Becker County Planning & Zoning
915 Lake Ave
Detroit Lakes, MN 56501
(218) 846-7314
www.co.becker.mn.us

Certificate of Compliance
Inspection Report - Permit #: SS2019-55

Owner & Property Information

Owner Name:	CLAY STEPHENS	**Site Address:**	13023 Co Hwy31 Frazee MN 56544
Mailing Address:	CLAY STEPHENS 13039 CO HWY 31 FRAZEE MN 56544	**Township - Sec/Twp/Rng:**	SILVER LEAF - 17/138/039
Parcel #:	290086000	**Legal Description:**	17-138-039 PT SW1/4 OF SW1/4: COMM NW COR TH SLY 939.22' AL W LN, CONT SLY 66.02', TH ELY 1295' TO POB; TH WLY 1295' TO W LN, NLY 66.02', ELY 647.42', NLY 195', ELY 430', NLY 60', ELY 215', SLY 321' TO POB
Secondary Parcel #:			
		Designer:	Scott's Septic Services LLC, L3947 (Scott Ellingson)
		Installer:	Keith E Ketter, C5441 (Keith E Ketter)

Inspector Verified Specifications

Insp- Effluent Screen Installed:	No	**Insp- Tank Nbr/Size:**	1/2250 combo
Insp- Alarm Required:	Yes	**Insp- Drainfield Type:**	Mound
Insp- Lift Pump in System:	Yes	**Insp- Drainfield Size:**	10' X 52' rockbed, 26' X 52' SAA total 1352 square ft
Insp- Number of Bedrooms:	3	**Insp- Soil Verification:**	#1:attached #2:N/A #3:N/A

Inspector Verified Setbacks

Insp- Tank Dist to Road	200+	**Insp- Drainfield Dist to Road**	200+
Insp- Tank Dist to Nearest Prop Line	50+	**Insp- Drainfield Dist to Nearest Prop Line**	50+ per installer
Insp- Tank Dist to Nearest Structure	60	**Insp- Drainfield Dist to Nearest Structure**	100
Insp- Tank Dist to Well	150	**Insp- Drainfield Dist to Well**	165
Insp- Tank Dist to OHW		**Insp- Drainfield Dist to OHW**	
Insp- Tank Dist to Pond/Wetland		**Insp- Drainfield Dist to Pond/Wetland**	
Insp- Tank Dist to Pressure Line		**Insp- Drainfield Dist to Pressure Line**	

Certificate of Compliance

(Yes) Certificate is hereby granted based upon the application, addendum from, plans, specifications and all other supporting data. With proper maintenance, this system can be expected to function satisfactory, however this is not a guarantee.

Certification Date: 4/28/2020

Zoning Office Signature:

Kyle Vareberg - ISTS Inspector

* Certificate of Compliance is not valid unless signed by a Registered Qualified Employee *

Field Review Form   Permit # SS2019-55

Property and Owner

Owner: **CLAY STEPHENS**	Parcel Number: **290086000**
Site Address: **13023 Co Hwy31 Frazee MN 56544**	Secondary Parcel:

Home Information

Does the structure contain any of the following elements?	Designer submitted	Inspector verified
	Garbage disposal: No Dishwasher: No Grinder pump: No Lift pump in bsmt: No	Garbage disposal? Y N Dishwasher? Y N Grinder pump? Y N Lift pump in basement? Y N
Number of bedrooms: **0**	Review - Number of bedrooms: 3 bed dwelling
Effluent screen	Effluent screen installed? Y (N) . Mfr:
Alarm: **Yes** Type: **Manual Float**	Review - Alarm? (Y) N Type & Mfr: PS Patrol
Lift pump in system: **No**	Review - Lift pump in system? Y N Mfr: BN15/

Component Information

Tank size: **1500**	Review - Tank nbr:	size: 2250 Mfr: Whippler
Drainfield type:	Review - Drainfield type: Type III mound 3' sand
Drainfield size: Full size - Reduced/warr. size -	Review - Drainfield status: none / installed / next spring Review - Drainfield size: 10' x 53' Rock bed
Absorption area size:	Review - Absorption area size: 26' x 53' SAA
Chamber type/num: Trench sqft/chamber -	Review - Chamber type: Num: Review - Trench sqft/chamber:
Drainfield rock depth:	Review - Rock depth:

Soil Verification

Vertical separation verified	Boring #1: attached Boring #2: Boring #3:

Setback Verification

House - mound

Distance to...	Designer submitted		Inspector verified	
	Tank	Drainfield	Tank	Drainfield
Road	100+	n/a	200+	200+
Nearest prop line	25	n/a	50+	50+
Nearest structure	10	n/s	60	100
Well	50+		150	165
OHW				
Pond/Wetland				
Pressure line	10+	n/a		

Date System Installed: 5/28/2020 Installer: Keith Ketter   Inspector: Denise Gutrud

N ↑

PARCEL # 290086000
YEAR 2019
SCALE 1" = 40'

SKETCH OF PROPERTY

Shed

house
13039
Co Hwy 31

⊗ Deep Well

Lot Line

← 100's ←
RROW

MANUAL
First

Shop

Shared dr.

⊗ Section Well

To Co Hwy 31
←
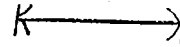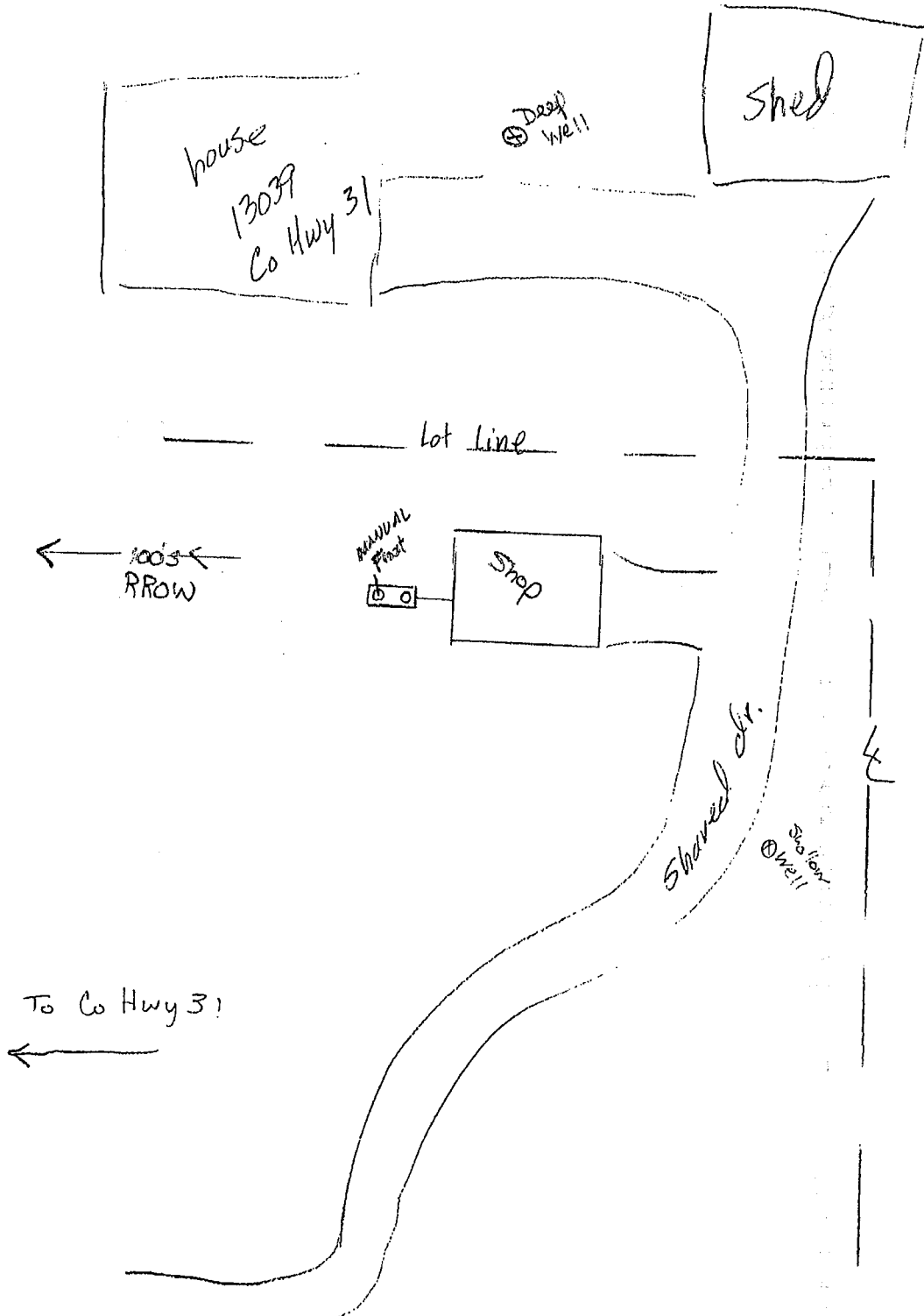
PARCEL	290086000
APP	SEPTIC
YEAR	2019
SCANNED	
LAKE	-

2019 Onsite Septic System Application
Becker County Planning & Zoning
915 Lake Ave, Detroit Lakes, MN 56501
Phone (218)-846-7314; Fax (218)-846-7266

Update

1. PROPERTY DATA (as it appears on the tax statement or deed)
Parcel Number of property where the system will be installed: __290086000__
If septic system is on more than one parcel, what is the number of the secondary parcel? __-__

2. OWNER INFORMATION (as it appears on the tax statement or deed)
Owner Name: __Jordan + Jane Stephens__
Owner Mailing Address: __13023 Co Hwy 31__ City, State, Zip: __Frazee, MN 56544__
Owner Phone Number: __-__ Owner Email Address: __-__
Property Site Address: __13023 Co Hwy 31__ City, State, Zip: __Frazee, MN 56544__
Township Name: __Silver Leaf__ Section/Township/Range: __17 138 39__
LegalDescription: __PT SW ¼ of SW ¼ ...__

3. DESIGNER/INSTALLER INFORMATION
Designer and License#: __Scott Ellingson 3947__ Installer and License#: __Keith Ketter__
Designer Email Address: __scottsseptic@outlook.com__ Installer Email Address: __-__
Address: __201 Meadow Cir Ashby MN 56309__ Address: __37718 St Hwy 87__
Company: __Scott's Septic Services, LLC__ Company: __Ketter's Septic Service__
Phone Number: __218-205-1667__ Phone Number: __218-841-2031__

4. SYSTEM DESIGN INFORMATION
System Status
- ☒ Vacant Lot-No existing system-new structure
- ☐ Replacement – structure removed and being rebuilt
- ☐ Failing –Replacement- cesspool/seepage pit or other
- ☐ Enlargement of system-Undersized
- ☐ Repairs Needed to existing
- ☐ Additional system on property

What will new system serve? Check one.
- ☒ Dwelling Fee: $150.00
- ☐ Resort/Commercial Fee: $300.00
- ☐ Commercial (Non-resort) Fee: $300.00
- ☐ Other – Explain: _____

Date of Site Evaluation: __8-23-19__

Design Flow __600__ Gallons Per Day
Number of Bedrooms __4__
Garbage Disposal: ___Yes ☒ No
Dishwasher: ☒ Yes ___No
Lift station in Structure ___Yes ☒ No
Grinder Pump in Structure: ___Yes ☒ No

Well Depth:
___Deep Well
☒ Shallow Well
___Well not Installed-To be Drilled
Depth of Other Wells within 100 ft. of System: (if applicable):
___Deep Well
___Shallow Well
___Well not Installed-To be Drilled

☒ Original Soil ___Compacted Soil

Type of Soil Observation:
___Pit ___Probe ☒ Boring

Depth to Restricting Layer (inches or feet) __8"__
Maximum Depth of System __3' SAND Lift__

Does the Septic Design Include a Drain Field? ☒ Yes ___ No
New or Existing Tank? ☒ New ___ Existing

Type of All Tank(s) to be installed :
- ___gal Single Compartment Septic Tank
- ☒ gal Compartmented Tank
- ___Pit Privy
- ___gal Holding Tank
- ___Existing Tank
- ___Existing Tank w/ New Additional Tank
- ___Existing tank w/new Lift Station
- ___Holding Tank with Privy

Total Number of Tanks to be Installed: __1__ *This number will be reported to the MPCA at the end of the year.
Size of Tank(s) __2250-3__
Is There an Alarm? ☒ Yes ___ No
Type of Alarm: __electronic__
Is there an effluent screen? ___Yes ☒ No

Is There a Lift Pump? ☒ Yes ___ No
If Yes, What is the Size of the Lift Pump? __29 gpm / 18 tfh__
What is the Size of the Lift Line? __2"__

Type of Drainfield		Full Size of Drainfield	Reduced/Warrantied Size	Size of Absorption Area $26' \times 52'$
_____	Chamber Trench	_____ sq. ft.	_____ sq. ft.	Depth of Rock __9"↓ pipe__
_____	Rock Trench	_____ sq. ft.	_____ sq. ft.	Chamber Type and
_____	Graveless	_____ sq. ft.	_____ sq. ft.	Number __—__
✓	Mound Type II	1352 sq. ft.		Total Sq. Ft. Per Chamber
_____	Pressure Bed	_____ sq. ft.		
_____	Seepage Bed	_____ sq. ft.		__—__
_____	At-Grade	_____ sq. ft.		
_____	Alternative/Performance	_____ sq. ft.		

Is System Pressurized? __✓__ Yes _____ No

*If System is pressurized, you must submit the applicable forms as listed below.
- Pressure Distribution System
- At Grade Design Worksheet
- Mound Design Worksheet- Slope 1% or Less
- Mound Design Worksheet- Slope 1% or More

What is the Perc Rate? __46__   What is the Soil Sizing Factor? __.45__
*If SSF other than .83, you must attach the Perc Test Data

_____ 0.00	✓ 0.45	_____ 0.60	_____ 0.83	_____ 1.67
_____ 0.24	_____ 0.50	_____ 0.78	_____ 1.27	

Soil Borings (three are required) and ALL FIELDS ARE MANDATORY

#1

Depth	Texture	Color	Structure Shape	Structure Grade	Structure Constancy
0-8	LS	10yr 3/2			
8"+	SCL	0yr 5/2			
		10yr 4/3	10yr 5/6	7.5yr 4/6	

#3

Depth	Texture	Color	Structure Shape	Structure Grade	Structure Constancy
0-8	LS	10yr 3/2			
8"—	SCL	10yr 5/2			
		10yr 4/3	10yr 5/6	7.5 4/6	

#2

Depth	Texture	Color	Structure Shape	Structure Grade	Structure Constancy
0-8	LS	10yr 3/2			
8"+	SCL	10yr 5/2			
		10yr 4/3	10yr 5/6	7.5yr 4/6	

Depth	Texture	Color	Structure Shape	Structure Grade	Structure Constancy

Options for Texture:
Loamy Sand
Loamy Coarse Sand
Fine Sand
Very Fine Sand
Loamy Fine Sand
Sandy Loam
Coarse Sandy Loam
Fine Sandy Loam
Very Fine Sandy Loam
Loam
Silt Loam
Silt
Clay Loam
Sandy Clay Loam
Silty Clay Loam
Clay
Sandy Clay
Silty Clay
Top Soil
Redox/Limiting Layer

Options for Structure Shape
Granular
Platy
Blocky
Prismatic
Strong
Single Grain

Options for Structure Grade:
Massive
Weak
Moderate
Loose

Options for Soil Structure Consistency:
Loose
Friable
Firm
Extremely Firm
Rigid

Measurements & Setbacks: *For a list of current required setbacks, see attached page.*

Lake/River/Wetlands Info (If Applicable)
Is the property within 1000 Feet of a lake or within 300 feet of a river? _____ Yes __✓__ No
Lake Name __—__   Drainfield Distance from the OHW of Lake or River ___—___
Township _Silver Leaf_   Does the property contain or is it within 50 feet of a pond or wetland?
Classification __—__   _____ Yes __✓__ No
River Name __—__   Tank Distance from Closest Pond/Wetland __—__
Tank Distance from OHW of Lake or   Drainfield Distance from the Closest Pond/Wetland __—__
River __—__

Road Type:
____ State
✓ County
____ Public/Township
____ Private Easement
____ 4 Lane Highway

I have found and marked the road right-of-way: _____ Yes __✓__ No
Please note: Measurement is taken from the property pins (measure from pins into property).

Setback Verification

	TANK/Lift	DRAINFIELD
Distance to Road	100+	100+
Distance to Property Line, other than road (side or rear):	100+	100+
Distance to Buildings including garages attached to dwellings	30	65
Distance to Pressure Line	10+	10+
Distance to Wetland/Protected Water	—	—
Distance to Well	100+	100+

Depth of Well: __✓__ Shallow _____ Deep

5. **REQUIRED DOCUMENTS:** *If any of the following is required, please submit along with application:*
   - Property Line Agreement Form
   - Township Road Right of Way Encroachment Form
   - County Road Right of Way
   - U of MN worksheets are required for mounds, pressure beds, seepage beds, at grades or Type IV or type V systems.

Are the required worksheets attached?
   __✓__ Yes _____ No

6. **DESIGNER'S CERTIFIED STATEMENT**

I, _____Scott Ellingson_____ certify that I have completed the preceding design work in accordance with all
     (Print Name of Designer)
applicable requirements (including, but not limited to Minnesota Chapter 7080 and the Becker County Individual Sewage Treatment System Ordinance).

_____Scott Ellingson_____   __8-24-19__
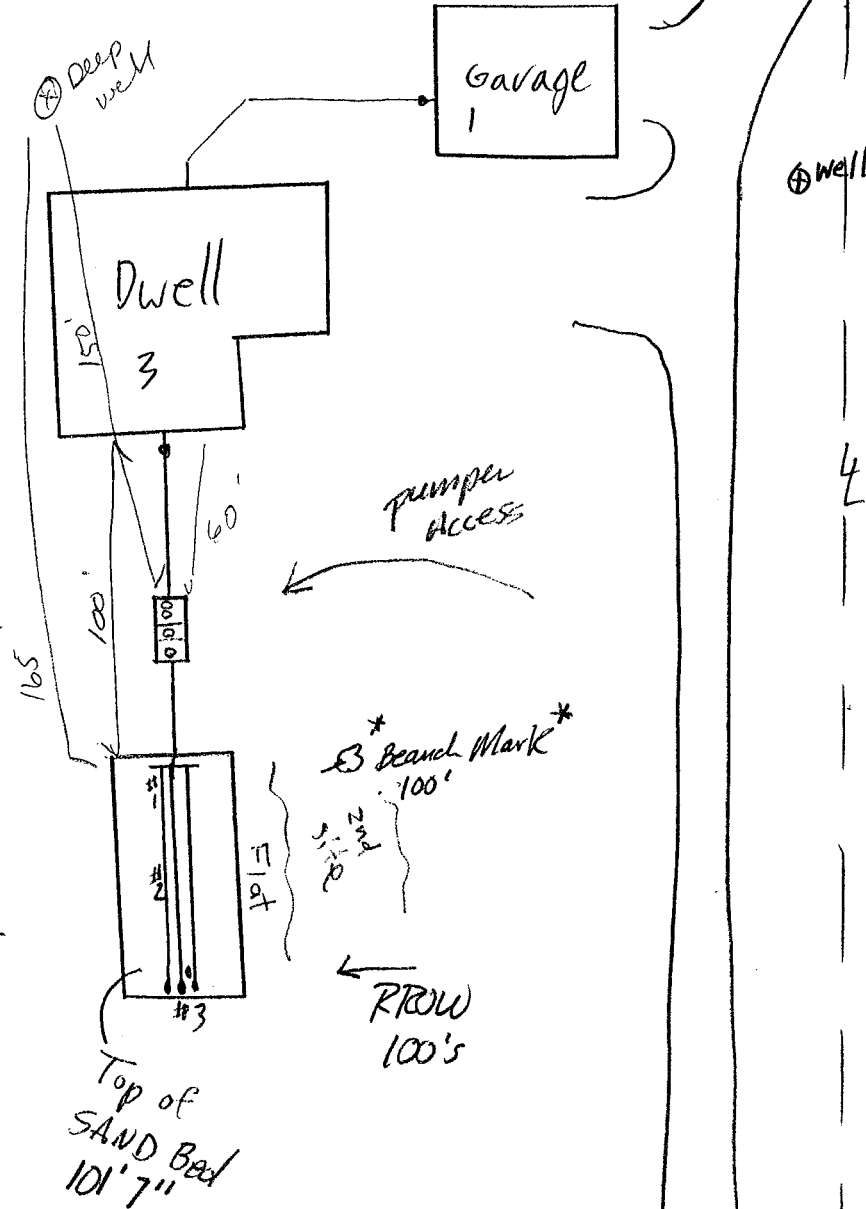Signature of Designer   Date

Scott's Septic Services, LLC

Scott Ellingson
201 Meadow Circle, Ashby, MN 56309
218-205-1667

PARCEL # 290086000
YEAR 2019
SCALE 1"= 40'

N

4 beds
No Garbage/pump
2250-3 Septic/Lift
Type III Mound
   10'x52' Rock bed
   26'x52' SAA
      1352▫
✱ 3' SAND Lift ✱
   2" Supply Line
2" 1½ Laterals
   3' Holes Apart
¼" 3½2" Holes
   29 gpm
   18 tfh

Inches per close   6.0"
Alarm Depth   26"
pump on   24"
pump off   18"

Garage
1

④ Deep Well

Dwell
3

⑥ Well

pumper access

4

105'
100'
60'
25'

Flat

#1
#2
#3

✱ £3 Bench Mark ✱
   100'
   2nd
   110

RROW
100's

Top of
SAND Bed
101' 7"

4

4

5/28/2020
① Tank 2250-3 whippler

BN152   pump
PS patrol alarm

3' sand -
10' X 52' Rock bed   26' X 52' SAA

CO HWY 31

Cert by Denise Gubrud

University of Minnesota
ONSITE
SEWAGE
TREATMENT
PROGRAM

Design Summary Page

mn MINNESOTA POLLUTION
CONTROL AGENCY

1. PROJECT INFORMATION

v 04.02.2019

Property Owner/Client:	Jordan & Jane Stephens
Site Address:	XXXXX CO Hwy 31
Email Address:	

Project ID:	
Date:	08/24/19
Phone:	

2. DESIGN FLOW & WASTE STRENGTH   *Attach data / estimate basis for Other Establishments*

Design Flow: **600** GPD   Anticipated Waste Type: **Residential**

BOD: **170** mg/L   TSS: **60** mg/L   Oil & Grease: **25** mg/L

Treatment Level: **C**   *Select Treatment Level C for residential septic tank effluent*

3. HOLDING TANK SIZING

Minimum Capacity: Residential =400 gal/bedroom, Other Establishment = Design Flow x 5.0, Minimum size 1000 gallons

Code Minimum **Holding Tank** Capacity: [ ] Gallons   in [ ] Tanks or Compartments

Recommended **Holding Tank** Capacity: [ ] Gallons   in [ ] Tanks or Compartments

Type of High Level Alarm: [ ] (Set @ 75% tank capacity)

Comments: [ ]

4. SEPTIC TANK SIZING

A. Residential dwellings:

Number of Bedrooms (Residential): **4**

Code Minimum **Septic Tank** Capacity: **1500** Gallons   in **1** Tanks or Compartments

Recommended **Septic Tank** Capacity: **1500** Gallons   in **2** Tanks or Compartments

Effluent Screen & Alarm (Y/N): **No**   Model/Type: [ ]

B. Other Establishments:

Waste received by: [ ]   [ ] GPD x [ ] Days Hyd. Retention Time

Code Minimum **Septic Tank** Capacity: [ ] Gallons   In [ ] Tanks or Compartments

Recommended **Septic Tank** Capacity: [ ] Gallons   In [ ] Tanks or Compartments

Effluent Screen & Alarm (Y/N): [ ]   Model/Type: [ ]

5. PUMP TANK SIZING

Pump Tank 1 Capacity (Minimum):	500	Gal
Pump Tank 1 Capacity (Recommended):	750	Gal
Pump 1	29.0 GPM Total Head	18.0 ft
Supply Pipe Dia. 2.00 in	Dose Vol:	100.0 gal

Pump Tank 2 Capacity (Minimum):		Gal
Pump Tank 2 Capacity (Recommended):		Gal
Pump 2	GPM Total Head	ft
Supply Pipe Dia.	Dose Vol:	Gal

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SEWAGE
TREATMENT
PROGRAM

Design Summary Page

MINNESOTA POLLUTION CONTROL AGENCY

6. SYSTEM AND DISTRIBUTION TYPE — Project ID:

Soil Treatment Type:	Mound	Distribution Type:	Pressure Distribution-Level
Elevation Benchmark:	100 ft	Benchmark Location:	Nail IN Tree
MPCA System Type:	Type III	Distribution Media:	Rock
Type III/IV Details:			

7. SITE EVALUATION SUMMARY:

Describe Limiting Condition: Redoximorphic Features/Saturated Soils

Layers with >35% Rock Fragments? (yes/no) No   If yes, describe below: % rock and layer thickness, amount of soil credit and any additional information for addressing the rock fragments in this design.

Note:

	Depth	Depth	Elevation	
Limiting Condition:	8 inches	0.7 ft		ft
Minimum Req'd Separation:	36 inches	3.0 ft	*Elevation*	*Critical for system compliance*
Code Max System Depth:	Mound inches	-2.3 ft		ft

This is the maximimum depth to the bottom of the distribution media. Negative Depth (ft) means it must be a mound.

Soil Texture:	Sandy Clay Loam		
Soil Hyd. Loading Rate:	0.45 GPD/ft^2	Percolation Rate:	MPI
Contour Loading Rate:	10	Note:	
Measured Land Slope:	0.0 %	Note:	
Comments:			

8. SOIL TREATMENT AREA DESIGN SUMMARY

Trench:

Dispersal Area	ft^2	Sidewall Depth	in	Trench Width	ft
Total Lineal Feet	ft	No. of Trenches		Code Max. Trench Depth	in
Contour Loading Rate	ft	Min. Length	ft	Designed Trench Depth	in

Bed:

Dispersal Area	ft^2	Sidewall Depth	in	Maximum Bed Depth	in
Bed Width	ft	Bed Length	ft	Designed Bed Depth	in

Mound:

Dispersal Area	520.0 ft^2	Bed Length	52.0 ft	Bed Width	10.0 ft
Absorption Width	26.0 ft	Clean Sand Lift	3.0 ft	Berm Width (0-1%)	22.2 ft
Upslope Berm Width	22.2 ft	Downslope Berm	22.2 ft	Endslope Berm Width	22.2 ft
Total System Length	96.4 ft	System Width	54.4 ft	Contour Loading Rate	12.0 gal/ft

Project ID:

Design Summary Page

At-Grade:

Bed Width	____ ft	Bed Length	____ ft	Finished Height	____ ft
Contour Loading Rate	____ gal/ft	Upslope Berm	____ ft	Downslope Berm	____ ft
Endslope Berm	____ ft	System Length	____ ft	System Width	____ ft

Level & Equal Pressure Distribution

No. of Laterals	3	Perforation Spacing	3 ft	Perforation Diameter	7/32 in
Lateral Diameter	1.50 in	Min Dose Volume	66 gal	Max Dose Volume	150 gal

Non-Level and Unequal Pressure Distribution

	Elevation (ft)	Pipe Size (in)	Pipe Volume (gal/ft)	Pipe Length (ft)	Perf Size (in)	Spacing (ft)	Spacing (in)	
Lateral 1								Minimum Dose Volume
Lateral 2								
Lateral 3								____ gal
Lateral 4								
Lateral 5								Maximum Dose Volume
Lateral 6								____ gal

9. Additional Info for At-Risk, HSW or Type IV Design

A. Starting BOD Concentration = Design Flow X Starting BOD (mg/L) X 8.35 ÷ 1,000,000

____ gpd X ____ mg/L X 8.35 ÷ 1,000,000 = ____ lbs. BOD/day

B. Target BOD Concentration = Design Flow X Target BOD (mg/L) X 8.35 ÷ 1,000,000

____ gpd X ____ mg/L X 8.35 ÷ 1,000,000 = ____ lbs. BOD/day

Lbs. BOD To Be Removed: ____

PreTreatment Technology: ____ *Must Meet or Exceed Target

Disinfection Technology: ____ *Required for Levels A & B

C. Organic Loading to Soil Treatment Area:

____ mg/L X ____ gpd x 8.35 ÷ 1,000,000 ÷ ____ ft² = ____ lbs./day/ft²

10. Comments/Special Design Considerations:

Installing a Type III Mound

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

Scott Ellingson	*Scott Ellingson*	3947	8/25/2019
(Designer)	(Signature)	(License #)	(Date)

Mound Design Worksheet
<1% Slope

University of Minnesota ONSITE SEWAGE TREATMENT PROGRAM

MINNESOTA POLLUTION CONTROL AGENCY

1. SYSTEM SIZING: Project ID: v 04.02.2019

A. Design Flow :	600	GPD
B. Soil Loading Rate:	0.45	GPD/ft^2
C. Depth to Limiting Condition:	0.7	ft
D. Percent Land Slope:	0.0	%
E. Design Media Loading Rate:	1.2	GPD/ft^2
F. Mound Absorption Ratio:	2.60	

TABLE IXa
LOADING RATES FOR DETERMINING BOTTOM ABSORPTION AREA AND ABSORPTION RATIOS USING PERCOLATION TESTS

Percolation Rate (MPI)	Treatment Level C		Treatment Level A, A-2, B,	
	Absorption Area Loading Rate (gpd/ft²)	Mound Absorption Ratio	Absorption Area Loading Rate (gpd/ft²)	Mound Absorption Ratio
<0.1	-	1	-	1
0.1 to 5	1.2	1	1.6	1
0.1 to 5 (fine sand and loamy fine sand)	0.6	2	1	1.6
6 to 15	0.78	1.6	1	1.6
16 to 30	0.6	2	0.78	2
31 to 45	0.5	2.4	0.78	2
46 to 60	0.45	2.6	0.6	2.6
61 to 120	-	5	0.3	5.3
>120	-	-	-	-

Table I
MOUND CONTOUR LOADING RATES:

Measured Perc Rate	← OR →	Texture - derived mound absorption ratio		Contour Loading Rate:
≤ 60mpi	← OR →	1.0, 1.3, 2.0, 2.4, 2.6	→	≤12
61-120 mpi	OR	5.0	→	≤12
≥ 120 mpi*	→	>5.0*	→	≤6*

*Systems with these values are not Type I systems. Contour Loading Rate (linear loading rate) is a recommended value.

2. DISPERSAL MEDIA SIZING

A. Calculate Dispersal Bed Area: Design Flow (1.A) ÷ Design Media Loading Rate (1.E) = ft^2

600	GPD ÷	1.2	GPD/ft^2 =	500	ft^2

If a larger dispersal media area is desired, enter size: | 520 | ft^2

B. Enter Dispersal Bed Width: | 10 | ft   *Can not exceed 10 feet.*

C. Calculate Contour Loading Rate: Bed Width (2.B) X Design Media Loading Rate (1.E)

10	ft^2 X	1.2	GPD/ft^2 =	12.0	gal/ft *Can not exceed Table 1*

D. Calculate Minimum Dispersal Bed Length: Dispersal Bed Area (2.A) ÷ Bed Width (2.B) = Bed Length

520	ft^2 ÷	10	ft =	52.0	ft

3. ABSORPTION AREA SIZING

A. Calculate Absorption Width: Bed Width (2.B) X Mound Absorption Ratio (1.F) = Absorption Width

10.0	ft X	2.6	=	26.0	ft

B. For slopes from 0 to 1%, the Absorption Width is measured from the bed equally in both directions.

Absorption Width Beyond the Bed: Absorption Width (3.A) - Bed Width (2.B) ÷ 2 = Width beyond Bed

(26.0	ft -	10.0	ft) ÷	2	= 8.0	ft

4. DISTRIBUTION MEDIA: ROCK   Project ID:

A. Rock Depth Below Distribution Pipe

9	in	0.75	ft

5. DISTRIBUTION MEDIA: REGISTERED TREATMENT PRODUCTS: CHAMBERS AND EZFLOW

A. Enter Dispersal Media: [   ]

B. Enter the Component: Length: [   ] ft   Width: [   ] ft   Depth: [   ] ft

C. Number of Components per Row = Bed Length divided by Component Length (Round up)

[   ] ft ÷ [   ] ft = [   ] components/row

Check registered product information for specific application and design

D. Actual Bed Length = Number of Components/row X Component Length:

[   ] components X [   ] ft = [   ]

E. Number of Rows = Bed Width divided by Component Width

[   ] ft ÷ [   ] ft = [   ] rows *Adjust width so this is a whole number.*

F. Total Number of Components = Number of Components per Row X Number of Rows

[   ] X [   ] = [   ] components

6. MOUND SIZING

A. Calculate Clean Sand Lift: 3 feet minus Depth to Limiting Condition = Clean Sand Lift (1 ft minimum)

3.0 ft - [0.7] ft = [2.3] ft   Design Sand Lift (optional): [3.0] ft

B. Upslope Mound Height = Clean Sand Lift + Depth of Media + Depth of Cover (1 ft)

[3.0] ft + [1.05] ft + [1.50] ft = [5.6] ft

C. Berm Width = Upslope Mound Height (4.B) X 4 (4 is recommended, but could be 3-12)

[5.6] ft X [4.0] ft = [22.2] ft

D. Total Landscape Width = Berm Width + Dispersal Bed Width + Berm Width

[22.2] ft + [10.0] ft + [22.2] ft = [54.4] ft

E. Additional Berm Width necessary for absorption - Absorption Width - Total Landscape Width

[26.0] ft - [54.4] ft = [0] ft   if number is negative (<0), value is **ZERO**

F. Final Berm Width = Additional Berm Width + Berm Width

[0] ft + [22.2] ft = [22.2] ft

G. Total Mound Width = Final Berm Width + Dispersal Bed Width + Final Berm Width

[22.2] ft + [10.0] ft + [22.2] ft = [54.4] ft

H. Total Mound Length = Final Berm Width + Dispersal Bed Length + Final Berm Width

[22.2] ft + [52.0] ft + [22.2] ft = [96.4] ft

I. Setbacks from the Bed: Absorption Width - Dispersal Bed Width divided by 2

([26.0] ft - [10.0]) / 2 = [8.0] ft

Total Mound Width

54.4

22.2   Upslope

Endslope

22.2

Dispersal Bed

52.0   X   10

Endslope

22.2

22.2   Downslope

96.4

Total Mound Length

4" inspection pipe

18" cover on top

22.2

Upslope berm

22.2

Downslope berm

3.0   Clean sand lift (6.A)

0.7   Depth to Limiting   Limiting Condition

26.0

Absorption Width
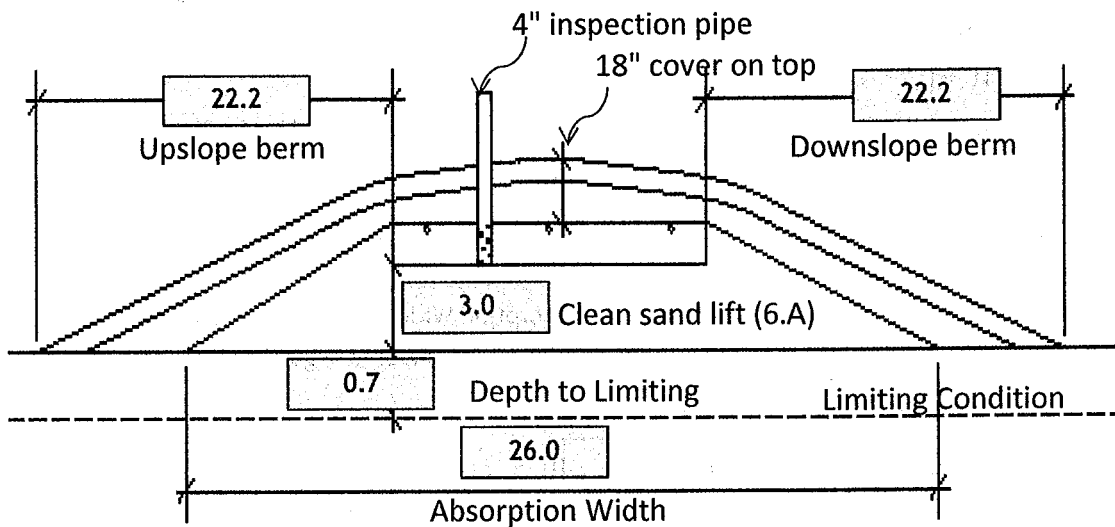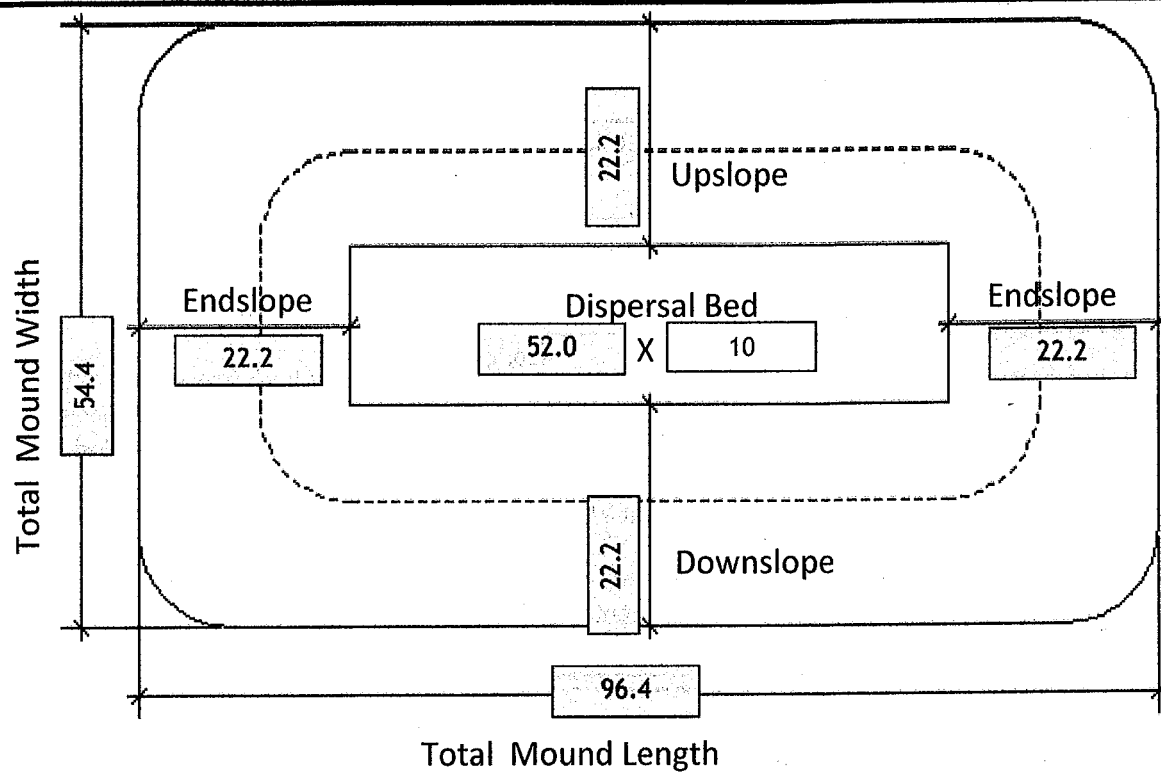
Comments:

Mound Materials Worksheet

MINNESOTA POLLUTION CONTROL AGENCY

Project ID:		v 04.02.2019

A. Rock *Volume*: (Rock Below Pipe + Rock to cover pipe (*pipe outside dia + ~2 inch*)) X *Bed Length* X *Bed Width* = *Volume*

(**9** in + **3.5**) ÷ 12 **52.0** ft X **10.0** ft = **541.7** ft^3

Divide ft^3 by 27 ft^3/yd^3 to calculate cubic yards: **541.7** ft^3 ÷ 27 = **20.1** yd^3

Add 30% for constructability: **20.1** yd^3 X 1.3 = **26.1** yd^3

B. Calculate *Clean Sand Volume*:

Volume Under Rock bed: *Average Sand Depth* x *Media Width* x *Media Length* = cubic feet

3.0 ft X **10.0** ft X **52.0** ft = **1560.0** ft^3

For a Mound on a slope from 0-1%

Volume from Length = ((Upslope Mound Height - 1) X Absorption Width Beyond Bed X Media Bed Length)

5.55 ft - 1) X **8.00** X **52** ft = **1892.80**

Volume from Width = ((Upslope Mound Height - 1) X Absorption Width Beyond Bed X Media Bed Width)

5.55 ft - 1) X **8.00** X **10** ft = **364.00**

Total Clean Sand Volume: Volume from Length + Volume from Width + Volume Under Media

1892.8 ft^3 + **364.0** ft^3 + **1560** ft^3 = **3816.8** ft^3

For a Mound on a slope greater than 1%

Upslope Volume: ((*Upslope Mound Height - 1*) x 3 x *Bed Length*) ÷ 2 = cubic feet

((____ ft - 1) X 3.0 ft X ____) ÷ 2 = ____ ft^3

Downslope Volume: ((*Downslope Height - 1*) x Downslope Absorption Width x *Media Length*) ÷ 2 = cubic feet

((____ ft - 1) X ____ ft X ____) ÷ 2 = ____ ft^3

Endslope Volume: (*Downslope Mound Height - 1*) x 3 x *Media Width* = cubic feet

(____ ft - 1) X 3.0 ft X ____ ft = ____ ft^3

Total Clean Sand Volume: Upslope Volume + Downslope Volume + Endslope Volume + Volume Under Media

____ ft^3 + ____ ft^3 + ____ ft^3 + ____ ft^3 = ____ ft^3

Divide ft^3 by 27 ft^3/yd^3 to calculate cubic yards: **3816.8** ft^3 ÷ 27 = **141.4** yd^3

Add 30% for constructability: **141.4** yd^3 X 1.3 = **183.8** yd^3

C. Calculate *Sandy Berm Volume*:

Total Berm Volume (approx): ((Avg. Mound Height - 0.5 ft topsoil) x Mound Width x Mound Length) ÷ 2

(**5.6** - 0.5)ft X **54.4** ft X **96.4**) ÷ 2 = **13241.5** ft^3

Total Mound Volume - Clean Sand volume - Rock Volume = cubic feet

13241.5 ft^3 - **3816.8** ft^3 - **541.7** ft^3 = **8883.0** ft^3

Divide ft^3 by 27 ft^3/yd^3 to calculate cubic yards: **8883.0** ft^3 ÷ 27 = **329.0** yd^3

Add 30% for constructability: **329.0** yd^3 x 1.2 = **427.7** yd^3

D. Calculate *Topsoil Material Volume*: *Total Mound Width* X *Total Mound Length* X .5 ft

54.4 ft X **96.4** ft X 0.5 ft = **2622.1** ft^3

Divide ft^3 by 27 ft^3/yd^3 to calculate cubic yards: **2622.1** ft^3 ÷ 27 = **97.1** yd^3

Add 30% for constructability: **97.1** yd^3 x 1.3 = **74.7** yd^3

Pressure Distribution
Design Worksheet

UNIVERSITY OF MINNESOTA — ONSITE SEWAGE TREATMENT PROGRAM

MINNESOTA POLLUTION CONTROL AGENCY

Project ID:	v 04.02.2019

1. Media Bed Width: **10** ft

2. Minimum Number of Laterals in system/zone = Rounded up number of [(Media Bed Width - 4) ÷ 3] + 1.

   [(**10** - 4) ÷ 3] + 1 = **3** laterals   *Does not apply to at-grades*

3. Designer Selected *Number of Laterals*: **3** laterals
   Cannot be less than line 2 (Except in at-grades)

4. Select *Perforation Spacing*: **3.00** ft

5. Select *Perforation Diameter Size*: **7/32** in

6. *Length of Laterals* = Media Bed Length - 2 Feet.

   52.0 - 2ft = **50.0** ft   *Perforation can not be closer then 1 foot from edge.*

7. Determine the *Number of Perforation Spaces*. Divide the *Length of Laterals* by the *Perforation Spacing* and round down to the nearest whole number.

   Number of Perforation Spaces = **50.0** ft ÷ **3.0** ft = **16** Spaces

8. *Number of Perforations per Lateral* is equal to 1.0 plus the *Number of Perforation Spaces*. Check table below to verify the number of perforations per lateral guarantees less than a 10% discharge variation. The value is double with a center manifold.

   Perforations Per Lateral = **16** Spaces + 1 = **17** Perfs. Per Lateral

Maximum Number of Perforations Per Lateral to Guarantee <10% Discharge Variation

1/4 Inch Perforations						7/32 Inch Perforations					
Perforation Spacing (Feet)	Pipe Diameter (Inches)					Perforation Spacing (Feet)	Pipe Diameter (Inches)				
	1	1¼	1½	2	3		1	1¼	1½	2	3
2	10	13	18	30	60	2	11	16	21	34	68
2½	8	12	16	28	54	2½	10	14	20	32	64
3	8	12	16	25	52	3	9	14	19	30	60

3/16 Inch Perforations						1/8 Inch Perforations					
Perforation Spacing (Feet)	Pipe Diameter (Inches)					Perforation Spacing (Feet)	Pipe Diameter (Inches)				
	1	1¼	1½	2	3		1	1¼	1½	2	3
2	12	18	26	46	87	2	21	33	44	74	149
2½	12	17	24	40	80	2½	20	30	41	69	135
3	12	16	22	37	75	3	20	29	38	64	128

9. *Total Number of Perforations* equals the *Number of Perforations per Lateral* multiplied by the *Number of Perforated Laterals*.

   17 Perf. Per Lat. X **3** Number of Perf. Lat. = **51** Total Number of Perf.

10. Spacing of laterals; Must be greater than 1 foot and no more than 3 feet: **3.0** ft

10. Select *Type of Manifold Connection* (End or Center): **End**

11. *Select Lateral Diameter (See Table)*: **1.50** in

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ONSITE
SEWAGE
TREATMENT
PROGRAM

Pressure Distribution
Design Worksheet

MINNESOTA POLLUTION CONTROL AGENCY

12. Calculate the *Square Feet per Perforation*. Recommended value is 4-11 ft² per perforation. **Does not apply to At-Grades**

  a. *Bed Area* = Bed Width (ft) X Bed Length (ft)

  | 10 | ft | X | 52 | ft | = | 520 | ft² |

  b. *Square Foot per Perforation* = *Bed Area* divided by the *Total Number of Perforations*.

  | 520 | ft² | ÷ | 51 | perforations | = | 10.2 | ft²/perforations |

13. Select *Minimum Average Head* : | 1.0 | ft

14. Select *Perforation Discharge* (GPM) based on Table: | 0.56 | GPM per Perforation

15. Determine required *Flow Rate* by multiplying the *Total Number of Perfs.* by the *Perforation Discharge*.

  | 51 | Perfs X | 0.56 | GPM per Perforation = | 29 | GPM

16. *Volume of Liquid Per Foot of Distribution Piping (Table II)* : | 0.110 | Gallons/ft

17. *Volume of Distribution Piping* =

  = [*Number of Perforated Laterals* X *Length of Laterals* X (Volume of Liquid Per Foot of Distribution Piping]

  | 3 | X | 50 | ft X | 0.110 | gal/ft | = | 16.5 | Gallons

18. Minimum Delivered Volume = Volume of Distribution Piping X 4

  | 16.5 | gals X 4 = | 66.0 | Gallons

Table II Volume of Liquid in Pipe	
Pipe Diameter (inches)	Liquid Per Foot (Gallons)
1	0.045
1.25	0.078
1.5	0.110
2	0.170
3	0.380
4	0.661

manifold pipe

pipe from pump

clean outs

alternate location of pipe from pump

Cleanouts

Manifold pipe

Alternate location of pipe from pump

Pipe from pump
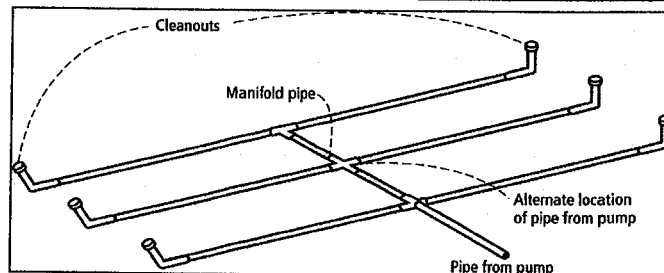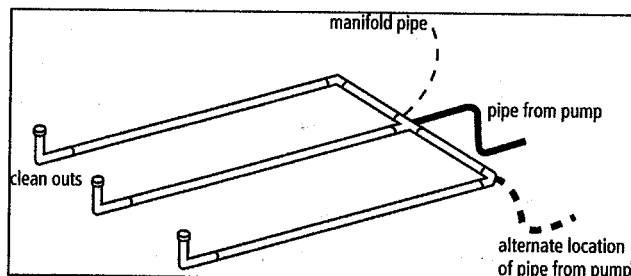
Comments/Special Design Considerations:

Basic Pump Selection Design Worksheet

1. PUMP CAPACITY

Project ID: v 04.02.2019

Pumping to Gravity or Pressure Distribution: | Pressure |

1. If pumping to gravity enter the gallon per minute of the pump: [ ] GPM *(10 - 45 gpm)*

2. If pumping to a pressurized distribution system: [29.0] GPM

3. Enter pump description: | Demand Dosing |

2. HEAD REQUIREMENTS

Soil treatment system & point of discharge

A. Elevation Difference [12] ft

   between pump and point of discharge:

B. Distribution Head Loss: [5] ft

C. Additional Head Loss: [0.0] ft (due to special equipment, etc.)

Supply line length
Inlet pipe
Elevation difference
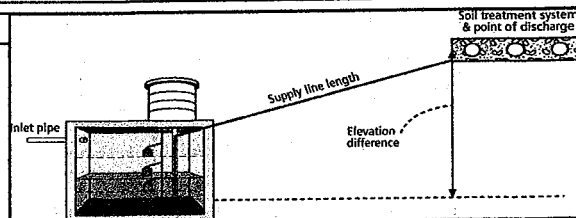
Distribution Head Loss

Gravity Distribution = 0ft

Pressure Distribution based on Minimum Average Head Value on Pressure Distribution Worksheet:

Minimum Average Head	Distribution Head Loss
1ft	5ft
2ft	6ft
5ft	10ft

Table I. Friction Loss in Plastic Pipe per 100ft

Flow Rate (GPM)	Pipe Diameter (inches)			
	1	1.25	1.5	2
10	9.1	3.1	1.3	0.3
12	12.8	4.3	1.8	0.4
14	17.0	5.7	2.4	0.6
16	21.8	7.3	3.0	0.7
18		9.1	3.8	0.9
20		11.1	4.6	1.1
25		16.8	6.9	1.7
30		23.5	9.7	2.4
35			12.9	3.2
40			16.5	4.1
45			20.5	5.0
50				6.1
55				7.3
60				8.6
65				10.0
70				11.4
75				13.0
85				16.4
95				20.1

D. 1. Supply Pipe Diameter: [2.0] in

   2. Supply Pipe Length: [35] ft

E. Friction Loss in Plastic Pipe per 100ft from Table I:

   Friction Loss = [2.23] ft per 100ft of pipe

F. Determine *Equivalent Pipe Length* from pump discharge to soil dispersal area discharge point. Estimate by adding 25% to supply pipe length for fitting loss. *Supply Pipe Length (D.2)* X 1.25 = *Equivalent Pipe Length*

   [35] ft   X   1.25   =   [43.8] ft

G. Calculate *Supply Friction Loss* by multiplying *Friction Loss Per 100ft* (Line E) by the *Equivalent Pipe Length* (Line F) and divide by 100.

   Supply Friction Loss =

   [2.23] ft per 100ft   X   [43.8] ft   ÷   100   =   [1.0] ft

H. *Total Head* requirement is the sum of the *Elevation Difference* (Line A), the Distribution Head Loss (Line B), Additional Head Loss (Line C), and the Supply Friction Loss (Line G)

   [12.0] ft   +   [5.0] ft   +   [0.0] ft +   [1.0] ft =   [18.0] ft

3. PUMP SELECTION

A pump must be selected to deliver at least **29.0** GPM (Line 1 or Line 2) with at least **18.0** feet of total head.

Comments:

Pump Tank Design Worksheet (Demand Dose)

ONSITE SEWAGE TREATMENT PROGRAM

MINNESOTA POLLUTION CONTROL AGENCY

DETERMINE TANK CAPACITY AND DIMENSIONS	Project ID:	v 04.02.2019

1.

A. *Design Flow (Design Sum. 1A):* — 600 GPD   C. Tank Use: **Dosing**

B. Min. required pump tank capacity: — 500 Gal   D. Recommended pump tank capacity: — 750 Gal

2.

A. Tank Manufacturer: Whippler   B. Tank Model: 2250-3

C. Capacity from manufacturer: — 750 Gallons

D. Gallons per inch from manufacturer: — 17.8 Gallons per inch

E. Liquid depth of tank from manufacturer: — 48.0 inches

Note: Design calculations are based on this specific tank. Substituting a different tank model will change the pump float or timer settings. Contact designer if changes are necessary.

DETERMINE DOSING VOLUME

3 Calculate *Volume to Cover Pump* (The inlet of the pump must be at least 4-inches from the bottom of the pump tank & 2 inches of water covering the pump is recommended)

(Pump and block height + 2 inches) X *Gallons Per Inch* (2C or 3E)

(16 in + 2 inches) X 17.8 Gallons Per Inch = 320 Gallons

4 *Minimum Delivered Volume* = 4 X Volume of Distribution Piping:

-Item 18 of the Pressure Distribution or Item 11 of Non-level — 66 Gallons (Minimum dose) — 3.7 inches/dose

5 Calculate *Maximum Pumpout Volume* (25% of Design Flow)

Design Flow: 600 GPD X 0.25 = 150 Gallons (Maximum dose) — 8.4 inches/dose

6 *Select a pumpout volume that meets both Minimum and Maximum:* — 100 Gallons

7 Calculate *Doses Per Day* = Design Flow ÷ *Delivered Volume*

600 gpd ÷ 100 gal = 6.00 Doses

8 Calculate Drainback:

A. *Diameter of Supply Pipe* = 2 inches

B. Length of Supply Pipe = 35 feet

C. *Volume of Liquid Per Lineal Foot of Pipe* = 0.170 Gallons/ft

D. *Drainback = Length of Supply Pipe X Volume of Liquid Per Lineal Foot of Pipe*

35 ft X 0.170 gal/ft = 6.0 Gallons

9. *Total Dosing Volume* = Delivered Volume plus Drainback

100 gal + 6.0 gal = 106 Gallons

10. Minimum Alarm Volume = Depth of alarm (2 or 3 inches) X gallons per inch of tank

2 in X 17.8 gal/in = 35.6 Gallons

Volume of Liquid in Pipe

Pipe Diameter (inches)	Liquid Per Foot (Gallons)
1	0.045
1.25	0.078
1.5	0.110
2	0.170
3	0.380
4	0.661

DEMAND DOSE FLOAT SETTINGS

11. Calculate *Float Separation Distance* using *Dosing Volume*.

Total Dosing Volume / Gallons Per Inch

106 gal ÷ 17.8 gal/in = 6.0 Inches

12. Measuring from bottom of tank: Inches for Dose: 6.0 in

A. *Distance to set Pump Off Float* = Pump + block height + 2 inches

16 in + 2 in = 18 Inches

B. *Distance to set Pump On Float* = Distance to Set Pump-Off Float + Float Separation Distance

18 in + 6.0 in = 24 Inches

C. *Distance to set Alarm Float* = Distance to set Pump-On Float + Alarm Depth (2-3 inches)

24 in + 2.0 in = 26 Inches

Alarm Depth — 26.0 in
Pump On — 24.0 in — 35.6 Gal
Pump Off — 18.0 in — 106 Gal
— Gal

10:00
House ~~$1000~~ 5/28/2020 →
? shop ?   *Ketter*

Becker County Planning & Zoning
915 Lake Ave
Detroit Lakes, MN 56501
(218) 846-7314
www.co.becker.mn.us

Septic Permit
Permit #: SS2019-55

Owner & Property Information

Owner Name:	CLAY STEPHENS	Parcel #:	290086000
	CLAY STEPHENS	Secondary Parcel #:	
Mailing Address:	13039 CO HWY 31	Site Address:	13023 Co Hwy31 Frazee MN 56544
	FRAZEE MN 56544	Township - Sec/Twp/Rng:	SILVER LEAF - 17/138/039
Phone #:	n/a		
Lake/River(1000/300):	No	Designer:	Scott's Septic Services LLC, L3947 (Scott Ellingson)
Lake/River Name:			
Pond/Wetland(50):	No	Installer:	Jason Niemi, L3225 (Jason Niemi)

Specifications
HT - Shop + full system - house

Tank to be Installed:	Holding Tank	Type of Drainfield:	
Total # Tanks Installed:	1	Full Size of Drainfield:	
System Status:	No Existing System	Reduced/Warrantied Size:	
System Serves:	Other	Absorbtion Area Size:	
Number of Bedrooms:	0	Rock Depth:	
Design Flow/GPD:	150	Chamber Type and Number:	
Garbage Disposal?	No	Chamber Trench SqFt/Chamber:	
Size of Lift Pump:		Is System Pressurized?	
Size of Lift Line:		Alarm?	Yes
Soil Sizing Factor:		Type of Alarm:	Manual Float

Setbacks

Road Type:	County	Right of Way Marked:	No
Tank Dist to Road:	100+	Drainfied Dist to Road:	n/a
Tank Dist to Closest Prop Line:	25	Drainfied Dist to Closest Prop Line:	25
Tank Dist to Nearest Structure:	10	Drainfield Dist to Nearest Structure:	n/s
Tank Dist to Well:	50+	Drainfield Dist to Well:	
Tank Dist to OHW:		Drainfield Dist to OHW:	
Tank Dist to Pond/Wetland:		Drainfield Dist to Pond/Wetland:	
Tank Dist to Pressure Line:	10+	Drainfield Dist to Pressure Line:	n/a

Other Information

Date Approved:	5/24/2019
Permit Fee:	150.00
Receipt Number:	158164-713166
Date Paid:	5/24/2019
Notes:	

Zoning Office Signature:

PERMIT MUST BE POSTED AT JOB SITE. PERMIT EXPIRES ONE YEAR FROM DATE PAID.
** Please schedule for inspection prior to installation! **

SCANNED

2019 Onsite Septic System Application
Becker County Planning & Zoning
915 Lake Ave, Detroit Lakes, MN 56501
Phone (218)-846-7314; Fax (218)-846-7266

1. PROPERTY DATA (as it appears on the tax statement or deed)
Parcel Number of property where the system will be installed: _____290086000_____

If septic system is on more than one parcel, what is the number of the secondary parcel? _____NA_____

2. OWNER INFORMATION (as it appears on the tax statement or deed)
Owner Name: Clay Stephens_____

Owner Mailing Address: __13039 CO Hwy 31_____ City, State, Zip: Frazee, MN 56544_____

Owner Phone Number: _____ Owner Email Address: _____

Property Site Address: ___13023 CO Hwy 31_____ City, State, Zip: Frazee, MN 56544_____

Township Name: _____Silver Leaf_____ Section/Township/Range: __17_____ __138_____ __39_____

LegalDescription:____PT SW1/4 of SW1/4: COMM....._____

3. DESIGNER/INSTALLER INFORMATION
Designer and License#: Scott Ellingson___3947_____ Installer and License#: _Jason Niemi 3225_____

Designer Email Address: scottsseptic@outlook.com_____ Installer Email Address: _magnumconst@arvig.net_____

Address: _201 Meadow Circle Ashby, MN 56309 Address: _43493 150th ST Frazee, MN 56544_____

Company: __Scott's Septic Services, LLC_ _____ Company: _Jason Niemi_____

Phone Number: _218-205-1667_____ Phone Number: _218-234-8076_____

4. SYSTEM DESIGN INFORMATION
System Status

___X__ Vacant Lot-No existing system-new structure

_____ Replacement – structure removed and being rebuilt

_____ Failing –Replacement- cesspool/seepage pit or other

_____ Enlargement of system-Undersized

_____ Repairs Needed to existing

_____ Additional system on property

What will new system serve? Check one.

_____ Dwelling   Fee: $150.00

_____ Resort/Commercial   Fee: $300.00

_____ Commercial (Non-resort)   Fee: $300.00

__X__ Other – Explain: ____Shop_____

Date of Site Evaluation: _05/17/2019_____

Design Flow __150__ Gallons Per Day

Number of Bedrooms ____0_____

Garbage Disposal: ____ Yes __X__ No

Dishwasher: ____Yes _X__No

Lift station in Structure ____ Yes X____ No

Grinder Pump in Structure:__Yes_X__ No

Well Depth:

___Deep Well

__X__Shallow Well

____Well not Installed-To be Drilled

Depth of Other Wells within 100 ft. of System: (if applicable):

___X__Deep Well

_____Shallow Well

_____Well not Installed-To be Drilled

____Original Soil____Compacted Soil

Type of Soil Observation:

_____ Pit _____ Probe ___Boring

Depth to Restricting Layer (inches or feet)

_____

Maximum Depth of System _____

Does the Septic Design Include a Drain Field? _____ Yes ___X_____ No

New or Existing Tank? ___X___ New _____ Existing

Type of All Tank(s) to be installed :

_____gal Single Compartment Septic Tank

_____gal Compartmented Tank

_____Pit Privy

1500_gal Holding Tank

_____Existing Tank

_____Existing Tank w/ New Additional Tank

_____Existing tank w/new Lift Station

_____Holding Tank with Privy

Total Number of Tanks to be Installed: _____1____ *This number will be reported to the MPCA at the end of the year.
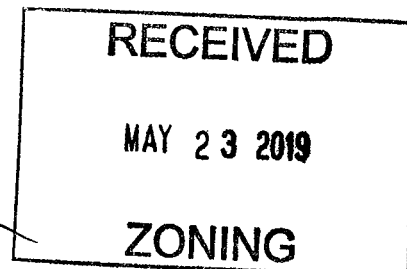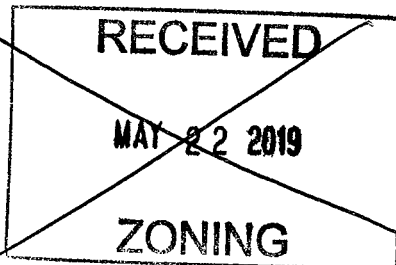
Size of Tank(s) _1500 gallons_____

Is There an Alarm? __X__ Yes _____ No

Type of Alarm: _Manual Float_____

Is there an effluent screen? ____ Yes _X_ No

Is There a Lift Pump? _____ Yes __X____ No

If Yes, What is the Size of the Lift Pump? _____

What is the Size of the Lift Line? _____

Measurements & Setbacks: *For a list of current required setbacks, see attached page.*

Lake/River/Wetlands Info (If Applicable)

Is the property within 1000 Feet of a lake or within 300 feet of a river? _____ Yes ___X_____ No

Lake Name _____

Township   Silver Leaf_____

Classification _____

River Name _____

Tank Distance from OHW of Lake or River _____

Drainfield Distance from the OHW of Lake or River _____

Does the property contain or is it within 50 feet of a pond or wetland?

_____ Yes _____X_____ No

Tank Distance from Closest Pond/Wetland _____

Drainfield Distance from the Closest Pond/Wetland _____

Road Type:

___ State

_X_ County

___ Public/Township

___ Private Easement

___ 4 Lane Highway

I have found and marked the road right-of-way: _____ Yes __X_____ No

Please note: Measurement is taken from the property pins (measure from pins into property).

Setback Verification

	TANK	DRAINFIELD
Distance to Road	__100's_____	_____
Distance to Property Line, other than road (side or rear):	__25'_____	_____
Distance to Buildings including garages attached to dwellings	__10'_____	_____
Distance to Pressure Line	__10+_____	_____
Distance to Wetland/Protected Water	__NA_____	_____
Distance to Well	__50+_____	_____

Depth of Well: ____X_____ Shallow _____ Deep

5. **REQUIRED DOCUMENTS:** *If any of the following is required, please submit along with application:*
   - Property Line Agreement Form
   - Township Road Right of Way Encroachment Form
   - County Road Right of Way
   - U of MN worksheets are required for mounds, pressure beds, seepage beds, at grades or Type IV or type V systems.

Are the required worksheets attached?

_____ Yes ____X_____ No

6. **DESIGNER'S CERTIFIED STATEMENT**

I, _____Scott Ellingson_____ certify that I have completed the preceding design work in accordance with all
   (Print Name of Designer)

applicable requirements (including, but not limited to Minnesota Chapter 7080 and the Becker County Individual Sewage Treatment System Ordinance).

_____   _____05/17/2019_____
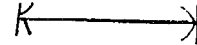Signature of Designer   Date

N ↑

PARCEL # 290086000
YEAR 2019
SCALE 1" = 40'

SKETCH OF PROPERTY

Shed

house
13039
Co Hwy 31

⊗ Deep Well

Lot Line

← 100's ← RROW

MANUAL Float
⊡ ⊙ ⊙

Shop

Shoved dr.

⊗ Shallow Well

To Co Hwy 31
←