

SNOHOMISH HEALTH DISTRICT
BOARD OF HEALTH

RESOLUTION NO. 2 - 70

RE: REGULATION I - Revision No. 2
USE AND INSTALLATION

A RESOLUTION APPROVING RULES AND REGULATIONS PROMULGATED BY THE HEALTH OFFICER UNDER THE REVISED SEWAGE WASTE DISPOSAL RESOLUTION OF THE SNOHOMISH HEALTH DISTRICT, WHICH REGULATIONS ESTABLISH MINIMUM STANDARDS AND REQUIREMENTS FOR THE CONSTRUCTION AND INSTALLATION OF PRIVATE SEWAGE WASTE DISPOSAL SYSTEMS (SEWAGE WASTE DISPOSAL REGULATION I), PROVIDING AN EFFECTIVE DATE AND SETTING FORTH THE APPLICABILITY OF SAID REGULATIONS TO NEW CONSTRUCTION AND NEW SUBDIVISIONS, AND AMENDING RESOLUTION DATED NOVEMBER 17, 1970.

THE BOARD OF HEALTH OF THE SNOHOMISH HEALTH DISTRICT DOES HEREBY RESOLVE AND ORDAIN AS FOLLOWS:

Section 1. SEWAGE WASTE DISPOSAL REGULATION I:
REQUIREMENTS AND STANDARDS: REVISION NO. 2.

Sewage Waste Resolution Regulation I promulgated by the health officer of the Snohomish Health District on the 17th day of November, 1970, be, and the same is, hereby approved, subject to the following conditions, to-wit:

(a) That a copy of said "Sewage Waste Disposal Regulation I" is attached hereto, so marked and, by this reference, incorporated herein as though set forth at length; that a copy of said regulation shall be maintained in the office of the Snohomish Health District for inspection by the public during business hours and shall also be maintained in the office of the Environmental Health Division of the Snohomish Health District and available for inspection by the public during business hours

at said office. Copies of said regulation may be distributed by the Director of the Environmental Health Division to the public and to various department heads of county and city governments in the County of Snohomish.

(b) This regulation shall be applicable to all land in the County of Snohomish for which a building permit is applied for on or after the effective date of this resolution; PROVIDED, HOWEVER, this regulation shall not apply to (1) lots in plats previously approved and filed with the Snohomish County Auditor as a final plat, or (2) areas of land, unplatted, previously established as to area by a valid and duly executed and recorded deed, contract or instrument conveying title, as evidenced by an instrument on file in the real property records of the Snohomish County Auditor, or (3) lots within previously filed preliminary plats, filed with the Snohomish County Planning Commission or a city planning authority and the Snohomish Health District, where the expiration for filing a final plat has not elapsed. Land within the foregoing exclusions shall be governed by prior regulations of the Snohomish Health District as well as other applicable laws of the County of Snohomish or applicable city ordinances; PROVIDED FURTHER, the Snohomish County Health Officer, upon the recommendation of the Director of the Environmental Health Division, may deny an application for a sewage waste disposal system permit in the event such Health Officer finds that there is not a sufficient supply of safe water to adequately serve the subject property; or the physical features of the land for such proposed building site under which it is proposed to locate the sewage waste disposal system create a public health hazard or would in all reasonable probability be a public health hazard; or the design of said proposed sewage disposal system is inadequate; or the design of said proposed sewage disposal system contains features affecting the margin of safety if said system is operated and in all reasonable probability would create or creates a public health hazard.

(c) This regulation shall be effective in all areas of the County of Snohomish, including those areas lying within the geographical or corporate limits of any city; PROVIDED, HOWEVER, where a city within the County of Snohomish has a duly established sewer utility implemented with appropriate municipal legislation providing for inspections and the issuance of permits for private sewage waste disposal systems by said municipality and where said municipality, through its governing authority by express legislative and executive action, elects to issue such permits in accordance with the fee schedule prescribed by municipal ordinance, then and in that event, said licenses and permits may be issued in accordance with the city's fee schedule and fees collected retained by said municipality; HOWEVER, nothing contained in this proviso shall remove the applicability of the provisions of this regulation and regulations adopted thereby, from compliance in the use and installation of the private waste disposal system; PROVIDED, FURTHER, nothing contained within the foregoing proviso shall effect, in any way, the power, right, duty or obligation of the Snohomish Health District as the final public health authority within all areas of its jurisdiction.

Section 2. The effective date of this resolution shall be the 1st day of January, 1971.

Section 3. That certain resolution adopted by the Board of Health of the Snohomish Health District at its regular meeting on the 17th of November, 1970, is hereby amended in its entirety by the within resolution.

Section 4. Invalidation of any part or portion of this resolution and/or the regulation hereby approved shall not invalidate the remaining sections or portions thereof.

DULY ADOPTED this 8th day of December, 1970.

SNOHOMISH HEALTH DISTRICT

By: W. Richard Forogren
Chairman of the Board

Attest:

Clarid Alyate, M.D.
Health Officer

SNOHOMISH HEALTH DISTRICT
Environmental Health Division
Court House
Everett, Washington

Sewage Waste Disposal Regulation I
Requirements and Standards
Revision No. 2

A REGULATION PROMULGATED BY THE SNOHOMISH HEALTH OFFICER UNDER THE SEWAGE WASTE DISPOSAL RESOLUTION OF SNOHOMISH COUNTY PRESCRIBING MINIMUM REQUIREMENTS AND STANDARDS FOR THE CONSTRUCTION AND INSTALLATION OF PRIVATE SEWAGE DISPOSAL SYSTEMS. NOTHING CONTAINED IN THIS REGULATION SHALL BE CONSTRUED TO PREVENT THE HEALTH OFFICER FROM REQUIRING COMPLIANCE WITH HIGHER REQUIREMENTS THAN THOSE CONTAINED HEREIN WHERE SUCH HIGHER REQUIREMENTS ARE ESSENTIAL TO MAINTAIN A SAFE AND SANITARY CONDITION.

Item 1. SEPTIC TANKS

(A) Design and Construction

- (1) The septic tank shall be of durable, water-tight construction not subject to excessive corrosion or decay.
- (2) Poured concrete tanks shall be sufficiently reinforced and all sides, top and bottom, shall be at least 3 inches thick.
- (3) No pre-cast septic tank shall be installed on a commercial basis except those which have been clearly and legibly marked on the upper surface of the lid showing the number assigned by the director.
- (4) Concrete block tanks shall be laid on a poured concrete floor not less than 4 inches thick with walls water-proofed with cement mortar, asphalt tar emulsion or other water-proofing material approved by the Health Officer.
- (5) Metal septic tanks shall be approved by underwriters laboratory with said seal visible on tank.
- (6) The liquid depth of the tank shall not be less than four (4) feet. A liquid depth greater than six (6) feet shall not be considered in determining the liquid capacity of the tank.
- (7) Standard inlet and outlet tees or baffles shall be located at opposite ends of the tank and tees shall be at least 4 inches inside diameter. The inlet tee or baffle shall project below the liquid level not less than nor more than 6 to 12 inches and the upper leg of the inlet tee shall project at least to crown of the inlet sewer. The outlet tee or baffle shall project below the liquid level not less than 15 to 18 inches and the upper leg at least 4 inches above the crown of the inlet sewer.
- (8) The invert of the inlet pipe shall be at least 2 inches above the outlet invert.
- (9) There shall be at least one inch between the underside of the top of the tank and the top inlet and outlet tee or baffle.

- (10) Adequate access to each compartment of the tank shall be provided by a means of a manhole with a minimum width of 18 inches. Provision shall be made for direct access to inlet and outlet tees.

(B) Minimum Liquid Capacities for Septic Tanks

Table I

All 1 or 2 bedroom houses	750 gallon septic tank
All 3 bedroom houses	900 gallon septic tank
All 4 bedroom houses	1000 gallon septic tank
Additional bedrooms	250 additional per bedroom

- (1) Residents of over four bedrooms, commercial or public buildings, temporary dwellings, multiple family units such as apartments and tourist accommodations shall have septic tanks of a size to be determined by the Health Officer or his authorized representative.

(C) Procedure for doing percolation tests

- (1) At least 3 test holes are required, spaced uniformly over the proposed drainfield area.
- (2) Dig test hole at least 36 inches deep in the drainfield area.
- (3) Carefully scratch the bottom and sides of the hole with a knife blade or sharp-pointed instrument in order to remove any smeared soil surfaces and to provide a natural soil interface into which water may percolate. Remove all loose material from the hole. Add two inches of coarse washed sand or fine gravel to protect the bottom from scouring the sediment.
- (4) Fill hole with water. Now let all water run out of hole. This soaks the ground and will give a more accurate reading.
- (5) Again pour water in hole to a height of 12 inches from the bottom. Let water run out until there is just 6 inches from the bottom left in the hole.
- (6) Note how many minutes it takes for this last 6 inches to seep away.
- (7) Dig two holes at least 48 inches deep in the disposal field area to determine the type of soil present.
- (8) One of the two soil log holes shall have a minimum diameter of 18 inches.

(D)

MINIMUM REQUIRED AREA
Table II.
(Tile field--Square feet) per bedroom
(2 foot wide trench)

3 minutes or less	115	11 min.	259
4 min.	157	12 min.	268
5 min.	185	13 min.	277
6 min.	202	14 min.	288
7 min.	214	15 min.	300
8 min.	226	16 min.	306
9 min.	238	17 min.	312
10 min.	250	18 min.	318
		19 min.	324
		20 min.	330

OVER 20 MINUTES PER INCH NOT ACCEPTABLE

Item II. REQUIREMENTS FOR PRIVIES

- (1) A sewage disposal permit must be obtained for a privy.
- (2) Privies must be constructed according to recommendations of Snohomish Health District.
- (3) When privy is complete, notify Snohomish Health District.

Item III. SUBSURFACE ABSORPTION FIELD

(A) Location

Location of the absorption field shall be in an unobstructed area and shall comply with the minimum distances given in Table III.

Table III.

<u>From</u>	<u>Minimum Distances in Feet</u>		
	<u>To</u>	<u>Absorption field</u>	<u>Privies</u>
Well	50 feet	100 feet	100 feet
Property Line	10 feet	5 feet	10 feet
Foundation Wall	5 feet	5 feet	5 feet
Bodies of surface water (highest point)	50 feet	100 feet	100 feet
Water lines	10 feet	10 feet	10 feet
Water Easements	10 feet	10 feet	10 feet

(B) Length of Lines.

The minimum absorption area (total bottom area of trenches) of the absorption field shall be determined by the Health Officer or his authorized representative based on experience, data and percolation tests. Each field shall be treated as an individual installation and shall be based on the conditions upon its own particular lot from the standpoint of sewage load, type and condition of the soil, topography of the site, ground water conditions, and such other factors that will affect the operating efficiency of the system.

(C) Spacing.

Tile lines shall be spaced in accordance with Table IV.

Table IV.

Size and Minimum Spacing for Disposal Trenches

Width of trench at bottom (inches)	Minimum spacing of trenches wall to wall
18 to 24 inches	7.0 feet

(D) Natural Earth

- (1) That portion of an absorption trench below the top of the distribution pipe shall be in natural or acceptably stabilized earth.
- (2) There shall be a minimum depth of (cleared original soil in the drainfield area) 3 feet of permeable soil overlying any impermeable layer, any cemented layer, or overlying the ground water table, or the elevation of ground water during the wet season.
- (3) If the opinion of the Health Officer is that a lot can be made acceptable by filling*, a maximum of 12" of fill material is allowable.
- (4) There shall be an area equivalent to 100% of the initial drainfield area reserved for a replacement of a drainfield in case of a failure. This area must meet all of the site requirements of the initial installation.

(E) Fields in Flat Areas.

In locations where the slope of the ground over the absorption field area is relatively flat (6 inches fall or less in any direction with field area) the trenches shall be connected to produce a continuous system and the trench bottoms shall be level.

(F) Fields in Sloping Ground

- (1) In locations where the ground over the absorption field area slopes (fall greater than 6 inches in any direction of the field area) a system of serial distribution trenches following the contours of the land may be used. The trenches will be installed at different elevations, but the bottom of each individual trench shall be level.

*Where conditions permit, this may be attained with the use of off site fill material having a percolation rate after placement on the lot not to exceed the average percolation rate of the original soil.

- (2) Trenches shall be connected with a water-tight overflow line in such a manner that a trench will be filled with sewage to a depth of the gravel before the sewage flows to the next lower trench.
- (3) The overflow line shall be a 4 inch water-tight sewer with direct connections to the distribution tiles in adjacent trenches. Distribution tile lines shall have a level grade.
- (4) There shall be undisturbed earth between trenches. At the point where an overflow pipe leaves an absorption trench, the trench for this pipe shall be dug no deeper than the top of the soil-gravel interface. Overflow line shall rest on undisturbed earth and backfill shall be carefully tamped. The inlet to a trench shall be placed as far as practical from the outlet (overflow) from the same trench.

(G) Distributing Devices

Effluent from the septic tank shall be conducted to the absorption field through a water-tight line with a grade of at least 1/4 inch per foot. Tees, Wyes or other distributing devices may be used.

NOTE: If a distribution box is used, it shall be of sufficient size to accommodate the necessary field lateral lines. The invert of all outlets shall be level and the inlet invert shall be at least one inch above the outlet inverts. Outlet inverts shall be from 4 to 6 inches above the floor permitting water retention to act in lieu of a baffle for the purpose of securing equal distribution.

(H) Tile Field Construction

Tile fields shall be constructed in accordance with table 5.

Table V.

Subsurface Absorption Field Construction Details

<u>Items</u>	<u>Unit</u>	<u>Maximum</u>	<u>Minimum</u>
Number of lateral trenches			2
Length of trenches (equal)	Feet	100	
Width of trenches	Inches	24	18
Depth of trench	Inches	36	24
Slope of the tile lines	In/100 ft.	6	level
Depth of coarse material:			
Under pipe	Inches		6
Over pipe	Inches		2
Under pipe located within 10 ft. of trees	Inches		12
Size of Tile Line	Inches		4
Size of coarse material	Inches	2 1/2	1/2
Depth of backfill over coarse material	Inches		12
Width of openings between tile joints	Inches	1/4	1/8
Bottom of trench to seasonal high water table, clay or hardpan			12"

Bottom of trench shall have a setback of 30 feet from embankments.

All corners to be water tight joints at a bend.

(I) Pipe Specifications.

Pipe used for line between septic tank and absorption field, all lines within 5 feet of dwellings and under paved areas and pipe used in absorption field shall comply with the National Plumbing Code ASA-A40.8 or other pipes approved by the Western Uniform Plumbing Code. Pipe used under driveways or other areas subject to heavy loads shall be installed to withstand the imposed loads and shall be water-tight. Such sections shall not be considered in determining the effective absorption area.

(J) Filter material shall be crushed stone, gravel, slag, or similar material of equivalent strength and durability. It may vary from 1/2 inch to 2 1/2 inches and shall be free from fines, dust, sand or clay. The filter material shall completely encase the tile or perforated pipe.

(K) Protection of Disposal Field

- (1) All open joints shall be protected by tar paper strips over the top half of the tile openings to effectively eliminate soil infiltration.
- (2) An effective barrier such as untreated paper or straw shall be placed over the filter material to prevent infiltration of the backfill.
- (3) Heavy equipment shall not be driven over the trenches during backfilling or after completion of the absorption field.

(L) Interceptor Trench Specification:

0 feet - 200 feet:	4 inch tile
200 feet - 600 feet:	6 inch tile

If distance is greater than 600 feet, the size of tile shall be sized according to the highest possible water flow. Gravel depth shall be brought to within 6 inches of finish grade.

This trench shall be installed no closer than ten (10) feet to a drainfield line provided the drainfield is on a slope lower than trench. If drainfield is above interceptor trench, same shall be installed no closer than 30 feet.

Item IV. SOILS CLASSIFICATION

The following classifications are used in determining acceptable and not acceptable soils for use in subsurface drainfields:

- (a) Class A soil - porous soil, acceptable for septic tanks
Example: 0 to 72 inch depth having a sandy loam characteristic.

- (b) Class B soil - porous soil, may require sewage disposal systems to be designed by a licensed Sewage Disposal Designer or Civil Engineer. Example: 0 to 48 inch depth having a sandy loam with clay characteristic overlaying a clay pan.
- (c) Class C soil - marginal soil, may require sewage disposal site to be checked and approved by Health Department before issuing permit. Example: 0 to 18 inch depth having a sandy loam characteristic. May be mixed with gravel, clay and with water running over clay pan.
- (d) Class D soil - Not acceptable for development by septic tanks under present conditions. Example: plastic clay having fine silt. No porous soil and generally water table close to top of the ground indicating very poor drainage.

Item V. TEMPORARY SEWAGE DISPOSAL SYSTEMS

Septic tank permits may be issued if jurisdictional sewer municipality gives letter stating when sewers will be available. Any variation may be changed subject to approval by the Health Officer.

Item VI. LAND REQUIREMENTS FOR LIVING UNITS.

The zoning resolution of the County of Snohomish controls the density of the number of living units in any zoned area. The following minimum lot or parcel sizes are hereby set forth from the standpoint of public health and the control of sewage waste and effluent. Compliance with this provision of Regulation I shall not be deemed compliance with zoning code of the County of Snohomish. The following lot sizes or parcels shall be deemed minimum density for the type of occupancy listed below when a private sewage waste disposal system is to be used.

(A) Residential

- (1) 12,500 square feet is the minimum lot size (excluding water and road easements or any other easements if in the opinion of the Health Officer may disrupt, or effect the operation of a drainfield system) for residential property in Snohomish County, where a private sewage disposal system is to be utilized except in lots of legal record. (Where there is a minimum depth of 5 feet of porous soil (cleared) above the seasonal high water table or impervious soil, the lot size may be reduced to 9600 sq. ft.)
- (2) The minimum lot size where individual wells and septic tank systems are located on the same lot shall be a minimum of 1 acre.
- (3) Public sewer system shall be provided for lots less than the minimum size indicated in Item VI. (A)(1).

(B) Multiple

In determining lot size for multiple dwellings, there shall be a minimum of 4200 square feet of land area per bedroom, or any room normally used as a bedroom. (Excluding water and road easements or any other easements, if in the opinion of the Health Officer may disrupt or effect the operation of a drainfield system.)

Item VII. REQUIREMENTS FOR MULTIPLE DWELLINGS, SCHOOLS, RESTAURANTS, TAVERNS, MOBILE HOME PARKS AND OTHER COMMERCIAL ESTABLISHMENTS.

(A) Multiple

- (1) Maximum seasonal ground water or impervious soil from surface not less than four (4) feet. (Only percolation rates up to 10 minutes per inch acceptable.)
- (2) Minimum capacities for septic tanks shall be based on number of bedrooms in dwelling determined from Table I.
- (3) Results of percolation tests shall be determined from Table II. Subsurface Absorption Fields. (Minimum required trench bottom area per bedroom)

(B) Mobile Home Parks

- (1) Maximum seasonal ground water or impervious soil not less than four (4) feet. (Only percolation rates up to 10 minutes per inch acceptable.)
- (2) Minimum capacities for septic tanks shall be based on number of bedrooms in mobile home as determined from Table I. (Each mobile home shall be considered on a minimum of two (2) bedroom unit.)
- (3) Results of percolation tests shall be determined from Table II. Subsurface Absorption Fields. (Minimum required trench bottom area per bedroom)

(C) Schools, Restaurants, Taverns and other Commercial Establishments

- (1) Maximum seasonal ground water or impervious soil from surface not less than four (4) feet. (Only percolation rates up to 10 minutes per inch acceptable.)
- (2) Minimum capacities for septic tanks shall be computed from Manual of Septic Tank Practice.
- (3) Results of percolation tests for subsurface absorption fields shall be computed from Manual of Septic Tank Practice.

This regulation amends Regulation I of the Snohomish Health District, Environmental Health Division, and is Revision No. 1-2 amending said regulation in its entirety.

Adopted this 17th day of November, 1970

That this regulation shall become effective this 1st day of January, 1971.