FIELD EVALUATION SHEET

PRELIMINARY EVALUATION DATE 6/19/19, FIELD EVALUATION DATE 6/19/19
PROPERTY OWNER: Elliot Hampos PHONE
ADDRESS: 17298 Goshawk St CITY,STATE,ZIP: McGregor MN 55760
LEGAL DESCRIPTION:
PIN# 29-0-05500 SEC T R TWP NAME Shamrock
FIRE# LAKE/RIVER LAKE CLASS OHWL FT.

DESCRIPTION OF SOIL TREATMENT AREAS

	AREA #1	AREA #2
DISTURBED AREAS	YES NO X	YES NO
COMPACTED AREAS	YES NO X	YES NO
FLOODING	YES NO X	YES NO
RUN ON POTENTIAL	YES NO X	YES NO
SLOPE %		
DIRECTION OF SLOPE		
LANDSCAPE POSITION		
VEGETATION TYPES	Mowed lawn	

REFERENCE BM ELEV. 100 FT.
REFERENCE BM DESCRIPTION
Top of well head

DEPTH TO STANDING WATER OR MOTTLED SOIL: BORING# 1 34"+, 1A , 2 30"+, 2A

BOTTOM ELEVATION--FIRST TRENCH OR BOTTOM OF ROCK BED: #1 98.09' FT., #2 FT.

SOIL SIZING FACTOR: SITE # 1 .78, SITE #2 .78

CONSTRUCTION RELATED ISSUES:

LIC# L552 SITE EVALUATOR SIGNATURE:
SITE EVALUATOR NAME: Bradley Eddy TELEPHONE# 218-426-4285
LUG REVIEW DATE 6/19/19

Comments:

SOIL BORING LOGS ON REVERSE SIDE

Form des 2/20/98

SOILS CHARTS FOR BOTH PROPOSED AND ALTERNATE SITES

1 (PROPOSED) SOILS DATA

DEPTH (INCHES)	TEXTURE	MUNSELL COLOR
0-4"	Topsoil	
4"-34"	loamy sand mottles @ 34"	10YR 6/6
34"-54"	loamy sand	7.5 YR 5/6

2 (PROPOSED) SOILS DATA

DEPTH (INCHES)	TEXTURE	MUNSELL COLOR
0-4"	Topsoil	
4"-36"	loamy sand mottles @ 36"	10YR 6/6
36"-54"	loamy sand	7.5 YR 4/6

1 (ALTERNATE) SOILS DATA

DEPTH (INCHES)	TEXTURE	MUNSELL COLOR

2 (ALTERNATE) SOILS DATA

DEPTH (INCHES)	TEXTURE	MUNSELL COLOR

ADDITIONAL SOIL BORINGS MAY BE REQUIRED

2011 purple code

Mound Design - Aitkin county

www.SepticResource.com (vers 15.2)

Property Owner: Elliot Haapoja **Date:** 8/2/2019

Site Address: 17298 Goshawk St McGregor **PID:** 29-0-055500

Comments:

instructions: [ ] = enter data [ ] = adjust if desired [ ] = computer calculated - DO NOT CHANGE!

1) [3] bedroom Type [1] Residential System

2) [450] GPD design flow

3) [No] Garbage disposal or pumped to septic

4) [1000] Gal Septic tank (code minimum) [1000] Gal Septic tank (design size / LUG req'd)
Tank options: none

5) [1.2] GPD/ft^2 mound sand loading rate contour loading rate of [12] req's a min [37.5] ft. long rockbed

6) [10.0] ft rockbed width [37.5] ft rockbed length

7) [3.0] ft lateral spacing [3.0] ft perforation spacing (maximum of 3 for both)
[end feed] manifold connection

8) [3] laterals [35.5] feet long [12.0] perfs / lateral [36] perfs total
(1/2 a perf means the first perf starts at the middle feed manifold)

9) [7/32] inch perfs at [1] feet residual head gives [0.56] gpm flow rate per perforation

for this perf size & spacing, & pipe size on line 12, max perfs/lateral = [19], line #8 must be less -->

10) [4.0] doses per day (4 minimum)

11) [113] gallons per dose (treatment volume)

2.00 5x

12) [1.50] inch diameter laterals must be used to meet "4x pipe volume" requirement

2.00 3x

13) [145] feet of [1.5] inch supply line leads to [16] gallons of drainback volume
(Tip: "top feed" manifold to control the drainback)

14) [129] gallons TOTAL pump out volume (treatment + drainback)

15) [8] feet vertical lift from pump to mound laterals, leads to a:

16) [21] GPM @ [23] feet of head, Pump requirement (note: >50gpm may require an extra 3-6' of head)

17) [500] gal Dose tank (code minimum) [520] gal Dose tank (design size / LUG req'd) at [12.69] gpi
leads to a

18) [10.2] inch swing on Demand float, or timed dosing of [6.1] min ON (confirm pump rate with drawdown
(this delivers Average flow, =70% of Peak design flow) [9] hrs OFF test and adjust as necessary)

19) [12] inches from bottom of tank to "Pump OFF" float

20) [22] inches from bottom of tank to "Pump ON" float, or [12] inches to "Timer ON" float if time dosed

21) [25] inches from bottom of tank to "Hi Level" float, or [35] inches to "Hi Level" float if time dosed

22) [203] gallons reserve capacity (after High Level Alarm is activated)

23) 0.78 gpd/ft² Absorption area Soil Loading Rate, (this must match the soil boring log) which gives a mound ratio of 1.5 (minimum)
desired mound ratio 1.5

24) 8 percent site slope (0-20% range) 8 (% downslope site slope, if different than upslope)

25) 18 inches, or 1.5 ft. to Redox or other limiting condition (need at least 12" to be a Type I)
Treatment zone contains 0 inches of 0% soil credit, and 0 inches of 50% soil credit. Giving a:

26) 18 inch, or 1.5 ft. Sand Lift Mound **CRITICAL FOR FUTURE CERTIFICATIONS!!!**

27) 15.0 ft. base absorption width (with sand beyond rockbed as follows:)
37.0 greater of: absorption width OR sand slope

28) 0.0 ft. upslope and sideslope sand upslope 7.6
5.0 ft. Downslope sand down slope 19.4

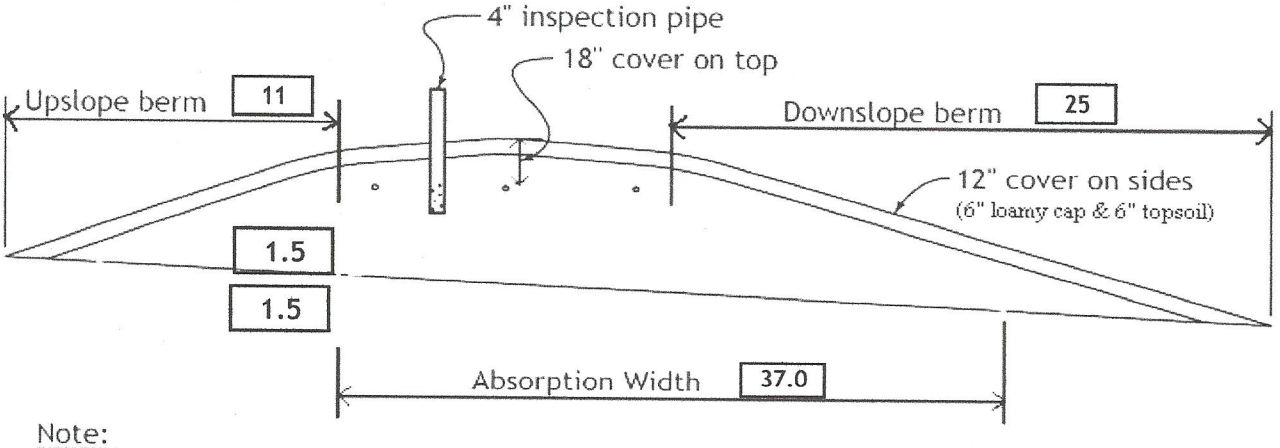
Individual slope ratios give BERM widths (topsoil beyond rockbed) of:

29) 4:1 upslope ratio 11 ft. upslope berm

30) 4:1 sideslope 17 ft. sideslope berms

31) 4:1 downslope 25 ft. downslope berm

32) Overall Dimensions: 10.0 ft. wide by 37.5 ft. long Rock bed
46 ft. wide by 72 ft. long Mound footprint



Note:
For 0 to 1% slopes, *Absorption Width* is measured from the *Bed* equally in both directions.
For slopes >1%, *Absorption Width* is measured downhill from the upslope edge of the *Bed*.

33) Rock Bed:
10.0 ft. by 37.5 ft. by 6 inches under pipe, plus 20% gives 13 yd³ or *1.4= 18 ton

34) Mound Sand: (note: volume is based on 3:1/4:1 slope from top of rockbed, Exchange sand for loamy cap if desired)
22.3 up + 75.3 downslope + 16.1 ends + 26.4 under rock = 168 yd³ or *1.4= 235 ton
plus 20%

35) Loamy Cap:
42 ft. by 68 ft. 6" deep, plus 20% gives 63 yd³ or *1.4= 88 ton

36) Topsoil:
46 ft. by 72 ft. 6" deep, plus 20% gives 74 yd³ or *1.4= 104 ton

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

Designer Signature	Company	License#	Date
	Ekelund Excavating	L552	8/2/2019

Installer Summary

1000 gallon Septic tank (minimum) Tank options: none

520 gallon Dose tank (minimum) at 12.69 gpi

21 GPM @ 23 ft. of head, Pump required

10.2 inch swing on Demand float which translates to roughly 6.1 inches of float tether length

if time dosing is required --> 6.1 minutes ON time & 9 hours OFF time

22 inches from bottom of tank to "pump ON" float, or 12 inches to "timer ON" float

25 inches from bottom of tank to "Hi Level Alarm" or 35 inches to "Hi level alarm" if time dosed

145 ft. of 1.5 inch supply line with end feed manifold connection

(Tip: "top feed" manifold to control drainback)

18 inch, or 1.5 ft. Sand Lift Mound

10.0 ft. wide by 37.5 ft. long Rock bed

3 laterals 1.50 inch diameter 35.5 ft. long 3.0 ft. lateral spacing

7/32 inch perfs 3.0 ft. perforation spacing

No Effluent filter & alarm

3 clean out & valve box assemblies

37.0 ft.Total sand ABSORPTION width (minimum)

7.6 ft. upslope and sideslope (sand beyond rockbed, minimum)

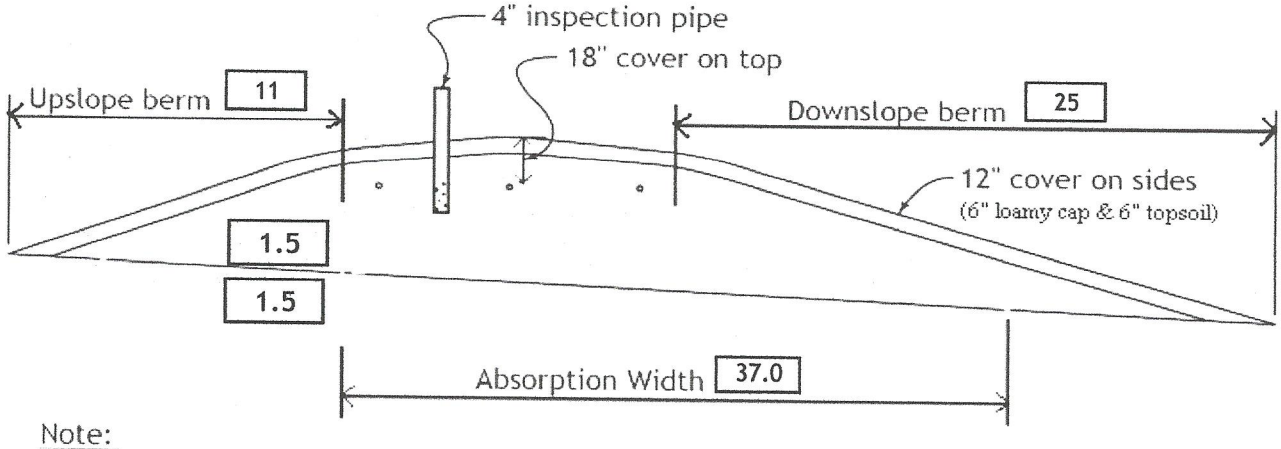
19.4 ft. Downslope

Specific slope ratios give BERM widths (topsoil beyond rockbed) of:

4:1 upslope ratio 11 ft. upslope berm

4:1 sideslope 17 ft. sideslope berms

4:1 downslope 25 ft. downslope berm



Note:
For 0 to 1% slopes, *Absorption Width* is measured from the *Bed* equally in both directions.
For slopes >1%, *Absorption Width* is measured downhill from the upslope edge of the *Bed*.

Rock Bed:	13.0	yd^3 or *1.4=	18	ton
Mound Sand:	168	yd^3 or *1.4=	235	ton
Loamy Cap:	63	yd^3 or *1.4=	88	ton
Topsoil:	74	yd^3 or *1.4=	104	ton

6 inches under pipe

calculation based on 3:1/4:1 slope from top of rockbe

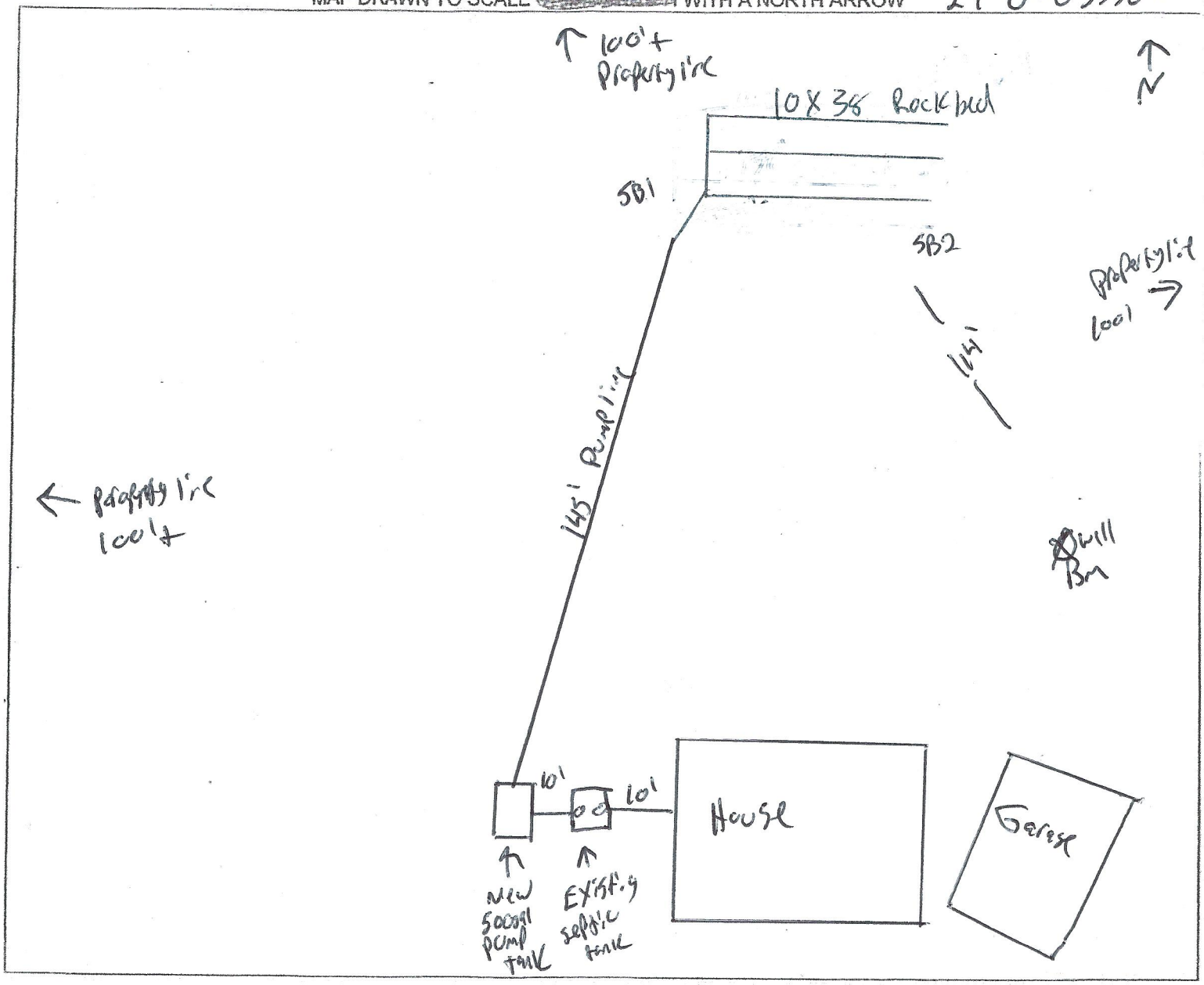
6" deep

6" deep

SKETCH SHEET

CLIENT: Elliot Haaposa DATE: 6/23/19

MAP DRAWN TO SCALE [redacted] WITH A NORTH ARROW 29-0-055500



CHECK OFF LIST--HAVE ALL OF THE FOLLOWING BEEN DRAWN ON THE MAP??

SHOW EXISTING OR PROPOSED

- ☐ WATER WELLS WITHIN 100 FT OF TREATMENT AREAS
- ☐ PRESSURE WATER LINES WITHIN 10 FT OF TREATMENT AREAS
- ☐ STRUCTURES
- ☐ LOT IMPROVEMENTS
- ☐ ALL SOIL TREATMENT AREAS
- ☐ ALL ISTS COMPONENTS
- ☐ HORIZONTAL AND VERTICALREFERENCE
- ☐ POINT OF SOIL BORINGS
- ☐ DIRECTION OF SLOPE
- ☐ LOT EASEMENTS
- ☐ ALL LOT DIMENSIONS
- ☐ DISTURBED/ COMPACTED AREAS
- ☐ SITE PROTECTION--LATHE AND RIBBON EVERY 15 FT
- ☐ ACCESS ROUTE FOR TANK MAINTENANCE

REQUIRED SETBACKS

- ☐ STRUCTURES
- ☐ PROPERTY LINES
- ☐ OHWL

COMMENTS:

INDICATE ELEVATIONS

BENCHMARK well head	100'
ELEVATION OF SEWER LINE @ HOUSE	95.26
ELEVATION @ TANK INLET	97.00
ELEVATION @ BOTTOM OF ROCK LAYER	99.2
ELEVATION @ BOTTOM OF BORING OR RESTRICTIVE LAYER	95.09
ELEVATION OF PUMP	94.26
ELEVATION OF DISTRIBUTION DEVICE	99.54

DESIGNER SIGNATURE [signature]

LICENSE# L552

DATE 6/23/19

Subsurface Sewage Treatment System Management Plan

Property Owner: Elliot Hautala Phone: 218-820-5423 Date: 6/23/19

Mailing Address: PO Box 125 City: McGregor Zip: 55760

Site Address: 17294 Gohawk St City: McGregor Zip: 55760

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 24 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 _____ 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: Elliot Hautala Jr Date: 6/23/19

Designer Signature: [signature] Date: 6/23/19

See Reverse Side for Management Log