

# *Ed Eklin Septic System Design*

2303 County Road F East • White Bear Lake, MN 55110  
651-485-2300

April 17, 2016

Loretta Johnson  
260 Hazel Street  
White Bear Lake, MN 55110

Dear Loretta:

I had been informed that another party has completed a compliance inspection for your current subsurface sewage treatment system located at 260 Hazel St., Mahtomedi, MN. This other party has failed your system because they felt there was less than a two foot separation from the bottom of the trenches to a seasonal water table.

I ask Washington County Public Health to evaluate your drainfield.

I believe the drainfield was installed in 1992, consists of a 1,200 gallon septic tank and 5 trenches which are 60 feet long and approximately 42 to 48 inches deep. I have located the top of the drainfield rock at 24 to 30 inches deep.

I performed two soil borings in the drainfield area and believe there is no indication of a seasonal water table to seven feet deep.

I am attaching the original design. I have not found any permit information.

As required, I am sending this report to Washington County Public Health.

If you have any questions or concerns, please feel free to call me. I would be glad to help.

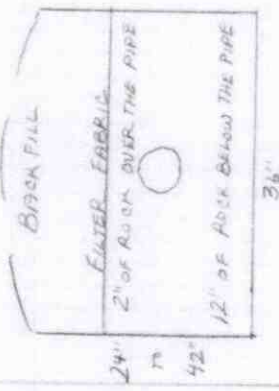
Sincerely,



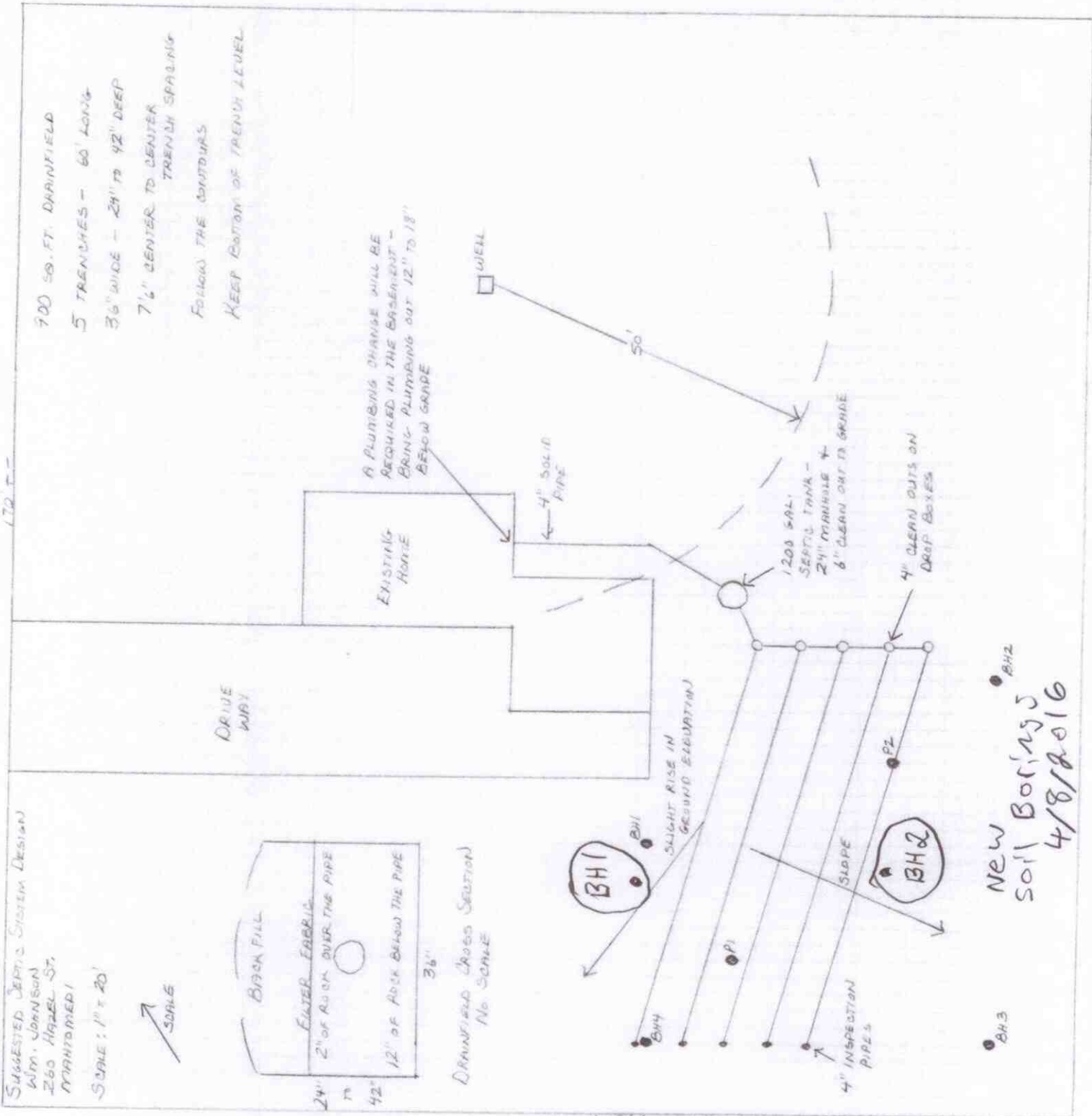
Ed Eklin

SUGGESTED LEAKS SYSTEM DESIGN  
 Wm. Johnson  
 260 Hazel St.  
 MYRTLEBEACH, FL

SCALE: 1" = 20'



DRAINFIELD CROSS SECTION  
 NO SCALE



900 SQ. FT. DRAINFIELD  
 5 TRENCHES - 60' LONG  
 36" WIDE - 24" TO 42" DEEP  
 7 1/2" CENTER TO CENTER  
 TRENCH SPACING  
 FOLLOW THE CONTOURS  
 KEEP BOTTOM OF TRENCH LEVEL

A PLUMBING CHANGE WILL BE  
 REQUIRED IN THE BASEMENT -  
 BRING PLUMBING OUT 12" TO 18"  
 BELOW GRADE

1200 GAL. SEPTIC TANK -  
 24" DIAMETER +  
 6" CLEAN OUT TO GRADE

4" CLEAN OUTS ON  
 DRAIN BOXES

New Soil Borings  
 BH1  
 BH2  
 BH3  
 4/8/2016

VERIFY LOT LINE

# OSTP Soil Observation Log



v 12.04.25

Project ID:

Client/ Address:		Legal Description/ GPS:									
Soil parent material(s): (Check all that apply) <input type="checkbox"/> Outwash <input type="checkbox"/> Lacustrine <input type="checkbox"/> Loess <input type="checkbox"/> Till <input type="checkbox"/> Alluvium <input type="checkbox"/> Bedrock <input type="checkbox"/> Organic Matter											
Landscape Position: (check one) <input type="checkbox"/> Summit <input type="checkbox"/> Shoulder <input type="checkbox"/> Back/Side Slope <input type="checkbox"/> Foot Slope <input type="checkbox"/> Toe Slope Slope shape											
Vegetation	lawn	Soil survey map units		Slope%	0.0	Elevation:					
Weather Conditions/Time of Day:		sunny 9:35 AM		Date		04/08/16					
Observation #/Location:		BH1									
Depth (in)	Texture	Rock Frag. %	Matrix Color(s)	Mottle Color(s)	Redox Kind(s)	Indicator(s)	Shape	Grade	Consistence	Observation Type:	
0-20	Fine Sand		mixed				Single grain			<input checked="" type="checkbox"/> Auger <input type="checkbox"/> Probe <input type="checkbox"/> Pit	
20-46	Fine Sand		10yr 6/3				Single grain				
46-84	Fine Sand		10yr 6/3				Single grain				
Comments OK 7' -- 46 to 84" fine sand 10yr 6/3 with loamy fine sand layers 7.5yr 5/4											
I hereby certify that I have completed this work in accordance with all applicable ordinances, rules and laws.											
										(Designer)	(Date)
										(Signature)	(License #)

# Additional Soil Observation Logs



Project ID:

Client/ Address:		Legal Description/ GPS:									
Soil parent material(s): (Check all that apply) <input type="checkbox"/> Outwash <input type="checkbox"/> Lacustrine <input type="checkbox"/> Loess <input type="checkbox"/> Till <input type="checkbox"/> Alluvium <input type="checkbox"/> Bedrock <input type="checkbox"/> Organic Matter											
Landscape Position: (check one) <input type="checkbox"/> Summit <input type="checkbox"/> Shoulder <input type="checkbox"/> Back/Side Slope <input type="checkbox"/> Foot Slope <input type="checkbox"/> Toe <input type="checkbox"/> Slope shape											
Vegetation		lawn		Soil survey map units		Slope%		Elevation:		Date	
Weather Conditions/Time of Day:		sunny 9:50 AM 04/08/16									
Observation #/Location:		BH2									
Depth (in)	Texture	Rock Frag. %	Matrix Color(s)	Mottle Color(s)	Redox Kind(s)	Indicator(s)	Shape	Grade	Consistence	Observation Type:	<input checked="" type="checkbox"/> Auger <input type="checkbox"/> Probe <input type="checkbox"/> Pit
0-18	Fine Sand		mixed				Single grain				
18-50	Fine Sand		10yr 6/3				Single grain				
50-84	Fine Sand		10yr 5/4				Single grain				
Comments OK 7' -- 50 to 84" fine sand 10yr 5/4 with fine sand layers 10yr 6/3											
Observation #/Location:		BH3									
Depth (in)	Texture	Rock Frag. %	Matrix Color(s)	Mottle Color(s)	Redox Kind(s)	Indicator(s)	Shape	Grade	Consistence	Observation Type:	Auger
Comments											



# Compliance Inspection Form

## Existing Subsurface Sewage Treatment Systems (SSTS)

### Summary Form (Completed form must be submitted to the local unit of government within 15 days.)

Parcel number: \_\_\_\_\_

System status:  Compliant  Noncompliant  
(based on all compliance requirements)

For Local Tracking Purposes:

### Property Information

Property owner name(s): Loretta Johnson Property owner phone: 651-426-3723

Property address: 260 Hazel Ave., Mahtomedi, MN 55116

Property owner address (if different): \_\_\_\_\_

County: Washington Permitting authority: Washington County Public Health

Date system constructed: 1992 Reason for inspection: City requirement

### System Description

Brief system description: 1200 gallon septic tank

Local permit number: \_\_\_\_\_ Number of bedrooms: 3 Design flow rate: 450

#### Is the system:

- |   |   |  |   |
|---|---|--|---|
| In Shoreland area?  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | In Wellhead Protection Area?   | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| An U.S. Environmental Protection Agency (EPA) Class V Injection Well? | <input type="checkbox"/> Yes <input type="checkbox"/> No            | System serving a Minnesota Department of Health (MDH) licensed facility? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

### Compliance Status (Based on state requirements – additional local requirements may also apply.)

Based on the information gathered and reported on attached forms, the compliance status of this system is (check one):

Certificate of Compliance – valid until (3 years from date of report): 4/17/2019

Notice of Noncompliance - For Noncompliant systems:

The reason for noncompliance is: \_\_\_\_\_

This noncompliant system is classified as (check one below):

Imminent threat to public health & safety  Failing to protect ground water  Not in compliance with operating permit

### 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.

Name: Ed Eklin Certification number: 3268

Business license name and number: Ed Eklin Septic System Design #3321 or

Name of local unit of government: City of Mahtomedi

Signature: [Signature] Date: 4/17/2016

### Required Attachments

- |   |   |  |
|---|---|--|
| <input checked="" type="checkbox"/> Hydraulic Performance           | <input checked="" type="checkbox"/> Tank Integrity  | <input type="checkbox"/> Operating Permit Form (if applicable) |
| <input checked="" type="checkbox"/> Soil Boring Logs                | <input checked="" type="checkbox"/> Soil Separation   |  |
| <input checked="" type="checkbox"/> System drawing/As-built drawing | <input type="checkbox"/> Any local requirements that are different from what is required on this form |  |
| <input type="checkbox"/> Other information (list): _____            |   |  |

**Upgrade Requirements** (derived from 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.

Parcel number: \_\_\_\_\_ System status:  Compliant  Noncompliant  
(as determined by this form)

## Hydraulic Performance and Other Compliance – Compliance Inspection Form for Existing SSTS

### Compliance Issue #1 of 4

Date of observation: 4/8/2016 Reason for observation: City requirement

This form expires upon next inspection or in three years, whichever occurs first: \_\_\_\_\_

#### Compliance questions/criteria: (Required)

(Check the appropriate box)

Does the system discharge sewage to the ground surface?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Does the system discharge sewage to drain tile or surface waters?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Does the system cause sewage backup into dwelling or establishment?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Do other situations exist that have the potential to immediately and adversely impact or threaten public health or safety (electrical, unsafe covers, etc.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Any "yes" answer indicates that the system is an imminent threat to public health and safety.</b>	
Does the system pose a threat to ground water for any conditions deemed non-protective as determined by the inspector?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

**"Yes" indicates that the system is failing to protect ground water. If "yes", describe the condition noted:**

\_\_\_\_\_

\_\_\_\_\_

#### Verification Method\*: (Optional)

(Check the appropriate box)

- Searched for surface outlet
- Performed hydraulic test
- Searched for seeping in yard
- Checked for backup in home
- Excessive ponding in soil system/D-boxes
- Homeowner testimony
- Examined for surging in tank
- "Black soil" above soil dispersal system
- System requires "emergency" pumping
- Performed dye test
- Other: \_\_\_\_\_

\* No standard protocol exists. This list is not exhaustive, in sequential order, nor does it indicate which combinations are necessary to make this determination.

## Certification

This form is to be completed and attached to the Summary Form of the Minnesota Pollution Control Agency's (MPCA) **Compliance Inspection Form for Existing Subsurface Sewage Treatment Systems**. Observations, interpretations, and conclusions must be completed by an inspector. Completed form must be submitted to the local unit of government within 15 days.

Property owner name(s): Loretta Johnson

Property address: 260 Hazel Ave., Mahtomedi, MN 55116

Property owner's address (if different): \_\_\_\_\_

County: Washington Property owner phone: 651-426-3723

I hereby certify that I personally made the observations, interpretations, and conclusions reported on this form and that they are correct.

Name: Ed Eklin Certification number: 3268

Business license name and number: Ed Eklin Septic System Design #3321 or

Name of local unit of government: City of Mahtomedi

Signature:  Date: 4/17/2016

Parcel number: \_\_\_\_\_

System status:  Compliant  Noncompliant  
(as determined by this form)

### Tank Integrity and Safety Compliance – Compliance Inspection Form for Existing SSTS

#### Compliance Issue #2 of 4

Date of observation: 4/17/2016 Reason for observation: city requirement

This form expires on (three years): 4/17/2019

#### Compliance questions/criteria: (Required) (Check the appropriate box)

Does the system consist of a seepage pit*, cesspool, drywell, or leaching pit?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Do any sewage tank(s) leak below their designed operating depth?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

If yes, identify which sewage tank leaks. \_\_\_\_\_

**Any "yes" answer indicates that the system is failing to protect ground water.**

\* Seepage pits meeting 7080.2550 may be compliant if allowed in ordinance by local permitting authority.

#### Verification Method\*\* (Optional) (Check the appropriate box)

- Probed tank bottom
- Observed low liquid level
- Examined construction records
- Examined empty (pumped) tank
- Probed outside tank for "black soil"
- Pressure/vacuum check
- Other: \_\_\_\_\_

\*\* No standard protocol exists. This list is not exhaustive, in sequential order, nor does it indicate which combinations are necessary to make this determination.

#### Safety Check

1. Are maintenance hole covers damaged, cracked, or appeared to be structurally unsound?  Yes\*  No
2. Were maintenance hole covers replaced in a secured manner (e.g., screws replaced)?  Yes  No\*
3. Was secondary access restraint present (safety pan, second cover, or safety netting) – highly recommended.  Yes  No
4. Are other safety/health issue present?  Yes\*  No

Explain: \_\_\_\_\_

**\*System is an imminent threat to public health and safety.**

#### Certification

This form is to be completed and attached to the Summary Form of the Minnesota Pollution Control Agency's (MPCA) **Compliance Inspection Form for Existing Subsurface Sewage Treatment Systems**. Observations, interpretations, and conclusions must be completed by an inspector, maintainer, or service provider. Completed form must be submitted to the local unit of government within 15 days.

Property owner name(s): Loretta Johnson

Property address: 260 Hazel Ave., Mahtomedi, MN 55116

Property owner's address (if different): \_\_\_\_\_

County: Washington Property owner phone: 651-426-3723

*I hereby certify that I personally made the observations, interpretations, and conclusions reported on this form and that they are correct.*

Name: Ed Eklin Certification number: 3268

Business license name and number: Ed Eklin Septic System Design #3321 or

Name of local unit of government: City of Mahtomedi

Signature:  Date: 4/17/2016

Parcel number: \_\_\_\_\_

System status:  Compliant  Noncompliant  
(as determined by this form)

### Soil Separation Compliance and Other Compliance – Compliance Inspection Form for Existing SSTS

#### Compliance Issue #3 of 4

Date of observation: 4/8/2016 Reason for observation: city requirement

*This information on this form does not expire.*

#### Compliance questions/criteria: (Required) (Check the appropriate box)

#### Verification Method\*\* (Optional) (Check the appropriate box)

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:

Does the system have at least a two-foot vertical separation distance from periodically saturated soil or bedrock?

Yes  No

Conducted soil observation(s) (attach boring logs)

Two previous verifications (attach boring logs)

Other: \_\_\_\_\_

For 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:

Does the system have a three-foot vertical separation distance from periodically saturated soil or bedrock?\*

Yes  No

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

For reduced separation distance systems (i.e., "performance" systems under old 7080.0179 or Type IV or V system under new 7080. 2350 or 7080.2400):

Does the system meet the designed vertical separation distance from periodically saturated soil or bedrock?\*

Yes  No

\* May be reduced by up to 15 percent if allowed in local ordinance.

\*\* No standard protocol exists. This list is not exhaustive, in sequential order, nor does it indicate which combinations are necessary to make this determination.

**Any "no" answer indicates that the system is failing to protect ground water.**

### Certification

This form is to be completed and attached to the Summary Form of the Minnesota Pollution Control Agency's (MPCA) **Compliance Inspection Form for Existing Subsurface Sewage Treatment Systems**. Observations, interpretations, and conclusions must be completed by an inspector or designer. Completed form must be submitted to the local unit of government within 15 days.

Property owner name(s): Loretta Johnson

Property address: 260 Hazel Ave., Mahtomedi, MN 55116

Property owner's address (if different): \_\_\_\_\_

County: Washington Property owner phone: 651-426-3723

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Signature:  Date: 4/17/2016