Inspect Minnesota & Midwest Soil Testing

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SUBSURFACE SEWAGE TREATMENT SYSTEM (SSTS) COMPLIANCE REPORT

Date: October 3, 2016 **Time:** 1:00 PM **Owner:** David & Sara Johnson

Inspection Address: 180 Old Wildwood Road, Mahtomedi, MN 55115

REPORT SUMMARY

I have performed an "MPCA Compliance Inspection" on this system, have reviewed the history of the system with the owner, David Johnson, and have reviewed the original design/permit records, along with a previous compliance inspection from 2007, which were on file at Washington County. This system consists of two pre-cast septic tanks, a pre-cast lift tank, and a rock trench drainfield.

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.

Brian Humpal

Brian Humpal

NOTE: This report is not complete without the inclusion/attachment of the additional pages which consist of up to three (3) MPCA drafted Compliance Inspection Documents, one (1) Homeowner/Occupant Information Sheet (when obtainable), one (1) site diagram, one (1) log of soil boring(s), one (1) Brian L Humpal, Inc. Disclaimer Sheet, and one (1) MPCA License.

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.

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

For local tracking purposes:

System Status

System status on date (mm/dd/yyyy): 10/3/2016

☒ **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: 180 Old Wildwood Road, Mahtomedi, MN 55115
Reason for inspection: Requested By City

Property owner: David & Sara Johnson
Owner's phone: 651-216-9033

or

Owner's representative:
Representative phone:

Local regulatory authority: Washington County
Regulatory authority phone: 651-430-4052

Brief system description: Two pre-cast septic tanks, 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
Certification number: L5342

Business name: Inspect Minnesota, Midwest Soil Testing
License number: L2896

Inspector signature: Brian Humpal
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: 180 Old Wildwood Road, Mahtomedi, MN 55115 Inspector initials/Date: 10/3/2016BH

1. Impact on Public Health – Compliance component #1 of 5

Compliance criteria:	
System discharge sewage to the ground surface.	☐ Yes ☒ No
System discharge sewage to drain tile or surface waters.	☐ Yes ☒ No
System cause sewage backup into dwelling or establishment.	☐ Yes ☒ No
Any "yes" answer above indicates the system is an Imminent Threat to Public Health and Safety.	

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)*

Comments/Explanation:

None of the above found.

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

2. Tank Integrity – Compliance component #2 of 5

Compliance criteria:	
System consists of a seepage pit, cesspool, drywell, or leaching pit. *Seepage pits meeting 7080.2550 may be compliant if allowed in local ordinance.*	☐ Yes ☒ No
Sewage tank(s) leak below their designed operating depth.	☐ Yes ☒ No
If yes, which sewage tank(s) leaks:	
Any "yes" answer above indicates the system is Failing to Protect Groundwater.	

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)*

Comments/Explanation:

Lowered underwater camera into tanks - baffles and tanks walls OK.

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:

4. Soil Separation – Compliance component #4 of 5

Date of installation: 2004 ☐ 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: Drainfield has at least a two-foot vertical separation distance from periodically saturated soil or bedrock.	☐ Yes ☐ No
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: Drainfield has a three-foot vertical separation distance from periodically saturated soil or bedrock.*	☒ Yes ☐ No
"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) Drainfield meets the designed vertical separation distance from periodically saturated soil or bedrock.	☐ Yes ☐ No

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 (A*ttach 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 2007.

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: _____ Have the Operating Permit requirements been met?	☐ Yes ☐ No
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.*

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: October 3, 2016	Time: 1:00 PM
Property Address: 180 Old Wildwood Road, Mahtomedi, MN	Zip: 55115
Property Owner: David & Sara Johnson	Phone: 651-216-9033

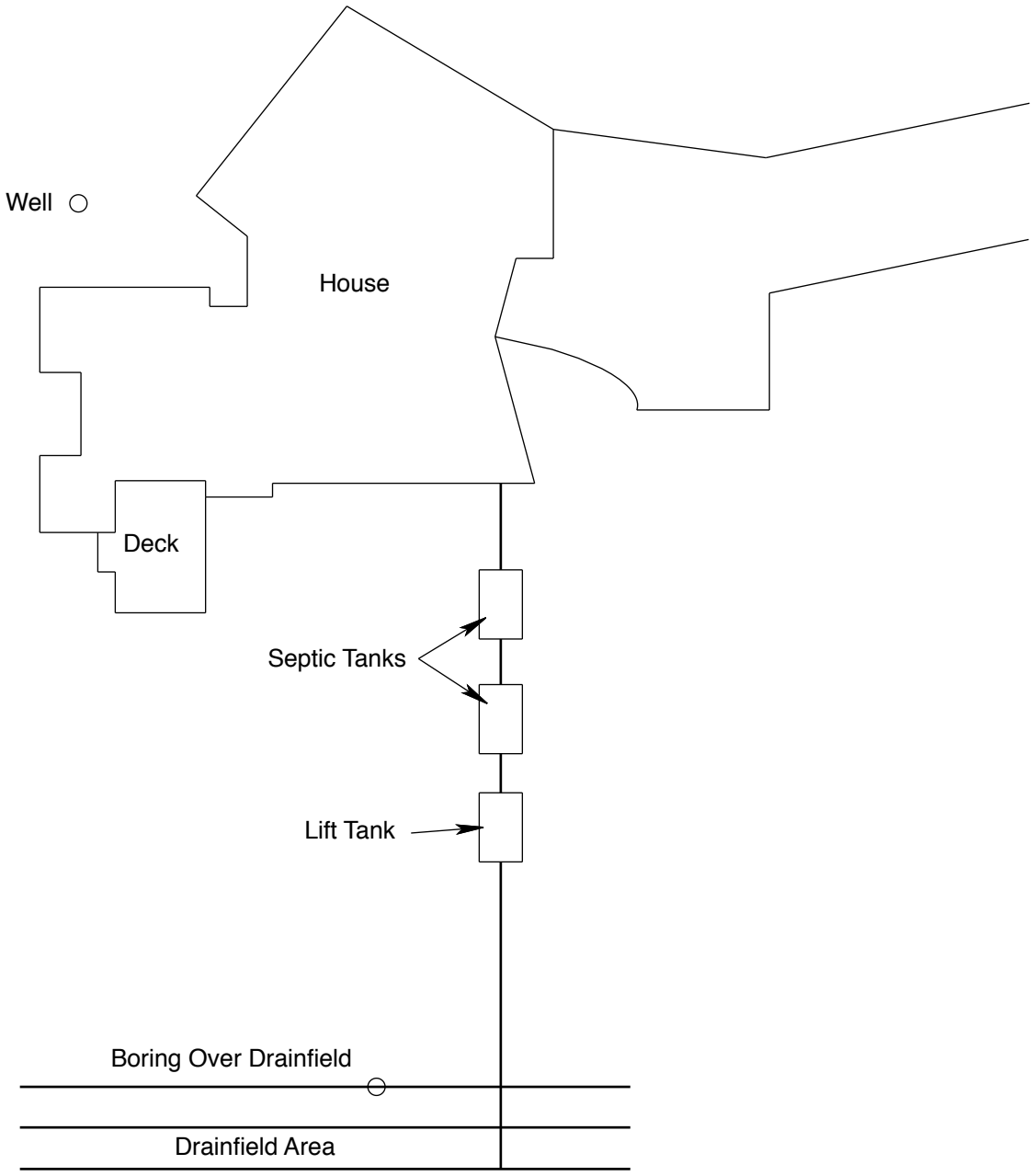
Tank(s)	Tank(s)Material	Soil Treatment System	Other
☒ Septic 2	☐ Fiberglass	☒ Rock trench	☐ Alternative system _____
☐ Aerobic	☐ Plastic	☐ Gravelless trench	☐ Experimental system _____
☒ Lift	☐ Metal	☐ Chamber trench	☐ Cesspool system _____
☐ Holding	☒ Concrete	☐ Seepage bed	☐ Other system _____
☐ Other:	☐ Block	☐ Mound	_____
	☐ Other _____	☐ At-grade	_____

Are the tank maintenance covers accessible? ☐ Yes ☒ 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: 2004	Year septic installed: 2004	Tank size (gals.): 2-1000
How long has seller owned the property? 2007	Number of residents in home? 4	
Number of bedrooms? 4	Are all floors drained by gravity? Y	
Garbage disposal? N	Whirlpool bath? Y	
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? South Side		
Location of water well on lot? Northwest Side	Is the well a deep well? Y	
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? N If yes, explain:		
When was the system last pumped? 2014	Name of pumper: Unknown	
How often pumped in previous years?	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? Y		
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: David Johnson's Signature On File Date: 10/3/2016



NO SCALE

180 Old Wildwood Rd, Mahtomedi, MN 55115

Log Of Soil Borings

Location of Project:	180 Old Wildwood Road, Mahtomedi		
Borings Made By:	Inspect Minnesota	Date:	12/26/07
Auger Used:	Hand/Bucket	Classification System:	USDA
Boring Number:	1	Boring Number:	
Surface Elevation of Boring	Same as top of ground at SE end of last drianfield trench	Surface Elevation of Boring	

Depth In Inches	Soils Encountered	Depth In Inches	Soils Encountered
0-10	7.5YR 2.5/3 Loamy Fine Sand		
10-28	10YR 3/4 Loamy Fine Sand		
28-44	10YR 5/6 Fine Sand		
44-56	5YR 4/4 Loamy Sand with 10YR 5/6 Fine Sand Layers		
56-62	10YR 5/6 Fine Sand		
64-74	10YR 5/6 Fine Sand with 7.5YR 5/8 Mottles		
64"	Depth To End Of Boring Or Mottled Soils		Depth To End Of Boring Or Mottled Soils
Same	Elevation Of Boring Relative To System		Elevation Of Boring Relative To System
27"	Depth To Bottom Of System		Depth To Bottom Of System
=37"	Of Separation		Of Separation

End Of Boring At:	74"	End Of Boring At:	
Mottled Soil Present At:	64"	Mottled Soil Present At:	
Standing Water Present At:	None	Standing Water Present At:	

Bottom Of Distribution Medium At: 27" Inches

JOB BOB ADAMSON
LOT 1, WILDWOOD OVERLOOK
MAHTOMEDI

DATE 5-13-03

BORING LOG

EXTENDED TEST SITE

BOREHOLE DIAMETER 4"-3½" HAND AUGER

DEPTH FEET	HOLE #	HOLE #	HOLE #	SOIL CLASSIFICATION	HOLE #	HOLE #
1	TOP SOIL – SANDY	TOP SOIL – SAND		TOP SOIL – BROWN LOAM 7.5YR 4/4		
2	YELLOWISH BROWN, SANDY LOAM	YELLOWISH BROWN, SANDY LOAM		YELLOWISH BROWN LOAM 10YR 5/8		
3	LIGHT BROWN, FINE SAND			LIGHT BROWN SAND 7.5YR 6/3		
4		LIGHT BROWN, FINE SAND –				
5	LIGHT BROWN, FINE SAND –	FAINT IRON				
6	MOTTLED SOIL	LIGHT BROWN, FINE SAND – MOTTLED SOIL				
7	STOP	STOP				
8	MOTTLE 4'6"	MOTTLE 5'				
9						
10						

LOT 1, WILDWOOD OVERLOOK
MONTROSE

BORING LOG

DATE 8-14-98

BOREHOLE DIAMETER 4"- 3½" HAND AUGER

DEPTH FEET	HOLE #1	HOLE #2	HOLE #3	HOLE #4	HOLE #5	HOLE #6
	TOP SOIL	TOP SOIL	TOP SOIL	TOP SOIL	TOP SOIL	
1	BROWN, FINE SAND	BROWN, FINE SAND	BROWN, FINE SAND	BROWN, FINE SAND	BROWN, FINE SAND	
2		LIGHT BROWN, FINE SAND				
	LIGHT BROWN, FINE SAND		LIGHT BROWN, FINE SAND		LIGHT BROWN, FINE SAND	
3				LIGHT BROWN, FINE SAND		
4	BROWN, SANDY LOAM - FAINT IRON AND GRAYS		BROWN, FINE SAND WITH LIGHT LOAM	BROWN, FINE SAND WITH LIGHT LOAM	BROWN, FINE SAND WITH LIGHT LOAM	
5		BROWN, SANDY LOAM				
	LIGHT BROWN FINE SAND - CLEAN				LIGHT BROWN, FINE SAND	
6		FAINT GRAYS				
	STOP	STOP	STOP	STOP	STOP	
7						
	OKAY 6'+	OKAY 6'+	OKAY 6'+	OKAY 6'+	OKAY 6'+	
8						
9						
10						

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 1st through April 1st) 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

License

License # L2896

Date of Issuance:	Oct 28, 2015
Maintainer License Expires:	Dec 22, 2016
Installer License Expires:	Dec 22, 2016
Adv Inspector License Expires:	Dec 22, 2016
Adv Designer License Expires:	Dec 22, 2016

Inspect Minnesota, Midwest Soil Testing

Designated Certified Individual (DCI)	Certification Type	Certification Expires
Brian L. Humpal	Maintainer (Certified)	10/15/2017
Brian L. Humpal	Advanced Designer (Certified)	10/15/2017
Brian L. Humpal	Advanced Inspector (Certified)	10/15/2017
Brian L. Humpal	Installer (Certified)	10/15/2017
Brian L. Humpal	Service Provider (Certified)	10/15/2017
Christopher R. Uebe	Designer (Certified)	03/04/2018
Christopher R. Uebe	Inspector (Certified)	03/04/2018

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

Steven Giddings, Manager
Environmental Business Assistance Section