



St. Joseph County Health Department

"Promoting physical and mental health and facilitating the prevention of disease, injury, and disability for all St. Joseph County residents"

PRESSURE TRENCH DISTRIBUTION WORKSHEET

This worksheet must be accurately completed and submitted with the site plan which demonstrates all aspects of the subsurface pressure system.

SYSTEM SPECIFICATIONS: See Health Department specification sheet for information

Soil Load Rate (SLR) _____ Required absorption area _____ ft²

Daily Design Flow (DDF): _____ gallons = number of bedrooms/equivalents ___ x 150 or 450 whichever is greater.

SEPTIC TANK: New: _____ Existing: _____ Size: _____ gallons Manufacturer: _____

DOSE TANK: New: _____ Existing: _____ Size: _____ gallons Manufacturer: _____

Internal dimensions: Width: _____ inches, Length: _____ inches, _____ gallons per inch or foot
(circle one)

ABSORPTION FIELD: _____ Aggregate/pipe/holes down _____ Chambers/laterals suspended/holes up

Lateral separation: _____ feet on-center. Minimum trench depth: _____" Maximum trench depth: _____"

Chambers: Manufacturer: _____ Length per chamber: _____ feet.

Total number of chambers: _____ Chambers per run or trench: _____

Trenches: Number: _____ Length: _____ feet. Width: _____ feet. Total square feet: _____

Bed: Bottom must be level. Length: _____ feet. Width: _____ feet. Total square feet: _____

DISTRIBUTION NETWORK: (check one) _____ Center Feed, or _____ End Feed (max lateral length 55 feet)

Only pressure rated pipe, fittings (couplers, reducers, elbows, tee's, etc.) will be used. _____ Yes _____ No

Manifold and all laterals will be placed at the same elevation ___ Yes ___ No - contact the department

Laterals: Total number _____ Length _____ feet Diameter _____ inches (Use Lateral Diameter Graph)

Holes: Soil loading rate _____ (Spec 23 sand is 1.2) Spacing _____ feet on/center Size 1/4 inch

Holes/lateral _____ Holes/system _____ Flow/lateral _____ gpm Flow/system _____ gpm

Total length of laterals _____ x the volume/foot = Total volume of laterals _____ gallons

Total number of holes x 1.28 gpm (3.0' design head) or 1.17 gpm (2.5' design head) = _____ total gpm

Lateral length in feet with hole placement. Mark the appropriate lateral length and count the holes.
(From the manifold, holes start 1/2 the distance of the hole spacing and no hole shall be placed less than that distance from the end cap. Do not forget to count the hole in the end cap.)

Example: 3 feet on center hole spacing is universal for all soil load rates)

0	1½	4½	7½	10½	13½	16½	19½	22½	25½	28½	31½	34½	37½	40½	43½	46½	49½	52½	55	
!	!	!	!	!	!	!	!	!	!	!	!	!	!	!	!	!	!	!	!	!

Manifold: Length: _____ feet. Diameter: _____ inches (must be 2 – 4"). Refer to Table X of Rule 410 IAC 6-8.2

Effluent force main: Length*: _____ feet. Diameter: _____ inches. Volume***: _____ (length x volume/foot)

**If line drains to the dose tank, this is drain-back amount to be added to the actual dose to determine float settings.

Drains to: ___Field ___Dose tank

Pipe diameter:	1"	1¼"	1½"	2"	3"	4"
Gallons/foot:	.045	.078	.106	.174	.384	.650

*Is any portion of the force main deeper than than 60": ___yes ___no.

If yes, what length will NOT drain: _____ feet. (subtract this amount from the total length before calculating drain-back volume)

Friction loss in effluent force main: *Sec. 73 (z) Table IX of Rule 410 IAC 6-8.2.

Friction loss at _____ gpm = _____ *feet per 100 ft. of _____ inch diameter pipe.

Calculate friction loss from fittings using chart:

List each fitting by type and corresponding value.

Example (for 2"): 2-90° elbows at 5.2' = 10.4'

*Pipe diameter:	1"	1½"	2"	2½"	3"	4"
90° Elbow :	2.6'	4.3'	5.2'	6.2'	7.7'	10.1'
45° Elbow:	1.4'	2.1'	2.8'	3.3'	4.1'	5.4'
Check valve:	8.7'	13.4'	17.2'	20.6'	25.5'	33.6'

Add up total equivalent length for each fitting type to get "Friction loss length from fittings" to use below.

FITTINGS List:

Length force main _____ (+) Friction loss length from fittings _____ = _____ total effective length in feet.

Number from Table IX: _____ (x) _____ total effective length in feet/100 = _____ **Friction loss**

In a repair situation when backfilling with Spec 23 sand is necessary, mark the 1.2 load rate line and contact the Health Department to discuss any "special circumstances" that may exist with the site.

Required dose: _____ + Drain back: _____ = _____ total gallons to determine float settings.

Volume calculation: The total dose amount delivered must be ≥ 7 times the volume of the distribution laterals.

Total volume of the laterals (from page one) _____ x 7 = _____ gallons. Total dose amount = _____ gallons.

Plan meets volume calculation requirements: ___Yes ___No (If No, revise if possible or contact the HD)

PUMP: Manufacturer: _____ Model: _____ Horse power: _____ Height: _____"

Performance curve included with TDH and gpm plotted: _____ Yes _____ No

Pump is adequate, but not oversized: _____ Yes _____ No

Dosing Tank will be set up in compliance with Sec. 64 and Sec. 65 of the State Rule: _____ Yes _____ No

Junction box(es) will be located outside the dosing tank and riser, and shall be in accordance with Sec. 65 of the State Rule: _____ Yes _____ No

All Septic Tanks and Dosing Tanks will have risers in accordance with Sec. 59 of the State Rule: _____ Yes _____ No

Each Dose Tank will be equipped with an audible and visual alarm on a separate circuit from the pump: _____ Yes _____ No

Pump will stay submerged at all times: _____ Yes _____ No

TOTAL DYNAMIC HEAD:

A. Friction Loss in Force Main _____ feet

B. Elevation Difference _____ feet
(Pump-off to Manifold, or highest elevation in force main)

C. System Design Head _____ feet

Total Dynamic Head = _____ feet
(A + B + C)