CARE AND MAINTENANCE

Properly installed septic systems that are well maintained, can have a life span of 30-50 years. To get the most life out of your septic system, it must be taken care of. Here are few items to keep in mind:

1. Pump your tank every 3-5 years.
2. Check the toilet paper you use. Is it approved for septic systems?
3. Don't park or drive over the drainfield.
4. Grass is the best plant to cover a drainfield. Tree roots can damage a drainfield.
5. Repair leaks or running toilets in the home. Too much water can overload the drianfield causing it to fail.
6. Spread laundry out over the week, instead of washing cloths all in one day. This will help the soil absorb wastewater more efficiently.
7. Reduce or eliminate using a garbage disposal. Food items don't breakdown easily in the septic tank.
8. Don't dump items down the toilet such as oils, flushable wipes, paper towels, or house hold cleaners. They don't break down in the tank.
9. Dump your RV at a designated RV dump. Chemicals in RVs kill the bacteria needed for a septic system to work.

RESOUCES

Idaho Department of Environmental Quality, Technical Guidance Manual (TGM).
http://www.deq.idaho.gov/media/1148/tgm-entire.pdf

Idaho Division of Building Safety
https://dbs.idaho.gov/

IF YOU HAVE ANY QUESTIONS, PLEASE CONTACT US. WE WANT TO HELP YOU AVOID MISTAKES THAT MAY REQUIRE COSTLY AND TIME-CONSUMING CORRECTIONS.

***This document is based off Eastern Idaho Public Health's* Homeowner's Guide to Installing a Septic System.**

Public Health
Idaho North Central District

Nez Perce County
215 10th Street
Lewiston, ID 83501
(208) 799-3100
Fax: 799-0349

Latah County
333 E Palouse River Dr
Moscow, ID 83843
(208) 882-7506
Fax: 882-3494

Clearwater County
105 115th Street
Orofino, ID 83544
(208) 476-7850
Fax: 476-7494

Idaho County
903 West Main Street
Grangeville, ID 83530
(208) 983-7850
Fax: 983-2845

Lewis County
132 N Hill Street
P O Box 277
Kamiah, ID 83536
(208) 935-2124
Fax: 935-0223

Homeowner

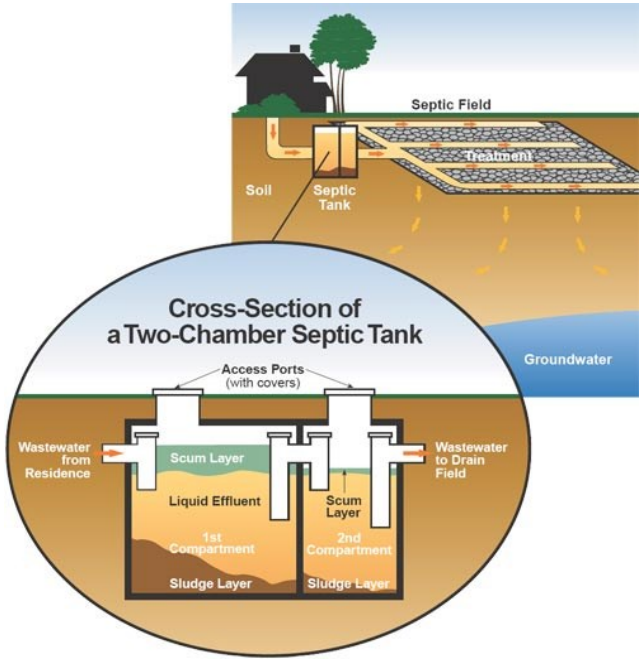


Image from the City of Winnipeg Canada

Installer Manual

Website: http://idahopublichealth.com/

PURPOSE

The purpose of the on-site sewage disposal program is to protect the environment and drinking water for both the property owner and their neighbors. This is done by ensuring an on-site system has been installed correctly.

On-site sewage disposal permits are issued for traditional drainfield septic systems, alternative systems, vault privies/outhouses, new systems, failing systems, and replacement tanks. The Environmental Health Specialist will work with the property owner to determine site suitability and issue the installation permit.

The purpose of this guide is to assist the homeowner with installing their own basic septic system. If the permit is listed as complex, a complex installer must install the system.

The Property Owner will

- Provide a completed application
- Provide property location (address, road, parcel number)
- Pay the permit fee prior to site evaluation
- Make arrangements to have equipment available to dig test holes
- Make sure permit is issued
- Call to have the system approved before cover

The Inspector will

- Review application for completion and proposed plot plan
- Conduct a site evaluation
- Determine soil conditions
- Issue the septic permit
- Verify the installed system meets the permit specifications

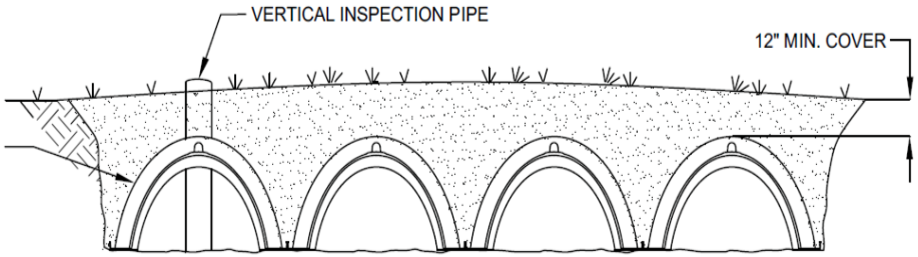
The Environmental Health Specialist will not design the system for the owner. If you are not comfortable installing a system, contact a licensed installer. Public Health Idaho maintains a list of licensed installers that is updated regularly.

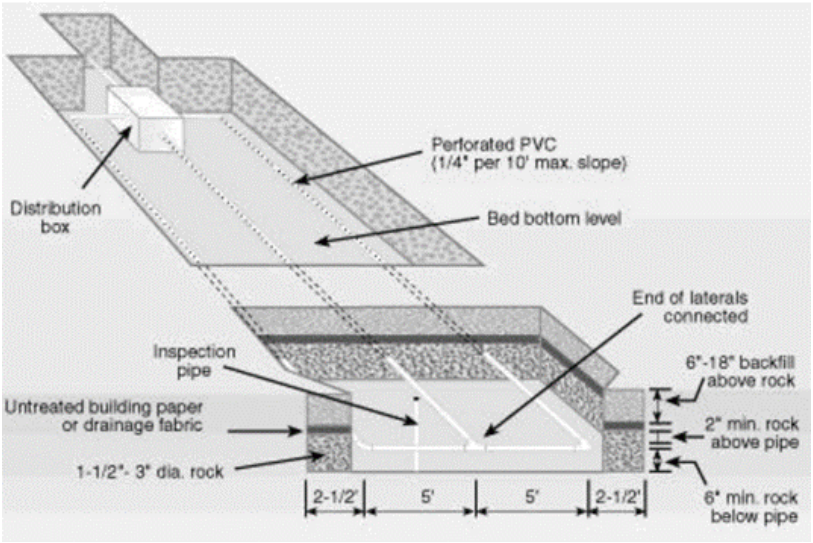
ABSORPTION BEDS:

Absorption beds often have a smaller foot print than a standard drainfield. They are generally used for smaller lots or when a replacement system is needed and there is very little room. Absorption beds, regardless of components used, must be level.

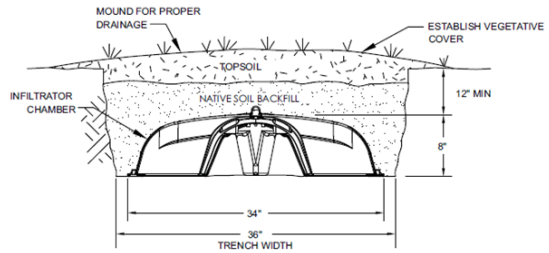
Absorption beds are generally a square or rectangle filled with drain rock or gravelless drainfield components. If drain rock is desired, then a pipe distribution network must be constructed in the rock. Pipes shall be no more than 3 feet away from the side of the bed and no more than 6 feet away from each other.

Any permit issued for an absorption bed will have specific requirements listed.





GRAVELLESS SYSTEM: Gravelless drainfield components may be used and most reduce the necessary square footage for the system by 25%. The gravelless system meets all the requirements of a standard pipe and gravel system. The permit will say if this system is allowed.

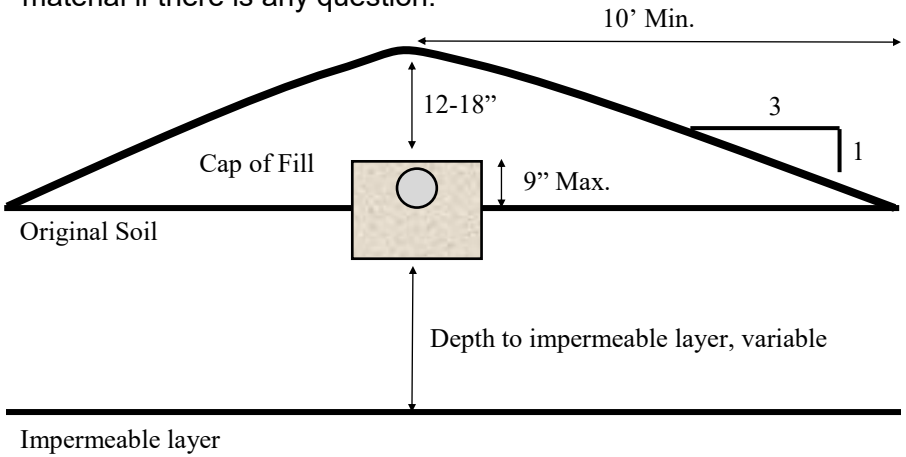


CAPPING FILL DRAINFIELD

A capping fill drainfield may be required if there is insufficient soil depth. All of the standard drainfield requirements apply except the installation depth is less than 2 feet, but no less than 3 inches.

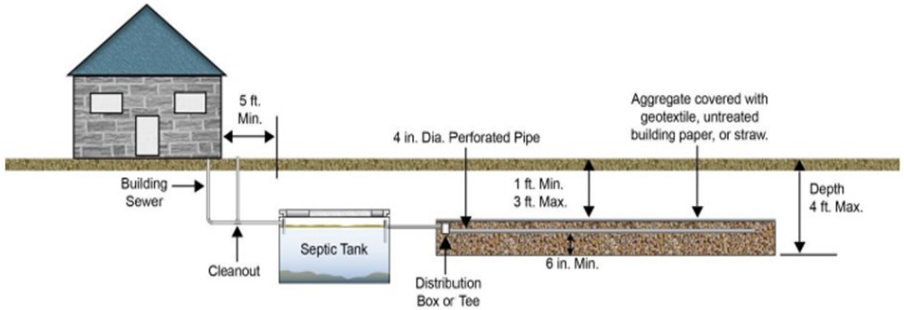
The drainfield must be covered and capped by at least 18 inches of soil and that soil cap must extend 10 feet beyond the side wall of the drainfield trench. It is imperative the 10 feet beside the trench where the cap will be placed is prepared by removing all vegetation and scarifying the surface. The sod and vegetation removed may be saved and put on top of the cap after it has been placed.

The fill material to go over the drainfield must be the same type of dirt, or slightly denser, than the dirt in the bottom of the drainfield trench. Ask the Environmental Health specialist to evaluate the fill material if there is any question.



STANDARD SEPTIC SYSTEM

Standard septic systems are composed of three main components: septic tank, piping, and a drainfield or absorption bed. All plumbing before the septic tank is under the jurisdiction of the Idaho Division of Building Safety. Building sewers must run at a uniform slope not less than 0.25 inch per foot to the point of discharge.



Septic tanks are made either of concrete or plastic. The tank chosen must be on the approved list found in the Idaho Technical Guidance Manual for On-site Sewer systems. The manufacturers installation instructions must be followed; this is especially true for plastic tanks as improper installation may cause premature tank failure.

Septic tanks must be level and a minimum of five feet from a building. Tanks with more than 24 inches of cover are required to have risers. With concrete tanks, make sure the inlet and outlet are facing the correct way before the delivery truck drives away.

THE APPLICATION

Prior to issuing a permit, an application must be filled out and a fee paid. Information that must be included on the application: location of the property, number of bedrooms, bathrooms including those in a shop, any future development such as pools, shops, landscaping, signature of the applicant.

Property Address (if avalible): 7500 E Independence BLVD STE 105 City: CHARLOTTE

Legal Description: Section: 35N Township: 03W Range: 26 County: Nez Perce Parcel #: _____

Subdivision: Sunny Acres Lot _____ Block: _____ Acres: 10

Directions (nearest crossroad): Take US 95 to mile marker 354 and take a left. Go down Hill Road for 5 miles until you see the yellow house, turn right. Go another 10 miles, look for the lot with the purple gate.

Applicants Name: Parcel Owner Email: _____

Mailing Address: 234 Test ST Phone: _____

City: CHARLOTTE State: NC Zip Code: 28205

Applicant is: ☑ Landowner ☐ Contractor ☐ Installer ☐ Other _____

Owners Name: Parcel Owner

Mailing Address: 234 Test ST Phone: _____

City: CHARLOTTE State: NC Zip Code: 28205

Type of Septic Installation: ☑ New ☐ Expansion ☐ Repair ☐ Tank Only ☐ Speculative Site Evaluation

Proposed Usage: ☑ Residential ☐ Non-Residential ☐ Other (i.e. barn, shop, etc)
☐ Central (more than two dwellings) ☐ Large Soil Absorption (2,500 gal/day or ten or more dwellings) # of Units: _____

Is there an existing structure on this parcel? ☐ Yes ☑ No Year Built: _____

Number of Bedrooms: (residential only) 3 Number of Bathrooms: 2

Number of People: 2 Square Footage: _____ Garbage Disposal? ☐ Yes ☑ No

Non-Residential Flow Design: _____ Average:(residential only) _____ Peak:(gpd) _____

Foundation Type: ☐ Basement ☑ Crawl Space ☐ Split Level ☐ Slab

Property is located: ☐ Inside City ☑ Inside County

Zoning certificate or other country documentation submitted: ☐ Yes ☐ No ☑ N/A

City sewer or central wastewater collection system 200 feet or less to structure? ☐ Yes ☑ No

Water Supply: ☑ Private Well ☐ Shared Well (Non-Public) ☐ Public Water System, Number: _____

SIGNATURE: _____ DATE _____

In addition to the application, a detailed plot plan showing *how* the property will be developed needs to be submitted. The plot plan must show features of concerns such as wells including neighboring wells, irrigation cannels, and seasonal streams and springs. The property lines should be indicated. Any future development such as shops, pools, or extensive landscaping should be included in the plot plan, even if those structures are not scheduled for construction until years later.

DRAINFIELDS

Drainfields associated with a septic system are the most complex part with the most construction options. The type of drainfield will be listed on the permit. A few things to consider when constructing the drainfield:

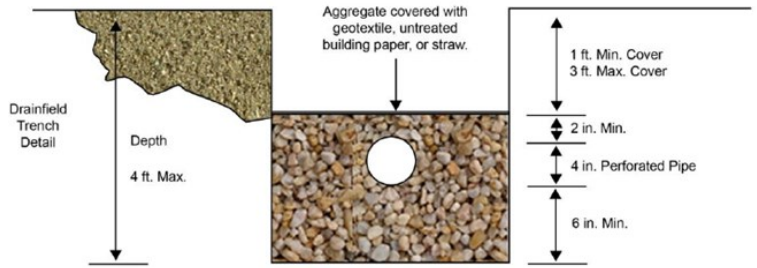
- Wheeled equipment may not be driven in the bottom of the drainfield
- Do not excavate any wider than necessary, this is especially true for gravelless drainfield components
- Installation of drainfields while the soil is wet should be avoided
- If installation during the wet time of year is unavoidable ask the Environmental Health Specialist about special considerations or requirements.

DRIANFIELD is constructed of one or more trenches:

Effluent is dispersed to the drainfield trenches either equally through the use of a piping header or distribution box, or serially with one trench filling completely before the next trench receives any effluent.

Drainfields must be installed level between 2 and 4 feet in depth, with at least 12 inches of soil covering the drainfield. Each trench shall measure no more than 100 feet in length. Trench widths may be between 1 foot and 6 feet. Trenches must be separated by 6 feet of undisturbed earth. The permit will list specific requirements.

STANDARD PIPE AND GRAVEL SYSTEM -Traditional system



If drain rock is used, the rock must be between 0.5 and 2.5 inches and free of fines (washed). 12 inches of rock is required, 6 inches in the bottom of the trench then a 4 inch distribution pipe centered in the trench, then two inches of rock on top of the pipe. The top of the drain rock must be covered by either building paper, straw, or geo-textile fabric.

APPROVED PIPING MATERIAL

Piping used for any purpose in a septic system must meet the ASTM or AWWA rating listed for the specified use in the TGM. Four inch ABS Schedule 40, or pipe with equal or greater strength, is required leaving the tank and extending three feet onto native grade beyond the excavation created for the tank. There is no maximum distance for an effluent line, between the tank and drainfield, however the drainfield must be at least six feet away from the tank. There is no minimum or maximum slope for effluent piping in a septic system. It is ideal to have some fall from the tank to the trench, about 1/4" per foot at a minimum.

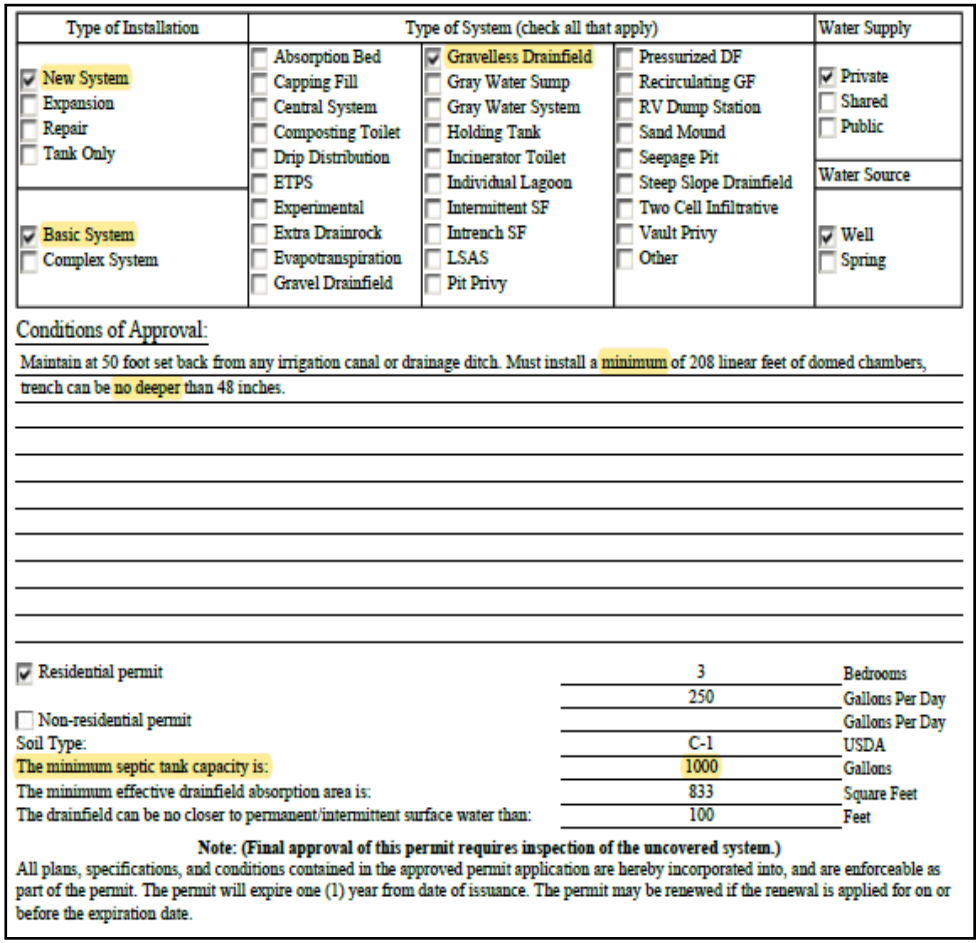
Pipe Material & Specification		FUNCTION			
		Tank to Dosing Chamber	Tanks to Drainfield	Gravity Drainfield	Pressure Distribution System
ABS Sch. 40	ASTM D2661	X	X	X	X
	ASTM F628	X	X	X	X
PVC Sch. 40	ASTM F891-10	X	X	X	X
	ASTM D3034	X	X	X	
	ASTM D2729			X	
PVC	ASTM D2241	X	X	X	X
	AWWA C900	X	X	X	X
	ASTM D2665	X	X	X	
	ASTM D1785	X	X	X	X
PE	AWWA C906	X	X	X	X
	ASTM F810		X	X	
	ASTM F667			X	

*Table 5-13 from the Idaho Technical Guidance Manual, current approved list as of June 8, 2017.

READING THE PERMIT

In Idaho most counties will not issue a building permit or an electrical start permit until a septic permit has been issued. The permit will list specific requirements that must be met. On the permit, you should look for:

- What type of system must be installed (gravel or gravelless)
- Maximum depth to install the system
- Minimum length of drainfield to install.
- Any set backs that must be maintained (see set pages 6 and 7)
- Minimum tank size that must be installed



Type of Installation	Type of System (check all that apply)			Water Supply
☑ New System ☐ Expansion ☐ Repair ☐ Tank Only	☐ Absorption Bed ☐ Capping Fill ☐ Central System ☐ Composting Toilet ☐ Drip Distribution ☐ ETPS ☐ Experimental ☐ Extra Drainrock ☐ Evapotranspiration ☐ Gravel Drainfield	☑ Gravelless Drainfield ☐ Gray Water Sump ☐ Gray Water System ☐ Holding Tank ☐ Incinerator Toilet ☐ Individual Lagoon ☐ Intermittent SF ☐ Intrench SF ☐ LSAS ☐ Pit Privy	☐ Pressurized DF ☐ Recirculating GF ☐ RV Dump Station ☐ Sand Mound ☐ Seepage Pit ☐ Steep Slope Drainfield ☐ Two Cell Infiltrative ☐ Vault Privy ☐ Other	☑ Private ☐ Shared ☐ Public **Water Source** ☑ Well ☐ Spring
☑ Basic System ☐ Complex System				

Conditions of Approval:

Maintain at 50 foot set back from any irrigation canal or drainage ditch. Must install a minimum of 208 linear feet of domed chambers, trench can be no deeper than 48 inches.

☑ Residential permit	3	Bedrooms
	250	Gallons Per Day
☐ Non-residential permit		Gallons Per Day
Soil Type:	C-1	USDA
The minimum septic tank capacity is:	1000	Gallons
The minimum effective drainfield absorption area is:	833	Square Feet
The drainfield can be no closer to permanent/intermittent surface water than:	100	Feet

Note: (Final approval of this permit requires inspection of the uncovered system.)

All plans, specifications, and conditions contained in the approved permit application are hereby incorporated into, and are enforceable as part of the permit. The permit will expire one (1) year from date of issuance. The permit may be renewed if the renewal is applied for on or before the expiration date.

YOU MUST CALL 48 HOURS AHEAD TO SCHEDULE THE FINAL INSPECTION.

SET BACKS REQUIREMENTS

Listed in the following tables are the minimal dimensional and set back requirements. The Environmental Health Specialist will verify these requirements during the site visit and finalizing the installed system.

Drainfield Dimensional Requirements

Item	All Soil Groups
Length of Individual Distribution Laterals	100 Feet Maximum
Grade of Distribution Laterals & 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	1500 Sq. Ft. Max
Undisturbed Earth Between Trenches	6 Feet Minimum
Undisturbed Earth Between Septic Tank & Trenches	6 Feet Minimum

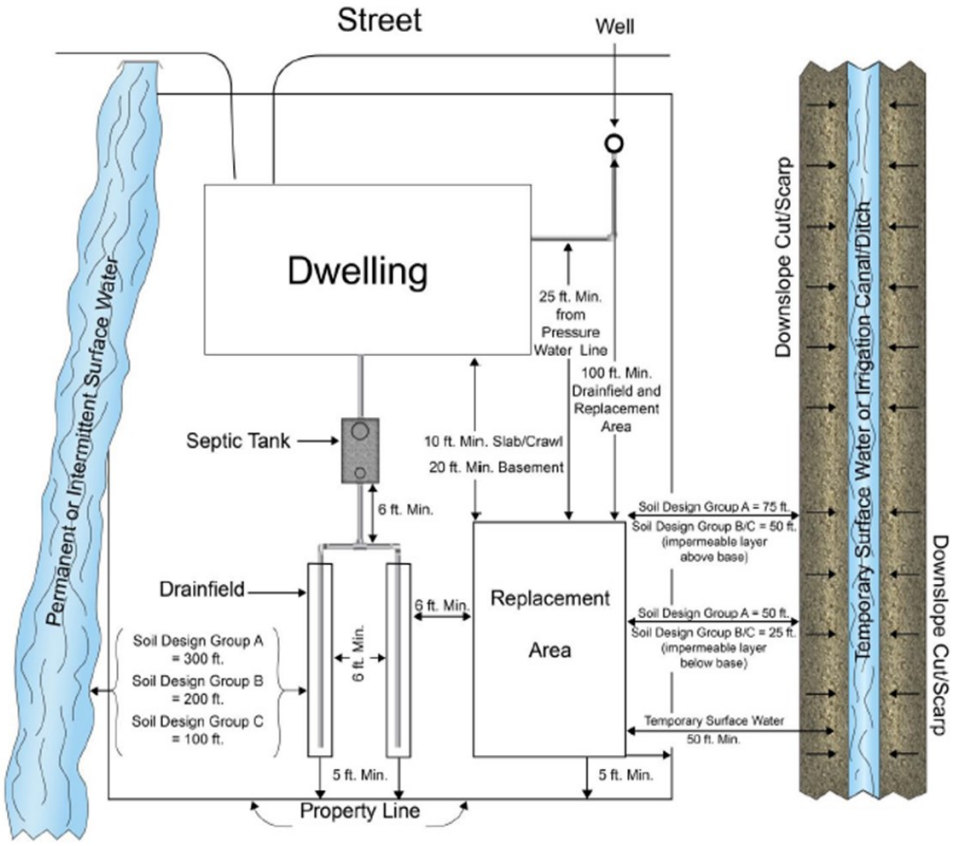
Drainfield Setbacks

Features of Interest	Soil Types All	A	B	C
All Other Domestic Water Supplies including Springs and Suction Lines	100			
Water Distribution Lines: Pressure Suction	 25 100			
Permanent of Intermittent Surface Water other than Irrigation Canals & Ditches		300	200	100
Temporary Surface Water & 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			

Septic Tank Setbacks

Features of Concern		Minimum Distance to Septic Tank in Feet
Well, Spring, or Suction Line	Public Water Other	100 50
Water Distribution Line	Public Water Other	25 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

Typical Plot Plan Layout

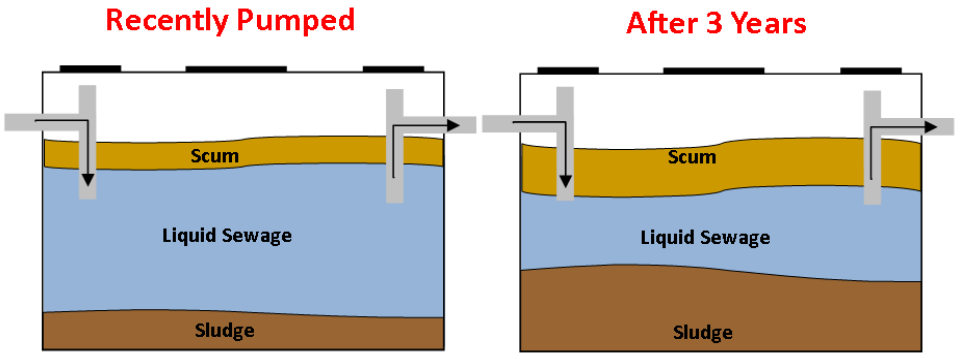


MAINTENANCE OF INDIVIDUAL SEWAGE DISPOSAL SYSTEMS

SEPTIC TANK MAINTENANCE & OPERATON

Septic tanks and drainfield work by bacterial decomposition of raw sewage only. *No additives, yeast, septic tank conditioner or like are needed.* These products have **NOT** been known to enhance the operation or performance of septic tanks or drainfields. Normal amounts of bleach, soap or detergent will not significantly hinder the functioning of the tank.

Pumping the septic tank on a regular basis has been shown to significantly increase the life expectancy of the drainfield. Normally a septic tank should be pumped every 3-5 years, but if you have a garbage disposal unit and/or automatic dishwasher, the pumping may be needed sooner for such wastes cause a more rapid buildup of solid matter.



From Shenandoah Valley Soil & Water Conversation District

CARE OF THE DRAINFIELD

1. Pump your tank every 3-5 years.
2. Check the toilet paper you use. Is it approved for septic systems?
3. Don't park or drive over the drainfield.
4. Grass is the best plant to cover a drainfield. Roots can damage a drainfield.
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7. Reduce or eliminate using a garbage disposal. Food items don't breakdown easily in the septic tank.
8. Don't dump items down the toilet such as oils, flushable wipes, paper towels, or house hold cleaners. They don't break down in the tank.
9. Dump your RV at a designated RV dump. Chemicals in RVs kill the bacteria needed for a septic system to work.

If repair work is needed on the present sewage system, the District Health Department must obtain a permit prior to any repair or construction.

You do not need to have permit to have your septic tank pumped. However, only licensed septic pumpers with inspected equipment are allowed to operate in this District. A list of contractors of licensed pumpers is updated regularly at http://idahopublichealth.com/ under the "Environmental" tab.