



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”

ELEVATED SAND MOUND WORKSHEET

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

SYSTEM SPECIFICATIONS: See Health Department specification sheet for information

Soil Load Rate _____ Required absorption area _____ ft² Aggregate bed _____ ft²

Number of bedrooms/equivalents _____ x 150 = Daily Design Flow (DDF): _____ gallons

SEPTIC TANK: Size: _____ gallons Manufacturer _____

DOSE TANK: Size: _____ gallons Manufacturer _____

Gallons _____ per inch or foot Internal dimensions _____ width _____ length
(circle one)

POSITION OF AGGREGATE BED: _____ Centered (slope $\leq 1/2\%$) or _____ Upslope (slope $> 1/2\%$ - 6%)

Elevation shots are necessary to determine slope and these must be included in the site plan. If you use a topography map, it may not include sufficient information and permit approval could be delayed.

MOUND DIMENSIONS: IDEAL: Longest length possible for the site – *see maximum width calculation

Basal area: Width _____ feet Length _____ feet Total absorption area _____ square feet

Sand area: Width _____ feet Length _____ feet Depth under aggregate bed _____

Cover/Plow area: Width _____ feet Length _____ feet

Aggregate Bed: Width _____ feet Length _____ feet Depth _____ inches Total area _____ ft²

Lateral separation _____ feet on/center (2 foot minimum and 3 foot maximum)

Separation of laterals to edge of aggregate bed _____ side _____ end (side 1 – 1.5 feet, end 1.5)

*Aggregate bed maximum width = $0.83 \sqrt{\frac{\text{daily design flow} \times \text{soil load rate}}{3}}$ = _____

A 1-foot sand berm is required around the edge of the aggregate bed to properly bed the aggregate.

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

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

Holes: Size $1/4$ inch Spaced 3 feet on/center Holes/lateral _____ Holes/system _____

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

Flow/lateral _____ gpm Flow/system _____ gpm Total length of laterals _____ feet

Lateral length in feet with hole placement. Mark the appropriate lateral length and count the holes. (Holes start 18” from the manifold and no hole shall be placed less than 18” from the end cap. Do not forget to count the hole in the end cap.)

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

Manifold: Length _____ Diameter _____ Refer to Table IX of Rule 410 IAC 6-8.1
(Note: Manifold diameter minimum 2” and maximum 4”)

Delivery Line: Length _____ feet Diameter _____ inches Volume* _____ (length x volume/foot)

*This is the drain back amount to be added to the actual dose to determine the float settings.

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

Friction loss in delivery line: Sec. 53 (v) Table VIII of Rule 410 IAC 6-8.1

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

Number from Table VIII _____ x _____ delivery line length/100 = _____ Friction loss

Dose amount: ¼ DDF _____ + Drain back _____ = _____ total gallons to determine float settings

Volume calculation: Actual dose must be ≥ 7 times the volume of the distribution laterals

Dosage (¼ DDF) _____ ≥ 7 x total length of distribution lines _____ x volume/foot _____ = _____

PUMP: Manufacturer _____ Model _____ Horse power _____

Performance curve included with TDH and gpm plotted _____ Yes Pump is adequate _____ Yes

Drawdown distance → pump on/off _____ x _____ gallons per inch or foot = _____ total dose amount
(circle one)

Dosing Tank will be set up in compliance with Sec. 44 and Sec. 45 _____ Yes _____ No
of the State Code

Electrical Connections will be inside gas proof box. _____ Yes _____ No

All Septic Tank and Dosing Tanks will have risers in accordance _____ Yes _____ No
with Sec. 39 (g) of the State Code

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

Pump must stay submerged at all times _____ Yes _____ No

TOTAL DYNAMIC HEAD: A. Friction Loss in Delivery Line _____ feet

B. Elevation Difference (Pump to Manifold) _____ feet

C. System Design Head _____ feet

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