Preliminary & Field Evaluation Form

www.SepticResource.com vers 12.4

Owner Information

Date	10/13/2022	Sec / Twp / Rng	S-18, T-49, R-22
Parcel ID	10-0-028300	LUG (county, city, township)	Aitkin Co.
Property Owner:	Laura Carlson	Owners address (if different)	
Property Address:	50007 153rd Pl Tamarack MN 55787		50007 153rd Pl.
City / State / Zip:			Tamarack MN 55787

Flow Information and Waste Type / Strength

Estimated Design flow: 450

Comments: Existing System Non-Compliant

Anticipated Waste strength	☐ Hi Strength	☑ Domestic
Any Non-Domestic Waste	☐ Yes (class V)	☑ No
Sewage ejector/grinder pump	☐ Yes	☑ No
Water softener	☐ Yes	☑ No
Garbage Disposal	☐ Yes	☑ No
Daycare / In home business	☐ Yes	☑ No

Site Information

Existing & proposed lot improvements located (see site map)	☐ Yes	☑ No	Well casing depth	Existing Shallow well	
Easements on lot located (see site map)	☐ Yes	☑ No	Drainfield w/in 100' of residential well	☐ Yes	☑ No
Property lines determined (see site map)	☑ Yes By Owner	☐ No	Site w/in 200' of transient noncommunity water supply (TNCWS)	☐ Yes	☑ No
Req'd setbacks determined (see site map)	☑ Yes	☐ No	Site w/in an inner wellhead mgmt zone (CWS/NTNCWS)	☐ Yes	☑ No
Utilities located & identified (gopher state one call)	☐ Yes	☑ No	Buried water supply pipe w/in 50' of system	☐ Yes	☑ No
Access for system maintenance (shown on site map)	☑ Yes	☐ No	Site located in Shoreland (w/in 1000' of lake, 300' of river)	☑ Yes	☐ No
Soil treatment area protected	☑ Yes	☐ No	Site map prepared with previous items included	☑ Yes	☐ No

Construction related issues: Abandon Existing System

Soil Information

Evidence of site:

Cut	☐ Yes	☑ No
Filled	☐ Yes	☑ No
Compacted	☐ Yes	☑ No
Disturbed	☐ Yes	☑ No

Original soils ☑ Yes ☐ No

Soil logs completed and attached ☑ Yes ☐ No

Perk test completed and attached (if applicable) ☐ Yes ☑ No

Soil loading rate (gpd/ft^2) 0.78

Percolation rate (if applicable) _____

Depth/elev to SHWT 70"

Flooding or run-on potential (comments) ☐ Yes ☑ No

Depth to system bottom maximum (or elev minimum) 30"

Flood elevation (if applicable) _____

Depth/elev to standing water (if applicable) _____

Elevation of ordinary high water level (if applicable) _____

Depth/elev to bedrock (if applicable) _____

Floodplain designation and elev - 100 yr/10 yr (if applicable) _____

Soil Survey information determined (see attachment) ☑ Yes ☐ No

Differences between soil survey and field evaluation (if applicable) _____

I hereby certify this evaluation was completed in accordance with MN 7080 and any local req's.

Designer signature | Brummer Septic LLC. (Company) | L-1347 (License #)

Soil Observation Log

www.SepticResource.com vers 12.4

Owner Information

Property Owner / project: Laura Carlson Date 10/13/2022

Property Address / PID: 50007 153rd Pl Tamarack MN 55787

Soil Survey Information

☐ refer to attached soil survey

Parent matl's: ☐ Till ☑ Outwash ☐ Lacustrine ☐ Alluvium ☐ Organic ☐ Bedrock

landscape position: ☐ Summit ☐ Shoulder ☑ Side slope ☐ Toe slope

soil survey map units: D458E & D458C slope 8 % direction- West

Soil Log #1

☑ Boring ☐ Pit Elevation 95' Depth to SHWT 70"

Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0 - 6	Topsoil Sandy Loam	<35	10YR3/2		Loose	Loose	Granular
6 - 20	Loamy Sand	<35	7.5YR4/6		Loose	Loose	Granular
20 - 42	Med Sand	<35	10YR4/4		Loose	Loose	Granular
42 - 70	Med Sand	<35	10YR5/4		Loose	Loose	Granular
70 - 76	Med Sand	<35	10YR5/4	7.5YR5/6	Loose	Loose	Granular

Comments:

50007 153rd Pl Tamarack MN 55787 **Soil Log #2**

☑ Boring ☐ Pit Elevation 96.5' Depth to SHWT 76"

Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0 - 6	Topsoil Sandy Loam	<35	10YR3/2		Loose	Loose	Granular
6 - 20	Loamy Sand	<35	10YR4/4		Loose	Loose	Granular
20 - 55	Med Sand	<35	10YR4/4		Loose	Loose	Granular
55 - 76	Med Sand	<35	10YR5/4		Loose	Loose	Granular
76 - 84	Med Sand	<35	10YR5/4	7.5YR5/6	Loose	Loose	Granular

50007 153rd Pl Tamarack MN 55787 **Soil Log #3**

☐ Boring ☐ Pit Elevation ______ Depth to SHWT ______

Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive

I hereby certify this work was completed in accordance with MN 7080 and any local req's.

Designer Signature

Brummer Septic LLC.
Company

L-1347
License #

Aitkin County { Trench Design } Write in form

Property Owner: Laura Carlson Date: 10/13/2022 Cell: 763-670-7731

Mailing Address: 50007 153rd Pl Home Phone # :

City: Tamarack State: MN Zip: 55787

Site Address : 50007 153rd Pl Parcel Number: 10-0-028300

City: Tamarack State: Mn Zip: 55787

Driving Directions if no adress issued :

Legal Description : NLY 310 ft. of lot 1 4 acres

Sec : 18 Twp: 49 Range : 22 Twp Name : Haugen

Lake / River : Island Lake / River Classification : RD

FLOW DATA

Number of Bedrooms :	3
Dwelling Classification :	I
System Type :	I
Gallons per Day (GPD) :	450

Estimated Flow in Gallons per Day (GPD)

Bedrooms	Class I	Class II	Class III
2	300	225	180
3	450	300	218
4	600	375	256
5	750	450	294
6	900	525	332
7	1050	600	370
8	1200	675	408

WELLS

Deep Well : None

Shallow Well : Existing Shallow

Wells to be sealed (if Applicable) ? None

SETBACKS

Tank(s) to Well : 70' Drainfield to Well : 101' Sewer Line to Well : +20'

Tank(s) to House : 60' Drainfield to House : 90' Air Test YES

Tank(s) to Property Line : +20' Drainfield to Property Line : + 100'

Additional System Notes and Information: Existing Tank has tim top pump, collapse, fill or remove.

Abandon drainfield if there is one.

This deisgn is for 12" Chamber (Infiltrator Quick 4 Plus High Capacity) or 12" rock under pipe Trenches.

Designer Name : Jeff Brummer License Number : L-1347

Address : 7450 Burr Ln. City : Brainerd State : Mn

Zip Code : 56401 Home Phone # : Cell: 218-821-0704

E-Mail Address : brummerseptic@gmail.com

Designer Signature : Jeff Brummer Date: 10/4/2017

Crow Wing / Cass County { Trench / Pressure Bed Design }

Property Owner: Laura Carlson Date: 10/13/22 Designer's Initials : JB

Tank Sizing

A. Septic Tank Capacity : 1000 Gallons

Tank Type : 1 Compartment Filter : NO

Garbage Disposal / Basement Lift Station : No Disposal or Lift

Bedrooms	Minimum	GD / BL
6 or Less		
7 or 8		

B. Pump Tank Capacity : Gallons (7080.2100) Alarm Type :

Soils

C. Depth to Restricting Layer : 70 inches

D. Native SSF : 1.27 { Perc. Rate (optional) } MPI

** Enter GPD next to the Type of System **

ROCK TRENCHES

E. 6 in. Trench Depth GPD x D = 0.0 sq. ft. Cubic Yards of Rock : 0.00 yrds.

F. 12 in. Trench Depth 450 GPD x D x .80 = 457.2 sq. ft. Cubic Yards of Rock : 25.40 yrds.

G. 18 in. Trench Depth GPD x D x .66 = 0.0 sq. ft. Cubic Yards of Rock : 0.00 yrds.

H. 24 in. Trench Depth GPD x D x .60 = 0.0 sq. ft. Cubic Yards of Rock : 0.00 yrds.

I. Divide (E-H) by Trench Width for Lineal feet : Select One ÷ 3 = #VALUE!

CHAMBER TRENCHES

J. Brand : Infitrator Quick4 Plus High Cap Dimensions of one Chamber (L x W) : 4 ft. x 3 ft.

K. 6 - 11 in. Chamber Depth : GPD x D = 0 sq. ft.

L. 12 in. Chamber Depth : 450 GPD x D x .80 = 457.2 sq. ft.

M. Select from either (K or L) if installing Chamber Trenches : 457.2

N. Divide (M) by Trench Width for lineal feet : 457.2 ÷ 3 ft. width = 152.4 Lineal ft.

O. Total Chambers Needed (***Round up***) = 38.1 Chambers needed 39.0

SEEPAGE BEDS

P. Seepage Bed GPD x D x 1.5 = 0 sq. ft. Bed Dimensions : 46 ft. x 0 ft.

Cubic Yards of Rock = (Bed Length x Bed Width x ft. Rock Depth) 0 ÷ 27 = 0.0 yrds.

ADDITIONAL SYSTEM NOTES and INFORMATION :

Owner will have house plumbed with 4" sewer pipe out-let + 20 feet from well.

Installer will conecet to 4" sewer pipe. Install clean-out near house, pressure test sewer pipe from house to tank.

Aitkin Co. excepts the End caps on the chambers as drop boxes, Make sure installer uses the right end cap.

(Recommend installing inspection pipes on the drop-box end of trenches also.

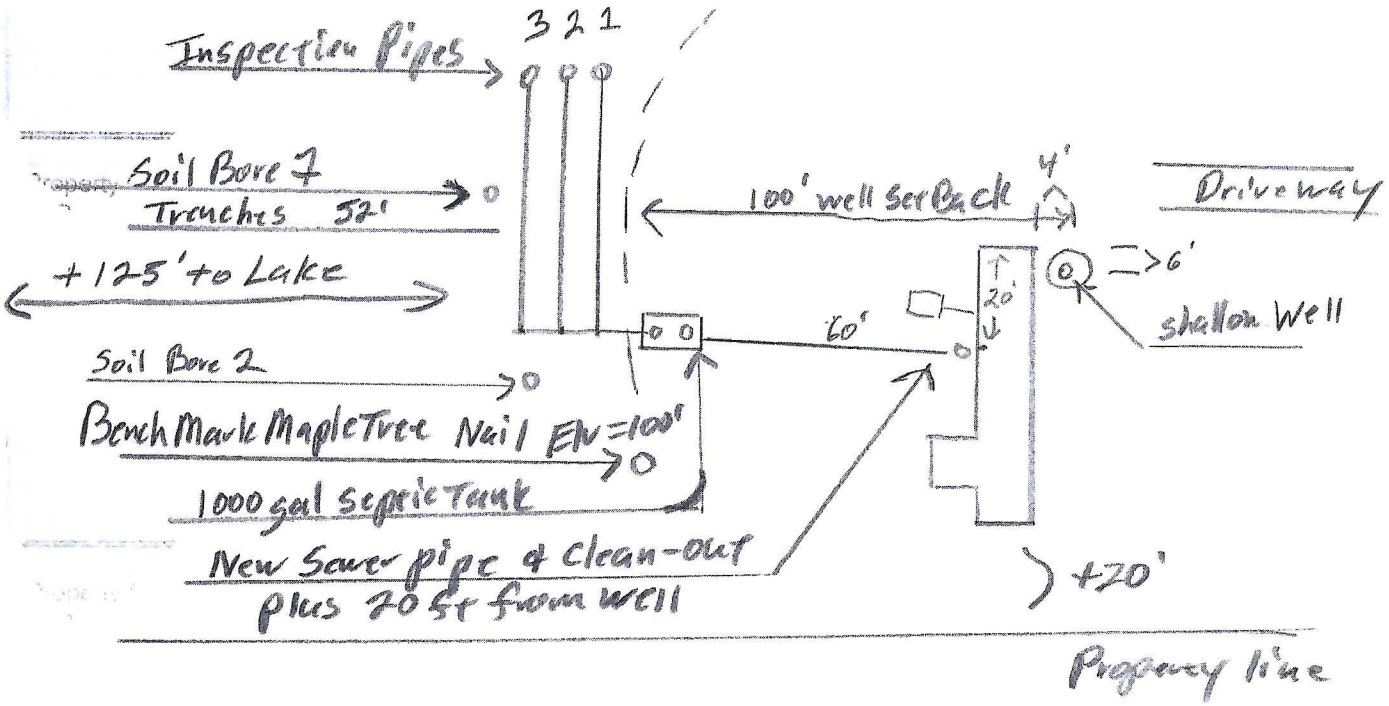
{ Design Drawing }

Property Owner: Laura Carlson Date: 10/13/22 Designer's Initials : JB

Parcel ID. Number : 10-0-028300 Address : 50007 153rd Pl Tamarack MN 55787

one Inch = 40ft.

North



Grade at Well Pit Elv.= 105.5' Estimated Island Lake Elv. = 75'

	Surface/ SHWT	***Nail on Tree= Bench Mark 100'***			Existing Grade of trenches
Soil Bore 1	95' / 70"	Bench Mark	100'		Trench #1 Elv= 98.5' Bottom Elv.= 96'
Soil Bore 2	96.5' 76"	Ground Elv. BM	99.9'		Trench #2 Elv= 97.5' Bottom Elv.= 95'
Soil Bore 3		Ground Elv. Tank	100'		Trench #3 Elv= 96.2' Bottom Elv.= 93.7'
	Ground at	Trailer house	104.7	West side	New sewer pipe Approx. Elv.= 103.5'

Please show all that apply (Existing)

Wells within 100ft. Of Drain field.

Water lines within 10 ft. of Drain field.

Drain field Areas.

Please Draw to Scale with North to Top or Left Side of Page:

Disturbed/Compacted Areas	Access Route for Tank Maintenance
Component Location	Property Lines
OHW ordinary high water	Structures
Lot Easements	Setbacks

Aitkin County { Design Notes }

Property Owner: Laura Carlson Date: 10/13/22 Designer's Initials : JB

PIN : 10-0-028300 Page : of

Existing house is 3 bedroom, Existing well is a shallow well in a pit NE of house.
Existing septic system is non-compliant, Abandon drainfield if there is one.
Existing tank should be approached with caution, tin cover (Home made). Pump collapse, fill or remove.
Owner will have house plumbing move to plus 20' from well, on West side of house, use 4" schd 40 pipe.
Installer to connect to new 4" sewer pipe. Install 4" clean-out near house. Pressure test 4" sewer pipe
from house to tank. Sewer will gravity flow from house to septic tank, no lift , no GD.
Benchmark Nail is on a Maple tree South of the tank location. Nail is at Elv. = 100'

Install new 1000gal.Jacobson Septic tank, gravity flow from house. Insulate tank if less than 2 ft of cover.
Raise all manholes to finished grade or higher, (recommend 4" above finished grade).
Septic Tank will meet 50ft. setback from well, and will meet 10 ft. setback to all property lines.

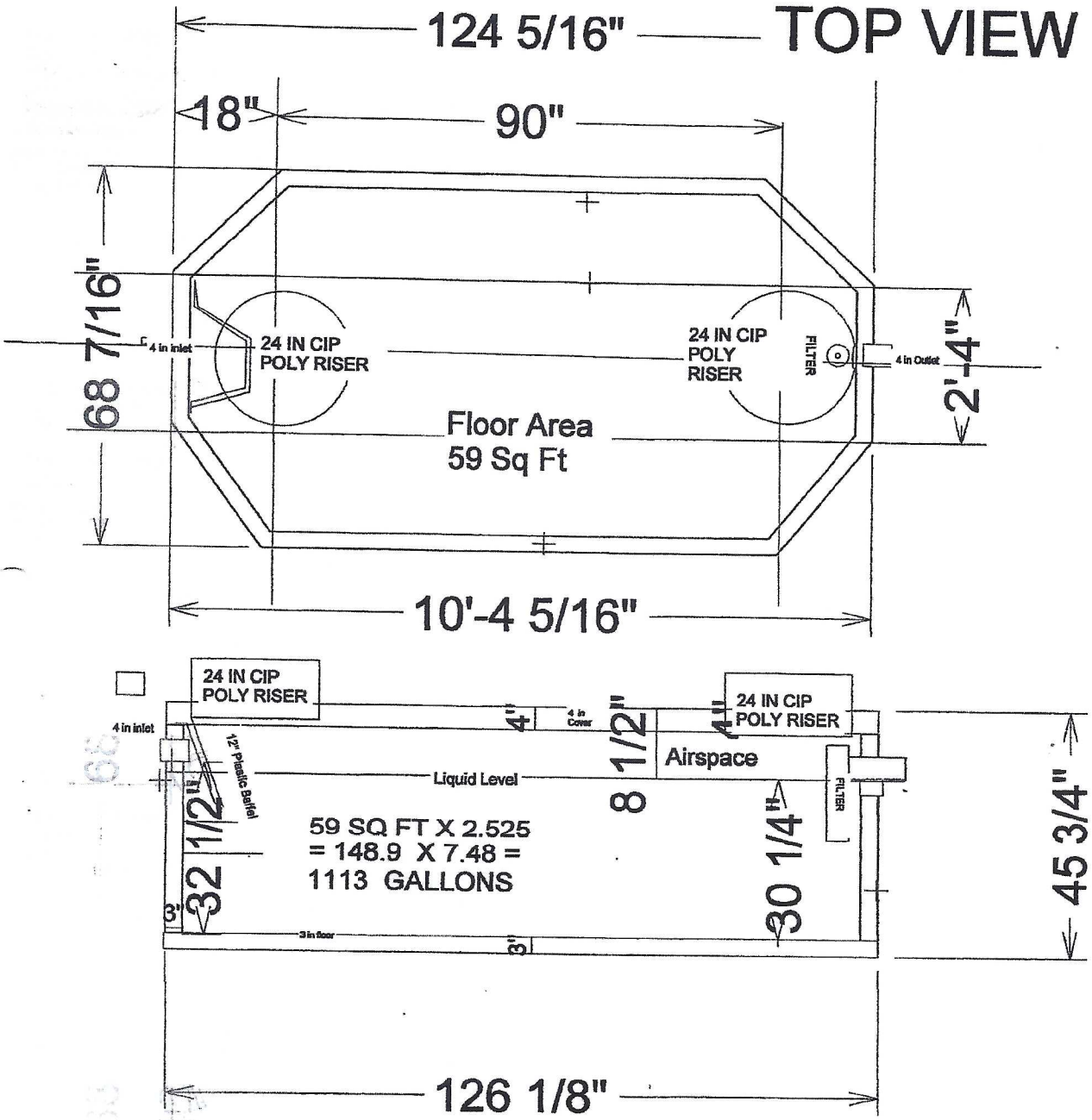
Install 3 trenches, on contour, with bottoms no deeper than 30".
Designer has existing grade at trench locations and bottom elevations on the site map.
Designer used Infiltrator Quick4Plus High Capacity chambers because of the remote location.
Installer may use 12" of sewer rock under 4" pipe in place of the chambers same length 52ft
Install 13 chamber in each trench, 52 ft long plus approx. 2 ft on each end for caps.
Aitkin co. will except the all in one end caps as drop boxes, must install as instructed.
Install 4" inspection pipes at the terminal end of each trench
(recommend installing 4" inspection pipes at each drop box also).

If installing rock trenches No deeper than 30", 36' wide 52 ft long, must use dropboxes.
12" inches of rock under 4" pipe, cover rock with fabric, install 4" inspection pipes.

10/13/2022

Jeff Brummer L-1347 218-821-0704

1000 S Septic Tank



SIDE VIEW

INFILTRATOR®
water technologies

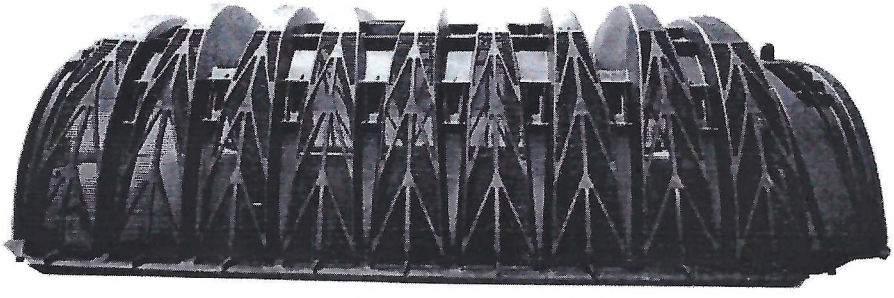
Quick4 PLUS™ CHAMBER SYSTEMS

The Quick4® Plus High Capacity Chamber

Quick4 Plus™ Series

The Quick4 Plus High Capacity Chamber offers maximum strength through its two center structural columns. This chamber can be installed in a 36-inch-wide trench. Like the original line of Quick4 chambers, it offers advanced contouring capability with its Contour Swivel Connection™ which permits turns up to 15-degrees, right or left. It is also available in four-foot lengths to provide optimal installation flexibility. The Quick4 Plus All-in-One 12 Endcap, and the Quick4 Periscope are available with this chamber, providing increased flexibility in system configurations.

Maximum Strength



Quick4 Plus High Capacity Chamber Benefits:

- Two center structural columns offer increased stability and superior strength
- Advanced contouring connections
- Latching mechanism allows for quick installation
- Four-foot chamber lengths are easy to handle and install
- Supports wheel loads of 16,000 lbs/axle with 12" of cover

Quick4 Plus High Capacity Chamber Specifications

Size 34"W x 53"L x 14"H (864 mm x 1346 mm x 356 mm)
Effective Length 48" (1219 mm)
Louver Height 12" (305 mm)
Storage Capacity 54 gal (204 L)
Invert Height 0.8" (20 mm), 5.3" (135 mm), 8.0" (203 mm), 12.7" (323 mm)

Quick4 Plus All-in-One 12 Endcap Benefits:

- May be used at the end of chamber row for an inlet/outlet or can be installed mid-trench
- Mid-trench connection feature allows construction of chamber rows with center feed, as an alternative to inletting at the ends of chamber rows
- Center-feed connection allows for easy installation of serial distribution systems
- Pipe connection options include sides, ends or top

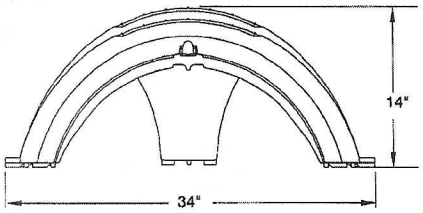
Quick4 Plus All-in-One Periscope Benefits:

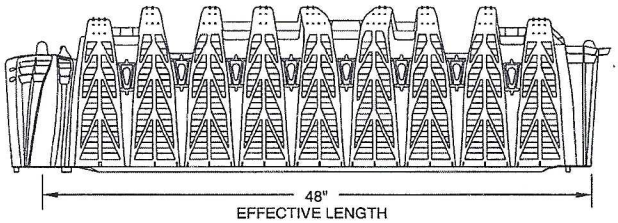
- Allows for raised invert installations
- 180° directional inletting
- 12" raised invert is ideal for serial applications

Certified by the International Association of Plumbing and Mechanical Officials (IAPMO)

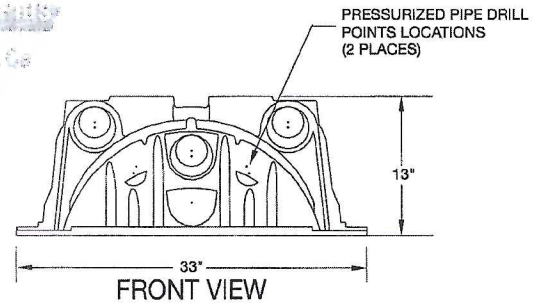
APPROVED in _____

Quick4 Plus High Capacity Chamber

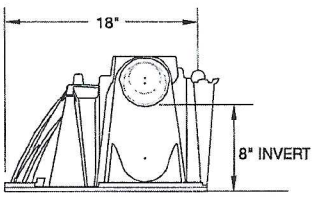




Quick4 Plus All-in-One 12 Endcap

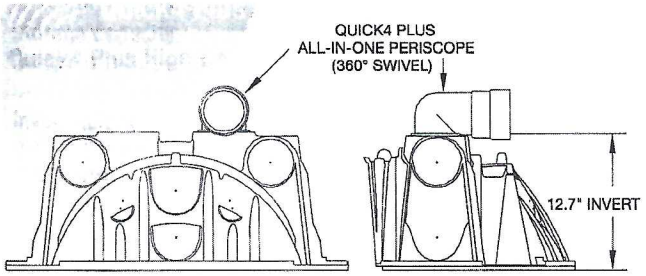


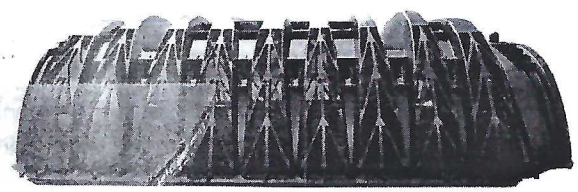
FRONT VIEW



SIDE VIEW

Quick4 Plus All-in-One Periscope





INFILTRATOR WATER TECHNOLOGIES STANDARD LIMITED WARRANTY

(a) The structural integrity of each chamber, endcap and other accessory manufactured by Infiltrator ("Units"), when installed and operated in a leachfield of an onsite septic system in accordance with Infiltrator's instructions, is warranted to the original purchaser ("Holder") against defective materials and workmanship for one year from the date that the septic permit is issued for the septic system containing the Units; provided, however, that if a septic permit is not required by applicable law, the warranty period will begin upon the date that installation of the septic system commences. To exercise its warranty rights, Holder must notify Infiltrator in writing at its Corporate Headquarters in Old Saybrook, Connecticut within fifteen (15) days of the alleged defect. Infiltrator will supply replacement Units for Units determined by Infiltrator to be covered by this Limited Warranty. Infiltrator's liability specifically excludes the cost of removal and/or installation of the Units.

(b) THE LIMITED WARRANTY AND REMEDIES IN SUBPARAGRAPH (a) ARE EXCLUSIVE. THERE ARE NO OTHER WARRANTIES WITH RESPECT TO THE UNITS, INCLUDING NO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE

(c) This Limited Warranty shall be void if any part of the chamber system is manufactured by anyone other than Infiltrator. The Limited Warranty does not extend to incidental, consequential, special or indirect damages. Infiltrator shall not be liable for penalties or liquidated damages, including loss of production and profits, labor and materials, overhead costs, or other losses or expenses incurred by the Holder or any third party. Specifically excluded from Limited Warranty coverage are damage to the Units due to ordinary wear and tear, alteration, accident, misuse, abuse or neglect of the Units; the Units being subjected to vehicle traffic or other conditions which are not permitted by the installation instructions; failure to maintain the minimum ground covers set forth in the installation instructions; the placement of improper materials into the system containing the Units; failure of the Units or the septic system due to improper siting or improper sizing, excessive water usage, improper grease disposal, or improper operation; or any other event not caused by Infiltrator. This Limited Warranty shall be void if the Holder fails to comply with all of the terms set forth in this Limited Warranty. Further, in no event shall Infiltrator be responsible for any loss or damage to the Holder, the Units, or any third party resulting from installation or shipment, or from any product liability claims of Holder or any third party. For this Limited Warranty to apply, the Units must be installed in accordance with all site conditions required by state and local codes; all other applicable laws; and Infiltrator's installation instructions.

(d) No representative of Infiltrator has the authority to change or extend this Limited Warranty. No warranty applies to any party other than the original Holder.

The above represents the Standard Limited Warranty offered by Infiltrator. A limited number of states and counties have different warranty requirements. Any purchaser of Units should contact Infiltrator's Corporate Headquarters in Old Saybrook, Connecticut, prior to such purchase, to obtain a copy of the applicable warranty, and should carefully read that warranty prior to the purchase of Units.

INFILTRATOR water technologies

4 Business Park Road
P.O. Box 768
Old Saybrook, CT 06475
860-577-7000 • Fax 860-577-7001
1-800-221-4436
www.infiltratorwater.com

PLUS10 0713

Detailed Parcel Report

Parcel Number: 10-0-028300

General Information

Township/City:	HAUGEN TWP		
Taxpayer Name:	CARLSON, LAURA A		
Taxpayer Address:	50007 153RD PL TAMARACK MN 55787		
Property Address:	50007 153rd Pl		
Township:	49	**Lake Number:**	1002200
Range:	22	**Lake Name:**	ISLAND LAKE
Section:	18	**Acres:**	4.00
Green Acres:	No	**School District:**	4.00
Plat:			
Brief Legal Description:	NLY 310 FT OF LOT 1		

RD 75'SSTS

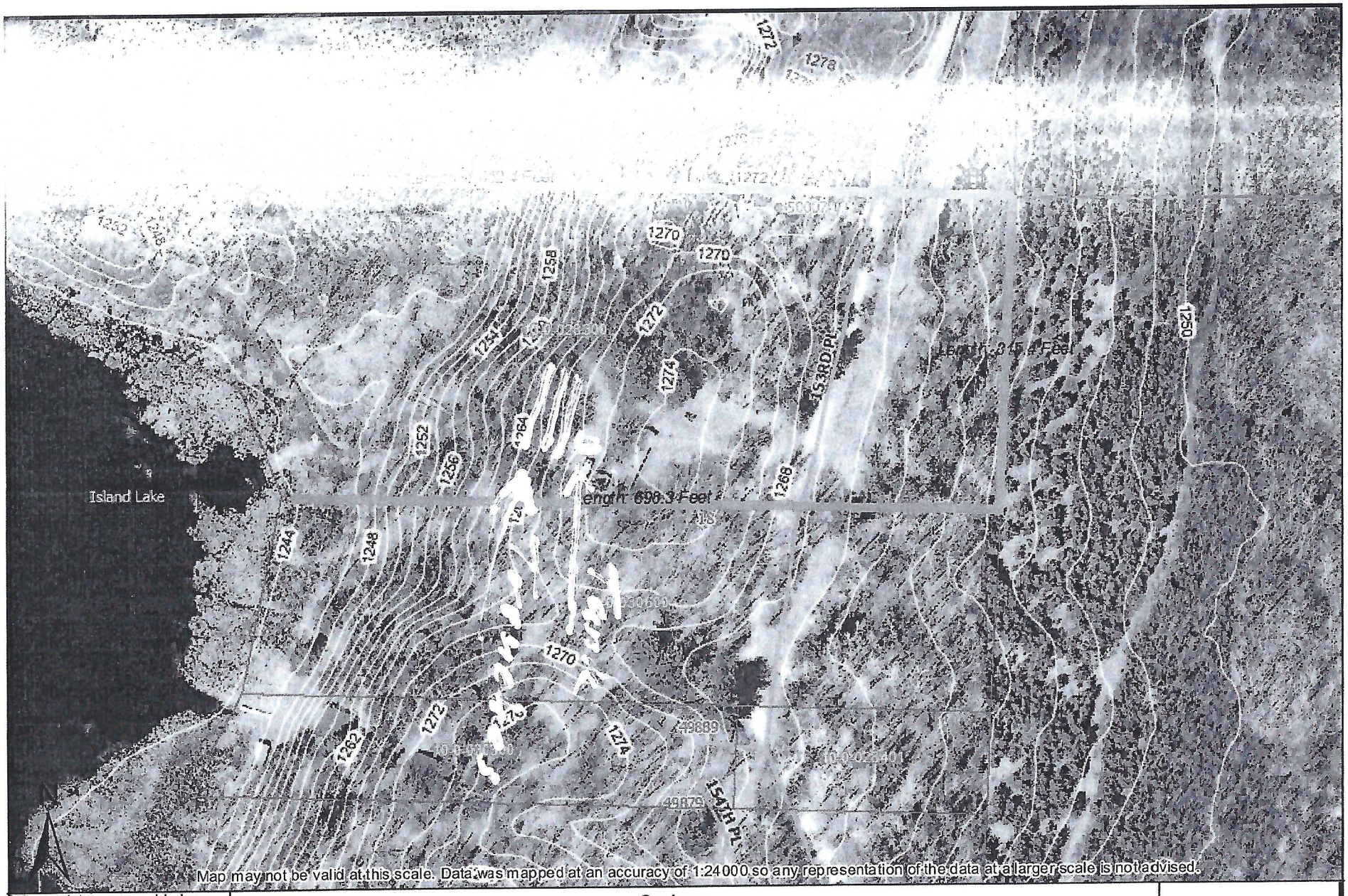
Tax Information

Class Code 1:	Non-Comm Seasonal Residential Recreational
Class Code 2:	Unclassified
Class Code 3:	Unclassified
Homestead:	Non Homestead
Assessment Year:	2022

Estimated Land Value:	$132,800.00
Estimated Building Value:	$25,200.00
Estimated Total Value:	$158,000.00
Prior Year Total Taxable Value:	$103,600.00
Current Year Net Tax (Specials Not Included):	$856.00
Total Special Assessments:	$0.00
****Current Year Balance Not Including Penalty:**	$428.00
Delinquent Taxes:	No

*** For more information on delinquent taxes, please call the Aitkin County Treasurer's Office at 218-927-7325.**

**** Balance Due on a parcel does not include late payment penalties.**



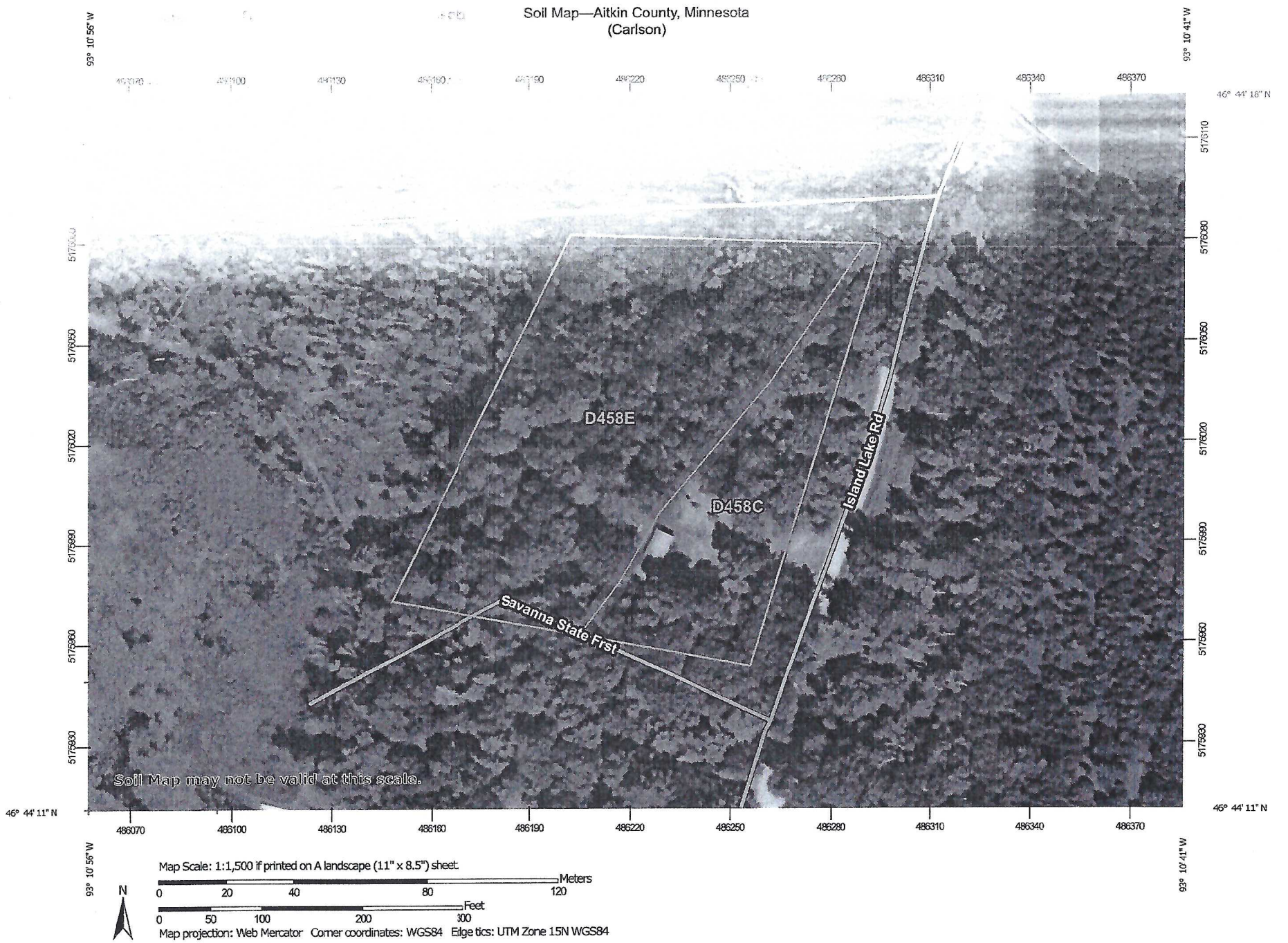
These data are provided on an "AS-IS" basis, without warranty of any type, expressed or implied, including but not limited to any warranty as to their performance, merchantability, or fitness for any particular purpose.

Carlson

1:2,257 | 0 0.01 0.02 mi | 1 inch = 188 feet | Web AppBuilder for ArcGIS

Aitkin County

Date: 10/5/2022


Soil Map—Aitkin County, Minnesota
(Carlson)
93° 10' 56" W
93° 10' 41" W
46° 44' 18" N
46° 44' 11" N
486070
486100
486130
486160
486190
486220
486250
486280
486310
486340
486370
5176110
5176080
5176050
5176020
5175990
5175960
5175930
D458E
D458C
Island Lake Rd
Savanna State Frst
Soil Map may not be valid at this scale.
Map Scale: 1:1,500 if printed on A landscape (11" x 8.5") sheet.
Meters
0 20 40 80 120
Feet
0 50 100 200 300
N
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

Aitkin County, Minnesota

D458C—Menahga loamy sand, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2t4t2
Elevation: 590 to 2,030 feet
Mean annual precipitation: 23 to 33 inches
Mean annual air temperature: 36 to 48 degrees F
Frost-free period: 90 to 170 days
Farmland classification: Not prime farmland

Map Unit Composition

Menahga and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Menahga

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy outwash

Typical profile

A - 0 to 3 inches: loamy sand
Bw - 3 to 17 inches: loamy sand
C - 17 to 79 inches: sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): 4s
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A

Ecological site: F057XY023MN - Dry Sandy Upland Coniferous Forest
Forage suitability group: Sandy (G057XN022MN)
Other vegetative classification: Sandy (G057XN022MN)
Hydric soil rating: No

Minor Components

Eagleview

Percent of map unit: 8 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Sandy (G057XN022MN)
Hydric soil rating: No

Roscommon

Percent of map unit: 2 percent
Landform: Swales
Down-slope shape: Concave
Across-slope shape: Linear
Other vegetative classification: Level Swale, Low AWC, Acid (G057XN007MN)
Hydric soil rating: Yes

Meehan

Percent of map unit: 2 percent
Landform: Swales
Down-slope shape: Concave
Across-slope shape: Linear
Other vegetative classification: Level Swale, Low AWC, Acid (G057XN007MN)
Hydric soil rating: No

Andrusia

Percent of map unit: 2 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Sloping Upland, Low AWC, Acid (G057XN008MN)
Hydric soil rating: No

Leafriver, frequently ponded

Percent of map unit: 1 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Organic (G057XN014MN)

Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Aitkin County, Minnesota
Survey Area Data: Version 23, Sep 6, 2022

Aitkin County, Minnesota

D458E—Menahga loamy sand, 15 to 30 percent slopes

Map Unit Setting

National map unit symbol: 2t4t3
Elevation: 590 to 2,030 feet
Mean annual precipitation: 23 to 33 inches
Mean annual air temperature: 36 to 48 degrees F
Frost-free period: 90 to 170 days
Farmland classification: Not prime farmland

Map Unit Composition

Menahga and similar soils: 87 percent
Minor components: 13 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Menahga

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy outwash

Typical profile

A - 0 to 3 inches: loamy sand
Bw - 3 to 17 inches: loamy sand
C - 17 to 79 inches: sand

Properties and qualities

Slope: 15 to 30 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A

Ecological site: F088XY012MN - Very Dry Sandy Upland Coniferous Forest
Forage suitability group: Steep; Coarse Texture; Low AWC (G057XN018MN)
Other vegetative classification: Steep; Coarse Texture; Low AWC (G057XN018MN)
Hydric soil rating: No

Minor Components

Eagleview

Percent of map unit: 8 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F088XY012MN - Very Dry Sandy Upland Coniferous Forest
Other vegetative classification: Steep; Coarse Texture; Low AWC (G057XN018MN)
Hydric soil rating: No

Roscommon

Percent of map unit: 2 percent
Landform: Swales
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F088XY008MN - Wet Mixed Forest
Other vegetative classification: Level Swale, Low AWC, Acid (G057XN007MN)
Hydric soil rating: Yes

Andrusia

Percent of map unit: 1 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F088XY012MN - Very Dry Sandy Upland Coniferous Forest
Other vegetative classification: Steep; Coarse Texture; Low AWC (G057XN018MN)
Hydric soil rating: No

Leafriver, frequently ponded

Percent of map unit: 1 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F088XY007MN - Wet Depressional Forest
Other vegetative classification: Organic (G057XN014MN)

Hydric soil rating: Yes

Meehan

Percent of map unit: 1 percent
Landform: Swales
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F088XY011MN - Moist Sandy Mixed Forest
Other vegetative classification: Level Swale, Low AWC, Acid (G057XN007MN)
Hydric soil rating: No

Data Source Information

Soil Survey Area: Aitkin County, Minnesota
Survey Area Data: Version 23, Sep 6, 2022