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# Inspect Minnesota & Midwest Soil Testing

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P.O. Box 383 Hugo, MN 55038  
651-492-7550/Brian@midwestsoiltesting.com

Brian Humpal  
MPCA Licensed Designer & Inspector

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## **SUBSURFACE SEWAGE TREATMENT SYSTEM COMPLIANCE REPORT**

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**Date:** November 15, 2016

**Time:** 10:00 AM

**Owner:** Bob & Mary Criswell

**Inspection Address:** 346 Old Wildwood Road, Mahtomedi, MN 55115

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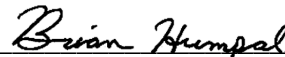
### **REPORT SUMMARY**

I have performed an "MPCA Compliance Inspection" on this septic system, have reviewed the history of the system with the Owner, Bob Criswell, and have reviewed the original design/permit records on file at Washington County. This very old system (installed in 1985) consists of a pre-cast septic tank, a pre-cast lift tank, and a rock trench drainfield.

My inspection indicates that this system is presently "non-compliant" in accordance with MPCA rules 7080.1500 Subp.4(B)(D) because of the lack of the required three foot separation between the bottom of the drainfield and seasonally saturated soils. Washington County issued sewage treatment permit #3619 for the installation of this septic system.

In accordance with MPCA rules, I am sending a copy of this complete report to Washington County. I cannot officially speak on behalf of the County relative to the upgrade requirements of these non-compliant systems. Please contact Washington County Environmental Specialist, Mr. Chris LeClair (651-430-4052), to verify the County's position.

Please advise buyer, agents, lender, etc. to contact me should they have any questions regarding this system.



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Brian Humpal

**NOTE:** This report is not complete without the inclusion/attachment of the additional pages which consist of up to five (5) 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.

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): 11/15/2016

**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: 346 Old Wildwood Road, Mahtomedi, MN 55115

Reason for inspection: Property Sale

Property owner: Bob & Mary Criswell

Owner's phone: 651-773-2174

or

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

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

Local regulatory authority: Washington County

Regulatory authority phone: 651-430-4052

Brief system description: Pre-cast septic tank, 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

**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:  
None of the above found.

**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 tank - 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:

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

Date of installation: 1985  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:

**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.

FEE: \$ 50.00

### WASHINGTON COUNTY, MINNESOTA

Sewage Treatment Permit No. 3619

Inspection of Installation Must Be Made By the Building Official Before Any Portion of System Is Covered  
Contact Planning Department, 439-3220 x-176, 24 HOUR NOTICE REQUIRED

Owner THOMAS ARNOLD

Property Description \_\_\_\_\_

Property Address 346 OLD WILDWOOD RD MONTICELLO

Use of Building: HOME Flow Rate: 3 BEDROOM Percolation Rate: 15 mpi

Septic Tank 1000 Gal. Liquid Capacity Lift Station (if needed) 1000 Gal.

Type of System: SEPTIC TANK DRAINFIELD

Absorption Trench — Square Feet 570 Lineal Feet 190 Width 36"

Depth of Rock Below Lines 12 Inches, Above Lines 2 Inches

Depth of Trench From Existing Grade — Minimum 24 Inches, Maximum 42 Inches

Recommended Number of Lines 3 AT 64 (Note: Maximum Length of Individual Line Is 100 Feet.)

Minimum Spacing of Lines 7 1/2 Ft. Center to Center

Special Conditions SYSTEM MUST GO IN AREA  
TESTED & APPROVED AS SHOWN ON  
ATTACHED SITE PLAN. FILL EXISTING  
TANKS TO AVOID FUTURE HAZARD.

PERMIT: Permission is hereby granted to the above named applicant to perform the work described in the application to the minimum specifications shown above and per attached site plan. This permit is granted upon express condition that the person to whom it is granted, and his agents, employees and workmen shall conform in all respects to ordinances of Washington County, Minnesota. This permit may be revoked at any time upon violation of any said ordinance, and permit shall be void if work is not commenced within six (6) months.

**INSTALLER MUST HOLD CURRENT SEPTIC INSTALLER LICENSE WITH WASHINGTON COUNTY.**

Approved: [Signature] Date 6-27-85  
Zoning Administrator/Authorized Agent

Comments App. situation - installer. 3 lines @ 10', 1 @ 35', and 2 @  
60'. System in at time of inspection.

Installation Approved [Signature] Date 9/6/85  
Inspector

## Inspect Minnesota & Midwest Soil Testing

### Subsurface Sewage Treatment System Owner/Property Information

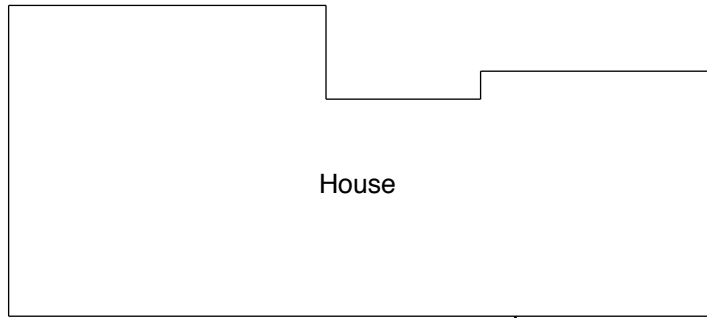
This information will be used for the purpose of conducting an MPCA Compliance Inspection.

Date of Inspection: November 15, 2016		Time: 10:00 AM	
Property Address: 346 Old Wildwood Road, Mahtomedi, MN		Zip: 55115	
Property Owner: Bob & Mry Criswell		Phone: 651-773-2174	
<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 type="checkbox"/> Yes <input checked="" 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: 1951	Year septic installed: 1985	Tank size (gals.): 1200	
How long has seller owned the property? 1999		Number of residents in home? 2-3	
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? Nn			
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? North 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? Y If yes, explain: 2016, replaced pipe between lift tank and drainfield.			
When was the system last pumped? 2016		Name of pumper: Smilies 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? Y			
Do you have any additional information that should be given to the new owner? N			

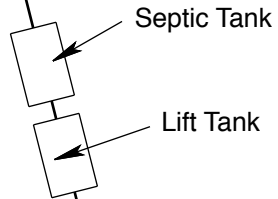
I hereby certify that the above information is correct to the best of my knowledge. I also understand that if the system is considered "non-compliant/failing" per MPCA rules, that the inspector must by law submit a copy of this report to the local government unit within 15 days of the date of inspection 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: Bob Criswell's Signature On File

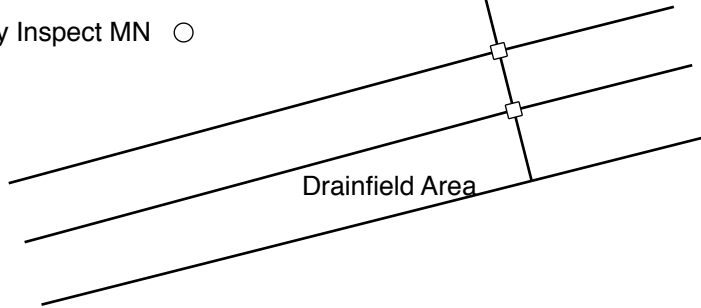
Date: 11/15/2016



House



B-1 By Inspect MN ○



Drainfield Area

Fence

○ B-2 By Inspect MN

**NO SCALE**

**346 Old Wildwood Road, Mahtomedi, MN 55115**

## Log Of Soil Borings

Location of Project:		346 Old Wildwood Road, Mahtomedi, MN 55115	
Borings Made By:		Inspect Minnesota	Date: 11/15/16
Auger Used:		Hand/Bucket	Classification System: USDA
Boring Number:		1	Boring Number: 2
Surface Elevation of Boring	Same ground surface as last drainfield trench		Surface Elevation of Boring
		Same ground surface as last drainfield trench	
Depth In Inches	<u>Soils Encountered</u>		Depth In Inches
		<u>Soils Encountered</u>	
0-17	10YR 2/2 Fine Sand (Fill) With Fill Redox		0-9
17-30	10YR 4/3 Fine Sand (Moist)		9-31
30-48	10YR 5/4 Fine Sand (Moist)		31-42
48-64	10YR 4/4 Very Fine Sand (Moist) With 10YR 6/2 & Few 7.5YR 5/8 Redox		42-58
64-74	10YR 4/4 Fine Sandy Loam (Moist) With 10YR 6/2 & 7.5YR 5/8 Redox		
48"	Depth To End Of Boring Or Redox		42"
Same	Elevation Of Boring Relative To System		Same
-38"	Depth To Bottom Of Distribution Media		-38"
=10"	Of Separation		=4"
End Of Boring At:		74"	End Of Boring At:
Redox Present At:		48"	Redox Present At:
Standing Water Present At:		None	Standing Water Present At:
			None

Bottom Of Distribution Medium At: 38 Inches

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# **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

# 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*  
Steven Giddings  
Manager

Environmental Business Assistance Section