

# ZIERKE SOIL TESTING

Gary and Tami Hanson  
9155 182<sup>nd</sup> St N  
Marine on St Croix, MN 55047

September 17<sup>th</sup>, 2019

Dear Gary and Tami Hanson,

At your request, I have conducted a septic inspection to determine the compliance status of your system pursuant to Minnesota Rules Chapter 7080.1500.

The compliance test set out in 7080.1500 has three main inquiries: 1). Is the system functioning hydraulically (disposing of effluent in a manner that prevents it from coming in contact with people)? 2). Are the septic tanks water tight? 3). Does the system have sufficient vertical separation between the bottom of the septic system and restrictive layers (bedrock, standing water, seasonally wet layers, etc) to provide full treatment of effluent?

Based off of these criteria, your system is non-compliant due to a lack of vertical separation between the bottom of your drain field and indicators of seasonally wet soil (redoximorphic features). Therefore, this system is considered "failing to protect groundwater" and is not considered an imminent threat to public health. I am required to provide copies of this report to you and to your local unit of government. You should contact them as to the next steps that will be required to bring the system into compliance.

Sincerely,



Benjamin Zierke  
MPCA Lic 119, Cert 9594

ADDRESS:  
28587 Jeffrey Ave  
Chisago City, MN 55013

PHONE 651-249-1346  
EMAIL benzierke@gmail.com



**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

**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): 9/17/2019

**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: 9155 182<sup>nd</sup> St N Forest Lake, MN 55025

Reason for inspection: Sale

Property owner: Gary and Tami Hanson

Owner's phone: 651-433-2501

or

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

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

Local regulatory authority: Washington County

Regulatory authority phone: 651-430-6655

Brief system description: Pre cast septic tank with sectional lid, gravity 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: Benjamin Zierke

Certification number: C9594

Business name: Zierke Soil Testing

License number: L119

Inspector signature: *Benjamin Zierke*

Phone number: 651-249-1346

### Necessary or Locally Required Attachments

- Soil boring logs
- System/As-built drawing
- Forms per local ordinance
- Other information (list): \_\_\_\_\_

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

**Compliance criteria:**

System discharges sewage to the ground surface.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
System discharges sewage to drain tile or surface waters.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
System causes 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:**

Homeowners have not had any issues with leakage or backups. No signs of ponding during site visit 9/13/2019.

**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. If yes, which sewage tank(s) leaks:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

**Any “yes” answer above indicates the system is failing to protect groundwater.**

**Comments/Explanation:**

Tank does not have access cover. Tank was pumped 8/29/2019 by Smilies with no issues noted. During site visit 9/13/2019 I checked operating level and tank operating level was normal. Tank will be abandoned when system is replaced.

**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 be 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: 1975  Unknown  
(mm/dd/yyyy)

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.

**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:**

**Indicate depths or elevations**

A. Bottom of distribution media	97.6'
B. Periodically saturated soil/bedrock	98.0'
C. System separation	-0.4'
D. Required compliance separation*	2.0'

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

**Any "no" answer above indicates the system is failing to protect groundwater.**

**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.

9155 182nd St N

**Relative Elevations (in decimal feet)**

**B1: 100.0, redox 98.0**

**B2: 100.3, redox 99.3**

**Bottom of rock in trench: 97.6**

**B1 Separation: -0.4**

**B2 Separation: -1.7**

**Benchmark: 105.2  
(top of inspection cap on tank)**

**Height of instrument: 108.8**

Septic Tank

Drainfield

B1

B2



100 ft

## Logs of Soil Borings

Location of Project: 9155 182nd St N Forest Lake, MN 55025

Borings Made by Ben Zierke

Date: 9/13/2019

Hand bucket auger used for borings; USDA - SCS Soil Classification used.

Depth, in Inches	Boring Number 1	Depth, in Inches	Boring Number 2
0-----	-----	0-----	-----
0-20"	10YR 3/2 sandy loam	0-16"	10YR 3/2 sandy loam, 5/2 reductions present below 14"
20-24"	10YR 4/3 sandy loam, redox present below 24"	16-24"	10YR 4/3 sandy loam, redox present below 16"
24-28"	10YR 5/4 clay loam	24-28"	10YR 4/4 clay loam
			*1' separation credit

End of boring at 2.3 feet  
**Standing water table:**  
 Present at \_\_\_\_\_ feet of depth \_\_\_\_\_ Hours after boring  
 Standing water not present in hole   
**Mottled Soil:**  
 Observed at 2 feet of depth  
 Mottled soil not present in bore hole   
 Comments:

End of boring at 2.3 feet  
**Standing water table:**  
 Present at \_\_\_\_\_ feet of depth \_\_\_\_\_ Hours after boring  
 Standing water not present in hole   
**Mottled Soil:**  
 Observed at 1 feet of depth  
 Mottled soil not present in bore hole   
 Comments:

Depth, in Inches	Boring Number 3	Depth, in Inches	Boring Number 4
0-----	-----	0-----	-----

End of boring at \_\_\_\_\_ feet  
**Standing water table:**  
 Present at \_\_\_\_\_ feet of depth \_\_\_\_\_ Hours after boring  
 Standing water not present in hole   
**Mottled Soil:**  
 Observed at \_\_\_\_\_ feet of depth  
 Mottled soil not present in bore hole   
 Comments:

End of boring at \_\_\_\_\_ feet  
**Standing water table:**  
 Present at \_\_\_\_\_ feet of depth \_\_\_\_\_ Hours after boring  
 Standing water not present in hole   
**Mottled Soil:**  
 Observed at \_\_\_\_\_ feet of depth  
 Mottled soil not present in bore hole   
 Comments: