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# Inspect Minnesota & Midwest Soil Testing

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P.O. Box 10853 White Bear Lake, MN 55110  
651-492-7550/Brian@Midwestsoiltesting.com

Brian Humpal  
MPCA Licensed Advanced Inspector

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## SUBSURFACE SEWAGE TREATMENT SYSTEM (SSTS) COMPLIANCE REPORT

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**Date:** September 6, 2018

**Time:** 9:00 AM

**Owner:** Adam Hendel

**Inspection Address:** 97 Quamwell Ave N, Lakeland, MN 55043

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### REPORT SUMMARY

I have performed an “MPCA Compliance Inspection” on this system, have reviewed the history of the system with the owner, Adam Hendel, and have reviewed the original design/permit records, along with the previous compliance inspections from 2006 and 2015, which were on file at Washington County. This older system (installed in 1990) consists of a pre-cast septic tank, a pre-cast lift tank, and a rock trench drainfield.

Although not a compliance criteria, it should be noted that the lift pump is only equipped with a visual alarm. I recommend adding an audible alarm to notify the occupants of the house in the event of a pump malfunction.

Predicated on my inspection of the system, my review of the history of the system with the owner, and my review of the records, it is my opinion that this system presently meets MPCA minimum compliance inspection requirements.

Inspect Minnesota and Midwest Soil Testing have been hired to perform a compliance inspection of this SSTS for compliance with local ordinances pursuant to Minn. Stat. § 115.55 (2013). This compliance inspection covers only the criteria required by Minn. Stat. § 115.55 Subd. 5a (2013) and Minn. R. 7080.1500 (2011). A compliance inspection is an indication of the current compliance status of the system and does not guarantee the performance or longevity of this system beyond the date of inspection, as it is impossible to determine the future performance of any system. Inspect Minnesota and Midwest Soil Testing disclaim any use of this compliance inspection beyond determining SSTS compliance pursuant to Minn. Stat. § 115.55 Subd. 5a (2013) and Minn. R. 7080.1500 (2011).

Please contact me should you have any questions.




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Christopher Uebe




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Brian Humpal


**Minnesota Pollution  
Control Agency**

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

# Compliance Inspection Form

## Existing Subsurface Sewage Treatment Systems (SSTS)

*Doc Type: Compliance and Enforcement*

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

For local tracking purposes:

**Submit completed form to Local Unit of Government (LUG) and system owner within 15 days**

### System Status

 System status on date (mm/dd/yyyy): 9/6/2018
 **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*) – *Imminent threat to public health and safety*
- Other Compliance Conditions (*Compliance Component #3*) – *Imminent threat to public health and safety*
- Tank Integrity (*Compliance Component #2*) – *Failing to protect groundwater*
- Other Compliance Conditions (*Compliance Component #3*) – *Failing to protect groundwater*
- Soil Separation (*Compliance Component #4*) – *Failing to protect groundwater*
- Operating permit/monitoring plan requirements (*Compliance Component #5*) – *Noncompliant*

### Property Information

Parcel ID# or Sec/Twp/Range: \_\_\_\_\_

 Property address: 97 Quamwell Ave N, Lakeland, MN 55043

 Reason for inspection: Property Transfer

 Property owner: Adam Hendel

 Owner's phone: 612-799-7905
**or**

Owner's representative: \_\_\_\_\_

Representative phone: \_\_\_\_\_

 Local regulatory authority: Washington County

 Regulatory authority phone: 651-430-6655

 Brief system description: A pre-cast septic tank, a pre-cast lift tank, and a rock trench drainfield.

Comments or recommendations: \_\_\_\_\_

### Certification

*I hereby certify that all the necessary information has been gathered to determine the compliance status of this system. No determination of future system performance has been nor can be made due to unknown conditions during system construction, possible abuse of the system, inadequate maintenance, or future water usage.*

 Inspector name: Brian Humpal/Christopher Uebe

 Certification number: C5342/C9852

 Business name: Inspect Minnesota, Midwest Soil Testing

 License number: L2896

 Inspector signature: 

 Phone number: 651-492-7550

### Necessary or Locally Required Attachments

- Soil boring logs       System/As-built drawing       Forms per local ordinance
- Other information (list): Report Summary, Property Information, Disclaimer, License

Property address: 97 Quamwell Ave N, Lakeland, MN 55043

Inspector initials/Date: 9/6/2018 *BACU***1. Impact on Public Health – Compliance component #1 of 5****Compliance criteria:**

System discharge sewage to the ground surface.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
System discharge sewage to drain tile or surface waters.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
System cause sewage backup into dwelling or establishment.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

**Any “yes” answer above indicates the system is an Imminent Threat to Public Health and Safety.**

Comments/Explanation:

A soil boring over the drainfield indicated no signs of ponding or black/grey soils.

**Verification method(s):**

- Searched for surface outlet
- Searched for seeping in yard/backup in home
- Excessive ponding in soil system/D-boxes
- Homeowner testimony (See Comments/Explanation)
- “Black soil” above soil dispersal system
- System requires “emergency” pumping
- Performed dye test
- Unable to verify (See Comments/Explanation)
- Other methods not listed (See Comments/Explanation)

**2. Tank Integrity – Compliance component #2 of 5****Compliance criteria:**

System consists of a seepage pit, cesspool, drywell, or leaching pit. <i>Seepage pits meeting 7080.2550 may be compliant if allowed in local ordinance.</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Sewage tank(s) leak below their designed operating depth.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If yes, which sewage tank(s) leaks:	

**Any “yes” answer above indicates the system is Failing to Protect Groundwater.**

Comments/Explanation:

Lowered underwater camera into tanks - baffles and tank walls OK.  
Lift pump and alarm were operational at the time of the inspection.

**Verification method(s):**

- 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)

**3. Other Compliance Conditions – Compliance component #3 of 5**

- a. Maintenance hole covers are damaged, cracked, unsecured, or appear to structurally unsound.  Yes\*  No  Unknown
- b. Other issues (*electrical hazards, etc.*) to immediately and adversely impact public health or safety.  Yes\*  No  Unknown  
**\*System is an imminent threat to public health and safety**

Explain:

- c. System is non-protective of ground water for other conditions as determined by inspector  Yes\*  No  
**\*System is failing to protect groundwater**

Explain:

Property address: 97 Quamwell Ave N, Lakeland, MN 55043

Inspector initials/Date: 9/6/2018 *BACU*

**4. Soil Separation – Compliance component #4 of 5**

Date of installation: 1990  Unknown  
 Shoreland/Wellhead protection/Food Beverage Lodging?  Yes  No

**Compliance criteria:**

For systems built prior to April 1, 1996, and not located in Shoreland or Wellhead Protection Area or not serving a food, beverage or lodging establishment:  Yes  No

Drainfield has at least a two-foot vertical separation distance from periodically saturated soil or bedrock.

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

Drainfield has a three-foot vertical separation distance from periodically saturated soil or bedrock.\*

"Experimental", "Other", or "Performance" systems built under pre-2008 Rules; Type IV or V systems built under 2008 Rules (7080.2350 or 7080.2400 (Advanced Inspector License required)  Yes  No

Drainfield meets the designed vertical separation distance from periodically saturated soil or bedrock.

**Any "no" answer above indicates the system is Failing to Protect Groundwater.**

**Verification method(s):**

Soil observation does not expire. Previous soil observations by two independent parties are sufficient, unless site conditions have been altered or local requirements differ.

- Conducted soil observation(s) (Attach boring logs)
- Two previous verifications (Attach boring logs)
- Not applicable (Holding tank(s), no drainfield)
- Unable to verify (See Comments/Explanation)
- Other (See Comments/Explanation)

**Comments/Explanation:**

Reviewed previous compliance inspection from 2015.  
 Reviewed previous compliance inspection from 2006.  
 Reviewed design and permit records.

**Indicate depths of elevations**

A. Bottom of distribution media	See Attached Boring Log(s)
B. Periodically saturated soil/bedrock	
C. System separation	
D. Required compliance separation*	

\*May be reduced up to 15 percent if allowed by Local Ordinance.

**5. Operating Permit and Nitrogen BMP\* – Compliance component #5 of 5  Not applicable**

Is the system operated under an Operating Permit?  Yes  No **If "yes", A below is required**

Is the system required to employ a Nitrogen BMP?  Yes  No **If "yes", B below is required**

BMP=Best Management Practice(s) specified in the system design

**If the answer to both questions is "no", this section does not need to be completed.**

**Compliance criteria**

- a. Operating Permit number: \_\_\_\_\_  Yes  No  
 Have the Operating Permit requirements been met?
- b. Is the required nitrogen BMP in place and properly functioning?  Yes  No

**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.

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**Inspect Minnesota & Midwest Soil Testing**  
**Subsurface Sewage Treatment System Owner/Property Information**

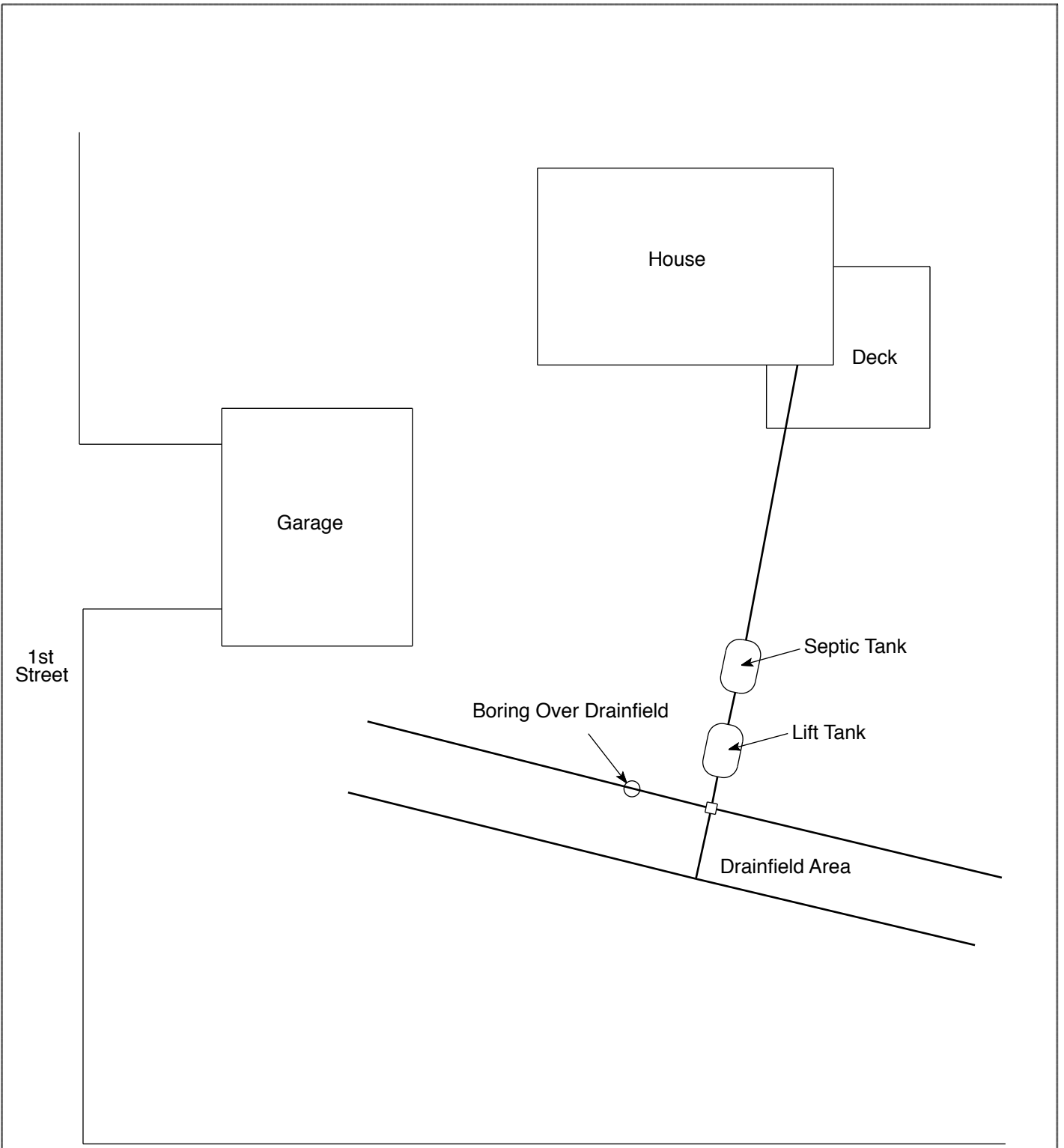
This information will be used for the purpose of conducting an MPCA Compliance Inspection.

Date of Inspection: September 6, 2018		Time: 9:00 AM
Property Address: 97 Quamwell Ave N, Lakeland, MN		Zip: 55043
Property Owner: Adam Hendel		Phone: 612-799-7905
<u>Tank(s)</u> <input checked="" type="checkbox"/> Septic 1 <input type="checkbox"/> Aerobic <input checked="" type="checkbox"/> Lift <input type="checkbox"/> Holding <input type="checkbox"/> Other:	<u>Tank(s)Material</u> <input type="checkbox"/> Fiberglass <input type="checkbox"/> Plastic <input type="checkbox"/> Metal <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Block <input type="checkbox"/> Other _____	<u>Soil Treatment System</u> <input checked="" type="checkbox"/> Rock trench <input type="checkbox"/> Gravelless trench <input type="checkbox"/> Chamber trench <input type="checkbox"/> Seepage bed <input type="checkbox"/> Mound <input type="checkbox"/> At-grade
<u>Other</u> <input type="checkbox"/> Alternative system _____ <input type="checkbox"/> Experimental system _____ <input type="checkbox"/> Cesspool system _____ <input type="checkbox"/> Other system _____		
Are the tank maintenance covers accessible? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No *If no, proper maintenance must be performed through the maintenance holes. Maintenance hole covers should be made accessible to the ground surface to facilitate access and proper maintenance of the system.		
Year house built: 1972	Year septic installed: 1990	Tank size (gals.): 1250
How long has seller owned the property? 2015		Number of residents in home? 2
Number of bedrooms? 3	Are all floors drained by gravity? Y	
Garbage disposal? N		Whirlpool bath? N
More than one system (laundry, etc.)? N		
Does this property have any footing drain tiles connected to the septic system? N		
Are any buildings on this property such as garages or out-buildings connected to this system? N		
Are there any additional systems on this property serving other buildings? N		
Location of septic system on lot? West Side		
Location of water well on lot? City Water		Is the well a deep well? N/A
Have you ever experienced any problems with the system such as: tree roots, sewage back-ups, surfacing of sewage onto the ground, septic tank overflowing, etc.; or have any repairs been made to the system? Y If yes, explain: Replaced lift pump in 2018.		
When was the system last pumped? 2018		Name of pumper: Pinky's Sewer Service
How often pumped in previous years? Every 3		Is system on a monitoring plan? N
Have you received notices from any government agency concerning this system? N		
Is your property located in a shoreland management area? N		
Do you have any additional information that should be given to the new owner? N		

I hereby certify that the above information is correct to the best of my knowledge. I also understand that if the system is considered "non-compliant/failing" per MPCA rules, that the inspector must by law submit a copy of this report to the local government unit within 15 days of the date of inspection completion. I also agree that unless otherwise noted in this report, that I/we are ultimately responsible for payment of all fees for all work performed relative to this inspection by Inspect Minnesota and Midwest Soil Testing.

Owner/Occupant: Adam Hendel's Signature On File

Date: 9/6/2018



1st Street

Garage

House

Deck

Septic Tank

Lift Tank

Boring Over Drainfield

Drainfield Area

Quamwell Ave N

← N  
**NO SCALE**

**97 Quamwell Ave N, Lakeland, MN 55043**

## Log Of Soil Borings

Location of Project:		97 Quamwell Ave N, Lakeland, MN 55043	
Borings Made By:		Inspect Minnesota	Date: 1/28/15
Auger Used:		Hand/Bucket	Classification System: USDA
Boring Number:		1	Boring Number:
Surface Elevation of Boring	Same ground surface as drainfield		Surface Elevation of Boring
Depth In Inches	<u>Soils Encountered</u>		Depth In Inches
0-51 51-80	7.5YR 3/4 Medium Sand 7.5YR 4/4 Medium Sand		
80"	Depth To End Of Boring Or Redox		Depth To End Of Boring Or Redox
Same	Elevation Of Boring Relative To System		Elevation Of Boring Relative To System
-48"	Depth To Bottom Of System		Depth To Bottom Of System
≥32"	Of Separation		Of Separation
End Of Boring At:	80"	End Of Boring At:	
Redox Present At:	None	Redox Present At:	
Standing Water Present At:	None	Standing Water Present At:	

Bottom Of Distribution Medium At: 48 Inches

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Logs of Soil Borings

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Location or Project 97 Quamwell Ave. N.  
 Borings made by Inspect MN Date 9-22-06  
 Classification System: AASHO     ; USDA-SCS ; Unified     ; other       
 Auger used (check two): Hand , or Power     ; Flight     , or Bucket ; other     

Depth, in feet	Boring number <u>B-1</u>	Depth, in feet	Boring number <u>    </u>
	Surface elevation <u>Same as top of ground @ drainfield</u>		Surface elevation <u>    </u>
0	0"-14" loamy sand fill	0	
1	14"-18" 7.5 YR 2.5/1 loam original topsoil	1	
2	18"-72" 7.5 YR 4/4 Sand	2	
3		3	
4		4	
5		5	
6	72"-96" 7.5 YR 5/4 Sand	6	
7		7	
8	Has + 24" of Separation	8	

End of Boring at: 96 Inches  
 Mottled Soil Present: Yes  NO   
 Mottled Soil at:      Inches  
 Standing Water Present: Yes  NO   
 Standing Water Present at:      Inches

End of Boring at:      Inches  
 Mottled Soil Present: Yes  NO   
 Mottled Soil at:      Inches  
 Standing Water Present: Yes  NO   
 Standing Water Present at:      Inches

TOP OF DISTRIBUTION MEDIUM AT:      INCHES  
 BOTTOM OF DISTRIBUTION MEDIUM AT: 48" INCHES

REMARKS:  
 WERE SOIL SAMPLES SPRAYED? YES      NO

When performing the soil boring (s) relative to this septic system inspection, site evaluation or design, the depth to distinct redoximorphic features (commonly know as "mottled soils") were determined by using the definition for "distinct" as defined in MPCA rules 7080.0020 Subp. 13a. adopted through September 2002: "Distinct" means a soil color that varies from another color by one or more hues, more than two units of value, or more than one unit of chroma.

M.I. has been advised through training and conversations with the MPCA that the above procedure for determining redoximorphic features (mottled soils) must be used in all cases; no other definitions will be allowed. The only exceptions would be when the difference in soil colors are attributed to other soil features such as lamellae banding, chelation from tannic acids, calcium carbonates, etc.



# **DISCLAIMER**

## **Brian L. Humpal, Inc. dba. Inspect Minnesota, Midwest Soil Testing Relative to Subsurface Sewage Treatment System (SSTS) Compliance Inspections**

1. This inspection/report is being performed for only the seller/owner of the property on which the SSTS is located. In such case that another party is paying for the inspection, the contract is between only said party and Brian L. Humpal, Inc.; there is no contract between Brian L. Humpal, Inc. and any other party unless otherwise noted.
3. Brian L. Humpal, Inc. has not been retained to warranty, guarantee, or certify the proper functioning of the SSTS for any period of time beyond the date of inspection or into the future. Because of the numerous factors (usage, maintenance, soil characteristics, previous failures, etc.) which may affect the proper operation of an SSTS, as well as the inability of Brian L. Humpal, Inc. to supervise or monitor the use or maintenance of the SSTS, the report shall not be construed as a warranty by Brian L. Humpal, Inc. that the SSTS will function properly for any particular party for any period of time.
4. Brian L. Humpal, Inc. is unable to verify the frequency and/or, quality of prior or future maintenance of the SSTS. Maintenance of the tank(s) must be performed through the tanks maintenance hole. The removal of solids from any location other than the maintenance hole is not a compliant method of maintenance. It is strongly recommended that maintenance covers be made accessible to the ground surface to facilitate proper maintenance.
5. Minimum Compliance Inspection requirements relative to this inspection and this report include only verification that the SSTS has tank(s) (septic tanks, lift tanks, dosing tanks, stilling tanks, etc.) which are watertight below the designed operating depth, the required separation between the bottom of the subsurface soil distribution medium and seasonally saturated soils, no back-ups of sewage into the dwelling, no discharge of sewage/effluent to the ground surface or surface waters, and no imminent safety hazards. Brian L. Humpal, Inc. does not inspect plumbing or pumps prior to the first SSTS component as these are plumbing components. The performance of exterior pumps and associated components are not inspected as they are considered to be maintenance items. Additionally, no indications relative to compliance with electrical code requirements have been made. It is recommended that any other applicable plumbing, electrical, housing, etc. inspections be performed by a qualified inspection business. Sewage back-up verification is limited to observing the floor drain area and/or the information supplied by the last occupants of the building prior to inspection. Brian L. Humpal, Inc. cannot guarantee that the information given to them by the last occupants of the building prior to inspection relative to back-ups is accurate.
4. Certification of this SSTS does not warranty future use beyond the date of the inspection. Any SSTS, old or new, can become hydraulically overloaded or discharge sewage/effluent to the ground surface as a result of more people moving into the house than were previously occupying the house, improper maintenance, heavy usage, leaking plumbing fixtures, groundwater infiltration, tree roots, freezing conditions, surface drainage problems, poor initial design, poor construction practices, or unsuitable materials used in constructing the system; the system can also simply stop working because of its age. An SSTS that has been properly designed and installed, properly maintained, and used in the manner for which the system was designed can be expected to provide service for twenty to twenty-five years on average. Some parts of the SSTS such as alarms, switches, pumps, filters, etc. will most likely have to be repaired or replaced over the lifetime of the system.
5. A Compliance Inspection is not meant to be a test or inspection for longevity of the system; a Compliance Inspection is strictly for the purpose of determining if the SSTS is protective of public health and safety, as well as the groundwater at the date and time the inspection was performed. This inspection is not intended to determine if the SSTS was originally designed or installed to past or present MPCA or other Local Government Unit code requirements. This inspection is not intended to determine if the SSTS was designed and/or installed to support the anticipated flow from the building as the use of the building may have changed since the design and construction of the SSTS due to the addition of bedrooms, occupants, etc. In addition, this inspection is not intended to determine the quality of the original SSTS design, the quality of the construction practices used while installing the SSTS, or the quality of the materials used in constructing the SSTS.
6. Brian L. Humpal, Inc. cannot guarantee the performance of SSTS products/components such as: gravelless pipe, chamber trenches, effluent filters, tanks, sewage pre-treatment components, piping, etc. Products such as gravelless pipe are no longer approved for installation in the State of Minnesota and may have a significantly reduced performance and/or life expectancy.
7. WINTER WORK: By accepting this report, it is understood that inspections conducted during winter months (approximately November 1<sup>st</sup> through April 1<sup>st</sup>) are more difficult to perform because of possible snow cover and/or ground frost. SSTS components such as tanks, maintenance covers, tank inspection pipes, subsurface distribution medium inspection pipes, and soil treatment areas are more difficult or impossible to locate due to snow cover and/or ground frost. In addition, soil borings are more difficult to perform due to snow cover and/or ground frost. Brian L. Humpal, Inc. will attempt to use the same level of standards when performing work during winter periods as when performing work during non-winter periods. However, the recipient of this report understands that because of the aforementioned considerations, the same level of standards may not be possible.
8. By accepting this report, the client understands that Brian L. Humpal, Inc. will not be responsible for any monetary damages exceeding the fee for the services provided.

# Subsurface Sewage Treatment Systems

Non-transferable

# Business License

Inspect Minnesota, Midwest Soil Testing

License # L2896

License Expires: 12/22/2018

Issued: 10/10/2017

## Specialty Area(s):

Installer

Maintainer

Service Provider

Advanced Designer

Advanced Inspector

## Designated Certified Individual(s):

Cert #	Name	Certification Expires:
C9633	Anthony P Scully Installer, Designer (Conditional)	7/28/2018
C5342	Brian L Humpal Installer, Maintainer, Serv Prov, Adv Designer, Adv Inspector	10/15/2020
C9852	Christopher R Uebe Designer, Inspector	3/4/2018



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

Charles K Thompson, Supervisor  
Certification & Training Unit