

**FIELD EVALUATION SHEET**

PRELIMINARY EVALUATION DATE 1-22-19 , FIELD EVALUATION DATE 1-25-19  
PROPERTY OWNER: William Hennessy PHONE \_\_\_\_\_  
ADDRESS: 28842 180<sup>th</sup> Str CITY STATE, ZIP: Adelphi IA 52330  
LEGAL DESCRIPTION: 2.660 of E 1/4 of SW of SW  
PIN# 18-0-021702 SEC 20 T 44 R 27 TWP NAME SEAWAY  
FIRE# \_\_\_\_\_ LAKE/RIVER N/A LAKE CLASS \_\_\_\_\_ OHWL \_\_\_\_\_ FT

**DESCRIPTION OF SOIL TREATMENT AREAS**

	AREA #1	AREA #2	REFERENCE BM ELEV. _____ FT
DISTURBED AREAS	YES _____ NO <u>X</u>	YES _____ NO _____	REFERENCE BM DESCRIPTION _____
COMPACTED AREAS	YES _____ NO <u>X</u>	YES _____ NO _____	_____
FLOODING	YES _____ NO <u>X</u>	YES _____ NO _____	_____
RUN ON POTENTIAL	YES _____ NO <u>X</u>	YES _____ NO _____	_____
SLOPE %	YES _____ NO <u>X</u>	YES _____ NO _____	_____
DIRECTION OF SLOPE	<u>0</u>	_____	_____
LANDSCAPE POSITION	<u>level</u>	_____	_____
VEGETATION TYPES	<u>grass yard</u>	_____	_____

DEPTH TO STANDING WATER OR MOTTLED SOIL: BORING# 1 \_\_\_\_\_, 1A In Spring, 2 \_\_\_\_\_, 2A \_\_\_\_\_

BOTTOM ELEVATION—FIRST TRENCH OR BOTTOM OF ROCK BED: #1 \_\_\_\_\_ FT., #2 \_\_\_\_\_ FT.

SOIL SIZING FACTOR: SITE #1 .83 , SITE #2 \_\_\_\_\_

CONSTRUCTION RELATED ISSUES: 1650 combo to 10'x25' Rock Bed on 3' Sand Base

LIC# 2088 SITE EVALUATOR SIGNATURE: Bob Rault

SITE EVALUATOR NAME: \_\_\_\_\_ TELEPHONE# \_\_\_\_\_

LUG REVIEW \_\_\_\_\_ DATE \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**SOIL BORING LOGS ON REVERSE SIDE**



28-0-031702

# SOILS CHARTS FOR BOTH PROPOSED AND ALTERNATE SITES

*I'll do  
in spring  
after ground  
thaws out*

1 (PROPOSED) SOILS DATA

DEPTH (INCHES)	TEXTURE	MUNSELL COLOR
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2 (PROPOSED) SOILS DATA

DEPTH (INCHES)	TEXTURE	MUNSELL COLOR
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1 (ALTERNATE) SOILS DATA

DEPTH (INCHES)	TEXTURE	MUNSELL COLOR
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2 (ALTERNATE) SOILS DATA

DEPTH (INCHES)	TEXTURE	MUNSELL COLOR
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ADDITIONAL SOIL BORINGS MAY BE REQUIRED



031702  
28-0-071060

# MOUND DESIGN WORK SHEET (For Flows up to 1200 gpd)

## A. Average Design FLOW

Estimated 300 gpd (see figure A-1)  
or measured \_\_\_\_\_ x 1.5 (safety factor) = \_\_\_\_\_ gpd

A-1: Estimated Sewage Flows in Gallons per Day

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.

## B. SEPTIC TANK Capacity

1150 combo gallons (see figure C-1)

C-1: Septic Tank Capacities (in gallons)

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

## C. SOILS (refer to site evaluation)

1. Depth to restricting layer = \_\_\_\_\_ feet
2. Depth of percolation tests = \_\_\_\_\_ feet 3' Sand
3. Texture \_\_\_\_\_ Base  
Percolation rate \_\_\_\_\_ mpi
4. Soil loading rate \_\_\_\_\_ gpd/sqft (see figure D-33)
5. Percent land slope \_\_\_\_\_ %

## D. ROCK LAYER DIMENSIONS

1. Multiply average design flow (A) by 0.83 to obtain required rock layer area.  
300 gpd x 0.83 sqft/gpd = 250 sqft
2. Determine rock layer width = 0.83 sqft/gpd x linear Loading Rate (LLR)  
0.83 sqft/gpd x \_\_\_\_\_ gpd/sqft = 10 ft
3. Length of rock layer = area ÷ width =  
250 sqft (D1) ÷ 10 ft (D2) = 25 ft

Mound LLR

< 120 MPI	≤ 12
≥ 120 MPI	≤ 6

## E. ROCK VOLUME

1. Multiply rock area (D1) by rock depth of 1 ft to get cubic feet of rock  
250 sqft x 1 ft = 250 cuft
2. Divide cuft by 27 cuft/cuyd to get cubic yards  
250 cuft ÷ 27 cuyd/cuft = 9 cuyd
3. Multiply cubic yards by 1.4 to get weight of rock in tons  
9 cuyd x 1.4 ton/cuyd = 13 tons

## F. SEWAGE ABSORPTION WIDTH

Absorption width equals absorption ratio (See Figure D-33) times rock layer width (D2)

10 x 1.5 ft = 15 ft

D-33: Absorption Width Sizing Table

Percolation Rate in Minutes per Inch (MPI)	Soil Texture	Loading Rate Gallons per day per square foot	Absorption Ratio
Faster than 5	Coarse Sand Medium Sand Loamy Sand Fine Sand	1.20	1.00
6 to 15	Sandy Loam	0.79	1.50
16 to 30	Loam	0.60	2.00
31 to 45	Silt Loam	0.50	2.40
46 to 60	Silt Sandy Clay Loam Silty Clay Loam Clay Loam	0.45	2.67
61 to 120	Silty Clay Sandy Clay Clay	0.24	5.00
Slower than 120*			

\*Systems designed for these soils must be other or performance



28-0-037702

≤ 1% land slope

G. Mound Slope Width and Length  
(landslope less than or equal to 1%)

1. Absorption width (F) 15 ft.

2. Calculate mound size

a. Determine depth of clean sand fill

at upslope edge of rock layer = 3 ft

minus the distance to restricting layer (C1)

3 ft - 0 ft = 3 ft

b. Mound height at the upslope edge of rock layer = depth of clean sand for separation (G2a)

at upslope edge plus depth of rock layer (1 ft) plus depth of cover (1 ft)

3 ft + 1ft + 1ft = 5 ft

c. Berm width = upslope mound height (G2b) times 4 (4 is recommended, but could be 3-12)

5 x 4 = 15 ft

d. The total landscape width is the sum of berm (G2c) width plus rock layer width (D2) plus berm w (G2c): 15 ft + 10 ft + 15 ft = 40 ft

e. Additional width necessary for absorption = absorption width (F) minus the landscape width (G2c)

15 ft - 40 ft = 0 ft, if number is negative (<0) skip to g

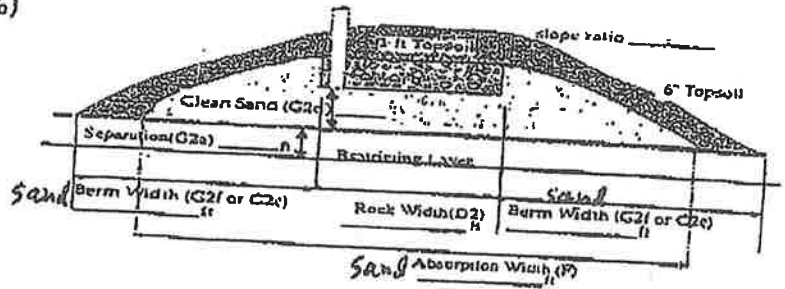
f. Final berm width = additional width (G2e) plus the berm width (G2c)

0 ft + 15 ft = 15 ft

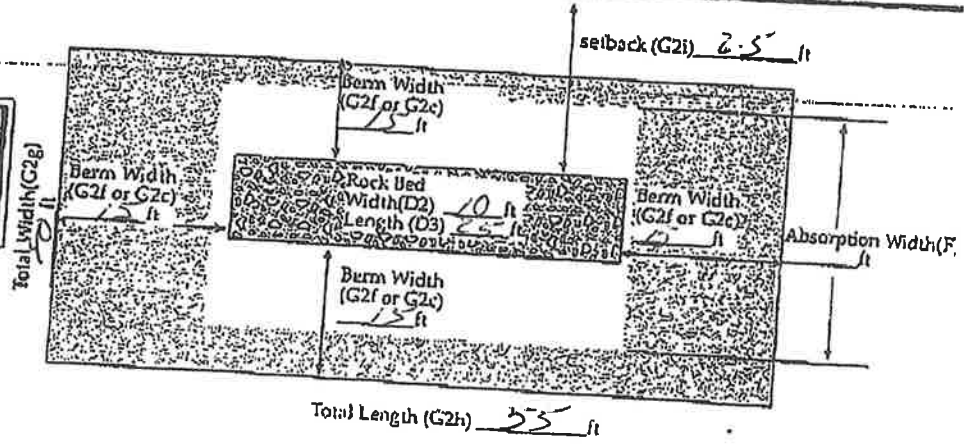
g. Total mound width is the sum of berm width (G2f or G2c) plus rock layer width (D2) plus berm width (G2f or G2c): 15 ft + 10 ft + 15 ft = 40 ft

h. Total mound length is the sum of berm (G2f or G2c) plus rock layer length (D3) plus berm (G2f or G2c): 15 ft + 25 ft + 15 ft = 55 ft

i. Setbacks from the rockbed are calculated as follows: the absorption width (F) minus the rock bed width (D2) divided by 2: (15 ft - 10 ft) ÷ 2 = 2.5 ft



**Final Dimensions:**  
40 x 55



I hereby certify that I have completed this work in accordance with applicable ordinances, rules and laws.  
Bob Bantel (signature) 1-25-19 (license #) 2088 (date)





# PRESSURE DISTRIBUTION SYSTEM

28-0-031702

- Select number of perforated laterals 3
- Select perforation spacing = 3 ft
- Since perforations should not be placed closer than 1 foot to the edge of the rock layer (see diagram), subtract 2 feet from the rock layer length.

$$\frac{25}{\text{Rock layer length}} - 2 \text{ ft} = \underline{23} \text{ ft}$$

- Determine the number of spaces between perforations. Divide the length (3) by perforation spacing (2) and round down to nearest whole number.  
Perforation spacing = 23 ft ÷ 3 ft = 7 spaces
- Number of perforations is equal to one plus the number of perforation spaces (4). Check figure E-4 to assure the number of perforations per lateral guarantees <10% discharge variation.  
7 spaces + 1 = 8 perforations/lateral

- A. Total number of perforations = perforations per lateral (5) times number of laterals (1)  
8 perfs/lat x 3 lat = 24 perforations

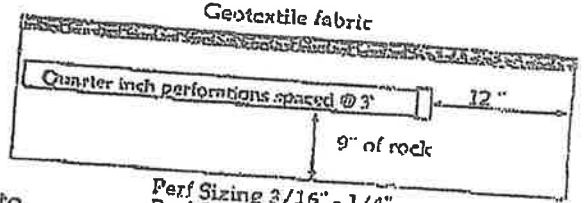
- B. Calculate the square footage per perforation. Should be 6-10 sqft/perf. Does not apply to at-grades.  
Rock bed area = rock width (ft) x rock length (ft)  
10 ft x 25 ft = 250 sqft  
Square foot per perforation = Rock bed area ÷ number of perfs (6)  
250 sqft ÷ 24 perfs = 10 sqft/perf

- Determine required flow rate by multiplying the total number of perforations (6A) by flow per perforation (see figure E-6)

$$\underline{24} \text{ perfs} \times \underline{.74} \text{ gpm/perfs} = \underline{18} \text{ gpm}$$

- If laterals are connected to header pipe as shown on upper example, to select minimum required lateral diameter: enter figure E-4 with perforation spacing (2) and number of perforations per lateral (5) Select minimum diameter for perforated lateral = 2 inches.

- If perforated lateral system is attached to manifold pipe near the center, lower diagram, perforated lateral length (3) and number of perforations per lateral (5) will be approximately one half of that in step 8. Using these values, select minimum diameter for perforated lateral = \_\_\_\_\_ inches.



E-4: Maximum allowable number of 1/8-inch perforations per lateral to guarantee <10% discharge variation

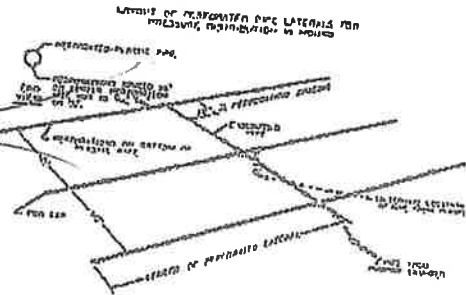
perforation spacing (feet)	1 inch	1.25 inch	1.5 inch	2.0 inch
2.5	8	14	10	28
3.0	8	13	17	26
3.3	7	12	16	25
4.0	7	11	15	23
5.0	6	10	14	22

E-6: Perforation Discharge in gpm

head (feet)	perforation diameter (inches)			
	1/8	3/16	7/32	1/4
1.0 <sup>a</sup>	0.18	0.42	0.56	0.74
2.0 <sup>b</sup>	0.26	0.59	0.80	1.04
5.0	0.41	0.94	1.26	1.65

<sup>a</sup> Use 1.0 foot for single-family homes.  
<sup>b</sup> Use 2.0 feet for anything else.

MANIFOLD LOCATED AT END OF PRESSURE DISTRIBUTION SYSTEM



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

Bob Burt (signature)

(signature)

2088 (license #)

(license #)

1-25-19 (date)

(date)



# PUMP SELECTION PROCEDURE

28-0-031702

## 1. Determine pump capacity:

### A. Gravity distribution

1. Minimum required discharge is 10 gpm
2. Maximum suggested discharge is 45 gpm. For other establishments at least 10% greater than the water supply rate, but no faster than the rate at which effluent will flow out of the distribution device.

### B. Pressure distribution

See pressure distribution work sheet

From A or B Selected pump capacity: 18 gpm

## 2. Determine pump head requirements:

A. Elevation difference between pump and point of discharge?  
7 feet

B. Special head requirement? (See Figure at right - Special Head Requirements)  
5 feet

### C. Calculate Friction loss

1. Select pipe diameter 2 in

2. Enter Figure E-9 with gpm (1A or B) and pipe diameter (C1).  
Read friction loss in feet per 100 feet from Figure E-9

Friction Loss = .73 ft/100ft of pipe

3. Determine total pipe length from pump discharge to soil treatment discharge point. Estimate by adding 25 percent to pipe length for fitting loss. Total pipe length times 1.25 = equivalent pipe length  
30 feet x 1.25 = 38 feet

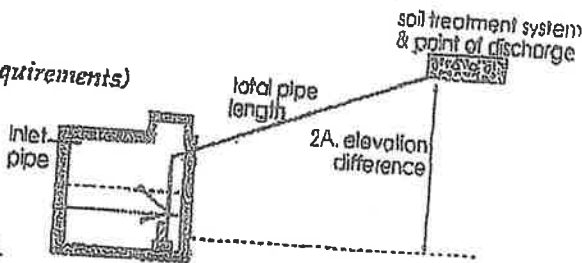
4. Calculate total friction loss by multiplying friction loss (C2) in ft/100 ft by the equivalent pipe length (C3) and divide by 100.  
= .73 ft/100ft x 38 + 100 = 3 ft

D. Total head required is the sum of elevation difference (A), special head requirements (B), and total friction loss (C4)  
7 ft + 5 ft + 3 ft =

Total head: 15.3 feet

## 3. Pump selection

A pump must be selected to deliver at least 18 gpm (1A or B) with at least 13 feet of total head (2D)



Special Head Requirements	
Gravity Distribution	0 ft
Pressure Distribution	5 ft

flow rate gpm	E-9: Friction Loss in Plastic Pipe Per 100 feet		
	nominal pipe diameter		
	1.5"	2"	3"
20	2.47	0.73	0.11
25	3.73	1.11	0.16
30	5.23	1.55	0.23
35	6.96	2.06	0.30
40	8.91	2.64	0.39
45	11.07	3.28	0.48
50	13.46	3.99	0.58
55		4.76	0.70
60		5.60	0.82
65		6.48	0.95
70		7.44	1.09

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

Bob Best (signature)

2088 (license #)

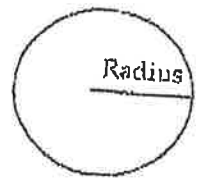
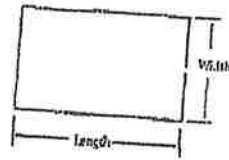
1-25-19 (date)



# DOSING CHAMBER SIZING

28-0-031701

- Determine area
  - Rectangle area =  $L \times W$   
 $\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$  square feet
  - Circle area =  $\pi (3.14) \times \text{radius in feet} \times \text{radius in feet}$   
 $3.14 \times \underline{\hspace{2cm}} \text{ ft} \times \underline{\hspace{2cm}} \text{ ft} = \underline{\hspace{2cm}}$  sqft
  - Get area from manufacturer  $\underline{\hspace{2cm}}$  sqft



- Calculate gallons per inch  
 There are 7.5 gallons per cubic foot of volume, therefore multiply the area (1A, B or C) times the conversion factor and divide by 12 inches per foot to calculate gallon per inch.  
 $\text{Area} \times 7.5 \div 12 = \underline{\hspace{2cm}}$  sqft  $\times 7.5 \div 12 \text{ in/ft} = \underline{12.69 \text{ mfg.}}$  gallon per inch

Legal Tank:  
500 gallons or  
100% the Daily flow  
or  
Alternating Pumps

- Calculate total tank volume
  - Depth from bottom of inlet pipe to tank bottom  $\underline{\hspace{2cm}}$  in
  - Total tank volume = depth from bottom of inlet pipe to tank bottom (3A)  $\times$  gal/in (2)  
 $= \underline{\hspace{2cm}}$  in  $\times \underline{\hspace{2cm}}$  gal/in =  $\underline{\hspace{2cm}}$  gal

- Calculate gallons to cover pump (with 2-3 inches of water covering pump)  
 (Pump and block height (inch) + 2 inch)  $\times$  gallon/inch  
 $(\underline{12} \text{ in} + 2 \text{ in}) \times \underline{12.69} \text{ gal/in} = \underline{178}$  gallon

A-1: Estimated Sewage Flows in Gallons per Day

number of bedrooms	Class I	Class II	Class III	Class IV
2	300	225	180	175
3	450	300	210	of the volume
4	600	375	256	in the
5	750	450	294	Class I
6	900	525	332	II, or III
7	1050	600	370	columns
8	1200	675	408	

- Calculate total pumpout volume
  - Select pump size for 4-5 doses per day. Gallon per dose = gpd (see figure A-1) / doses per day =  $\underline{300}$  gpd  $\div$   $\underline{4}$  doses/day =  $\underline{75}$  gallons
  - Calculate drainback
    - Determine total pipe length,  $\underline{36}$  feet
    - Determine liquid volume of pipe,  $\underline{17}$  gal per ft (see figure E-20)
    - Drainback quantity =  $\underline{30}$  ft (5B1)  $\times$   $\underline{17}$  gal per ft (5B2) =  $\underline{5}$  gal
  - Total pump out volume = dose volume (5A) + drainback (5B3)  
 $\underline{75}$  gal +  $\underline{5}$  gal =  $\underline{80}$  Total gallon

E-20: Volume of Liquid in Pipe

Pipe Diameter inches	Gallons per foot
1	0.045
1.25	0.078
1.5	0.11
2	0.17
2.5	0.25
3	0.38
4	0.66

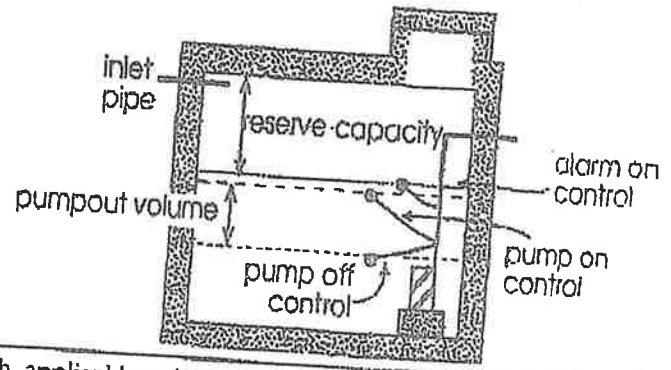
- Float separation distance (using total pumpout volume)  
 Total pumpout volume (5C)  $\div$  gal/inch (2)  
 $\underline{80}$  gal  $\div$   $\underline{12.69}$  gal/in =  $\underline{6}$  inch

- Calculate volume for alarm (typically 2 to 3 inches)  
 Alarm depth (inch)  $\times$  gallon/inch (2) =  $\underline{2}$  in  $\times$   $\underline{12.69}$  gal/in =  $\underline{25}$  gal

- Calculate total gallon = gallons over pump (4) + gallons pumpout (5C) + gallons alarm (7)  
 $\underline{178}$  gal +  $\underline{80}$  gal +  $\underline{25}$  gal =  $\underline{293}$  gallons

- Total Tank Depth = total gallon (8)  $\div$  gallon/inch (2)  
 $\underline{293}$  gal  $\div$   $\underline{12.69}$  gal/in =  $\underline{23}$  in

Recommended:  
 Calculate reserve capacity (75% the daily flow)  
 Daily flow  $\times .75 = \underline{300} \times .75 = \underline{225}$  gallons



I hereby certify that I have completed this work in accordance with applicable ordinances, rules and laws.  
Bob Pugh (signature) 2088 (license #) 1-25-19 (date)



### Maintenance Log

Activity	Date Accomplished											
<i>Check frequently:</i>												
* 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 _____)												
<i>Check annually:</i>												
* 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: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Mitigation/corrective action plan: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_





CLIENT: Larry

New owner

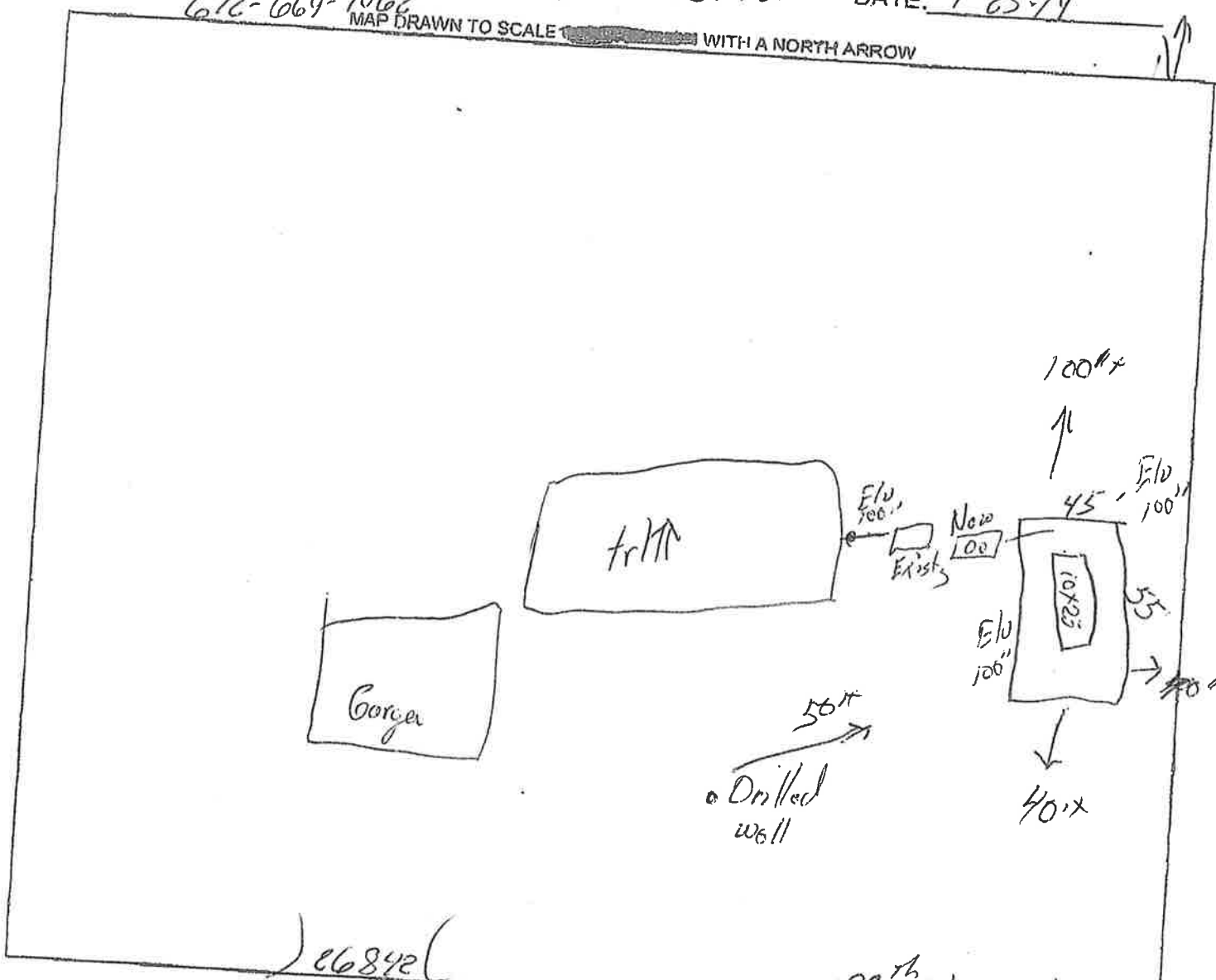
SKETCH SHEET

28-0-031761

DATE: 1-25-19

612-669-9062

MAP DRAWN TO SCALE WITH A NORTH ARROW



26842

180<sup>th</sup> str city Rd 26

**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
- ALL SOIL TREATMENT AREAS
- HORIZONTAL, AND VERTICAL REFERENCE
- POINT OF SOIL BORINGS
- LOT EASEMENTS
- DISTURBED/ COMPACTED AREAS
- SITE PROTECTION--LATHE AND RIBBON EVERY 15 FT
- ACCESS ROUTE FOR TANK MAINTENANCE
- REQUIRED SETBACKS
- STRUCTURES
- OHWL
- LOT IMPROVEMENTS
- ALL ISTS COMPONENTS
- DIRECTION OF SLOPE
- ALL LOT DIMENSIONS
- PROPERTY LINES

COMMENTS:

DESIGNER SIGNATURE Bob Barth  
LICENSE# 2088

**INDICATE ELEVATIONS**

- BENCHMARK 106"
- ELEVATION OF SEWER LINE @ HOUSE 88"
- ELEVATION @ TANK INLET 88"
- ELEVATION @ BOTTOM OF ROCK LAYER 136"
- ELEVATION @ BOTTOM OF BORING OR RESTRICTIVE LAYER TBD
- ELEVATION OF PUMP 73"
- ELEVATION OF DISTRIBUTION DEVICE 45"

DATE 1-25-19



28-0-031702

# Subsurface Sewage Treatment System Management Plan

Property Owner: \_\_\_\_\_ Phone: \_\_\_\_\_ Date: \_\_\_\_\_  
 Mailing Address: \_\_\_\_\_ City: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Site Address: 26842 180<sup>th</sup> St City: McGroh Zip: 56350

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.

System Designer: check every \_\_\_\_\_ months.  
 Local Government: check every \_\_\_\_\_ months.  
 State Requirement: check every 36 months.

My System needs to be checked every \_\_\_\_\_ months.

*(State requirements are based on MN Rules Chapter 7080.2450, Subp. 2 & 3)*

### 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 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

### Professional Management Tasks

- Check to make sure tank is not leaking
- Check and clean the in-tank effluent filter
- 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: Bob Bault Date: 1-25-19

See Reverse Side for Management Log



# AITKIN COUNTY ENVIRONMENTAL SERVICES

## APPLICATION for an OPERATING PERMIT FOR WASTEWATER TREATMENT AND DISPERSAL

PERMITTEE William Hennessy PARCEL NUMBER 28-0-031702

ADDRESS 28842 180<sup>th</sup> Str. McBrath

LEGAL DESCRIPTION SW of SW

TELEPHONE # 612-669-9062 GIS LOCATION \_\_\_\_\_

**A. DESCRIPTION OF WASTEWATER TREATMENT AND DISPERSAL SYSTEM:**  
(Attach ISTS site evaluation and design; estimated cost of system construction, operation, monitoring, service, component replacement, and management; anticipated system life, hydraulic and organic loading rates)

Flows : separation

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**B. MONITORING PLAN AND REPORTING FREQUENCY:**

PARAMETER	COMPLIANCE LIMIT	SAMPLE LOCATION	SAMPLE FREQUENCY	SAMPLE TYPE	REPORTING FREQUENCY
FLOW	300 gpd	event counter	monthly		Annually
5-DAY BOD					
TOTAL NITROGEN					
TOTAL PHOSPHORUS					
TSS					
FATS, OILS AND GREASE					
FECAL COLIFORM					
SEPARATION DISTANCE	3'	Drainfield			Annually

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\_\_\_\_\_ will perform the monitoring of this septic system.

**C. MAINTENANCE PLANS**

PARAMETER	LOCATION	FREQUENCY

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**D. MITIGATION PLAN:**

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I hereby certify with my signature as the designer, that all data for the operating permit application is true and correct to the best of my knowledge. I agree to indemnify and hold Aitkin County harmless from loses, damages, costs and charges that may be incurred by the County because of the information submitted with this application.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
License Number

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name (please print)

\_\_\_\_\_  
Address

\_\_\_\_\_  
Telephone #

**MAINTENANCE SERVICE, MONITORING AND INSPECTION  
CONTRACT  
FOR INDIVIDUAL SEWAGE TREATMENT SYSTEM**

It is hereby agreed this 31<sup>st</sup> day of January, 2019 by and between  
\_\_\_\_\_ (Inspector) and \_\_\_\_\_ (client)

(Client) Name & Address  
\_\_\_\_\_

Street Address \_\_\_\_\_

City, State, Zip \_\_\_\_\_

That in consideration of the payments provided herein, the Inspector shall provide services to perform Preventative Maintenance, Monitoring and Inspection of the Individual Sewage Treatment System (ISTS) located at the property described in the Aitkin County Operating Permit.

Each inspection includes an examination of the ISTS followed by a written report to the client. This inspection report shall contain recommendations for operation and maintenance for failure-preventative measures, if any are deemed appropriate by the inspector and a list of recommended corrective measures or replacement parts. The Inspector is authorized to submit a copy of the report to the Aitkin County Environmental Services Department.

This contract does not assume any responsibilities or obligations, which are normally the responsibilities of the Client, as related to parts or labor and does not extend to cover any costs that may be associated with any recommendations made under this contract.

The Inspector can only contract or subcontract for parts or labor after authorization. Billings for service calls shall be made on a case by case basis. This contract only covers maintenance, monitoring and inspection services per current Aitkin County Operating Permit and does not cover alarm calls of any kind.

The Inspector shall be provided access to the site and the system in order to perform the following services:

**SEPTIC TANK AND LIFT STATIONS INSPECTION**

(check the boxes needed to fill the requirements of the Operating Permit)

Check septic tank and compartments for solids buildup and general appearance. If necessary, have tanks pumped (cost of pumping is the responsibility of the client).

Check effluent filter for buildup and clean, if applicable.

Check pumping system, including control panel and floats.

Record and date the readings of the elapsed time meter and cycle counter(s), if applicable.

Check dosing settings (in the control panel, if applicable).

Other: \_\_\_\_\_

\*\*If the septic tank or lift stations need pumping to be in compliance with the operating permit the cost of the pumping is the responsibility of the Client.

### TREATMENT DEVICE

Inspect pretreatment unit (aerobic tank, sand filter, etc.) per manufacturer's recommendations, if applicable.

Inspect and clean any parts per manufacturer's recommendations.

Inspect and clean laterals, if applicable.

Inspect the appearance of the wastewater inside the unit for color, turbidity and examination of odors.

Sample effluent per Operating Permit monitoring requirements.

**(Cost of sampling and analysis is the responsibility of the Client)**

Other: \_\_\_\_\_

### DISPERSAL FIELD

Inspect for visible signs of failure (surface discharge, soggy ground, wet spots, settling, etc.)

If liquid level monitors are installed, levels will be observed and recorded.

Flush filters and clean cartridges, if applicable.

Check field control unit solenoid operations or manual control, if applicable.

Other: \_\_\_\_\_



In no event shall the Inspector be responsible for special or consequential damages, including but not limited to, loss of time, injury to personal property or any other consequential damages or incidental or economic loss due to equipment failure or for any other reason. This contract does not assume any responsibilities or obligations, which are normally, the responsibility of the Client or as, related to parts or labor and does not extend to cover any costs that may be associated with any recommendations made under this contract.

This contract shall be effective: Beginning at End of completion of system  
and Ending 1 yr later

**Cost for Maintenance Service, Monitoring and Inspection Contract is:**

\$ \_\_\_\_\_ /yr. For \_\_\_\_\_ years totaling \$ \_\_\_\_\_

The Inspector agrees to provide inspection, monitoring and routine maintenance service only under this contract. The Client remedies for breach of this contract shall be limited to refund of any of the amounts paid in advance for service. This contract may be renewed 30 days from the ending date.

Payment for all services shall be paid \_\_\_\_\_.

**Client:**

**Inspector:**

Sign: \_\_\_\_\_

Sign: Bob Bartol

Print: \_\_\_\_\_

Print: Bob Bartol

Date: \_\_\_\_\_

Date: 1-27-19

