

2022-009530

AITKIN COUNTY ZONING

PERMIT NUMBER 47358

PARCEL NUMBER 10-0-035602

Location _____
Lot _____ Block _____ Gov't. Lot _____ Section 21 Twp. 49 Rge. 22

SE NE LESS 4 AC + E 1/2 OF E 1/2 OF SE 1/4 LESS 1 AC + LESS .64 AC CO RD ROW

Issued October 7, 2022 To James & Tammy Onstad

Nature of Authorization 3 Bdrm 'Other' Type III mound Septic
with operating permit # 806

New Construction _____ Alteration _____

Sewer Installation

Flood Plain and Lowest Floor Elev. _____

NOTE:

This permit must be posted in a conspicuous place on premises on which work is to be done and remain until work has been completed and inspected.

**This permit expires one year from date of issuance
NOT TRANSFERABLE**

S. Wiebisch
ZONING ADMINISTRATOR

No Portion of any Sewage Disposal System shall be Covered Prior to Inspection.

AITKIN COUNTY ENVIRONMENTAL SERVICES-PLANNING & ZONING
307 Second Street NW, Room 219
Aitkin, Minnesota 56431

PH: (218) 927-7342
FX: (218) 927-4372
aitkinpz@co.aitkin.mn.us



10/7/2022

James Onstad
15415 Goshawk St
Tamarack, MN 55787

Re: Operating Permit #806
Zoning Permit # 2022-9530
Parcel # 10-0-035602

Dear Permittee:

Enclosed is the Operating Permit for an "Other" Septic System (formerly Experimental, Performance, Etc.) that you are petitioning Aitkin County to allow to be installed on your property instead of a standard system. Please review this permit thoroughly and become acquainted with all of the conditions, then sign the operating permit and return it to the address above.

One provision that is often overlooked by homeowners is the State of Minnesota requirement that a water meter or other flow measuring device be installed and the results recorded by the homeowner on a REGULAR basis.

You will receive an annual reminder notice on how to renew your operating permit before the renewal expiration deadline. This reminder notice will ask that you provide:

- 1) Recorded water meter readings**
- 2) Annual Compliance Inspection report**
- 3) Renewal application and fee**

The Service Provider/Qualified Individual is privately hired by you, the landowner. The Service Provider/Qualified Individual must review the septic system on an annual basis. This annual review would be a great opportunity to review the conditions of the Operating Permit.

Should you have any questions, please contact our office.

Thank you,
Aitkin County Planning & Zoning

Enclosure: Operating Permit App

AITKIN COUNTY ENVIRONMENTAL SERVICES

OPERATING PERMIT FOR WASTEWATER TREATMENT AND DISPERSAL

OPERATING PERMIT #: 806
ZONING PERMIT #: 2022-9530
PARCEL #: 10-0-035602
PERMITTEE: James Onstad

ORIGINAL DATE ISSUED: 10/6 /2022
RENEWAL PERIOD: ANNUALLY
EXPIRATION: 9 /30/2025

MAILING ADDRESS: 15415 Goshawk St
Tamarack, MN 55787

PROPERTY ADDRESS:
48127 Kestrel Ave
Tamarack, MN 55787

TELEPHONE: (218) 232-8569

LEGAL: SE NE LESS 4 AC & E 1/2 OF E 1/2 OF SE 1/4 LESS...

FEE PAID: **DATE PAID:** **INVOICE #** 56124 **CK #:**

Aitkin County Environmental Services authorizes the Permittee to operate a wastewater treatment and dispersal system located on the above described property in accordance with the requirements of this permit.

This permit is effective on the issuance date identified above. This permit and the authorization to treat and disperse from the above system shall expire on the above expiration date. The Permittee is not authorized to discharge after the above date of expiration. The Permittee shall submit such monitoring information as required by Aitkin County Environmental Services no later than thirty (30) days prior to the expiration date. When the required information is submitted and approved by Aitkin County Environmental Services, the permit may be renewed. This permit is not transferable from owner to owner.

I hereby certify with my signature as the Permittee that I understand the provisions of this operating permit including maintenance and monitoring requirements. I agree to indemnify and hold Aitkin County harmless from all loss, damages, costs and charges that may be incurred by use of this system and if I fail to comply with the provisions of this Operating Permit. If I sell this property during the life of the permit, I will inform the new owner(s) of the permit requirements and the need to renew the operating permit.



Signature of Permittee

Date

Signature of Permitting Authority

Date

If you have any questions regarding this permit, including the specific permit requirements, permit reporting or permit compliance status, please contact Aitkin County Environmental Services at 218-927-7342.

A. DESCRIPTION OF WASTEWATER TREATMENT AND DISPERSAL SYSTEM

4 Bedroom Type III "Other" Mound system. Treatment with 30"+ of sand base. Type III due to mottles in soil in 8"-12" area.

B. PERFORMANCE STANDARD REQUIREMENTS:

During the period beginning on the effective date (issuance date) of this permit and lasting until this permit's expiration date, the Permittee is authorized to discharge from the wastewater treatment unit to subsurface dispersal. No surface discharge is permitted. The following parameters must be monitored and the results must be found within the compliance limits.

PARAMETER	COMPLIANCE LIMIT	SAMPLE LOCATION	SAMPLE FREQUENCY	SAMPLE TYPE	REPORTING FREQUENCY
Seperation Distance	3 feet	Mound	Yearly	Boring by inspector	ANNUALLY to Aitkin Co.
Flow	400	Event Counter	Monthly by owner	Record on a Log Sheet	Annually to Aitkin Co.

C. MAINTENANCE REQUIREMENTS:

PARAMETER	LOCATION	FREQUENCY
600 GPD Flow	Event Counter	Record Monthly

D. MONITORING AND REPORTING REQUIREMENTS:

Monitoring results obtained during each calendar year shall be submitted no later than September 30th of that year to:

Aitkin County Environmental Services
307 2nd Street NW, Room 219
Aitkin, MN 56431

The monitoring reports shall be signed by the Permittee. Copies are to be retained by the Permittee. Any sampling and laboratory testing procedures shall be performed in accordance with Standard Methods at a Minnesota Department of Health approved laboratory. All sampling and testing costs shall be the responsibility of the Permittee. Monitoring plans may be modified as necessary and reapproved by Aitkin County Environmental Services.

The Permittee shall notify Aitkin County Environmental Services within thirty (30) days when monitoring results do not meet the monitoring plan requirements of this permit.

The owner has secured the services of **Unknown** as the Service Provider or qualified individual for this system. The Service Provider or qualified individual is hereby authorized to report the required monitoring data and routine maintenance service records to Aitkin County Environmental Services.

E. MITIGATION PLAN:

Insepect system 1 year after install.

2. Zoning/Land Use Permit Applications Septic Only Permit # 2022-8352, App. # App-2022-009530, UID # 206360**App. Status: Approved****Aitkin County Planning & Zoning / Environmental Services****307 Second St. NW Room 219****Aitkin, MN 56431****Phone: 218-927-7342****Fax: 218-927-4372****Email: aitkinpz@co.aitkin.mn.us****Property Owner Contact**

Landowner Phone Number:

(218) 232 - 8569

Property Owner Email Address:

logmanta@aol.com; forests99@yahoo.com

Project Location Search

Property:

Property Location			Property Address	Legal Description	Property Attributes		Owner Information	Tax Payer Information
Parcel Number	Section-Township-Range	Township or City Name	Property Address	Legal Description	Lake Number	Lake Name	Owner Name(s)	Taxpayer Name(s)
10-0-035602	S:21 T:49 R:22	HAUGEN TWP	48127 Kestrel Ave TAMARACK, MN 55787	SE NE LESS 4 AC & E 1/2 OF E 1/2 OF SE 1/4 LESS 1 AC & LESS .64 AC CO RD ROW	0		ONSTAD, JAMES J & TAMMY L	ONSTAD, JAMES J & TAMMY L

Driving directions to the property from Aitkin.: North on goshawk st in tamarack
Take first right off corner.
Go until stop sign. First place on left on dirt

Designer/Installer

Designer Name:

Roger Hurd

Installer:

Licensed Septic Professional

Installer Name:

Cloquet Constructors

Installer License Number:

941

System Information

Please attach Septic Design & Management Plan:

File 1: [3193_001.pdf](#)

Attach Operating Permit Application & Maintenance Contract:

File 1: [Onstad_OP.pdf](#)

Please select all that apply:

Residential Other/Performance Sewer (Type III, IV, V)

Residential Operating Permit (Type III, IV, V)

Terms

General Terms Zoning Permits

Defining and staking the property lines, road right-of-ways, septic sites, and wells are the responsibility of the property owner. In some cases, a registered survey may be required to verify setbacks before granting a permit.

Land Use/Septic General Terms

Zoning permits and Subsurface Sewage Treatment System permits are valid for one (1) year (unless the sewage permit is to upgrade an Imminent Threat to Public Health or Safety system, which is then valid for ten (10) months).

All corners of the proposed structure(s) need to be staked with visible flags, ribbon, or lathes prior to onsite inspection by Aitkin County.

If property lines are not clearly marked and visible, then they need to be staked with visible flags, ribbon, or lathes prior to onsite inspection by Aitkin County.

It shall be a violation of the Aitkin County Zoning Ordinance to commence construction before the permit application is approved by Aitkin County.

The landowner or authorized agent may make application for a zoning permit agreeing to do such work in accordance with all Aitkin County Ordinances. The landowner or authorized agent agrees that the application, site plan, and all other attachments submitted herewith are true and accurate and shall become a part of the permit. The landowner or authorized agent agrees that, in making application for a zoning permit, the landowner grants permission to Aitkin County, at reasonable times, to enter the property to determine compliance of the application with applicable Local, County or State Ordinances or Statutes. It is the applicants sole responsibility to contact other Local, County or State agencies to ensure the applicant has complied with all relevant Local, County or State Ordinances or Statutes.

After a complete application is submitted and reviewed, an on-site inspection may be conducted; a permit may be issued describing the proposed construction that may take place on the property. Changes to a project may require a permit application to be resubmitted.

The septic installer shall notify Aitkin County Environmental Services a minimum of twenty-four (24) hours before the covering of any portion of the septic installation. Changes from the approved septic design will require approval by the County prior to construction.

Applicants are responsible for getting all applicable entrance permits from the appropriate road authority.

Applicants acknowledge that they are in compliance with MN Contractor Licensing laws per MN Statute 326B.85.

I acknowledge that by submitting this application, the application and its attachments are public information.

Invoice #56124 (09/15/2022) Expected Payment Method: Multiple

Charge	Cost	Quantity	Total
Residential Operating Permit added 10/06/2022 3:32 PM \$150 Flat Fee	\$150.00	x 1	\$150.00
Residential Other/Performance Sewer (Type III, IV, V) added 10/06/2022 3:32 PM \$400 Flat Fee	\$400.00	x 1	\$400.00
Grand Total			
		Total	\$550.00
		Payment 09/15/2022	\$350.00
		Payment 10/07/2022	\$200.00
		Due	\$0.00

Approvals

Approval	Signature
Applicant	Tom Anderson - 10/07/2022 9:20 AM - witnessed by Shannon Wiebusch cb263062febe3ccc7f16f4449cf4481e d06100f5adb4deeb7cf56bd6d6f49461
#1 Adminstrative Approval Group	Shannon Wiebusch - 10/07/2022 9:20 AM 4e48859cfe41c0f1fddaebf73358feff 10122169ee4ee40983c8c17a46c4d579
#2 Inspector Group	Shannon Wiebusch - 10/07/2022 9:21 AM 521eda9a6eca6c529bee0c1b96619b74 170e482436d88f40c5762ddb91822682
#3 Final Approval	Shannon Wiebusch - 10/07/2022 9:21 AM eddfd631a6c0fb1da9c02731f12a1b52 fa9c5bd4bb41870bbf19d3dbe4f1d448

Public Notes

Text: Permit # 47358 approved for 3 bdrm Type III mound septic with operating permit #806

File(s): File 1: 3195_001.pdf

[3195_001.pdf](#)

File 2: OP_806.pdf

[OP_806.pdf](#)

Admin Checklist

Date application was complete: 09/15/2022

This review has been started by: Shannon Wiebusch

Zoning District of project location: Farm Residential

Required OHWL setback

distance:

"Other" OHWL setback distance

is:

Pumping Agreement Attached?

Low Interest Loan or SSTS Grant

project?

Is this an After-The-Fact

application?

Is the parcel a Lot of Record

before 1-21-92 or have alternate

sites been identified?

DESIGN REVIEW CHECKLIST

Zoning Inspector: Kevin Turnock

SSTS Type: Type III

SSTS Design: "Other"/Performance System (III, IV, V)

New or Replacement SSTS: Replacement SSTS

gpd: 1-2,499 gpd

of bedrooms: 4

Does this system require an

Operating Permit?

Operating Permit #: 806

Attach appropriate inspection

forms.:

Does this system belong to an

other establishment?

Is this a Cluster System?

Preliminary & Field Evaluation Form

www.SepticResource.com vers 12.4

Owner Information			
Date	<u>8/11/2022</u>	Sec / Twp / Rng	<u>S.21 T.49 R.22</u>
Parcel ID	<u>10-0-035602</u>	LUG (county, city, township)	<u>Aitkin County</u>
Property Owner:	<u>James Onstad</u>	Owners address (if different)	
Property Address:	<u>48127 Kestrel Ave.</u>	<u>15415 Goshawk St.</u>	
City / State / Zip:	<u>Tamarack, MN. 55787</u>		

Flow Information and Waste Type / Strength			
Estimated Design flow	<u>600</u>	Anticipated Waste strength	<input type="checkbox"/> Hi Strength <input checked="" type="checkbox"/> Domestic
Comments:		Any Non-Domestic Waste	<input type="checkbox"/> Yes (class V) <input checked="" type="checkbox"/> No
		Sewage ejector/grinder pump	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		Water softener	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		Garbage Disposal	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		Daycare / In home business	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

Soil Information

		Evidence of site:		
		Cut	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
		Filled	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
		Compacted	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
		Disturbed	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Original soils	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Soil logs completed and attached	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Perk test completed and attached (if applicable)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Soil loading rate (gpd/ft ²)	<u>0.78</u>	Percolation rate (if applicable)	_____	
Depth/elev to SHWT	<u>8.00</u>	Flooding or run-on potential (comments)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Depth to system bottom maximum (or elev minimum)	<u>-28.00</u>	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)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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	R.H. Inspection & Design Company	3847 License #
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Soil Observation Log

www.SepticResource.com vers 12.4

Owner Information	
Property Owner / project: <u>James Onstad</u>	Date <u>8/11/2022</u>
Property Address / PID: <u>48127 Kestrel Ave.</u>	

Soil Survey Information	
<input type="checkbox"/> refer to attached soil survey	
Parent mat'l's:	<input checked="" type="checkbox"/> Till <input type="checkbox"/> Outwash <input type="checkbox"/> Lacustrine <input type="checkbox"/> Alluvium <input type="checkbox"/> Organic <input type="checkbox"/> Bedrock
landscape position:	<input type="checkbox"/> Summit <input type="checkbox"/> Shoulder <input checked="" type="checkbox"/> Side slope <input type="checkbox"/> Toe slope
soil survey map units:	_____ slope <u>1</u> % direction- <u>downhill</u>

Soil Log #1							
		<input checked="" type="checkbox"/> Boring	<input type="checkbox"/> Pit	Elevation _____	Depth to SHWT <u>12"</u>		
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0-8	Topsoil	<35	5YR3/3		Friable	Weak	Granular
8-12	Sandy Loam	<35	10YR4/3	7.5YR5/6	Friable	Weak	Granular
		<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
Comments: Mottles at 12"							

48127 Kestrel Ave. Soil Log #2							
<input checked="" type="checkbox"/> Boring <input type="checkbox"/> Pit		Elevation _____		Depth to SHWT <u>12"</u>			
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0-8	Topsoil	<35	5YR3/3		Friable	Weak	Granular
8-12+	Sandy Loam	<35	10YR4/3	7.5YR5/6	Friable	Weak	Granular
		<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

48127 Kestrel Ave. Soil Log #3							
<input checked="" type="checkbox"/> Boring <input type="checkbox"/> Pit		Elevation _____		Depth to SHWT <u>12"</u>			
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0-8	Topsoil	<35	5YR3/3		Friable	Weak	Granular
8-12+	Sandy Loam	<35	10YR4/3	7.5YR5/6	Friable	Weak	Granular
		<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

R.H. Inspection & Design
Company

3847
License #

48127 Kestrel Ave.		Soil Log #4					
		<input type="checkbox"/> Boring	<input type="checkbox"/> 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

48127 Kestrel Ave.		Soil Log #5					
		<input type="checkbox"/> Boring	<input type="checkbox"/> 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

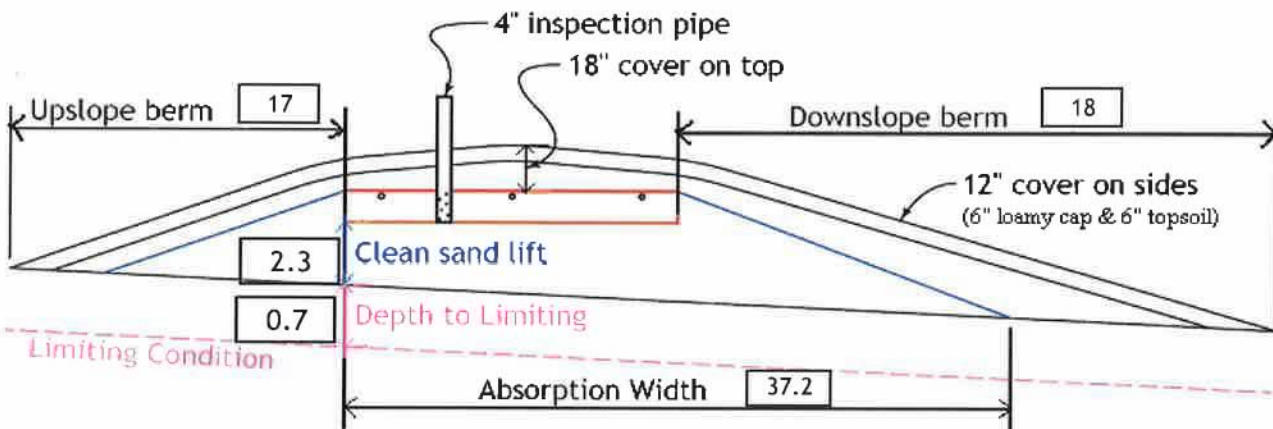
R.H. Inspection & Design

Company

3847

License #

- 23) **0.78** gpd/ft² Absorption area Soil Loading Rate, which gives a mound ratio of **1.5** (minimum)
 (this must match the soil boring log) desired mound ratio **1.5**
- 24) **1** percent site slope (0-20% range) **1** (% downslope site slope, if different than upslope)
- 25) **8** inches, or **0.7** ft. to Redox or other limiting condition (need at least 12" to be a Type I)
 Treatment zone contains **0** inches of 0% soil credit, and **0** inches of 50% soil credit. Giving a:
- 26) **28** inch, or **2.3** ft. Sand Lift Mound **CRITICAL FOR FUTURE CERTIFICATIONS!!!**
- 27) **15.0** ft. base absorption width (with sand beyond rockbed as follows):
37.2 greater of: absorption width OR sand slope
- 28) **2.5** ft. upslope and sideslope sand upslope **12.8**
2.5 ft. Downslope sand down slope **14.3**
- Individual slope ratios give BERM widths (topsoil beyond rockbed) of:
- 29) **4:1** upslope ratio **17** ft. upslope berm
- 30) **4:1** sideslope **18** ft. sideslope berms
- 31) **4:1** downslope **18** ft. downslope berm
- 32) Overall Dimensions: **10.0** ft. wide by **50.0** ft. long Rock bed
45 ft. wide by **86** ft. long Mound footprint



Note:

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

- 33) Rock Bed:
10.0 ft. by **50.0** ft. by **6** inches under pipe, plus 20% gives **17** yd³ or *1.4= **24** ton
- 34) Mound Sand: (note: volume is based on 3:1/4:1 slope from top of rockbed, Exchange sand for loamy cap if desired)
61.8 up + **71.0** downslope + **17.5** ends + **44.1** under rock = **233** yd³ or *1.4= **327** ton
 plus 20%
- 35) Loamy Cap:
41 ft. by **82** ft. 6" deep, plus 20% gives **75** yd³ or *1.4= **105** ton
- 36) Topsoil:
45 ft. by **86** ft. 6" deep, plus 20% gives **86** yd³ or *1.4= **120** ton

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

 Designer Signature

R.H. Inspection & Design
 Company

3847
 License#

8/11/2022
 Date

Property Owner: James OnstadDate: 8/11/2022Site Address: 48127 Kestrel Ave.PID: 10-0-035602

Comments: _____

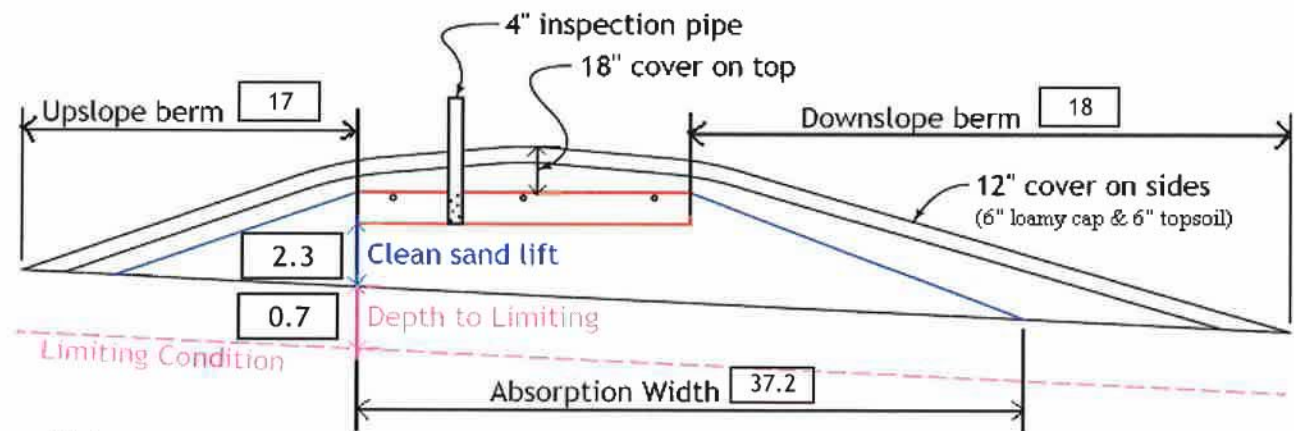
Instructions: - enter data = adjust if desired = computer calculated - DO NOT CHANGE!

- 1) bedroom Type Residential System
- 2) GPD design flow
- 3) Garbage disposal or pumped to septic
- 4) Gal Septic tank (code minimum) Gal Septic tank (design size / LUG req'd)
Tank options: Effluent filter & alarm req'd
- 5) GPD/ft² mound sand loading rate contour loading rate of req's a min ft. long rockbed
- 6) ft rockbed width ft rockbed length
- 7) ft lateral spacing ft perforation spacing (maximum of 3 for both)
 manifold connection
- 8) laterals feet long perfs / lateral perfs total
(1/2 a perf means the first perf starts at the middle feed manifold)
- 9) inch perfs at feet residual head gives gpm flow rate per perforation
for this perf size & spacing, & pipe size on line 12, max perfs/lateral = , line #8 must be less --> **OK**
- 10) doses per day (4 minimum)
- 11) gallons per dose (treatment volume) 2.00 5x
- 12) inch diameter laterals must be used to meet "4x pipe volume" requirement 2.00 3x
- 13) feet of inch supply line leads to gallons of drainback volume
(Tip: "top feed" manifold to control the drainback)
- 14) gallons TOTAL pump out volume (treatment + drainback)
- 15) feet vertical lift from pump to mound laterals, leads to a:
- 16) GPM @ feet of head, Pump requirement (note: >50gpm may require an extra 3-6' of head)
- 17) gal Dose tank (code minimum) gal Dose tank (design size / LUG req'd) at gpi
leads to a
- 18) inch swing on Demand float, or timed dosing of min ON (confirm pump rate with drawdown
(this delivers Average flow, =70% of Peak design flow) hrs OFF test and adjust as necessary)
- 19) inches from bottom of tank to "Pump OFF" float
- 20) inches from bottom of tank to "Pump ON" float, or inches to "Timer ON" float if time dosed
- 21) inches from bottom of tank to "Hi Level" float, or inches to "Hi Level" float if time dosed
- 22) gallons reserve capacity (after High Level Alarm is activated)

Installer Summary

- gallon Septic tank (minimum) Tank options: Effluent filter & alarm req'd
- gallon Dose tank (minimum) at gpi
- GPM @ ft. of head, Pump required
- inch swing on Demand float which translates to roughly inches of float tether length
if time dosing is required --> minutes ON time & hours OFF time
- inches from bottom of tank to "pump ON" float, or inches to "timer ON" float
- inches from bottom of tank to "Hi Level Alarm" or inches to "Hi level alarm" if time dosed
- ft. of inch supply line with manifold connection
(Tip: "top feed" manifold to control drainback)
- inch, or ft. Sand Lift Mound
- ft. wide by ft. long Rock bed
- laterals inch diameter ft. long ft. lateral spacing
- inch perfs ft. perforation spacing
- Effluent filter & alarm
- clean out & valve box assemblies

- ft. Total sand ABSORPTION width (minimum)
- ft. upslope and sideslope (sand beyond rockbed, minimum)
- ft. Downslope (sand beyond rockbed, minimum)
- Specific slope ratios give BERM widths (topsoil beyond rockbed) of:
- upslope ratio ft. upslope berm
- sideslope ft. sideslope berms
- downslope ft. downslope berm



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

Rock Bed:	<input type="text" value="17.0"/> yd ³ or *1.4=	<input type="text" value="24"/> ton	<input type="text" value="6"/> inches under pipe
Mound Sand:	<input type="text" value="233"/> yd ³ or *1.4=	<input type="text" value="327"/> ton	calculation based on 3:1/4:1 slope from top of rockbed
Loamy Cap:	<input type="text" value="75"/> yd ³ or *1.4=	<input type="text" value="105"/> ton	<input type="text" value="6"/> " deep
Topsoil:	<input type="text" value="86"/> yd ³ or *1.4=	<input type="text" value="120"/> ton	<input type="text" value="6"/> " deep

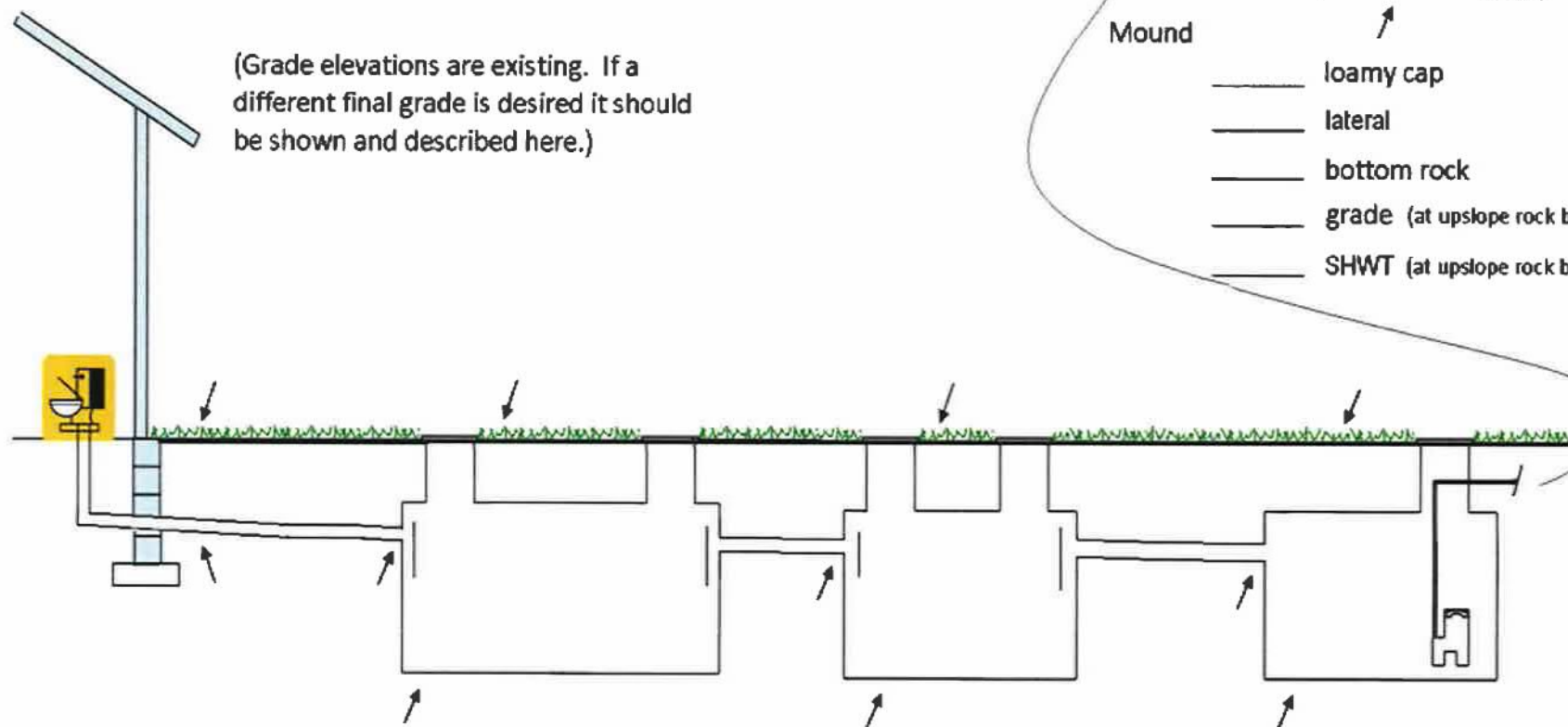
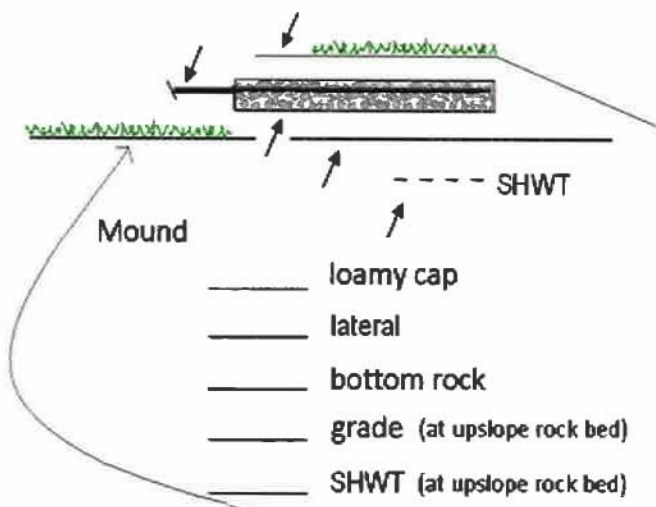
INSPECTOR CHECKLIST - mound

- 4812/ Kestrel Ave.
- WELL setbacks: 20' to pressure tested sewer line (5 psi for 15 min)
50' to everything 100' to dispersal area with shallow well
- PROPERTY LINES setback: 10' to everything
- Road setback: platted: 10' prop line. Metes & bounds: out of road easement, or outer ditch.
- LAKE / BLUFF setback: 20' for bluff. Lakes: GD __, RD __, NE __. Protected wetland __.
- Building setbacks: 10' for everything, 20' for dispersal area.
- WATER LINE under pressure set 10' to bed, tank & sewer line. (else sewer line > 12" below, else ok w/pvc)
- Sewer line & baffle connection (no 90's, 3' between 45's, slope min 1" in 8', max 2" in 8')
(no depth req's, clean out every 100', Sch 40 pipe)
- Septic tank and risers (water tight, insulated, proper depth, existing verified by pumping)
mfg _____ 1500 gallons Effluent filter & alarm req'd _____
- Riser over outlet, riser over inlet or center, and 6"+ inspection pipe over any remaining baffles.
No _____ effluent filter & alarm
- Dose tank risers and piping (water tight, insulated, proper depth, drainback)
mfg _____ 520 gallons
- dose pump _____ 29 gpm 16 head VERIFY PUMP CURVE 5.5 min ON 9 hr OFF
- float setting drop 9.6 inches at 16.6 gpi "DESIGNED" 5.8 inches approx float tether length
159.0 gal dose divided by _____ gpi "INSTALLED" = _____ inches float drop (field corrected)
- LABEL pump requirements and drawdown on riser or panel
- Cam lock reachable from grade - 30" max. J-hook weep hole. Supply line access (no hard 90's)
2.0 inch supply pipe: Sch40, sloped 1/8"+, supported by 4" sch40 sleeve or compacted, and buried 6"+.
splice box / control panel / electrical connections
flow measurement: CT, ETM, time dosed, home water meter
mound absorption area rough up
mound rock dimensions 10.0 X 50.0
Sand lift depth 28 inches. (Jar test : 2" sand leaves < 1/8" silt after 30 min)
- Absorption Sand beyond rock 12.8 upslope 14.3 downslope
- Bermed topsoil beyond rockbed 17 upslope 18 sideslope 18 downslope
- cover depth of 12-18"+ VERIFY
3 laterals (1-2' from edge of rock)
1.50 inch pipe size (Sch40 pipe & fittings)
3.0 ft lateral spacing
- 7/32 inch perforations
3.0 ft perforation spacing
- Air inlet at end of laterals, and at top feed manifold if necessary. VERIFY
clean outs (no hard 90's)
4" inspection pipe to bottom of rock, anchored VERIFY
- Abandon existing system - if necessary Re-use existing tank certification
monitoring plan and type _____
well abandonment form - if necessary _____

System Elevations

_____ benchmark _____

(Grade elevations are existing. If a different final grade is desired it should be shown and described here.)



Sewer pipe exiting house

_____ Grade
_____ Pipe

Septic Tank

_____ Grade
_____ inlet
_____ Tank bottom

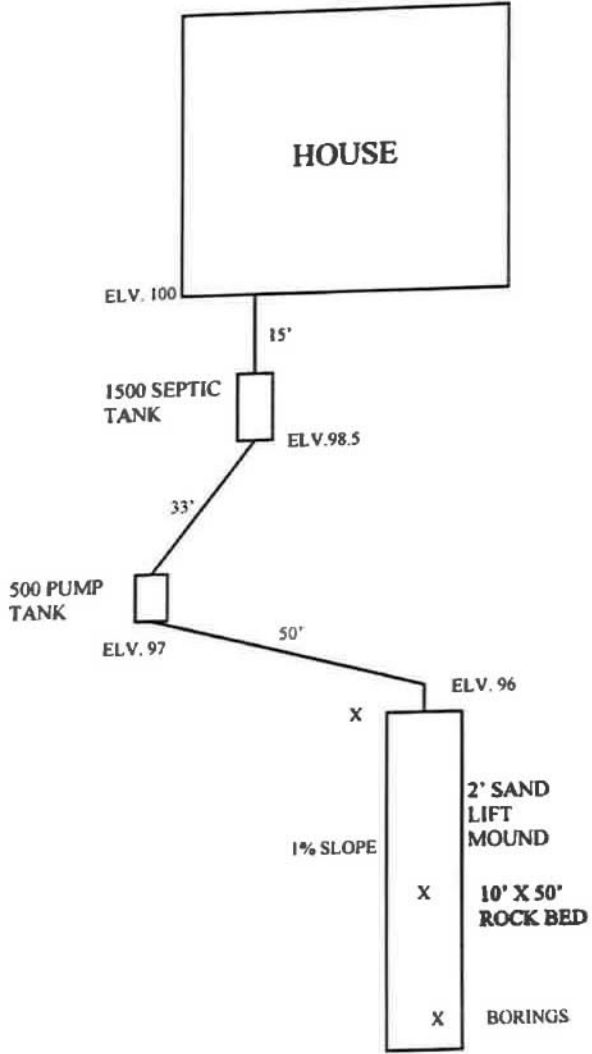
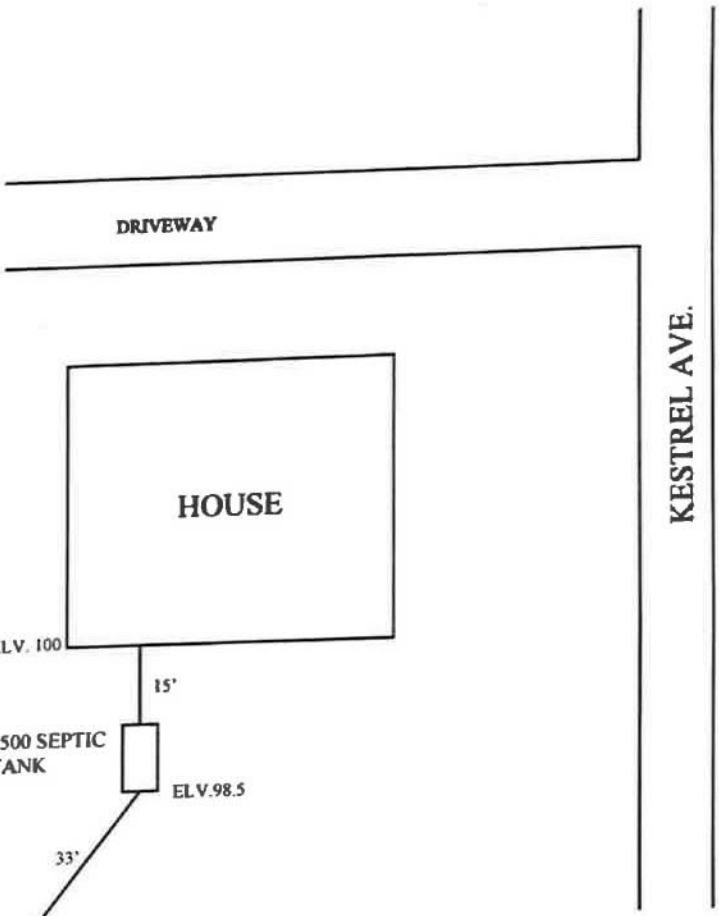
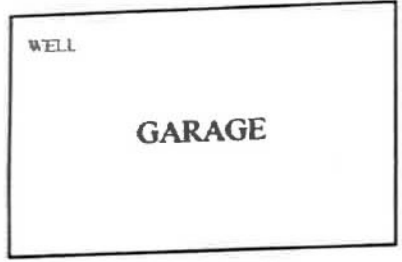
Septic Tank (if applicable)

_____ Grade
_____ inlet
_____ Tank bottom

Pump Tank

_____ Grade
_____ inlet
_____ Tank bottom

48127 KESTREL AVE.
TAMARACK, MN.
55787



AITKIN COUNTY ENVIRONMENTAL SERVICES

APPLICATION for an OPERATING PERMIT FOR WASTEWATER TREATMENT AND DISPERSAL

PERMITTEE JAMES ONSTAD PARCEL NUMBER 10-0-035602

ADDRESS 48127 KESTREL AVE.

LEGAL DESCRIPTION _____

TELEPHONE # 218-232-8569

GIS LOCATION _____

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

MOTTLES IN SOIL IN 8"-12" AREA, TREATMENT WITH 30" + SAND MOUND

B. MONITORING PLAN AND REPORTING FREQUENCY:

PARAMETER	COMPLIANCE LIMIT	SAMPLE LOCATION	SAMPLE FREQUENCY	SAMPLE TYPE	REPORTING FREQUENCY
FLOW	<u>600 GPD</u>	<u>EVENT COUNTER</u>	<u>MONTHLY</u>		<u>ANNUAL TO COUNTY</u>
5-DAY BOD					
TOTAL NITROGEN					
TOTAL PHOSPHORUS					
TSS					
FATS, OILS AND GREASE					
FECAL COLIFORM					
SEPARATION DISTANCE	<u>3'</u>	<u>MOUND</u>	<u>YEARLY</u>	<u>BORING</u>	<u>ANNUAL TO COUNTY</u>

HOMEOWNER RECORDS EVENT COUNTER MONTHLY AND REPORTS TO COUNTY

HOMEOWNER

will perform the monitoring of this septic system.

C. MAINTENANCE PLANS

PARAMETER	LOCATION	FREQUENCY
600 GPD	EVENT COUNTER AT PUMP TANK	MONTHLY

D. MITIGATION PLAN:

INSPECT SYSTEM 1 YEAR AFTER INSTALL

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

Roger Hurd
Signature

3847
License Number

5 OCT 22
Date

ROGER HURD
Name (please print)

2169 SCHELINDER RD
Address CARLTON, 55718

218-391-0510
Telephone #

AITKIN COUNTY
CERTIFICATE OF INSTALLATION/~~NOTICE OF NONCOMPLIANCE~~

This certificate of installation/~~notice of noncompliance~~ has been issued this _____ day of _____, 20____ to certify compliance/~~noncompliance~~ with Aitkin County's Subsurface Sewage Treatment System Ordinance.

The premises covered by this certificate are legally described as: _____

Section _____ Township _____ Range _____ Lake _____
PERMIT NO. _____ Owner Name _____
Address _____
Installer Name _____
Type of System Inspected _____
Parcel Number _____

The certificate of installation/~~notice of noncompliance~~ was based on No ___ of the following:

- 1) Inspection of the installation or construction as in accordance with the above referenced permit and application design.

- 2) Review of as-built plans submitted in accordance with Subdivision 9.2 D of Aitkin County's Subsurface Sewage Treatment System Ordinance.

If the above permitted subsurface sewage treatment system is in noncompliance with Aitkin County's Subsurface Sewage Treatment System Ordinance, then the following shall serve as a Notice of Violation:

1) Statement of the findings of fact through inspections or investigations:

2) List of specific violations of Ordinance: _____

3) Requirements for correction or removal of violations: _____

4) Time schedule for compliance: _____

Failure to correct or remove the above violation(s) will result in this matter being turned over to the Aitkin County Attorney's Office for further legal action, which may result in revocation of licenses or registrations, fines and/or imprisonment.

INSPECTOR SIGNATURE _____

**SUBSURFACE SEWAGE TREATMENT SYSTEM INSPECTION FORM
AITKIN COUNTY, MINNESOTA**

Township Haugen Date of Inspection 10/25/2022 F App. Number 2022-035602
10/20/2022 I 47358

Owner James & Tammy Oustad Parcel Number 10-0-035602

Project Address 48127 Kestrel Ave. Installer Cloquet Constructors
T34BR MND L941

City Tamarack Zip Code 55787

New Repair

SETBACKS:

Buildings to tank(s) 13'
 Buildings to drainfield 80'
 Well(s) 50' or 100' 24' to ext tank DW
 Lake/Creek/Wetland —

SEPTIC TANKS:

New Existing

Number of tanks installed 1
 Liquid capacity and type 1500 Combo ex
 Type of baffle Conc.

Inspection pipes —

Manholes size 24"

Manhole to grade Yes No

PUMPS:

New Existing

Tank capacity and type 520G Tac
 Pump manufacturer & model # Gould PE41
 Horsepower & GPM 0.4HP 29GPM
 Feet of head 16'
 Gallons per cycle 150 GPC
 Size of discharge line 2"
 Type & location of alarm Elec. Alarm
 Water meter Event counter

DRAWING OF SYSTEM: (include soils)

DIST. or DROP BOX & TYPE —

TRENCHES, BEDS, OR GRAVELLESS LEACHFIELD:

Trench/Bed depth —
 Trench/Bed length —
 Trench/Bed bottom width —
 Trench spacing —
 Drainfield rock below pipe —
 Size of gravelless pipe —
 Depth of backfill —
 Absorption area: square feet —
 lineal feet —

MOUNDS:

Percent slope 10%
 Upslope sand width 13'
 Downslope sand width 14'
 Sideslope sand width 10'
 Drainfield rock below pipe 6"
 Depth of sand below rock 36"
 Perforation size & spacing 1/32" / 36" sp.
 Pipe size & spacing 1.5" / 36" sp.
 Dimensions of rock bed 10' x 50'
 Dimensions of sand base 36' x 73'
 Final cover 45' x 86'; 12" cover over rb - 4" ts

Inspector's Comments: Well is inside house. 24' to existing tank. 4" pipe between ex. septic tank + new lift tank was not pressure tested. Well is 70' from new lift tank.

Inspector's Signature Bryan Hargrave Installer's Signature —

