KITSAP COUNTY BOARD OF HEALTH ORDINANCE 2008-01

ONSITE SEWAGE SYSTEM AND GENERAL SEWAGE SANITATION REGULATIONS

Policy #18: Construction Standards for Pressure Distribution Systems

Effective Date: April 14, 2010

Purpose: The purpose of this policy is to establish specific construction standards for Pressure Distribution Systems intended, or required, to protect onsite sewage systems.

1. Performance Standards

    1.1. Measure of performance

        1.1.1. The squirt height difference must not exceed 21% (10% flow difference) between orifices on anyone lateral. The squirt height difference over the entire system must not exceed 32% (15% flow difference).

        1.1.2. A minimum residual pressure of 0.87 psi (2 feet of head) is required for systems with 3/16 inch diameter orifices and larger, and 2.18 psi (5 feet of head) is required for systems with orifices smaller than 3/16 inch.

2. Construction

    2.1. Orifices must be no smaller than 1/8 inches in diameter.
    2.2. The pump tank must have either have a septic tank effluent filter preceding it, or a screened pump vault.
    2.3. The pump must be protected by a vault per the designer's specifications.
    2.4. The splitter/manifold valve riser box shall be constructed in a manner that promotes water drainage from the box and prevents burrowing animals from entering the box, (e.g. wire mesh placed over a gravel base) or as otherwise specified within the Onsite Sewage Systems Use, Monitoring & Maintenance Field Manual.
    2.5. The splitter/manifold shall be located so that it is no lower in elevation than the highest drainfield leg, unless check valves are installed on each charged drainfield line and those check valves area accessible via the same rise box as the manifold valves.

    2.6. Orifice Spacing

2.6.1. Sand filters (including sand lined trenches), mounds and pressure distribution in soil types 1, and 2 and in medium sands, must have a minimum of one orifice per 6 ft^2 of infiltrative surface area, evenly distributed.

2.6.2. In other soil types, there must be a minimum of one orifice every six feet on center along the lateral.

2.6.3. The maximum spacing between the outside laterals and the edge of the trench or bed must be 1/2 of the selected orifice spacing, ±0.5 feet.

Table A-1 Lateral Design Table

			Maximum Lateral Length (ft)
Orifice	**Lateral**	**Orifice Spacing**	Pipe Material
(inches)	(inches)	(feet)	**Schedule 40**
1/8	1	1.5	42
1/8	1	2	50
1/8	1	2.5	57.5
1/8	1	3	66
1/8	1	4	80
1/8	1	5	90
1/8	1	6	102
1/8	1.25	1.5	66
1/8	1.25	2	80
1/8	1.25	2.5	92.5
1/8	1.25	3	105
1/8	1.25	4	124
1/8	1.25	5	145
1/8	1.25	6	162
1/8	1.5	1.5	85.5
1/8	1.5	2	104
1/8	1.5	2.5	120
1/8	1.5	3	135
1/8	1.5	4	164
1/8	1.5	5	190
1/8	1.5	6	210
1/8	2	1.5	132
1/8	2	2	160
1/8	2	2.5	185
1/8	2	3	207
1/8	2	4	248
1/8	2	5	290
1/8	2	6	324
5/32	1	1.5	31.5
5/32	1	2	36
5/32	1	2.5	42.5

5/32	1	3	48

Table A-1 Lateral Design Table (continued)

			Maximum Lateral Length (ft)
Orifice	**Lateral**	**Orifice Spacing**	Pipe Material
(inches)	(inches)	(feet)	**Schedule 40**
5/32	1	4	56
5/32	1	5	65
5/32	1	6	72
5/32	1 1/4	1.5	48
5/32	1 1/4	2	58
5/32	1 1/4	2.5	67.5
5/32	1 1/4	3	75
5/32	1 1/4	4	92
5/32	1 1/4	5	105
5/32	1 1/4	6	120
5/32	1 1/2	1.5	63
5/32	1 1/2	2	76
5/32	1 1/2	2.5	87.5
5/32	1 1/2	3	99
5/32	1 1/2	4	120
5/32	1 1/2	5	140
5/32	1 1/2	6	156
5/32	2	1.5	96
5/32	2	2	116
5/32	2	2.5	135
5/32	2	3	150
5/32	2	4	184
5/32	2	5	210
5/32	2	6	240
3/16	1	1.5	24
3/16	1	2	28
3/16	1	2.5	32.5
3/16	1	3	39
3/16	1	4	44

3/16	1	5	50
3/16	1	6	60
3/16	1.25	1.5	37.5

Table A-1 Lateral Design Table (continued)

			Maximum Lateral Length (ft)
Orifice	**Lateral**	**Orifice Spacing**	Pipe Material
(inches)	(inches)	(feet)	**Schedule 40**
3/16	1.25	2	46
3/16	1.25	2.5	52.5
3/16	1.25	3	60
3/16	1.25	4	72
3/16	1.25	5	85
3/16	1.25	6	96
3/16	1.5	1.5	49.5
3/16	1.5	2	60
3/16	1.5	2.5	70
3/16	1.5	3	78
3/16	1.5	4	92
3/16	1.5	5	110
3/16	1.5	6	120
3/16	2	1.5	76.5
3/16	2	2	92
3/16	2	2.5	105
3/16	2	3	120
3/16	2	4	144
3/16	2	5	165
3/16	2	6	186
7/32	1	1.5	19.5
7/32	1	2	24
7/32	1	2.5	27.5
7/32	1	3	30
7/32	1	4	36
7/32	1	5	45
7/32	1	6	48
7/32	1.25	1.5	31.5
7/32	1.25	2	38
7/32	1.25	2.5	42.5
7/32	1.25	3	48

7/32	1.25	4	60
7/32	1.25	5	70

Table A-1 Lateral Design Table (continued)

			Maximum Lateral Length (ft)
Orifice	**Lateral**	**Orifice Spacing**	Pipe Material
(inches)	(inches)	(feet)	**Schedule 40**
7/32	1.25	6	78
7/32	1.5	1.5	40.5
7/32	1.5	2	50
7/32	1.5	2.5	57.5
7/32	1.5	3	63
7/32	1.5	4	76
7/32	1.5	5	90
7/32	1.5	6	102
7/32	2	1.5	63
7/32	2	2	76
7/32	2	2.5	87.5
7/32	2	3	99
7/32	2	4	116
7/32	2	5	135
7/32	2	6	156
1/4	1	1.5	16.5
1/4	1	2	20
1/4	1	2.5	22.5
1/4	1	3	27
1/4	1	4	32
1/4	1	5	35
1/4	1	6	42
1/4	1.25	1.5	27
1/4	1.25	2	32
1/4	1.25	2.5	37.5
1/4	1.25	3	42
1/4	1.25	4	48
1/4	1.25	5	55
1/4	1.25	6	66
1/4	1.5	1.5	34.5

1/4	1.5	2	42
1/4	1.5	2.5	47.5

Table A-1 Lateral Design Table (continued)

			Maximum Lateral Length (ft)
Orifice	**Lateral**	**Orifice Spacing**	Pipe Material
(inches)	(inches)	(feet)	**Schedule 40**
1/4	1.5	3	54
1/4	1.5	4	64
1/4	1.5	5	75
1/4	1.5	6	84
1/4	2	1.5	52.5
1/4	2	2	64
1/4	2	2.5	72.5
1/4	2	3	81
1/4	2	4	100
1/4	2	5	115
1/4	2	6	126