Preliminary & Field Evaluation Form

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Owner Information

Date	6/17/2021	Sec / Twp / Rng	S.26 T.48 R.24
Parcel ID	14-0-043801	LUG (county, city, township)	Aitkin County
Property Owner:	Jack Gould	Owners address (if different)	
Property Address:	41698 240th Place		
City / State / Zip:	McGregor, MN. 55760		

Flow Information and Waste Type / Strength

Estimated Design flow: 300

Comments:

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	96'
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	☐ 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

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) 1.20

Percolation rate (if applicable) _____

Depth/elev to SHWT 60.00

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

Depth to system bottom maximum (or elev minimum) 24.00

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) _____

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

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

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.

Roger Hill
Designer Signature

R.H. Inspection & Design
Company

3847
License #

2011 purple code

Gravity Trenches Design

(includes pump to gravity)

www.SepticResource.com (vers 15.2)

Property Owner: Jack Gould **Date:** 6/17/2021

Site Address: 41698 240th Place **PID:** 14-0-043801

Comments:

instructions: [ ] = enter data [ ] = adjust if desired [ ] = computer calculated - DO NOT CHANGE!

1) [2] bedroom Type [I] Residential System

2) [300] GPD design flow

3) [No] Garbage disposal or pumped to septic

4) [1000] Gal Septic tank (code minimum) [1000] Gal Septic tank (design size / LUG req'd)
Tank options: none

5) [1.20] GPD/ft^2 Soil Loading Rate (must match soil boring log) [6] inches of rock below the pipe
[250] ft^2 (code minimum) [381] ft^2 (design size / LUG req'd)

Distribution media: ☐ installers choice ☑ rock ☐ chamber ☐ _____

6) [7] desired # of 3' wide trenches, leads to [18.1] ft. Long trenches (avg)
or [127] lineal ft (total)

7) [60] inches, or [5.00] ft. to Redox or other limiting condition (This must match the soil boring log)
Treatment zone contains [0] inches 0% soil credit, and [0] inches 50% soil credit

8) [36] inches, or [3.00] ft. of vertical separation required
leads to bottom of rock no more than:

9) [24] inches, or [2.0] ft. Below existing grade **CRITICAL FOR FUTURE CERTIFICATIONS!!!**

10) Overall Dimensions: [7] Trenches [3] ft. wide by [18.1] ft. Long
or [127] lineal ft (total)

11) Rock materials:
[21] ft. by [18.1] ft. by [12] inches total, plus 20% gives [17] yd^3 or *1.4= [24] ton

For pump to gravity systems:

12) [4.0] doses per day (4 minimum)

13) [75] gallons per dose (treatment volume)

14) [ ] feet of [2.0] inch supply line leads to [#####] gallons of drainback volume
(Tip: "top feed" manifold to control drainback)

15) [#####] gallons TOTAL pump out volume (treatment + drainback)

16) [ ] feet vertical lift from pump to highest trench, leads to a

17) [20] GPM @ [######] feet of head, Pump requirement
(10-45 gpm)

18) [500] gal Dose tank (code min) [0] gal Dose tank (design size / LUG req'd) at [ ] gpi

19) [#####] inch swing on Demand float, or Timed dosing of [#####] min ON (confirm rate with drawdown
(this delivers Average flow, =70% of Peak design flow) [#####] hrs OFF test and adjust as necessary)

20) [12] inches from bottom of tank to "pump OFF" float

21) [#####] inches from bottom of tank to "pump ON" float, or [12] inches to "timer ON" float if time dosed

22) [#####] inches from bottom of tank to "Hi Level" float, or [#####] inches to "Hi Level" float if time dosed

[#####] gallons reserve capacity (after High Level Alarm is activated)

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

Designer Signature	Company	License#	Date
Roger Hinds	R.H. Inspection & Design	3847	6/17/2021

Installer Summary

1000 gallon Septic tank (minimum) Tank options: none

7 Trenches 3.0 ft. wide by 18.1 ft. Long (avg)
or 127 lineal ft (total)

No Effluent filter & alarm

Bottom of rock no more than:
24 inches, or 2.0 ft. Below existing grade

6 inches of rock below the pipe

Rock materials: 17 yd^3 or *1.4= 24 ton

For pump to gravity systems:
0 gallon Dose tank (minimum) at approximately gpi

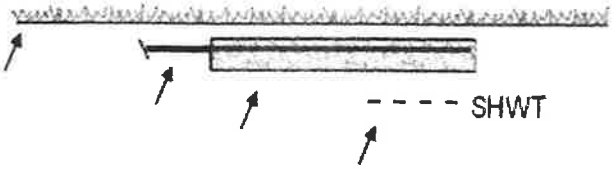
20 GPM @ ###### ft. of head, Pump required
(pump curve CAN NOT exceed 45 gpm at this elevation/head require

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 12 inches to "timer ON" float
inches from bottom of tank to "Hi Level Alarm" float

ft. of 2.0 inch supply line

System Elevations

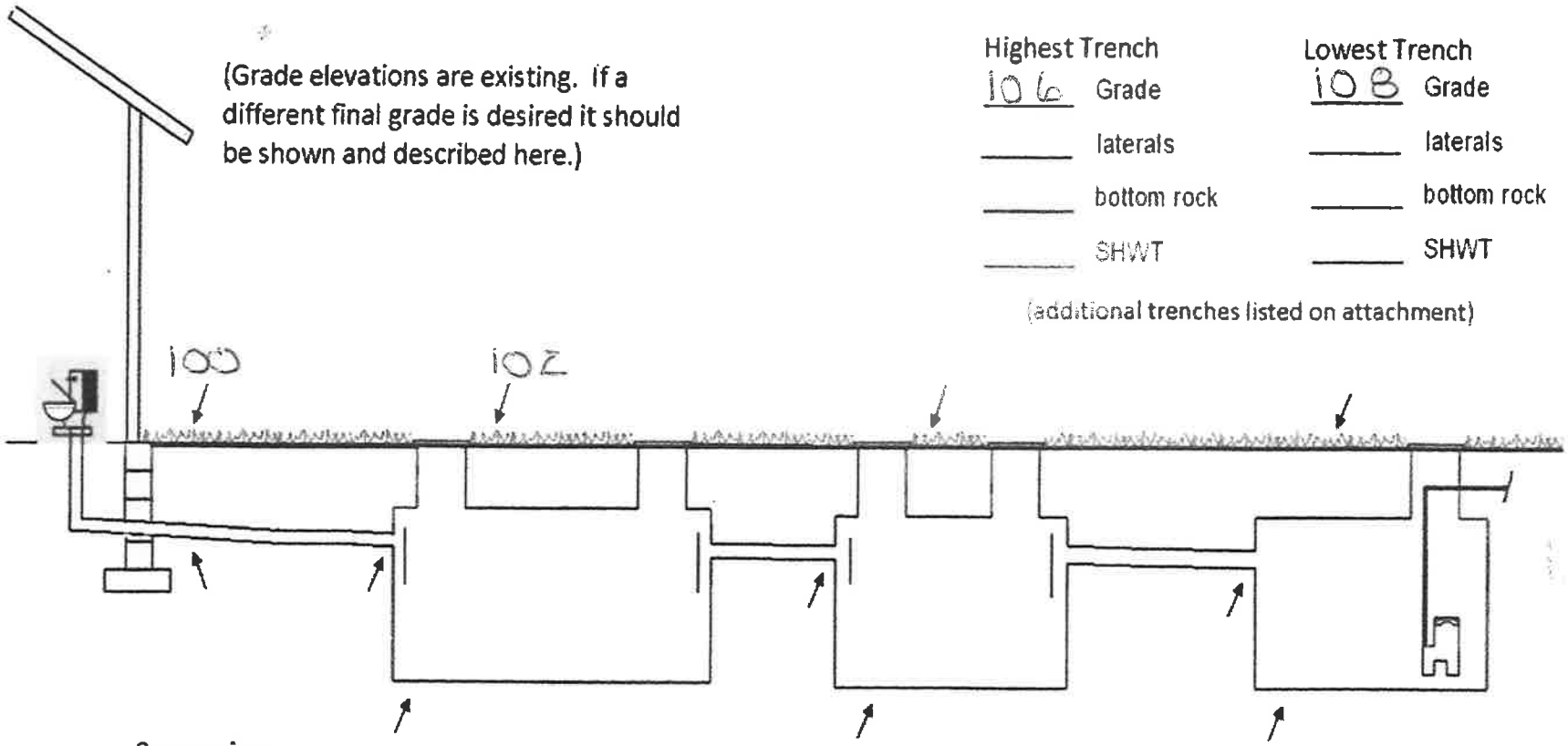


_____ benchmark _____

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

Highest Trench		Lowest Trench	
106	Grade	108	Grade
_____	laterals	_____	laterals
_____	bottom rock	_____	bottom rock
_____	SHWT	_____	SHWT

(additional trenches listed on attachment)



Sewer pipe exiting house	Septic Tank	Septic Tank (if applicable)	Pump Tank (if applicable)
_____ Grade	_____ Grade	_____ Grade	_____ Grade
_____ Pipe	_____ inlet	_____ inlet	_____ inlet
	_____ Tank bottom	_____ Tank bottom	_____ Tank bottom

INSPECTOR CHECKLIST - gravity trenches

41698 240th Place

☐ 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 se 10' to bed,tank & sewer line. (else sewer > 12" below)

☐ 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_____ 1000 gallons none

☐ Riser over outlet, riser over inlet or center, and 6"+ inspection pipe over any remaining baffles.

☐ No effluent filter & alarm

FOR PUMP TO GRAVITY:

☐ Dose tank risers and piping (water tight, insulated, proper depth, drainback)
mfg_____ 0 gallons

☐ dose pump _____ 20 gpm ##### head VERIFY PUMP CURVE
min ON ##### hr OFF

(pump curve can not exceed 45 gpm @ ##### head)

☐ float setting drop ###### inches at ☐ gpi "DESIGNED" ##### "approx tether length
gal dose divided by _____ gpi "INSTALLED" = _____ " float drop (field correcte

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)

☐ splice box / control panel / electrical connections

☐ flow measurement: CT, ETM, time dosed, home water meter

☐ 2.0 inch supply pipe: Sch40, sloped 1/8"+, supported by 4" sch40 sleeve or compacted, and buried 6"+.

END PUMP TO GRAVITY.

☐ gravity supply pipe: Sch40 or 35, sloped 1/8"+, supported by 4" sch40 or compacted, and buried 6"+.

☐ 7 Trenches 3' wide 18 feet long (sewer pipe)
or 126.7 total lineal feet

☐ Rock depth below pipe 6 inches

☐ Rock bottom elevation 24.0 inches from Grade to bottom of rock (max)

☐ cover depth of 12"+ VERIFY

☐ 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

Soil Observation Log

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Owner Information

Property Owner / project: Jack Gould Date 6/17/2021

Property Address / PID: 41698 240th Place

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: _____ slope _____ % direction- downhill

Soil Log #1

☑ Boring ☐ Pit Elevation _____ Depth to SHWT 60"+

Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0-3	Topsoil	<35	5YR3/3		Friable	Weak	Blocky
3-60+	Fine sand	<35	10YR5/4		Loose	Loose	Single grain
		<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: No mottles found

41698 240th Place

Soil Log #2

☑ Boring ☐ Pit Elevation _____ Depth to SHWT 60"+

Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0-3	Topsoil	<35	5YR3/3		Friable	Weak	Blocky
3-60+	Fine sand	<35	10YR5/4		Loose	Loose	Single grain
		<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

41698 240th Place

Soil Log #3

☑ Boring ☐ Pit Elevation _____ Depth to SHWT 60"+

Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0-3	Topsoil	<35	5YR3/3		Friable	Weak	Blocky
3-60+	Fine sand	<35	10YR5/4		Loose	Loose	Single grain
		<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.

Roger Hunt

Designer Signature

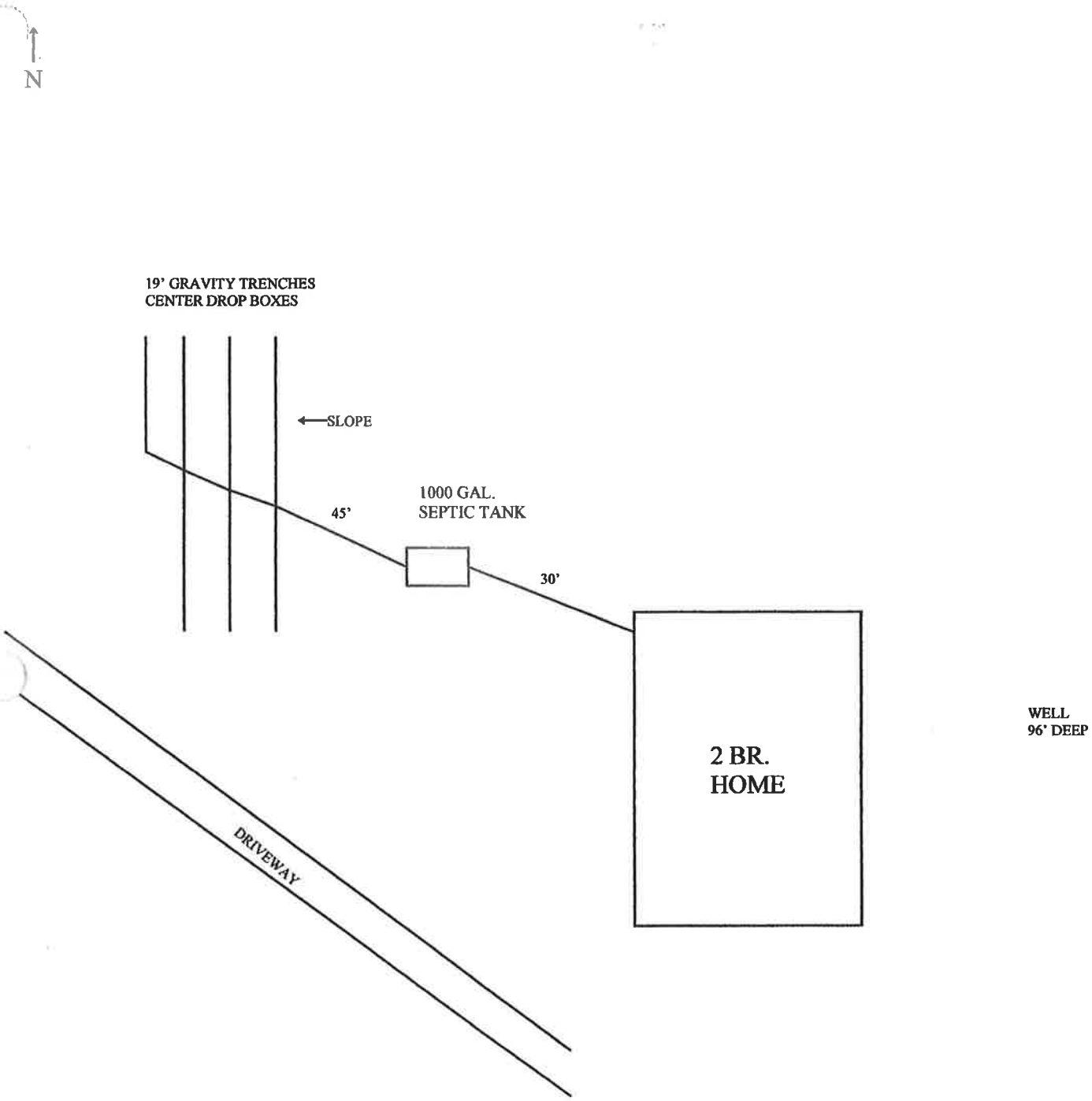
R.H. Inspection & Design

Company

3847

License #

41698 240TH PLACE
MCGREGOR, MN. 55760



Subsurface Sewage Treatment System Management Plan

Property Owner: JACK GOULD (ROBIN) Phone: 218-232-5125 Date: 17 JUN 21

Mailing Address: _____ City: _____ Zip: _____

Site Address: 41698 240TH PLACE City: MCGREGOR, MN. Zip: 55760

This management plan will identify the operation and maintenance activities necessary to ensure long-term performance of your septic system. Some of these activities must be performed by you, the homeowner. Other tasks must be performed by a licensed septic service provider or maintenance provider.

System Designer: Recommends SSTS check every 36 months.
Local Government: Recommends SSTS check every 36 months.
State Requirement: Requires SSTS check every 36 months.
(State requirements are based on MN Rules Chapter 7080.2450, Subp. 2 & 3)

My System needs to be checked every 36 months.

Homeowner Management Tasks:

Leaks – Check (look, listen) for leaks in toilets and dripping faucets. Repair leaks promptly.

Surfacing sewage – Regularly check for wet or spongy soil around your soil treatment area.

Effluent filter – Inspect and clean twice a year or more.

Alarms – Alarm signals when there is a problem. Contact a service or maintenance provider any time an alarm signals.

Event counter or water meter – Record your water use.

-recommend meter readings be conducted (*circle one:* *DAILY* *WEEKLY* *MONTHLY* *N/A*)

Licensed septic service provider or maintenance provider (Check all that apply):

- ☑ Check to make sure tank is not leaking
- ☑ Check and clean the in-tank effluent filter (if exists)
- ☑ Check the sludge/scum layer levels in all septic tanks
- ☑ Recommend if tank should be pumped
- ☑ Check inlet and outlet baffles
- ☑ Check the drainfield effluent levels in the rock layer
- ☐ Check the pump and alarm system functions
- ☐ Check wiring for corrosion and function
- ☐ Check dissolved oxygen and effluent temperature in tank
- ☑ Provide homeowner with list of results and any action to be taken
- ☐ Flush and clean laterals if cleanouts exist

"I understand it is my responsibility to properly operate and maintain the sewage treatment system on this property, utilizing the Management Plan. If requirements in the Management Plan are not met, I will promptly notify the permitting authority and take necessary corrective actions. If I have a new system, I agree to adequately protect the reserve area for future use as a soil treatment system."

Property Owner Signature: _____ Date: _____

Designer Signature: Robin Hunt Date: 17 JUN 21

See Reverse Side for Management Log

Maintenance Log

Activity	Date Accomplished									
Check frequently:										
Leaks: check for plumbing leaks										
Soil treatment area check for surfacing										
Lint filter: check, clean if needed										
Effluent screen: if owner-maintained										
Water usage rate (monitor frequency _____)										
Check annually:										
Caps: inspect, replace if needed										
Sludge & Scum/Pump										
Inlet & Outlet baffles										
Drainfield effluent leaks										
Pump, alarm, wiring										
Flush & clean laterals if cleanouts exists										
Other:_____										
Other:_____										

Notes:_____