

FIELD EVALUATION SHEET

PRELIMINARY EVALUATION DATE 3-10-21, FIELD EVALUATION DATE 4-12-21
PROPERTY OWNER: JOHN+MARY CEBULA PHONE
ADDRESS: CITY,STATE,ZIP:
LEGAL DESCRIPTION: LOT 4 BLK 4 + PT VACATED ROAD
PIN# 29-1-434100/29-1-434800 SEC 16 T 49 R 23 TWP NAME SHAMROCK
FIRE# LAKE/RIVER BIG SANDY LAKE CLASS OHWL FT.

DESCRIPTION OF SOIL TREATMENT AREAS

AREA #1 AREA #2 REFERENCE BM ELEV. 100 FT
DISTURBED AREAS YES NO YES NO REFERENCE BM DESCRIPTION
COMPACTED AREAS YES NO YES NO BASE OF PINE TREE BY
FLOODING YES NO YES NO ROAD. AREA WILL NOT BE
RUN ON POTENTIAL YES NO YES NO DISTURBED BORING
SLOPE % 12% CONSTRUCTION
DIRECTION OF SLOPE SW
LANDSCAPE POSITION TOP OF HILL / SIDE SLOPE
VEGETATION TYPES WOODED

DEPTH TO STANDING WATER OR MOTTLED SOIL: BORING# 1 78", 1A 78", 2 72", 2A 72"

BOTTOM ELEVATION--FIRST TRENCH OR BOTTOM OF ROCK BED: #1 88.5 FT., #2 FT.

SOIL SIZING FACTOR: SITE #1 1.27, SITE #2

CONSTRUCTION RELATED ISSUES: 3 BDRM 1650 WITH 152 L.F. OF TRENCH

LIC# 127 SITE EVALUATOR SIGNATURE: Larry Liljenquist

SITE EVALUATOR NAME: LARRY LILJENQUIST TELEPHONE# 218 820 8886

LUG REVIEW DATE

Comments:

SOIL BORING LOGS ON REVERSE SIDE

TRENCH AND BED WORKSHEET

1. AVERAGE DESIGN FLOW

- A. Estimated 450 gpd (see figure A-1)
 or measured x 1.5 (safety factor) = gpd
 B. Septic tank capacity 1000 gal (see figure C-1)

2. SOILS (Site evaluation data)

- C. Depth to restricting layer = 6 1/2 ft
 D. Max depth of system Item 2C - 3 ft = 6 1/2 ft - 3 ft = 3 1/2 ft
 E. Texture S.L. Percolation rate 6-15 MPI
 F. Soil Sizing Factor (SSF) 1.27 sqft/gpd (see figure D-15)
 G. % Land Slope 12 %

3. TRENCH or BED BOTTOM AREA

- H. For trenches with 6 inches of rock below the pipe:
 $A \times F = \text{ } \text{ gpd} \times \text{ } \text{ sqft/gpd} = \text{ } \text{ sqft}$
 I. For trenches with 12 inches of rock below the pipe:
 $A \times F \times 0.8 = \text{450 gpd} \times \text{1.27 sqft/gpd} \times 0.8 = \text{457 sqft}$
 J. For trenches with 18 inches of rock below the pipe:
 $A \times F \times 0.66 = \text{ } \text{ gpd} \times \text{ } \text{ sqft/gpd} \times 0.66 = \text{ } \text{ sqft}$
 K. For trenches with 24 inches of rock below the pipe:
 $A \times F \times 0.6 = \text{ } \text{ gpd} \times \text{ } \text{ sqft/gpd} \times 0.6 = \text{ } \text{ sqft}$
 L. For gravity beds with 6 or 12 inches of rock below the pipe:
 $1.5 \times A \times F = 1.5 \times \text{ } \text{ gpd} \times \text{ } \text{ sqft/gpd} = \text{ } \text{ sqft}$
 For pressure beds with 6 or 12 inches of rock below the pipe:
 $A \times F = \text{ } \text{ gpd} \times \text{ } \text{ sqft/gpd} = \text{ } \text{ sqft}$

4. DISTRIBUTION (Check all that apply)

- Bed (< 6% slope) Drop boxes (any slope) Rock
 Trenches Distribution box (< 3%) Chamber
 Pressure Gravity Gravelless

5. SYSTEM WIDTH, LENGTH and VOLUME

- M. Select trench width = 3 ft
 N. If using rock, divide bottom area by width: (H, I, J, K or L) ÷ M =
457 sqft ÷ 3 ft = 152 lineal feet
 Rock depth below distribution pipe plus 0.5 foot times bottom area:
 Rock depth in feet + 0.5 feet x Area (H, I, J, K, or L)
 (1 ft + 0.5 ft) x 450 sqft = 675 cuft
 Volume in cubic yards = cuft ÷ 27
675 cuft ÷ 27 = 25 cu yds
 Weight of rock in tons = cubic yds x 1.4
25 cu yds x 1.4 = 35 tons
 O. If using 10" Gravelless Pipe, Flow (A) x Gravelless SSF (see figure D-9)
 gpd x lineal feet/gpd = lineal feet
 P. If using Chambers, H, I, J, or K (based on height of chamber slats) ÷
 width of chamber in feet (M)
 sqft ÷ ft = lineal ft

6. LAWN AREA

- Q. Select trench spacing, center to center = 6 feet
 R. Multiply trench spacing by lineal feet R x Q = sqft of lawn area
6 ft x 152 ft = 912 sqft

7. Include a drawing with scale (one inch = ft). Show pertinent boundaries, right of way, easements, location of house, garage, driveway, all other improvements, existing or proposed soil treatment system, well and dimensions of all elevations, setbacks and separation distances.

number of bedrooms	Class I	Class II	Class III	Class IV
2	300	225	180	60%
3	450	300	218	of the
4	600	375	256	values
5	750	450	294	in the
6	900	525	332	Class I,
7	1050	600	370	II, or III
8	1200	675	408	columns.

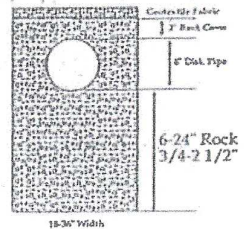
Number of Bedrooms	Minimum Liquid Capacity	Liquid capacity with garbage disposal	Liquid capacity with disposal & lift inside
2 or less	750	1125	1500
3 or 4	1000	1500	2000
5 or 6	1500	2250	3000
7, 8 or 9	2000	3000	4000

Percolation Rate (minutes per inch)	Soil Texture	Soil Sizing Factor (square feet/gallon per day/sqft/gpd)
faster than 0.1"	Coarse sand	0.83
0.1 to 5"	Medium sand	0.83
	Loamy sand	1.67
0.1 to 5"	Fine sand	1.67
6 to 15	Sandy loam	1.27
16 to 30	Loam	1.67
31 to 45	Silt loam	2.00
	Silt	2.20
46 to 60	Clay loam	2.20
	Sandy clay	4.20
	Silty clay	4.20
	Clay	4.20
over 61 to 120***	Sandy clay	4.20
	Silty clay	4.20
slower than 120****		

*Use systems for rapidly permeable soils; pressure distribution or seial distribution with no trench >25% of the total system.
 **Soil having 50% or more fine sand plus very fine sand.
 ***A mound must be used.
 ****An other or performance system must be used

percolation rate (minutes/inch)	soil texture	lineal feet/gallon/day
Faster than 0.1"	Coarse Sand	---
0.1 to 5"	Medium Sand	0.28
	Loamy Sand	0.6
0.1 to 5"	Fine Sand**	0.42
6 to 15	Sandy Loam	0.56
16 to 30	Loam	0.67
31 to 45	Silt Loam	0.67
	Silt	0.74
46 to 60	Clay Loam (CL)	0.74
	Sandy CL	---
	Silty CL	---
slower than 60****	Clay	---
	Sandy Clay	---
	Silty Clay	---

*Soil too coarse for sewage treatment.
 Use systems for rapidly permeable soils.
 **Soil having 50% or more fine sand + very fine sand.
 ***Soil with too high a percentage of clay for installation of a standard inground system.
 ****A mound must be used.



I hereby certify that I have completed this work in accordance with applicable ordinances, rules and laws.

Larry Lyngstad (signature) 127 (license #) 4-12-21 (date)

SOILS CHARTS FOR BOTH PROPOSED AND ALTERNATE SITES

1 (PROPOSED) SOILS DATA

DEPTH (INCHES)	TEXTURE	MUNSELL COLOR
0 - 5	TOPSOIL	10YR 3/3
5 - 50	SAND	10YR 4/6
50 - 60	SAND	10YR 4/4
60 - 78	SANDY LOAM	10YR 4/4

2 (PROPOSED) SOILS DATA

DEPTH (INCHES)	TEXTURE	MUNSELL COLOR
0 - 5	TOPSOIL	10YR 3/3
5 - 58	SAND	10YR 4/6
58 - 78	SANDY LOAM	10YR 4/4

1 (ALTERNATE) SOILS DATA

DEPTH (INCHES)	TEXTURE	MUNSELL COLOR
0 - 4	TOPSOIL	10YR 3/3
4 - 50	SAND	10YR 4/6
50 - 72	SANDY LOAM	10YR 4/4

2 (ALTERNATE) SOILS DATA

DEPTH (INCHES)	TEXTURE	MUNSELL COLOR
0 - 5	TOPSOIL	10YR 3/3
	SAND	10YR 4/6
	SANDY LOAM	10YR 4/4

ADDITIONAL SOIL BORINGS MAY BE REQUIRED



View Soil Information By Use: All Uses Printable Version Add to Shopping Cart

- Search
- Suitabilities and Limitations Ratings
- [Open All](#) [Close All](#)
- Building Site Development
 - Construction Materials
 - Disaster Recovery Planning
 - Land Classifications
 - Land Management
 - Military Operations
 - Recreational Development
 - Sanitary Facilities**
 - Aquifer Assessment (MN)
 - Daily Cover for Landfill
 - Sanitary Landfill (Area)
 - Sanitary Landfill (Trench)
 - Septage Application - Incorporation or Injection (MN)
 - Septage Application - Surface (MN)
 - Septic Tank Absorption Fields
 - Septic Tank Absorption Fields — At-Grade (MN)
 - Septic Tank Absorption Fields — Mound (MN)
 - Septic Tank Absorption Fields — Trench (MN)
 - Sewage Lagoons
 - Soil-Based Residential Wastewater Disposal Ratings (VT)

View Options

Map

Table

Description of Rating

Rating Options

Detailed Description

Advanced Options

[View Description](#) [View Rating](#)

- Soil Health
- Agricultural Organic Soil Subsidence
 - Farm and Garden Composting Facility - Surface
 - Fragile Soil Index
 - Organic Matter Depletion
 - Soil Surface Sealing
 - Soil Susceptibility to Compaction
 - Suitability for Aerobic Soil Organisms
 - Surface Salt Concentration
 - Vegetative Productivity
 - Waste Management



Tables — Septic Tank Absorption Fields — Trench (MN) — Summary by Map Unit

Summary by Map Unit — Aitkin County, Minnesota (MN001)

Summary by Map Unit — Aitkin County, Minnesota (MN001)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
454E	Mahtomedi loamy coarse sand, 12 to 25 percent slopes	Moderately limited	Mahtomedi (90%)	Slope (0.73) Excessive percolation (0.21)	4.3	87.4%
454F	Mahtomedi gravelly loamy sand, 25 to 40 percent slopes	Extremely limited	Mahtomedi (90%)	Slope (1.00) Excessive percolation (0.21)	0.6	12.6%
Totals for Area of Interest					4.9	100.0%

Table — Septic Tank Absorption Fields — Trench (MN) — Summary by Rating Value

Summary by Rating Value

Rating	Acres in AOI	Percent of AOI
Moderately limited	4.3	87.4%

Water Management	Extremely limited	0.6	12.6%
Totals for Area of Interest		4.9	100.0%
Description — Septic Tank Absorption Fields — Trench (MN)			
<p>Trench septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through perforated pipe. In this system the drain field is placed in a trench and covered with soil material. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Saturated hydraulic conductivity (Ksat) is evaluated from a depth of 30 to 107 centimeters. Depth to saturation and depth to bedrock are evaluated from the surface to a depth of 203 centimeters. The frequency of ponding and flooding also is evaluated. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.</p> <p>The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect this use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Slightly limited" indicates that the soil has features that are favorable for the specified use. "Moderately limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Good performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without special design or expensive installation procedures. "Extremely limited" indicates that the soil has one or more features that are very unfavorable for the specified use. The limitations generally cannot be overcome.</p> <p>Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).</p> <p>The components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as the one shown for the map unit. The percent composition of each component in a particular map unit is given to help the user better understand the extent to which the rating applies to the map unit.</p> <p>Other components with different ratings may occur in each map unit. The ratings for all components, regardless the aggregated rating of the map unit, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.</p>			
Rating Options — Septic Tank Absorption Fields — Trench (MN)			
Aggregation Method: Dominant Condition			
Component Percent Cutoff: None Specified			
Tie-break Rule: Higher			

Subsurface Sewage Treatment System Management Plan

Property Owner: JOHN+MARY CEBULA Phone: _____ Date: 4-12-21
Mailing Address: 13513 CROOKED LK BLVD N^W City: ANDOVER Zip: 55304
Site Address: _____ City: _____ Zip: _____

This management plan will identify the operation and maintenance activities necessary to ensure long-term performance of your septic system. Some of these activities must be performed by you, the homeowner. Other tasks must be performed by a licensed septic service provider or maintenance provider.

System Designer: Recommends SSTS check every 36 months.
Local Government: Recommends SSTS check every _____ months.
State Requirement: Requires SSTS check every 36 months.
(State requirements are based on MN Rules Chapter 7080.2450, Subp. 2 & 3)

My System needs to be checked every 36 months.

Homeowner Management Tasks:

Leaks – Check (look, listen) for leaks in toilets and dripping faucets. Repair leaks promptly.

Surfacing sewage – Regularly check for wet or spongy soil around your soil treatment area.

Effluent filter – *Inspect and clean twice a year or more.*

Alarms – Alarm signals when there is a problem. Contact a service or maintenance provider any time an alarm signals.

Event counter or water meter – Record your water use.

-recommend meter readings be conducted (*circle one*: DAILY WEEKLY MONTHLY N/A)

Licensed septic service provider or maintenance provider (Check all that apply):

- Check to make sure tank is not leaking
- Check and clean the in-tank effluent filter (if exists)
- Check the sludge/scum layer levels in all septic tanks
- Recommend if tank should be pumped
- Check inlet and outlet baffles
- Check the drainfield effluent levels in the rock layer
- Check the pump and alarm system functions
- Check wiring for corrosion and function
- Check dissolved oxygen and effluent temperature in tank
- Provide homeowner with list of results and any action to be taken
- Flush and clean laterals if cleanouts exist

"I understand it is my responsibility to properly operate and maintain the sewage treatment system on this property, utilizing the Management Plan. If requirements in the Management Plan are not met, I will promptly notify the permitting authority and take necessary corrective actions. If I have a new system, I agree to adequately protect the reserve area for future use as a soil treatment system."

Property Owner Signature: _____ Date: _____

Designer Signature: Larry Lyngstad Date: 4-12-21

See Reverse Side for Management Log

Maintenance Log

Activity	Date Accomplished
Check frequently:	
Leaks: check for plumbing leaks	
Soil treatment area check for surfacing	
Lint filter: check, clean if needed	
Effluent screen: if owner-maintained	
Water usage rate (monitor frequency _____)	
Check annually:	
Caps: inspect, replace if needed	
Sludge & Scum/Pump	
Inlet & Outlet baffles	
Drainfield effluent leaks	
Pump, alarm, wiring	
Flush & clean laterals if cleanouts exists	
Other: _____	
Other: _____	

Notes: _____
