

## Mound Design - Aitkin county

Property Owner: Tom Ernsting ( Sue Radke )

Date: 6/10/2019

Site Address: 36374 Nature Ave. Aitkin MN 56431

PID: 15-0-040200

Comments: Replacement for a Non-Conforming Septic System

Instructions:  = enter data  = adjust if desired  = computer calculated - DO NOT CHANGE!

- 1)  bedroom Type  Residential System
- 2)  GPD design flow
- 3)  Garbage disposal or pumped to septic Install 1650 Jacobson Compartment tank 1120/533
- 4)  Gal Septic tank (code minimum)  Gal Septic tank (design size / LUG req'd)  
Tank options: Effluent filter & alarm req'd
- 5)  GPD/ft<sup>2</sup> mound sand loading rate contour loading rate of  req's a min  ft. long rockbed
- 6)  ft rockbed width  ft rockbed length
- 7)  ft lateral spacing  ft perforation spacing (maximum of 3 for both)  
 manifold connection
- 8)  laterals  feet long  perfs / lateral  perfs total  
(1/2 a perf means the first perf starts at the middle feed manifold)
- 9)  inch perfs at  feet residual head gives  gpm flow rate per perforation  
for this perf size & spacing, & pipe size on line 12, max perfs/lateral = , line #8 must be less --> OK
- 10)  doses per day (4 minimum)
- 11)  gallons per dose (treatment volume) 1.50 5x
- 12)  inch diameter laterals must be used to meet "4x pipe volume" requirement 2.00 3x
- 13)  feet of  inch supply line leads to  gallons of drainback volume  
(Tip: "top feed" manifold to control the drainback)
- 14)  gallons TOTAL pump out volume (treatment + drainback)
- 15)  feet vertical lift from pump to mound laterals, leads to a:
- 16)  GPM @  feet of head, Pump requirement (note: >50gpm may require an extra 3-6' of head)
- 17)  gal Dose tank (code minimum)  gal Dose tank (design size / LUG req'd) at  gpi  
leads to a
- 18)  inch swing on Demand float, or timed dosing of  min ON (confirm pump rate with drawdown  
(this delivers Average flow, =70% of Peak design flow)  hrs OFF test and adjust as necessary)
- 19)  inches from bottom of tank to "Pump OFF" float
- 20)  inches from bottom of tank to "Pump ON" float, or  inches to "Timer ON" float if time dosed
- 21)  inches from bottom of tank to "Hi Level" float, or  inches to "Hi Level" float if time dosed
- 22)  gallons reserve capacity (after High Level Alarm is activated)