

IDAPA 58 - DEPARTMENT OF ENVIRONMENTAL QUALITY

58.01.03 - INDIVIDUAL/SUBSURFACE SEWAGE DISPOSAL RULES

DOCKET NO. 58-0103-0801

NOTICE OF RULEMAKING - PROPOSED RULE

AUTHORITY: In compliance with Section 67-5221(1), Idaho Code, notice is hereby given that this agency has initiated proposed rulemaking procedures. The action is authorized by Chapters 1 and 36, Title 39, Idaho Code.

PUBLIC HEARING SCHEDULE: A public hearing concerning this proposed rule will be held as follows. The hearing will take place simultaneously and the following hearing locations will be connected by telephone.

Thursday - August 28, 2008 - 3:30 p.m. Mountain Time	
DEPARTMENT OF ENVIRONMENTAL QUALITY	
Conference Room B, 1410 N. Hilton Boise, Idaho	2110 Ironwood Parkway Coeur d'Alene, Idaho
1118 F Street Lewiston, Idaho	1363 Fillmore Twin Falls, Idaho
444 Hospital Way #300 Pocatello, Idaho	900 N. Skyline, Suite B Idaho Falls, Idaho

The hearing site(s) will be accessible to persons with disabilities. Requests for accommodation must be made no later than five (5) days prior to the hearing. For arrangements, contact the undersigned at (208) 373-0418.

DESCRIPTIVE SUMMARY: The purpose of this rulemaking is to provide for a revised method to estimate wastewater flow from single family dwellings that is more consistent with domestic water usage statewide. The proposed revisions would provide for a more refined soil classification system which will allow more precise sizing of drainfields. The rule would also provide a definition of "bedroom" and "module" to assist understanding and applicability of the rule within the regulated community.

The proposed rule includes the following:

1. Add a definition for the terms "bedroom" and "module";
2. Revise the wastewater flow rates for single family dwellings (Subsection 007.08);
3. Refine the soil classification system from 3 to 6 soil types (Subsections 008.02 and 008.03); and
4. Revise the maximum total square feet of trench (Subsection 008.04). In order to be in balance with the increased wastewater flow rates, it is necessary to increase the maximum allowable size for a standard drainfield.

Local government, property owners, representatives of the building construction industry, and the public at large may be interested in commenting on this proposed rule. The proposed rule text is in legislative format. Language the agency proposes to add is underlined. Language the agency proposes to delete is struck out. It is these additions and deletions to which public comment should be addressed.

After consideration of public comments, DEQ intends to present the final proposal to the Board of Environmental Quality at the October or November 2008 Board meeting for adoption as a pending rule. The rule is expected to be final and effective upon the conclusion of the 2009 legislative session if adopted by the Board and approved by the Legislature.

NEGOTIATED RULEMAKING: The text of the proposed rule has been drafted based on discussions held and concerns raised during negotiations conducted pursuant to Idaho Code Section 67-5220 and IDAPA 04.11.01.810-

815. On May 7, 2008, the Notice of Negotiated Rulemaking was published in the Idaho Administrative Bulletin, Vol. 08-5, pages 63 and 64, and a preliminary draft rule was made available for public review. Meetings were held on May 22, June 5, and June 19, 2008. Several members of the public participated in this negotiated rulemaking process by attending the meetings and by submitting written comments.

IDAHO CODE SECTION 39-107D STATEMENT: Section 39-107D, Idaho Code, provides that the Department of Environmental Quality (DEQ) must meet certain requirements when it formulates and recommends rules which are broader in scope or more stringent than federal law or regulations. There is no federal law or regulation that is comparable to the proposed rule. Therefore, the proposed changes to the rule are not broader in scope or more stringent than federal law or regulations.

Section 39-107D, Idaho Code, also applies to a rule which “proposes to regulate an activity not regulated by the federal government.” This proposed rule regulates an activity not regulated by the federal government. The following is a summary of additional information required by Sections 39-107D(3) and (4), Idaho Code. Information relating to Section 39-107D(2) has also been provided.

Section 39-107D(2), Idaho Code. To the degree that a department action is based on science, the department shall utilize (a) the best available peer reviewed science and supporting studies conducted in accordance with sound objective scientific practices, and (b) data collected by accepted methods or best available methods if the reliability of the method and the nature of the decision justifies use of the data.

The requirements set forth in the proposed rule are based on studies and analyses conducted by the health districts, the DEQ, the U.S. Environmental Protection Agency (EPA), and national wastewater organizations that indicate the requirements are protective of human health and the environment and reduce the risk of human exposure to sewage, wastewater effluent, and associated pathogens. The referenced studies and analyses will be included in the rulemaking record and can be reviewed during the public comment period for further detailed information regarding risk.

Section 39-107D(3)(a), Idaho Code. Identification of each population or receptor addressed by an estimate of public health effects or environmental effects.

The proposed rule, in particular the changes in rates of wastewater flow from single family dwellings, are expected to have both public health and environmental effects. The populations affected by the proposed rule include applicants for individual septic system permits, system installers, single family dwellings on individual septic systems, users of nearby drinking water supply wells, and other users of down-gradient beneficial uses of ground water and surface water.

Section 39-107D(3)(b) and (c), Idaho Code. Identification of the expected risk or central estimate of risk for the specific population or receptor and identification of each appropriate upper bound or lower bound estimate of risk.

The expected risk of exposure to sewage, wastewater effluent, and associated pathogens for the potentially affected populations listed above is reduced by addressing undersized septic system drainfields. The current rule wastewater flow estimates account for average flows from single family dwellings and were based on national studies conducted in the 1970s. This data, and the current rules, do not adequately take into account peak flows, were not based on usage data specific to Idaho, and do not accurately reflect household usage today. As a result, the current rules underestimate wastewater flow and have resulted in failing drainfields. Failed drainfields expose the affected populations described above to potential pathogens from open sewage and wastewater effluent.

The expected risk for contamination of ground water and surface water is also reduced. The increased flow estimates in the proposed rule result in slightly larger drainfields for standard systems. The chance of drainfield failure is reduced by the larger drainfields. Hydraulic overloading of soils will be reduced by distributing the wastewater effluent over the larger drainfield, thereby reducing the risk of ground water contamination. Overland flow of sewage and wastewater effluent into surface water bodies will likewise be reduced by properly sizing drainfields.

Section 39-107D(3)(d), Idaho Code. Identification of each significant uncertainty identified in the process of the assessment of public health effects or environmental effects and any studies that would assist in resolving the uncertainty.

There is uncertainty inherent in the process of identifying wastewater flows from single family dwellings. For

instance, usage may be highly variable from person to person, and the number of persons in a household is difficult to predict. The new flow rates introduce a peaking factor that accounts for peak flows expected at the system, thereby addressing this uncertainty. Using peak flows instead of average flows adds a margin of safety during normal flow conditions.

The estimation of wastewater flow rates in the current rule are based on average wastewater flows from national studies conducted in the 1970s. Prior to the collection of flow data in 2008, there was uncertainty as to how actual usage in Idaho compared to these national estimates. While some uncertainty remains, the 2008 Idaho-specific data provides more accuracy and reduces overall uncertainty inherent in estimating flows. Reducing uncertainty in the flow rates allows for the proposed rule to more accurately size drainfields. Since the 2008 data indicates the current rule underestimate flows, the proposed rule is expected to improve drainfield life and reduce early drainfield failure.

Section 39-107D(3)(e), Idaho Code. Identification of studies known to the department that support, are directly relevant to, or fail to support any estimate of public health effects or environmental effects and the methodology used to reconcile inconsistencies in the data.

The requirements set forth in this proposed rule are based upon studies and analyses conducted by the health districts, the DEQ, the EPA, and national wastewater organizations that indicate the requirements will reduce the risk of exposure to sewage, wastewater effluent, and associated pathogens for the populations listed above. The proposed rule is also expected to more adequately protect ground water and surface water from contamination resulting from failed drainfields. The referenced studies and analysis will be included in the rulemaking record and can be reviewed during the public comment period for further detailed information regarding risk.

FISCAL IMPACT STATEMENT: The following is a specific description, if applicable, of any negative fiscal impact on the state general fund greater than ten thousand dollars (\$10,000) during the fiscal year: Not applicable.

ASSISTANCE ON TECHNICAL QUESTIONS, SUBMISSION OF WRITTEN COMMENTS: For assistance on questions concerning the proposed rulemaking, contact AJ Maupin at aj.maupin@deq.idaho.gov, (208)373-0167.

Anyone can submit written comments by mail, fax or e-mail at the address below regarding this proposed rule. The Department will consider all written comments received by the undersigned on or before September 3, 2008.

Dated this 3rd day of July, 2008.

Paula J. Wilson
Hearing Coordinator
Department of Environmental Quality
1410 N. Hilton/Boise, Idaho 83706-1255
(208)373-0418/Fax No. (208)373-0481
paula.wilson@deq.idaho.gov

THE FOLLOWING IS THE TEXT OF DOCKET NO. 58-0103-0801

003. DEFINITIONS.

For the purposes of these rules, the following definitions apply. (5-7-93)

01. Abandoned System. A system which has ceased to receive blackwaste or wastewater due to diversion of those wastes to another treatment system or due to termination of waste flow. (10-1-90)

02. Alternative System. Any system for which the Department has issued design guidelines or which

the Director judges to be a simple modification of a standard system. (10-1-90)

03. Authorized or Approved. The state of being sanctioned or acceptable to the Director as stated in a written document. (10-1-90)

04. Bedroom. ()

a. Any room within a dwelling that is used primarily for sleeping and consists of the following elements: ()

i. Floor space of at least one hundred (100) square feet; ()

ii. Provides privacy to the occupants; ()

iii. One (1) or more interior means of ingress/egress, not through a room already classified as a bedroom; and ()

iv. One (1) or more windows or additional means of ingress/egress that meet jurisdictional building code requirement(s) applicable to bedrooms. ()

b. Any room shall be considered as a portion of an adjoining room when at least one-half (1/2) of the area of the common wall is open and unobstructed. ()

c. An unfinished basement shall qualify as a minimum of one (1) bedroom so long as Subsections 003.04.a.iii. and 003.04.a.iv. are satisfied. ()

d. A room identified on building plans that meets the conditions of Subsection 003.04.a., such as a "den," "study," "office," "library," "sewing room," or "craft room," shall be considered a bonus room. A bonus room shall be considered a bedroom except as follows: ()

i. Dwellings with four (4) or five (5) bedrooms will be allowed one (1) bonus room not to be counted as a bedroom; or ()

ii. Dwellings with six (6) or more bedrooms will be allowed two (2) bonus rooms not to be counted as bedrooms. ()

045. Blackwaste. Human body waste, specifically excreta or urine. This includes toilet paper and other products used in the practice of personal hygiene. (10-1-90)

056. Blackwater. A wastewater whose principal pollutant is blackwaste; a combination of blackwaste and water. (10-1-90)

067. Board. Idaho State Board Of Environmental Quality. (10-1-90)

078. Building Sewer. The extension of the building drain beginning five (5) feet outside the inner face of the building wall. (10-1-90)

089. Central System. Any system which receives blackwaste or wastewater in volumes exceeding twenty-five hundred (2,500) gallons per day; any system which receives blackwaste or wastewater from more than two (2) dwelling units or more than two (2) buildings under separate ownership. (10-1-90)

0910. Construct. To make, form, excavate, alter, expand, repair, or install a system, and, their derivations. (5-7-93)

101. Director. The Director of the Idaho Department of Environmental Quality or the Director's designee or authorized agent. (10-1-90)

- ~~142.~~ **Existing System.** Any system which was installed prior to the effective date of these rules. (5-7-93)
- ~~123.~~ **Expand.** To enlarge any nonfailing system. (10-1-90)
- ~~134.~~ **Failing System.** Any system which exhibits one (1) or more of the following characteristics: (10-1-90)
- a.** The system does not meet the intent of these rules as stated in Subsection 004.01. (5-7-93)
- b.** The system fails to accept blackwaste and wastewater. (10-1-90)
- c.** The system discharges blackwaste or wastewater into the waters of the State or onto the ground surface. (10-1-90)
- ~~145.~~ **Ground Water.** Any water of the state which occurs beneath the surface of the earth in a saturated geological formation of rock or soil. (5-7-93)
- ~~156.~~ **High Groundwater Level -- Normal, Seasonal.** High ground water level may be established by the presence of low chroma mottles, actual ground water monitoring or historic records. (5-7-93)
- a.** The normal high groundwater level is the highest elevation of ground water that is maintained or exceeded for a continuous period of six (6) weeks a year. (5-7-93)
- b.** The seasonal high groundwater level is the highest elevation of ground water that is maintained or exceeded for a continuous period of one (1) week a year. (5-7-93)
- ~~167.~~ **High Water Mark.** The line which the water impresses on the soil by covering it for sufficient periods of time to prevent the growth of terrestrial vegetation. (10-1-90)
- ~~178.~~ **Individual System.** Any standard, alternative or subsurface system which is not a central system. (10-1-90)
- ~~189.~~ **Install.** To excavate or to put in place a system or a component of a system. (10-1-90)
- ~~1920.~~ **Installer.** Any person, corporation, or firm engaged in the business of excavation for, or the construction of individual or subsurface sewage disposal systems in the State. (10-1-90)
- ~~201.~~ **Large Soil Absorption System.** A large soil absorption system is a subsurface sewage disposal system designed to receive two thousand five hundred (2,500) gallons of wastewater or more per day, including where the total wastewater flow from the entire proposed project exceeds two thousand five hundred (2,500) gallons per day but the flow is separated into absorption modules which receive less than two thousand five hundred (2,500) gallons per day. (5-7-93)
- ~~212.~~ **Limiting Layer.** A characteristic subsurface layer or material which will severely limit the capability of the soil to treat or absorb wastewater including, but not limited to, water tables, fractured bedrock, fissured bedrock, excessively permeable material and relatively impermeable material. (10-1-90)
- ~~23.~~ **Module.** A module shall consist of one (1) primary drainfield, one (1) secondary drainfield with a design flow equal to that of the primary drainfield, and one (1) replacement area in accordance with Subsection 004.06. The primary drainfield in any module may be designed for flows up to a maximum of ten thousand (10,000) gallons per day and shall not receive more than ten thousand (10,000) gallons per day. ()
- ~~224.~~ **Mottling.** Irregular areas of different color in the soil that vary in contrast, density, number and size. Mottling generally indicates poor aeration and impeded drainage. (5-7-93)
- ~~235.~~ **New System.** A system which is or might be authorized or approved on or after the effective date of

these rules. (5-7-93)

246. Nondischarging System. Any system which is designed and constructed to prevent the discharge of blackwaste or wastewater. (10-1-90)

257. Permit. An individual or subsurface system installation permit or installer's registration permit. (10-1-90)

268. Pollutants. Any chemical, biological, or physical substance whether it be solid, liquid, gas, or a quality thereof, which if released into the environment can, by itself or in combination with other substances, create a public nuisance or render that environment harmful, detrimental, or injurious to public health, safety or welfare or to domestic, commercial, industrial, agricultural, recreational, aesthetic, or other beneficial uses. (10-1-90)

279. Public System. Any system owned by a county, city, special service district, or other governmental entity or Indian tribe having the authority to dispose of blackwaste or wastewater; a municipal wastewater treatment facility. (10-1-90)

2830. Repair. To remake, reform, replace, or enlarge a failing system or any component thereof as is necessary to restore proper operation. (10-1-90)

2931. Scarp. The side of a hill, canyon, ditch, river bank, roadcut or other geological feature characterized by a slope of forty-five (45) degrees or more from the horizontal. (10-1-90)

302. Sewage. Sewage has the same meaning as wastewater. (10-1-90)

343. Soil Texture. The relative proportion of sand, silt, and clay particles in a mass of soil. (10-1-90)

324. Standard System. Any system recognized by the Board through the adoption of design and construction regulations. (10-1-90)

335. Subsurface System. Any system with a point of discharge beneath the earth's surface. (10-1-90)

346. Surface Water - Intermittent, Permanent, Temporary. (7-1-93)

a. Any waters of the State which flow or are contained in natural or man-made depressions in the earth's surface. This includes, but is not limited to, lakes, streams, canals, and ditches. (10-1-90)

b. An intermittent surface water exists continuously for a period of more than two (2) months but not more than six (6) months a year. (10-1-90)

c. A permanent surface water exists continuously for a period of more than six (6) months a year. (10-1-90)

d. A temporary surface water exists continuously for a period of less than two (2) months a year. (10-1-90)

357. System. Beginning at the point of entry physically connected piping, treatment devices, receptacles, structures, or areas of land designed, used or dedicated to convey, store, stabilize, neutralize, treat, or dispose of blackwaste or wastewater. (10-1-90)

368. Wastewater. Any combination of liquid or water and pollutants from activities and processes occurring in dwellings, commercial buildings, industrial plants, institutions and other establishments, together with any groundwater, surface water, and storm water that may be present; liquid or water that is chemically, biologically, physically or rationally identifiable as containing blackwater, grey water or commercial or industrial pollutants; and sewage. (10-1-90)

379. Waters of the State. All the accumulations of water, surface and underground, natural and

artificial, public and private or parts thereof which are wholly or partially within, which flow through or border upon the state of Idaho. (10-1-90)

~~3840.~~ **Water Table.** The surface of an aquifer. (10-1-90)

(BREAK IN CONTINUITY OF SECTIONS)

007. SEPTIC TANKS DESIGN AND CONSTRUCTION STANDARDS.

01. Materials. New septic tanks will be constructed of concrete, or other materials approved by the Director. Steel tanks are unacceptable. (10-1-90)

02. Construction Requirements. All septic tanks will be water tight, constructed of sound, durable materials and not subject to excessive corrosion, decay, frost damage or cracking. (10-1-90)

03. Concrete Septic Tanks. New concrete septic tanks will at a minimum meet the following requirements: (10-1-90)

a. The walls and floor must be at least two and one-half (2 1/2) inches thick if adequately reinforced and at least six (6) inches thick if not reinforced. (10-1-90)

b. Concrete lids or covers must be at least three (3) inches thick and adequately reinforced. (10-1-90)

c. The floor and at least a six (6) inch vertical portion of the walls of a poured tank must be poured at the same time (monolithic pour). (10-1-90)

d. Wall sections poured separately must have interlocking joints on joining edge. (10-1-90)

e. All concrete outlet baffles must be finished with an asphalt or other protective coating. (10-1-90)

04. Horizontal Dimension Limit. No interior horizontal dimension of a septic tank or compartment may be less than two (2) feet. (10-1-90)

05. Liquid Depth. The liquid depth shall be at least two and one-half (2 1/2) feet but not greater than five (5) feet. (10-1-90)

06. Manufactured Tank Markings. Septic tanks manufactured in accordance with a specified design approved by the Director, will be legibly and indelibly marked with the manufacturer's name or trademark, total liquid capacity and shall indicate the tank's inlet and outlet. (10-1-90)

07. Minimum Tank Capacities. (7-1-93)

a. Tanks serving one (1) or two (2) single dwelling units:

MINIMUM CAPACITY PER DWELLING UNIT	
Number of Bedrooms	Minimum Liquid Capacity (Gallons)
1 or 2	900
3 or 4	1,000

For each bedroom over four (4) add two hundred fifty (250) gallons. (10-1-90)

b. Tanks serving all other flows. Septic tank capacity shall be equal to two (2) times the average daily

flow as determined from Subsection 007.08. The minimum tank capacity shall be seven hundred and fifty (750) gallons. (12-31-91)

08. Wastewater Flows from Various Establishments in Gallons Per Day.

ESTABLISHMENTS	
Single Family Dwelling and Mobile Homes:	<u>250/Unit</u>
1 & 2 bedrooms: Add/subtract 50 gallons/bedroom	<u>300</u>
<u>3 bedrooms</u>	<u>350</u>
<u>4 bedrooms</u>	<u>450</u>
<u>5 bedrooms</u>	<u>550</u>
<u>6 or more bedrooms</u>	<u>650 + 50 gpd/bedroom</u>
MULTIPLE RESIDENTIAL	
Hotel:	
With Private Baths	60/Bedspace
Without Private Baths	40/Bedspace
Motel:	40/Bedspace
With Kitchenette	60/Bedspace
Boarding House:	150/Bedspace
Add for each nonresident	25
Rooming House/Bunk House	40/Resident
Staff Resident	40/Staff
Nonresident	15/Staff
Apartments	250/Unit
INSTITUTIONAL	
Assembly Hall/Meeting House	2/Seat
Church:	3/Seat
With Kitchen	7/Seat
Hospital:	250/Bedspace
Kitchen only	25/Bedspace
Laundry only	40/Bedspace
Nursing Home/Rest Home	125/Bedspace
Day School:	
Without Showers	20/Student
With Showers	25/Student
With Cafeteria, add	3/Student
Staff-Resident	40/Staff
Nonresident	20/Staff
FOOD SERVICE	
Conventional Service:	
Toilet & Kitchen Wastes	13/Meal
Kitchen Wastes	3.3/Meal
Take Out or Single Service	2/Meal

ESTABLISHMENTS	
Dining Hall: Toilet & Kitchen Wastes Kitchen Wastes	8/Meal 3.3/Meal
Drinking Establishment	2/Person
Food Service Employee	15/Employee
COMMERCIAL AND INDUSTRIAL	
Bowling Alley	125/Lane
Laundry - Self Service	50/Wash
Public Transportation Terminal	5/Fare
Service Station	10/Vehicle
Car Wash: 1st Bay Additional Bays	50/Vehicle 1000 500 each
Shopping Center (No food/laundry)	1/Pkg.Sp.
Theaters (including Concession Stand): Auditorium Drive-in	5/Seat 10/Space
Offices	20/Employee
Factories: No Showers With Showers Add for Cafeteria	25/Employee 35/Employee 5/Employee
Stores	2/Employee
Public Restrooms	
SEASONAL AND RECREATIONAL	
Fairground (Peak Daily Attend)	1/Person
Stadium	2/Seat
Swimming Pool: Toilet & Shower Wastes	10/Person
Parks & Camps (Day Use): Toilet & Shower Wastes	15/Person
Roadside Rest Area: Toilet & Shower Wastes Toilet Waste	10/Person 5/Person
Overnight Accommodation: Central Toilet Central Toilet & Shower	25/Person 35/Person
Designated Camp Area: Toilet & Shower Wastes Toilet Wastes	90/Space 65/Space

ESTABLISHMENTS	
Seasonal Camp	50/Space
Luxury Cabin	75/Person
Travel Trailer Park with Sewer & Water Hook-up	125/Space
Construction Camp	50/Person
Resort Camps	50/Person
Luxury Camps	100/Person
Country Clubs Resident Member	100/Member
Add for Nonresident Member	25/Person
Public Restrooms:	
Toilet Wastes	5/Person
Toilet & Shower Wastes	15/Person

~~(10-1-90)~~()

09. Total Volume. The total volume of a septic tank will at a minimum be one hundred fifteen percent (115%) of its liquid capacity. (10-1-90)

10. Inlets. (7-1-93)

a. The inlet into the tank will be at least four (4) inches in diameter and enter the tank three (3) inches above the liquid level. (10-1-90)

b. The inlet of the septic tank and each compartment will be submerged by means of a vented tee or baffle. (10-1-90)

c. Vented tees or baffles will extend above the liquid level seven (7) inches or more but not closer than one (1) inch to the top of the tank. (10-1-90)

d. Tees should not extend horizontally into the tank beyond two (2) times the diameter of the inlet. (10-1-90)

11. Outlets. (7-1-93)

a. The outlet of the tank will be at least four (4) inches in diameter. (10-1-90)

b. The outlet of the septic tank and each compartment will be submerged by means of a vented tee or baffle. (10-1-90)

c. Vented tees and baffles will extend above the liquid level seven (7) inches or more above the liquid level but no closer than one (1) inch to the inside top of the tank. (10-1-90)

d. Tees and baffles will extend below the liquid level to a depth where forty percent (40%) of the tank's liquid volume is above the bottom of the tee or baffle. For vertical walled rectangular tanks, this point is at forty percent (40%) of the liquid depth. In horizontal cylindrical tanks this point is about thirty-five percent (35%) of the liquid depth. (10-1-90)

e. Tees and baffles should not extend horizontally into the tank beyond two (2) times the diameter of the outlet. (10-1-90)

12. Scum Storage. A septic tank will provide an air space above the liquid level which will be equal to

or greater than fifteen percent (15%) of the tank's liquid capacity. For horizontal cylindrical tanks, this condition is met when the bottom of the outlet port is located at nineteen percent (19%) of the tank's diameter when measured from the inside top of the tank. (10-1-90)

13. Manholes. Access to each septic tank or compartment shall be provided by a manhole twenty (20) inches in minimum dimension or a removable cover of equivalent size. Each manhole cover will be provided with a corrosion resistant strap or handle to facilitate removal. (10-1-90)

14. Inspection Ports. An inspection port measuring at least eight (8) inches in its minimum dimension will be placed above each inlet and outlet. Manholes may be substituted for inspection ports. (10-1-90)

15. Split Flows. The wastewater from a single building sewer or sewer line may not be divided and discharged into more than one (1) septic tank or compartment. (10-1-90)

16. Multiple Tank or Compartment Capacity. Multiple septic tanks or compartmented septic tanks connected in series may be used so long as the sum of their liquid capacities is at least equal to the minimum tank capacity computed in Subsection 007.07 and the initial tank or compartment has a liquid capacity of more than one-half (1/2) but no more than two-thirds (2/3) of the total liquid capacity of the septic tank facility. (12-31-91)

17. Minimum Separation Distances Between Septic Tanks and Features of Concern.

Features of Concern	Minimum Distance to Septic Tank in Feet	
Well or Spring or Suction Line	Public Water	100
	Other	50
Water Distribution Line	Public Water	25
	Other	10
Permanent or Intermittent Surface Water		50
Temporary Surface Water		25
Downslope Cut or Scarp		25
Dwelling Foundation or Building		5
Property Line		5
Seasonal High Water Level (Vertically from Top of Tank)		2

(10-1-90)

18. Installation of Manufactured Tanks. If written installation instructions are provided by the manufacturer of a septic tank, those instructions relative to the stability and integrity of the tank are to be followed unless otherwise specified in the installation permit of these rules. (5-7-93)

19. Manhole Extension. If the top of the septic tank is to be located more than twenty-four (24) inches below the finished grade, manholes will be extended to within eighteen (18) inches of the finished grade. (10-1-90)

20. Sectional Tanks. Sectional tanks will be joined in a manner that will insure that the tank is watertight. (10-1-90)

21. Inlet and Outlet Piping. Unless otherwise specified in the installation permit, piping to and from a septic tank or dosing chamber, to points three (3) feet beyond the tank excavation shall be of a material approved by the Director. The following materials are required: (5-7-93)

- a. ABS schedule forty (40) or material of equal or greater strength piping shall be used to span the

excavations for the septic tank and dosing chamber. (5-7-93)

b. ASTM-D-3033 or 3034 plastic pipe may be used to span the septic tank and dosing chamber if the excavation is compacted with fill material. (5-7-93)

i. The fill material must be granular, clean and compacted to ninety percent (90%) standard proctor density. (5-7-93)

ii. Placement of ASTM-D-3033 or 3034 on undisturbed earth is suitable, but in no installation shall there be less than twelve (12) inches of cover over the pipe. (5-7-93)

22. Effluent Pipe Separation Distances. Effluent pipes shall not be installed closer than fifty (50) feet from a well. (5-7-93)

23. Septic Tank Abandonment. Responsibility of properly abandoning a septic tank shall remain with the property owner. Septic tanks shall be abandoned in accordance with the following: (5-7-93)

a. Disconnection of the inlet and outlet piping; (5-7-93)

b. Pumping of the scum and septage with approved disposal; (5-7-93)

c. Filling the septic tank with earthen materials; or (5-7-93)

d. Physically destroying the septic tank or removing the septic tank from the ground. (5-7-93)

008. STANDARD SUBSURFACE DISPOSAL FACILITY DESIGN AND CONSTRUCTION.

01. Standard Drainfield. A drainfield consisting of an effluent sewer, one (1) or more aggregate filled trenches and a gravity flow wastewater distribution system. These standards will be the basis of acceptable design and configuration. Overall dimensions of a specific facility will depend upon site characteristics and the volume of wastewater. (10-1-90)

02. Site Suitability. The area in which a standard drainfield is to be constructed must meet the conditions stated in this subsection: (10-1-90)

a. Slope. The natural slope of the site will not exceed twenty percent (20%). (10-1-90)

b. Soil types. Suitable soil types must be present at depths corresponding with the sidewalls of the proposed drainfield and at depths which will be between the bottom of the proposed drainfield and any limiting soil layer (effective soil depth).

Design Soil Group	Design Soil Subgroup	Soil Textural Classification	USDA Field Test Textural Classification	
Unsuitable		Gravel (>95%)	10 Mesh	
		Coarse Sand(>95%)	10-35 Mesh	Sand
A	A-1	Medium Sand	35-60 Mesh	Sand
	A-2a	Medium Sand	Poorly Graded	Sand
	A-2b	Fine Sand	65-140 Mesh	Sand
		Loamy Sand		Sand

Design Soil Group	Design Soil Subgroup	Soil Textural Classification	USDA Field Test Textural Classification		
B	<u>B-1</u>	Very Fine Sand	140-270 Mesh	Sand	
		Sandy Loam		Sandy Loam	
		Very Fine Sandy Loamy-Sand		Sandy Loam	
	<u>B-2</u>	Loam			
		Silt Loam		Silt Loam	
		<u>Sandy Clay Loam</u>	(<u><27% Clay</u>)		
C	<u>C-1</u>	Silt		Silt Loam	
		Clay Loam		Clay Loam	
		Sandy Clay Loam	(<u>>27% Clay</u>)	Clay Loam	
		Silty Clay Loam		Clay Loam	
	<u>C-2</u>	<u>Clay Loam</u>		<u>Clay Loam</u>	
	Unsuitable		Sandy Clay	(<u>>35% Clay</u>)	Clay
		Silty Clay	(<u>>40% Clay</u>)	Clay	
		Clay		Clay	
		Clay soils with high shrink/swell potential		Clay	
		Organic mucks			
		Claypan, Duripan, <u>Hardpan</u>			
		Hardpan			

(10-1-90)()

c. Effective Soil Depths. Effective soil depths, in feet, below the bottom of the drainfield must be equal to or greater than those values listed in the following table.

EFFECTIVE SOIL DEPTHS TABLE						
Site Conditions	Design		Soil		Group	
	<u>A-1</u>	B <u>A-2</u>	C <u>B-1</u>	<u>B-2</u>	<u>C-1</u>	<u>C-2</u>
Limiting Layer						
Impermeable Layer	4	4	4	<u>4</u>	4	<u>4</u>
Fractured Bedrock, Fissured Bedrock or Extremely Permeable Material	6	<u>4.5</u>	<u>3.4</u>	<u>3</u>	<u>3</u>	<u>2.5</u>
Normal High Groundwater Level	6	<u>4.5</u>	<u>3.4</u>	<u>3</u>	<u>3</u>	<u>2.5</u>
Seasonal High Groundwater Level	1	1	1	<u>1</u>	1	<u>1</u>

(5-7-93)()

d. Separation Distances. The drainfield must be located so that the separation distances given be maintained or exceeded according to the following Table:

Feature of Interest	Soil Types All	A	B	C
Public Water Supply	100			
All Other Domestic Water Supplies including Springs and Suction Lines	100			
Water Distribution Lines: Pressure Suction	25 100			
Permanent or Intermittent Surface Water other than Irrigation Canals & Ditches		300	200	100
Temporary Surface Water and Irrigation Canals and Ditches	50			
Downslope Cut or Scarp: Impermeable Layer Above Base Impermeable Layer Below Base		75 50	50 25	50 25
Building Foundations: Crawl Space or Slab Basement	10 20			
Property Line	5			

(5-7-93)

03. Subsurface Disposal Facility Sizing. The size of a subsurface disposal system will be determined by the following procedures: (10-1-90)

a. Daily flow estimates should be determined in the same manner as are flow estimates for septic tank sizing in Subsection 007.08. (5-7-93)

b. The total required absorption area is obtained by dividing the estimated daily flow by a value below.

Design Soil Group	A-1	B A-2a	C A-2b	B-1	B-2	C-1	C-2
Absorption Area - Gallons/Square Foot/Day	1.02	0.5 1.0	0.275	0.6	0.45	0.3	0.2

(10-1-90)()

c. Required Area. The size of an acceptable site must be large enough to construct two (2) complete drainfields in which each are sized to receive one hundred percent (100%) of the design wastewater flow. (10-1-90)

04. Standard Subsurface Disposal Facility Specifications. The following table presents additional design specifications for new subsurface sewage disposal facilities.

SUBSURFACE DISPOSAL FACILITY TABLE	
Item	All Soil Groups
Length of Individual Distribution Laterals	100 Feet Maximum
Grade of Distribution Laterals and Trench Bottoms	Level
Width of Trenches	1 Foot Minimum 6 Feet Maximum
Depth of Trenches	2 Feet Minimum 4 Feet Maximum
Total Square Feet of Trench for A and B Soils	1500 Sq.ft. Max.
Total Square Feet of Trench for C Soils	2250 Sq. ft. Max.
Undisturbed Earth Between Trenches	6 Feet Minimum
Undisturbed Earth Between Septic Tank and Trenches	6 Feet Minimum
Depth of Aggregate:	
Total	12 In. Minimum
Over Distribution Laterals	2 In. Minimum
Under Distribution Laterals	6 In. Minimum
Depth of Soil Over Top of Aggregate	12 In. Minimum

(10-1-90)()

05. Wastewater Distribution. Systems shall be installed to maintain equal or serial effluent distribution. (10-1-90)

06. Excavation. Trenches will not be excavated during the period of high soil moisture content when that moisture promotes smearing and compaction of the soil. (10-1-90)

07. Soil Barrier. The aggregate will be covered throughout with untreated building paper, a synthetic filter fabric (geotextile), a three (3) inch layer of straw or other acceptable permeable material. (10-1-90)

08. Aggregate. The trench aggregate shall be crushed rock, gravel, or other acceptable, durable and inert material which is, free of fines, and has an effective diameter from one-half (1/2) to two and one-half (2 1/2) inches. (10-1-90)

09. Impermeable Surface Barrier. No treatment area trench or replacement area shall be covered by an impermeable surface barrier, such as tar paper, asphalt or tarmac or be used for parking or driving on or in any way compacted and shall be adequately protected from such activities. (5-7-93)

10. Standard Absorption Bed. Absorption bed disposal facilities may be considered when a site is suitable for a standard subsurface disposal facility except that it is not large enough. (10-1-90)

a. General Requirements. Except as specified in this section, rules and regulations applicable to a standard subsurface disposal system are applicable to an absorption bed facility. (10-1-90)

b. Slope Limitation. Sites with slopes in excess of eight percent (8%) are not suitable for absorption bed facilities. (10-1-90)

c. Vehicular Traffic. Rubber tired vehicles must not be driven on the bottom surface of any bed excavation. (10-1-90)

d. Distribution Lateral Spacing. Distribution laterals within a bed must be spaced on not greater than six (6) feet centers nor may any sidewall be more than three (3) feet from a distribution lateral. (10-1-90)

11. Seepage Pit. Seepage pit disposal facilities may be used on a case by case basis within the boundaries of District Health Department Seven when an applicant can demonstrate to the district director's satisfaction that the soils and depth to ground water are sufficient to prevent ground water contamination. The district director shall document all such cases. (4-2-91)L

a. General Requirements. Except as specified in Subsection 008.11.b., rules and regulations applicable to a standard subsurface disposal system are applicable to a seepage pit. (12-31-91)

b. Other conditions for approval, sizing and construction will be as provided for in the seepage pit section of the Technical Guidance Manual for Individual and Subsurface Sewage Disposal, except that the site size restriction in condition two (2) of the Conditions for Approval will not apply. (10-1-90)

12. Failing Subsurface Sewage Disposal System. If the Director determines that the public's health is at risk from a failed septic system and that the replacement of a failing subsurface sewage disposal system cannot meet the current rules and regulations, then the replacement system must meet the intent of the rules and regulations by utilizing a standard subsurface sewage disposal design or alternative system design as specified by the Director. (5-7-93)

(BREAK IN CONTINUITY OF SECTIONS)

013. LARGE SOIL ABSORPTION SYSTEM DESIGN AND CONSTRUCTION.

01. Site Investigation. A site investigation for a large soil absorption system by a soil scientist and/or hydrogeologist may be required by the Director for review and approval and shall be coordinated with the Director. Soil and site investigations shall conclude that the effluent will not adversely impact or harm the waters of the State. (5-7-93)

02. Installation Permit Plans. Installation permit application plans, as outlined in Subsection 005.04, for a large soil absorption system submitted for approval shall include provisions for inspections of the work during construction by the design engineer or his designee and/or by the Director. (5-7-93)

03. Module Size Flow. ~~The maximum size of any subsurface sewage disposal module shall be ten thousand (10,000) gallons per day. Developments~~ Large soil absorption systems with greater than ten thousand (10,000) gallons per day flow shall be divided ~~the system~~ into absorption modules ~~designed for ten thousand (10,000) gallons per day or less.~~ (5-7-93)(____)

04. Standard Large Soil Absorption System Design Specifications. (5-7-93)

a. All design elements and applications rates shall be arrived at by sound engineering practice and shall be provided by a professional engineer licensed by the state of Idaho and specializing in environmental or sanitary engineering. (5-7-93)

b. Within thirty (30) days of system installation completion the design engineer shall provide either as-built plans or a certificate that the system has been installed in substantial compliance with the installation permit application plans. (5-7-93)

c. Effective Soil Depths. Effective soil depths, in feet, below the bottom of the absorption module to the site conditions must be equal to or greater than the following table:

TABLE -- EFFECTIVE SOIL DEPTHS			
Site Conditions	Design	Soil	Group
Limiting Layer	A	B	C
Impermeable Layer	8	8	8
Fractured Bedrock, Fissured Bedrock or Extremely Permeable Material	12	8	6
Normal High Groundwater Level	12	8	6
Seasonal High Groundwater Level	2	2	2

(5-7-93)

d. Separation Distances. The disposal area absorption module must be located so that the following separation distances given, in feet, are maintained or exceeded as outlined in the following table:

TABLE -- SEPARATION DISTANCES			
Feature of Interest	Design	Soil	Group
	A	B	C
All Domestic Water Supplies			
Sewage Volume - 2,500-5,000 GPD	250	200	150
Sewage Volume - 5,000-10,000 GPD	300	250	200
Property Lines			
Sewage Volume - 2,500-5,000 GPD	50	50	50
Sewage Volume - 5,000-10,000 GPD	75	75	75
Building Foundations - Basements			
Sewage Volume - 2,500-5,000 GPD	50	50	50
Sewage Volume - 5,000-10,000 GPD	75	75	75
Downslope Cut or Scarp			
Impermeable Layer - Below Base	100	50	50
Separation Distance - Between Modules	12	12	12

(5-7-93)

e. No large soil absorption system shall be installed above a downslope scarp or cut unless it can be demonstrated that the installation will not result in effluent surfacing at the cut or scarp. (5-7-93)

f. A minimum of two (2) disposal systems will be installed, each sized to accept the daily design flow, and a replacement area equal to the size of one (1) disposal system will be reserved. (5-7-93)

g. The vertical and horizontal hydraulic limits of the receiving soils shall be established and flows shall not exceed such limits so as to avoid hydraulically overloading any absorption module and replacement area. (5-7-93)

- h.** The distribution system must be pressurized with a duplex dosing system. (5-7-93)
- i.** A geotextile filter fabric shall cover the aggregate. (5-7-93)
- j.** An in-line effluent filter between an extended treatment system or lagoon system and the large soil absorption area shall be installed. (5-7-93)
- k.** Observation pipes shall be installed to the bottom of the drainrock throughout the drainfield. (5-7-93)
- l.** Pneumatic tired machinery travel over the excavated infiltrative surface is prohibited. (5-7-93)
- m.** The drainfield disposal area shall be constructed to allow for surface drainage and to prevent ponding of surface water. Before the system is put into operation the absorption module disposal area shall be seeded with typical lawn grasses and/or other appropriate shallow rooted vegetation. (5-7-93)
- 05. Large Septic Tanks.** Large Septic Tanks shall be constructed according to Section 007, except as outlined in this Subsection: (5-7-93)

 - a.** Length to width ratios shall be maintained at least at a three to one (3:1) ratio. (5-7-93)
 - b.** Tank inlet shall allow for even distribution of the influent across the width of the tank. (5-7-93)
 - c.** The width to liquid depth ratio shall be between one to one (1:1) and two and one-quarter to one (2.25:1). (5-7-93)
- 06. Monitoring and Reporting.** Before an installation permit is issued, a monitoring and reporting plan shall be approved by the Director and shall contain the following minimum criteria: (5-7-93)

 - a.** Monthly recording and inspection for ponding in all observation pipes. (5-7-93)
 - b.** Monthly recording of influent flows based on lapse time meter and/or event meter of the dosing system. (5-7-93)
 - c.** Monthly recording of groundwater elevation measurements at all monitoring wells if high seasonal groundwater is within fifteen (15) feet of the ground surface. (5-7-93)
 - d.** Semi-annual groundwater monitoring at all monitoring wells. (5-7-93)
 - e.** Monitoring shall conform to the requirements of all federal, state, and local rules and regulations. (5-7-93)
 - f.** An annual "Large Soil Absorption System Report" shall be filed with the Director no later than January 31 of each year for the last twelve (12) month period and shall include section on operation, maintenance and monthly and annual monitoring data. (5-7-93)
- 07. Operation and Maintenance.** Before an installation permit is issued, an operation and maintenance plan shall be approved by the Director and shall contain the following minimum criteria: (5-7-93)

 - a.** Annual or more frequent rotation of the disposal systems, and whenever ponding is noted. (5-7-93)
 - b.** A detailed operation and maintenance manual, fully describing and locating all elements of the system and outlining maintenance procedures needed for operation of the system and who will be responsible for system maintenance, shall be submitted to the Director prior to system use. (5-7-93)
 - c.** A maintenance entity shall be specified to provide continued operation and maintenance. Approval of the entity shall be made by the Director prior to issuance of an installation permit. (5-7-93)