Division of Environmental Health
100 Central Ave.
Cheyenne, WY 82007
Ph: 307-633-4090
Email: envhlth@laramiecountywy.gov
Website: www.clcpublichealth.org

SMALL WASTEWATER FACILITY APPLICATION PACKET

A PERCOLATION TEST WITH A 10' SITE HOLE AND/OR AN APPLICATION ALONG WITH AN ADDRESS MUST BE COMPLETED AND SUBMITTED TO THE DIVISION OF ENVIRONMENTAL HEALTH BEFORE A PERMIT TO INSTALL OR MODIFY A SMALL WASTEWATER FACILITY (SEPTIC SYSTEM) CAN BE ISSUED IN LARAMIE COUNTY.

Page two (2) of the packet is the application for a permit to construct or modify a Small Wastewater Facility.

a) The top portion is for the landowner(s) legal description of the property on which the Small Wastewater Facility is being considered and **MUST BE COMPLETELY FILLED OUT**.
b) The middle portion is for recording "Percolation Test Readings" and for the signature of the person running the test.
c) The lower section of the application is for the property owner's signature and date of the property owner.

The person running the percolation test and the property owner must sign the application. The completed application is to be returned to Environmental Health with a

$384.00 PERMIT FEE PLUS THE INSTALLATION FEE BELOW:

$103.00- INSPECTION FEE FOR LICENSED INSTALLER

$308.00- INSPECTION FEE FOR HOMEOWNER INSTALLATION

All new construction requires an approved zoning certificate or official address assignment from the County Planning Department. The owner or legal representative will be notified to appear at Environmental Health to sign the septic permit. ***

*****STATE LAW REQUIRES that the signature of the property owner appear on the permit. *****

Page Three (3) shows an example site location map that must be included with the perc application.

Page Four (4) is the Percolation Test Guidelines, which explains the procedures for running a percolation test.

a) A perc test is used to determine the ability of soils to support a Small Wastewater Facility, and to size the facility.
b) Anyone can run the test. Instructions are available.
c) An onsite evaluation of the property, including the test holes and 10' site hole, will be conducted by an Environmental Health Inspector.

*****ALL SEPTIC SYSTEMS MUST BE INSTALLED BY A LARAMIE COUNTY HEALTH DEPARTMENT LICENSED SMALLWASTEWATER CONTRACTOR/INSTALLER, *****

UNLESS OTHER ARRANGEMENTS HAVE BEEN APPROVED THROUGH ENVIRONMENTAL HEALTH.

Submit to Environmental Health Department:

- Small Wastewater Facility Application.
- Surveyed plot plan
- Permit fee plus inspection fee
- Property address

NO SEPTIC SYSTEM EXCAVATION WITHOUT AN APPROVED PERMIT ONSITE*

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SMALL WASTEWATER SYSTEM PERMIT APPLICATION

PERMIT FEE $384 (*All Fees Must Accompany This Application*)

INSPECTION FEES: Licensed Installer: **$103 ($487 Total)** Homeowner – **$308 ($692 Total)** Partial Inspection Fee - **$105** per trip.

Make Checks Payable to: ***ENVIRONMENTAL HEALTH.*** **INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED!**

The Cheyenne-Laramie County Health Department shall review each application and take final action within sixty (60) days from the date the application is received.

LANDOWNER:_____ PHONE: (HM) _____ (WK)_____

MAILING ADDRESS:_____CITY:_____ST.:_____ZIP:_____

PROPERTY ADDRESS (MANDATORY) :_____ CITY:_____

RANGE:_____ TOWNSHIP:_____ SECTION:_____ SUBDIVISION:_____ LOT/TR:_____ BLOCK:_____

PROPOSED NUMBER OF BEDROOMS:_____
ACREAGE:_____ DIMENSIONS:_____X_____

CIRCLE ALL THAT APPLY: MAIN HOME SHOP ALQ NEW CONSTRUCTION ADU REPAIR RV
BASEMENT: FINISHED UNFINISHED NA
PREVIOUSLY PERMITTED: YES NO

IS THIS TO BE A HOMEOWNER INSTALL? _____YES _____NO
IF NO, WHO WILL BE THE LICENSED SYSTEM INSTALLER: _____

PERC HOLE DEPTH:_____ HOW LONG WERE HOLES PRE-SOAKED_____ BUILDING DRAIN DEPTH:_____
DATE TEST RUN:_____/_____/_____ ROCK WIDTH _____ CHAMBER – MAKE _____ MODEL _____

READINGS →

A 10 foot site hole is required for new construction

HOLES	1	2	3	4	5	6*	7	8**
#1								
#2								
#3								
#4								
#5								
#6								

5

min

TIM
MIN
MIN

PER

Inspector Notes:

_____ Date Test Run _____
PLEASE PRINT

PLEASE ATTACH ON A SEPARATE SHEET OF PAPER:

- A surveyed 8.5X11 site plan with proposed dimensions and depths of all septic components. Include: home, perc hole location, well, septic tank, drainfield/replacement drainfield, garages/shops, driveways, easements, drainages/floodplains, property lines and setbacks.
- INDICATE ALL WELL LOCATIONS ON ADJACENT PROPERTIES. (All wells shall be at least 50' from septic tank and at least 100' from drainfield. Well to drainfield distance may be greater in some subdivisions).
- DIRECTIONS & DISTANCES TO PROPERTY. PERC HOLES ARE REQURIED TO BE OPEN AND MARKED.

I, THE UNDERSIGNED LANDOWNER, CERTIFY THAT THE ATTACHED SKETCH IS AN ACCURATE REPRESENTATION OF MY PROPOSED HOMESITE.

LANDOWNER NAME: PRINT_____DATE: _____

SIGN_____

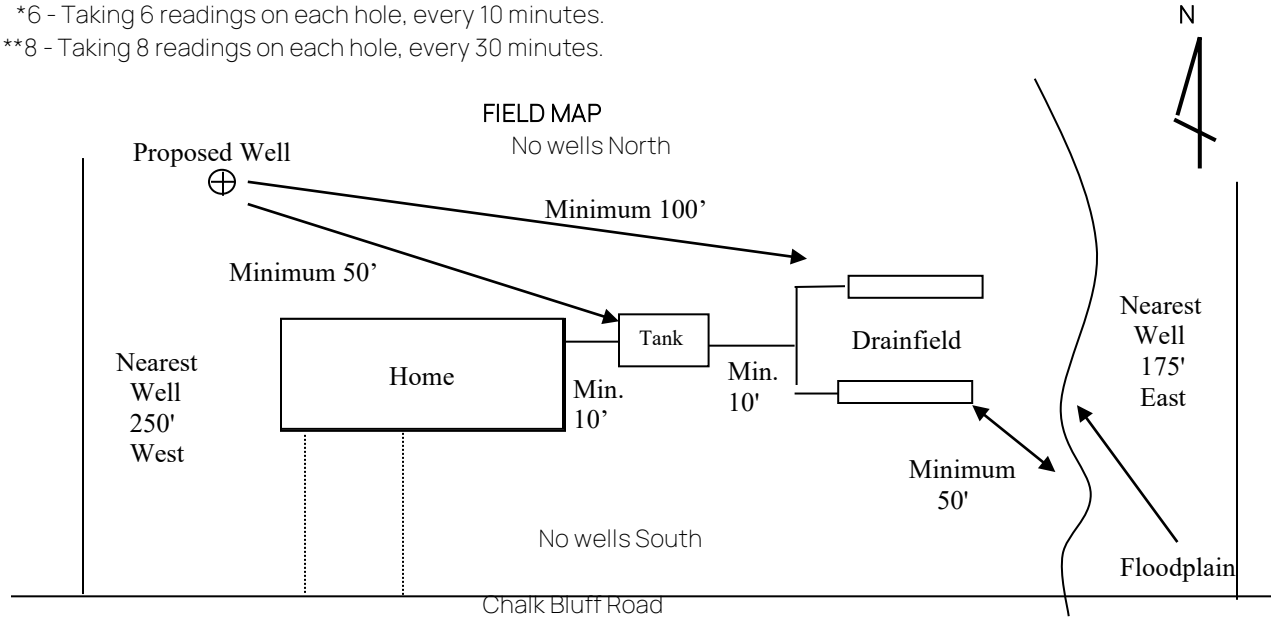
PERC HOLE READINGS EXAMPLE ONLY
(REFER TO GUIDELINES FOR DETAILS)

READINGS SHOULD GO HORIZONTALLY →

	1	2	3	4	5	*6	7	**8
#1 HOLE	4	3	2.5	1.75	1.5	1		
#2 HOLE	3	2.5	2	1.5	1	.5		
#3 HOLE	4	3	2	1.5	1	1		
#4 HOLE	3	2.75	2.5	2	1.25	.75		
#5 HOLE	2.5	2	1.75	1.5	1.0	.75		
#6 HOLE	3	2.75	2.5	2	1.5	1.25		

1. Perc holes should be completely filled with water the night before test is run to saturate the holes.
2. Create a fixed measuring line in each hole.
3. Fill each hole with water to the fill line.
4. If running 30 min. test (Example): - Fill holes @ 8:00 a.m. & refill every 1/2 hour to measuring line.
   - Take 1st reading @ 8:30 a.m. on each hole & read every 1/2 hour thereafter, until all 8 readings are completed.

*6 - Taking 6 readings on each hole, every 10 minutes.
**8 - Taking 8 readings on each hole, every 30 minutes.



Information required on map:

1. Boundary Roads
2. North Direction
3. Location of:
   - Driveway
   - Well
   - Tank
   - Perc Holes
   - Drainage Easements
   - Drainfield

SITE MAP
EXAMPLE ONLY

PERCOLATION TEST GUIDELINES

SITE SELECTION FOR SEPTIC TANK ABSORPTION FIELD (PERCOLATION TEST HOLE SITE SELECTION).

BEFORE YOU PLAN YOUR SEWAGE DISPOSAL SYSTEM, BECOME FAMILIAR WITH THE HEALTH REGULATIONS IN THE COMMUNITY, THE PERMIT, INSPECTION REQUIREMENTS AND THE PENALTIES THAT MAY BE IMPOSED FOR VIOLATIONS. IN SELECTING A SITE FOR THE ABSORPTION FIELD (PERCOLATION TEST HOLE SITES), KEEP IN MIND THE FOLLOWING:

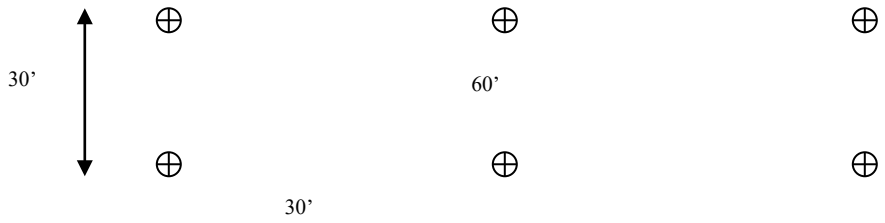
1) Soil permeability should be moderate to rapid and the soil percolation rate should be at least one (1) inch per hour but no more than twelve (12) inches per hour. This will be determined by the percolation test which will be run. Rates outside the parameters will require an engineer to design the system.
2) Groundwater level, during the wettest season, shall be at least four (4) feet below the bottom of the trenches in a subsurface tile (plastic pipe) absorption field. That is eight (8) feet minimum or more from ground surface to the water table, or seasonally high groundwater mark.
3) Rock formations or other impervious layers shall be more than four (4) feet below the bottom of the trenches in a subsurface tile (plastic pipe) absorption field. That is eight (8) feet minimum or more from ground surface to the impervious layer.
4) Trenches and seepage beds are difficult to lay out and construct on slopes steeper than 15 percent. If steep, shallow soils that are underlain by rock or the impervious materials are used as absorption fields, the septic tank effluent is likely to seep to the surface.
5) Do not select a site for an absorption field that is within fifty (50) feet of a stream or other body of water or drainage way. **Never** install a sewage system on a flood plain that may be subject to flooding. Wells and springs should be located up slope from planned sewage disposal systems and at a distance of at least 100 feet from proposed leach fields (i.e. trench or seepage bed). Fields should be constructed to provide sufficient land area for entire new absorption system if needed.

PROCEDURE:

1) Dig a 10' site hole with a minimum 2' wide bucket. If rock or water is encountered locate perc to another area.

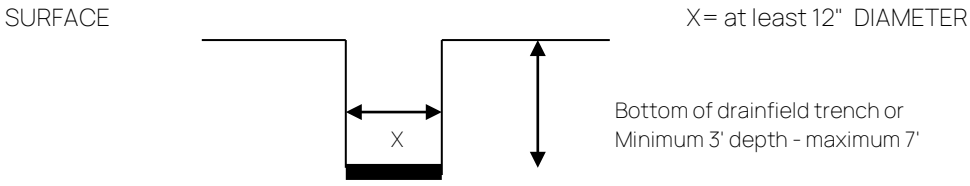
2) NUMBER AND LOCATION OF TEST HOLES:
Six (6) test holes shall be dug in the proposed absorption field according to the following plan.
NOTE: TEST HOLES ARE DUG TO THE BOTTOM OF THE DRAINFIELD TRENCH.

One hole located in each corner of a 30 foot by 60 foot rectangle with one hole in the middle of each of the long sides. Typical layout for test holes will look like this:



NOTE: 6 HOLE AND 3 HOLE METHOD: See step #5 & #6 before starting.

3) TYPE OF TEST HOLE:
Dig or bore a hole with a diameter of 12 inches and vertical depth to the bottom of the proposed drainfield. Deep drainfield, deep perc test:



NOTE: REMOVE ALL DIRT AWAY FROM MOUTH OF HOLE.

4) PREPARATION OF TEST HOLE:

Carefully scratch the bottom and sides of the hole with a sharp pointed instrument (knife blade) 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 and from around the surface and perimeter at the ground level. Add two (2) inches of coarse sand or fine gravel to protect the bottom of the hole from scouring and sediment.

5) SATURATION AND SWELLING OF THE SOIL:

It is important to distinguish between saturation and swelling. Saturation means that the void spaces between soil particles are full of water. This can be accomplished in a short period of time. Swelling is caused by intrusion of water into the individual soil particle. This is a slow process, especially in clay-type soil and is the reason for requiring a prolonged soaking period.

Fill each hole with clear water to a level at least eighteen (18) inches above the gravel or coarse sand. If the eighteen (18) inches of water seeps away in eighteen (18) minutes or less, add eighteen (18) inches of water a second time. If the second filling of eighteen (18) inches of water seeps away in eighteen (18) minutes or less, this indicates the soil is sandy and is excessively permeable. The soil absorption system shall meet the requirements of Section 8 (c).

If either the first or second fillings of eighteen (18) inches of water does not seep away in ninety (90) minutes, eighteen (18) inches of water must be maintained in the hole for at least four (4) hours to presoak the test hole. After the four (4) hours of water contact time, wait at least twelve (12) hours before starting the percolation rate measurement.

To conduct the test, carefully fill the hole completely full of water approximately 12 - 24 hours prior to the actual percolation. NOTE: IN SOME SOILS IT IS NECESSARY TO REFILL THE HOLE BY SUPPLYING A SURPLUS RESERVOIR OF WATER TO KEEP THE WATER IN THE HOLE FOR AT LEAST 12 HOURS. The procedure is to insure that the soil is given ample opportunity to swell and to approach the conditions it will be in during the wettest season of the year. Thus, the test will give comparable results in the same soil, whether made in a dry or wet season.

6) PERCOLATION RATE MEASUREMENT:

Percolation rate measurement shall be made on the day following the procedure described under item 4 above, by one of the following methods:

a. IF water remains in the test holes after the overnight swelling period, adjust the depth to approximately 12 inches over the gravel or hole bottom. From a fixed reference point, measure the drop in water level every 30 minutes, for four hours in each hole - refilling each hole to the same (original) depth after recording the amount of drop.

b. If no water remains in the holes after the overnight swelling period, add enough clear water to a depth of 12 inches over the gravel and allow to stand for 15 minutes prior to recording any measurements. From a fixed reference point, measure the drop in water level every 30 minutes for four (4) hours, in each hole - refilling each hole to the same (original) depth after recording the amount of drop. The drop that occurs during the final 30 minute period is used to calculate the percolation rate. The drop during prior periods provide information for possible modification of the procedure to suit local circumstances.

c. In sandy soil (or other soils in which the first six (6) inches of water seeps away in less than 30 minutes, after the overnight swelling period, the time interval between measurements shall be taken as ten (10) minutes and the test run for one hour. Add 12 inches of water over the top of the gravel (in the hole bottom). From a fixed reference point measure the drop in water level every ten (10) minutes for one hour, in each hole - refilling each hole to the same (original) depth after recording the amount of drop. The drop that occurs during the final (10) minute period is used to calculate the perc rate. An average reading faster than 1" in 5 minutes will be returned for engineering design.

7) PERCOLATION TESTS MAY BE EITHER 6 HOLES OR 3 HOLES:

a. In the first case, the 6 hole results will be averaged to size the system.
b. In the second case, the worst hole result will be used to size the system.