



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 #: SS2020-540

Owner & Prope	erty Information				
Owner Name:	BCANS ENTERPRISES LLC	Site Address:	38622 CEDAR CREST CIR		
Mailing Address:	BCANS ENTERPRISES LLC 29783 387TH ST	Township - Sec/Twp/Rng:	MAPLE GROVE - 08/142/040		
· ·	WAUBUN MN 56589	11 - 1 March 1950 1 - 1 March 196 1 - 1 March	8-142-40 GOVT LOT 2 LESS 4.61 AC		
Owner Name: Mailing Address: Parcel #:	200233000	Legal	FOR NEMEC BCH, NEMEC 1ST ADDN; TRACTS SOLD, LESS 3.17 AC FOR 20-0233-001, -002, -003.		
Secondary Parcel #:	Control of the contro	Description:			
	44	Designer:	Scott's Septic Services LLC, L3947 (Scott Ellingson)		
		Installer:	Lunde Blade & Gravel LLC, L1254 (Jason M Lunde)		

I	Inspector \	Verified	Specif	ications
	a transfer of the second and the sec	Services of the Transport of the Control of the Con	the experience observed the second of the	PERSONAL PROPERTY AND INCIDENTAL PROPERTY AND INCIDENT

The process of the contract of	CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR	or agreement was a consequence of the consequence	LO REPORTE A CORRECT ORGANIZACIÓN POZNATORO SE OPROPRIO E ESPARA CA ANTIGORA SE ANTIGORA S
Insp- Effluent Screen Installed:	Yes	Insp- Tank	2/1500 (added septic) and 1000 lift
Insp- Alarm Required:	Yes	Nbr/Size:	The state of the s
Insp- Lift Pump in System:	Yes	Insp- Drainfield Type:	Mound
Insp- Number of Bedrooms:	28 (resort)	Insp- Drainfield Size:	10' X 100' rock bed and 26' X 100' soil absorption area = 2600 sq ft
		Insp- Soil Verification:	#1:attached #2:N/A #3:N/A

Inspector	Verified	<b>Setbacks</b>
and the second s	with the committee of the fermion of the control of	The second of th

Insp- Tank Dist to Road	100+	Insp- Drainfield Dist to Road	100+
Insp- Tank Dist to Nearest Prop Line	500+	Insp- Drainfield Dist to Nearest Prop Line	500+
Insp- Tank Dist to Nearest Structure	20	Insp- Drainfield Dist to Nearest Structure	50
Insp- Tank Dist to Well	1500+	Insp- Drainfield Dist to Well	1500+
Insp- Tank Dist to OHW	2000+	Insp- Drainfield Dist to OHW	2000+
Insp- Tank Dist to Pond/Wetland	500+	Insp- Drainfield Dist to Pond/Wetland	500+
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: 9/17/2020

**Zoning Office Signature:** 

Denise Gubrud - ISTS Inspector

<sup>\*</sup> Certificate of Compliance is not valid unless signed by a Registered Qualified Employee \*

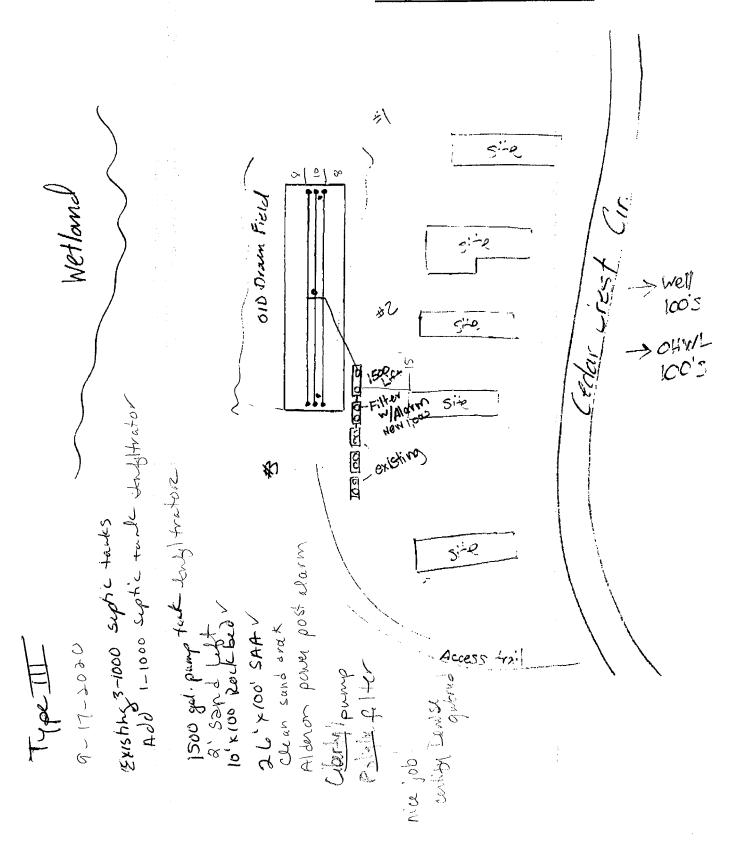
Property and Owner				
Owner: BCANS ENTERPRISES LLC		Parcel Number:	200233000	
Site Address: 38622 CEDAR CREST CIR		Secondary Parc	el:	
Home Information			741	EIL
Does the structure contain any of the following		Designer submitted		spector verified
elements?	Dishwash Grinder p	disposal: Yes ler: Invalid Field ump: Invalid Field in bsmt: Invalid Fi	Dishwasher Grinder pur	sposal? (Y) N ? (P) N np? Y (D) n basement? Y ()
Number of bedrooms: 28	Review -	Number of bedroor	ns: 28	
Effluent screen	Effluent s	creen installed?	y) N Mfr:	
Alarm: <b>Yes</b> Type:	Review -	Alarm?() N	Type & Mfr: ♠\ 👌	200
Lift pump in system: <b>Yes</b>	Review -	Lift pump in syste	m? (Y) N Mfr	:
Component Information				
Γank size: <b>1500, 1000</b>	Review -	Tank nbr: 🙏 🛚 siz	e: 1500 - Lift Mfr:	Multrator
Drainfield type: Mound	Review -	Drainfield type:	mound_	V
Orainfield size: Full size - <b>4000</b> Reduced/warr. size -	Review -	Drainfield size: / 🖰	none (installed )	bed
Absorption area size:	Review - /	Absorption area siz	e: 06 × 100 S	oil Absorpt ~ Aven
Chamber type/num: Trench sqft/chamber -	Review -	Chamber type: Trench saft/chamb	Νι er:	ım <u>:</u>
Orainfield rock depth:	Review -	Rock depth: 12 11	a 2" Sand	left
Soil Verification				
Vertical separation verified	Boring #1: Boring #2: Boring #3:	attached	) - no move of display	d part of filler
Setback Verification	Designer s	ubmitted	Inspe	ctor verified
Distance to Tar	nk	Drainfield	Tank	Drainfield
Road 100	Oft	100ft	100+ 1	1001
learest prop line 500	Oft	500ft	500"	5xx*
learest structure 50	ft	50ft	30	50,
Vell 150	Oft	1500ft	1500+	1500t
PHW 200	Oft	2000ft	2-000	2000
ond/Wetland 500	)ft	500ft		
Pressure line n/a	a	n/a		



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

PARCEL # <u>2002 33000</u> YEAR <u>2018</u> SCALE <u>1" = 40'</u>

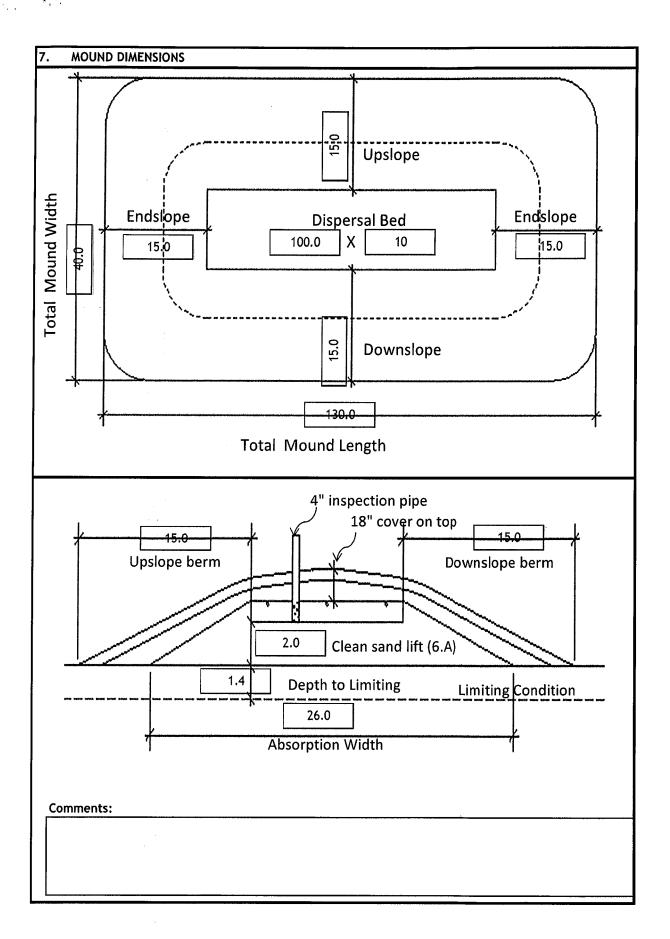
### **SKETCH OF PROPERTY**



# Becker County Restrictive Layer Verification

(Date) /7-2020	(License #)	(Inspector)	(Designer) - S ( ) + E	(Designer)
S	rdinace, rules and laws		Certified Statement: I hereby certify that I have completed this work in accordance with all applicable o	Certified S
•				
		200100	12 lastrictus 1927 1 Rodox Jop 12102	
			ts/Notes:	Comments/Notes:
5/1	104r 5/1	10454/3	7:	
ואוטריוה ביסוחו (יי)		Matrix Color(s)	Depth (in) Texture	1
lo Colorfe)	ethod:	Observation#/Location/Me	Weather Conditions/Time of Day: ((30 Pt.Clay	Weather C
	· ·		Vegetation: 1,000 doc)	Vegetation
			Address: 38622 Codon Crast Circle	Address:
	1000	Parcel: 400 40 2000		Client:
7-4040	Date: 9 -17-2020	- コ バッノ いい ハウブ		

(Date)		(License #)			(Signature)		٦	(Designer/Inspector)	(Dest
9/22/2017		L3108	ı						
				\	1			Ken Ramondo	*
			ules and laws.	able ordinances, r	ance with all applic	hereby certify that I have completed this work in accordance with all applicable ordinances, rules and laws.	completed	ty that I have o	I hereby cert
							yer 96.87.	Comments Restricting layer 96.87	Comments
Extremely Firm	Moderate	Platey	S1	Concentrations	10R 3/6	10YR 5/1	<35%	Clay Loam	33
Extremely Firm	Weak	Platey	\$2	Depietions	10YR 5/1	10YR 4/3	<35%	Sandy Clay Loam	21-35
Firm	Moderate	Blocky	83	Depletions	10YR 5/1	10YR 4/3	<35%	Clay	17-21
Firm	Weak	Blocky				10YR 4/3	<35%	Clay	6-17
Firm	Moderate	Blocky				10YR 4/2	<35%	Clay Loam	3-6
Frlable	Moderate	Granular				10yr 3/1	<35%	Loam	0-3
Consistence	Structure Grade	Shape 1-	Indicator(s)	Redox Kind(s)	Mottle Calor(s)	Matrix Color(s)	Frag. %	Texture	Depth (In)
Auger		Observation Type:	Obsei		System One (soil boring #2)	System On		Observation #/Location:	Observation
09/22/17	9	Date		:50 am	Sunny 60oF 8:50 am		of Day:	Weather Conditions/Time of Day:	Weather Con
98.29	Elevation:	3.0	Slope%	718C	Soil survey map units 7180	Sof	Lawn		Vegetation
F		☐ Toe Slopstope shape		Slope   Foot Slope	Stoulder 🕢 BedlySide Slope	Summit St	(one)	Landscape Position: (check one)	Landscape Po
Organic Nother	П	tum 🔲 Bedrock	TRI 🔲 Alkavium	e □ beso □ n	Outwash   Lacustrine		heck all th	Soil parent material(s): (Check all that apply)	Soil parent n
			Legal Description/ GPS:	Legal Desc	ort	Cedar Crest Resort		Client/ Address:	Ç,
F	v 05.†3.14	Cedar	Project ID: Cedar		bservatio	OSTP Soil Observation Log		University of Minnesota	OF MII





# OSTP Pressure Distribution Design Worksheet Upper Uppe

University of Minnesota



					Project	ID:				v 04	4.20.2016
1. Media Bed Widt	th:				Γ	10 ft					
2. Minimum Numb	er of La	terals ir	ı systen	n/zone :	= Round	ed up number o	f [(Media	a Bed W	idth - 4)	÷ 3] + 1	1.
	[(	10	- 4	) ÷ 3] +	1 = [	3 late	rals	Does	not app	ly to at	-grades
3. Designer Select						3 late	rals				
Cannot be less 4. Select Perforat			ept in c	it-graae	,s) [	3.0 ft	1.5	(\$100 m)	Insulated acces	s box	
5. Select Perforat	ion Dian	neter Si	ze:			1/4 in	/a perform	Gegue Hons spaced 1° m D 64° of rock		Strock D	7
6. Length of Later	rals = Me	edia Bed	d Lengtl	h - 2 Fe	et.	l	Perf	oration sizing: 1/s	to 1/4" Perfor	atlon spacing: 2°	to 3'
7. Determine the A		of Perf	oration	Spaces	. Divide	erforation can r e the Length of			·		_
Number of Perf					ft	÷ 3	ft	= [	32	Spa	aces
Number of Perf 8. below to verify value is double Perf	the num with a c	ber of penter m	perforat nanifold <i>teral</i> =	tions pe I.	r latera		s than a	10% dis	•	ariation	n. The
		Perforation		i or across s			il and the state of the state o	nch Perfo	rations		
Perforation Spacing (Feet)		Pipe (	Diameter (	(Inches)	·····	Perforation Spacing		Pipe I	Diameter (I	nches)	
remoration spacing (reet)	1	114	11/2	2	3	(Feet)	1	114	11/2	2	3
	10	13	18	30	60	2	II a	16	21	34	68
21/1	8	12	16	28	54	21/2	10	14	20	32	64
3	8	12	16	25	52		9	14	19	30	60
	3/16 Inch							nch Perfor			
Perforation Spacing (Feet)	4	•	Diameter (	<del></del>	T .	Perforation Spacing (Feet)		<del>,</del>	Diameter (I		
	1	1¼ 18	11½ 26	2 46	87	(reet) 2	21	1¼ 33	1½ 44	2 74	3 149
<u>29</u>	12	17	24	40	80	2½	20	30	41	69	135
31.3	12	16	22	37	75	1	20	29	38	64	128
9. Total Number of Perforated Later 33 Per					·	,	<del></del>		·		ıber of
10. Select Type of M						of Perf. Lat. = ☐ End ☑ C		<u>,                                     </u>	rotal Nu	mber of	Perf.



### **Minnesota Pollution Control Agency**

### **OSTP Pressure Distribution** Design Worksheet

University of Minnesota



12.	Calculate the Square Feet per Perforation. Recommended value is 4-11 $\mathrm{ft}^2$ per perforation.	
	Does not apply to At-Grades	
a.	Bed Area = Bed Width (ft) X Bed Length (ft)	
	10 ft X 100 ft = 1000 ft <sup>2</sup>	
b.	Square Foot per Perforation = Bed Area divided by the Total Number of Perforations.	
	1000 $ft^2$ ÷ 99 perforations = 10.1 $ft^2$ /perforations	
13.	Select Minimum Average Head: 1.0 ft	
14.	Select Perforation Discharge (GPM) based on Table: 0.74 GPM per Perforation	
15.	Determine required Flow Rate by multiplying the Total Number of Perfs. by the Perforation Discharge.	
	99 Perfs X 0.74 GPM per Perforation = 73 GPM	
16.	Volume of Liquid Per Foot of Distribution Piping (Table II): 0.170 Gallons/ft	
17.	Volume of Distribution Piping = Table II	
	= [Number of Perforated Laterals X Length of Laterals X (Volume of Liquid Per Foot of Distribution Piping]  Volume of Liquid Pipe	
	Pipe Liquic	3.30
	3 X 98 ft X 0.170 gal/ft = 50.0 Gallons Cinches) (Gallon	A 111 (A)
18.	Minimum Delivered Volume = Volume of Distribution Piping X 4  1 0.045	1
	50.0 gals X 4 = 199.9 Gallons 1.25 0.078	
	2 0.170	
	manifold pipe \ 3 0.380	
	4 0.661	_
	pipe from pump	H
1	Manifold pipe	
clean o		A
	alternate location	켁
	of pipe from pump	
	or pipe nom points	
	Pipe from pump	
Comm	ents/Special Design Considerations:	
COMM	ents/special besign considerations.	



# OSTP Basic Pump Selection Design UNIVERSITY

Worksheet

of Minnesota



1. PUMP CAPACITY	Project ID:				v 0	4.20.2016
Pumping to Gravity or Pressure Distributio	n: Pre	ssure	1			
If pumping to gravity enter the gallon per	r minute of the pump:		]  GPM	pm)		
If pumping to a pressurized distribution s		73.0	J Jgpm			
, , ,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	<u></u>	nd Dosing Soil Trea	tment		
3. Enter pump description:		Demar	id Dosing Soit Frea	cinenc	Soll tre	atment system nt of discharge
2. HEAD REQUIREMENTS						nt of discharge
A. Elevation Difference 10	ft			Supply line length		
between pump and point of discharge:		Inlet pipe		Elevation	January .	
B. Distribution Head Loss: 5	ft			differenc		
C. Additional Head Loss:	ft (due to special equipment	, etc.)			<del>-</del>	
			Table I.Friction	on Loss in Plast	ic Pipe pe	r 100ft
Distribution H	ead Loss	10 / 72 O (1865) 1	Flow Rate		eter (inch	
Gravity Distribution = Oft			(GPM)	1 1.25	1.5	2
Pressure Distribution based on M Value on Pressure Distribution W		ad	10 F-8-6 (25) - 680	9.1 3.1	1.3	0.3
	Distribution Head L		12	12.8 4.3	1.8	0.4
Minimum Average Head	5ft	<u> </u>	14	17.0 5.7 21.8 7.3	3.0	0.6 0.7
2ft	6ft		16	21.8 7.3 9.1	3.8	0.7
5ft 5ft	10ft	···	18 20	11.1	4.6	1.1
<u></u>			1	16.8	6.9	1.7
	<del></del> ].		25	23.5	9.7	2,4
D. 1. Supply Pipe Diameter: 2.0	in		79	23.3	12.9	3,2
2. Supply Pipe Length: 45	ft		35 40		11 100,000,000	3.2 4.1
			45	Marine and Lagran 1993	20.5	5.0
E. Friction Loss in Plastic Pipe per 100ft from	Table I:		50	agaige a the late		6.1
	40066 6 to		55			7.3
Friction Loss = 12.29 ft p	per 100ft of pipe		60			8.6
F. Determine Equivalent Pipe Length from pur	p discharge to soil dispersal	area discharge	65			10.0
point. Estimate by adding 25% to supply pip	e length for fitting loss. Supp	oly Pipe Length	70	형 경계를받았	A AREA	11.4
(D.2) X 1.25 = Equivalent Pipe Length			75			13.0
	<u> </u>		85			16.4
45 ft X 1.25	= 56.3 ft		95			20.1
G. Calculate Supply Friction Loss by multiplying	g Friction Loss Per 100ft (Lin	e E) by the <i>Equiv</i>	alent Pipe Length	(Line F) and divid	e by 100.	
Supply Friction Loss =						
12.29 ft per 100ft	X 56.3 ft	÷ 100	= 6.9	ft		
H. Total Head requirement is the sum of the El	evation Difference (Line A)	the Distribution i	Head Loss (Line R)	Additional Head I	oss (Line C)	and the
Supply Friction Loss (Line G )	evacion bijjevence (eine Aj,	the bistribution i	read Loss (Line D),	Additional Fiedd	-050 (20 0)	,
100		ft +	6.9 f	t = 21.9	ft	
10.0 ft + 5.0	ft +		0.7	21,7	''`	
3. PUMP SELECTION  A pump must be selected to deliver at least	<b>73.0</b> GPM (L	ine 1 or Line 2) w	ith at least	<b>21.9</b> fe	et of total h	ead.
A pump must be selected to deliver at least	73.0 GPM (L	me i oi Lille z) W	יונוו מנ וכמשנ	Z1,7 10	ct or total li	
Comments:						



## OSTP Pump Tank Design Worksheet (Demand Dose)

University of Minnesota



	DETERM	INE TANK CAPACITY AN	ID DIMENSIC	ONS				Project ID:				v 04.20.2016
1.	Α.	Design Flow (Design Sur	n. 1A) :		1	135	GPD					
	В.	Min. required pump tar	nk canacity		1	135	Gal	C.Recommended	I numn tank cana	acity:	1500	Gal
L	D.	mili. required pump tai	т сарасиу.			133		c.necommended	pump cank cape			
2.	A.	Tank Manufacturer:	,	Brown Wilb	ert		В.	Tank Model:		1500		
ŀ	c.	Capacity from manufac	turer:		1!	500	Gallons				ased on this spec odel will change	
	D.	Gallons per inch from r	nanufacture	r;	3:	5.8	Gallons	per inch			t designer if chan	
	E.	Liquid depth of tank fro	nm manufac	turer:	4	3.0	J Inches		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
					L		]		*			
		DOSING VOLUME								· 6		n is
3	recomm	e Volume to Cover Pum; ended)	(The intet	of the pump must	be at le	ast 4-inci	nes trom	the bottom of the	pump tank at 21	inches of water	covering the pun	p is
	(Pump a	nd block height + 2 inch	es) X Gallon	s Per Inch (2C or 3	BE)	_						
	(	16 in	+ 2 inches	) X 35	5.8	Gallons	Per Inch	=	644	Gallons		
4		m Delivered Volume =		•	ing:					٦		
		of the Pressure Distrib							200	Gallons (mini	mum dose)	
5		e Maximum Pumpout Vo	<u>`-</u>	1 .	^	25			284	Gallons (maxi	imum doso)	
	Design F	low:	1135	GPD X	0.	.25	=		204	Gattons (maxi	muni dose)	
6	Select a	pumpout volume that n	neets both M	linimum and Maxii	mum:		2	00 Gallons	IN IN	volume of	Liquid in	
7	Calculat	e Doses Per Day = Desig	n Flow + <i>De</i>	livered Volume						Pip	CONTRACTOR CONTRACTOR	
		1135 gpd	÷	200	gal =			5 Doses		Pipe	Liquid	
8	Calculate	e Drainback:			•			_			Per Foot	
	A.	Diameter of Supply Pip	e =				2	inches		personal programme and the later	(Gallons)	
	В.	Length of Supply Pipe =					45	feet	F	1	0.045	
								.j ]		1.25	0.078	
	C.	Volume of Liquid Per L		•			170	Gallons/ft		1.5	0.110	
	D.	Drainback = Length of						1		2	0.170	
	T	45 ft	L	gal/ft	=		'.7	Gallons		3	0.380	
9.	Total Do	sing Volume = Delivered			,	08	Gallons			4	0.661	
4.0		200 gal	L				J					
10.	MINIMUN	n Alarm Volume = Depth 2 in X		5.8 gal/in			1.6	Gallons				
				gat/ III		<u> </u>		Gallons				
		SE FLOAT SETTINGS										
11.		e Float Separation Dista		osing Volume .								
	Total Do	osing Volume / Gallons Po		25.0	l <b>,</b>	12						
		208 gal	÷	35.8	gau	/in =		.8 Inches	lander for Dece	. F0 t-	F	
l		ng from bottom of tank:	- Dume : El-	ack boight + 2 in al	10F				Inches for Dose			广
<sup>A.</sup>	vistance	to set Pump Off Float		2	1		18	Inches	M 6		Г	
	Dietons	16 in to set Pump On Float=1			in = t + Float	L			Alarm Depth Pump On	25.8 <sup>In</sup>	71.6 Gal	
٥.	vistance	18 in		5.8	in =		24	Inches	Pump Off	18.0 in	208 Gal	
٦	Distance	to set Alarm Float = Di			]			_	, ump 011		644 Gal	<del></del>
	Discurre	24 in		2.0	in =		26	Inches				

11:30 9-17-2020 Undle



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

### **Septic Permit**

Permit #: SS2020-540

### **Owner & Property Information**

**Owner Name:** 

**BCANS ENTERPRISES LLC** 

**BCANS ENTERPRISES LLC** 

Mailing Address:

29783 387TH ST

**WAUBUN MN 56589** 

Phone #:

2184732116

Lake/River(1000/300):

Yes

Lake/River Name:

White Earth (Maple Grove) [RD]

Pond/Wetland(50):

Yes

200233000 Parcel #:

Secondary Parcel #:

Site Address:

38622 CEDAR CREST CIR

Township -

Sec/Twp/Rng:

MAPLE GROVE - 08/142/040

Designer:

Scott's Septic Services LLC, L3947

(Scott Ellingson)

Installer:

Lunde Blade & Gravel LLC, L1254

(Jason M Lunde)

### **Specifications**

	Ta	ank	to	b	е
i	In	sta	ille	d:	
	T,	nta	۱#۱	Ta	nk

Installed:

Existing Tank with New Additional Tank

System Status:

Failing System (Cesspool, Seepage

Pit, other)

Commercial Resort

System Serves: Number of

28

Bedrooms:

1135

Design Flow/GPD: Garbage Disposal?

Size of Lift Pump: Size of Lift Line:

Soil Sizing Factor: 0.45

Type of Drainfield:	Mound
Full Size of Drainfield:	4000
Reduced/Warrantied Size:	and the state of t
Absorbtion Area Size:	1000 sq ft
Rock Depth:	***************************************
Chamber Type and Number:	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Chamber Trench SqFt/Chamber:	
Is System Pressurized?	No
Alarm?	Yes
Type of Alarm:	

### **Setbacks**

Road Type:	Private Easement
Tank Dist to Road:	100ft
Tank Dist to Closest Prop Line:	500ft
Tank Dist to Nearest Structure:	50ft
Tank Dist to Well:	1500ft
Tank Dist to OHW:	2000ft
Tank Dist to Pond/Wetland:	500ft
Tank Dist to Pressure Line:	n/a

Right of Way Marked:	Yes
Drainfied Dist to Road:	100ft
Drainfied Dist to Closest Prop Line:	500ft
Drainfield Dist to Nearest Structure:	50ft
Drainfield Dist to Well:	1500ft
Drainfield Dist to OHW:	2000ft
Drainfield Dist to Pond/Wetland:	500ft
Drainfield Dist to Pressure Line:	n/a

### Other Information

**Date Approved:** 7/9/2020 300.00 Permit Fee: **Receipt Number:** 248938857 **Date Paid:** 7/9/2020

Notes: Utilize 3 - 1000 gallon existing septic tanks, add 1 -1000 septic tank and 1 - 1500 gallon lift tank. Construct a mound system with a 2' sand lift, a 10' X 1000' rock bed

Zoning Office Signature:

enise gubrud

### University of Minnesota

### **OSTP Preliminary Evaluation Form**



1. Contact Informati	ion	······································				v 03.19.15
Prop	erty Owner/Client	BCANS Enterprises / Ker	nneth Hunze		Client Phone Number	. [122 112 1017
Mailing Address	29783 387th St Wa				Project ID:	200233000
Site Address	TBD, Ce	edar Crest Resort SW corne	er of parcel	Legal Description		
Parcel (D:	2	200233000	Latitude	·	Longitude	95°46′26.47′W
Evaluation for sys	tem type	New Construction	■ Replacement	Dat		<u> </u>
2. Flow Information						
Client-Provided I		* Residential	Commercial	Other (Specify)		
Type(s) of use (all		Γ	7			
No. of bedrooms*  No. of residents in		3		Unfinished space	(ft²) [	
Existing flow meas		Adults     Yes (If Yes, attach readings)	Children	Teenagers No		,
Existing flow meas			····	- NO		
Water wife de de	(	<ul> <li>Garbage Disposat</li> <li>Dishwasher</li> </ul>		Water Softener*	• Iron Filter*	
Water-using device apply)	es (check all that	Large Bathtub/Jacuzzi		<ul> <li>Sump Pump*</li> <li>High Efficiency Fumace</li> </ul>	Other (specify)	
		<ul> <li>Laundry/Large Tub on 2nd</li> </ul>	Floor	* Hot Tub*	* Clear water source	
Water use concern	s (check all that	Faucet/Toilet Leaks	Multiple Loads o	f.l. mades/Dev		
apply)		In-Home Business	No Lint Screen		<ul> <li>Long-Term Prescription Meds</li> <li>Frequent Entertaining of Out-of-Town Guest</li> </ul>	<ul> <li>Use of Anti-Bacterial Soap</li> </ul>
Any additional curr	ent or future uses of	on this parcel (specify)				
	scharges to system					
	grinder pump in hor		No			
	above is complete a		(Client(	s) signature and date)		
Designer-determin	ed Flow Information	on			L.,	
A. Estimated Desig			450			
Anticipated waste s	trength values:		High Strength	_	BOD: m	g/L
CBOD:		mg/L (TS	(S):	mg/L	O&G:	mg/L
. Preliminary Site In			····			
Well(s) were located		ft of absorption area	• Yes • N			
Depth of well(s)	- Unacconsav			onal Communication	MN Unique Well Id #:	
Impervious Laver	• No • Yes		ft	Well casing depth(s)	ft	Source
		If Yes, Define & Source	<del></del>		Required Setback:	ft
				* Yes * No	Source	
B(4). Location of al	I existing water supplemental in the control of the	ply management area osed buildings and impro	vements on lot (see !	• Yes • No Site Evaluation map )	Source	
B(5). Buried water:	supply pipes within	n 50 ft of proposed system	n	• Yes • No		
		e Site Evaluation map )		Source		
		vel (OWHL) - MN DNR (if a	adjacent to parcel)	[		
E. Floodplain design					Sou	ırce
F. Determine prope	rty lines (see Site E	Evaluation map )	Survey • Plat Map	• Other:	GIS	
Site located in a shor			No		Shoreland	
G. Distance of setba	cks	Property Lines     Other Buildings	• OHWL	Water Supply Pipes		
		Other Buildings	Easements	• Well(s)		

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### OSTP Preliminary Evaluation Form



H Soil Sup	vey Information (from	wah soil susyay)	• Map	Man Haita on Dan		408			
n. 3011 3ul 1		web soil survey )	rap	Map Units on Par		408		······	
	List landforms	moraines		Stop	e Range	1%-8%			
		rials -check all that	apply			Landform Position (c	heck all th	at apply )	
• Till	<ul> <li>Colluvium</li> </ul>	<ul> <li>Lacustrine</li> </ul>	Alluvium	• Summit	• Shouk	der • Baci	cslope	<ul> <li>Footslope</li> </ul>	• Plain
Outwash	• Loess	Bedrock	Organic	Depression	• Stream	n/Terrace • Mar	made	Toe Slope	
	Minimum bedrock depi	th: inches	Mir	nimum bedrock dep	th:	inches			
	Maximum bedrock dep	th: inches	Мах	rimum bedrock dep	th:	inches			
	·	ليا	Γ-			]			
Man Unit Da	tings		osorption Field - Trench (MN)					<del></del>	
Map Unit Ra	cings		orption Field - At-grade (MN)						
			bsorption Field - Mound (MN)						
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Soll Profile Information		rvey - m						
Enter inform	nation here or attach m	ap and description.							
Map Unit	40B							Other	
		Depth	Texture(s)	Structure(s)		Consistence		Restrictions	Color
	Horizon 1	0-3	Loam			<b>9.40</b>			
	Horizon 2	3-9"	Fine Sandy Loam						
	Horizon 3	9-26"	Clay Loam						
	Horizon 4	26-79"	Loam						
11 11-26	Horizon 5								
Map Unit		Donth	T	<b>a .</b>		_		Other	
	Horizon 1	Depth	Texture(s)	Structure(s)		Consistence		Restrictions	Color
	Horizon 2								
	Horizon 3		·	1		****			
	Horizon 4								
	Horizon 5		······································						
Map Unit		<u> </u>		I		******			
		Depth	Texture(s)	Structure(s)		Consistence		Other Restrictions	Color
	Horizon 1								
	Horizon 2								
	Horizon 3								
	Harizon 4								
	Horizon 5								
Map Unit								Other	
	11-1-4	Depth	Texture(s)	Structure(s)	(	Consistence		Restrictions	Color
	Horizon 1	<u> </u>		·					
	Horizon 2	<u> </u>				<u>.</u>			
	Horizon 3			<del></del>					
	Horizon 4 Horizon 5								
Local Covers	ment Unit Information								
	ment Unit Information								
Name of LGU		Becker County		LGU Contact					
LGU-specific s		<u> </u>							
	esign requirements								
	nstallation requirement								
I hereby certif	y that I have completed	this work in accorda	ance with all applicable ordinar	nces, rules and law	s.	7			
		vn Hedlund		Hel	[/	2970		09/19/18	
	. (0	esigner)	(Sig	nature)		(License #)		(Date)	

### University of Minnesota

### OSTP Field Evaluation Form



1. Contact Information		Project ID:	200233000		v 03.19.15
Property Owner/Client	t BCANS Enterprises / Ke	nneth Hunze		Client Phone Number: 423-443-1	<del></del>
	s TBD, Cedar Crest Resort	SW corner of parcel			
Date 9/19/2018	Weather Condit	ions		nice	
2. Utility and Structure Inform	ation			**************************************	
	· · · · · · · · · · · · · · · · · · ·				
Utility Locations Identified	Gopher State One Call #		Any Private Utilities		
Property Lines	<ul> <li>Determined and Approved by</li> </ul>	Client		Client's Approval (initial)	
	Determined but not Approved				
	<ul> <li>Approximate</li> </ul>				
	<ul> <li>Property Lines Surveyed</li> </ul>				
Locate and Verify (see Site Evalu	ation map )				
	<ul> <li>Existing Buildings</li> </ul>	• Improvements •	Easements • S	Setbacks	
3. Site Information					
Percent Slope	2		Slope Direction		west
Landscape Position			Slope Shape co		
Vegetation type(s)			forest		1
Evidence of cut, fill, com	pacted or disturbed areas	³ Yes •	No		
Discuss the flooding	or run-on potential of site				
Identify ben	chmarks and elevations (S	te Evaluation Map )			
Proposed soil treatment area ade	quately protected	• Yes •	No		
A. Conoral Calle In Co.					
4. General Soils Information					
•	Sail Dueb -	No No			
Type of observation   Number of soil observations		Soil Boring # 5	Soil Pit		
L	3				
Soil observations were conducted			Yes • No		
A soil observation was made withii Soil boring log forms completed an	n the most limiting area of		• Yes • No		
		• Yes • No			[
Percolation tests performed, form	s completed and attached	" Yes " No			İ
i. Phase I. Reporting Information	1				
Depth to standing wate		nches			
Flood elevatio		eet	Antic	ripated construction issues	
Depth to bedroc	,	nches			]
Depth to periodically saturated so		nches	<u></u>		
Maximum depth of systen		nches	<del></del>		
Elevation at system botton		eet	Difference 1		_
Percolation rate		nin/inch	Differences Det/	ween soil survey and field evaluation	1
Loading rate		pd/ft <sup>2</sup>			
Contour loading rate		pd/ft			_ '
te evaluation issues / comments	· L	рал те			_
nereby certify that I have complet	ed this work in accordance	with all an <del>olical</del> ls	ordinancod sulses at 1		
		ppillabel	rules and laws	i./	
Shawn	Hedlund		X //	2970 09/19/18	
(Des	signer)	(Sigr	nature)	(License #) (Date)	_

# UNIVERSITY OSTP Soil Observation Log



TYAT	VIOCINITIATIVA	] 2			(	Project ID:	200233000	v 03.19.15	温温度とく
Cli	Client/ Address:	BCAI	BCANS Enterprises / Kenneth Hunze	Cenneth Hunze	Legal Desc	Legal Description/ GPS:			
Soil parent n	Soil parent material(s): (Check all that apply)	heck all ti	o	Outwash • Lacustrine	o Loess a Till	- Alluvium	n Bedrock	ck ° Organic Matter	latter
Landscape P	Landscape Position: (check one)	k one)	° Summit ° Shoulder	ider   Back/Side Slope	e " Foot Slope	<ul> <li>Toe Slope</li> </ul>	Slope shape	conve	convex/linear
Vegetation		forest	Sc	Soil survey map units 40B	40B	Slope%	2.0	Elevation:	99
Weather Cor	Weather Conditions/Time of Day:	of Day:		afternoon/nice	/nice		Date	09,	09/19/18
Observatio	Observation #/Location:			1		Obser	Observation Type:	Sc	Soil Pit
Depth (in)	Texture	Rock	Matrix Color(s)	Mottle Color(s)	Redox Kind(s)	Indicator(s)	-	l Structure	
		rrag. %			(3)	110100001(3)	Shape	Grade	Consistence
0-6	Clay Loam	<35%	10YR 2/2				Granular	Moderate	Friable
6-14	Clay Loam	<35%	10YR 4/4		2		Prismatic	Strong	Friable
14-27	Clay	<35%	10YR 5/4				Platey	Strong	Friable
		; ;							
Comments	redox @ 24"								
hereby certi	ify that I have	completed	this work in accor	I hereby certify that I have completed this work in accordance with all applicable ordinances, rules and laws.	able ordinances, r	ules and laws.			
Sh	Shawn Hedlund		K	WAR.			2970		9/19/2018
(Desi	(Designer/Inspector)	[T]	1	(Signature)			(License #)		(Date)

# Additional Soil Observation Logs

Project ID: 20023300

ı	••	
	200233000	
	9 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	,



					rioject ib:	200233000	PROGRAM	に関する人
Client/ Address:	BCAN	BCANS Enterprises / Kenneth Hunze	enneth Hunze	Legal Desc	Legal Description/ GPS:			
Soil parent material(s): (Check all that apply)	eck all th		Outwash • Lacustrine	□ Loess □ Till	ill a Alluvium	um • Bedrock	ock o Organic Matter	Matter
Landscape Position: (check one)	one)	<ul> <li>Summit</li> <li>Shoulder</li> </ul>	ılder	pe      Foot Slope	<ul> <li>Toe Slope</li> </ul>	Slope shape	сопу	convex, linear
Vegetation fo	forest	So	Soil survey map units 40B	40B	Slope%	2.0	Elevation:	99
Weather Conditions/Time of Day:	of Day:		afternoon, nice	nice		Date		09/19/18
Observation #/Location:		,	2		Obse	Observation Type:	A	Auger
Depth (in) Texture	Rock	Matrix Color(s)	Mottle Color(s)	Redox Kind(s)	Indicator(c)		Structure-	
	Frag. %	7-7	(2)	(chally your	ווועורמנטו (ז)	Shape	Grade	Consistence
0-8 Clay Loam	<35%	10YR 2/2				Granular	Moderate	Frisklo
8-14 Clay Loam	<35%	10YR 4/4	The second section of the sec		Commission of the late of the commission of the			
i i				decision of the special section of	Other Common Change of	Prismatic	strong	Friable
14-26 Clay	<35%	10YR 5/4		Approximation of the control of the	The state of the s	Platey	Strong	Friable
Comments		redox @ 25"						
Observation #/Location:		ω			Obser	Observation Type:	Δι	Aliger
Depth (in) Texture	Rock	Matrix Color(s)	Mottle Color(s)	Redox Kind(s)	Indicator(s)	-	Structure	
	7350	10VD 272				Shape	Grade	Consistence
-	\0.0%	101K 2/2	The second secon		:	Granular	Moderate	Friable
	<35%	10YR 4/4				Prismatic	Strong	Friable
14-27 Clay	<35%	10YR 5/4				Platey	Strong	Friable
					:			
						1		
Comments redox @ 25"								



### Design Summary Page



Pump Tank 1 Capacity (Minimum): 500 Gal Pump Tank 2 Capacity (Minimum): Gal Pump Tank 1 Capacity (Recommended): 0 Gal Pump Tank 2 Capacity (Recommended): Gal Pump 1 29.0 GPM Total Head 15.8 ft Pump 2 GPM Total Head ft Supply Pipe Dia. 2.00 in Dose Vol: 100.0 Gal Supply Pipe Dia. 2.00 in Dose Vol: 100.0 Gal Supply Pipe Dia.	1. PROJECT INFORMATION	`	v 04.17.2018
Email Address: kenhunze@comcast.net	Property Owner/Client: BCANS Enterprises LLC./ Kenneth Hunze	Project ID:	200233000
Design FLOW & WASTE STRENGTH  Attach data / estimate basis for Other Establishments  Design Flow:  BOD:  mg/L TSS:  mg/L Oil & Grease:  mg/L  Treatment Level:  C Select Treatment Level C Or 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:  Comments:  4. SEPTIC TANK SIZING  A. Residential dwellings:  Number of Bedrooms (Residential):  3 Code Minimum Septic Tank Capacity: 1000 Gallons in 1 Tanks or Compartments  Recommended Septic Tank Capacity: 1000 Gallons in 1 Tanks or Compartments  B. Other Establishments:  Waste received by:  GAD x Days Hyd. Retention Time  = Code Minimum Septic Tank Capacity: Gallons in Tanks or Compartments  Recommended Septic Tank Capacity: Gallons in Tanks or Compartments  Model/Type:  B. Other Establishments:  GAD x Days Hyd. Retention Time  = Code Minimum Septic Tank Capacity: Gallons in Tanks or Compartments  Recommended Septic Tank Capacity: Gallons in Tanks or Compartments  Recommended Septic Tank Capacity: Gallons in Tanks or Compartments  Recommended 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 2 Capacity (Recommended): Gal  Pump Tank 1 Capacity (Recommended): Gal	Site Address: TBD/ Cedar Crest Resort, Waubun	Date:	9/19/2018
Design Flow: 450 GPD Anticipated Waste Type: BDD: mg/L TSS: mg/L Oil & Grease: 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: (Set @ 75% tank capacity)  4. SEPTIC TANK SIZING  A. Residential dwellings: Number of Bedrooms (Residential): 3  Code Minimum Septic Tank Capacity: 1000 Gallons in 1 Tanks or Compartments  Recommended Septic Tank Capacity: 1000 Gallons in 1 Tanks or Compartments  Effluent Screen & Alarm (Y/N): No Model/Type:  B. Other Establishments: GPD x Days Hyd. Retention Time = Code Minimum Septic Tank Capacity: Gallons in Tanks or Compartments  Effluent Screen & Alarm (Y/N): Gallons in Tanks or Compartments  Effluent Screen & Alarm (Y/N): Gallons in Tanks or Compartments  Effluent Screen & Alarm (Y/N): Gallons in Tanks or Compartments  Effluent Screen & Alarm (Y/N): Gallons in Tanks or Compartments  Effluent Screen & Alarm (Y/N): Gallons in Tanks or Compartments  Effluent Screen & Alarm (Y/N): Gallons in Tanks or Compartments  Effluent Screen & Alarm (Y/N): Gallons in Tanks or Compartments  Effluent Screen & Alarm (Y/N): Gallons in Gallons	Email Address: <u>kenhunze@comcast.net</u>	Phone:	4234431047
BOD: mg/L TSS: mg/L Oil & Grease: 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 Atarm: (Set @ 75% tank capacity)  Comments: 4. SEPTIC TANK SIZING  A. Residential dwellings: Number of Bedrooms (Residential): 3  Code Minimum Septic Tank Capacity: 1000 Gallons in 1 Tanks or Compartments  Recommended Septic Tank Capacity: 1000 Gallons in 1 Tanks or Compartments  Effluent Screen & Alarm (Y/N): No Model/Type:  B. Other Establishments: 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: Gallons in Tanks or Compartments  Effluent Screen & Alarm (Y/N): Model/Type: Gallons in Tanks or Compartments  Effluent Screen & Alarm (Y/N): Model/Type: Gallons in Tanks or Compartments  Effluent Screen & Alarm (Y/N): Model/Type: Gallons in Tanks or Compartments  Effluent Screen & Alarm (Y/N): Model/Type: Gallons in Tanks or Compartments  Effluent Screen & Alarm (Y/N): Model/Type: Gallons in Tanks or Compartments  Effluent Screen & Alarm (Y/N): Model/Type: Gallons in Tanks or Compartments  Effluent Screen & Alarm (Y/N): Model/Type: Gallons in Tanks or Compartments  Effluent Screen & Alarm (Y/N): Model/Type: Gallons in Tanks or Compartments	2. DESIGN FLOW & WASTE STRENGTH Attach data / estimate basis for Other Establish	ments	
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): 3  Code Minimum Septic Tank Capacity: 1000 Gallons in 1 Tanks or Compartments  Recommended Septic Tank Capacity: 1000 Gallons in 1 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 2 Capacity (Minimum): Gal  Pump Tank 1 Capacity (Recommended): Gal  Pump Tank 1 Capacity (Recommended): Gal  Pump Tank 1 Capacity (Recommended): Gal  Pump Tank 2 Capacity (Recommended): Gal  Pump Tank 1 Capacity (Recommended): Gal  Pump Tank 2 Capacity (Recommended): Gal	Design Flow: 450 GPD Anticipated \	Vaste Type:	
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: (Set @ 75% tank capacity)  4. SEPTIC TANK SIZING  A. Residential dwellings: Number of Bedrooms (Residential): 3  Code Minimum Septic Tank Capacity: 1000 Gallons in 1 Tanks or Compartments  Recommended Septic Tank Capacity: 1000 Gallons in 1 Tanks or Compartments  Effluent Screen & Alarm (Y/N): No Model/Type:  B. Other Establishments: 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  Fefluent Screen & Alarm (Y/N): Model/Type: Gallons In Tanks or Compartments  Recommended Septic Tank Capacity: Gallons In Tanks or Compartments  Fefluent Screen & Alarm (Y/N): Model/Type: Gallons In Tanks or Compartments  Fefluent Screen & Alarm (Y/N): Gallons In Tanks or Compartments  Recommended Septic Tank Capacity: Gallons In Tanks or Compartments  Fefluent Screen & Alarm (Y/N): Model/Type: Gallons In Tanks or Compartments  Fefluent Screen & Alarm (Y/N): Model/Type: Gallons In Tanks or Compartments  Fefluent Screen & Alarm (Y/N): Model/Type: Gallons In Tanks or Compartments  Fefluent Screen & Alarm (Y/N): Model/Type: Gallons In Tanks or Compartments  Fefluent Screen & Alarm (Y/N): Model/Type: Gallons In Tanks or Compartments  Fefluent Screen & Alarm (Y/N): Model/Type: Gallons In Tanks or Compartments  Fefluent Screen & Alarm (Y/N): Model/Type: Gallons In Tanks or Compartments  Fefluent Screen & Alarm (Y/N): Model/Type: Gallons In Tanks or Compartments  Fefluent Screen & Alarm (Y/N): Model/Type: Gallons In Tanks or Compartments  Fefluent Screen & Alarm (Y/N): Model/Type: Gallons In Tanks or Compartments  Fefluent Screen & Alarm (Y/N): Model/Type: Gallons In Tanks or Compartments  Ferland Tanks or Co	BOD: mg/L TSS: mg/L O	il & Grease:	mg/L
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): 3  Code Minimum Septic Tank Capacity: 1000 Gallons in 1 Tanks or Compartments  Recommended Septic Tank Capacity: 1000 Gallons in 1 Tanks or Compartments  Effluent Screen & Alarm (Y/N): No Model/Type:  B. Other Establishments: 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  Recommended Septic Tank Capacity: Gallons In Tanks or Compartments  Feffluent Screen & Alarm (Y/N): Model/Type: Gallons In Tanks or Compartments  Pump Tank 1 Capacity (Minimum): 500 Gal Pump Tank 2 Capacity (Minimum): Gall Pump Tank 1 Capacity (Recommended): Gall	Treatment Level: C Select Treatment Level C for residential s	ــ eptic tank efflu	lent
Code Minimum Holding Tank Capacity:  Gallons in Tanks or Compartments  Type of High Level Alarm:  Comments:  4. SEPTIC TANK SIZING  A. Residential dwellings: Number of Bedrooms (Residential):  Septic Tank Capacity:  No Gallons in 1 Tanks or Compartments  Recommended Septic Tank Capacity:  Waste received by:  Code Minimum Septic Tank Capacity:  Gallons in 1 Tanks or Compartments  Fifluent Screen & Alarm (Y/N):  No Model/Type:  B. Other Establishments:  Waste received by:  Gallons in Tanks or Compartments  Fifluent Screen & Alarm (Y/N):  Model/Type:  Secommended Septic Tank Capacity:  Gallons in Tanks or Compartments  Fifluent Screen & Alarm (Y/N):  Model/Type:  Secommended Septic Tank Capacity:  Gallons in Tanks or Compartments  Recommended Septic Tank Capacity:  Gallons in Tanks or Compartments  Fifluent Screen & Alarm (Y/N):  Model/Type:  Secommended Septic Tank Capacity:  Gallons in Tanks or Compartments  Fifluent Screen & Alarm (Y/N):  Model/Type:  Secommended Septic Tank Capacity:  Gallons in Tanks or Compartments  Fifluent Screen & Alarm (Y/N):  Model/Type:  Secommended Septic Tank Capacity:  Gallons in Tanks or Compartments  Fifluent Screen & Alarm (Y/N):  Model/Type:  Secommended Septic Tank Capacity:  Figure Tank 1 Capacity (Minimum):  Gallons in Tanks or Compartments  Fifluent Screen & Alarm (Y/N):  Model/Type:  Secommended Septic Tank Capacity:  Figure Tank 2 Capacity (Minimum):  Gallons in Tanks or Compartments  Fifluent Screen & Alarm (Y/N):  Figure Tank 2 Capacity (Minimum):  Gallons in Tanks or Compartments  Figure Tanks or Co	3. HOLDING TANK SIZING		
Code Minimum Holding Tank Capacity:  Gallons in Tanks or Compartments  Type of High Level Alarm:  Comments:  4. SEPTIC TANK SIZING  A. Residential dwellings: Number of Bedrooms (Residential):  Septic Tank Capacity:  No Gallons in 1 Tanks or Compartments  Recommended Septic Tank Capacity:  Waste received by:  Code Minimum Septic Tank Capacity:  Mo Model/Type:  B. Other Establishments:  Waste received by:  Gallons in Tanks or Compartments  Feroum Model/Type:  Gallons in Tanks or Compartments  For Days Hyd. Retention Time  Code Minimum Septic Tank Capacity:  Gallons in Tanks or Compartments  For Days Hyd. Retention Time  Code Minimum Septic Tank Capacity:  Gallons in Tanks or Compartments  Recommended Septic Tank Capacity:  Gallons in Tanks or Compartments  Recommended Septic Tank Capacity:  Gallons in Tanks or Compartments  For Days Hyd. Retention Time  Code Minimum Septic Tank Capacity:  Gallons in Tanks or Compartments  Recommended Septic Tank Capacity:  Gallons in Tanks or Compartments  For Days Hyd. Retention Time  Code Minimum Septic Tank Capacity:  Gallons in Tanks or Compartments  Recommended Septic Tank Capacity:  Gallons in Tanks or Compartments  For Days Hyd. Retention Time  Code Minimum Septic Tank Capacity:  Gallons in Tanks or Compartments  For Days Hyd. Retention Time  Code Minimum Septic Tank Capacity:  Gallons in Tanks or Compartments  For Days Hyd. Retention Time  Code Minimum Septic Tank Capacity:  Gallons in Tanks or Compartments  For Days Hyd. Retention Time  Code Minimum Septic Tank Capacity:  Gallons in Tanks or Compartments  For Days Hyd. Retention Time  Code Minimum Septic Tank Capacity:  Gallons in Tanks or Compartments  For Days Hyd. Retention Time  Code Minimum Septic Tank Capacity:  Gallons in Tanks or Compartments  For Days Hyd. Retention Time  Code Minimum Septic Tank Capacity:  Gallons in Tanks or Compartments  For Days Hyd. Retention Time  Code Minimum Septic Tank Capacity:  Gallons in Tanks or Compartments  For Days Hyd. Retention Time  Code Minimum Septic Tank Capacity:  Gallons	Minimum Capacity: Residential =400 gal/bedroom, Other Establishment = Design Flow x 5.0,	Minimum size	e 1000 gallons
Recommended Holding Tank Capacity:  Type of High Level Alarm:  Comments:  4. SEPTIC TANK SIZING  A. Residential dwellings: Number of Bedrooms (Residential):  Recommended Septic Tank Capacity:  No Gallons in 1 Tanks or Compartments  Recommended Septic Tank Capacity:  Effluent Screen & Alarm (Y/N):  No Model/Type:  B. Other Establishments:  Waste received by:  Code Minimum Septic Tank Capacity:  Gallons in Tanks or Compartments  For Days Hyd. Retention Time  Code Minimum Septic Tank Capacity:  Gallons in Tanks or Compartments  Recommended Septic Tank Capacity:  Gallons in Tanks or Compartments  Recommended Septic Tank Capacity:  Model/Type:  5. PUMP TANK SIZING  Pump Tank 1 Capacity (Minimum):  Gal  Pump Tank 2 Capacity (Minimum):  Gal  Pump Tank 2 Capacity (Recommended):  Gal  Pump Tank 2 Capacity (Recommended):  Gal  Pump Tank 2 Capacity (Recommended):  Gal  Pump Tank 1 Capacity (Recommended):  Gal  Pump Tank 2 Capacity (Recommended):  Gal	Code Minimum Holding Taul. Co		
Type of High Level Alarm:  Comments:  4. SEPTIC TANK SIZING  A. Residential dwellings: Number of Bedrooms (Residential):  3  Code Minimum Septic Tank Capacity: 1000 Gallons in 1 Tanks or Compartments  Recommended Septic Tank Capacity: 1000 Gallons in 1 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): Gal  Pump Tank 1 Capacity (Recommended): 0 Gal Pump Tank 2 Capacity (Recommended):	Paccommonded Helding T. J. C. J.	•	
A. Residential dwellings: Number of Bedrooms (Residential):    Code Minimum Septic Tank Capacity:   1000   Gallons   in   1   Tanks or Compartments	Typo of High Loyal Manual		
A. Residential dwellings: Number of Bedrooms (Residential):    Supply Pipe Dia, 2.00 in   Days Mission   Code Minimum   Code M			
Number of Bedrooms (Residential):  Code Minimum Septic Tank Capacity:  Recommended Septic Tank Capacity:  No Model/Type:  B. Other Establishments:  Waste received by:  GALLONS IN Tanks or Compartments  Foliation Time  Code Minimum Septic Tank Capacity:  GALLONS IN Tanks or Compartments  Recommended Septic Tank Capacity:  GALLONS IN Tanks or Compartments  Recommended Septic Tank Capacity:  GALLONS IN Tanks or Compartments  Fifluent Screen & Alarm (Y/N):  Model/Type:  5. PUMP TANK SIZING  Pump Tank 1 Capacity (Minimum):  GALLONS IN Tanks or Compartments  Fifluent Screen & Alarm (Y/N):  Model/Type:  Supply Pipe Dia. 2.00 in Pose Vol: 100.0 Gallons In Pump Tank Supply Pipe Dia. 2.00 in Pose Vol: 100.0 Gallons In Pump Tank Supply Pipe Dia. 2.00 in Pose Vol: 100.0 Gallons In Pump Tank Supply Pipe Dia. 2.00 in Pose Vol: 100.0 Gallons In Pump Tank Supply Pipe Dia. 2.00 in Pose Vol: 100.0 Gallons In Pump Tank Supply Pipe Dia. 2.00 in Pose Vol: 100.0 Gallons Pump Tank Supply Pipe Dia. 2.00 in Pose Vol: 100.0 Gallons Pump Tank Supply Pipe Dia. 2.00 in Pose Vol: 100.0 Gallons Pump Tank Supply Pipe Dia. 2.00 in Pose Vol: 100.0 Gallons Pump Tank Supply Pipe Dia. 2.00 in Pose Vol: 100.0 Gallons Pump Tank Supply Pipe Dia. 2.00 in Pose Vol: 100.0 Gallons Pump Tank Supply Pipe Dia. 2.00 in Pose Vol: 100.0 Gallons Pump Tank Supply Pipe Dia. 2.00 in Pose Vol: 100.0 Gallons Pump Tank Supply Pipe Dia. 2.00 in Pose Vol: 100.0 Gallons Pump Tank Supply Pipe Dia. 2.00 in Pose Vol: 100.0 Gallons Pump Tank Supply Pipe Dia. 2.00 in Pose Vol: 100.0 Gallons Pump Tank Supply Pipe Dia. 2.00 in Pose Vol: 100.0 Gallons Pump Tank Supply Pipe Dia. 2.00 in Pose Vol: 100.0 Gallons Pump Tank Supply Pipe Dia. 2.00 in Pose Vol: 100.0 Gallons Pump Tank Supply Pipe Dia. 2.00 in Pose Vol: 100.0 Gallons Pump Tank Supply Pipe Dia. 2.00 in Pose Vol: 100.0 Gallons Pump Tank Supply Pipe Dia. 2.00 in Pose Vol: 100.0 Gallons Pump Tank Supply Pipe Dia. 2.00 in Pose Vol: 100.0 Gallons Pump Tank Supply Pipe Dia. 2.00 in Pose Vol: 100.0 Gallons Pump Tank Supply Pipe	4. SEPTIC TANK SIZING		
Code Minimum Septic Tank Capacity: 1000 Gallons in 1 Tanks or Compartments  Recommended Septic Tank Capacity: 1000 Gallons in 1 Tanks or Compartments  Effluent Screen & Alarm (Y/N): No Model/Type:  B. Other Establishments:  Waste received by: Gallons In Tanks or Compartments  Recommended 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 2 Capacity (Minimum): Gal  Pump Tank 1 Capacity (Recommended): 0 Gal  Pump Tank 2 Capacity (Recommended): Gal	A. Residential dwellings:		
Recommended Septic Tank Capacity: 1000 Gallons in 1 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 2 Capacity (Minimum): Gal  Pump Tank 1 Capacity (Recommended): 0 Gal  Pump Tank 2 Capacity (Recommended): Gal  Pump Tank 3 Capacity (Recommended): Gal  Pump Tank 4 Capacity (Recommended): Gal  Pump Tank 5 Capacity (Recommended): Gal  Pump Tank 6 Capacity (Recommended): Gal  Pump Tank 7 Capacity (Recommended): Gal  Pump Tank 8 Capacity (Recommended): Gal  Pump Tank 9 Capacity (Recommended): Gal	Number of Bedrooms (Residential): 3		distilling personal
Recommended Septic Tank Capacity: 1000 Gallons in 1 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 2 Capacity (Minimum): Gal  Pump Tank 1 Capacity (Recommended): 0 Gal Pump Tank 2 Capacity (Recommended): Gal  Pump 1 29.0 GPM Total Head 15.8 ft Pump 2 GPM Total Head ft  Supply Pipe Dia. 2.00 in Pose Vol: 100.0 Gal Supply Pipe Dia. 2.00 in Po	Code Minimum Septic Tank Capacity: 1000 Gallons in 1 Tanks	or Compartm	ents
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 2 Capacity (Minimum):  Gal  Pump Tank 2 Capacity (Recommended):  Gal	Recommended Sentic Tank Capacitus 1000 C. II	·	net hadden
Waste received by:  GPD x  Days Hyd. Retention Time  Foode Minimum Septic Tank Capacity:  Gallons  In  Tanks or Compartments  Tanks or Compartments  Fifluent Screen & Alarm (Y/N):  Model/Type:  Fump Tank 1 Capacity (Minimum):  Days Hyd. Retention Time  Tanks or Compartments  Model/Type:  Fump Tanks or Compartments  Model/Type:  Fump Tank 2 Capacity (Minimum):  Gal  Pump Tank 2 Capacity (Recommended):  Fump Tank 2 Capacity (Recommended):  Gal  Fump Tank 2 Capacity (Recommended):  Fump Tank 2 Capacity (Recommended):  Fump Tank 2 Capacity (Recommended):  Gal  Fump Tank 2 Capacity (Recommended):  Gal  Fump Tank 2 Capacity (Recommended):  Fump Tank 2 Capacity (Recommended):  Gal  Fump Tank 2 Capacity (Recommended):  Fump Tank 2 Capacity (Recommended):  Gal		•	
= 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 2 Capacity (Minimum): Gal  Pump Tank 1 Capacity (Recommended): 0 Gal Pump Tank 2 Capacity (Recommended): Gal  Pump 1 29.0 GPM Total Head 15.8 ft Pump 2 GPM Total Head ft  Supply Pipe Dia, 2.00 in Pose Vol: 100.0 Gal S	B. Other Establishments:		
Gallons   In   Tanks or Compartments   Recommended   Septic Tank Capacity:   Gallons   In   Tanks or Compartments   Tanks or Compartments   Tanks or Compartments   Tanks or Compartments   Model/Type:     S. PUMP TANK SIZING   Pump Tank 1 Capacity (Minimum):   Soo   Gal   Pump Tank 2 Capacity (Minimum):   Gal   Pump Tank 1 Capacity (Recommended):   Gal   Pump Tank 2 Capacity (Recommended):   Gal   Supply Pipe Dia.   2.00   In   Dose Vol:   100 0   Gal   Supply Pipe Dia.   Supply Pipe Dia.   2.00   In   Dose Vol:   100 0   Gal   Supply Pipe Dia.   Supply Pipe Dia.   2.00   In   Dose Vol:   100 0   Gal   Supply Pipe Dia.   Supply Pipe Dia.   2.00   In   Dose Vol:   100 0   Gal   Supply Pipe Dia.   Supply Pipe Dia.   2.00   In   Dose Vol:   100 0   Gal   Supply Pipe Dia.   Supply Pipe Dia.   2.00   In   Dose Vol:   100 0   Gal   Supply Pipe Dia.   Supply Pipe Dia.   2.00   In   Dose Vol:   100 0   Gal   Supply Pipe Dia.   Supply Pipe Dia.   2.00   In   Dose Vol:   100 0   Gal   Supply Pipe Dia.   Supply Pipe Dia.   2.00   In   Dose Vol:   100 0   Gal   Supply Pipe Dia.   Supply Pipe Dia.   2.00   In   Dose Vol:   100 0   Gal   Supply Pipe Dia.   Supply Pipe Dia.   2.00   In   Dose Vol:   100 0   Gal   Supply Pipe Dia.   2.00   In   Dose Vol:   100 0   Gal   Supply Pipe Dia.   2.00   In   Dose Vol:   100 0   Gal   Supply Pipe Dia.   2.00   In   Dose Vol:   100 0   Gal   Supply Pipe Dia.   2.00   In   Dose Vol:   100 0   Gal   Supply Pipe Dia.   2.00   In   Dose Vol:   100 0   Gal   Supply Pipe Dia.   2.00   In   Dose Vol:   100 0   Gal   Supply Pipe Dia.   2.00   In   Dose Vol:   100 0   Gal   Supply Pipe Dia.   2.00   In   Dose Vol:   100 0   Gal   Supply Pipe Dia.   2.00   In   Dose Vol:   100 0   Gal   Dose V	Waste received by: GPD x	ays Hyd. Rei	ention Time
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 2 Capacity (Minimum): Gal Pump Tank 1 Capacity (Recommended): 0 Gal Pump Tank 2 Capacity (Recommended):	= Code Minimum Sentic Tank Canaditus		
Effluent Screen & Alarm (Y/N):  Model/Type:  5. PUMP TANK SIZING  Pump Tank 1 Capacity (Minimum):  500 Gal Pump Tank 2 Capacity (Minimum):  Gal Pump Tank 1 Capacity (Recommended):  0 Gal Pump Tank 2 Capacity (Recommended):  Supply Pipe Dia. 2.00 in Dose Vol: 100.0 Gal Supply Pipe Dia.	Recommended Sentic Tank Canacitus	·	
Pump Tank 1 Capacity (Minimum): 500 Gal Pump Tank 2 Capacity (Minimum): Gal Pump Tank 1 Capacity (Recommended): 0 Gal Pump Tank 2 Capacity (Recommended): Gal Pump 1 29.0 GPM Total Head 15.8 ft Pump 2 GPM Total Head ft Supply Pipe Dia. 2.00 in Dose Vol: 100.0 Gal Supply Pipe Dia. 2.00 in Dose Vol: 100.0 Gal Supply Pipe Dia.	Effluent Serger C. Al., O.C.	-	
Pump Tank 1 Capacity (Recommended):  O Gal Pump Tank 2 Capacity (Recommended):  Gal Pump 1 29.0 GPM Total Head 15.8 ft  Supply Pipe Dia. 2.00 in Dose Vol: 100.0 gal	5. PUMP TANK SIZING		
Pump Tank 1 Capacity (Recommended):  O Gal Pump Tank 2 Capacity (Recommended):  Gal Pump 1 29.0 GPM Total Head 15.8 ft  Supply Pipe Dia. 2.00 in Dose Vol: 100.0 gal	Pump Tank 1 Capacity (Minimum): 500 Gal Pump Tank 2 Capacity (A		
Pump 1 29.0 GPM Total Head 15.8 ft Pump 2 GPM Total Head ft  Supply Pipe Dia. 2.00 in Dose Vol: 100.0 gal Supply Pipe Dia.	Pump Tools 4 Connection (P	<u></u>	
Supply Pipe Dia. 2.00 in Dose Vol: 100.0 gal Supply Pipe Dia.	Pump 1 29 0 CD4 Table 1 45 0	· L	
	Supply Pipe Dia 2 00 in Dose Vely 100 0	Dose Vol:	Gal



### Design Summary Page



6. SYSTEM AND DIS	TRIBUTION TYPE		Project ID:	200233000	
Soil Treatment Type:	Mound		Distribution Typ	e: Pressure Distribution-	Level
Elevation Benchmark:	100	ft Bend	chmark Locatior	road height	
MPCA System Type:	Туре І	D	istribution Medi	a: Rock	
Type III/IV Details:					
7. SITE EVALUATION	SUMMARY:				
Describe Limiting Condi	tion: redox @	24"			
Limiting Condi	Depth tion: 24	inches 2.0	Elevation ft	n  ft	Terretablishing and the second
Minimum Req'd Separa	tion: 36	inches 3.0	ft	— Critical for syste	m compliance
Code Max System De	epth: Mound	inches	3.0	ft	·
Soil Text	cure: Clay Loar	n	Layers with	>35% Rock Fragments? (ye	s/no) No
Percolation R	late:	MPI		escribe below: % rock and	
Soil Hyd. Loading R	ate: 0.45	GPD/ft²		of soil credit and any addition Iressing the rock fragments	
Contour Loading R	ate: 12	Note:			
Measured Land Slo	ope: 2.0	% Note:			
Comme	nts:				
8. SOIL TREATMENT A	REA DESIGN SU	MMARY			
Trench:					
Dispersal Area	ft <sup>2</sup>	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 <sup>2</sup>	Sidewall Depth	in	Maximum Bed Depth	in
Bed Width	ft	Bed Length	ft	Designed Bed Depth	in
Mound:					
Dispersal Area	375.0 ft <sup>2</sup>	Bed Length	37.5 ft	Bed Width	10.0 ft
Absorption Width	26.0 ft	Clean Sand Lift	1.0 ft	Berm Width (0-1%)	ft
Upslope Berm Width	7.8 ft	Downslope Berm	20.0 ft	Endslope Berm Width	8.9 ft
Total System Length	55.2 ft	System Width	37.8 ft	Contour Loading Rate	12.0 gal/ft



### Design Summary Page



				Project ID:	20023300	00
At-Grade:						
Bed Width	ft	Bed Length		ft	Finished H	eight ft
Contour Loading Rate	gal/ft l	Jpslope Berm		]ft	Downslope	Berm ft
Endslope Berm	ft Sy	stem Length		]ft	System V	Vidth ft
Level & Equal Pressure	Distribution					
No. of Laterals	3 Perfora	ation Spacing	3	ft Per	foration Dian	neter 1/4 in
Lateral Diameter	2.00 in Min	Dose Volume	73	gal	Max Dose Vo	lume 113 gal
Non-Level and Unequal	Pressure Distribution	<del></del>				
Elevation (ft)	Pipe Size (in) Pipe Volume (gal/ft)	Pipe Length (ft)	Perf Size (in)	Spacing (ft)	Spacing (in)	Minimum Dose
Lateral 1						Volume
Lateral 2						gal
Lateral 3						<b></b>
Lateral 4						Maximum Dose
Lateral 5						Volume
Lateral 6						gal
9. Additional Info for	At-Risk, HSW or Typ	e IV Design				
A. Starting BOD Concer			OD (=== (L) )	/ 0 3E . 4 00		
gpd X	<u> </u>					
I		X 8.35 ÷ 1,00	· L		lbs. BOD/day	
B. Target BOD Concent	1		r			
gpd X	mg/L	X 8.35 ÷ 1,00	00,00 = [		lbs. BOD/day	
	Lb	s. BOD To Be	Removed:			
PreTreatment Tec	chnology:				*Must M	eet or Exceed Target
Disinfection Tec	chnology:				*Require	ed for Levels A & B
C. Organic Loading to S	Soil Treatment Area:				······································	
mg/L X	gpd	x 8.35 ÷ 1,00	0,000 ÷	f	t <sup>2</sup> =	lbs./day/ft²
10. Comments/Special [	Design Considerations	s:				
				····		
I hereby certify that	I have completed this	work in acco	rdance with	n all applica	ble ordinance	es, rules and laws.
Shawn Hedlund		TATE		i	970	9/19/2018
(Designer)		(Signature	, (	L	ense #)	(Date)

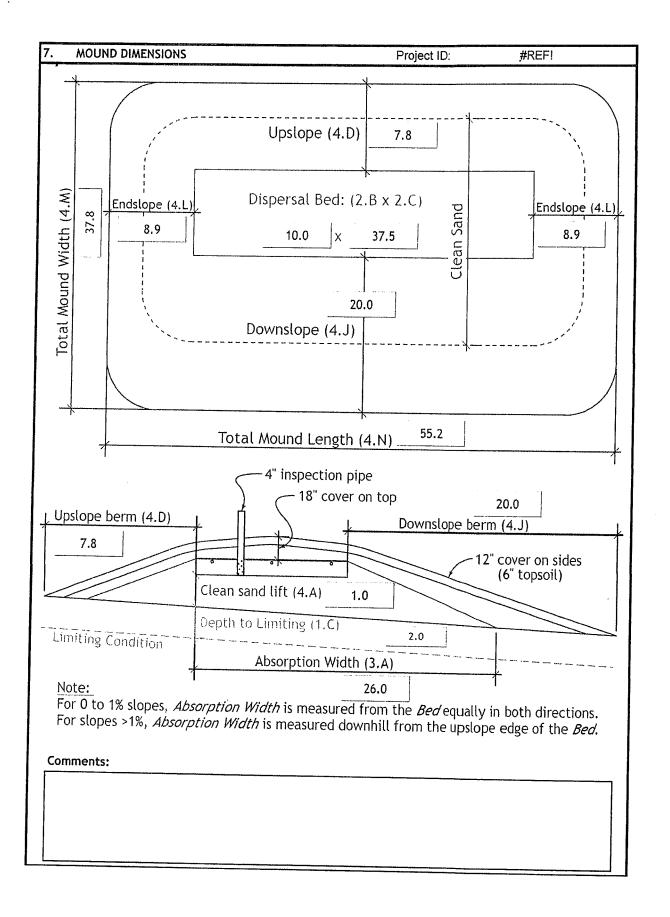


# Mound Design Worksheet ≥1% Slope



1.	SYSTEA	A SIZII	NG:		Proje	ct ID: 20	00233000			v 0	4.17.2018
	A. Design	Flow:		4	450	GPD		TAE	BLE IXa	1	
	B. Soil Loading Rate:		0	.45	GPD/ft <sup>2</sup>	LOADING RATES I					
	C. Depth t	o Lim	iting Condition:	2	2.0	ft			nt Level C		vel A, A-2, B,
	D. Percent	Land	Slope:	2	2.0	%	Percolation Rate (MPI)	Absorption Area Loading Rate	Mound Absorption Ratio	Absorption Area Loading Rate	Mound Absorption Ratio
	E. Design	Media	Loading Rate:	1	1.2	GPD/ft <sup>2</sup>	<0 1	(gpd/ft²)	1	(gpd/ft²)	1
	F. Mound	Absorp	otion Ratio:	2	.60		0 1 to 5	1.2	1	1.6	1
	<u></u>	······································	Table I				0.1 to 5 (fine sand and loamy fine sand)	0.6	2	1	1.6
	1	MOUN	D CONTOUR LOADING	RATES:		1	6 to 15	0.78	1.5	1	1.6
	Measured	Τ.	Tautura dani d	T	Conto	ur .	16 to 30	0.6	2	0.78	2
	Perc Rate	OR	Texture - derived mound absorption rati	o	Loadir		31 to 45	0.5	2.4	0.78	2
	-	,		]	Rate		46 to 60	0.45	2.6	0.6	2.6
	≤ 60mpi		1.0, 1.3, 2.0, 2.4, 2.6		±12		61 to 120	-	5	0.3	5.3
	-	١.			-	_	>120	-		•	
	61-120 mpi	OR	5.0		≤12	*5	ystems with th	oco voluo	s are not	Traclar	
	2 120 mpi*	'	E 01	1			Contour Loadii				
	_ 120 mpr		<b>∠5.0</b> '	'	£6°	-		commend			13 a
2.	DISPERS	AL M	DIA SIZING					***			
***************************************	A. Calculat	o Dice	oreal Rod Aron, Do		· · · · · · ·			_ ?			
•	·· Carculat		ersal Bed Area: De					_			
	L_	450	GPD ÷	1.	.2	GPD/ft <sup>2</sup>	= 375	ft²			
	lf a l	arger	dispersal media ar	ea is (	desired	enter si	ze:	ft <sup>2</sup>			ı
E			l Bed Width:	10							
			tour Loading Rate:		· · · · · · · · · · · · · · · · · · ·		n not exceed 1				
•								Rate			
-		10	ft <sup>2</sup> X 1.2		GPD/ft		12.0 gal/			xceed Tal	ole 1
L	. Calculate	Mini	mum Dispersal Bed	Lengt	th: Disp	ersal Bed	Area ÷ Bed V	Vidth = Be	ed Length	)	
		375	ft <sup>2</sup> ÷ 10.0	)	ft =	37.5	ft				
}.	ABSORPT	ION A	AREA SIZING		- Action				***************************************		
Α	. Calculate	Abso	rption Width: Bed	Width	Х Мон	nd Absor	ntion Ratio - A	Absorption	. Width		
		10.0			<u> </u>	26.0	ft	ansoi ptioi	i Widdi		İ
R	For slope	c \10/	the Absorption Wi		L						
U	Colonian	3 ~ 1/0,	the Absorption Wi	atn 1s	measu	red down	ihill from the u	ıpslope ed	ige of the	Bed.	
	Calculate	Dowi	nslope Absorption V	Vidth:	Absorp	tion Wid	th - Bed Width	า			
				26.	0 f	:	10.0 ft =	= 16.0	ft		
	DISTRIBU	TION	MEDIA: ROCK	***************************************			Project ID	:	#RE	F!	
A	. Rock Med	lia De	pth Below Distribut	ion Pi	ipe				*************		
	6	in	0.50 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
D. Actual Bed Length = Number of Components/row X Component Length:
components X ft =
E. Number of Rows = Bed Width divided by Component Width (Round up)
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 Minimum Clean Sand Lift: 3 feet minus Depth to Limiting Condition = Clean Sand Lift
3.0 ft - 2.0 ft = 1.0 ft Design Sand Lift (optional):  B. Upslope Height: Clean Sand Lift + Depth of Media + Depth of Cover cover (1 ft.)
1.0 ft + 0.8 ft + 1.0 ft = 2.8 ft
Upslope Berm         3:1         3.00         2.91         2.83         2.75         2.68         2.61         2.54         2.48         2.42         2.36         2.31         2.26         2.21
Ratio 4:1 4.00 3.85 3.70 3.57 3.45 3.33 3.23 3.12 3.03 2.94 2.86 2.78 2.70
C. Select Upslope Berm Multiplier (based on land slope): 2.83
D. Calculate Upslope Berm Width: Multiplier X Upslope Mound Height = Upslope Berm Width
2.83 ft X 2.8 ft = 7.8 ft
E. Calculate Drop in Elevation Under Bed: Bed Width X Land Slope ÷ 100 = Drop (ft)
10.0 ft X 2.0 % ÷ 100 = 0.20 ft
F. Calculate Downslope Mound Height: Upslope Height + Drop in Elevation = Downslope Height
2.8   ft +   0.20   ft =   3.0   ft   Land Slope %   0   1   2   3   4   5   6   7   8   0   10   11   12
Dayreigns   211   200   200   210   221   200   210   211   12
Berm Ratio 4:1 4.00 4.17 4.35 4.54 4.76 5.00 5.26 5.56 5.88 6.25 6.67 7.14 7.69
G. Select Downslope Berm Multiplier (based on land slope): 3.19
H. Calculate Downslope Berm Width: Multiplier X Downslope Height = Downslope Berm Width
3.19 x 3.0 ft = 9.4 ft
I. Calculate Minimum Berm to Cover Absorption Area: Downslope Absorption Width + 4 feet
16.0 ft + 4 ft = $20.0$ ft
J. Design Downslope Berm = greater of 4H and 4I: 20.0 ft
K. Select Endslope Berm Multiplier: 3.00 (usually 3.0 or 4.0)
L. Calculate Endslope Berm X Downslope Mound Height = Endslope Berm Width
3.00 ft $\times$ 3.0 ft = 8.9 ft
M. Calculate Mound Width: Upslope Berm Width + Bed Width + Downslope Berm Width
7.8 ft + 10.0 ft + 20.0 ft = 37.8 ft
N. Calculate Mound Length: Endslope Berm Width + Bed Length + Endslope Berm Width
8.9 ft + 37.5 ft + 8.9 ft = $55.2$ ft





### Mound Materials Worksheet



Project ID: 200233000 v 04.17.2018
A. Rock Volume: (Rock Below Pipe + Rock to cover pipe (pipe outside dia + ~2 inch)) X Bed Length X Bed Width = Volume
( 6 in + 4 ) $\div$ 12 37.5 ft X 10.0 ft = 312.5 ft <sup>3</sup>
Divide ft <sup>3</sup> by 27 ft <sup>3</sup> /yd <sup>3</sup> to calculate cubic yards: $312.5$ ft <sup>3</sup> ÷ 27 = $11.6$ yd <sup>3</sup>
Add 30% for constructability: $11.6   yd^3 \times 1.3 = 15.0   yd^3$
B. Calculate Clean Sand Volume:
Volume Under Rock bed: Average Sand Depth x Media Width x Media Length = cubic feet
0.9 ft X 10.0 ft X 37.5 ft = 318.8 $ft^3$
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)
ft - 1) X X ft =
Volume from Width = ((Upslope Mound Height - 1) X Absorption Width Beyond Bed X Media Bed Width)
ft - 1) X X ft =
Total Clean Sand Volume: Volume from Length + Volume from Width + Volume Under Media
$ft^3 + ft^3 + ft^3 = ft^3$
For a Mound on a slope greater than 1%
Upslope Volume: ((Upslope Mound Height - 1) $\times$ 3 $\times$ Bed Length) $\div$ 2 = cubic feet
$(($ 2.8 $ft - 1)$ X 3.0 ft X 37.5 $) \div 2 = $ 98.4 $ft^3$
Downslope Volume: ((Downslope Height - 1) x Downslope Absorption Width x Media Length) ÷ 2 = cubic feet
$(( 3.0 ft - 1) X 16.0 ft X 37.5 ) \div 2 = 585.0 ft^3$
Endslope Volume: (Downslope Mound Height - 1) x 3 x Media Width = cubic feet
( 3.0 ft - 1) X 3.0 ft X 10.0 ft = $58.5$ ft <sup>3</sup>
Total Clean Sand Volume : Upslope Volume + Downslope Volume + Endslope Volume + Volume Under Media
98.4 $ft^3 + 585.0$ $ft^3 + 585.5$ $ft^3 + 318.8$ $ft^3 = 1060.7$ $ft^3$
Divide ft <sup>3</sup> by 27 ft <sup>3</sup> /yd <sup>3</sup> to calculate cubic yards:
Add 30% for constructability: $39.3   yd^3 X   1.3 = 51.1   yd^3$
C. Calculate Sandy Berm Volume:
Total Berm Volume (approx): ((Avg. Mound Height - 0.5 ft topsoil) x Mound Width x Mound Length) ÷ 2
( 2.9 - 0.5 )ft X 37.8 ft X 55.2 ) $\div$ 2 = 2450.6 ft <sup>3</sup>
Total Mound Volume - Clean Sand volume -Rock Volume = cubic feet
2450.6 $ft^3$ - 1060.7 $ft^3$ - 312.5 $ft^3$ = 1077.4 $ft^3$
Divide ft <sup>3</sup> by 27 ft <sup>3</sup> /yd <sup>3</sup> to calculate cubic yards: $1077.4$ ft <sup>3</sup> ÷ 27 = $39.9$ yd <sup>3</sup>
Add 30% for constructability: $39.9   yd^3 \times 1.2 = 51.9   yd^3$
D. Calculate Topsoil Material Volume: Total Mound Width X Total Mound Length X .5 ft
27 9 G V FF 9
Divide ft <sup>3</sup> by 27 ft <sup>3</sup> /yd <sup>3</sup> to calculate cubic words: $\begin{bmatrix} 1042.8 \\ 1042.8 \end{bmatrix}$
Add 30% for constructability:
Add 30% for constructability:



### Pressure Distribution Design Worksheet



					·····	Project	t ID: 20023300	0			v (	04.17.2018
1.	Media Bed Wid	ith:					10 ft					
2.	Minimum Num	ber of L	aterals	in syste	m/zone	= Roun	ded up number	of I(Med	lia Bed \	Width - 4	4) ÷ 31 +	· 1.
		_		<del></del> -		r	<del></del> 1				-, -,	
		[(	10	4	) ÷ 3] +	1 = [	late	erals	Doe	s not ap	ply to a	t-grades
3.	Designer Selec	ted Nur	nber of	Latera	ls:	Γ	3 late	erals				
	Cannot be less					es) _		140		Invision de	exten	
4.	Select <i>Perfora</i>	tion Sp	acing:				3.0 ft	<b>3</b> 1560	4900	Soil es		門公司
5.	Select <i>Perfora</i>	tion Dic	ımeter S	Size:		Ē	1/4 in	/ * perto	Gen tetions spaced P	apart 1152	raun of rock	
6.	Length of Late				th - 2 Fe	et.	]'''		6" of re-		oration spacing 2	. to f.
	38		ft =	L			Perforation can			•	•	•
7.	Determine the	Numbe	r of Per	foration	Spaces	. Divid	e the <i>Length of</i>	Lateral	s by th	e Perfoi	ration S	pacing
	and round dow				number	•						
	Number of Per	foratio	า <b>S</b> paces	: =	36	ft	÷ 3	ft	=	12	Sp	aces
	Number of Per	foratio	ns per La	ateral i	s equal 1	to 1.0 p	lus the <i>Number</i>	— of Perfe	oration	Spaces .	 Check	table
8.	below to verify	the nu	mber of	perfora	itions pe	r latera	al guarantees les	s than a	a 10% di	scharge	variatio	n. The
	value is double	with a	center r	nanifolo	i.							
	Per	<b>foratio</b> r	ns Per Lo	ateral =	12	2 S	paces + 1 =		13	Perfs. P	er Later	ral
		Max	cimum Nun	ber of Per	forations P	er Lateral	to Guarantee <10% D	ischarge V				
		1/4 Inch	Perforation	ns			The desirance of the second		Inch Perfo	rations	<del></del>	
Perfe	oration Spacing (Feet)		Pipe I	Diameter (	Inches)		Perforation Spacing	·		Diameter (I	nches)	
		1	154	11/2	2	3	(Feet)	1	11/4	11/2	2	3
	2	10	13	18	30	60	2	11	16	21	34	68
	21/2	8	12	16	28	54	21/1	10	14	20	32	64
	3	8	12	16	25	52	3	9	14	19	30	60
		3/16 Inch	Perforation					1/81	nch Perfor			
Perfo	ration Spacing (Feet)		7	Diameter (I	<del></del>		Perforation Spacing		Pipe (	Diameter (1	nches)	
	2	12	11/4	11/2	46	3	(Feet)	1	11/4	11/2	2	3
····	212	12	17	24	40	87 80	2 21/2	21	33	44	74	149
	3	12	16	22	37	75	3	20	30	41	69	135
9.	T-4-124		<u> </u>		L		L		29	38	64	128
7.	Total Number of Perforated Late	f Perfoi rais	ations (	equals t	he <i>Num</i>	ber of F	Perforations per	Latera	<i>l</i> multip	olied by	the <i>Nun</i>	nber of
		Tuis.										
	13 Per	f. Per L	at. X	3	N	umber	of Perf. Lat. =	3	9	Гotal Nu	mber of	Perf.
10.	Select Type of M	Manifold	l Connec	tion (E	nd or Ce	enter):	End	]	<u>-</u>			
1.	Select Lateral D	iametei	r (See To	able):			2.00	in				



### Pressure Distribution Design Worksheet



12.	Calculate the Square Feet per Perforation. Recommended value is 4-11 ft <sup>2</sup> per perf	oration.	
	Does not apply to At-Grades		
a.	Bed Area = Bed Width (ft) X Bed Length (ft)		
	10 ft X 38 ft = 380 ft <sup>2</sup>		
b.	Square Foot per Perforation = Bed Area divided by the Total Number of Perforations	5.	
	$ft^2$ ÷ 39 perforations = 9.7 $ft^2$ /perforation	ns	
13.	Select Minimum Average Head: 1.0 ft		
14.	Select Perforation Discharge (GPM) based on Table: 0.74 GPM per	Perforation	1
15.	Determine required Flow Rate by multiplying the Total Number of Perfs. by the Pe	erforation [	ischarge.
	39 Perfs X 0.74 GPM per Perforation = 29 GPM		
16.	Volume of Liquid Per Foot of Distribution Piping (Table II): 0.170 Gallons/	ft	
17.	Volume of Distribution Piping =	-	le II
	= [Number of Perforated Laterals X Length of Laterals X (Volume of	l .	f Liquid in
	Liquid Per Foot of Distribution Piping]		pe
	3 X 36 ft X 0.170 gal/ft = 18.4 Gallons	Pipe Diameter (inches)	Liquid Per Foot (Gallons)
18.	Minimum Delivered Volume = Volume of Distribution Piping X 4	1	0.045
	18.4 gals X 4 = 73.4 Gallons	1.25 1.5	0.078
		2	0.170
	manifold pipe ,	3	0.380
	oing from pump		0.001
	pipe from pump		
clean out	Manifold pipe		
	alternate location		
	of pipe from pump	Altern	ate location
	R		e from pump
		Pipe from pump	
Comme	nts/Special Design Considerations:		



### Basic Pump Selection Design Worksheet



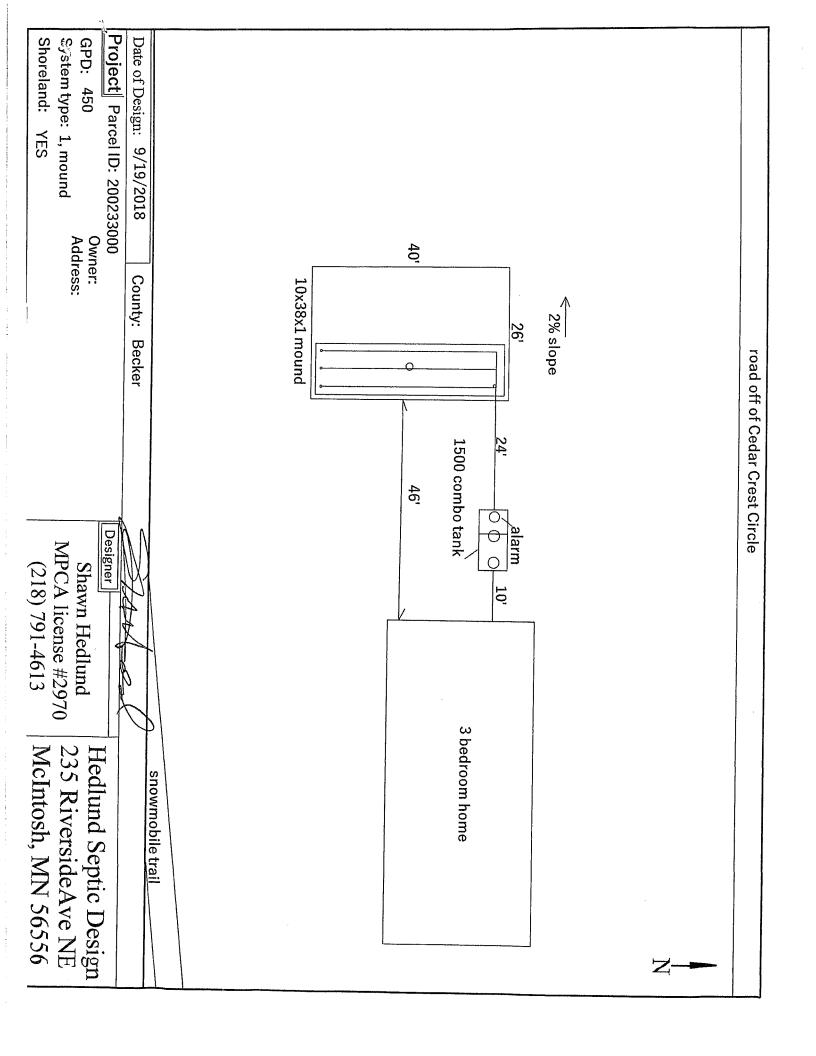
1.	PUMP CAPACITY Project ID:	200233000				٧	04.17.2018
	Pumping to Gravity or Pressure Distribution: Pre-	ssure					
	1. If pumping to gravity enter the gallon per minute of the pump:		GPM (10 · 45	gpm)			
	2. If pumping to a pressurized distribution system:	29.0	GPM				
	3. Enter pump description:		Demand Dosing				
2.	HEAD REQUIREMENTS	<u> </u>				Soil	treatment system soint of discharge
	Elevation Difference 10 ft						60°00°
"	between pump and point of discharge:			Supply lin	e length		
В.	Distribution Head Loss: 5 ft	inlet pipe			Elevation difference	,,,,,	
c.	Additional Head Loss: ft (due to special equipment,	etc.)				<del>]</del>	
		, F——I,					
	Distribution Head Loss		Table I. Friction	T'			
G	ravity Distribution = Oft		Flow Rate (GPM)	Pip 1	e Diame	T	7
Р	ressure Distribution based on Minimum Average Hea	ad	10	9.1	3.1	1.5	0.3
<u>  [                                   </u>	alue on Pressure Distribution Worksheet:		12	12.8	4.3	1.8	0.4
-	Minimum Average Head Distribution Head Lo	oss	14	17.0	5.7	2.4	0.6
一	1ft 5ft 2ft 6ft		16	21.8	7.3	3.0	0.7
E	5ft 10ft		18		9.1	3.8	0.9
			20		11.1	4.6	1.1
D.	1. Supply Pipe Diameter: 2.0 in	•	25 30		16.8 23.5	6.9	1.7
	2.5		35		23.5	9.7 12.9	3.2
	2. Supply Pipe Length: 30 ft		40			16.5	4.1
E.	Friction Loss in Plastic Pipe per 100ft from Table I:		45			20.5	5.0
			50				6.1
	Friction Loss = 2.23 ft per 100ft of pipe		55				7.3
F.	Determine Equivalent Pipe Length from pump discharge to soil dispersal a	area discharge	60			1	8.6
	point. Estimate by adding 25% to supply pipe length for fitting loss. Supp	ly Pipe Length	70				10.0
	(D.2) X 1.25 = Equivalent Pipe Length		75				13.0
	30 ft X 1.25 = 37.5 ft		85	ĺ			16.4
۔ د			95				20.1
<b>u.</b>	Calculate Supply Friction Loss by multiplying Friction Loss Per 100ft (Line Supply Friction Loss =	E) by the Equi	ivalent Pipe Lengtl	(Line F)	and divid	e by 100.	
ſ	2 22		<del></del>				
		+ 100	= 0.8				
н. ;	Total Head requirement is the sum of the Elevation Difference (Line A), to the Supply Friction Loss (Line G )	he Distribution	Head Loss (Line B	, Additior	nal Head L	oss (Line	C), and
	10.0 ft + 5.0 ft +	ft +	0.8 ft	=	15.8	ft	
. PI	UMP SELECTION				13.0		
1	A pump must be selected to deliver at least 29.0 GPM (Line	1 or Line 2) w	rith at least	15.8	feet	of total h	ead.
omn	nents:						
				···········			
							ļ
							-



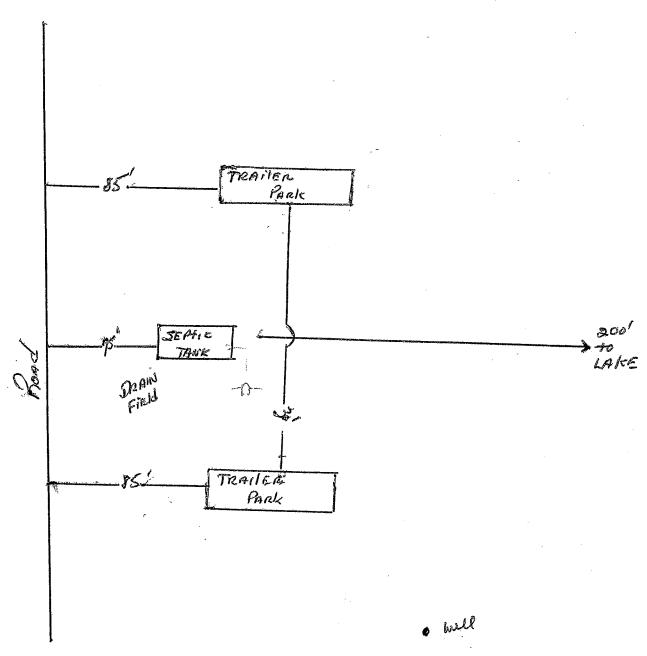
### Pump Tank Design Worksheet (Demand Dose)



	DETER	RMINE TANK CAPACITY AND	DIMENSIONS		Pr	oject ID:	200233000		v 04.17.2018
1.	. A.	Design Flow (Design Sum. 1	A):	450	GPD				
	В.	Min. required pump tank	capacity:	500	Gal C.Re	commended	pump tank capacity:		Gal
2.	Α.	Tank Manufacturer:	Brown		B. Tank	Model:	1500 combo	)	
	c.	Capacity from manufactur	rer:	500	Gallons	'	Note: Design calculations a Substituting a different tar		•
	D.	Gallons per inch from mar	nufacturer:	11.0	Gallons per in	ch	float or timer settings. Cor necessary.		
	Ε.	Liquid depth of tank from	manufacturer:	45.0	inches		·		
DE	TERMINE	E DOSING VOLUME					***************************************		
3	Calcula is reco	ate Volume to Cover Pump (	The inlet of the pump mus	t be at least 4-inc	hes from the b	ottom of the	pump tank & 2 inches of w	ater covering the	pump
	(Pump	and block height + 2 inches)	X Gallons Per Inch (2C or )	3E)					
			2 inches) X 11		er Inch	= [	165 Gallons		
4	Minim	um Delivered Volume = 4 X	Volume of Distribution Pip	ing:		L			
	- Line 1	17 of the Pressure Distributio	on or Line 11 of Non-level			ſ	73 Gallons (m	ninimum dose)	
5	Calcula	te Maximum Pumpout Volun	ne (25% of Design Flow)			L			
	Design	Flow: 45	0 GPD X	0.25	=	ſ	113 Gallons (m	naximum dose)	
6	Select a	a pumpout volume that mee	ts both Minimum and Maxir	пит:	100	Gallons			
í		te <i>Doses Per Day =</i> Design Fl		L			i	f Liquid in	
		450 gpd ÷		gal =	4.50	Doses	<del></del>	pe	
8	Calculat	te Drainback:	L	Ļ			Pipe	Liquid	
	A.	Diameter of Supply Pipe =		2	inches	i	Diameter	Per Foot	
	В.	Length of Supply Pipe =		<u> </u>			(inches)	(Gallons)	i
				30	feet		1 25	0.045	
	С.	Volume of Liquid Per Linea		0.17	- Juditon	s/ft	1.25	0.078	
	D.	Drainback = Length of Supp	ly Pipe X Volume of Liquid	l Per Lineal Foot	of Pipe		1.5	0.110	
_		30 ft X	0.170 gal/ft	= 5.1	Gallon	s	3	0.170	
у.	Total Do	osing Volume = Delivered Vo					4	0.380	
40	111-1	100 gal +	5.1 gal =	1	iallons			0.001	
10.	MINIMUM	n Alarm Volume = Depth of a			k				
	l	2 in X	11.0 gal/in =	= 22.0	Gallon	5			
		SE FLOAT SETTINGS							
		e Float Separation Distance				·			
	Total Do:	sing Volume /Gallons Per Inc	ch	_		_			
	L	105 gal ÷	11.0	gal/in =	9.6	Inches		_	
		g from bottom of tank:				in:	ches for Dose: 9.6 in		
А.	Distance [	to set Pump Off Float = Pun	np + block height + 2 inche	s					<b>F</b> . I
D	Dia	13 in +		in = 15	Inches	Al	arm Depth 26.6 in	T	
Ď.	istance اتنان	to set Pump On Float=Distan		+ Float Separation	n Distance	Pu	mp 0n <b>24.6</b> in	22.0 Ga	1
_	Distant.	15 in +		n = 25	Inches	Pu	mp Off <b>15.0</b> in	105 Ga	. ] ] ]
·. i	oistance .	to set Alarm Float = Distance			inches)			165 Ga	
		25 in +	2.0	in = 27	Inches				



Scale: Each grid equalsfeet/inches.	GRID PLAN SKETCHING FORM
Application for Building Permit Dated	19
Application for Sewage System Permit Dated	5-4 19 23
Building Permit Number	_ Sewage System Permit Number
Applicant agrees that this plot plan is a part of app	lication (s) indicated above.
Dated	Stoket Q Wysepl



W — File Y — Owner B — Building Inspector

### CEDAR CREST RESORT

RESTURANT

each seat 40

x75

 $\overline{3000}$  gallons per day

each employee

13 x3

39 gallons per day

HOUSE

650 gallons per day

3689 gallons per day

3 1500 gallon septic tanks

### Cedar Crest Resort

1981 - the existing resort consisted of 8 cabins, 6 until lodge and 16 trailers, for a total of 30 units.

1981 - a conditional use permit was approved to increase the resort by 30 units, total of 60 units.

1999 - a permit was issued to increase the number of units by 6 for a grand total of 66 units.

Tier calculations to determine whether or not an existing resort could expand would allow

11 in the first tier

17 in the second tier 22 in the third tier 50 total units.

5-5-10 State Dept of Health has resert
licensed as 18 cabins
34 sites
21 mobile home park

Hold 73



520 Lafayette Road North St. Paul, MN 55155-4194

Existing Su

oilibriance mishecrion i oi in
bsurface Sewage Treatment Systems (SSTS)
SCANIEL Compliance and Enforcement
For local tracking purposes: ay also apply.  MAY 28 2019
ZONING
-5-23-2019 to include all panels
☐ Noncompliant – Notice of Noncompliance (See Upgrade Requirements on page 3.)
e)
) – Imminent threat to public health and safety ent #3) – Imminent threat to public health and safety to protect groundwater
ent #3) – Failing to protect groundwater
ig to protect groundwater pliance Component #5) – Noncompliant
Included \$200549000*
ID# or Sec/Twp/Range: 20054 6000
Reason for inspection:  Owner's phone: 210-740-3144
S Owner's priorie.
Representative phone:
Regulatory authority phone:
system 2-1500 gol lank, lill stoken
system 2-1500 gol barke lill stokon
그 사람들 병자 시작하는 그는 그는 이 사람들 생각하는 것으로 다 했다.
The result of the second of th
ered to determine the compliance status of this system. No made due to unknown conditions during system construction, water usage.
Certification number:
4130

Inspection requirements

on Control Agenc il requirements m

rnment (LUG) a

System S

Submit com

within 15 da

System status on date (mm/dd/yyyy):

M Compliant - Certificate of Compliance

(Valid for 3 years from report date, unless shorter time frame outlined in Local Ordinance.)

Reason(s) for noncompliance (check all applicable

Impact on Public Health (Compliance Component #1

Other Compliance Conditions (Compliance Compone

☐ Tank Integrity (Compliance Component #2) - Failing

Other Compliance Conditions (Compliance Compone

Soil Separation (Compliance Component #4) - Failing

Operating permit/monitoring plan requirements (Com

4-homes **Property Information** 

or parcel

Owner's representative: Local regulatory authority:

Comments or recommendations:

Brief system description:

Property address: 291.70 Property owner: Jan

Certification

I hereby certify that all the necessary information has been gathe determination of future system performance has been nor can be possible abuse of the system-inadequate maintenance, or future

Inspector name: Business name:

Inspector signature:

License number: Phone number:

**Necessary or Locally Required Attachments** 

Soil boring logs

System/As-built drawing

☐ Forms per local ordinance

Other information (list):

Impact on Public Health –  Compliance criteria:	A 17	Verification method(s):
System discharges sewage to the ground surface.	☐ Yes 风No	A-Searched for surface outlet
System discharges sewage to drain tile or surface waters.	☐ Yes   No	Searched for seeping in yard/backup in home Excessive ponding in soil system/D-boxes
System causes sewage backup into dwelling or establishment.	Yes 🖾 No.	☐ Homeowner testimony (See Comments/Explanation) ☐ "Black soil" above soil dispersal system
Any "yes" answer above in system is an imminent thre health and safety.		☐ System requires "emergency" pumping ☐ Performed dye test ☐ Unable to verify (See Comments/Explanation) ☐ Other methods not listed (See Comments/Explanation)
Comments/Explanation:	· · · · · · · · · · · · · · · · · · ·	Other memods not listed (see comments/Explanation)
	•	
·		
·		
Tank Integrity - Compliance	e component #2 of 5	
Compliance criteria:	- component na or o	Verification method(s):
	Diver Dive	
System consists of a seepage pit, cesspool, drywell, or leaching pit.	Yes No	Probed tank(s) bottom
Seepage pits meeting 7080.2550 may be	,	Examined construction records
compliant if allowed in local ordinance.	<i>4.</i>	Examined Tank Integrity Form (Attach)
Sewage tank(s) leak below their	☐ Yes ☐ No	☐ Observed liquid level below operating depth ☐ Examined empty (pumped) tanks(s)
designed operating depth.		Probed oulside tank(s) for "black soil"
If yes, which sewage tank(s) leaks:		Unable to verify (See Comments/Explanation)
Any "yes" answer above in		☐ Other methods not listed (See Comments/Explanation)
system is failing to protect	groundwater.	Land Cities The medical for motion for continuing Expandition)
Comments/Explanation:	•	
Other Course It as a second		
Other Compliance Condition		
a. Maintenance hole covers are dar	naged, cracked, unsecured,	or appear to be structurally unsound. ☐ Yes* ÆNo ☐ Unkr
b. Other issues (electrical hazards, etc *System is an imminent threat		sely impact public health or safety.  ☐ Yes*  ☐ You ☐ Unkr
Explain:	••	, , , , , , , , , , , , , , , , , , ,
	٠.	
	; <b>ç</b> ,	
c. System is non-protective of grounds		as determined by inspector .
*System is failing to protect gr	oundwater.	. •
Explain:		

oate of installation:	<b>Z</b> -Unknown	Verification method(s):	
(mm/dd/yyyy) Shoreland/Wellhead protection/Food beverage odging?	⊈Yes □ No	Soil observation does not expire. Pre- observations by two independent part unless site conditions have been alter	ties are sufficient,
Compliance criteria:		requirements differ.	och horing lags)
For systems built prior to April 1, 1996, and not located in Shoreland or Wellhead	☐ Yes ☐ No	☐ Conducted soil observation(s) (Attach  Two previous verifications (Attach	
Protection Area or not serving a food,		☐ Not applicable (Holding tank(s), no c	
beverage or lodging establishment:		Unable to verify (See Comments/Ex	
Drainfield has at least a two-foot vertical separation distance from periodically saturated soil or bedrock.		☐ Other (See Comments/Explanation)	picination
Non-performance systems built April 1, 1996, or later or for non-performance systems located in Shoreland or Wellhead Protection Areas or serving a food, beverage, or lodging establishment:	☑ Yes □ No	Comments/Explanation:	
Drainfield has a three-foot vertical separation distance from periodically saturated soil or bedrock.*			
"Experimental", "Other", or "Performance"	☐ Yes ☐ No	Indicate depths or elevations	
systems built under pre-2008 Rules; Type IV or V systems built under 2008 Rules (7080.		A. Bottom of distribution media	2411
2350 or 7080.2400 (Advanced Inspector License required)		B. Periodically saturated soil/bedrock	60"
Drainfield meets the designed vertical		C. System separation	361
separation distance from periodically saturated soil or bedrock.		-	76.6
	<u> </u>	D. Required compliance separation*  *May be reduced up to 15 percent if	allowed by Local
Any "no" answer above indicates t failing to protect groundwater.	ne system is	Ordinance.	•
iaming to protoct groundings.			
. Operating Permit and Nitroge	a RMD* Compli	ence component #5 of 5	iot applicable
		es No If "yes", A below is requir	
Is the system operated under an Operating		· · ·	
Is the system required to employ a Nitroge	<del>-</del>		
BMP = Best Management Practice(s)			•
If the answer to both questions is "	no", this section o	loes not need to be completed.	
Compliance criteria	. *		
a. Operating Permit number:		☐ Yes ☐ No	
Have the Operating Permit requirem	ents been met?	Lies Lino	
		ı	

Property address:

Inspector initials/Date:

Upgrade Requirements (Minn. Stat. § 115.55) An imminent threat to public health and safety (ITPHS) must be upgraded, replaced, or its use discontinued within ten months of receipt of this notice or within a shorter period if required by local ordinance. If the system is failing to protect ground water, the system must be upgraded, replaced, or its use discontinued within the time required by local ordinance. If an existing system is not failing as defined in law, and has at least two feet of design soil separation, then the system need not be upgraded, replaced, or its use discontinued, notwithstanding any local ordinance that is more strict. This provision does not apply to systems in shoreland areas, Wellhead Protection Areas, or those used in connection with food, beverage, and lodging establishments as defined in law.

h & lake 10-60 sandy loom Inspection does not Imply or garrantee future hydralic functioning, only what Conditions were bound on date of Ingection

Pink – Assessor 829 LAKE AVF 3OX 787 — Phone 218-847-4427 — Detroit Lakes ″³inn. 56501 Date Goldenrod — Inspector APPLICATION FOR BUILLING OR SEWAGE PERMIT AND CERTIFI E OF OCCUPANCY LEGAL FIRE NUMBER DESCRIPTION AND LOCATION Lake No. Lake Classif. Range IDENTIFICATION: Please Print All Information Last Name Initial Mailing Address- No. Street, City and State Zip No. Tel. No disk DEWER PULL TYPE OF IMPROVEMENT: RESIDENTIAL PROPOSED USE: NON-RESIDENTIAL PROPOSED USE: ( )/New Building ( ) Alteration ( ) One Family Dwelling Specify: Other ( ) Multiple Dwelling \_ Units ESTIMATED COST OF IMPROVEMENT \$ Construction Starting Date: PRINCIPAL TYPE OF FRAME & BUILDING TYPE OF SEWAGE DISPOSAL: DIMENSIONS ( ) Masonry ( ) Public Basement: ( ) Yes ( ) No ( ) Wood Frame ) Garage ( ) Individual Septic Tank, etc. Stories above basement: ( ) Structural Steel ) Mobile Home WATER SUPPLY: Sq. feet (outside dimension) ..... ) Other - Specify Year . ( ) Public ( ) Individual Well ( ) Cottage ( ) Septic System MECHANICAL EQUIPMENT : HEATING: Type of Roof: ( ) Other Elevator: ( ) Yes ( ) No ( ) Electric ( ) Gas ( ) Oil Air Conditioning: ( ) Yes ( ) No ( ) Coal ed biserio RENCHE ( ) Unit Other SEWAGE DISPOSAL SYSTEM DATA SEEPAGE PIT SEPTIC TANK DRAIN FIELD 3 8 Capacity Gls Sq. Ft Sq. Ft. Ft. ۴t Ft. (iDistance from nearest well Distance from occupied building Ft. Distance from property line Ft. Ft Distance from bottom to Water Table All distances are shortest distance between nearest points CHARACTERISTICS: .. [4] Lot Area is ...... square feet. Water frontage is ...... Building set back from high water mark is ...... feet. (Building Line) Land height above high water mark at building line is ......feet Building setback from ( ) State - ( ) County - ( ) Township Highway \_\_\_\_ feet from the ( ) Center Line - ( ) Right of Way Side yard is ...... feet. Rear yard is ...... feet. Building will be located ...... feet from septic tank (Sewage System Permit must be obtained before installation). Building will be located ...... feet from soil absorption system (Cesspool, Drainfield, etc.). Agreement: I hereby certify that the information contained herein is correct and agree to do the proposed work in accordance with the description above set forth and according to the provisions of the ordinances of Becker County, Minnesota. I further agree that any plans and specifications submitted herewith shall become a part of this permit application. I also understand that this permit is valid for a period of six (6) months. Applicant further agrees that no part of the sewage system shall be covered until if has been inspected and accepted. It shall be the responsibility of the applicant for the permit to notify the County Zoning Administrator, 48 hours before the job is ready for inspection. Dated When signed and approved by the Zoning Administration this becomes your permit. Permission is hereby granted to the above named applicant to perform the work described in the above statement and/or as shown on the sketch. This permit is granted upon the express condition that the person to whom it is granted, and his agent, employees and workmen shall conform in all respects to the ordinances of Becker County, Minnesota. This permit may be revoked at any time upon violation of said ordinances Becker County Zoning Administrator State Surcharge \$\_ Cormorant Surcharge \$ 

BECKER COUNTY ZONING ADMINISTRATION

Yellow - Owner

### INSPECTOR'S CHECK LIST

Make all measurements and computations

and the state of t	ACTUAL IS ↓		MINIMUM Shall Be <b>↓</b>	Sq. Ft.
		<del></del>	•	
Building Set Back from High Water Mark		Ft.		Ft.
Building Set Back from State Highway		Ft.		Ft.
Side Yard	&	Ft.	&	Ft.
Rear Yard		Ft.		Ft.
Elevation at Building Line above				
High Water Mark		Ft.		Ft.

### SEWAGE DISPOSAL SYSTEM STATISTICS

* 50 ( ) a.g. ( )	SE	PTIC	TANK		SEE	PA	GE PIT		DRAIN	FIELD	
CATEGORY	Actua	ıl	Should	be	Actual		Should	be	Actual	Should	be
Capacity 33.381.30.000		GIs.		GIs.		SF		S F	SF		SF
Distance⊮from Nearest Well		F		F		F	75	F	F	50	1
Distance from Lake or Stream		F		F		F		F	F		F
Distance, from Occupied Building		F	10	F		F	20	F	F	20_	F
Distance from Property Line		F	10	F		F	10	F	F	10	F
Distance from Bottom to Water Table		F	<del></del>	F		F	4	F	F	4	F
											$\perp$

Inspector's Comments:		
bije introll to evento notifytis, storet is to they processored the entire in 1999 of the control of the contro		
e mer estamatable Doc, its hauten k <b>erore</b>		
INTERPRETATION OF ABBREVIATIONS		
Gls.— Gallons SF.— Square Feet cdt Framp Linear Feet but hydroxid time fra fra		Inspector's Signature
man panta sa n masa la		, ,
		Title
Inspection		0
Dated	19	
A STATE OF THE STA		Agency

### INDIVIDUAL SEWAGE TREATMENT SYSTEM WORKSHEET

		· ince
	A.	Estimatedgpd
	11.	measured <u>450 x</u> 1.5= <u>650 C</u> gpd
	ח	SEPTIC TANK VOLUME
	В.	gallons
		SOILS (Site evaluation data)
	C.	Depth to restricting layer =feet
	D. E.	Maximum depth of system C - 3 ft = feet Texture Percolation rate MPI
	F.	SSFsq ft/gpd
	G.	Slope%
	<del></del>	TRENCH BOTTOM AREA
	H.	For trenches with 6 inches of rock below the pipe:
		$A \times F = \underline{\qquad} \times \underline{\qquad} = \underline{\qquad} \text{sq ft of bottom area}$
λ	I.	For trenches with 12 inches of rock below the pipe:
7	J.	A x F x $0.8 = $ x x $0.8 = $ sq ft of bottom area For trenches with 18 inches of rock below the pipe:
	,. 	A x F x $0.66 = $ x $= $ x
	K.	For trenches with 24 inches of rock below the pipe:
		$A \times F \times 0.6 = $ $\times $ $\times $ $\times 0.6 = $ $\times $ $\times $ $\times $ $\times $ $\times $ $\times $ $\times $
	L.	For seepage beds with 6 or 12 inches of rock below the pipe;
		$1.5 \times A \times F = 1.5 \times \underline{\qquad} \times \underline{\qquad} = \underline{\qquad} \text{sq ft of bottom area}$
į		ROCK VOLUME IN CU FT
	M.	Rock depth below distribution pipe plus 0.5 foot times bottom area
		$M = Rock depth + 6 inches \times Area (H,I,J,L,K)$
		( + 0.5 ft) x = cu ft ROCK VOLUME IN CU YDS
$\mathcal{O}$	N.	Volume in cu ft divided by 27
۲,		M + 27 = cu yds + 27 = cu yds
	0	ROCK WEIGHT
	O.	Cubic yards times $1.4 = tons$ $N \times 1.4 = tons$ $\times 1.4 =$ tons
_		
		SYSTEM LENGTH
	P.	Select trench width =ft
		Divide bottom area by trench width: $(H, I, J, or K) + P =$
1		lineal feet
	Q1.	Gravelless Design
	~	A x F ÷ (3 for 10" pipe, 2 for 8" pipe, width of the Chamber)
		x=feet
L		LAWN AREA
	R.	Select trench spacing, center to center = feet
	S.	Multiply trench spacing by lineal feet $R \times Q = sq$ ft of lawn area
		x = sq ft
	NO PERSONAL PROPERTY AND ADMINISTRATION OF THE PERSON OF T	
		If the site evaluation determines a

If the site e	evaluatio	on deter	cmine	es a
mound system,	please	attach	the	mound
design worksh	eets.			

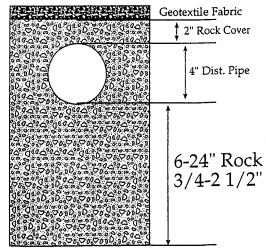
Estimate	d Sewas	ge Flows (gpd)	in Gallon	s per day
Number of Bedrooms	Type i	Type II	Type III	Type IV
2 3 4 5 6 7 8	300 450 600 750 900 1050 1200	225 300 375 450 525 600 675	180 218 256 294 332 370 408	60% of the values in Type I, II or III columns

	Septic	Tank Capacities (in	gallons)
1	Number of Bedrooms	Minimum Liquid Capacity	Liquid capacity with garbage disposal
	2 or less 3 or 4 5 or 6 7, 8 or 9	750 1000 1500 2000	1125 1500 2250 3000

for S	Sewage Treati	nent
Percolation Rate in Minutes per Inch (MPI)	Soil Texture	Square feet per gallon per day
Faster than 0.1 *	Coarse Sand	
0.1 to 5	Sand	0.83
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
46 to 60	Clay Loam	2.20
Slower than 60***	Člav	

- Soil too coarse for sewage treatment.
   Use systems for rapidly permeable soils.
   Soil having 50% or more of fine sand plus very fine sand.
   Soil with too high a percentage of clay for installation of an inground standard system.

6 inches= 0% Reduction\* 12 inches= 20% Reduction 18 inches= 34% Reduction 24 inches= 40% Reduction \* sizing for gravelless trench



18-36" Width

# NA Replacing ald Tanks

### - PERCOLATION TEST SHEET -

Test hole loc	Depth of hol	Soil Data fro			Method of sc	Date and hou	Method used	Maximum w	TIME								
Tes	De	Soi			Me	Dat	Mei	M				<u> </u>	<u> </u>		' '	<u></u>	<u> </u>
	inches				inches	above hole bottom	(/	- (am) pun-	conversions 1/16 = .06	1,8=.13 3,16=.13	1/4=.25	338=38	17.16=.44	9/16 = .55	11/16 = .69	34=.75	7/8=.88
Date test hole was prepared:	inc		2011 C010 C010 C010 C010 C010 C010 C010		Depth of pea size gravel in bottom of hole:		Darrol stice took of st		PERC RATE CALCULATION	TIME - DROP PERC A	TIME DROP PERC B	TIME . DROP PERC	TIME : DROP PERC (Decimal)	TIME : DROP PERC	TIME DROP PERC	TIME . DROP PERC	TIME - DROP PERC
	Diameter of hole:		son exune:		epth of pea size gra	Depth of initial water filling.		inches	WATER DROP (decimal)								[ <del>-</del>
Hole #	inches	9	.			ם	Method used to maintain 12" of water depth in hole for 4 hour <u>s:</u> Percolation test conducted by:	during test:	WATER DROP (fraction)		1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2						
		in the			ille	er filling:	" of water dept	ve hole bottom	WATER DEPTH				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
cation	le bottom:	Soil Data from test hole:		- Control of the Cont	Method of scratching sidewall:	Date and hour of initial water filling:	Method used to maintain 12" o Percolation test conducted by:	Maximum water depth above hole bottom during test.	INTERVAL (MINUTES)	START	REFILL	REFILL	REFILL	REFILL	REFILL 	REFILL	REFILL
Test hole location	Depth of hole bottom:	Soil Data fr			Method of s	Date and ho	Method used	Махітит и	TIME								

Ien Percent Calculation *	B,C,D	Largent # of BCD Smallest # of BCD	Smallest # of BCD × 0.10 =	D, E, F	Largest # of DEF Smallest # of DEF	Smullest # of DEF × 0.10 =	F,G,H	Cargest # of FCH Smullest # of FCH	Smullest # of FGH × 0.10=
len Perce	А,В,С	Largest # of ABC Smallest # of ABC	Smallest # of ABC × 0.10 =	C,D,E	Largest # of CDE Smallest # of CDE	Smallest # of CDE x 0.10 "	E,F,G	Lurgest # of EFC Smallest # of EFG	Smallest # of EFG × 0.10 =

### - PERCOLATION TEST SHEET -

Test hole location	cation		Hole #		Date test hole was prepared:	
Depth of he	Depth of hole bottom:		inches	Diameter of hole:		inches
Soil Data fr	Soil Data from test hole:	depth, inches	9	soil texture:	soil color	or
Method of s	Method of scratching sidewall:	all:	Δ	epth of pea size	Depth of pea size gravel in bottom of hole:	inches
Date and he	Date and hour of initial water filling:	er filling:	D D	Depth of initial water filling:		above hole bottom
Mernoa use Percolation	Method used to maintain 12. o Percolation test conducted by;	or water depu	an in noie tor 4 m		Percolation test started at	(am / pm).
Maximum 1	Maximum water depth above hole bottom during test.	re hole bottom	during test:	inches		•
TIME	INTERVAL (MINUTES)	WATER DEPTH	WATER DROP (fraction)	WATER DROP (decimal)	PERC RATE CALCULATION	conversions 1/16 = .06
	START				TIME DROP PERC A	3716 = .19
	REFILL				TIME DROP PERC B	1,4 = .25
	REFILL				TIME DROP PERC	33=33
	REFILL				TIME DROP PERC (Decimal)	1/76 = 44
	REFILL			1	TIME DROP PERC	9/16 = .56
	REFILL				TIME DROP PERC (Decimal)	11/16 = .69
	REFILL				TIME DROP PERC	34=.75
	REFILL				H TIME   DROP   PERC	7/8 15/16 = .94
						•

### Ten Percent Calculation \*

A,B,C	B,C,D
Lurgest # of ABC Smallest # of ABC	Largest # of BCD Smallest # of BCD
Smullest # of ABC × 0.10 =	Smallest # of HCD × 0.10 =
C,D,E	D,E,F
Largest # of CDE Smallest # of CDE	Largest # of DEF Smallest # of DEF
Smallest # of CDE × 0.10 =	Smallest # of DEF × 0.10 =
E,F,G	<b>F,</b> G, H
Lurgest # of EFG Smullost # of EFG	Largest # of FGH Smallest # of FGH
Smallest # of EFG × 0.10 =	Smullest # of FGH × 0.10 =
• If the non-number in each set of boxes is larger than the bottom number then take another res	an the bottom number then take another res

<sup>&</sup>quot; If the top number in each set of boxes is larger than the bottom number then take another reading. If the top number is equal or smaller than bottom number, average the thee numbers for the percrate.

### BECKER COUNTY PLANNING & ZONING

829 Lake Avenue, P O Box 787
Detroit Lakes, MN 56502-0787
Phone (218) 846-7314, Fax (218) 846-7266

Onsite Septic System Site Evaluation/Design	Tax Parcel N	Fire Number	000
Legal Description:  Lot 2 Less Pla Hed Par  Lake/Stream Name Lake/Stream Class  White Farth  Property Owner Address  Cedar Crest Resort  ISTS Designer I / Designer II License Number	Section TWP Ra  Section TWP Ra  Section TWP Ra  Section TWP Ra  City, State, Zip Cod  Wallbun MP	nge Township  O White Each le Phone Num  56589 473	Name Corowe Thy aber - 2116
Larry Muff 576	·	<u> 76569 983-</u>	3376 3376
The site plan must be drawn to dimension or to scale:	Site Plan		
*All Wells within  100 feet of the System  *Distance from all Wells within 100 ft of System  *Of System from Water Lines within  50 ft of System(existing & proposed)	*Distance from OHW *Distance from Property Lines *Location of any Unsuitable Disturbed/Compacted Soil	*Soil Boring & Perc Test L *Dimensions of Lot *Tank Access Route *Scale - One inch =	ocations
The state of the s	So House to The House to the South of the So	05/	LAML

8

### SOIL INFORMATION

	TEST	HOLE #.				TEST HO	LE #2	
DEPTH IN INCHES	SOIL TEXTURE	MUNSELL COLOR	STRUCTURE	DEPTH INCHES	IN	SOIL TEXTURE	MUNSELL COLOR	STRUCTURE
	Po		BLOCKY PLATY PRISMATIC NONE					BLOCKY PLATY PRISMATIC NONE
NA	Replocit	C	BLOCKY PLATY PRISMATIC NONE					BLOCKY PLATY PRISMATIC NONE
	Olg		BLOCKY PLATY PRISMATIC NONE	,				BLOCKY PLATY PRISMATIC NONE
			BLOCKY PLATY PRISMATIC NONE					BLOCKY PLATY PRISMATIC NONE
Depth to standing water				Depth standing w	to ater			
Depth to mottling				Depth mottling	to			
Describe the sur	face features (slope,	runoff, weather con	ditions, vegetation	on type, evid	ence o	f compaction, etc.)		

Describe the surface features (slope, runoff, weather conditions, vegetation type, evidence of com	paction, etc.)
SYSTEM IS () NEW REPAIR SYSTEM DESIGN () GRAW WATER USES: NUMBER OF BEDROOMS NUMBER OF BATHROOMS NUMBER OF BAT	VITY FLOW () PRESSURE DISTRIBUTION  DEPTH OF SYSTEM
Name of Designer I Designer II  MPCA Number  576	Date of Site Evaluation 10-30-96 Phone (218) 983-3376
I certify that the site evaluation has been completed in accordance with al Chapter 7080.	l provisions of ISTS Minnesota Rules
Signature of Evaluator James Date	11-5-96
For Office Use Only	
Date Site Evaluation / Design received 11/13/96 Received by	Albi Moltza
Date Site Evaluation approvedApproved by _	



**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 #: SS2019-45

### Owner & Property Information

**Owner Name:** 

**BCANS ENTERPRISES LLC** 

**BCANS ENTERPRISES LLC** 

**Mailing Address:** 

29783 387TH ST

**WAUBUN MN 56589** 

Parcel #:

200233000

Secondary Parcel #:

Site Address:

29783 387th St Waubun, MN

Township -Sec/Twp/Rng:

**Description:** 

MAPLE GROVE - 08/142/040

8-142-40 GOVT LOT 2 LESS 4.61 AC FOR NEMEC BCH, NEMEC 1ST ADDN;

TRACTS SOLD, LESS 3.17 AC FOR

20-0233-001, -002, -003.

Designer:

Legal

OTHER - Not listed (please add in next

field and we will add to our list)

Installer:

OTHER - Not listed (please add in next

field and we will add to our list)

### **Inspector Verified Specifications**

Insp- Effluent Screen Installed:

Insp- Tank

1/1500/2

Insp- Alarm Required:

Yes

Nbr/Size:

Insp- Lift Pump in System:

Yes

Insp- Drainfield Mound

3 Insp- Number of Bedrooms:

Type:

975 10' X 37.5' rock bed 26' X 37.5 Soil

Insp- Drainfield Size:

Absorption area

Insp- Soil Verification:

#1:Checked in tank hole No redox or restrictive layer within 24" #2:N/A

#3:N/A

### Inspector Verified Setbacks

Insp- Tank Dist to Road

200+ lot line per

Insp- Drainfield Dist to Road Insp- Drainfield Dist to Nearest 75+

Insp- Tank Dist to Nearest Prop Line

installer

**Prop Line** 

175+ lot line per

Insp- Tank Dist to Nearest

13

Insp- Drainfield Dist to Nearest

installer

Structure

300+

Structure Insp- Drainfield Dist to Well 33 300+

Insp- Tank Dist to Well Insp- Tank Dist to OHW

500+

Insp- Drainfield Dist to OHW

500+

Insp- Tank Dist to Pond/Wetland

Insp- Drainfield Dist to Pond/Wetland

C8952

Insp- Tank Dist to Pressure Line

20+

Insp- Drainfield Dist to Pressure

24'

### 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: 6/19/2019

Zoning Office Signature:

Kyle Vareberg - ISTS Inspector

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



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

### **Septic Permit**

Permit #: SS2019-45

Owner & Property Information

**Owner Name:** 

**BCANS ENTERPRISES LLC** 

**BCANS ENTERPRISES LLC** 

Mailing Address:

29783 387TH ST

**WAUBUN MN 56589** 

Phone #:

4234431047

Lake/River(1000/300):

Yes

Lake/River Name:

White Earth (Maple Grove) [RD]

Pond/Wetland(50):

No

Parcel #:

200233000

**Secondary Parcel** 

Site Address:

29783 387th St Waubun, MN

Township -Sec/Twp/Rng:

MAPLE GROVE - 08/142/040

Designer:

Installer:

OTHER - Not listed (please add in next field and we will add to our list)

OTHER - Not listed (please add in next field and we will add to our list)

Mound

975 sq ft

6 inches

975

**Specifications** 

Tank to be installed:

Compartmented Tank

1

Total # Tanks Installed: System Status:

Additional system for property

System Serves:

Number of Bedrooms:

Design Flow/GPD:

Garbage Disposal?

Size of Lift Pump:

Size of Lift Line:

Soil Sizing Factor:

Dwelling

3 450 No

> 1/2 HP 2 inch

0.45

Type of Drainfield:

Full Size of Drainfield:

Reduced/Warrantied Size:

Absorbtion Area Size:

Rock Depth:

Chamber Type and Number:

Chamber Trench SqFt/Chamber:

Is System Pressurized?

Alarm?

Type of Alarm:

Yes Yes

pedestal audible visual

Setbacks

Road Type:

Tank Dist to Road:

Tank Dist to Closest Prop Line: Tank Dist to Nearest Structure:

Tank Dist to Well: Tank Dist to OHW:

Tank Dist to Pond/Wetland:

Tank Dist to Pressure Line:

20'

801

200'

10'

300'+

950'

Private Easement

Right of Way Marked:

**Drainfied Dist to Road:** 

**Drainfied Dist to Closest Prop Line: Drainfield Dist to Nearest Structure:** 

**Drainfield Dist to Well:** Drainfield Dist to OHW:

**Drainfield Dist to Pond/Wetland: Drainfield Dist to Pressure Line:** 

24'

Yes

901

200'

35'

300'+

970'

Other Information

**Date Approved:** 

6/6/2019 150.00

Permit Fee: **Receipt Number:** Date Paid:

247800515 6/17/2019

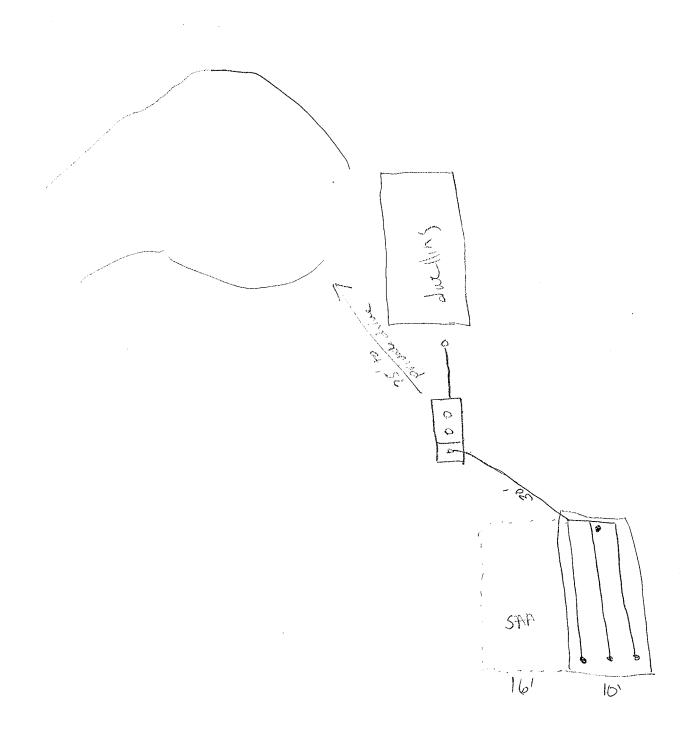
Notes:

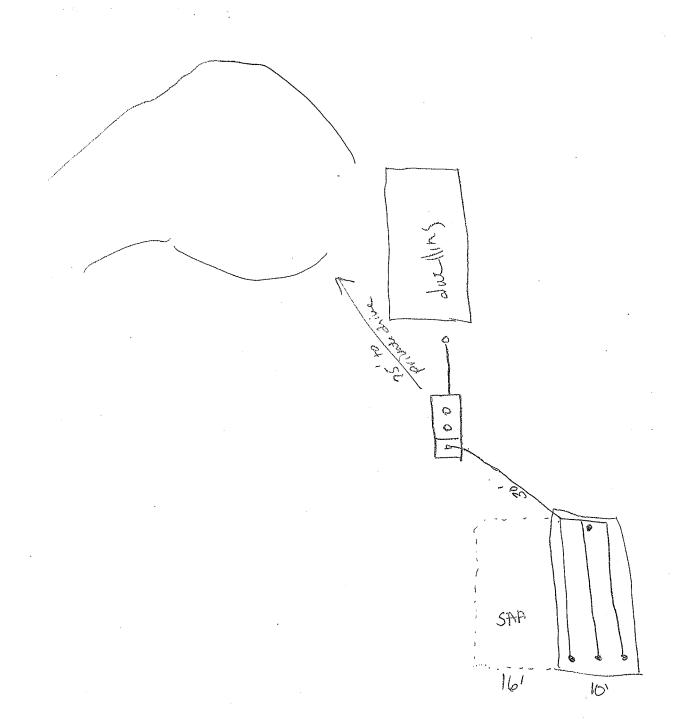
Zoning Office Signature:

5.00 6-19-19 Hedlund Backhore

Property and Owner				Shawfl	8 791 4613			
Owner: BCANS ENTERPRISES LLC	>	·	Parcel Number:		0 11 14 2			
Site Address: 29783 387th St Wauk	un, MN		Secondary Parcel: Brian Anse					
Home Information					1			
Does the structure contain any of th	e following	De	signer submitted		Inspector verified			
elements?		Garbage dis Dishwasher Grinder pun Lift pump ir	:: No np: No	Dishwas Grinder	e disposal? Y (N) sher? Y (N) pump? Y (N) p in basement? Y (N)			
Number of bedrooms: 3		Review - Nu	umber of bedroor	ms:				
Effluent screen		Effluent scr	een installed?	Y (N) Mfr:				
Alarm: Yes Type: pedestal audible alarm	visual	Review - Al	arm? (Y)N	Type & Mfr:	I Electro			
Lift pump in system: <b>Yes</b>		Review - Li	ft pump in syste	m? (Ŷ )N	Mfr. Zacller 152			
Component Information	1411	Sand	- 2"(	uts 14	3'spacing			
Tank size: 1500 combo		Review - Ta		e: 1500/2-M	fr: Lales U			
Drainfield type: Mound	Review - Dr	ainfield type: 📈	lound_					
Drainfield size: Full size - 975 Reduced/warr. size -	1	ainfield status: ainfield size:	none / installed $10 \times 37$	next spring				
Absorption area size: 6 inches	Review - Absorption area size: 26 x 37.5 395							
Chamber type/num: Trench sqft/chamber -	Review - Chamber type: Num: Review - Trench sqft/chamber:							
Drainfield rock depth: 6 inches		Review - Rock depth:						
Soil Verification				C len	in sand			
Vertical separation verified		Boring #1: — Boring #2: Boring #3:	TAPY to 2	y" ok				
Setback Verification				very pro	efessional Adb.			
		Designer sub		Ins	spector verified			
Distance to	Tanl	·	Drainfield	Tank	Drainfield			
Road	80'		90'	75+	75r			
Nearest prop line	200		170'	200t	150t			
Nearest structure	10'		35'	13	33'			
Well	300'-		300'+		on the tolet 300			
OHW	950	<u> </u>	970'	500t	500+			
Pond/Wetland								
Pressure line	20'	ļ	24'	†6-6 I	Sense gubruil			

C 8458





· · · · · · · · · · · · · · · · · · ·	Salent 2	APP SEPTIC
	System#7	YEAR
**********	**************************************	**********
Application Approved by: Amount Paid \$300,000	Receipt Number	Permit Number
NOTES:	Receipt Number	Permit Number
	ctt, 134803-68	7803 /20/10
	CASH # 135543 - 690	0545-8/21/18
**********	· ************************************	
	INSPECTION REPORT	1
Home Information	•	200233000
Does the structure contain any of the foll	7	
Garbage disposer Yes Grinder pump Yes		✓ No
Effluent screen installed? Yes	No Lift pump in basement No Effluent screen manufacturer	$\frac{\text{Yes}}{\rho_0/\sqrt{\rho_0}}$ No
. ,		1
	Alarm Type <u>llc</u> Alarm	
Lift pump in system?Yes	No Pump manufacturer Liberty 7	-66
Number of bedrooms 1765 gpd		
. 91		
Component Information		
Tank size (4) 3.000	Tank manufacturer Brown	3-septic tank?
A Diaminote of the sale	• • • • • • • • • • • • • • • • • • • •	1- Uf tank
Drainfield medium 3 5 and	Medium manufacturer	·
Drainfield medium size/depth	<u>l"under pipe</u>	
Soil Verification		
Vertical separation verified for l	Boring #1 on Depth	
XX		Tupe
vertical separation verified for i	Boring #2 on Depth	- 141
Vertical separation verified for l	Boring #3 on Depth	_ 3 50
Setback Verification .		
Secondary of Interaction	TANK DRAINFIELD	
Distance to Well	100°5 /00°S	
Distance to Building	50+ 10+	·
Distance to Property Line Distance to OHW of Lake	100'5 100'5	
Distance to Pressure Line	20t 20t	
Distance to Wetland/Protected V		•
0.86-19	MONT & BOXX - 100" 100"	
Date System Installed 1919-19-19	Turks Installer Gallon Lunde: Inspe	ector Denise Gubru
	****************	U
	***********	
	·	
	CERTIFICATE OF COMPLIANCE	
( ) Certificate Is Hereby Denied	•	
	ed upon the Application, addendum from, plans, s	pecifications and all other supporting data.
With property maintenance, this system of	can be expected to function satisfactory, however, t	this is not a guarantee.
Janise Gulwind	In Caritar	10/19/19
Signature Cymruc	Tritle	0/17//! Data
	nless signed by a Registered Qualified Employee)	Date

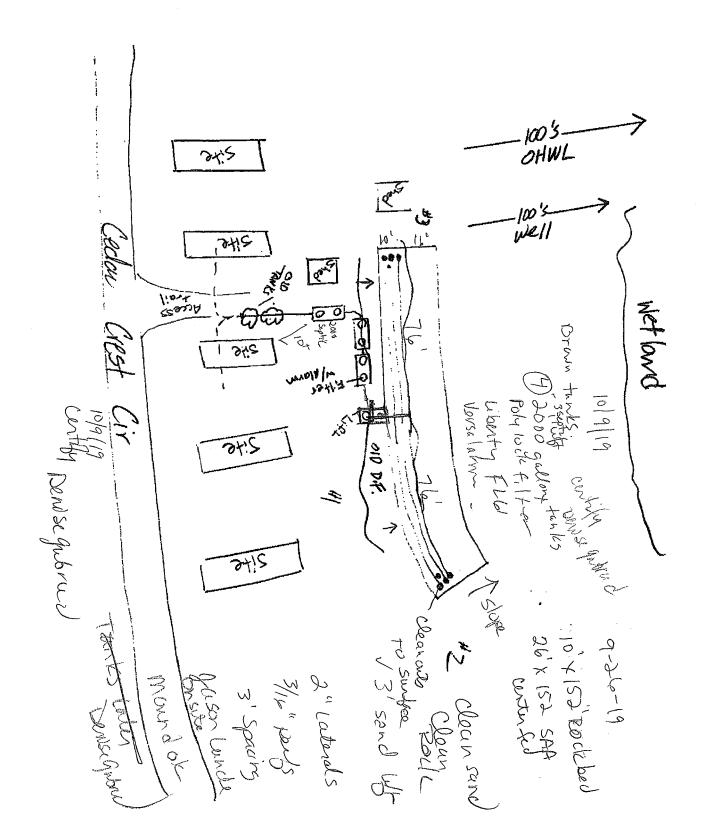


Scott Ellingson 201 Meadow Circle, Ashby, MN 56309 218-205-1667 System#2

PARCEL# 2002

PARCEL # 200233000 YEAR 2018 SCALE <u>1" = 40'</u>

### SKETCH OF PROPERTY



### 2018 Onsite Septic System Application

Becker County Planning & Zoning 915 Lake Ave, Detroft Lakes, MN 56501 Phone (218)-846-7314; Fax (218)-846-7266

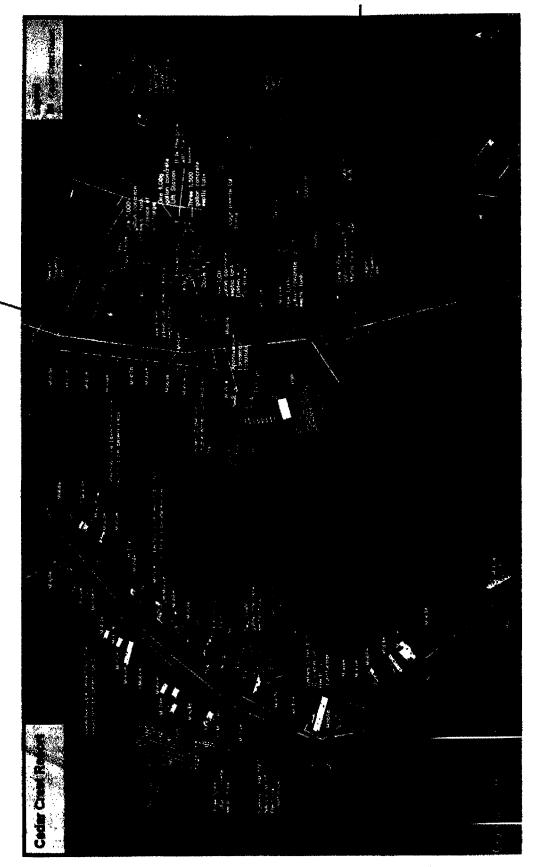
PARCEL	200233000
APP	SEPTIC
YEAR	2018
SCANNED	
LAKE	White Earth

1. PROPERTY DATA (as it appears on the tax statement, purchase agreement or deed) Parcel Number(s) of property where the system will be installed: 200233000 Is this a split of an existing property? Yes No (If yes and a parcel number has not yet been assigned, indicate the main parcel number from which the new parcel-was split.) Township Name Maple Grove Township 142 Range 40 AUG 2 1 2018 Lake Classification RD Lake Name White. 4.61 AC For Name BCH. Legal Description: Gov+ lot 2 Project Address: 297 2. PROPERTY OWNER INFORMATION (as it appears on the tax statement, purchase agreement or deed) Owner's First Name BCANS Enterprises LLC Owner's Last Name City, State, Zip Waubun, MN Mailing Address 29 3. DESIGNER/INSTALLER INFORMATION Company Name Scott's Septic Services, License # 390 Designer Name Scott Ellinoson 56309 Phone Number 218-205-1667 Installer Name What will new system serve? Check one System Status la-la-18 Date of site **Dwelling** Vacant Lot-No existing system-new structure evaluation Resort/Commercial Replacement - structure removed and being rebuilt Commercial (Non-resort) Failing -Replacement- cesspool/seepage pit or other Other -- explain below Enlargement of system-Undersized Repairs Needed to existing Additional system on property Original Soil NO Compacted Soil NO Well Depth Dead Design Flow 765 Gallons Per Day Type of Soil Observation Number of Bedrooms See design Summary Depth of other wells within Pit Probe > Boring Yes No 100 ft of system \_\_\_\_ Garbage Disposal Depth to Restricting Layer Yes No Dishwasher Maximum Depth of System \_3 Lift station in House \_\_\_\_Yes Grinder pump in House Yes / No Size of All Tanks to be installed Existing tank w/new Additional Tank 2000 gal Single Compartment Septic Tank 1-2000gal Separate Lift Station Existing tank w/new Lift Station gal Holding Tank gal Compartmented Tank Holding Tank with Privy Existing Tank to be used Pit Privy (This # will be reported to MPCA at end of year.)

Total Number of tanks to be installed in this system

·							PARCEL	200 435000
							APP	SEPTIC
ment	.6.43 1	n. 11 At	-8-14 m.t1M		.e., #t		YEAR	2018
Type of Drain	nneia i ber Trench	Full Size of Drain		varram sqfl		chamber		
	French	sq fl		n pa		f Rock 6	بنمف	<del>// </del>
Grave	-	sq fl		sq fl				<del></del>
Mound	Type III	3,982 sq fi	***					
	re Bed	sq fl	***		Alarm?		No tanK	
Seepar At-gra		sq n	***		1 ype of	Alarm on Lift Pump 63		5 #h
Altern		so fi	*** ***Attach W	/orkshe		iff Line 17	1	<u> </u>
Perfor	_							
			PROPOSED SE					
	~ 44			RAINI				
Distance to W Distance to B				100'S	),			
Distance to P			100F	loot	-			
Distance to O			100'5	100'5				
Distance to P	ressure Line		10+	10+				
Distance to W	/etland/Protect	ted Water	100'7/-	70'%				
Perc Rate		Soil Sizing l	Factor <u>. 45</u>		*If SSF or	ther than .83, a	tach Perc Te	st Data
Soil Borings	(three are requ				<b>#3</b>			
Depth	Texture	Color	Structure		Depth	Texture	Color	Structure
0"-6"	CL	10 41 2/1	B/w/F.:		0-6"	CL	10 yr 2/	B/W Fri
6"-16"	CL	10 yr 4/3	B/w/Firm		6'-16'	CL	16 yr 41:	3 B W Firm
16117	SL/SCL	104+4/4	B/W/ Fr:		16"+	SLISCL	104.4/	1 B/W Fr.
		4/1041 5/1					W/10415	1
	<u> </u>					L.,	1, 600 400	
Depth	Texture	Color	Structure		Depth	Texture	Color	Structure
0"-6"	CL	10 y = 2/1	BlW/Fii					
6"-16"	CL	64.43	3/w/Firm					
16"+	SL/SCL	10444	B  w/ F:					
		10 yr 4/4 1/0 yr 5/1						
5. REQUI	RED DOCUM	•						
2. WEAGOTE	ted bocom	EAN ES						
U of MN	l worksheets a	re required for ı	nounds, pressure be	ds, see	page beds, at-gra-	des or Type IV	or Type V	systems. Are the
required	worksheets att	ached? Y	es No					
6. DESIGNE	er's certif	TED STATEMI	ENT					
1, Scott	Ellings	<u> </u>	certify that I have	e comp	leted the precedin	g design work	in accordance	e with all
(Print Nar	ne of Designer	)		-				
		cluding, but not	limited to Minnesot	a Chap	ter 7080 and the	Becker County	Individual S	iewage Treatment
System Ordin	ince).	llings					/ _1E //	2
		wign					0-15-18	2
Signature of I	Jesigner				•	Date		

This is a Type III Mound Replacement



12

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v 05.13.14 Project ID: Cedar



ΰ	Clent/ Address:		Cedar Crest Resort	3.054	Legal Descr	Legal Description/ GPS:			
Soil parent r	Soit parent material(s): (Check	heck all ti	all that apply)	Outwark 🗌 tacustrine	m [] come [] m	TI 🗌 Alluvium	tum 📋 Bedrock	rock Organic Nather	ic Nather
Landscape P	andscape Position: (check one)	k one)	Summit   Sh	Shoulder 🗵 Back/Side Stope	ope 📋 Poot Stope	☐ Toe Slop	Toe Stope Stope shape		2
Vegetation		Lawn	×	Soil survey map units 40C	400	Slopeš	2.0	Elevation:	7.79
Weather Cos	Weather Conditions/Time of Day	of Day:		Sunny 600F 10:15 am	):15 am		Pate		09/22/17
Observatio	Observation #/Location:		Treatment S	Treatment System 2 (Soll Boring 1)	=	8	Observation Type:		Auger
Character (fm)	Texture	Rock	Matrix Colories	Modele Colorie)	Sector Wodie)	Indicatorical	-	Structure	
	a move .	Frag. X		mount cons (a)	recove roughly)	indrated (5)	Shape	Grade	Consistence
9-0	Clay Loam	<b>35%</b>	10yr 2/1				Grandar	Weak	Frlable
<del>6</del> -16	Clay Loem	<35K	10YR 4/3				Blocky	Weak	Extremely Firm
16-21	Sandy Loam	<35%	10YR 4/4	10YR 5/1	Depletions	Ø	Single grain	Structureless	Poor
21-34	Sendy Clay Loam	<35K	107R 4/4	10R 3/6	Concentrations	22	Blocky	Weak	Frlable
34-37	Sandy Loam	×35%	10YR 5/4	10R 3/4	Concentrations	S	Single grain	Structureless	Louse
37-60	Sandy Loam	<35%	10YR 6/3	10R 3/6	Concentrations	×	Blocky	Weak	Loose
Comments	Restricting La	yer 96.37	. Calcium Carbone	Comments Restricting Layer 96.37. Calcium Carbonete (verified with acid) starting at 6° 107R7/1 dry and observed all the way to 60°.	id) starting at 6" 1	OYR7/1 dry a	nd observed at	II the way to 60"	
I hereby cent	atify that I have Ken Remondo	compiete	d this work in acco	I hereby certify that I have completed this work in accordance with all applicable ordinances, rules and laws.	pable ordinances, r	ulee and laws	1.3106		87222017
<u>g</u>	(Designer/Inspector)	×		(Signature)			(License #)		(Date)



### **OSTP Design Summary Worksheet**

University of Minnesota



Property Owner/Client: BCANS Enterprises LLC Project ID: V 04.20.2016
Site Address: 29783 387th St. Date: 6/15/18
1. DESIGN FLOW, STRENGTH OF WASTE, AND TANKS
A. Design Flow: 1765 Gallons Per Day (GPD) Number of Bedrooms (Residential):
Type of Wastewater: Residential Treatment Level: C Nutrients:
Commercial (select method and provide data): Measured Flow: GPD Estimated Flow: GPD
B. Septic Tanks:  Minimum Code Required Septic Tank Capacity (Dwellings): 5295 Gallons, in 1 Tanks or Compartments
Minimum Code Required Septic Tank Capacity (Dwellings): 5295 Gallons, in 1 Tanks or Compartments  Minimum Septic Tank Capacity for Other Establishments = Design Flow X 3.0 if received by gravity or 4.0 if received by pressure
Waste received by:  GPD X = Gallons
Recommended Septic Tank Capacity: 6000 Gallons, in 3 Tanks or Compartments
Effluent Screen & Alarm:  Yes  No  Optional  Screen Only Effluent Screen Manufacturer/Model:
C. Holding Tanks Only:  Minimum Capacity: Residential =400 gal/bedroom, Other Establishment = Design Flow x 5.0, Minimum size 1000 gallons
Minimum Code Required Capacity: Gallons, in Tanks Type of High Level Alarm:
Designer Recommended Capacity: Gallons, in Tanks
D. Pump Tank 1 Capacity (Code Minimum): 1765 Gallons Pump Tank 2 Capacity (Code Minimum): Gallons
Pump Tank 1 Capacity (Designer Rec): 2000 Gallons Pump Tank 2 Capacity (Designer Rec): Gallons
Pump 1 63.0 GPM Total Head 20.5 ft Pump 2 GPM Total Head ft
Supply Pipe Dia. 2.00 in Dose Volume: 325.0 gal Supply Pipe Dia. in Dose Volume: gal
2. SYSTEM AND DISTRIBUTION TYPE
Soil Treatment Area Type: Mound Distribution Type: Pressure Distribution-Level
Benchmark Reference Elevation: ft Benchmark Location:
MPCA Type: Type III Type of Distribution Media: Drainfield Rock Registered Treatment Media:
Comments:
3. SITE EVALUATION:
A. Depth to Limiting Layer: 16 in 1.3 ft G. Soil Texture: Clay Loam
B. Elevation of Limiting Layer: H. Soil Hyd. Loading Rate: 0.45 GPD/ft <sup>2</sup>
C. Loc. of Restricive Elevation: I. Perc Rate: MPI
D. Minimum Required Separation: 36 in 3.0 ft J. Soil with >35% Rock Fragments Present? Yes No If yes describe below: % rock and layer thickness, amount of soil credit and any
E. Code Maximum Depth of System: Mound in additional information for adressing the rock fragments in this design.
F. Measured Land Slope %: 2.0 %
Comments:
4. DESIGN SUMMARY
Trench Design Summary
Dispersal Area ft <sup>2</sup> Sidewall Depth in Trench Width ft
Dispersal Area ft² Sidewall Depth in Trench Width ft  Total Lineal Feet ft Number of Trenches Code Maximum Trench Depth in



### **OSTP Design Summary Worksheet**

University of Minnesota



Bed Design Summary									
	Absorp	otion Area	ft <sup>2</sup>	Depth of	f sidewall	in	Code Ma	ximum Bed Depth in	
	F	Bed Width	ft	Ве	ed Length	ft	Designe	r's Max Bed Depth in	
				Mou	nd Design Summa	ary			
	Absorption	Bed Area 15	10.0 ft <sup>2</sup>	Ве	ed Length 15	1.0 ft	E	Bed Width 10.0 ft	
	Absorpt	ion Width 20	6.0 ft	Clean	Sand Lift 3.	.0 ft	Berm Wid	lth (0-1%)ft	
Upslope Berm Width 17.6 ft Downslope Berm Width 21.5 ft Endslope Berm Width 19.8 ft									
	Total System Length 190.6 ft Total System Width 49.1 ft Contour Loading Rate 12.0 gal/ft  At-Grade Design Summary								
	<del></del>					<del></del>	<del></del>		
	Absorption Bed Width ft Absorption Bed Length ft System Finished Height ft  Contour Loading Rate gal/ft Upslope Berm Width ft Downslope Berm Width ft								
Endslope Berm Width ft System Length ft System Width ft									
Level & Equal Pressure Distribution Summary									
No. of Perforated Laterals 3 Perforation Spacing 3 ft Perforation Diameter 3/16 in									
	Lateral	Diameter 2.	.00 in	Min. Delivered	d Volume 30	)4 gal	Maximum	Delivered Volume 441 gal	
			Non-L	evel and Uneq	jual Pressure Dist	ribution Sum	nary		
*************	Elevation		Pipe Volume	Pipe Length	Perforation Size				
	(ft)	Pipe Size (in)	(gal/ft)	(ft)	(in)	Spacing (ft)	Spacing (in)		
Lateral 1	<u> </u>							Minimum Delivered Volume	
Lateral 2								gal	
Lateral 3 Lateral 4	<del> </del>							Maximum Delivered Volume	
Lateral 5	+							gal	
Lateral 6	†							L	
5. Additional Info for Type IV/Pretreatment Design									
A. Calculate the organic loading									
1. Organic Loading to Pretreatment Unit = Design Flow X Estimated BOD in mg/L in the effluent X 8.35 ÷ 1,000,000									
		gpd X	<u> </u>	mg/L X 8.35 ÷	-		lbs BOD/day		
2. Type	<del>,, ,, ,, ,, ,, ,,,</del> ,,,,,,,,,,,,,,,,,,,	ent Unit Being Ir	nstalled:		 				
3. Calcu	late Soil Tre	atment System C	)rganic Loadin	g: BOD concent	tration after pret	reatment ÷ Bo	ttom Area = 1	lbs/day/ft <sup>2</sup>	
[		mg/L X 8.35 ÷ 1,		,	ft <sup>2</sup> =	lbs/da		ŕ	
Comments/Special Design Considerations:									
This system is a Type III Mound. We will be using 3 new 2,000 gallon septic tanks with a filter alarm installed onto a single 2,000 gallon									
								und @ 36" deep or as deep as ling the mound. Sizing is as	
								q. ft Drain field will be	
26'X1	51 3926sq.	ft T	Į.	,					
	1	. /	~~						
	v		ל <sup>י</sup>	,			2 Le	151	
		· V · I				`	_		
<u> </u>	I hereby ce	rtify that I have	completed thi	s work in accor	rdance with all ap	plicable ordin	ances, rules ar	nd laws.	
	Scoti	t Ellingson		5.4	=BD:		3947	06/15/18	
		esigner)	<del></del>	<u> </u>	Ellingso. nature)	<u> </u>	icense #)	(Date)	



### **Minnesota Poliution Control Agency**

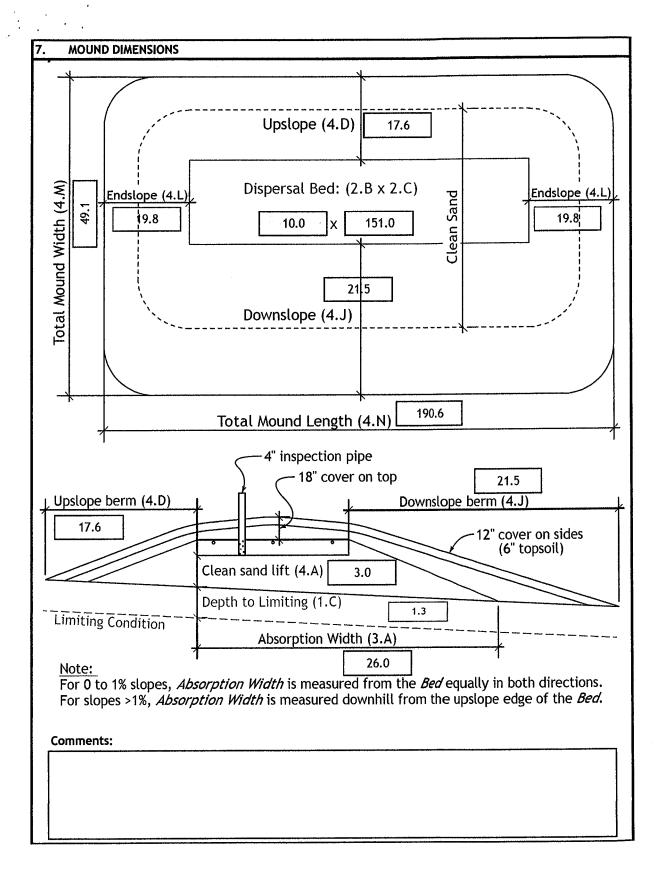
### **OSTP Mound Design** Worksheet >1% Slope of MINNESOTA

University



1.		SYSTEM	SIZIN	IG:	<del>i</del>	Proje	ct ID:				v 04	1.20.2016
	A.	Design F	low:		17	765	GPD		TAB	LE IXa	1	
	В.	Soil Loa	ding F	Rate:	0.	.45	GPD/ft <sup>2</sup>	LOADING RATES I	LOADING RATES FOR DETERMINING BOTTOM ABSORPTION AREA AND ABSORPTION RATIOS USING PERCOLATION TESTS			TION AREA
	c.	Depth to	. Limi	ting Condition:	1	.3	ft		Treatmen		Treatment Le	
		Percent			2	.0	] <sub>%</sub>	Percolation Rate (MPI)	Absorption Area Loading Rate	Mound Absorption Ratio	Absorption Area Loading Rate	Mound Absorption Ratio
	E. Design Media Loading Rate:			1	.2	GPD/ft <sup>2</sup>		(gpd/ft²)		(gpd/ft²)		
		_		- 1			]   GFD/10 	<0.1 0.1 to 5	1.2	1	1.6	1
	F.	Mound A	bsorp	otion Ratio:	2.	.60	<u> </u>	0.1 to 5 (fine sand	0.6	2	1	1.6
	Г			Table I				and loamy fine sand) 6 to 15	0.78	1.5	1	1.6
	L		MOUN	D CONTOUR LOADING	RATES:			16 to 30	0.6	2	0.78	2
		Measured	<b>,</b>	Texture - derived		Conto Loadi		31 to 45	0.5	2.4	0.78	2
	ı	Perc Rate	OR	mound absorption rat	io	Rate	- I	46 to 60	0.45	2.6	0.6	2.6
	H	3 3 A	'					61 to 120	0.40	5	0.3	5.3
		≤ 60mpi	1	1.0, 1.3, 2.0, 2.4, 2.	6	≤12	2		-		0.3	
	ē	51-120 mpi	← OR	5.0		≤12		ystems with th	oce value	s are not	Type Lsv	tems
	H				-	<del></del>	┨ '	Contour Loadi				
	1	≥ 120 mpi*		>5.0*		≤6'			ecommend			
2,		DISPERS	ΔIM	EDIA SIZING								
_	<u> </u>				aian C	love t	Dosign M	dia Landina Di	to - ft2			
	A. Calculate Dispersal Bed Area: Design Flow + Design Media Loading Rate = ft <sup>2</sup>											
	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$											
	If a larger dispersal media area is desired, enter size: 1510 ft²											
	B. Enter Dispersal Bed Width: 10.0 ft Can not exceed 10 feet											
	C. Calculate Contour Loading Rate: Bed Width X Design Media Loading Rate											
	10 $ft^2 \times 1.2$ GPD/ $ft^2 = 12.0$ gal/ft Can not exceed Table 1											
	D. Calculate Minimum Dispersal Bed Length: Dispersal Bed Area ÷ Bed Width = Bed Length											
	1510 $ft^2 \div 10.0$ $ft = 151.0$ $ft$											
3.	ABSORPTION AREA SIZING											
	A. Calculate Absorption Width: Bed Width X Mound Absorption Ratio = Absorption Width											
	۸.	Calculat	<del></del>	<del></del>		1		<del></del> 1	ABJOI PCI	)		
		<u> </u>	10.	0  ft X   2.	0	_	26.0	ft				
	В.	For slop	es >19	ሄ, the Absorption V	Vidth i	is meas	sured dov	vnhill from the	upslope e	edge of t	he Bed.	
		Calculat	e Dov	vnslope Absorption	Width	n: Abso	rption Wi	idth  - Bed Wid	th			
					26	5.0	ft -	10.0 ft	= 16	.0 ft		
4.		DISTRIB	UTIO	N MEDIA: ROCK								·
	A.			epth Below Distrib	ution	Pipe						
		0.50	ı	't			estimate	ed volume of ro	ock on mo	und mate	erials page	,

5.		DISTRIBUTION MEDIA: REGISTERED TREATMENT PRODUCTS: CHAMBERS AND EZFLOW
	A.	Enter Dispersal Media:
	В.	Enter the Component: Length: ft Width: ft Depth: ft
	C.	Number of Components per Row = Bed Length divided by Component Length (Round up)
		ft ÷ components/row
	D.	Actual Bed Length = Number of Components/row X Component Length:
		components X ft = ft
	E.	Number of Rows = Bed Width divided by Component Width (Round up)
	_	ft ÷ ft = rows Adjust width so this is an whole number.
	F.	Total Number of Components = Number of Components per Row X Number of Rows
		X = components
6.		MOUND SIZING
	Α.	Calculate Minimum Clean Sand Lift: 3 feet minus Depth to Limiting Condition = Clean Sand Lift
		3.0 ft - 1.3 ft = 1.7 ft Design Sand Lift (optional): 3 ft
	B. I	Calculate Upslope Height: Clean Sand Lift + media depth + cover (1 ft.) = Upslope Height
		3.0 ft + 0.8 ft + 1.0 ft = 4.8 ft
	c.	Select Upslope Berm Multiplier (based on land slope): 3.70
		and Slope % 0 1 2 3 4 5 6 7 8 9 10 11 12
	ps	Ope Berm     3:1     3.00     2.91     2.83     2.75     2.68     2.61     2.54     2.48     2.42     2.36     2.31     2.26     2.21       Ratio     4:1     4.00     3.85     3.70     3.57     3.45     3.33     3.23     3.12     3.03     2.94     2.86     2.78     2.70
L	D.	Calculate Upslope Berm Width: Multiplier X Upslope Mound Height = Upslope Berm Width
		3.70 ft X 4.8 ft = 17.6 ft
	E.	Calculate Drop in Elevation Under Bed: Bed Width X Land Slope ÷ 100 = Drop (ft)
		10.0 ft X 2.0 % ÷ 100 = 0.20 ft
	F.	Calculate Downslope Mound Height: Upslope Height + Drop in Elevation = Downslope Height
		4.8 ft + 0.20 ft = 5.0 ft
	G.	Select Downslope Berm Multiplier (based on land slope): 4.35
	L	and Slope % 0 1 2 3 4 5 6 7 8 9 10 11 12
Г		wnslope 3:1 3.00 3.09 3.19 3.30 3.41 3.53 3.66 3.80 3.95 4.11 4.29 4.48 4.69
L	NEW REPORTED	rm Ratio 4:1 4.00 4.17 4.35 4.54 4.76 5.00 5.26 5.56 5.88 6.25 6.67 7.14 7.69
	п.	Calculate Downslope Berm Width: Multiplier X Downslope Height = Downslope Berm Width $4.35 \times 5.0 \text{ ft} = 21.5 \text{ ft}$
ı	1	
		Calculate Minimum Berm to Cover Absorption Area: Downslope Absorption Width + 4 feet
		$\begin{array}{ c c c c c c }\hline 16.0 & ft + 4 & ft = 20.0 & ft \\ \hline \end{array}$
•	J.	Design Downslope Berm = greater of 4H and 4I: 21.5 ft
1	<b>K.</b> :	Select Endslope Berm Multiplier: 4.00 (usually 3.0 or 4.0)
I	L. 1	Calculate Endslope Berm X Downslope Mound Height = Endslope Berm Width
		4.00 ft X 5.0 ft = 19.8 ft
1	<b>W.</b> (	Calculate Mound Width: Upslope Berm Width + Bed Width + Downslope Berm Width
		17.6 ft + 10.0 ft + 21.5 ft = 49.1 ft
ı	٧. (	Calculate Mound Length: Endslope Berm Width + Bed Length + Endslope Berm Width
		19.8 ft + 151.0 ft + 19.8 ft = 190.6 ft





### **OSTP Mound Materials Worksheet**

University of Minnesota



Project ID: v 04.20.2016								
A. Calculate Rock Volume: (Rock Below Pipe + Rock to cover pipe (pipe dia + 1 inch)) X Bed Length (2.D) X Bed Width (2.B) = Volume (ft <sup>3</sup> )								
( 6 in + 3 in) $\div$ 12 X 151.0 ft X 10.0 ft = 1132.5 ft	3							
Divide ft <sup>3</sup> by 27 ft <sup>3</sup> /yd <sup>3</sup> to calculate cubic yards:								
Divide it by 27 it /yd to calculate cubic yards: $1132.5   ft^3 \div 27 = 41.9   yd$	13							
	_							
Add 20% for constructability:  41.9 yd³ X 1.2 = 50.3 yd³	l <sup>3</sup>							
For systems using other distribution media - see product registration for material required								
B. Calculate Clean Sand Volume:								
Volume Under Rock bed : Average Sand Depth x Media Width x Media Length = cubic feet								
2.9 ft X 10.0 ft X 151.0 ft = 4303.5 ft <sup>3</sup>								
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)								
ft -1) X X ft = (topstope mound neight -1) X Absorption with beyond bed X media bed Length)								
	11							
Volume from Width = ((Upslope Mound Height - 1) X Absorption Width Beyond Bed X Media Bed Width)								
ft -1) X X								
Total Clean Sand Volume: Volume from Length + Volume from Width + Volume Under Media								
$ft^3 + ft^3 + ft^3 = ft^3$								
For a Mound on a slope greater than 1%								
Upslope Volume: ((Upslope Mound Height - 1) x 3 x Bed Length) ÷ 2 = cubic feet	. 11							
(( 4.8 ft -1) X 3.0 ft X 151.0 ) ÷ 2 = 849.4 ft	s							
Downslope Volume: ((Downslope Height - 1) x Downslope Absorption Width x Media Length) ÷ 2 = cubic feet								
(( 5,0 ft - 1) X 16.0 ft X 151.0 ) ÷ 2 = 4771.6 ft	3							
Endslope Volume: (Downslope Mound Height - 1) x 3 x Media Width = cubic feet  5 0 ft - 1	3							
( 3.5 ) (C-1) X 3.5 (C-1)								
Total Clean Sand Volume : Upslope Volume + Downslope Volume + Endslope Volume + Volume Under Media								
849.4 $ft^3$ + 4771.6 $ft^3$ + 118.5 $ft^3$ + 4303.5 $ft^3$ = 10043.0 $ft^3$	.							
Divide $ft^3$ by $27 ft^3/vd^3$ to calculate cubic vards: $10043.0   ft^3 \div 27 = 372.0   y$								
bivide to by 27 it 7 ya to catedrate capit yards.								
Add 20% for constructability: $372.0$ yd $^3$ X 1.2 = $446.4$ y	d <sup>3</sup>							
C. Calculate Sandy Berm Volume:								
Total Berm Volume (approx): ((Avg. Mound Height - 0.5 ft topsoil) x Mound Width x Mound Length) ÷ 2 = cubic feet								
( 4.9 - 0.5 )ft X 49.1 ft X 190.6 ) $\div$ 2 = 20357.8 ft	.3							
Total Mound Volume - Clean Sand volume - Rock Volume = cubic feet								
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	.3							
Divide $ft^3$ by 27 $ft^3/yd^3$ to calculate cubic yards: 9182.3 $ft^3 \div 27 = 340.1$ y	d <sup>3</sup>							
Add 20% for constructability: $340.1   yd^3 \times 1.2 = 408.1   y$	d <sup>3</sup>							
D. Calculate Topsoil Material Volume: Total Mound Width X Total Mound Length X .5 ft								
	1							
49.1 ft X 190.6 ft X 0.5 ft = 4679.9 ft	13							
Divide ft <sup>3</sup> by 27 ft <sup>3</sup> /yd <sup>3</sup> to calculate cubic yards: 4679.9 ft <sup>3</sup> $\div$ 27 = 173.3 y	d³							
Divide to by 27 to 7yd to calculate casts yards								
Add 20% for constructability:	d³							



### **OSTP Pressure Distribution** Design Worksheet University OF MINNESOTA



	Project ID: v 04.20.2016											
1.	Media Bed Width	ո։				Γ	10 ft					
2.	Minimum Numbe	er of Lat	terals in	system	/zone =	ـــ Round =	led up number	of [(Media	Bed Wi	dth - 4)	÷ 3] + 1	•
		[(	10	-4)	÷ 3] + ′	1 = [	3 lat	erals	Does	not appi	ly to at-	grades
3.	Designer Selecte					_ [	3 lat	erals		··		
4.	Cannot be less than line 2 (accept in at-grades) Select Perforation Spacing:						3.0 ft	1	Genten	Insulated access	) 	7
5.	. Select Perforation Diameter Size:					Γ	3/16 in	h" perforat	lons spaced 3' ap-	Act 11-2-0	in frack	<i>)</i> - 12
6.	_s-circk									03		
	151 -	· 2ft	=	14	19 f	ft P	erforation can	not be clo	oser the	n 1 foot	from e	dge.
7.	Determine the A				-		e the <i>Length of</i>	Laterals	by the	Perfora	tion Spe	acing
	Number of Perfo	oration	Spaces	= 14	19 f	ft	÷ 3	ft	= [	49	Spa	ices
8.	Number of Perfo below to verify to value is double v	the num	ber of p	perforat	ions pe	-						
	Perf	orations	Per La	teral =	49	S	paces + 1 =	5	0 F	erfs. Pe	r Later	al
		Maxi	mum Num	ber of Per	forations P	er Latera	to Guarantee < 10%	Discharge Va	riation	TAZ.		
		1/4 Inch P	erforation	5				7/321	nch Perfor	ations		
Perf	oration Spacing (Feet)		Pipe [	iameter (l	nches)		Perforation Spacing Pipe Diameter (Inches)					
		1	114	11/2	2	3	(Feet)	1	114	11/2	2	3
	2	10	13	18	30	60	2	11	16	21	34	68
	21/2	8	12	16	28	54	21/2	10	14	20	32	64
	3	8	12	16	25	52	3 / 14	9	14	19	30	60
<del></del>		3/16 Inch	Perforatio						nch Perfor			
Perfe	oration Spacing (Feet)		<u></u>	hameter (I		Т.	Perforation Spacion (Feet)		,	riameter (li		3
	2	1 12	114	11/2	46	87	(reet) 2	21	1¼ 33	11/2	74	149
	21/2				<del> </del>	<del></del>	21/2				69	135
		12	17	24	40	80		20	30	41 20		
9.	9. Total Number of Perforations equals the Number of Perforations per Lateral multiplied by the Number of Perforated Laterals.  50 Perf. Per Lat. X 3 Number of Perf. Lat. = 150 Total Number of Perf.											
	<ul> <li>O. Select Type of Manifold Connection (End or Center): ☐ End ☐ Center</li> <li>1. Select Lateral Diameter (See Table): 2.00 in</li> </ul>											



### OSTP Pressure Distribution Design Worksheet $_{\mathrm{OF}}^{\mathrm{UN}}$





12.	Calculate the Square Feet per Perforation. Recommended value is 4-11 ft <sup>2</sup> per perforation.									
	Does not apply to At-Grades									
a.	a. Bed Area = Bed Width (ft) X Bed Length (ft)									
	10 ft X 151 ft = 1510 ft <sup>2</sup>									
b.	b. Square Foot per Perforation = Bed Area divided by the Total Number of Perforations.									
	1510 $ft^2$ ÷ 150 perforations = 10.1 $ft^2$ /perforations									
13. Select Minimum Average Head: 1.0 ft										
14.	14. Select <i>Perforation Discharge</i> (GPM) based on Table: 0.41 GPM per Perforation									
15.	Determine required Flow Rate by multiplying the Total Number of Perfs. by the Perforation Discharge.									
	150 Perfs X 0.41 GPM per Perforation = 63 GPM									
16.	Volume of Liquid Per Foot of Distribution Piping (Table II): 0.170 Gallons/ft									
17.	Volume of Distribution Piping = Table II									
	= [Number of Perforated Laterals X Length of Laterals X (Volume of Liquid in Liquid Per Foot of Distribution Piping]  Volume of Liquid in Pipe									
	Pipe Liquid									
	3 X 149 ft X 0.170 gal/ft = 76.0 Gallons Diameter (inches) (Gallons)									
18.	Minimum Delivered Volume = Volume of Distribution Piping X 4 1 0.045									
	76.0 gals X 4 = 304.0 Gallons 1.25 0.078									
	76.0 gats X 4 = 304.0 Gallons 1.5 0.110 2 0.170									
	manifold pipe, 3 0.380									
	4 0.661									
	pipe from pump									
P	pipe noni pump									
clean or	Manifold pipe									
Cicum o										
	alternate location									
L	of pipe from pump									
	Pipe from pump									
	Pripe from pump									
omm	ents/Special Design Considerations:									



### OSTP Basic Pump Selection Design Worksheet University OF MINNESOTA





1. PUMP CAPACITY Project ID:					v 0	4.20.2016
Pumping to Gravity or Pressure Distribution: Pr						
If pumping to gravity enter the gallon per minute of the pump:		GPM (10 - 45 s	ıpm)			
2. If pumping to a pressurized distribution system:	63.0	GPM				
3. Enter pump description:	Demar	nd Dosing Soil Trea	tment			
2. HEAD REQUIREMENTS						eatment system nt of discharge
A. Elevation Difference 12 ft						C - C -
between pump and point of discharge:		Supply line	lengu	,		
B. Distribution Head Loss: 5 ft	116		Elevation difference			
C. Additional Head Loss:	<b></b>					
-	<del></del>	Table I.Friction	on Loss i	n Plastic	Pipe pe	r 100ft
Distribution Head Loss		Flow Rate		e Diame		
Gravity Distribution = Oft		(GPM)	1	1.25	1.5	2
Pressure Distribution based on Minimum Average He	ead	10	9.1	3.1	1.3	0.3
Value on Pressure Distribution Worksheet:		12	12.8	4.3	1.8	0.4
Minimum Average Head Distribution Head	Loss	14	17.0	5.7	2.4	0.6
1ft 5ft 2ft 6ft		16	21.8	7.3	3.0	0.7
5ft 10ft		18		9.1	3.8	0.9
	*****	20		11.1	4.6	1.1
		25		16.8 23.5	6.9 9.7	1.7 2.4
D. 1. Supply Pipe Diameter: 2.0 in		30 35		23.5	12.9	3.2
2. Supply Pipe Length: 30 ft		40			16.5	4.1
		45			20.5	5.0
E. Friction Loss in Plastic Pipe per 100ft from Table I:		50				6.1
Friction Loss = 9.36 ft per 100ft of pipe		55				7.3
Friction Loss = 9.36 ft per 100ft of pipe		60				8.6
F. Determine Equivalent Pipe Length from pump discharge to soil dispersal	•	65				10.0
point. Estimate by adding 25% to supply pipe length for fitting loss. Sup	ply Pipe Length	70				11.4
(D.2) X 1.25 = Equivalent Pipe Length		75				13.0
30 ft X 1.25 = 37.5 ft		85				16.4
		95	// F\		100	20.1
G. Calculate Supply Friction Loss by multiplying Friction Loss Per 100ft (Lin	ne E) by the <i>Equiv</i> o	alent Pipe Length	(Line F) ai	na aiviae i	by 100.	
Supply Friction Loss =						
9.36 ft per 100ft X 37.5 ft	÷ 100	= 3.5	ft	<u>.</u>		
$\mbox{H. } \mbox{\it Total Head}$ requirement is the sum of the {\it Elevation Difference} (Line A), Supply Friction Loss (Line G )	the Distribution H	lead Loss (Line B),	Additiona	l Head Lo	ss (Line C)	, and the
12.0 ft + 5.0 ft +	ft +	3.5 f	t =	20.5	ft	
3. PUMP SELECTION						
A pump must be selected to deliver at least 63.0 GPM (I	ine 1 or Line 2) w	ith at least	20.5	feet	of total h	ead.
Comments:						

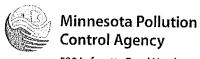


### OSTP Pump Tank Design Worksheet (Demand Dose)

University of Minnesota



	DETERA	AINE TANK CAPACIT	Y AND DIMENS	IONS				Project ID:				v 04.20.2016
1.	Α.	Design Flow (Design	n Sum. 1A) :		1	765	GPD					
	В.	Min. required pump	tank capacity	<i>/</i> :	1	765	Gal	C.Recommended	l pump tank ca	pacity:	2000	O Gal
2.	Α.	Tank Manufacturer	: [	Brown Wil	bert		В.	Tank Model:		2000		
	C. Capacity from manufacturer:					015	Gallons		Substituting	a different tank	based on this sp model will chang	ge the pump
	D.	Gallons per inch fro	om manufactur	er:	5	0.7	Gallons	per inch	float or time necessary.	r settings. Conta	act designer if ch	anges are
	E.	Liquid depth of tan	k from manufa	cturer:	3	9.0	inches					
DETERMINE DOSING VOLUME												
3	Calculat recomm	e Volume to Cover F	Pump (The inte	et of the pump mus	t be at le	ast 4-incl	nes from	the bottom of the	pump tank &	2 inches of wate	r covering the pu	ımp is
	(Pump a	ınd block height + 2 i	inches) X Gallo	ons Per Inch (2C or	3E)							
	(	16	in + 2 inche	es) X 5	0.7	Gallons	Per Inch	=	912	Gallons		
4	Minimu	m Delivered Volume	= 4 X Volume	of Distribution Pig	oing:	_				<u>-</u>		
	- Line 1	7 of the Pressure Dis	tribution or Li	ne 11 of Non-level					304	Gallons (mi	nimum dose)	
5	Calculat	e Maximum Pumpou	t Volume (25%	of Design Flow)						<del></del>		
	Design F	low:	1765	GPD X	0	.25	2		441	Gallons (ma	ximum dose)	
6	Select a	pumpout volume th	at meets both	Minimum and Max	imum:			325 Gallons		Volume of	f Liauid in	
7	Calculat	e Doses Per Day = D	esign Flow + D	elivered Volume	_					Pi	**************************************	
		1765 g	pd ÷	325	gal =			5 Doses		Pipe	Liquid	
8	Calculat	e Drainback:						-		Diameter	Per Foot	
	A.	Diameter of Supply	Pipe =				2	inches		(inches)	(Gallons)	
	В.	Length of Supply Pi	pe =				10	feet		1	0.045	
	<u></u>	Values of Hautel D		af Dian			170	]		1.25	0.078	
	C.	Volume of Liquid Po			دا منظ العاد	L	170	Gallons/ft		1.5	0.110	
	D.	Drainback = Length	· · · · · · · · · · · · · · · · · · ·	1.170 gal/ft			oj Pipe .1	Callana		2	0.170	
	Total D	osing Volume = Deliv	L.,		-		• I	Gallons		3	0.380	
"	TOTAL DE		·	5.1 gal =	<u> </u>	30	Gallons			4	0.661	
10	Minimur	n Alarm Volume = De			L		ļ					
		T.		50.7 gal/in			1.4	Gallons				
DE	MAND DO	SE FLOAT SETTINGS	<u> </u>			<u> </u>						
<u> — </u>		e Float Separation D	<del></del>	Dosing Volume .				· · · · · · · · · · · · · · · · · · ·				
		osing Volume /Gallor	-	zoomg rotumu t								
		330 g	al ÷	50.7	gal	/in =	,	5.5 Inches				
12.	Measurii	ng from bottom of ta	ınk:	<del></del>	1			I	Inches for Do	se: 6.5 in		
		to set Pump Off Flo		lock height + 2 inc	hes							J ∥└┐
		16	in +	2	in =	1	8	Inches	Alarm Depth	26.5 <sup>in</sup>		
В.	Distance	to set Pump On Flo	at=Distance to	Set Pump-Off Floo	ıt + Float	Separati	on Dista	nce	Pump On	24.5 in	101.4 0	Sal
		18	in +	6.5	in =	2	5	Inches	Pump Off	18.0 in	330 0	ial
c.	Distance	to set Alarm Float	= Distance to s	set Pump-On Float	+ Alarm	Depth (2	-3 inche	s)			912 (	ial ]
		25	in +	2.0	in =	2	7	Inches				



**Compliance Inspection Form** 

**Existing Subsurface Sewage Treatment Systems (SSTS)** 

Doc Type: Compliance and Enforcement

520 Lafayette Road North St. Paul, MN 55155-4194

Inspection results based on Minnesota Pollution Control Agency (MPrequirements and attached forms – additional local requirements may also	CA) For local tracking apply.	ng purposes:
Submit completed form to Local Unit of Government (LUG) and syswithin 15 days	stem owner	A STATE OF THE STA
System Status	e de la companie de l	
System status on date (mm/dd/yyyy): 9/22/2017		
	Noncompliant – Notice (See Upgrade Requirements on	
Reason(s) for noncompliance (check all applicable)		
<ul> <li>Impact on Public Health (Compliance Component #1) – Imn</li> <li>Other Compliance Conditions (Compliance Component #3)</li> <li>Tank Integrity (Compliance Component #2) – Failing to prote Other Compliance Conditions (Compliance Component #3)</li> <li>Soil Separation (Compliance Component #4) – Failing to prote Operating permit/monitoring plan requirements (Compliance</li> </ul>	– Imminent threat to public healt ect groundwater – Failing to protect groundwater tect groundwater	h and safety
Property Information Parcel ID# or	Sec/Twp/Range: 200233000	
Cedar Crest Resort 29783 387 <sup>th</sup> St Waubun, MN Property address: 56589	Reason for inspection: S	ellina
Property owner: Fred & Karen Brower or	Owner's phone: 218-473	
Owner's representative:	Representative phone:	
Local regulatory authority: Becker County	Regulatory authority phone:	
5-1,000-gallon concrete septic tanks, 3-1,50  Brief system description:  5-1,000-gallon concrete septic tanks, 3-1,50  lineal feet of rock drainfield.	O gallon concrete septic tanks, 1	- lift stations, and 560
Comments or recommendations:		
This inspection form is for system 3 (see attached map). All septic tanks	need to be pumped. No trench	inspection pipes.
Certification		
I hereby certify that all the necessary information has been gathered to d determination of future system performance has been nor can be made of possible abuse of the system, inadequate maintenance, or future water u	ue to unknown conditions during	of this system. No g system construction,
Inspector name: Ken Ramondo	Certification number: C47	37
Business name: H&R Septic Designation	License number: L31	06
Inspector signature:	Phone number: 218	759-0408
Necessary or Locally Required Attachments		

Soil boring logs

. Impact on Public Health – C	ompliance compor	nent #1 of 5				
Compliance criteria:		Verification method(s):  ☑ Searched for surface outlet				
System discharges sewage to the ground surface.	☐ Yes ☒ No					
System discharges sewage to drain tile or surface waters.	☐ Yes ⊠ No	<ul> <li>☐ Excessive ponding in soil system/D-boxes</li> <li>☐ Homeowner testimony (See Comments/Explanation)</li> </ul>				
System causes sewage backup into dwelling or establishment.	☐ Yes ⊠ No	☐ "Black soil" above soil dispersal system ☐ System requires "emergency" pumping				
Any "yes" answer above indi system is an imminent threat health and safety.		☐ Performed dye test ☐ Unable to verify (See Comments/Explanation) ☐ Other methods not listed (See Comments/Explanation)				
Comments/Explanation: Owner stated no problems.						
. Tank Integrity — Compliance	component #2 of 5					
Compliance criteria:		Verification method(s):				
	1	Verification method(s):				
System consists of a seepage pit, cesspool, drywell, or leaching pit.	☐ Yes ☒ No	□ Probed tank(s) bottom				
System consists of a seepage pit, cesspool, drywell, or leaching pit.  Seepage pits meeting 7080.2550 may be	☐ Yes ⊠ No	<ul><li>☑ Probed tank(s) bottom</li><li>☑ Examined construction records</li></ul>				
cesspool, drywell, or leaching pit. Seepage pits meeting 7080.2550 may be compliant if allowed in local ordinance.		□ Probed tank(s) bottom				
cesspool, drywell, or leaching pit.  Seepage pits meeting 7080.2550 may be compliant if allowed in local ordinance.  Sewage tank(s) leak below their	☐ Yes ☒ No	<ul><li>☑ Probed tank(s) bottom</li><li>☐ Examined construction records</li><li>☐ Examined Tank Integrity Form (Attach)</li></ul>				
cesspool, drywell, or leaching pit. Seepage pits meeting 7080.2550 may be compliant if allowed in local ordinance.		<ul> <li>☑ Probed tank(s) bottom</li> <li>☑ Examined construction records</li> <li>☑ Examined Tank Integrity Form (Attach)</li> <li>☑ Observed liquid level below operating depth</li> </ul>				
cesspool, drywell, or leaching pit.  Seepage pits meeting 7080.2550 may be compliant if allowed in local ordinance.  Sewage tank(s) leak below their designed operating depth.  If yes, which sewage tank(s) leaks:  Any "yes" answer above indi	☐ Yes ☒ No	<ul> <li>☑ Probed tank(s) bottom</li> <li>☐ Examined construction records</li> <li>☐ Examined Tank Integrity Form (Attach)</li> <li>☐ Observed liquid level below operating depth</li> <li>☐ Examined empty (pumped) tanks(s)</li> <li>☐ Probed outside tank(s) for "black soil"</li> <li>☐ Unable to verify (See Comments/Explanation)</li> </ul>				
cesspool, drywell, or leaching pit.  Seepage pits meeting 7080.2550 may be compliant if allowed in local ordinance.  Sewage tank(s) leak below their designed operating depth.  If yes, which sewage tank(s) leaks:	☐ Yes ☒ No	<ul> <li>☑ Probed tank(s) bottom</li> <li>☐ Examined construction records</li> <li>☐ Examined Tank Integrity Form (Attach)</li> <li>☐ Observed liquid level below operating depth</li> <li>☐ Examined empty (pumped) tanks(s)</li> <li>☐ Probed outside tank(s) for "black soil"</li> <li>☐ Unable to verify (See Comments/Explanation)</li> </ul>				
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cesspool, drywell, or leaching pit.  Seepage pits meeting 7080.2550 may be compliant if allowed in local ordinance.  Sewage tank(s) leak below their designed operating depth.  If yes, which sewage tank(s) leaks:  Any "yes" answer above indisystem is failing to protect gr  Comments/Explanation:	☐ Yes ☒ No  cates the roundwater.	<ul> <li>☑ Probed tank(s) bottom</li> <li>☐ Examined construction records</li> <li>☐ Examined Tank Integrity Form (Attach)</li> <li>☐ Observed liquid level below operating depth</li> <li>☐ Examined empty (pumped) tanks(s)</li> <li>☐ Probed outside tank(s) for "black soil"</li> <li>☐ Unable to verify (See Comments/Explanation)</li> <li>☐ Other methods not listed (See Comments/Explanation)</li> </ul>				
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cesspool, drywell, or leaching pit.  Seepage pits meeting 7080.2550 may be compliant if allowed in local ordinance.  Sewage tank(s) leak below their designed operating depth.  If yes, which sewage tank(s) leaks:  Any "yes" answer above indisystem is failing to protect gr  Comments/Explanation:  Other Compliance Condition  a. Maintenance hole covers are dama	Yes No  Cates the roundwater.  S - Compliance complete, cracked, unsecured to immediately and adverted to immediately adverted to immediately and adverted to immediately and adverted to immediately adverted to immediately adverted to immediately adverted to immediately adverted to immediately adverted to immediately adverted to immediately adverted to immediately adverted to immediately adverted to immediately adverted to immediately adverted to immediately adverted to immediately adverted to immediat	□ Probed tank(s) bottom     □ Examined construction records     □ Examined Tank Integrity Form (Attach)     □ Observed liquid level below operating depth     □ Examined empty (pumped) tanks(s)     □ Probed outside tank(s) for "black soil"     □ Unable to verify (See Comments/Explanation)     □ Other methods not listed (See Comments/Explanation)     □ Other methods not listed (See Comments/Explanation)  ponent #3 of 5  d, or appear to be structurally unsound. □ Yes* ☑ No □ Unknersely impact public health or safety. □ Yes* ☑ No □ Unknersely impact public health or yes impact public health or yes impact public				
cesspool, drywell, or leaching pit.  Seepage pits meeting 7080.2550 may be compliant if allowed in local ordinance.  Sewage tank(s) leak below their designed operating depth.  If yes, which sewage tank(s) leaks:  Any "yes" answer above indisystem is failing to protect gr  Comments/Explanation:  Other Compliance Condition  a. Maintenance hole covers are dama b. Other issues (electrical hazards, etc.)	Yes No  Cates the roundwater.  S - Compliance complete, cracked, unsecured to immediately and adverted to immediately adverted to immediately and adverted to immediately and adverted to immediately adverted to immediately adverted to immediately adverted to immediately adverted to immediately adverted to immediately adverted to immediately adverted to immediately adverted to immediately adverted to immediately adverted to immediately adverted to immediately adverted to immediately adverted to immediat	□ Examined construction records     □ Examined Tank Integrity Form (Attach)     □ Observed liquid level below operating depth     □ Examined empty (pumped) tanks(s)     □ Probed outside tank(s) for "black soil"     □ Unable to verify (See Comments/Explanation)     □ Other methods not listed (See Comments/Explanation)				

Explain:

Property address: Cedar Crest Resort 29783	387th St Waubun, MN	56589	Inspector initials/Date: _	kr   9/22/2017 (mm/dd/yyyy)				
4. Soil Separation - Compliance co	omponent #4 of 5							
Date of installation:	☑ Unknown	Verif	ication method(s):					
(mm/dd/yyyy)  Shoreland/Wellhead protection/Food beverage lodging?  Compliance criteria:			bservation does not expire. Pr vations by two independent pa s site conditions have been alt ements differ.	rties are sufficient,				
For systems built prior to April 1, 1996, and	☐ Yes ☐ No		nducted soil observation(s) (A	ttach horing logs)				
not located in Shoreland or Wellhead Protection Area or not serving a food,		☐ Two previous verifications (Attach boring logs) ☐ Not applicable (Holding tank(s), no drainfield)						
beverage or lodging establishment:								
Drainfield has at least a two-foot vertical separation distance from periodically saturated soil or bedrock.			<ul><li>☐ Unable to verify (See Comments/Explanation)</li><li>☐ Other (See Comments/Explanation)</li></ul>					
Non-performance systems built April 1, 1996, or later or for non-performance systems located in Shoreland or Wellhead Protection Areas or serving a food, beverage, or lodging establishment:	⊠ Yes □ No	Comn	nents/Explanation:					
Drainfield has a three-foot vertical separation distance from periodically saturated soil or bedrock.*								
"Experimental", "Other", or "Performance"	☐ Yes ☐ No	Indicate depths or elevations						
systems built under pre-2008 Rules; Type IV or V systems built under 2008 Rules (7080. 2350 or 7080.2400 (Advanced Inspector		A. Bottom of distribution media		96.01'				
License required)		B. Periodically saturated soil/bedrock		92.46'				
Drainfield meets the designed vertical separation distance from periodically saturated soil or bedrock.		C. System separation  D. Required compliance separation*		3.55' 3'				
Any "no" answer above indicates to failing to protect groundwater.  5. Operating Permit and Nitrogen	·	*May I Ordin	pe reduced up to 15 percent if ance.					
Is the system operated under an Operating	Permit?	s 🗌 No	If "yes", A below is requir	ed				
Is the system required to employ a Nitroger	n BMP? 🔲 Yes	s 🗌 No	If "yes", B below is requir	ed				
BMP = Best Management Practice(s)	specified in the system	design						
If the answer to both questions is "r	o", this section do	es not r	need to be completed.					
Compliance criteria								
a. Operating Permit number:								
Have the Operating Permit requirement	Have the Operating Permit requirements been met?							
b. Is the required nitrogen BMP in place	and properly functioni	ng?	☐ Yes ☐ No					
Any "no" answer indicates Nonc								
Upgrade Requirements (Minn. Stat. § 115.55) discontinued within ten months of receipt of this								

www.pca.state.mn.us • 651-296-6300 • 800-657-3864 TTY 651-282-5332 or 800-657-3864
 Available in alternative formats wq-wwists4-31 • 3/16/12 Page 3 of 4 ground water, the system must be upgraded, replaced, or its use discontinued within the time required by local ordinance. If an existing system is not failing as defined in law, and has at least two feet of design soil separation, then the system need not be upgraded, repaired, replaced, or its use discontinued, notwithstanding any local ordinance that is more strict. This provision does not apply to systems in shoreland areas, Wellhead Protection Areas, or those used in connection with food, beverage, and lodging establishments as defined in law.

www.pca.state.mn.us • 651-296-6300 • 800-657-3864 TTY 651-282-5332 or 800-657-3864 • Available in alternative formats Page 4 of 4

UNIVERSITY OSI

## OSTP Soil Observation Log

v 05.13.14

Project ID: Cedar

Consistence 9/22/2017 Friable 97.16 Loose Firm Firm |----- Structure------09/22/17 Organic Matter Auger > Structureless Grade Weak Weak Weak Elevation: ☐ Bedrock Single grain Date Toe Slope Slope shape Observation Type: (License #) Shape Blocky Blocky Platey 2.0 Alluvium Slope% hereby certify that I have completed this work in accordance with all applicable ordinances, rules and laws. Legal Description/ GPS: Indicator(s) 22 □ Loess ✓ Till ☐ Summit ☐ Shoulder ☑ Back/Side Slope ☐ Foot Slope Redox Kind(s) Depletions Sunny 60oF 12:15 pm Soil survey map units 40C U Outwash Uacustrine (Signature) Mottle Color(s) System 3 (Soil Boring 1) 7.5YR 4/6 Cedar Crest Resort Matrix Color(s) 10yr 4/3 10YR 5/4 10YR 6/3 10YR 5/1 Soil parent material(s): (Check all that apply) Comments Restricting layer 92.49'. Rock Frag. % <35% <35% <35% <35% Weather Conditions/Time of Day: Landscape Position: (check one) (Designer/Inspector) Loamy Coarse Sand Ken Ramondo Client/ Address: Sandy Loam Observation #/Location: Sandy Loam Sandy Clay Loam Texture Vegetation Depth (in) 47-52 52-56 0-47 26

```
Schedule: Resort is open from May 1st to October 1st. After October 1st, the lodge is open on on weekends from January 1st to February 28.

SYSTEM 1: FLOW & SIZING CALCULATION:

13 Seasonal Mobile Homes
10*100+(3*100*0.45) = 1,135 gpd
Clay Loam, Need 10' x 95' rock bed mound
Existing system: 732 LF of drainfield

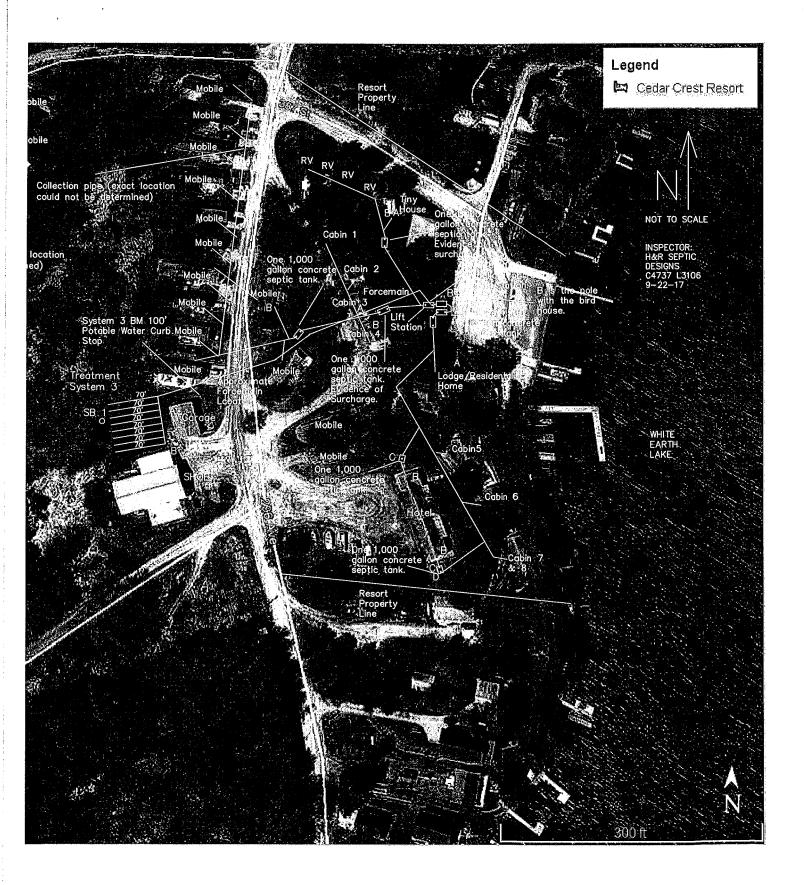
System 2:

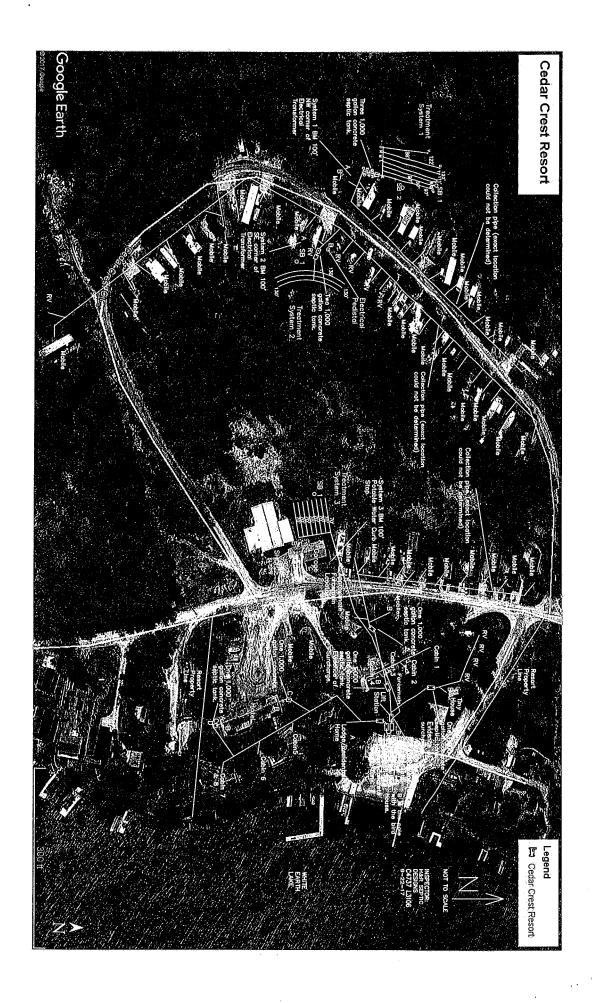
21 seasonal mobile homes
6 RV sites
10*100+((11*100+6*100))*0.45 = 1,765 gpd
Clay Loam, Need 10' x 302' rock bed mound
Existing system: 390 LF of drainfield

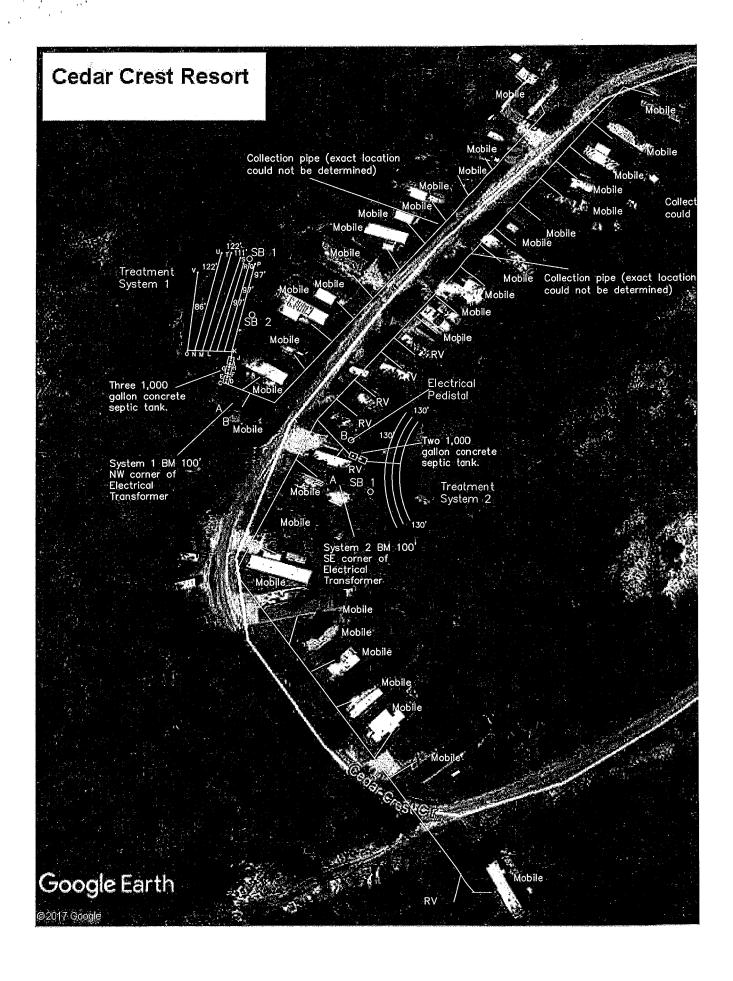
System 3:

8 cabins (50 people)
15 seasonal mobile homes
4 RV sites
1 permanent 3 bedroom home
Lodge: 45 seats with alcohol
2250+(10*100+((5*100+50*50+400+450))*0.45 = 4,983 gpd
Sandy Loam, 0.68 gpd/sq ft, need 7,328 sq ft (2,443 LF)
Existing system: 560 LF of drainfield
```

Swing Tie	s		
Swing Tie System 1 A-C A-D A-E A-F A-G A-H A-I A-J A-K A-L A-M A-N A-O A-P A-Q A-R A-C A-C A-C A-C A-C A-C A-C A-C A-C A-C	27' 30.5' 33' 35' 42.5' 45' 52' 60.5' 62' 61.5' 157' 156' 157' 171' 181' 180' 147' 166' 81'	B-C B-F B-F B-H B-J B-L B-N B-Q B-Q B-Q B-Q B-V B-V B-V B-SB1 B-SB2	41' 44.5' 47.5' 50' 53.5' 57' 58.5' 66' 75' 75' 77' 171' 170' 171' 195' 193' 160' 180'
System 2 A-C A-D A-SB1 A-trench	30' 21' 63'	B-C B-D B-SB1 B-Trench	19' 30' 104'
System 3 A-BM A-SB1 A-Trench	17' 21'	C-BM B-SB1 B-Trench	18' 84' 83'
Hotel Nor A-C A-D A-E A-F	th Septic 19' 16.5' 17' 19'	Tank B-C B-D B-E B-F	28' 9.5' 14.5' 18.5'
Hotel Sou A-C A-D A-E	th Septic 12.5' 14' 19'	Tank B-C B-D B-E	24' 24.5' 27.5'
Septic Tar A-C	nk Betwee 22'	n Blue Mol B-C	oile Home and RV 27'
Tank betw A-C A-D	reen cabin 18' 28'	s B-C B-D	17' 27'
Septic Tar A-C	nk by Tiny 67'	House B-C	66.5'
Septic Tal A-C A-D A-E A-F A-G A-H A-I	nks/Lift S 42' 48' 52.5' 57' 61' 61.5' 63'	tation by l B-C B-D B-E B-F B-G B-H B-I	Lodge 22' 17' 11' 20' 11' 24.5' 18.5'









Treatment System 1.



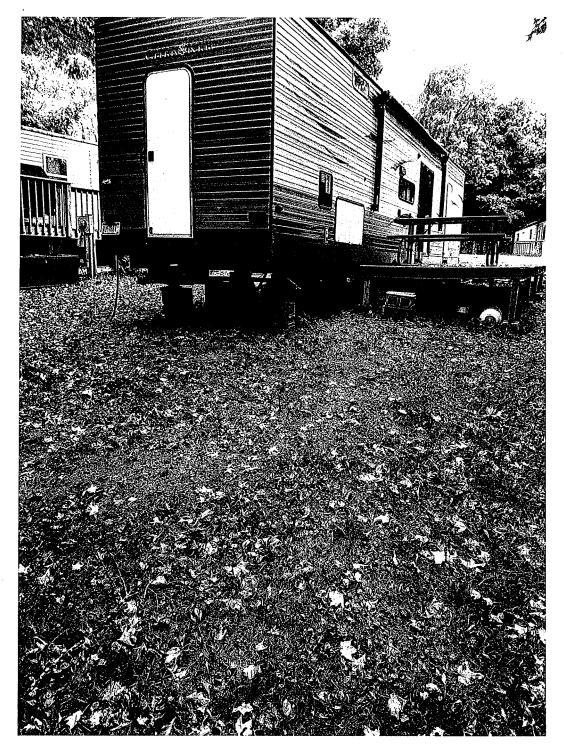
Treatment system 1 septic tanks.



Treatment system 2 (North).



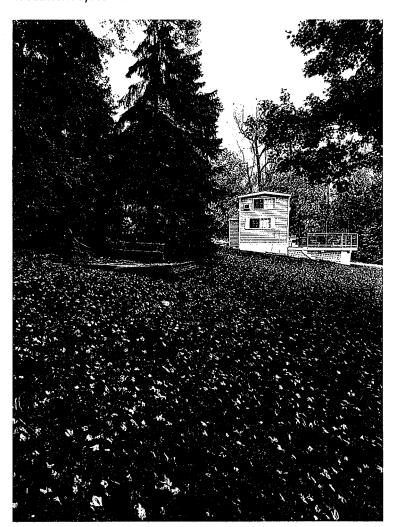
Treatment system 2 (south).



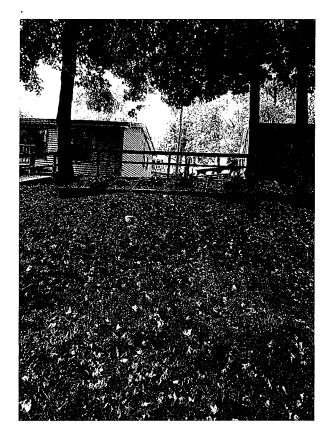
Treatment system 2 Septic Tanks.



Treatment system 3.



Treatment system 3 (Tank by Tiny House).



Treatment system 3 septic tank between cabins.



Treatment system 3 septic tanks/lift station by lodge.



Treatment system 3 Septic tank.



Treatment system 3 Hotel septic tank (north)



Treatment system 3 Hotel septic tank (South)



Treatment system 3 septic tank (south) baffle.



Treatment system 3 septic tank (south) baffle.



**Compliance Inspection Form** 

520 Lafayette Road North St. Paul, MN 55155-4194

**Existing Subsurface Sewage Treatment Systems (SSTS)** 

Doc Type: Compliance and Enforcement

Inspection results based on Minnesota Pollution Control Agency (MPCA) requirements and attached forms - additional local requirements may also apply.

Submit completed form to Local Unit of Government (LUG) and system owner

GP 201317

	7.			9846.4	
For loca	al trac	king purp	oses:	i sange	
Pro-	de la companya de la	21	,	College College Consumption College	

within 15 days	
System Status	The second section of the second section (
System status on date (mm/dd/yyyy): 9/22/2017	
Compliant – Certificate of Compliance (Valid for 3 years from report date, unless shorter time frame outlined in Local Ordinance.)	Noncompliant - Notice of Noncompliance (See Upgrade Requirements on page 3.)
Reason(s) for noncompliance (check all applicable)  Impact on Public Health (Compliance Component #1) – Ir Other Compliance Conditions (Compliance Component #2) Tank Integrity (Compliance Component #2) – Failing to pr Other Compliance Conditions (Compliance Component #3) Soil Separation (Compliance Component #4) – Failing to pr Operating permit/monitoring plan requirements (Compliance Component #4)	3) – Imminent threat to public health and safety rotect groundwater 3) – Failing to protect groundwater protect groundwater
Property Information Parcel ID#  Cedar Crest Resort 29783 387 <sup>th</sup> St Waubun, MN  Property address: 56589	or Sec/Twp/Range: 200233000
Property owner: Fred & Karen Brower or	Reason for inspection: Selling Owner's phone: 218-473-2116
Owner's representative:	Representative phone:
Local regulatory authority:Becker County	Regulatory authority phone:
Brief system description: 3-1,000-gallon concrete septic tanks and	
Comments or recommendations: This inspection form is for system 1(see attached map). All septic tank pipes in trenches 1, 2 and 3.	ks need to be pumped. Water was observed in the inspection
Certification	
hereby certify that all the necessary information has been gathered to determination of future system performance has been nor can be mad possible abuse of the system, inadequate maintenance, or future wate	le due to unknown conditions during system construction.
Inspector name: Ken Ramondo	Certification number: C4737
Business name: H&R Septic Designs	License number: L3106
Inspector signature:	Phone number: 218-759-0408
Necessary or Locally Required Attachments	
<ul><li>☑ Soil boring logs</li><li>☑ System/As-built drawing</li><li>☐ Other information (list):</li></ul>	☐ Forms per local ordinance

wq-wwists4-31 • 3/16/12

Compliance criteria:		Verification method(s):
System discharges sewage to the ground surface.	☐ Yes ☒ No	<ul><li>☑ Searched for surface outlet</li><li>☑ Searched for seeping in yard/backup in home</li></ul>
System discharges sewage to drain tile or surface waters.	☐ Yes ⊠ No	<ul> <li>☐ Excessive ponding in soil system/D-boxes</li> <li>☐ Homeowner testimony (See Comments/Explanation)</li> </ul>
System causes sewage backup into dwelling or establishment.	☐ Yes   No	☐ "Black soil" above soil dispersal system ☐ System requires "emergency" pumping
Any "yes" answer above in system is an imminent threa health and safety.		☐ Performed dye test ☐ Unable to verify (See Comments/Explanation) ☐ Other methods not listed (See Comments/Explanation)
Comments/Explanation: Owner stated no problems.		
Tank Integrity – Compliance	e component #2 of 5	The second secon
Compliance criteria:		Verification method(s):
System consists of a seepage pit, cesspool, drywell, or leaching pit.	☐ Yes ⊠ No	<ul><li>☑ Probed tank(s) bottom</li><li>☑ Examined construction records</li></ul>
Seepage pits meeting 7080.2550 may be compliant if allowed in local ordinance.	,	☐ Examined Tank Integrity Form (Attach)
compilant if allowed in local ordinarice.		☐ Observed liquid level below operating depth
Sewage tank(s) leak below their designed operating depth.	☐ Yes ☒ No	☐ Examined empty (pumped) tanks(s)
Sewage tank(s) leak below their designed operating depth.  If yes, which sewage tank(s) leaks:	☐ Yes   No	<ul><li>☐ Examined empty (pumped) tanks(s)</li><li>☐ Probed outside tank(s) for "black soil"</li></ul>
designed operating depth.	licates the	
designed operating depth.  If yes, which sewage tank(s) leaks:  Any "yes" answer above income.	licates the	☐ Probed outside tank(s) for "black soil" ☐ Unable to verify (See Comments/Explanation)
designed operating depth.  If yes, which sewage tank(s) leaks:  Any "yes" answer above incompared to protect to the system is failing to protect to the system is system.	licates the	☐ Probed outside tank(s) for "black soil" ☐ Unable to verify (See Comments/Explanation)
designed operating depth.  If yes, which sewage tank(s) leaks:  Any "yes" answer above incompared to protect to the system is failing to protect to the system is system in the system is system.	licates the	☐ Probed outside tank(s) for "black soil" ☐ Unable to verify (See Comments/Explanation)
designed operating depth.  If yes, which sewage tank(s) leaks:  Any "yes" answer above incompared to protect to comments/Explanation:	dicates the groundwater.	<ul> <li>□ Probed outside tank(s) for "black soil"</li> <li>□ Unable to verify (See Comments/Explanation)</li> <li>□ Other methods not listed (See Comments/Explanation)</li> </ul>
designed operating depth.  If yes, which sewage tank(s) leaks:  Any "yes" answer above incomposed in the system is failing to protect to comments/Explanation:  Other Compliance Condition	dicates the groundwater.	<ul> <li>□ Probed outside tank(s) for "black soil"</li> <li>□ Unable to verify (See Comments/Explanation)</li> <li>□ Other methods not listed (See Comments/Explanation)</li> </ul>
designed operating depth.  If yes, which sewage tank(s) leaks:  Any "yes" answer above incompleted in the system is failing to protect in	dicates the groundwater.  ons – Compliance compaged, cracked, unsecure to immediately and adverse.	☐ Probed outside tank(s) for "black soil" ☐ Unable to verify (See Comments/Explanation) ☐ Other methods not listed (See Comments/Explanation)  ponent #3 of 5  d, or appear to be structurally unsound. ☐ Yes* ☒ No ☐ Unkersely impact public health or safety. ☐ Yes* ☒ No ☐ Unkersely impact public health or safety. ☐ Yes* ☒ No ☐ Unkersely impact public health or safety. ☐ Yes* ☒ No ☐ Unkersely impact public health or safety.
designed operating depth.  If yes, which sewage tank(s) leaks:  Any "yes" answer above incompliance to protect graphs.  Comments/Explanation:  Other Compliance Condition  a. Maintenance hole covers are dannumb. Other issues (electrical hazards, etc.)	dicates the groundwater.  ons – Compliance compaged, cracked, unsecure to immediately and adverse.	□ Probed outside tank(s) for "black soil" □ Unable to verify (See Comments/Explanation) □ Other methods not listed (See Comments/Explanation)  ponent #3 of 5  d, or appear to be structurally unsound. □ Yes* ☒ No □ Unknersely impact public health or safety. □ Yes* ☒ No □ Unknersely impact public health or safety. □ Yes* ☒ No □ Unknersely impact public health or safety. □ Yes* ☒ No □ Unknersely impact public health or safety.
designed operating depth.  If yes, which sewage tank(s) leaks:  Any "yes" answer above incompleted in the system is failing to protect in the system is failing to protect in the system is failing to protect in the system is failing to protect in the system is an imminent threat in the system in the system is an imminent threat in the system is an imminent threat in the system is an imminent threat in the system is an imminent threat in the system is an imminent threat in the system is an imminent threat in the system is an imminent threat in the system in the system is an imminent threat in the system in the system is an imminent threat in the system is an imminent threat in the system in the system is an imminent threat in the system in the system is an imminent threat in the system in the system is an imminent threat in the system in the system is an imminent threat in the system in the system is an imminent threat in the system in the system is an imminent threat in the system in the system is an imminent threat in the system in the system is an imminent threat in the system in the system is an imminent threat in the system in the system is a system in the system in the system in the system in the system is a system in the system i	dicates the groundwater.  ons – Compliance compaged, cracked, unsecure to immediately and adveto public health and safet desired water for other conditions.	□ Probed outside tank(s) for "black soil" □ Unable to verify (See Comments/Explanation) □ Other methods not listed (See Comments/Explanation)  ponent #3 of 5  d, or appear to be structurally unsound. □ Yes* ☒ No □ Unknersely impact public health or safety. □ Yes* ☒ No □ Unknerty.

Soil Separation — Compliance of				(mm/dd/yyyy)
Don Separación Comphanice	component #4 of 5			
ate of installation:	_ 🛛 Unknown	Verif	ication method(s):	
(mm/dd/yyyy) oreland/Wellhead protection/Food beverage dging? ompliance criteria:	⊠ Yes □ No	obser unles	bbservation does not expire. Frations by two independent ps site conditions have been a rements differ.	parties are sufficient,
or systems built prior to April 1, 1996, and	☐ Yes ☐ No	⊠ Co	onducted soil observation(s) (	'Attach boring logs)
t located in Shoreland or Wellhead			vo previous verifications (Atta	
otection Area or not serving a food, everage or lodging establishment:			ot applicable (Holding tank(s), n	
Drainfield has at least a two-foot vertical separation distance from periodically saturated soil or bedrock.			nable to verify (See Comments)	
			☐ Other (See Comments/Explanation)	
on-performance systems built April 1, 96, or later or for non-performance stems located in Shoreland or Wellhead otection Areas or serving a food, verage, or lodging establishment:	☐ Yes ⊠ No	Comr	ments/Explanation:	
ainfield has a three-foot vertical paration distance from periodically turated soil or bedrock.*				
xperimental", "Other", or "Performance"	☐ Yes ☐ No	Indic	ate depths or elevations	,
stems built under pre-2008 Rules; Type IV V systems built under 2008 Rules (7080. 50 or 7080.2400 (Advanced Inspector		A. Bot	ttom of distribution media	93.95'
ense required)		B. Per	riodically saturated soil/bedrock	96.37'
ainfield meets the designed vertical paration distance from periodically		C. Sys	stem separation	-2.42
saturated soil or bedrock.			quired compliance separation*	3'
ny "no" answer above indicates to illing to protect groundwater.  Operating Permit and Nitroger	n BMP* – Complia	Ordin	be reduced up to 15 percent nance.  nponent #5 of 5	Not applicable
Is the system operated under an Operating	g Permit?	s 🗌 No	If "yes", A below is requ	ired
Is the system required to employ a Nitroge	n BMP? 🔲 Ye	s 🗌 No	If "yes", B below is requ	ired
BMP = Best Management Practice(s)	specified in the system	n design		
If the answer to both questions is "i	no", this section do	es not r	need to be completed.	
Compliance criteria				
a. Operating Permit number:				
Have the Operating Permit requirement	ents been met?		Yes No	
b. Is the required nitrogen BMP in place		ing?	☐ Yes ☐ No	

**Upgrade Requirements** (Minn. Stat. § 115.55) An imminent threat to public health and safety (ITPHS) must be upgraded, replaced, or its use discontinued within ten months of receipt of this notice or within a shorter period if required by local ordinance. If the system is failing to protect ground water, the system must be upgraded, replaced, or its use discontinued within the time required by local ordinance. If an existing system is not failing as defined in law, and has at least two feet of design soil separation, then the system need not be upgraded, repaired, replaced, or its use discontinued, notwithstanding any local ordinance that is more strict. This provision does not apply to systems in shoreland areas, Wellhead Protection Areas, or those used in connection with food, beverage, and lodging establishments as defined in law.

UNIVERSITY OST OF MINNESOTA

### OSTP Soil Observation Log

v 05.13.14

Project ID: Cedar

**Extremely Firm** Consistence 9/22/2017 Friable Friable Loose (Date) Loose Loose 97.7 ------- Structure-------09/22/17 Organic Matter  $\geq$ Comments Restricting layer 96.37. Calcium Carbonate (verified with acid) starting at 6" 10YR7/1 dry and observed all the way to 60". Structureless Single grain | Structureless Grade Weak Weak Weak Weak Elevation: Bedrock Date Toe Slope Slope shape Observation Type: Single grain (License #) Granular Shape L3106 Blocky Blocky Blocky ☐ Alluvium Slope% hereby certify that I have completed this work in accordance with all applicable ordinances, rules and laws. Legal Description/ GPS: Indicator(s) 23 S S S **≡** ☐ Shoulder ☑ Back/Side Slope ☐ Foot Slope Redox Kind(s) Concentrations Concentrations Concentrations Depletions □ Loess Sunny 60oF 10:15 am Soil survey map units 40C Treatment System 2 (Soil Boring 1) U Outwash 🔲 Lacustrine (Signature) Mottle Color(s) 10R 3/6 10R 3/4 10R 3/6 10YR 5/1 Cedar Crest Resort Matrix Color(s) 10yr 2/1 10YR 4/3 10YR 4/4 10YR 4/4 10YR 5/4 10YR 6/3 Summit Summit Soil parent material(s): (Check all that apply) Rock Frag. % <35% <35% <35% Weather Conditions/Time of Day: <35% <35% <35% -andscape Position: (check one) (Designer/Inspector) Client/ Address: Sandy Loam Observation #/Location: Sandy Loam Sandy Loam Ken Ramondo Clay Loam Clay Loam Sandy Clay Texture Loam Vegetation Depth (in) 16-21 37-60 91-9 21-34 34-37 9-0



St. Paul, MN 55155-4194

**Compliance Inspection Form** 

**Existing Subsurface Sewage Treatment Systems (SSTS)** 

Doc Type: Compliance and Enforcement

Inspection results based on Minnesota Pollution Control Agency (MPCA)

For local trad	cking p	urposes:	Ç.	
10000000000000000000000000000000000000	C. ()		10 mm m m m m m m m m m m m m m m m m m	

requirements and attached forms – additional local requirements may a	Iso apply.
Submit completed form to Local Unit of Government (LUG) and s within 15 days	
System Status	
System status on date (mm/dd/yyyy): 9/22/2017	
Compliant – Certificate of Compliance (Valid for 3 years from report date, unless shorter time frame outlined in Local Ordinance.)	Noncompliant - Notice of Noncompliance (See Upgrade Requirements on page 3.)
Reason(s) for noncompliance (check all applicable)	•
Impact on Public Health (Compliance Component #1) – In	aminent threat to public health and safety
Other Compliance Conditions (Compliance Component #3	3) - Imminent threat to public health and safety
☐ Tank Integrity (Compliance Component #2) – Failing to pro-	otect aroundwater
Other Compliance Conditions (Compliance Component #3	B) — Failing to protect groundwater
Soil Separation (Compliance Component #4) - Failing to	protect groundwater
☐ Operating permit/monitoring plan requirements (Complian	ce Component #5) - Noncompliant
Property Information Parcel ID# of Cedar Crest Resort 29783 387 <sup>th</sup> St Waubun, MN Property address: 56589	or Sec/Twp/Range: 200233000  Reason for inspection: Selling
Property owner: Fred & Karen Brower	Owner's phone: 218-473-2116
or	210-470-2110
Owner's representative:	Representative phone:
Local regulatory authority: Becker County	Regulatory authority phone:
Brief system description: 2-1,000-gallon concrete septic tanks and 3	390 lineal feet of rock drainfield.
Comments or recommendations:	
This inspection form is for system 2 (see attached map). All septic tank	ks need to be pumped.
Certification	
I hereby certify that all the necessary information has been gathered to determination of future system performance has been nor can be made possible abuse of the system, inadequate maintenance, or future water	due to unknown conditions during system construction
Inspector name: Ken Ramondo	Certification number: C4737
Business name: H&R Septic Design	License number: L3106
nspector signature:	Phone number: 218-759-0408
Necessary or Locally Required Attachments	
<ul><li>☑ Soil boring logs</li><li>☑ System/As-built drawing</li><li>☐ Other information (list):</li></ul>	☐ Forms per local ordinance

ground System tile or s System dwellin Any " syste healti Comm	n discharges sewage to the disurface. In discharges sewage to drain surface waters. In causes sewage backup into go or establishment. If yes" answer above indicates an imminent threat the and safety. In the safety of the safet		<ul> <li>☑ Searched for surface outlet</li> <li>☑ Searched for seeping in yard/backup in home</li> <li>☐ Excessive ponding in soil system/D-boxes</li> <li>☑ Homeowner testimony (See Comments/Explanation)</li> <li>☐ "Black soil" above soil dispersal system</li> <li>☐ System requires "emergency" pumping</li> <li>☐ Performed dye test</li> <li>☐ Unable to verify (See Comments/Explanation)</li> <li>☐ Other methods not listed (See Comments/Explanation)</li> </ul>
System tile or s System dwellin Any " system healt! Comm	n discharges sewage to drain surface waters.  n causes sewage backup into g or establishment.  'yes" answer above indiem is an imminent threat h and safety.  nents/Explanation:	☐ Yes ⊠ No	<ul> <li>☐ Excessive ponding in soil system/D-boxes</li> <li>☐ Homeowner testimony (See Comments/Explanation)</li> <li>☐ "Black soil" above soil dispersal system</li> <li>☐ System requires "emergency" pumping</li> <li>☐ Performed dye test</li> <li>☐ Unable to verify (See Comments/Explanation)</li> </ul>
System dwellin  Any " system healti  Comm Owner	surface waters. In causes sewage backup into ag or establishment. If yes" answer above indicem is an imminent threat the hand safety. It is an imminent threat the safety.	☐ Yes ⊠ No	<ul> <li>☑ Homeowner testimony (See Comments/Explanation)</li> <li>□ "Black soil" above soil dispersal system</li> <li>□ System requires "emergency" pumping</li> <li>□ Performed dye test</li> <li>□ Unable to verify (See Comments/Explanation)</li> </ul>
System dwellin  Any " system healti  Comm Owner	n causes sewage backup into g or establishment.  'yes" answer above indiem is an imminent threat h and safety.  ents/Explanation:	cates the	<ul> <li>□ "Black soil" above soil dispersal system</li> <li>□ System requires "emergency" pumping</li> <li>□ Performed dye test</li> <li>□ Unable to verify (See Comments/Explanation)</li> </ul>
Any " syste healti Comm Owner	g or establishment.  'yes" answer above indiem is an imminent threat h and safety.  eents/Explanation:	cates the	<ul> <li>☐ System requires "emergency" pumping</li> <li>☐ Performed dye test</li> <li>☐ Unable to verify (See Comments/Explanation)</li> </ul>
Syste healti Comm Owner	em is an imminent threat h and safety. ents/Explanation:		☐ Performed dye test ☐ Unable to verify (See Comments/Explanation)
Comm Owner	h and safety. ents/Explanation:	to public	☐ Unable to verify (See Comments/Explanation)
<b>Comm</b> Owner	ents/Explanation:		☐ Other methods not listed (See Comments/Explanation)
Owner			
	stated no problems.		
Tank			
	Integrity - Compliance	component #2 of 5	
Comp	liance criteria:		Verification method(s):
	n consists of a seepage pit,	☐ Yes ⊠ No	☑ Probed tank(s) bottom
cesspo	ool, drywell, or leaching pit.		☐ Examined construction records
	e pits meeting 7080.2550 may be int if allowed in local ordinance.		☐ Examined Tank Integrity Form (Attach)
	e tank(s) leak below their	☐ Yes ☒ No	☐ Observed liquid level below operating depth
	ed operating depth.	☐ 169 ⊠ M	Examined empty (pumped) tanks(s)
If yes, v	which sewage tank(s) leaks:		Probed outside tank(s) for "black soil"
-	'yes" answer above indi		Unable to verify (See Comments/Explanation)
syste	m is failing to protect gr	oundwater.	☐ Other methods not listed (See Comments/Explanation)
Comm	ents/Explanation:		•
•			
Other	r Compliance Condition	s – Compliance com	ponent #3 of 5
a. Ma	aintenance hole covers are dama	ged, cracked, unsecured	d, or appear to be structurally unsound. 🔲 Yes* 🖾 No 🔲 Unkn
	her issues <i>(electrical hazards, et</i> c.) System is an imminent threat to		ersely impact public health or safety. ☐ Yes* ☒ No ☐ Unkno ety.
Ex	plain:		
	rstem is non-protective of ground cystem is failing to protect grou		ns as determined by inspector . ☐ Yes*  ☑ No
٠.	rplain:		

Inspector initials/Date: kr | 9/22/2017

(mm/dd/yyyy)

Property address: Cedar Crest Resort 29783 387th St Waubun, MN 56589

www.pca.state.mn.us • 651-296-6300 • 800-657-3864 • TTY 651-282-5332 or 800-657-3864 • Available in alternative formats wq-wwists4-31 • 3/16/12 Page 2 of 3

Property address: Cedar Crest Resort 29783	307 til St vvaubull, ivil	N 20209	Inspector initials/Date:	kr   9/22/2017 (mm/dd/yyyy)
				(mmacayyyy)
. Soil Separation – Compliance co	omponent #4 of 5			
Pate of installation:	Unknown	Verifi	cation method(s):	
(mm/dd/yyyy) horeland/Wellhead protection/Food beverage odging? Compliance criteria:	⊠ Yes □ No	obser unless	bservation does not expire. Pr vations by two independent pa s site conditions have been alt ements differ.	arties are sufficient,
or systems built prior to April 1, 1996, and	☐ Yes ☐ No		nducted soil observation(s) (A	ttach boring logs)
ot located in Shoreland or Wellhead			o previous verifications (Attacl	
rotection Area or not serving a food, everage or lodging establishment:			t applicable (Holding tank(s), no	
rainfield has at least a two-foot vertical			able to verify (See Comments/E	
eparation distance from periodically attracted soil or bedrock.			ner (See Comments/Explanation)	
on-performance systems built April 1, 996, or later or for non-performance ystems located in Shoreland or Wellhead rotection Areas or serving a food, everage, or lodging establishment:	☐ Yes   No		nents/Explanation: acted two soil borings, see end	closed soil boring logs
rainfield has a three-foot vertical eparation distance from periodically aturated soil or bedrock.*				
Experimental", "Other", or "Performance"	☐ Yes ☐ No	Indica	ate depths or elevations	
vstems built under pre-2008 Rules; Type IV V systems built under 2008 Rules (7080. 350 or 7080.2400 (Advanced Inspector		A. Bot	tom of distribution media	94.07'
cense required)		B. Per	iodically saturated soil/bedrock	93.45'
ainfield meets the designed vertical paration distance from periodically turated soil or bedrock.			tem separation	0.62'
ny "no" answer above indicates t ailing to protect groundwater.	·	*May k Ordin		3' allowed by Local
Operating Permit and Nitrogen	BMP* – Complia	ance com	ponent #5 of 5 🔀 🛚	lot applicable
Is the system operated under an Operating	Permit?	es 🗌 No	If "yes", A below is requir	red
Is the system required to employ a Nitroger	n BMP? ☐ Ye	es 🗌 No	If "yes", B below is requi	red
BMP = Best Management Practice(s) s	specified in the syster	n design		
If the answer to both questions is "n	o", this section d	oes not n	need to be completed.	
Compliance criteria				
a. Operating Permit number:			☐ Yes ☐ No	
Have the Operating Permit requireme	nts been met?			

Any "no" answer indicates Noncompliance.

**Upgrade Requirements** (Minn. Stat. § 115.55) An imminent threat to public health and safety (ITPHS) must be upgraded, replaced, or its use discontinued within ten months of receipt of this notice or within a shorter period if required by local ordinance. If the system is failing to protect ground water, the system must be upgraded, replaced, or its use discontinued within the time required by local ordinance. If an existing system is not failing as defined in law, and has at least two feet of design soil separation, then the system need not be upgraded, repaired, replaced, or its use discontinued, notwithstanding any local ordinance that is more strict. This provision does not apply to systems in shoreland areas, Wellhead Protection Areas, or those used in connection with food, beverage, and lodging establishments as defined in law.

UNIVERSITY OSTP Soil Observation Log



OF MI	OF MINNESOTA				Obsei varie	מכוטוו בעצ ף	Project ID:	Cedar	v 05.13.14	
Cli	Client/ Address:		Ced	Cedar Crest Resort	ort	Legal Descri	Legal Description/ GPS:			
Soil parent r	Soil parent material(s): (Check all that apply)	heck all ti	hat apply)		Outwash 🔲 Lacustrine	le 🗌 Loess 🗸 Till	ill Alluvium		Bedrock 🔲 Organi	Organic Matter
Landscape P	Landscape Position: (check one)	k one)	Summit		☐ Shoulder ✓ Back/Side Slope	Slope   Foot Slope	Toe Slo	Toe Slopslope shape		TT
Vegetation		Lawn		Soil	Soil survey map units 718C	718C	%edolS	3.0	Elevation:	95.95
Weather Co	Weather Conditions/Time of Day:	of Day:			Sunny 600F 8:40 am	:40 am		Date		09/22/17
Observatio	Observation #/Location:			System On	System One (soil boring #1)		Obse	Observation Type:		Auger
Donth (in)	Tovturo	Rock		Matrix Color(s)	Mottle Color(s)	Redox Kind(s)	Indicator(s)	·	I Structure	
Deptil (III)	ובארחוב	Frag. %		(5)	ואוסרנוב בסנסו (s)		mulcacol (3)	Shape	Grade	Consistence
9-0	Clay Loam	<35%	10yr 3/	3/2				Blocky	Moderate	Firm
6-15	Clay Loam	<35%	10YR 4/	4/2				Blocky	Moderate	Firm
15-20	Clay	<35%	10YR 4/	4/4				Blocky	Weak	Extremely Firm
20-30	Clay	<35%	10YR 4/	4/3	10YR 4/4			Platey	Moderate	Extremely Firm
30-37	Sandy Clay Loam	<35%	10YR 4/6	4/6	10YR 5/1	Depletions	22	Massive	Weak	Extremely Firm
37-42	Clay Loam	<35%	10YR 5/	5/1	10R 3/6	Concentrations	S1	Platey	Moderate	Firm
Comments	Comments Restricting layer 93.45	yer 93.45							- Andrews	
I hereby cer	hereby certify that I have completed this work in	complete	d this work		ance with all applic	accordance with all applicable ordinances, rules and laws.	les and laws	2406		710010010
×	Ken Ramondo		ı				•	L3106	•	Sizzico II
(Dec	(Designer/Inspector)	or)			(Signature)			(# asijan)		(Date)



OF MI	ONIVERSITY OF MINNESOTA		OSTP Soil O	I Observation Log	on Log	Project ID:	Cedar	v 05.13.14	
Cli	Client/ Address:		Cedar Crest Resort	sort	Legal Desci	Legal Description/ GPS:			
Soil parent r	Soil parent material(s): (Check all that apply)	heck all tl	hat apply)	Outwash 🔲 Lacustrine	☐ Loess	Till Alluvium		Bedrock Organ	Organic Matter
Landscape P	Landscape Position: (check one)	k one)	Summit S	☐ Shoulder ☑ Back/Side Stope	Slope Toot Slope		Toe Slopslope shape		<b>1</b>
Vegetation		Lawn	Soi	Soil survey map units 718C	718C	Slope%	3.0	Elevation:	98.29′
Weather Co	Weather Conditions/Time of Day:	of Day:		Sunny 60oF 8:50 am	3:50 am		Date		09/22/17
Observatio	Observation #/Location:		System Or	System One (soil boring #2)		Obse	Observation Type:		Auger
Denth (in)	Texture	Rock	Matrix Color(s)	Mottle Color(s)	Redox Kind(s)	Indicator(s)	-	Structure	ļ
מבלימו (וווו)	יכאמור	Frag. %	(s)	יווסרבוב בסוכו (פ)	(c) numa (a)	(5) (3)	Shape	Grade	Consistence
0-3	Loam	<35%	10yr 3/1				Granular	Moderate	Friable
3-6	Clay Loam	<35%	10YR 4/2				Blocky	Moderate	Firm
6-17	Clay	<35%	10YR 4/3				Blocky	Weak	Firm
17-21	Clay	<35%	10YR 4/3	10YR 5/1	Depletions	\$2	Blocky	Moderate	Firm
21-35	Sandy Clay Loam	<35%	10YR 4/3	10YR 5/1	Depletions	52	Platey	Weak	Extremely Firm
35	Clay Loam	<35%	10YR 5/1	10R 3/6	Concentrations	51	Platey	Moderate	Extremely Firm
Comments	Comments Restricting layer 96.87	lyer 96.87							
I hereby cer	tify that I have	complete	I hereby certify that I have completed this work in accordance with all applicable ordinances, rules and laws.	dance with all appli	cable ordinances, r	ules and laws			1,000,000,000
¥	Ken Ramondo			No de la constante de la const	The second secon		L3106	-	9/2/2017 (Date)
(Des	(Designer/Inspector)	or)		(Signature)			(Ficense #)		(Dare)

### Rachel D. Bartee

From:

Kenneth Ramondo < kjramondo@gmail.com>

Sent:

Wednesday, September 27, 2017 2:42 PM

To:

Rachel D. Bartee; Jeff D. Rusness

Subject:

**H&R Septic Designs** 

**Attachments:** 

Existing Compliance Inspection Cedar Crest-signed.pdf

Hello,

I am not sure who to send subsurface sewage treatment system existing compliance inspections too? I have attached a compliance inspection that was conducted at Cedar Crest Resort Waubun, MN. Could you please let me know who receives this information? I could not locate anyone on the Becker County Website. Thanks

Ken Ramondo H&R Septic Designs (218) 759-0408



compliance inspéction form

**Existing Subsurface Sewage Treatment Systems (SSTS)** 

Doc Type: Compliance and Enforcement

520 Lafayette Road North St. Paul, MN 55155-4194

**Inspection results** based on Minnesota Pollution Control Agency (MPCA) requirements and attached forms – additional local requirements may also apply.

For local tr	acking-purposes. RECEIVED	
-	MAY 1 0 2018	
	ZONING	

Submit completed form to Local Unit of Government (LUG) and system owner within 15 days	MAY 1 0 2018
	ZONING
System Status	
System status on date (mm/dd/yyyy): 5-8-20/8	
	and the state of the same of t
V A. II. A.	npliant — Notice of Noncompliance ade Requirements on page 3.)
Reason(s) for noncompliance (check all applicable)  Impact on Public Health (Compliance Component #1) – Imminent threat  Other Compliance Conditions (Compliance Component #3) – Imminent  Tank Integrity (Compliance Component #2) – Falling to protect grounds  Other Compliance Conditions (Compliance Component #3) – Falling to  Soil Separation (Compliance Component #4) – Falling to protect ground  Operating permit/monitoring plan requirements (Compliance Component	threat to public health and safety vater protect groundwater dwater
Property Information	200549 000
Property address: 29730 38744 54 4 6 Reason	ange: 2005 7 7 800
Property Information Property address: 39730 38744 54. Under Reaso Property owner: Dion Brandt Owner or	r's phone: 218-790-3194
Champarla and a state of the st	• •
ocal regulatory authority:	sentative phone:atory authority phone:
Brief system description: 2-hanes on Sane System	2-1500 and to Le 1.4. 45/2/2
Brief system description: 3-hones on same system— Comments or recommendations: Chamber One offeld 3463 19044  Wyoming, Mar	La NE
myoming, mu	55092
Certification	
I hereby certify that all the necessary information has been gathered to determine the determination of future system performance has been nor can be made due to unknown possible abuse of the system, inadequate maintenance, or future water usage.	ne compliance status of this system. No nown conditions during system construction,
During the second	cation number:
	cense number: 7/8
Je Self	Phone number:
Necessary or Locally Required Attachments	
☐ Soil boring logs ☐ System/As-built drawing ☐ Forms p☐ Other information (list):	per local ordinance
2,34 cabins North of Ced	lar Crest co 112

lmm	Sold !	(עעעע
1 ( 2 1) 4 2		YYYYI

1.	Impact on Public Health -	Compliance compone	nt #1 of 5	
	Compliance criteria:		Verification method(s):	
	System discharges sewage to the	☐ Yes Ø No	ÆSearched for surface outlet	
	ground surface.		Searched for seeping in yard/backup in home	
	System discharges sewage to drain tile or surface waters.	Yes No	☐ Excessive ponding in soil system/D-boxes	
	System causes sewage backup into	☐ Yes ☐ No	Homeowner testimony (See Comments/Explanation)	
	dwelling or establishment.	Ties fluo	☐ "Black soil" above soil dispersal system ☐ System requires "emergency" pumping	
	Any "yes" answer above ind	icates the	Performed dye test	
•	system is an imminent threa	t to public	Unable to verify (See Comments/Explanation)	
	health and safety.		Other methods not listed (See Comments/Explanation)	
	Comments/Explanation:	-		
2.	Tank Integrity - Compliance	component #2 of 5		
	Compliance criteria:	2	Verification method(s):	
	System consists of a seepage pit,	Yes No	☑Probed tank(s) bottom	
	cesspool, drywell, or leaching pit.		Examined construction records	
•	Seepage pits meeting 7080.2550 may be compliant if allowed in local ordinance.	•	Examined Tank Integrity Form (Attach)	
			Observed liquid level below operating depth	
	Sewage tank(s) leak below their designed operating depth.	Yes ANo	☐ Examined empty (pumped) tanks(s)	
	If yes, which sewage tank(s) leaks:		☐ Probed outside tank(s) for "black soil"	
	Any "yes" answer above ind	icates the	☐ Unable to verify (See Comments/Explanation)	
	system is failing to protect g		☐ Other methods not listed (See Comments/Explanation)	
•	Comments/Explanation:	——————————————————————————————————————		
3.	Other Compliance Condition	15 - Compliance compo	onent #3 of 5	
			or appear to be structurally unsound.   Yes* No Unknown	own
	b. Other issues (electrical hazards, etc.) *System is an imminent threat to	to immediately and advers	sely impact public health or safety.   Yes*  No  Unknown	
	Explain:	•	•	
	•			
		: : : : : : : : : : : : : : : : : : : :		
	c. System is non-protective of ground  *System is failing to protect gro		as determined by inspector .   Yes*  No	
	Explain:			
	-			

ity address:		Inspector initials/Date:	<u> </u>
			(mm/dd/yyyy)
4. Soil Separation - Compliance c	omponent #4 of 5		
Date of installation:	_ 🔏 Unknown	Verification method(s):	
(mm/dd/yyyy) Shoreland/Wellhead protection/Food beverage lodging? Compliance criteria:	⊠ Yes □ No	Soil observation does not expire. Previou observations by two independent parties unless site conditions have been altered requirements differ.	are sufficient,
For systems built prior to April 1, 1996, and	☐ Yes ☐ No	Conducted soil observation(s) (Attach	borina loas)
not located in Shoreland or Wellhead		☐ Two previous verifications (Attach born	
Protection Area or not serving a food, beverage or lodging establishment:		☐ Not applicable (Holding tank(s), no drain	
Drainfield has at least a two-foot vertical		☐ Unable to verify (See Comments/Explan	
separation distance from periodically saturated soil or bedrock.		Other (See Comments/Explanation)	•
Non-performance systems built April 1, 1996, or later or for non-performance systems located in Shoreland or Wellhead Protection Areas or serving a food, beverage, or lodging establishment:	Ø Yes □ No	Comments/Explanation:	
Drainfield has a three-foot vertical separation distance from periodically saturated soil or bedrock.*			
"Experimental", "Other", or "Performance"	☐ Yes ☐ No	Indicate depths or elevations	
systems built under pre-2008 Rules; Type IV or V systems built under 2008 Rules (7080.	<b></b>	A. Bottom of distribution media	2411
2350 or 7080.2400 (Advanced Inspector License required)		B. Periodically saturated soil/bedrock	600
Drainfield meets the designed vertical		C. System separation	7811
separation distance from periodically saturated soil or bedrock.			36"
Any "no" answer above indicates to failing to protect groundwater.  5. Operating Permit and Nitroger	•	D. Required compliance separation*  *May be reduced up to 15 percent if allo Ordinance.  Ordinance.	
Is the system operated under an Operating		s ☐ No If "yes", A below is required	
Is the system required to employ a Nitroge		S ☐ No If "yes", B below is required	
BMP = Best Management Practice(s)			
If the answer to both questions is "l	•	•	
	y will would will		
Compliance criteria		T T	
a. Operating Permit number:	note have made	☐ Yes ☐ No	
Have the Operating Permit requirement			
b. Is the required nitrogen BMP in place  Any "no" answer indicates None		ng?   Yes   No	

ity address:

Upgrade Requirements (Minn. Stat. § 115.55) An imminent threat to public health and safety (ITPHS) must be upgraded, replaced, or its use discontinued within ten months of receipt of this notice or within a shorter period if required by local ordinance. If the system is failing to protect ground water, the system must be upgraded, replaced, or its use discontinued within the time required by local ordinance. If an existing system is not failing as defined in law, and has at least two feet of design soil separation, then the system need not be upgraded, replaced, or its use discontinued, notwithstanding any local ordinance that is more strict. This provision does not apply to systems in shoreland areas, Wellhead Protection Areas, or those used in connection with food, beverage, and lodging establishments as defined in law.

Jy 45 kelim Deal offeld area 2411

Inspection does not Imply or gravantee Luture hydralic functioning, only what Luture hydralic functioning, only what

100, 100 100 100, 100, 44 8×80 8-180 8-180 3600 5 200

/renches

Pink - Assessor Goldenrod - Inspector 829 LAKE AV BOX 787 — Phone 218-847-4427 — Detroit Lake inn. 56501 Date APPLICATION FOR BU. JING OR SEWAGE PERMIT AND CERTIFICATE OF OCCUPANCY LEGAL FIRE NUMBER. DESCRIPTION AND LOCATION WHITE EARTH වි 40 IDENTIFICATION: Please Print All Information Last Name Mailing Address- No. Street, City and State Zip No. RTZ BOX 92 WAUBUN 473-2116 WHITE EARTH WATER WITTE EARTH, UN SEWER DEPOTI IMPROVEMENT: RESIDENTIAL PROPOSED USE: NON-RESIDENTIAL PROPOSED USE: O S Family Dwelling Specify: Multiple Dwelling Size: ESTIMATED COST OF IMPROVEMENT \$ Construction Starting Date: PRINCIPAL TYPE OF FRAME & BUILDING TYPE OF SEWAGE DISPOSAL: DIMENSIONS: ( ) Masonry ( ) Public Basement: ( ) Yes ( ) No ( ) Wood Frame ( ) Garage ( ) Individual Septic Tank, etc. Stories above basement: ( ) Structural Steel ) Mobile Home WATER SUPPLY: Sa. feet (outside dimension) ..... ( ) Other - Specify Year ( ) Public ( ) Individual Well Bedrooms ...... Baths ..... ( ) Cottage Depth Type\_\_ ) Septic System MECHANICAL EQUIPMENT: **HEATING:** Type of Roof: ) Other Elevator: ( ) Yes ( ) No ( ) Electric ( ) Gas ( ) Oil Air Conditioning: ( ) Yes ( ) No ( ) Coal RENCHEC ( ) Central ( ) Unit Other: SEWAGE DISPOSAL SYSTEM DATA SEPTIC TANK SEEPAGE PIT DRAIN FIELD Capacity O Sq. Ft. Distance from nearest well ۴t. Ft Ft. Distance from occupied building Ft. Ft. Distance from property line Ft. Ft. Distance from bottom to Water Table Ft All distances are shortest distance between nearest points CHARACTERISTICS: Lot Area is ...... Water frontage is ... Building set back from high water mark is ....... feet. (Building Line) B15TING Land height above high water mark at building line is ......feet Building setback from ( ) State - ( ) County - ( ) Township Highway \_ Side yard is ..... feet. Rear yard is ...... feet. Building will be located ...... feet from septic tank (Sewage System Permit must be obtained before installation). Building will be located ... ..... feet from soil absorption system (Cesspool, Drainfield, etc.). Agreement: I hereby certify that the information contained herein is correct and agree to do the proposed work in accordance with the description above set forth and according to the provisions of the ordinances of Becker County, Minnesota. I further agree that any plans and specifications submitted herewith shall become a part of this permit application. I also understand that this permit is valid for a period of six (6) months. Applicant further agrees that no part of the sewage system shall be covered until it has been inspected and accepted. It shall be the responsibility of the applicant for the permit to notify the County Zoning Administrator, 48 hours before the job is ready for inspection. When signed and approved by the Zoning Administration this becomes your permit. Permission is hereby granted to the above named applicant to perform the work described in the above statement and/or as shown on the sketch. This permit is granted upon the express condition that the person to whom it is granted, and his agent, employees and workmen shall conform in all respects to the ordinances of Becker County, Minnesota. This permit may be revoked at any time upon violation of said ordinances. Cormorant Surcharge **ZO** State Surcharge \$ DRAINFIELD IS REPLACING EXISTING SEEPAGE PIT

BECKER COUNTY ZONING ADMINISTRATION

Yellow - Owner

### INSPECTOR'S CHECK LIST

Make all measurements and computations

	\$ - F		- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	
	ACTUAL IS <b>↓</b>		MINIMUM Shall Be ↓	Sq. Ft.
Building Set Back from High Water Mark		Ft.		Ft.
Building Set Back from State Highway		Ft.		Ft.
Side Yard	&	Ft.	&	Ft.
Rear Yard	ı	Ft.		Ft.
Elevation at Building Line above High Water Mark		Ft.		Ft.

### SEWAGE DISPOSAL SYSTEM STATISTICS

CATEGORY	SEPTIC TANK			SEEPAGE PIT				DRAIN FIELD			
	Actua	ıl	Should	be	Actua	al	Should	be	Actual	Should	be
Capacity		Gls.		GIs.		S F		SF	SF		SF
Distance from Nearest Well	3	F		F	1	F	75	F	F	50	F
Distance from Lake or Stream		F		F	,	F		F	F		F
Distance from Occupied Building		F	10	F		F	20	F	F	20	F
Distance from Property Line		F	10	F		F	10	F	F_	10	F
Distance from Bottom to Water Table		F		F		F	4	F	F	4	F

ector's comments	
INTERPRETATION OF ABBREVIATIONS GIS — Gallons SF — Square Feet F — Linear Feet	
	Inspector's Signature  Title
Inspection 19	Agency

February 15,1990

C.B. Schneider Environmental Field Services MN Dept Of Health 717 Delaware St SE PO Box 9441 MPLS, MN 55440

Subject: Plan No. 00672

Dear Mr. Schneider:

Enclosed find plan and forms re subject.

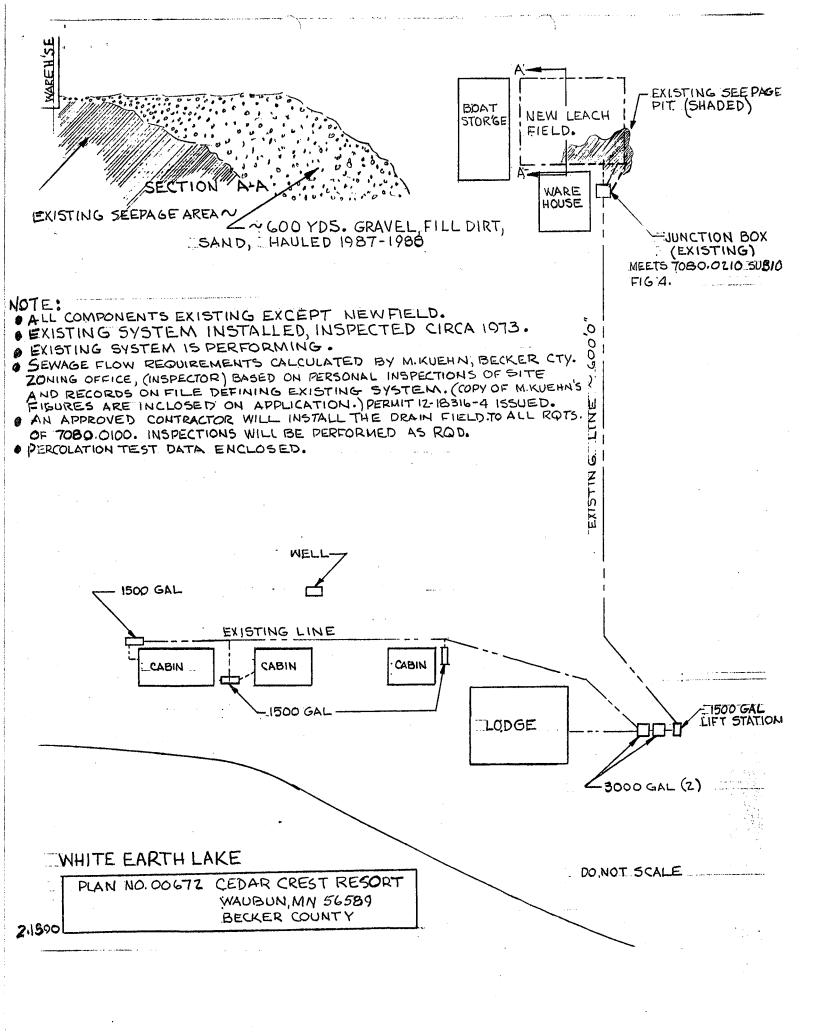
We are replacing an existing seepage pit with a new drain field only: there are no additions to the system which was completed in 1973. The description and approvals for the system are on file at the Becker County Zoning Administrator. (We do not have copies at hand, except for the site plan which is attached.)

The calculations for sewage flow were done by M. Kuehn, the Zoning Office expert and I dont have his calculations. However, I am enclosing the application for Permit 12-18316-4 which includes his estimate of drain field requirements based on his files re the existing system and his intimate knowledge of the original installation. I have also included the completed forms as sent to me by Mr Barber, your field representative in Fergus Falls.

I trust this will be adequate for your purposes. If additional information is required please let me know as soon as possible as we may again have a rather small window between thaw and opening of the season.

Why dont you come out and inspect this one personally?

Sincerely, Loren Thompson



### BECKER COUNTY SEWAGE SYSTEM PERMIT APPLICATION

Robert WXSUPh Address L	140 bun . 17	$\frac{1}{N}$ zip $\frac{3656}{656}$
Location of property: Lake 3	28 Sec. S Tv	vp/42 Range 40
Legal description		
Lot length Width	Lot size al	rea_ <u>S.S.46</u> ,
Contour of property: Approxim	mate elevation al	oove water table at
building site 30 sewage syst	tem site 30 ac	jacent property
Type of building: Residential	Commercial 4	Accessory
Location of roads: County	Township L	State
Type of sewage system planned	: Tank size	200 gs.
Number of tanks 2 Drainf:	ield 3 Lin	neal feet 200
Type of Soil: Sand Clay	Other	
Location of sewage system on a	adjacent property	Number of feet
		VIET DIE COMMENT
verse side). Un adjacent pro	tor E	BEREIOR KRIDER
Name of sewage system contract	LOL TOTAL CONTRACTOR C	JANY - NICOGER
		ions vourself in-
	above installat.	TONG YOUTSETT THE
	Doildina	Sounda System
	-	
	CAN SERVICE AND SE	
<del>-</del>		1101
Any other information:		
<del>адамініцы адаміну праводня за проделення за проделення за проделення в проделення в проделення в проделення в проделення в проделення в проделення в проделення в проделення в проделения в</del>	ng siggiri Pingkalaming ng kanalasida. At talah ali indicada menganan digi kadilan ing diginan ang salah salah	
	and the state of the control of the state of	
	lisera is controvalency as a 1 y Teretriphologic sociaty ova antisperspersion and representation shall	
Location of property: Lake 328 Sec. 8 Twp 42 Range 40  Legal description  Lot length Width Lot size area 5.5 AC.  Contour of property: Approximate elevation above water table a building site 30 sewage system site 30 adjacent property. Type of building: Residential Commercial Accessory  Location of roads: County Township State  Type of sewage system planned: Tank size 1200 gdl  Number of tanks 2 Drainfield 2 Lineal feet 200 Type of Soil: Sand Clay Other  Location of sewage system on adjacent property Number of feet  Location of well on your property 10 from Schrisketch on reverse side). On adjacent property 10 from Schrisketch on reverse side). On adjacent property 10 from Schrisketch on reverse side). On adjacent property 10 from Schrisketch on reverse side). On adjacent property 10 from Schrisketch on reverse side). On adjacent property 100 from Schrisketch on reverse side). On adjacent prope		
	est, sensistat etab (mm.c. emer 210 kg artemati araptatumanda tenhanda (nitera kada) sensista	
A CONTRACTOR OF THE PROPERTY O	ः सः अराज्यक्रम्भागम् वर्षेत्रस्याः अस्यानस्यानाः वर्षाः स्थाः वर्षाः स्थानस्यानस्य वर्षे	por acres de sine some servicios de la companya de la companya de la companya de la companya de la companya de
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ed 9-25-72	Applicants Sig	nature <u>Xlolul DU</u>
		-
mit No. 255	Permit Fee 🦟	

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en medical constraints and an experience of the second



### APP\* ICATION FOR SEWAGE SYSTEM

CERTIFICATE OF COMPLIANCE
With The Becker County Zoning Ordinance

Application Number	
Tax Parcel Number	· .
20.0233.0	$\infty$
Eiro Number of Project	Location

A GENERAL INFORMATION

	A. GENETIF	LINFORMATION	<del></del>
1. Applicant's Name (Last, First, M.I.)	n-L	2. Authorized Agent (if applicable)	
Cedar Crest Ked 3. Mailing Address (Street, RFD, Box Numb	ner City State 7in Code)		
5. Haming Manager (Emergy are)	Wave	un, MN. 56589	
4. Day Phone	5. Evening Phone	6. Section 7. Township	
y .		1 /1/aple	Grove
	B. PROPER	TY DESCRIPTION	
1. Lot(s), Block, Subdivision Name	4.1		
Lot a less pl	attend Dort + +	racts sold	
AUT OF TELLY PI	AIICE PARTY		1
SEWAGE SYSTEM DATA Anticipated Use a. ( ) Single Family b. ( ) Multiple Family c. ( ) Commercial d. ( ) Other (specify)  Type of Installation a. ( ) Septic Tank Only c. ( ) Septic Tank & Drainfield d. ( ) Holding Tank e. ( ) Septic Tank/Drainfield Lift Station		tanks installed from tanks installed from tank installed from	m lodge n cabins n Trailer
Type of Drainfield  a. ( ) Standard System  b. ( ) Mound (pressure distribution			
Well Data ? a. Depth b. Diameter  Type of Well a. ( ) Drilled b. ( ) Sand Point			
		Show Distance Between Sewage System And Buildings Property Lines, Lake, Road And All Wells Within 125 Fee	, et
	Tank Drainfield		Tank Drainfield
Distances to Well:	<u> 50+ 50+</u>	Distance to Pressure Line:	= <del>OUT</del> - <del>OUT</del>
Distance to Building:	= 10'+ 20'+	Tank Capacity (gal.& Area of Drainfield (ft 2)	(6) 1500 existing
Distance to Property Line:	= 10'+ 10+	Distance to Ordinary High Water Level:	= 75'+ 75'+
Name of the Control o	nown Ground Water Level, Impervious	Lens or Soil Mottling:	= NA
I hereby certify with my signature that all	data on my application forms.		
plans and specifications are true and corr	ect:	ure of Applicant	Date
		ure of Applicant MPLETED BY PLANNING AND ZONING	Duto
( ) CERTIFICATE IS HEREBY DENIED: (			UNTY PLANNING AND ZONING

( ) CERTIFICATE IS HEREBY DENIED: (See back For Reasons)

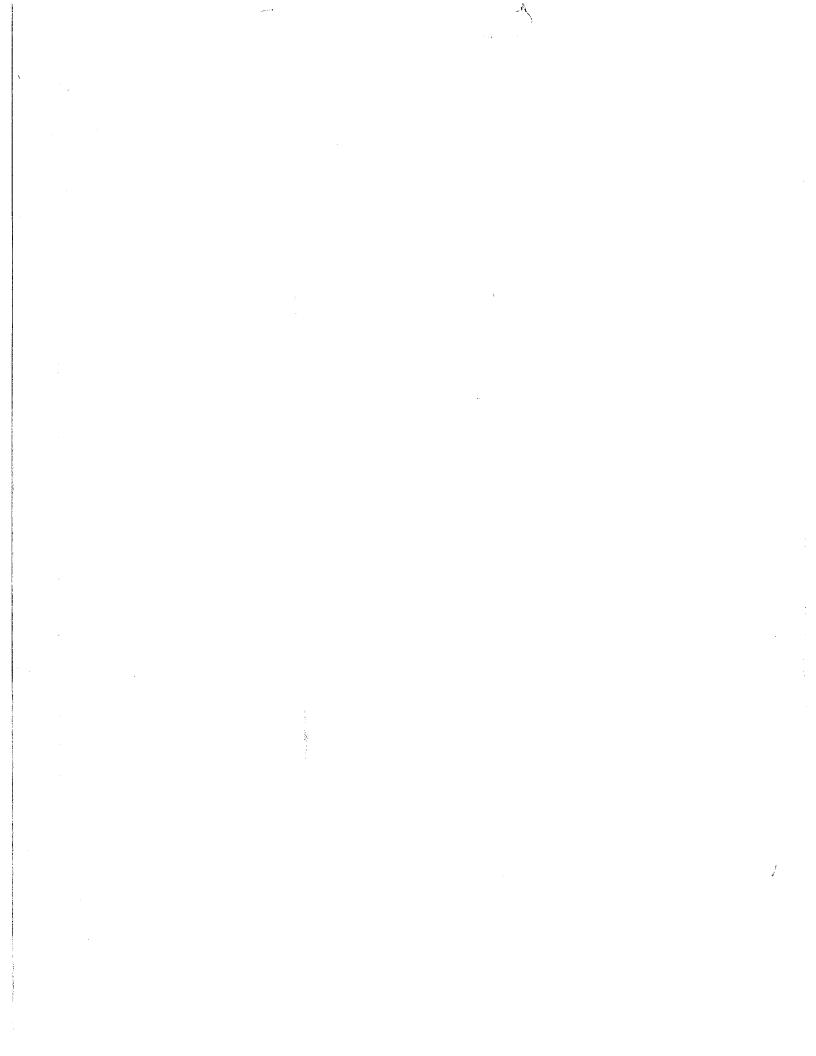
( ) CERTIFICATE IS HEREBY GRANTED: Based upon the application, addendum from, plans, specifications and all other supporting data. With proper maintenance this system can be expected to function satisfactory, however this is not a guarantee.

BECKER COUNTY PLANNING AND ZONING

AND Signature

Title

Date



### BECKER COUNTY

Permit Number 12-14	712-4	Date <u><b>6-/</b></u>	11-86
Building	_ Sewage Syste	em Sewer	ine
Township Maple Grove Se	c. 8 Descripti	ion track q	land
Work Authorized <u>Seω</u> .	er line to si	te *18 4/1	nygh
Issued to: Name Lori Address: Ceder Crost State Minn.	en P. Thom Pesort Town 4 Zip 6	pson Joubun 6589	
Sketch	-     - 80	20°	•
LOT 2 19/354 D 1 Inch = Feet	0'0"   X   301   129   10   10   10   10   10   10   10   1	UR WAS SHISH	19-354 T. LOT 2
NOTE: This card must be placed in a conspicuous post done, and must be maintained there until completion building footings have been completed. No part of the Notify the Zoning Administrator 24 hours before the Becker County Zoning Administrator.	n of such work. Notify Becker of the sewage system shall be covered by is ready for inspection.	irky Zoning Administrator	19.354C 140AC

4-255 12-10,404. White - Office ? COUNTY ZONING ADMINISTRATION Permit No Yellow - Owner
Pink - Assessor
Goldenrod - Inspector COUNTY COURT HOUSE -- Phone 218-847-3938-- Detroit Lakes, Minn. 56501 Date APPLICATION FOR BUILDING OR SEWAGE PERMIT AND CERTIFICATE OF OCCUPANCY LEGAL ESCRIPTION AND EARTH R40W LOCATION Lake Name IDENTIFICATION: Please Print All Information Last Name First Initial Mailing Address- No. Street, City and State Zip No. Tel. No. Owner 4732116 56589 Contractor TYPE OF IMPROVEMENT: NON-RESIDENTIAL PROPOSED USE: RESIDENTIAL PROPOSED USE: Specify: REC CAMDGROUND Alteration ( ) New Building ( ) One Family Dwelling ( ) Multiple Dwelling Units **ESTIMATED COST OF IMPROVEMENT \$** Construction Starting Date: PRINCIPAL TYPE OF FRAME: TYPE OF SEWAGE DISPOSAL: DIMENSIONS: ( ) Masonry ( ) Public Basement: ( ) Yes ( ) No ( ) Wood Frame Individual Septic Tank, etc. Stories above basement: ( ) Structural Steel WATER SUPPLY: Sq. feet (outside dimension) ..... ( ) Other - Specify ( ) Public Bedrooms ..... ( HIndividual Well MECHANICAL EQUIPMENT **HEATING:** Type of Roof: Elevator: ( ) Yes ( ) Electric ( ) Gas Air Conditioning: ( ) ( ) Coal ( ) None ) Central ( ) Unit Other: SEWAGE DISPOSAL SYSTEM DATA: SEPTIC TANK SEEPAGE PIT 5000 100 OSq. Ft Capacity 6000 Gls Sq. Ft. 200 Ft. Ft. Distance from nearest well 600 Distance from lake or stream Ft. Ft. 300 300 Ft. F<u>t.</u> Distance from occupied building Ft. 200 200 Distance from property line Ft. ۴t (O! (סון F١ Distance from bottom to Water Table All distances are shortest distance between nearest points acres CHARACTERISTICS: Water frontage is Building set back from high water mark is (Building Line) Land height above high water mark at building line is Building set back from State highw Side yard is ...... Building will be located . feet from septic tank (Sewage System Permit must be obtained before installation). Building will be located. ... feet from soil absorption system (Cesspool, Drainfield, etc.). Agreement: I hereby certify that the information contained herein is correct and agree to do the proposed work in accordance with the description above set forth and according to the provisions of the ordinances of Becker County, Minnesota. I further agree that any plans and specifications submitted herewith shall become a part of this permit application. I also understand that this permit is valid for a period of six (6) months. Applicant further agrees that no part of the sewage system shall be covered until it has been inspected and accepted. It shall be the responsibility of the applicant for the permit to notify the County Zoning Administrator, 48 hours before the job is ready for inspection. When signed and approved by the Zoning Administration this becomes your permit. Permission is hereby granted to the above named applicant to perform the work described in the above statement and/or as shown on the sketch. This permit is granted upon the express condition that the person to whom it is granted, and his agent, employees and workmen shall conform in all respects to the ordinances of Becker County, Minnesota. This permit may be revoked at any time upon violation of said ordinances. MUST BE POSTED AT THE BUILDING STIE 00 State Surcharge \$

### INSPECTOR'S CHECK LIST

Make all measurements and computations

	ACTUAL IS <b>↓</b>		MINIMUM Shall Be ↓	Sq. Ft.
Building Set Back from High Water Mark		Ft,		Ft.
Building Set Back from State Highway		Ft.		Ft.
Side Yard	&	Ft.	&	Ft.
Rear Yard		Ft.		Ft.
Elevation at Building Line above High Water Mark		Ft.		Ft.

### SEWAGE DISPOSAL SYSTEM STATISTICS

CATEGORY	SEPTIC TANK				SEEP	AGE PIT		DRAIN FIELD		
CATEGORY	Actua	Ι	Should	be	Actual	Should	be	Actual	Should	be
Capacity		GIs.		Gls.	S		SF	SF		SF
Distance from Nearest Well	to the on the light	F	P	F	F	75	F	F	50	F
Distance from Lake or Stream		F		F	F		F	F		F
Distance from Occupied Building		F	10	F	F	20	F	F	20_	F
Distance from Property Line		F	10	F	F	10	F	F	10	F
Distance from Bottom to Water Table		F		F	F	4	F	F.	4	F
						~p.				$oldsymbol{\perp}$

pector's Comments:		
INTERPRETATION OF ABBREVIATIONS		
Gls — Gallons SF — Square Feet F — Linear Feet	Inspector's Signature	
Inspection Dated 19	Title	· N
Dutou	Agency	

### White — Office Yellow — Inspector Pink — Owner

### B' KER COUNTY ZONING ADMINISTRAT

COUNTY COURT HOUSE

Phone 218-847-7721 — Detroit Lakes, MN 56501

APPLICATION FOR PERMIT TO INSTALL SEWAGE DISPOSAL SYSTEM

LEGAL						Permi	No	1100	P_	<u>S</u>
LEGAL						Date_	<u>5-</u>	4-7	<u>냉</u> _	
DESCRIPTION	V									
AND	378.1	+ 0. IT	33							
LOCATION	Lake No.	t Earth  Lake Name  L	ake Classi	f. Sec.	TWP	2 <u>40</u> Range	- fill	TWP Na		1/13
	TION: Please Print All		1					1 -: -:	T = .	
	Last Name	Robisist		Address -No. St.		and State		Zip No.	Tel.	No.
OWNER L	NYSUPH,	NO DISTO	LUn	C DUAL	8. 0. I/C	<u> </u>				
SEWAGE SYSTEM INSTALLER	Name Dan Ba	ny								
This Sys	tem will be ready for i	nspection on	M	24 9		ر <sub>19</sub> کخ				
This space	for office use only									
	19	M								
Date R	Rec'd	Time Rec'd Ph	one Call R	ec'd By		Owner o	r Agent S	Signațure		
					·····		<del></del>			
SEWAGE D	DISPOSAL SYSTEM D	DATA:		SEPTIC TA	NK T	SEEPAGE P	IT	DRAIN	FIEL	D
Capacity				1200	Gls.		Sq. Ft.	100	Sc	q. Ft.
Distance fro	om nearest well			100	Ft.	€.	Ft.	10	0	Ft.
Distance fro	om lake or stream			200	Ft.		Ft.	J.	N)	Ft.
	om occupied building			15	Ft.		Ft.		5	Ft,
	om property line			75	ft.		Ft.	2	5	Ft.
Distance fro	om bottom to Water	Table		over 4	Ft.		Ft.	over .	4	Ft.
		All distances are si	hortest di	stance between	nearest	points		,	,	
RECORD C	OF TESTS:									
Inspection v	was made on		, 19	, Time		"М Ву <u>:</u>				
PERCOLAT	ION TEST DATA:	Date of First Test			19	) Rat	e			
F-1		Date of Second Test,			, 19	), Rat	e			
1st Test Tak	•	Firm Total		T	_		_			
2nd Test Tak	ken By	First Test	+ 2na	Test	=	2	=	Rate		
agreeing to d Disposal Cod specification agrees that n	do all such work in str de Minimum Standar is submitted herewith io part of the system s it to notify the County	reby makes application ( ict accordance with ordin rds set forth by Minnesc and which are approved i shall be covered until it ha Zoning Administrator, 48	nances of ota Depar oy Zoning	the County of B thment of Heal Administrator spected and ac ore the job is re	ecker, N th. Appl shall be cepted. I agy for i	Ninnesota and A icant agrees the come a part of t	Ainneso nat plot he pern esponsit	ta Individu t plan, ske nit. Applica pility of the	al Sew tches ant fur applic	vage and rther
is granted up respects to o NOTE: Perm	oon express condition ordinances of Becker nit void if work is not c	commenced within (6) mo	it is gra nths.	to perform the nated, and his ag	work des gents, en	scribed in the al apployees and w	oove sta orkmer	atement. Th n shall cont	his per	'mit n all
				S B	Secker C	Juan by	dminis	strator	<del></del>	
Fee \$	Surcharge	\$			-	V				
comments:										

# BECKER COUNTY

Sewage Permit No. SP Ne

\_\_\_Twp. Name\_ \_Range\_\_ Twp. **Location:** Lake No.

Work Authorized Issued

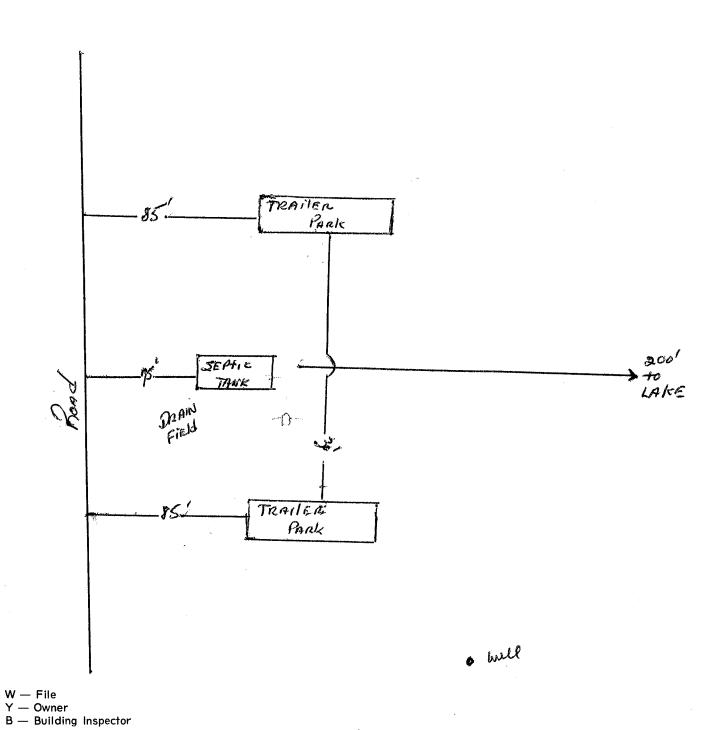
covered until it has been inspected and approved. Notify Zoning Administrator, (847-7721) office when job is ready NOTE: This card must be placed in a conspicuous place not more than 12 feet above grade on the premises on which work is to be done, and must be maintained there until completion of such work. No part of system shall be for inspection.

Becker County Zoning Administrator

Becker County, MINNESOTA Board of County Commissioners

· 

Scale: Each grid equalsfeet/inches.	GRID PL I PLAN SKETCHING FORM
Application for Building Permit Dated	19
Application for Sewage System Permit Dated	5-41923
Building Permit Number	Sewage System Permit Number 1108-5
Applicant agrees that this plot plan is a part of app	lication (s) indicated above.
Dated	Robert & Wysight



### BECKEL COUNTY PLANNING & ZUNING

829 LAKE AVENUE, PO BOX 787 DETROIT LAKES, MN 56502-0787 PHONE (218) 846-7314 - FAX (218) 846-7266

INSTALLATION PERMIT FOR INDIVIDUAL SEWAGE TREATMENT	FIRE NO	
PERMIT/RECEIPT NO. <u>10620</u>	TAX PARCEL	NUMBER 30. 0233.00
LEGAL DESCRIPTION		
Lot 2 Less Plath	d Part & tracks solv	
LAKE/STREAM ÑAME LK/STR	CLASS SECTION TWP RANGE	TOWNSHIP NAME
White Parth R	D 8 142 40	Maple Grove
PROPERTY OWNER	ADDRESS/ CITY/ STATE	PHONE NO
	hoven Thompson 'Uhubur	n MN
INSTALLER	LICENSE NO	PHONE NO
harry Muff		
	SEWAGE TREATMENT SYSTEM DATA	
WORK CATEGORY	SIZE OF TANK	SIZE OF LIFT STATION
	3-1500 GALLONS	<u>PY 151'</u> GALLONS SIZE OF PUMP
() NEW SYSTEM	SIZE OF DRAINFIELD	SIZE OF FOMP
(x) REPAIR	<u>EVISF</u> FT2 SYSTEM LENGTH	DEPTH TO RESTRICTING
	CVIST FT	LAYER
	NUMBER OF	MAXIMUM DEPTH OF
TYPE OF SYSTEM	TRENCHES <u>e KIS</u> ESTIMATED	SYSTEM
( ) SEPTIC TANK/DRAINFIELD	FLOW 3689 GPD	PERC RATE
( ) DRAINFIELD ONLY	e e	
( ) HOLDING TANK	TYPE OF DRAINFIELD	SSF
( ) ALTERNATE (specify)	ピゾしらん ( ) STANDARD (gravelless)	SIZE OF GRAVELLESS
		PIPE
() LIFT STATION	( ) STANDARD (rock trench)	DEPTH OF ROCK
sipticitanks only	( ) STANDARD (bed) ( ) MOUND (pressure distb)	DEFIN OF ROCK
	-	
T1	hat all the data contained herein as well as a	all supporting data are true and
I hereby certify with thy signature t	nat an the data contained necess as well as t	ar outhours and and

Any changes to the permit must first be approved by Becker County Planning & Zoning. No system shall be covered up without inspection by Becker County Planning & Zoning.

			•	
				·
	• .			
att	tached			
		•		
·				
				·
E Office Hee Only				
For Office Use Only		,50	Total	50
Application Fee	State Surcharge		Total 💆	
[ ] Application is hereby denied [X] Application is hereby granted to individual septic system according to the s		Lesert gita evaluation and		nstall an
Becker County Environmental Services O	ffice. By Order of:	Site Cyaluation and	/	to the
Debi Moltzo	<u></u>	to the second se	11/12	196
Signature of Becker County Qualified En	ployee	ingen a stanzense i Britania de Const.	ı ·	Date
This permit expires on $5-12-6$	9.7	Taxon taxon		

Site Plan as approved on Site I luation.

### BE KER COUNTY ZONING ADMINISTRATORY

COUNTY COURT HOUSE

Phone 218-847-7721 — Detroit Lakes, MN 56501

APPLICATION FOR PERMIT TO INSTALL SEWAGE DISPOSAL SYSTEM

				OTTILL OLIV	TOL DIOI	OUNE OTOTEM	19 /	7 <i>85</i> -
						Permit No		184 -
LEGA <b>L</b>						Date 4-		1
DESCRIPTIO	N					Date	<del>2      </del>	
AND								
LOCATION					·····			
	Lake No.	Lake Name	Lake Classi	if. Sec.	TWP	Range	TWP Na	ime
IDENTIFIC	ATION: Please Print AI							
OWNER	CEDAR CR	FST RESURT		Address -No.		56589	Zip No.	Tel. No.
	Robert D	Wysuph					<u> </u>	
SEWAGE SYSTEM INSTALLER	Name	•						
This Sy	stem will be ready for	inspection on				19		<u> </u>
<del></del>	for office use only							
<u> </u>	,							
Date	19 Rec'd	Time Rec'd P	hone Call F	Rec'd By		Owner or Agen	t Signature	
SEMAGE	DISPOSAL SYSTEM	DATA.	<del></del>			<del></del>		
— OLWAGE !	SICI OUAL OTOTEM	DATA.		2- SEPTIC T	ANK	SEEPAGE PIT	D-DRAIN	FIELD
Capacity	2 TANK	, 			Gls.	Sq. Ft		Sq. Ft.
Distance fr	<b>*</b>	INN DEPT	of H	colth	SDE	F1		Ft.
	om lake or stream	10.00	G-4I.J	,=,,	Ft.	Ft	. 1	Ft.
	om occupied building				Ft.	Ft		<u>Ft.</u>
Distance Tr	om property line				Ft.	Ft		Ft.
Distance fr	om bottom to Water	Table  All distances are	shortest d	istance betwee	Ft.	points Ft		Ft.
						,		
RECORD	OF TESTS:							
Inspection	was made on		, 19	, Time	••••••	_M Ву		
PERCOLA	TION TEST DATA:	Date of First Test			19			
		_ Date of Second Test,			19	), Rate		
1st Test Tal								
2nd Test Ta	ken By	First Test	+ 2nd	Test	=	= .	Rate	
Disposal Co specification agrees that r	do all such work in sti de Minimum Standa is submitted herewith	reby makes application rict accordance with ordi rds set forth by Minnes and which are approved shall be covered until it h Zoning Administrator, 40	nances of ota Depar by Zoning	the County of rtment of He Administrate spected and a	Becker, Naith. Appl or shall bec	linnesota and Minnes icant agrees that pla come a part of the per t shall be the respons	ota Individu ot plan, skei	al Sewage Iches and
respects to (	pon express condition ordinances of Becker nit void if work is not	nted to the above named In that the person to whor County Minnesota. Commenced within (6) mo	n it is gra	to perform the	e work des agents, en	cribed in the above s apployees and workmo	tatement. Then shall conf	is permit orm in all
Issued Date:	1-2-74		1	3	Recker C	Huenly ounty Zoning Agmin	Istrator	
Fee \$ 6	Surcharge	\$ 1.00	oil of	2114				
Comments:	to be s	used for	Lu	erong	Lt.	camping	5/ MO	)
any	sers, an	· oc · sou	illi	park	red (	The auch	lew	

## HEBELIEVES, SEPTICTANICTO DE SERIED

### BECKER COUNTY

	SEWAGE SYSTEM PERMIT APPLICATION Maple
L.	Location of property: Lake White Carlo Sec. 8 Twp Jane Range 40
	Legal description & Color Cost King
	Walten, Musen 56589
•	Lot length width 590 lot size area 36 Ancts
•	
	site sewage system site / adjacent property
. >	Type of building: residential commercial accessory
	Location of roads: County // Township State
•	Type of sewage system planned: Tank size 4000 gal 2 Compartment
	Number of tanks Drainfield Lineal feet 180
•	Type of soil: Sand Clay U Other
•	Location of well on your property(Sketch on
	reverse side). On adjacent property None
0.	Name of sewage system contractor Seff
	Well drilling contractor
	Note: If making either of the above installations yourself indicate
1.	Minimum set back: Building Sewage System
	From Road R.O.W.
	Adjacent Property
	Lakeshore (High Water Mark)
2.	Any other information:
	Dated Could1-22 Applicants signature
	Applicants signature Cadar Crest
	Permit No. 332 Permit Fee 250 Wauburn 5
	rermit No rermit ree
	Junit Hued Certified
	Jennit Struck Certificate 11/21/192 Struck
	( ) Land
	1/12/11/2 24/10/42