacity. If there are more than 2 persons per bedroom, 125 additional gallons per additional person shall be added. The above septic tank capacities are to be used only with a single-family residence. If a garbage grinder is installed, 250 additional gallons of capacity are required.

<u>Design Daily Flow</u> - Generally, flow design shall be based on 350 gpd for the first three (3) bedrooms and 100 gpd for each additional bedroom.

#### **SECTION 3.4 DOSING TANKS**

<u>Dosing Tank</u> construction shall be equivalent to septic tank construction and shall have a minimum capacity equal to the design daily flow. The dosing tank must be properly vented to insure safety and a riser shall be installed allowing accessibility for maintenance of pumps.

<u>Effluent Pumps</u> - Mechanical pumps used for sewage effluent are to be manufactured and classified as such and shall meet specifically engineered conditions. The pump shall be equipped with an alarm system activated by a float switch to provide ample warning in

event of failure (Alarm circuit shall be separate from pump circuit). All electrical construction shall be enclosed in conduit and meet applicable State Codes. (Bell siphons may be used in place of mechanical pumps for dosing.)

<u>Discharge</u> - The discharge line from the pump shall be provided with an accessible union to accommodate easy pump removal. This discharge line shall be uniformly graded so that complete drainage occurs; check valves thereon shall be prohibited above the frost line. Excess liquid from each surge shall drain back into the dosing tank to assure frost-free design. The discharge at the header shall be vertical so as to prevent backflow from the drain field.

#### SECTION 3.5 FINAL DISPOSAL PIPING

The final disposal field for disposal of septic tank effluent shall be constructed in such fashion that uniform distribution of liquid is effectively accomplished.

<u>Tile and Piping</u> - All tiles and piping used in subsurface sewage disposal systems shall be approved by the Michigan Department of Public Health and bear the "Michigan Standards" (MS) logo. Rigid non-perforated header pipe shall be required. The header shall be laid on undisturbed level subsoil. When necessary, any backfill material under the header shall be compacted sand.

<u>Limitations</u> - In no case shall the disposal field be laid under any drive, parking area, paved surface or building, or area subject to seasonal flooding.

<u>A Header or Distribution Box</u> - shall be set true so as to afford an even distribution of all septic tank effluent throughout the subsurface laterals. Concrete distribution boxes may be accepted if they are constructed on adequate footings to prevent any frost heave.

<u>Headers and Footers</u> - A bridle or manifold header shall be provided for systems with 6 or more trenches or laterals, and a connection made for every 20 lineal feet of header pipe. Multiple connections may require a double-header or Y to assure uniform distribution.

<u>Header Connections</u> - must attach at  $90^0$  angles and be located so as to provide the most symmetrical, equal distribution possible. Elbows and "T"s are required whenever a change of direction is necessary. Terminal ends of each tile line shall be interconnected with perforated drain tile (footer).

<u>Installation Requirements</u> - The final disposal field shall contain not less than 2 lines; the length of each line shall not exceed 100'. Solid bed construction requires 4' from tile center to tile center and trench design requires 6' from tile center to tile center. The drain tile shall be covered with at least 12", but not more than 24" of proper back fill material, starting with 6" of sand over the straw/filter fabric. **Backfill and final cover of the on-site sewage disposal system is the responsibility of the on-site sewage disposal system installer.** There shall be a minimum of 6" of stone beneath the tile across the entire

width of the trench or bed, and a minimum of 2" of stone over the top of the tile for the entire width of the trench or bed. The slope or grade of the tile lines shall not exceed 2" in 100'.

#### **SECTION 3.6 AGGREGATE**

All aggregate shall be clean, washed 6A or 10A stone only, and subject to on-site approval. All other materials, and those that could result in clogging, cementing, deterioration or cause other adverse effects, are prohibited, unless reviewed and approved by the Health Officer.

#### SECTION 3.7 FINAL DISPOSAL AREA

The Application Rate - The minimum amount of final disposal area, defined as "trench bottom", shall be based on the occupancy of no more than two (2) persons per bedroom. <u>Bedrooms</u>- are rooms that have a door, closet, and proper means of egress. If there are more than 2 persons per bedroom, additional disposal area shall be added according to the application rate chart as follows:

	Minimum	Minimum	
<u>Soil Type</u>	per Bedroom (2 Persons)	Square Feet Solid Bed per Bedroom (2 Persons)	
Sand	100	200	
Sandy Loam	150	400	
Sandy Clay Loam	200	600	
Clay Loam/Clay	Unacceptable unless approved under Section 3.0 of these Standards or Section 6.7 of Chapter VI (Variances) of the Regulations	Unacceptable unless approved under Section 3.0 of these Standards or Section 6.7 of Chapter VI (Variances) of the Regulations	

#### SECTION 3.8 MINIMUM ISOLATION DISTANCES

Horizontal isolation distances (in feet) for residential applications shall be:

	Buried Sewers constructed of approved water- tight materials	Buried Sewers constructed of other materials	Septic <u>Tank</u>	Tile <u>Field</u>
Well or Suction Line	10	50	50	50
Water Line under Pre	ssure 5	10	10	10

Property Line	2	5	10	10
Foundation Wall	5	5	10	20
Bank or Drop-off	5	10	15	30
Lake or Stream	10	50	50	50
Type I & II (a) Wells	200	200	200	200
Type II (b) & III Wells	75	75	75	75

## SECTION 3.9 CONSTRUCTION AND INSTALLATION PRACTICE/PROCEDURE

The following specifications, practices and procedures apply to sewage disposal systems installed in Genesee County:

<u>Sandy Clay Loam and Clay Loam</u> - In sandy clay loam and clay loam soils, trenches shall be backfilled with sand above surface grade.

<u>Types of Design</u> - A narrow, shallow trench or an elevated mound are the preferred types of system design. All septic systems shall be installed as shallow as possible to provide an oxygen-rich environment for the proper breakdown of sewage and to enhance system longevity. When permitted, serial distribution shall be the system of choice in hillside applications.

<u>Elevation Changes</u> - Where changes in elevations occur, systems shall run along contour lines, resulting in a long, narrow mound or trench application.

<u>Water Table</u> - No site shall be approved for on-site sewage disposal when the seasonal high water table or mottling is closer than 12" to the ground surface. Upon denial, a licensed engineer may be contacted to design an alternative system, requiring plan review and Health Department approval.

<u>Fill and Site Preparation</u> - All sand fill shall be medium to medium coarse and clean with less than 5% fines subject to on site approval. Topsoil must be left in place, unless approved by the sanitarian for removal, and *excess* vegetation shall be mowed and removed. The entire basal area shall be scarified prior to sand filling.

<u>Final Disposal Area</u> - Shall be protected from compaction and other damage so as not to destroy the permeability of the soil.

<u>Berms</u> - Berms shall be constructed whenever the elevation of the tile is above existing grade. The berm shall consist of a horizontal bank of compacted sand extending a

minimum of 5' beyond the edge of the trench/bed, beyond which shall be a slope no steeper than four-to-one (4:1) to finish grade.

Filter Fabric – An approved filter fabric must cover the septic bed or lineal foot trench system prior to backfilling. Straw is no longer acceptable.

<u>Top Soil</u> - A minimum of 6" of topsoil or cap and final grade shall be completed and made ready for sod or seeding within 30 days. **Backfill and final cover of the on-site sewage disposal system is the responsibility of the installer.** Sod or seeding shall be the responsibility of the homeowner, unless mutually agreed upon via contract, between the owner and installer. This must be completed in a reasonable timeframe, weather permitting.

<u>Reserve Area</u> - Tile field reserve area equal to one and one-half  $(1 \ 1/2)$  times the size of the initial system shall be provided.

<u>Tile/Absorption Field Specifications</u> - The following specifications shall be met with respect to isolation distances and system sizing:

	<u>Unit</u>	<u>Maximum</u>	<u>Minimum</u>
Cleanouts Within Sewer Line	Feet	50	-
Number of Distribution Lines	-	-	2
Length of Trenches	Feet	100	-
Width of Trenches	Inches	36	24
Length of Bed	Feet	60	-
Width of Solid Bed	Feet	-	10
Depth to Trench Bottom Below Finished Grade (pre-treatment system)	Inches	36 -	24 10
Distance Between Tiles in Solid Bed	Feet	6	4
Distance Between Tiles for Trenches	Feet	8	6
Slope of Tile Lines	Inches/100 Fee	et 2	Level

Depth of Stone:	<u>Unit</u>	<u>Maximum</u>	<u>Minimum</u>	
Under Tile Over Tile	Inches Inches	-	6 2	
Size of Stone	-	6A	10A	
Depth of Porous Backfill Over Stone (Including Topsoil)	Inches	24	12	
Depth to Groundwater from trench bottom	Inches	-	24	
Depth of Septic Tank Manhole Inches (or Riser) Below Finished Grade	Inches	24	3	
Sewers Under Driveways (All sewer lines installed beneath potent	Sch 40 ial heavy trat	- ffic areas shall b	12" be 4" Sch 40 sleeve	ed

by 6" Sch 40, at a minimum.)

<u>Additional Requirements for Proper Septic Installation</u> - Construction techniques and procedures developed and published from time to time by the Health Department shall be employed in system design, and construction and maintenance by installers, homeowners and contractors to help prevent problems with septic installations. These techniques and procedures are hereby incorporated by reference in these standards.

<u>Variance</u> – If these Construction Standards cannot be met, the property owner may apply for a variance from these provisions. See Section 6.701 of the Genesee County Health Regulations. (Variances requesting more than a 15% reduction of these standards shall be denied, requiring approved engineered plans.)

<u>Special Construction Methods/Alternate Systems</u> - Nothing contained in this Chapter shall prevent the use of special construction methods, materials, or installation techniques, provided the design of such system is first approved by the Health Officer and meets the equivalent and intent of these Construction Standards. (See SECTIONS 5.0 and 5.1)

<u>Engineered Systems</u> – The Health Officer may require that the owner obtain specifications and/or installation certification from a licensed professional engineer or registered sanitarian on specially constructed disposal system or where sewage is pumped from the septic tank to the disposal field.

<u>Water Conservation and System Maintenance</u> - Septic systems, in an attempt to increase life expectancy, shall be subjected to the least amount of flow possible. Low or no-

volume fixtures are encouraged and shall be installed and utilized wherever practical, and when specifically required by the Health Officer. Low or no-volume fixtures shall include, but not be limited to, toilet tank inserts, dual-flush toilets with air mix, lowvolume flush toilets, shower head water reduction inserts, suds savers, faucet aerators, and incineration or composting toilets. The Health Officer shall have the authority to inspect flow reduction devices when they are required as a condition of permit. All such devices are subject to township or municipality and state plumbing board approval. All governmental agencies shall be encouraged to eliminate nonfunctional water uses through homeowner/ public education programs.

#### SECTION 4.0 GENERAL REQUIREMENTS FOR PRESSURE DISTRIBUTION

Property which can meet the minimum conditions as specified in the Section 3.9 may be evaluated and considered for Pressure Mound Systems application pursuant to R 560.424 of the Michigan Department of Environment, Great Lakes and Energy Administrative Rules, "On-Site Water Supply and Sewage Disposal for Land Divisions and Subdivisions".

All applicable materials and components specified in Section 3.0 – General Requirements, shall apply in addition to the following specifications.

See the Michigan Department of Environmental Quality (MEGLE) Pressure Mound System handout for Technical Guidance for Site Suitability, Design, Construction and Operation and Maintenance for the standards deemed necessary to install in Genesee County.

**SECTION 4.1** All systems which will utilize pressure mounds shall submit plans prepared by a licensed professional engineer and submitted to the Health Department for review prior to approval.

**SECTION 4.2** Pressure Mounds may be reduced in size when a pre-treatment system is installed. The maximum loading rate shall never exceed 1.5 gallons per day per square foot.

**SECTION 4.3** Land Division/Condominiums/Parcels Less Than 1 Acre -- Parcels less than one acre, Condominiums, and Platted Subdivisions shall conform to the Michigan Department of Environment, Great Lakes and Energy Administrative Rules (R. 560.401 to 560.428) which are incorporated by reference in these standards.

## SECTION 5.0 SPECIAL CONSTRUCTION METHODS / ALTERNATIVE TECHNOLOGY

Nothing contained in these standards shall prevent the use of special construction methods, materials, installation techniques or alternative technology provided the design

of said system is first, approved by the Health Officer and, it meets the equivalent and intent of these Construction Standards.

#### SECTION 5.1 EXPERIMENTAL SEWAGE DISPOSAL FACILITIES

In the absence of applicable guidelines and technical information concerning a new category of alternative sewage disposal facility, device or process, the Health Officer may authorize the utilization of such an alternative facility, device or process on a limited experimental basis, if it is determined that no hazard to public health and safety, nuisance or degradation of the natural environment will result. The Health Officer may impose special conditions and requirements pertaining to the approval and use of such a facility, including the submission of detailed engineering plans, periodic inspections and provisions for alternate methods of sewage disposal in the event of failure of the experimental facility.

#### **SECTION 6.0 - PRIVIES AND SIMILAR TOILET DEVICES**

#### **SECTION 6.1 LOCATION**

Earth-pit and vault-type privy shall be located at least 50' from any well or other source of water supply, and upon ground sloping away from the water supply. No privy shall be located within 200' of a municipal water intake or any well used for a municipal water supply. Privies shall be located at least 10' from any property line, and 50' from any lake or stream or another dwelling on adjacent property other than the one served. No privy shall serve more than 1 dwelling or other habitable building.

#### **SECTION 6.2 DEPTH**

An earth-pit privy shall be not less than 4' or more than 6' deep. Where ground water and seasonal high water tables are encountered, a mound may be constructed to allow not less than

4' from the bottom of the pit to the ground water, or not less than 2' to the seasonal high water tables.

#### **SECTION 6.3 CONSTRUCTION**

The receptacle for receiving and storing fecal matter and its surrounding enclosure shall be constructed in such manner and of such material as to be fly-tight, vermin-proof, smooth, easily cleanable, light-colored, and durable. It shall provide adequate capacity under ordinary conditions of usage. Privies shall be vented so as to provide a continuous escape of odors through a screened vent inaccessible to flies. The ventilating pipe shall be connected to the receptacle or bowl and extend above all parts of the building.

#### **SECTION 6.4 MAINTENANCE**

Privies shall be so maintained so as not to create a nuisance, odor condition or health hazard. The privy receptacle shall not be allowed to fill to a point higher than 12" below the under surface of the floor of the building. Privies shall be emptied at sufficiently frequent intervals to prevent the creation of an unsanitary condition or nuisance. The seat, floor, and ground immediately surrounding a privy shall be kept clean at all times. The vent shall be maintained in good repair and free from obstructions at all times.

#### SECTION 7.0 COMPOSTING TOILETS

#### **SECTION 7.1 GENERAL**

Composting toilets may be permitted in Genesee County where not prohibited by local or municipal ordinance, and upon approval by the Health Officer. When permitted, composting toilets shall meet the design and operation requirements of current and applicable Technical Bulletins published by the Michigan Department of Environmental Quality, as promulgated pursuant to Act 421, P.A. 1980.

#### **GLOSSARY OF DEFINITIONS**

**ABSORPTION FIELD, TRENCH, OR BED** - Means a method of distributing septic tank effluent or overflow below the ground surface by means of a line or a series of lines of drain tile laid on a bed of stone (or other approved methodology), with openings so as to allow the effluent or overflow to be absorbed by the surrounding soil.

**ALTERNATE TREATMENT SYSTEM** – A treatment and disposal system which is not conventional and provides for an equivalent or better degree of protection for public health and the environment than a conventional system.

**APPROVED** – A written statement of reliability issued by the local health officer or the department.

**AVAILABLE SANITARY SEWER** - If a sanitary sewer is within three hundred (300) feet of any part of a premises, then the sewer is considered available to that premises for the disposal of sewage.

BASAL AREA – The effective in situ soil surface available to transmit the treated effluent from the sand fill media into the original receiving soils.

**CONVENTIONAL SYSTEM** – An onsite sewage treatment system consisting of a watertight septic tank and a subsurface soil absorption system with a distribution of the effluent to subsurface soil trenches or absorption bed.

**COVER MATERIAL** – Material used to cover a septic system.

EFFLUENT – Liquid discharge from a septic tank or other onsite sewage component. FINAL TREATMENT SYSTEM – System constructed of trenches or an absorption bed.

**DOSING CHAMBER** - Means a watertight tank or receptacle used for the purpose of retaining the overflow or effluent from a septic tank, pending its automatic discharge to a selected point.

FILL SAND OR FILTER MATERIAL - Means medium to coarse clean sand, unless otherwise specified, as part of a permit condition and approved by the Health Officer.

**FLOOD PLAIN** - Means the elevation of the contour defining the flood plain limits of any area subject to hypothetical or actual flooding or inundation based on a historical recurrence frequency period of once in about one hundred (100) years.

**GREEN BELT AREA** – The area measured horizontally down slope from the edge of the final treatment system which is maintained undisturbed prior to, during, and after construction so as not to impeded lateral movement of effluent.

**GROUND WATER** - Means the water in the ground that is in the zone of saturation. **HIGH GROUND WATER ELEVATION** - Means the elevation of the upper surface of the zone of saturation as may occur during the normally wet periods of the year.

**IN SITU SOIL** – Soil present in the undisturbed natural or original position.

**LIMITING LAYER** – High ground water elevations, soils with a texture classification from silty clay to clay or bedrock.

**LOW VOLUME FIXTURES** - Means faucets or showers with a flow rate of not greater than 2.75 gallons per minute (gpm) at 20-40 pounds per square inch (psi) and toilets that utilize 3.5 gallons or less per flush.

**MAINTENANCE PROVIDER** – An entity certified by the manufacturer or distributor to test, evaluate and review the operating performance of the alternative treatment system.

**ORIGINAL GRADE** – the natural land elevation which exist prior to construction. **PERMEABLE SOILS** – Soils with a texture classification, according to the U.S. Department of Agriculture Soil Conservation Service classification system, of coarse

sands to some silty clay loams that are well structured.

**PERMEABILITY** - Means the capability of a soil to transmit water and/or air. **PRESSURE DISTRIBUTION** – A system of small diameter pipes uniformly distributing effluent throughout a trench, bed, or chamber.

**PRIVY** - Means all "outhouses", buildings or other structures which are not connected with a sewerage system or with a sewage disposal system and which are used for the reception, disposition or storage, either temporarily or permanently, of feces or other excreta from the human body.

**PUMP CHAMBER** – A watertight tank or compartment following the septic tank or other pretreatment process which contains a pump, floats and volume for storage of effluent.

**RESERVE AREA** – An area of land with site conditions deemed suitable for the installation technique to ensure adequate wastewater treatment.

**SAND FILL** – Sand meeting specific criteria regarding particle size and sieve size to ensure adequate wastewater treatment.

**SEPTIC TANK** - Means a water-tight receptacle used for the purpose of receiving all sewage and so designed to permit the collection of solids from such wastes and to permit such solids to undergo decomposition therein, permitting the effluent to overflow in a controlled manner to an approved disposal system.

**SEWAGE OR WASTEWATER** - Means all the residential, commercial and industrial water-carried wastes from any premises.

**SEWAGE DISPOSAL SYSTEM** - Means the method of controlled disposal of sewage by means of a sewer line connected to a septic tank or tanks, and an absorption field, trench or bed or any other device approved by the Health Officer.

**SEWAGE SYSTEM FAILURE** - Means a situation where any one of the following conditions exist:

- 1) The system refuses to accept effluent at the rate of application.
- 2) Sewage or effluent seeps from, or ponds on the ground surface.

3) The system contaminates a potable well or surface waters of the State.

**SEWER** - Means a water-tight conduit for carrying sewage.

**SLOW PERMIABLITY** – Soils with a textural classification, according to the U.S. Department of Agriculture Soil Conservation Service classification system, of silt loams and some silty clay loams that are well structured.

**SOIL COMPACTION** –An increase in the soil bulk density, and decreased in soil porosity, by the application of mechanical forces to the soil which results in a soil that retains less water and resists root penetration. Soils with high clay content are more easily compacted than sandy soils.

**SOILS EVALUATION** - Means on-site investigation to evaluate the suitability of a site (specific location on each site) to support an adequate sewage disposal system.

**SOIL LOADING RATE** – the allowable application rate required for absorption of effluent based upon soil texture for a given soil structure.

**SOIL MOTTLING** – Spots or blotches of contrasting colors, such as, but not limited to, grey or brown colors in close proximity, that are formed in the soil matrix by the processes of reduction, translocation, and oxidation of iron and manganese compounds in soils that have been periodically saturated.

**SOIL STRUCTURE** – Refers to the aggregate of the primary soil particles of sand, silt, and clay into compound particles or clusters of primary soil particles, which are separated from adjoining aggregates or clusters by surfaces of weakness.

**SOIL TEXTURE** – Refers to the relative proportion of sand, silt, and clay in a soil. **SURFACE WATER** - Means a body of water whose top surface is exposed to the atmosphere including a flowing body, ponds or lake , drains, rivers, streams, ditches, either natural or constructed.

**UNSANITARY CONDITION, NUISANCE OR HEALTH HAZARD** - Means any structure or condition which the Health Officer reasonably believes to be a potential cause of illness, poses a threat to the health of the public, pollutes any stream or other body of water

**OTHER DEFINITIONS** - Other technical definitions not described herein but which may be used in this Regulation shall mean the most commonly recognized interpretation of description of the technical term used in the environmental health profession.