



# JOHNSON COUNTY PLANNING DEPARTMENT

26 N DeSmet Ave, Buffalo, Wyoming 82834  
Phone: (307) 684-1907  
E-mail: [jwaller@johnsoncowy.us](mailto:jwaller@johnsoncowy.us)

REC. BY: _____
DATE: _____
PERMIT #: _____
OFFICE USE

Form Revised 4/1/2018

## APPLICATION FOR SMALL WASTEWATER TREATMENT FACILITIES

**FEE: 150.00**

All septic systems within the unincorporated area of Johnson County, must be designed by a professional engineer licensed in the State of Wyoming.

Johnson County is authorized to permit small wastewater systems that are domestic waste only and less than 2000 gallons per day. Systems larger than 2000 gallons per day or contain other wastes that are not entirely domestic waste, must be permitted by the Wyoming Department of Environmental Quality, contact the **Underground Injection Control program (UIC) at 307-777-5623 OR the District Engineer for DEQ, Water Quality Division at 307-473-3465.**

An application is required for all new construction, installation, replacement, or repair of any small wastewater treatment facility within the unincorporated areas of Johnson County. Submission of this application does not grant permission to construct. A Permit to Construct must be issued by the Johnson County Planning Department before construction can commence. Inspection of the installed system is required prior to backfill.

Residential     
  New     
  Modification     
  Replacement  
 Other Non-Commercial

<b>Applicant:</b> _____	
<small>Name</small>	<small>Day &amp; Evening Phone Numbers</small>
<b>Mailing Address:</b> _____	
<b>E-mail:</b> _____	
<b>Installer:</b> _____	
<small>Name</small>	<small>Business Name</small>
<b>Mailing Address:</b> _____	
<b>Phone Number:</b> _____	<b>E-mail:</b> _____
<b>Owners Name:</b> _____ <b>Date:</b> _____	
<b>Phone #:</b> _____	
<small>Day</small>	<small>Evening</small>
<b>E-mail:</b> _____	
<b>Mailing Address:</b> _____	
<small>Street</small>	<small>City/Town</small>
<small>State</small>	<small>Zip Code</small>
<b>Location of Facility:</b> _____ <b>Section</b> _____, <b>Township</b> _____ <b>Range</b> _____	
<small>Quarter/Quarter</small>	
<b>Site Address:</b> _____	
<b>Subdivision:</b> _____, <b>Block</b> _____, <b>Lot</b> _____	
*If in a subdivision, is the system in compliance with subdivision review standards? <input type="checkbox"/> YES <input type="checkbox"/> NO	
*Refer to subdivision covenants, if applicable, and plat for possible restrictions.	
Does the system require enhanced components? <input type="checkbox"/> YES <input type="checkbox"/> NO    If yes, provide all appropriate design sheets.	
<b>Access:</b> As part of signing and submitting this application, the applicant certifies, under penalty of perjury, that the applicant has secured and shall maintain permission for Johnson County and/or Department of Environmental Quality personnel and their invitees to access the permitted site, including permission to access the land where the site is located, permission to collect resource data as defined by Wyoming Statute §6-3-414, and permission to enter and cross all properties necessary to access the site if the site cannot be directly accessed from a public road.	
<b>Signatures:</b> The information presented in this application is true and correct to my knowledge. I understand that presenting missing or incorrect information may result in my application being returned. I certify that the above described facility has been submitted in accordance with local, county, and state statutes as required. Said facility shall be constructed as authorized under the provisions specified in the Johnson County Septic Regulations. I Authorize representatives from the Department of Environmental Quality/Water Quality Division and/or Johnson County, during regular business hours, to have access to inspect the installed facilities prior to backfilling. I certify that the information included with this application is correct and true to the best of my knowledge and any missing information may cause delay in issuing the permit. I will install and construct the system in accordance with the regulations governing sewage systems in Johnson County. I will also notify the Planning Department when the system is ready for final inspection, prior to covering.	
<b>APPLICANT (if not owner):</b> _____ <b>DATE:</b> _____	
<b>PROPERTY OWNER(S):</b> _____ <b>DATE:</b> _____	

**BUILDING INFORMATION:**

Single Family Home: \_\_\_\_\_ Number of Bedrooms: \_\_\_\_\_ Will the basement be unfinished:\* \_\_\_\_\_

\*Add 2 bedrooms to the total number of bedrooms for an unfinished basement\*

Multiple Family Dwelling: \_\_\_\_\_ Number of Bedrooms: \_\_\_\_\_ Laundry Area Included: \_\_\_\_\_

Other OR Non-Commercial Use: \_\_\_\_\_ Specify gpd: \_\_\_\_\_

Size Or Capacity (gpd): \_\_\_\_\_ Water Supply:  Municipal \_\_\_\_\_ (Name)  
 Private Well \_\_\_\_\_ SEO Well Number \_\_\_\_\_  
 Other: \_\_\_\_\_

Is the building site within a flood prone area:  YES  NO

**If YES; site elevation data and additional site details may be required as directed in the Johnson County Flood Damage Prevention Ordinance.**

**SITE AREA:**

Nearest Creek, River, or Ephemeral Stream (Name & Distance): \_\_\_\_\_.

Lot Size: \_\_\_\_\_ ft. X \_\_\_\_\_ ft. Lot Area: \_\_\_\_\_ sq.ft. OR \_\_\_\_\_ acres

Ground Slope: \_\_\_\_\_ Soil Type: \_\_\_\_\_

**Percolation Test Results (ATTACH PERCOLATION TEST)**

(1); \_\_\_\_\_ (2); \_\_\_\_\_ (3); \_\_\_\_\_ (4); \_\_\_\_\_ (5); \_\_\_\_\_ (6); \_\_\_\_\_ Avg. 6 or more: \_\_\_\_\_

Depth to Seasonal Ground Water: \_\_\_\_\_ Depth to Bedrock or Impervious Layer: \_\_\_\_\_

Who, How, & When were these determined: \_\_\_\_\_

**Applications must include a color photo of the test pit and materials excavated.**

**SEPTIC TANK:**

Septic Tank Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_

Liquid Capacity: \_\_\_\_\_ Dimensions: (W) \_\_\_\_\_ (L) \_\_\_\_\_ (D) \_\_\_\_\_

Tank Material: \_\_\_\_\_ Number of Compartments: \_\_\_\_\_ Inlet and Outlet Type: \_\_\_\_\_

**DRAINFIELD:**

Leachfield type: Bed: \_\_\_\_\_ Trench: \_\_\_\_\_ Other: \_\_\_\_\_

Chamber Manufacture & Model: \_\_\_\_\_ Chamber EQ Area: \_\_\_\_\_

Effluent Distribution Device (type or Model): \_\_\_\_\_

\*Bed Dimensions: (W) \_\_\_\_\_ (L) \_\_\_\_\_ \*Trench Dimensions: (No.) \_\_\_\_\_, (W) \_\_\_\_\_, (L) \_\_\_\_\_, (# Chambers) \_\_\_\_\_

\*Perforated Pipe & Washed Rock—Max bed width 25 feet; Max trench length 100 feet. Chamber Systems—Max bed width 25 feet; Max trench length 60 feet\*

Depth of Gravel Below Pipe: \_\_\_\_\_ Infiltrative Surface Provided (sqft) \_\_\_\_\_

\*Depth from Bottom of Bed/Trench to Ground Surface: \_\_\_\_\_ Gravel Size: \_\_\_\_\_

\*Max depth to bottom of trench 5 feet (60 inches)

Is a replacement field reserved on the site plan?  YES  NO

Does the reserve area follow all site suitability requirements?  YES  NO

**Components & Materials:**

Are all required cleanouts, pipe specifications, and/or install materials identified on plan detail sheets?  YES  NO

Registered Engineer:

Engineering FIRM:

# Application Attachments

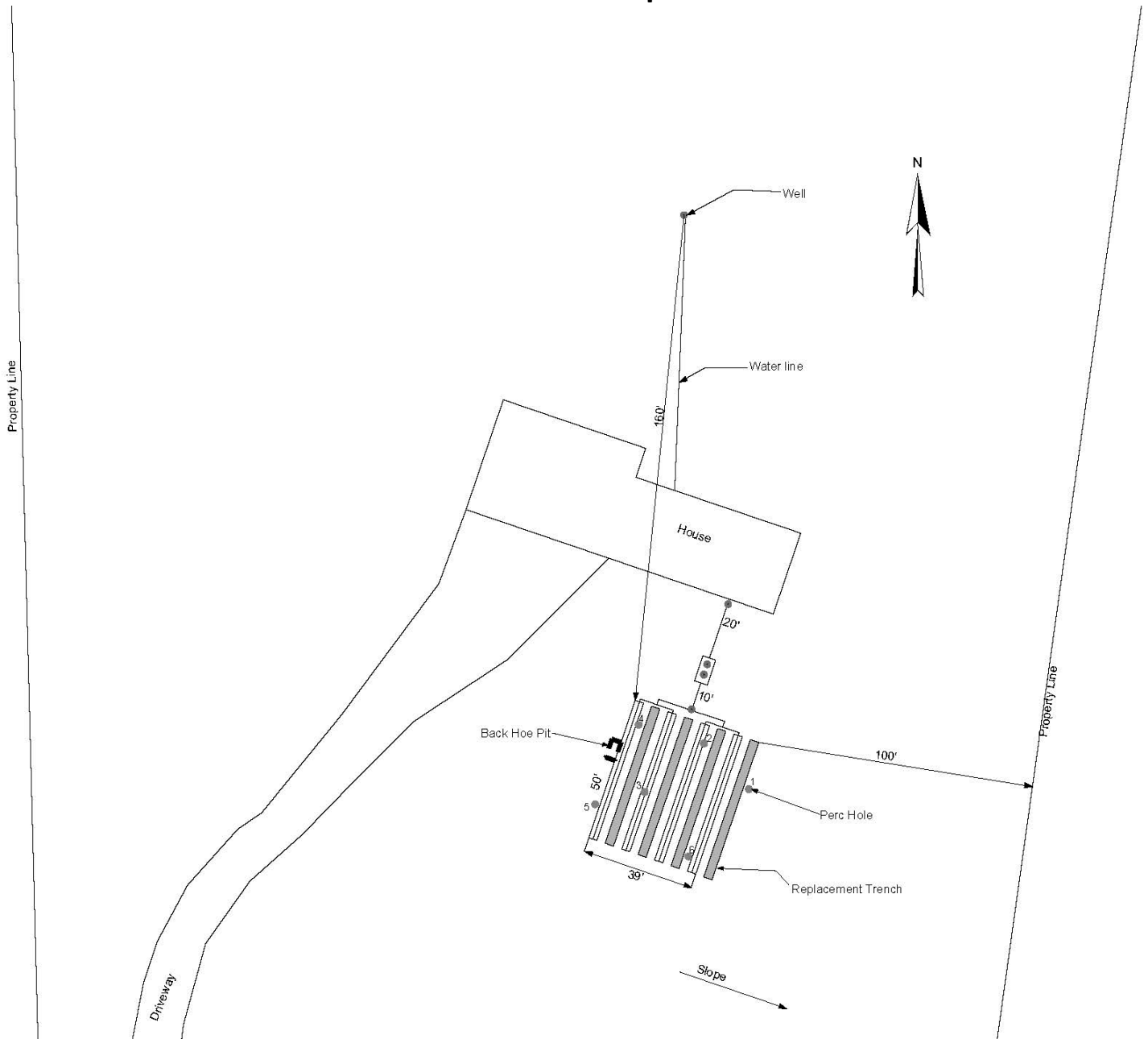
All SWTF designs must be accompanied by Plans and specifications that identify the minimum listed.

1. **Site Plan** (Example Site Plan Appendix A)
  - a. Include property lines
  - b. All buildings proposed
  - c. Surface Water (ditch, creek, pond, intermittent, etc.)
  - d. Water lines
  - e. All wells within 200 feet (Distances included)
  - f. Include distances from Building to Tank and to Disposal Field
  - g. Show replacement leachfield (meeting all site restrictions)
  - h. Slope of land (drawn as an arrow indicating general slope direction)
  - i. All other appropriate distances for a completed site plan
2. **Site Suitability Information**
  - a. Excavation/Exploration to at least 4 feet below the bottom of the proposed leachfield
  - b. Include soil profile or color Photo of the cut and the Soils removed (can be e-mailed)
3. **Percolation Test Procedure** (Percolation Test Instructions & Example Appendix B)
  - a. Complete percolation test
4. **Septic Tank profile/Cross Section**—Septic Tank Manufacturer, Model # from DEQ approved List
5. **Leachfield/Disposal Field configuration and profile/Cross Section**
  - a. Include Effluent Distribution details.
6. **Name, Address, Telephone number of Contractor installing the septic system.**
7. **Specifications:** Pipe materials, slope, cleanouts, vents, or similar requirements.
8. **Other information deemed pertinent to the SWTF design**
  - a. All Applicable Design Calculation Sheets
  - b. All Septic Components used in the design with specifications. (Specified Pumps, Pump Curves, Treatment Components or other related details)
9. **If the site is located within a FLOOD PRONE AREA; contact the Johnson County Planning Department. The Johnson County Flood Damage Prevention Ordinance may apply.**

Johnson County, Wyoming Published Soil Survey available at the following web

site: <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>

## Appendix A Site Plan Example



Your Site Plan **Must** show the following items with the proposed distances. The table below provides the minimum distance required as well as the minimum items for a completed site plan.

From	To Septic Tank (Minimum in feet)	To Leachfield (Minimum in feet)
Property Lines	10	10
All buildings, roads, and driveways		
Open waterways (ditch, pond, intermittent waterways, etc.)	50	50
Public water supply wells	100	200
Wells	50	100
Potable water lines	25	25
Cisterns	25	5
Building foundation without foundation drain	5	10
Building foundation with a foundation drain	5	25
Break in slope	15	15
Septic tank	N/A	10
Replacement Leachfield	10	
Slope (arrow pointing downslope)		
Location of all Required Cleanouts		
Location of Exploration pit		
Location of numbered percolation test holes		

## Appendix B

# Percolation Tests

In order for a septic system to perform properly, the wastewater needs to be effectively treated by the soil and percolate or travel through the soil in a reasonable amount of time to be appropriately treated. **The Percolation Test must be performed in the soils that will treat the effluent water.**

### PERCOLATION TEST PROCEDURE INSTRUCTIONS

1. Location of Percolation Test Holes - The percolation (perc) test holes shall be spaced uniformly over the proposed soil absorption (leachfield) site. A **minimum of three (3) test holes** are required. More than 3 can be used if desired.

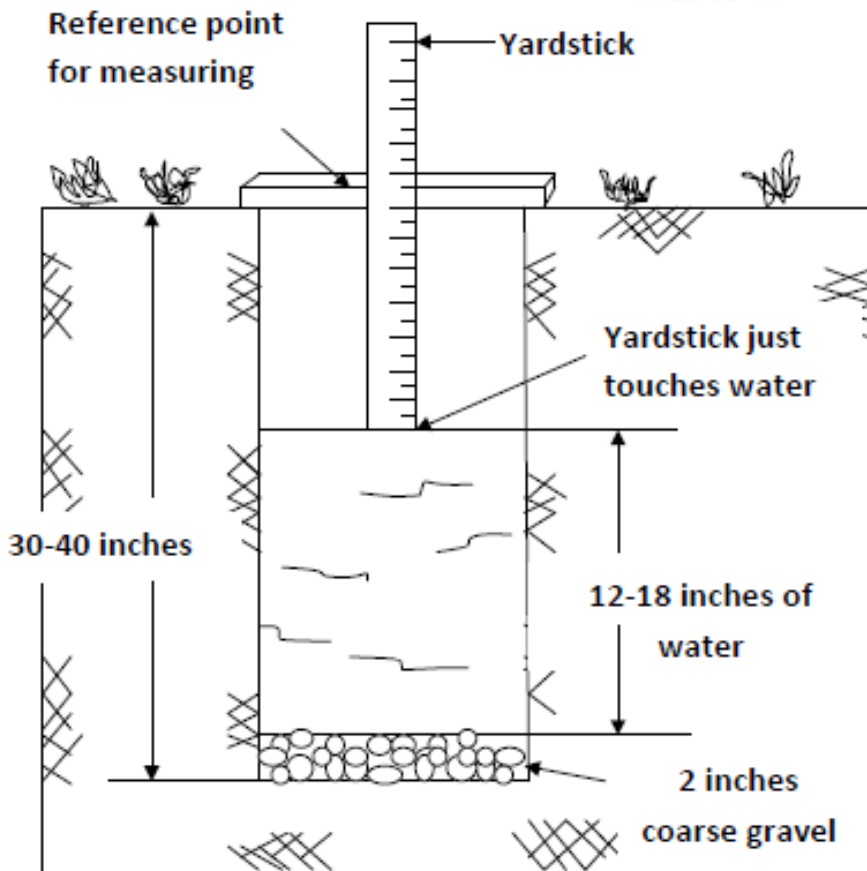
2. Test Hole Preparation - Test holes shall be **12 inches** in diameter and shall be dug or bored to the proposed depth of the leach field (typical depths are **30 to 40 inches**). The side walls shall be vertical and a natural soil surface (one which is not smeared from digging) shall be exposed by scraping the sides and bottom of the test hole with a sharp pointed instrument. Any loose material shall be removed from the test hole and two (2) inches of coarse sand or gravel placed in the bottom of the test hole in order to prevent scouring and sealing before the water is poured in.

3. Presoaking - **PRESOAKING IS ABSOLUTELY REQUIRED** in order to get valid percolation test results. The purpose of presoaking is to have the water conditions in the soil reach a stable condition similar to that which exists during continual wastewater application in a leachfield. The minimum time of presoaking varies with soil type and presoaking instructions are usually sufficient to establish the proper soil moisture conditions.

- a. *Sandy or loose soils* - Fill the test hole to within several inches of the top and allow it to seep away. Fill the hole a 2<sup>nd</sup> and 3<sup>rd</sup> time and let the water seep away. If the water continues to all seep away in ten (10) minutes or less, this indicates that the soil is excessively permeable and the site is unsuitable for a standard subsurface disposal system. In this case, special requirements are needed and you'll need to contact your County Official.
- b. *Other suitable soils* - If the soil is suitable for a standard subsurface leachfield, then the test holes should be presoaked for at least 4 hours. Maintain at least 18 inches of water in the test holes for at least 4 hours, then allow the soil to swell for 12 hours (overnight is good) before starting the actual perc test measurements.

4. Percolation Rate Measurements - Start the test by filling each test hole with approximately **12 to 18 inches** of water. Let the soil re-hydrate for about 15 minutes and then refill to 12 to 18 inches deep. Next, decide on a time interval for your test. Time intervals of **10 or 15 minutes** are typical. Once decided, the time interval must remain constant throughout the test so that it can be determined when the water level drop rate has stabilized. Measure the initial water level (from a fixed reference point such as a flat board across the top of the hole) in each hole and record on the first line for each hole in the test data table. After each water level measurement, calculate the water level drop from the previous measurement and record in the test data table. Continue the test until the water level drop rate has stabilized; i.e. - **3 consecutive equal drop rates** within 1/8 inch of each other. Please note that some test holes may take longer than others to stabilize. The test should be continued at each test hole until each drop rate stabilizes. Also please note, a minimum of **6 inches** of water should be maintained in the test hole. If the level drops below 6 inches, some additional water should be added between time intervals. If water level drops fluctuate, use the final of 6 intervals for calculations.

## Percolation Test Hole Example



Side view of a typical percolation test. Yardstick is lowered to the surface of the water after each time interval. Time interval and measurement are noted and recorded. When measuring use the reference point as a guide.

