



August 22, 2014

Jeannine McCrumb, Septic Officer
Spencer Harris, Septic Consultant
Town of Charlotte
P.O. Box 119
Charlotte, VT 05445

RE: Nona Lippert 2-Bedroom Residence at 2834 Spear Street, Charlotte, Vermont –
Replacement Septic Disposal Field

Dear Jeannine & Spencer:

Ms. Lippert owns a 0.57 acre parcel on Spear Street near its intersection with Hinesburg Road. This is the former church next to the grange hall that was converted into a 2-bedroom residence. During a septic inspection before the sale of the property, the inspector found that the system was in fact failed, and the disposal field was not taking the effluent. Upon further inspection with Steve Denton and his excavator, we found that the septic tank was not connected to the disposal field, the line was broken and the remaining lines of the disposal field were packed full of sediment and stones.

I conducted a test pit type soil evaluation in the only area available for a replacement disposal field and generally found 0-9" of black organic duff type material, 9 – 16" of brown silt loam with a strong blocky structure and roots throughout overlying a firm olive colored clay loam, with common distinct redoximorphic features. Although the soils are marginal, I am able to place a 10.0' x 28.0' best-fix mound disposal system with 2' of mound sand to the north of the residence as shown on Figure 1. Steve Revell conducted a brief site specific mounding analysis at the top of the mound which indicated an effluent mound of 0.21' beneath the toe leaving 1.12' of unsaturated soil. The mound will require a new pump station and 1/3 hp pump and the existing septic tank will need to be retrofitted with access risers set to grade and an effluent filter at the outlet end.

I believe the application package is complete with a signed application and ANR Form 5; a \$245.00 application fee payable to the Town of Charlotte; 2 signed copies of Figures 1 and 2; 1 signed 11" x 17" copy of Figures 1 and 2; 1 copy of this letter and the attachments; and 1 CD of the whole application. Ms. Lippert looks forward to the issuance of this permit so the sale can be completed.

If you have any questions, please give me a call.

Very truly yours,
Lincoln Applied Geology, Inc.

Tyler Maynard
Licensed Class B Designer #597
Enclosure

F:\CLIENTS\2014\14081\2014 WW Permit\Jeannine McCrumb Letter.docx

Drinking Water & Groundwater Protection Division - Permit Application Wastewater System & Potable Water Supply



For Office Use Only:

Application#	PIN#	Date Complete Application Received
<input type="text"/>	<input type="text"/>	<input type="text"/>

Authority:

10 V.S.A. Chapter 64, the Environmental Protection Rules, Chapter 1, Wastewater System & Potable Water Supply Rules, and Chapter 21, Water Supply Rules, Appendix A. Part 11 - Small Scale Water Systems.

General Information:

The organization and/or content of this form may not be altered, however, the form is designed to expand to allow additional information to be entered. Changes in the organization and/or content of the form may result in an invalid application or permit.

In most cases a licensed designer will be required for your project and to help complete this application form. There are also line-by-line instructions available to assist with completing this form.

NOTE: We strongly suggest referring to the application instructions while completing this application form.

Part I Applicant (Landowner) & Project Contact Information

Section A - Applicant Details (if Landowner is an Individual or Individuals)

1 Last Name <input type="text" value="Lippert"/>		2 First Name (and Middle Initial if appropriate) <input type="text" value="Nona"/>	
3 Mailing Address Line 1 <input type="text" value="13253 Blue Heron Hills Drive"/>		4 Mailing Address Line 2 <input type="text"/>	
5 Town/City <input type="text" value="King George"/>	6 State/Province <input type="text" value="VA"/>	7 Country <input type="text" value="United States"/>	8 Zip/Postal Code <input type="text" value="22485"/>
9 Email Address <input type="text"/>			10 Telephone <input type="text"/>

Section B - Applicant Details (if Landowner is other than an Individual or Individuals, e.g. Corporations, Homeowner's Associations, etc.)

1 Registered Legal Entity or Organization Name <input type="text"/>			2 Telephone <input type="text"/>
3 Mailing Address Line 1 <input type="text"/>		4 Mailing Address Line 2 <input type="text"/>	
5 Town/City <input type="text"/>	6 State/Province <input type="text"/>	7 Country <input type="text" value="United States"/>	8 Zip/Postal Code <input type="text"/>

Certifying Official

The Certifying Official must be a person who has signatory authority for the legal entity or organization that is the Applicant.

9 Certifying Official Last Name <input type="text"/>		10 Certifying Official First Name (and MI if appropriate) <input type="text"/>	
11 Certifying Official Title <input type="text"/>			
12 Certifying Official Email Address <input type="text"/>			13 Telephone <input type="text"/>

Section C - Primary Contact Information (if other than Applicant)							
1 Last Name				2 First Name (and Middle Initial if appropriate)			
Hudson				Lori			
3 Mailing Address Line 1				4 Mailing Address Line 2			
5 Town/City		6 State/Province		7 Country		8 Zip/Postal Code	
				United States			
9 Email Address						10 Telephone	
campasol@hotmail.com						1-301-873-6480	

Section D - Building/Business Owner Information							
1 Last Name				2 First Name (and Middle Initial if appropriate)			
3 Mailing Address Line 1				4 Mailing Address Line 2			
5 Town/City		6 State/Province		7 Country		8 Zip/Postal Code	
				United States			
9 Email Address						10 Telephone	

Part II Certifying Designer(s) Information							
1 Designer Last Name				2 Designer First Name (and Middle Initial if appropriate)			
Maynard				Tyler			
3 Designer License#		4 Company Name					
597		Lincoln Applied Geology, Inc.					
5 Mailing Address Line 1				6 Mailing Address Line 2			
163 Revell Drive							
7 Town/City		8 State/Province		9 Country		10 Zip/Postal Code	
Lincoln		VT		United States		05443	
11 Email Address						12 Telephone	
tmaynard@lagvt.com						802 453 4384	
13 Designer Role(s) (check all that apply)							
<input type="checkbox"/> Water Supply Designer <input checked="" type="checkbox"/> Wastewater Disposal System Designer							
<input type="button" value="Remove This Designer"/>							

Part III Property Location Information	
Section A - Property Location	
1 Please provide the property Town and the property address or a brief description of the location.	
(a) Town or City <input type="text" value="Charlotte"/>	(b) Street or Road Location <input type="text" value="2834 Spear Street"/>

Section B - Center of Property GPS Coordinates

1 Enter the approximate center of property coordinates using GPS set for NAD83 or as derived from a map (map must be based on NAD83).

(a) Latitude (in decimal degrees to five decimal places, ex. 44.38181°) (b) Longitude (in decimal degrees to five decimal places, ex. -72.31392 °)

N ° W (-) °

Part IV Project Information

Section A - General Project Information & Questions

1 Project Name (if applicable) 2 Total Acreage of Property

Lippert Project

3 Business Name (if applicable)

4 Detailed Project Description

Replacement disposal field for a 2-bedroom residence.

5 (a) Were all existing buildings or structures, campgrounds, and their associated potable water supplies and wastewater systems substantially completed before January 1, 2007? Yes No

(b) Were all existing improved and unimproved lots in existence before January 1, 2007? Yes No

6 Does this application include subdividing the property? Yes No

7 Has anyone from the Drinking Water & Groundwater Protection Division's Regional Office been to the property? Yes No

If Yes, enter the staff person's name and the date of the visit.

(a) Name of Staff Person (b) Date of Visit (m/d/yyyy)

8 Will any construction occur within 50 feet of a wetland boundary, mapped or designated? Yes No

If Yes, contact the Wetlands Program of the Watershed Management Division at (802) 338-4835.

9 Will more than one acre be disturbed during the entire course of construction, including all lots and phases? Yes No

If Yes, contact the Stormwater Program of the Watershed Management Division at (802) 241-4320.

10 Will there be any stream crossings by roads, utilities, or other construction? Yes No

If Yes, contact the River Corridor Mgmt. Program of the Watershed Management Division at:

Central & Northwest Vermont (802) 879-5631

Southern Vermont (802) 786-5906

Northeastern Vermont (802) 751-0129

11 Is the project located in a special flood hazard area as designated on the flood insurance maps prepared for a municipality by the Federal Emergency Management Agency? Yes No

If Yes, show the special flood hazard area limits on the site plan.

12 Act 250: Has the Applicant (Landowner) subdivided any other lots of any size within a five mile radius of this subdivision, or within the environmental district within the last five years? Yes No

If Yes, enter the town(s) and the associated number of lots in the table below:

(a) Town	(b) Number of Lots
<input checked="" type="checkbox"/> <input type="text"/>	<input type="text"/>

13 Is there any prior Act 250 jurisdiction on the tract of land? Yes No

If Yes, enter the Act 250 permit number:

(a) Act 250 Permit Number

Section B - Project Deed Reference

1 Please provide the Town, Parcel ID, Book, and Page reference for the current landowner's deed(s) to this property:

	(a) Town	(b) Parcel ID	(c) Book	(d) Page(s)
X	Charlotte	0002-02834	173	592-593

Add Another Deed Reference

Section C - Project Plan Reference

1 Please provide the following information for all water supply and wastewater disposal system plans being submitted.

	(a) Sheet#	(b) Title	(c) Plan Date	(d) Plan Revision Date
X	1	Site Plan with Proposed Replacement Wastewater System	8/15/2014	
X	2	Wastewater System Design Details	8/15/2014	

Add Another Plan Reference

Section D - Existing Project Lot/Building Details

Please provide the existing project details. This section is used to describe what is existing for the project. For example, if you are subdividing an undeveloped 21-acre parcel, you would list the existing parcel. If you are revising the boundary lines of two commercial lots in an industrial park, and constructing an addition to an existing building you would list the existing lot numbers, existing acres, existing buildings, existing uses, construction date(s), prior permits, and answer the compliance questions.

1 Lot#	2 Lot Size (acres)	3 Existing Use of the Lot
1	0.57	2-bdrm Residence

4 Provide the following information for each building on the lot:

(a) Building ID	(b) Existing Use	(c) Date Construction of Building Substantially Complete	(d) Prior Permits	(e) In compliance with existing permits?
X Church	Residential	01-01-1900		<input checked="" type="radio"/> Yes <input type="radio"/> No

Add Another Building

Remove This Lot

Add Another Lot

Section E - Proposed Project Lot/Building Details

This section is used to describe what you are proposing to do in this project. For example, if you were going to create 4 lots for construction of single family residences, you would list each lot, proposed acreage, proposed buildings, and proposed use.

1 Lot#	2 Lot Size (acres)	3 Proposed Use of the Lot
1	0.57	2-bdrm Residence

4 Is the lot being created as part of a subdivision? Yes No

5 Are you requesting that the Blood, Marriage, or Civil Union special fee be applied to this lot? Yes No

6 If the lot is exempt, please indicate the specific exemption from the Wastewater System and Potable Water Supply Rules?

7 Provide the following information for each building on the lot:

(a) Building ID	(b) If building is exempt, indicate exemption	(c) Construction or increased flow?	(d) Proposed Use
X Church		<input type="checkbox"/>	2-bdrm Residence

Add Another Building

Remove This Lot

Add Another Lot

Part V Water Supply Information																																								
Section A - Water Supply Screening Questions																																								
1 Are you proposing a new water supply or water service line or changes to a permitted but not constructed water supply or water service line for this project?	<input type="radio"/> Yes <input checked="" type="radio"/> No																																							
2 Are you proposing changes to an existing water supply or water service for this project (including changes to location, design flows, or operational change)?	<input type="radio"/> Yes <input checked="" type="radio"/> No																																							
3 Is there an existing connection to a water supply or water service line for this project?	<input checked="" type="radio"/> Yes <input type="radio"/> No																																							
<i>Complete Part V if you answered Yes to any of the above questions. A project with no existing or proposed water supply may skip to Part VI.</i>																																								
Section B - General Water Supply Questions																																								
1 Does this project involve a failed water supply?	<input type="radio"/> Yes <input checked="" type="radio"/> No																																							
2 Will any of the proposed water sources serve 25 or more people or have 15 or more service connections?	<input type="radio"/> Yes <input checked="" type="radio"/> No																																							
<i>If Yes, the applicant must contact the Drinking Water & Groundwater Protection Division at (802) 241-3400 for source, construction and an operating permit.</i>																																								
3 Are any of the existing or proposed water sources located within a special flood hazard area?	<input type="radio"/> Yes <input checked="" type="radio"/> No																																							
4 Are any of the existing or proposed water sources located within a floodway?	<input type="radio"/> Yes <input checked="" type="radio"/> No																																							
5 Are any of the proposed water sources located within 1 mile of a hazardous waste site as designated by the Waste Management Division and identified on the Agency mapping website?	<input type="radio"/> Yes <input checked="" type="radio"/> No																																							
<i>If Yes, please submit additional information on the site. The Waste Management Division can be reached at (802) 241-3888.</i>																																								
6 Does this project require an approval letter from the Drinking Water & Groundwater Protection Division for the construction of a public water system, municipal water line extension over 500 feet, or hydrants or sprinkler systems?	<input type="radio"/> Yes <input checked="" type="radio"/> No																																							
<i>If Yes, please submit a copy of the approval letter from the Drinking Water & Groundwater Protection Division.</i>																																								
7 Does the proposed or existing water supply(ies) use a water treatment device to obtain compliance with the quality requirements in the Water Supply Rule?	<input type="radio"/> Yes <input checked="" type="radio"/> No																																							
<i>If Yes, please submit additional information regarding the constituent(s) that exceeds the standards and plans, details, and specifications of the treatment device.</i>																																								
8 Is any portion of the proposed water supply located in or near a Water Source Protection Area as designated by the Drinking Water & Groundwater Protection Division?	<input type="radio"/> Yes <input checked="" type="radio"/> No																																							
<i>If in areas of known interference issues, contact the Drinking Water & Groundwater Protection Division at (802) 241-3400.</i>																																								
Section C - Individual Water Supply Details																																								
Please provide the following information for each of the existing and proposed water supply(ies) serving a building or structure, or campground on the property.																																								
1 Water Supply Name/Identifier Lippert Well	2 Water Supply Owner (if not Applicant)																																							
3 Water Source Type Non-Public Drilled Bedrock Well	4 Type of Change to Supply No Change																																							
5 Lots/Buildings Served by this Water Supply System																																								
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2"></th> <th colspan="3"></th> <th colspan="3" style="background-color: #e0e0e0;">Design Flows (Gallons Per Day)</th> <th rowspan="2"></th> </tr> <tr> <th style="background-color: #e0e0e0;">(a) Lot#</th> <th style="background-color: #e0e0e0;">(b) Building ID</th> <th style="background-color: #e0e0e0;">(c) Type of Change to the Building's Supply</th> <th style="background-color: #e0e0e0;">(d) Existing</th> <th style="background-color: #e0e0e0;">(e) Change</th> <th style="background-color: #e0e0e0;">(f) Total</th> <th style="background-color: #e0e0e0;">(g) Rule or Meter Based Flows</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;">1</td> <td style="text-align: center;">Church</td> <td style="text-align: center;">No Change</td> <td style="text-align: center;">280</td> <td style="text-align: center;">0</td> <td style="text-align: center;">280</td> <td style="text-align: center;">Rule-based</td> </tr> <tr> <td colspan="4" style="background-color: #e0e0e0;">Add Another Lot/Building Served by this Supply</td> <td style="text-align: center;">6</td> <td style="text-align: center;">7</td> <td style="text-align: center;">8</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">280</td> <td style="text-align: center;">0</td> <td style="text-align: center;">280</td> <td></td> </tr> </tbody> </table>						Design Flows (Gallons Per Day)				(a) Lot#	(b) Building ID	(c) Type of Change to the Building's Supply	(d) Existing	(e) Change	(f) Total	(g) Rule or Meter Based Flows	X	1	Church	No Change	280	0	280	Rule-based	Add Another Lot/Building Served by this Supply				6	7	8						280	0	280	
				Design Flows (Gallons Per Day)																																				
	(a) Lot#	(b) Building ID	(c) Type of Change to the Building's Supply	(d) Existing	(e) Change	(f) Total		(g) Rule or Meter Based Flows																																
X	1	Church	No Change	280	0	280	Rule-based																																	
Add Another Lot/Building Served by this Supply				6	7	8																																		
				280	0	280																																		

9 Is this water supply located off-lot? Yes No

10 Is this water supply shared? Yes No

If the water supply is located off-lot or shared, submit a copy of the agreement to provide an easement prior to construction.

11 Is a variance being requested for this water supply? Yes No

If Yes, please submit additional details related to the variance request.

Remove This Water Supply

Add Another Water Supply

Section D - Water Supply Design Flows Summary Table

1 If the project includes more than one water supply, please list each water supply system and provide the total water supply design flows for the project. **IMPORTANT:** Please don't include systems that were identified in this Part on Section C, Line 4 as a "Replacement Area Designation" in this summary table.

(a) Water Supply Name/Identifier	Design Flows (Gallons Per Day)		
	(b) Existing	(c) Change	(d) Total
X Lippert Well	280	0	280
Add Another Water Supply	2 280	3 0	4 280

Part VI Wastewater Disposal System Information

Section A - Wastewater Disposal System Screening Questions

1 Are you proposing a new or replacement wastewater disposal system, a new wastewater service line, or changes to a permitted but not constructed wastewater disposal system or wastewater service line for this project? Yes No

2 Are you proposing changes to an existing wastewater disposal system, replacement wastewater disposal system, replacement area, or wastewater service line for this project (including changes to location, design flows, or operational change)? Yes No

3 Is there an existing connection to a wastewater disposal system or wastewater service line for this project?..... Yes No

*Complete Part VI if you answered Yes to any of the above questions.
A project with no existing or proposed wastewater disposal systems may skip to Part VII.*

Section B - General Wastewater Disposal System Questions

1 Does this project involve a failed wastewater disposal system? Yes No

2 Do any of the systems require a curtain or dewatering drain as part of the design? Yes No

3 Is a hydrogeologic study required for this project? Yes No

4 For projects using soil-based wastewater systems having a total design flow that exceeds 1,000 gpd, is this project located in a Class A Watershed?..... Yes No NA

If Yes, indicate the Class A Watershed in which the system(s) is located:

(a) Class A Watershed Name

5 Are there any existing or proposed floor drains as part of this project?..... Yes No

If Yes, indicate where the floor drains will discharge:

(a) Floor Drain Discharge Point

6 If the project utilizes an Innovative/Alternative System or Product, has the applicant received a copy of the Drinking Water & Groundwater Protection Division's approval letter? Yes No NA

7 Is any portion of the proposed wastewater disposal system located in or near a Water Source Protection Area as designated by the Drinking Water & Groundwater Protection Division? Yes No

If Yes, contact the Drinking Water & Groundwater Protection Division at (802) 241-3400.

Section C - Individual Wastewater Disposal System Details

Please provide the following information for each of the existing and proposed wastewater disposal systems serving a building or structure, or campground on the property.

1 Wastewater Disposal System Name/Identifier <input style="width:95%;" type="text" value="Lippert Old System"/>	2 Wastewater Disposal System Owner (if not Applicant) <input style="width:95%;" type="text"/>
3 Wastewater Disposal System Type <input style="width:95%;" type="text" value="In-ground"/>	4 Type of Change to System <input style="width:95%;" type="text" value="No Change"/>

5 Lots/Buildings Served by this Wastewater Disposal System

	(a) Lot#	(b) Building ID	(c) Type of Change to the Building's System	Design Flows (Gallons Per Day)			(h) Rule or Meter Based Flows	
				(d) Existing	(e) Change	(f) Infiltration		(g) Total
X	<input style="width:95%;" type="text" value="1"/>	<input style="width:95%;" type="text" value="Church"/>	<input style="width:95%;" type="text" value="No Change"/>	<input style="width:95%;" type="text" value="280"/>	<input style="width:95%;" type="text" value="0"/>	<input style="width:95%;" type="text" value="0"/>	<input style="width:95%;" type="text" value="280"/>	<input style="width:95%;" type="text" value="Rule-based"/>
Add Another Lot/Building Served by this System				<input style="width:95%;" type="text" value="280"/>	<input style="width:95%;" type="text" value="0"/>	<input style="width:95%;" type="text" value="0"/>	<input style="width:95%;" type="text" value="280"/>	

6 7 8 9

10 Is this wastewater disposal system located off-lot? Yes No

11 Is this wastewater disposal system shared? Yes No

If the wastewater disposal system is located off-lot or shared, submit a copy of the agreement to provide an easement prior to initiation of construction.

12 Is a variance being requested for this wastewater disposal system? Yes No

If Yes, please submit additional details related to the variance request.

13 If this wastewater disposal system type is a connection to an Indirect Discharge System, please provide the Indirect Discharge System ID number.

Indirect Discharge System ID Number

14 If this wastewater disposal system type is a connection to a municipal system, please select the town.

Town

15 If this wastewater disposal system is a soil-based system, please select the design approach used.

Design Approach Used

16 For soil-based systems, please check all that apply (Note: Store and dose does not apply to standard pump/pump chamber systems).

Storage and Dose Filtrate Constructed Wetlands

17 If this is an Innovative/Alternative soil-based system, please select the system use type.

Innovative/Alternative System Use Type

18 If this is an Innovative/Alternative soil-based system, please select the Innovative/Alternative system or product.

Innovative/Alternative System or Product

Remove This Wastewater System

1 Wastewater Disposal System Name/Identifier <input style="width:95%;" type="text" value="Lippert Mound"/>	2 Wastewater Disposal System Owner (if not Applicant) <input style="width:95%;" type="text"/>
3 Wastewater Disposal System Type <input style="width:95%;" type="text" value="Mound"/>	4 Type of Change to System <input style="width:95%;" type="text" value="Replacement of Failed System"/>

5 Lots/Buildings Served by this Wastewater Disposal System

	(a) Lot#	(b) Building ID	(c) Type of Change to the Building's System	Design Flows (Gallons Per Day)			(g) Total	(h) Rule or Meter Based Flows
				(d) Existing	(e) Change	(f) Infiltration		
X	<input style="width: 40px;" type="text" value="1"/>	<input style="width: 80px;" type="text" value="Church"/>	<input style="width: 150px;" type="text" value="Replacement of Failed System"/>	<input style="width: 40px;" type="text" value="280"/>	<input style="width: 40px;" type="text" value="0"/>	<input style="width: 40px;" type="text" value="0"/>	<input style="width: 40px;" type="text" value="280"/>	<input style="width: 80px;" type="text" value="Rule-based"/>
<input style="width: 250px;" type="button" value="Add Another Lot/Building Served by this System"/>				<input style="width: 40px;" type="text" value="280"/>	<input style="width: 40px;" type="text" value="0"/>	<input style="width: 40px;" type="text" value="0"/>	<input style="width: 40px;" type="text" value="280"/>	

10 Is this wastewater disposal system located off-lot? Yes No

11 Is this wastewater disposal system shared? Yes No

If the wastewater disposal system is located off-lot or shared, submit a copy of the agreement to provide an easement prior to initiation of construction.

12 Is a variance being requested for this wastewater disposal system? Yes No

If Yes, please submit additional details related to the variance request.

13 If this wastewater disposal system type is a connection to an Indirect Discharge System, please provide the Indirect Discharge System ID number.

Indirect Discharge System ID Number

14 If this wastewater disposal system type is a connection to a municipal system, please select the town.

Town

15 If this wastewater disposal system is a soil-based system, please select the design approach used.

Design Approach Used

16 For soil-based systems, please check all that apply (Note: Store and dose does not apply to standard pump/pump chamber systems).

Storage and Dose Filtrate Constructed Wetlands

17 If this is an Innovative/Alternative soil-based system, please select the system use type.

Innovative/Alternative System Use Type

18 If this is an Innovative/Alternative soil-based system, please select the Innovative/Alternative system or product.

Innovative/Alternative System or Product

Section D - Wastewater Disposal Systems Design Flows Summary Table

1 If the project includes more than one wastewater disposal system, please list each system on this page and provide the total wastewater disposal design flows for the project. **IMPORTANT:** Please don't include systems that were identified in this Part on Section C, Line 4 as a "Replacement Area Designation" in this summary table.

(a) Wastewater Disposal System Name/Identifier	Design Flows (Gallons Per Day)			
	(b) Existing	(c) Change	(d) Infiltration	(e) Total
X Lippert Mound	280	0	0	280
Add Another Wastewater System	2	3	4	5
	280	0	0	280

Part VII Application Fees

1 Fee Amount

2 Fee Calculation Details

Part VIII Designer Certification & Copyright License

Section A - Certifying Designer 1 Certification & Copyright License

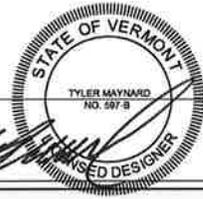
"I hereby certify that in the exercise of my reasonable professional judgment, the design-related information submitted with this application is true and correct, and that the design included in this application for a permit complies with the Vermont Wastewater System and Potable Water Supply Rules and the Vermont Water Supply Rules.

As the individual who prepared this application, including all documents that are marked as copyrighted, I hereby grant a non-exclusive, limited license to the State to allow the documents to be made available for public review and copying in order to properly implement and operate the permitting programs for Wastewater Systems and Potable Water Supplies, and for no other purposes. As a condition to this license, the State agrees that it will not make any changes to such documents, nor will the State delete any copyright notices on such documents."

1 Check the design(s) you are certifying. This should be the same as the Designer Role(s) you selected in Part II, Section A, Line 13.

Water Supply Designer
 Wastewater Disposal System Designer

1 Designer 1 Name <input type="text" value="Tyler Maynard"/>	2 Designer 1 Signature 	3 Signature Date <input type="text" value="8/15/2014"/>
---	--	--



Section B - Certifying Designer 2 Certification & Copyright License

"I hereby certify that in the exercise of my reasonable professional judgment, the design-related information submitted with this application is true and correct, and that the design included in this application for a permit complies with the Vermont Wastewater System and Potable Water Supply Rules and the Vermont Water Supply Rules.

As the individual who prepared this application, including all documents that are marked as copyrighted, I hereby grant a non-exclusive, limited license to the State to allow the documents to be made available for public review and copying in order to properly implement and operate the permitting programs for Wastewater Systems and Potable Water Supplies, and for no other purposes. As a condition to this license, the State agrees that it will not make any changes to such documents, nor will the State delete any copyright notices on such documents."

1 Check the design(s) you are certifying. This should be the same as the Designer Role(s) you selected in Part II, Section B, Line 13.

Water Supply Designer
 Wastewater Disposal System Designer

1 Designer 2 Name <input type="text"/>	2 Designer 2 Signature <input type="text"/>	3 Signature Date <input type="text"/>
---	--	--

Part IX Applicant(s) Signature & Acknowledgements

In order to insure compliance with the requirements of the regulations administered by the Department of Environmental Conservation, Drinking Water & Groundwater Protection Division, it may be necessary to visit the property. As this would involve a Department employee entering private property, we request your approval to do so.

1 If we do visit your property, do you have any special instructions?

"As landowner of the property for which I am requesting a permit from the Department of Environmental Conservation I understand that by signing this application I am granting permission for the Department employees to enter the property, during normal working hours, to insure compliance of the property with the applicable rules of the Department.

I also understand that I am not allowed to commence any site work or construction on this project without written approval from the Department of Environmental Conservation.

If my project utilizes an Innovative/Alternative System or Product, I have received a copy of the Drinking Water & Groundwater Protection Division's approval letter and agree to abide by the conditions of the approval.

I also certify that to the best of my knowledge and belief the information submitted above is true, accurate and complete."

<input checked="" type="checkbox"/>	2 Print Applicant Name Nona Lippert <u>NONA LIPPERT</u>	3 Applicant Signature <u>NONA LIPPERT</u>	4 Signature Date <u>8/18/2014</u>
<input type="button" value="Add Applicant Signature Block"/>			

ANR Form 5: Certification Statement for Wastewater System and Potable Water Supply Permits when there is no Required Notification of Overshadowed Property Owner(s)

A person submitting an application to the Secretary for a Wastewater System and Potable Water Supply Permit shall use this statement whenever overshadowing notification of affected landowners is not required (see guidance and instructions for examples).

Note: When the property subject to the permit application is owned by more than one person, only one of the landowners must sign this certification statement even though all landowners must sign the permit application itself.

I hereby certify that "overshadowing" notification is not required either because there is an exemption to the notification requirement or there are no landowners whose property may be affected by the proposed water and wastewater systems.

Signature Nora Lippert 

Name (Printed) NONA LIPPERT

Property Address or Property Tax ID # 2834 Spear St.

Date of this certification 8/18/14 ?

(To Comply with Act 145 and Act 117 - 8-24-12 Last Revised 9-11-12)

**Lippert Property
Charlotte, Vermont
Soil Profile Descriptions
July 14, 2014**

By Tyler Maynard, Licensed Class B Designer #597

Test Pit #1 (TP-1) **Total Depth 24"**

- 0-10" Black sandy loam - topsoil, loose to friable, strong fine blocky structure, well drained.
- 10-20" Brown sandy loam, friable, strong fine blocky structure, roots throughout, well drained.
- 20-24" Ran into existing septic field. 4" black pipe in a 2' wide stone trench, pipe filled full of sediment.

Test Pit #2 (TP-2) **Total Depth 42"**

- 0-6" Black sandy loam - topsoil, loose to friable, strong fine blocky structure, well drained.
- 6-16" Brown sandy loam, friable, strong fine blocky structure, roots throughout, well drained.
- 16-42" Brown to olive-brown sandy loam, friable, strong blocky structure, redoximorphic features throughout, moist toward bottom of pit.

Test Pit #3 (TP-3) **Total Depth 36"**

- 0-9" Black sandy loam - topsoil, loose to friable, strong fine blocky structure, well drained.
- 9-16" Brown sandy loam, friable, strong fine blocky structure, roots throughout, well drained.
- 16-36" Olive clay, firm & moist, redoximorphic features present at 16" and throughout.

Test Pit #4 (TP-4) **Total Depth 36"**

- 0-7" Black sandy loam - topsoil, loose to friable, strong fine blocky structure, well drained.
- 7-16" Brown sandy loam, friable, strong fine blocky structure, roots throughout.
- 16-28" Light brown sandy clay loam, strong blocky structure, friable, redoximorphic features at 16", roots throughout.
- 28-36" Olive clay, firm & moist, redoximorphic features throughout.

Hand Auged #1 (HA-1) **Total Depth 18"** Confirmatory Hand Auger done on 7/15/14

- 0-6" Black sandy loam - topsoil, loose to friable, strong fine blocky structure, well drained.
- 6-15" Brown sandy loam, friable, strong fine blocky structure, roots throughout.
- 15-18" Light brown sandy clay loam, strong blocky structure, friable, redoximorphic features at 15", roots throughout.

Lippert Property
2834 Spear Street
Charlotte, Vermont

Percolation Test Results

All tests were performed on July 15, 2014 at a depth of 18"

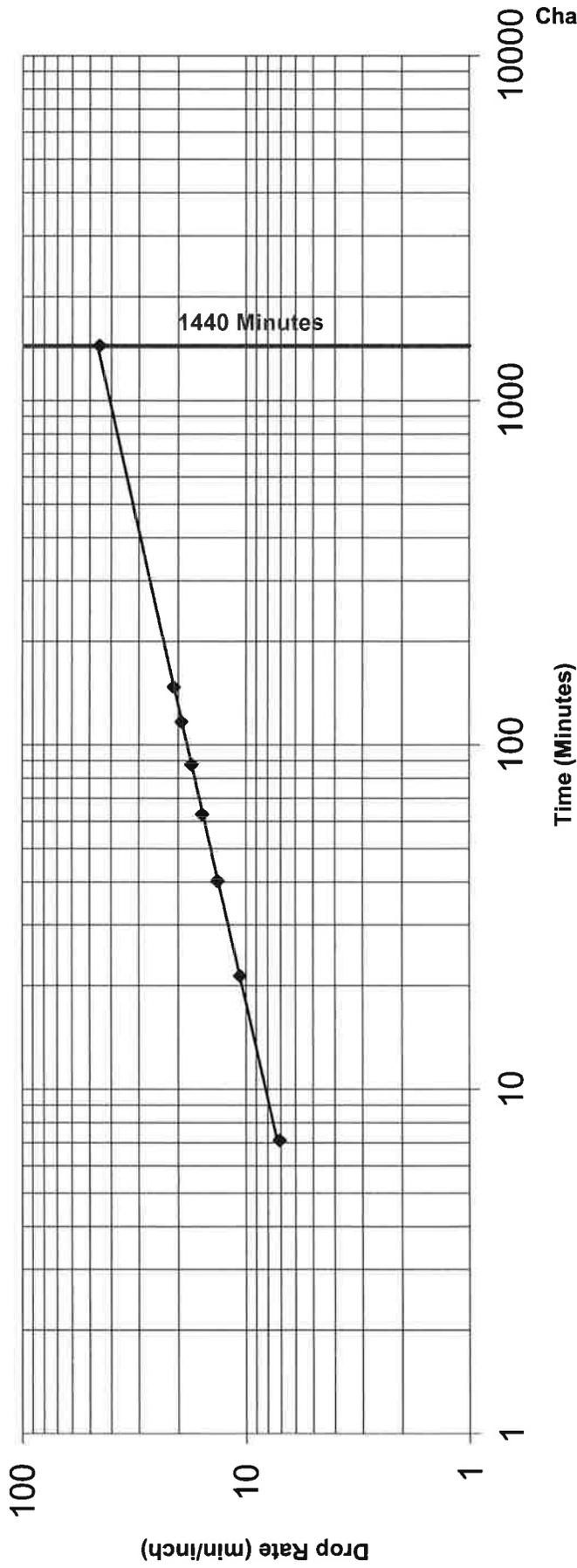
PT-1	Drop Time (min)	Total Drop Time (min)	Total Drop (inches)	Drop Rate (min/inch)
	7.1	7.1	1	7.1
	14.2	21.3	2	10.7
	18.9	40.2	3	13.4
	22.5	62.7	4	15.7
	24.8	87.5	5	17.5
	29.0	116.5	6	19.4
	30.4	146.8	7	21.0
	---	1440.0	---	45.3

*NOTE:
Drop time includes fill time for
each of the seven runs.

Lippert Property
2834 Spear Street
Charlotte, Vermont

Percolation Test Results

All tests were performed on July 15, 2014 at a depth of 18"



◆ PT-1
— Best Fit PT-1

Chart 1

PRESSURE DISTRIBUTION & MOUND DIMENSION DETAILS

CLIENT'S NAME: Lippert
 DATE: 7/16/2014 PERFORMED BY: T. Maynard LAG Project #: 14081

Design Flow Rate	280	GPD
Width of Distribution Stone Bed/Trench	10	FEET
Length of Distribution Stone Bed/Trench	28	FEET
Thickness of Sand Beneath Distribution Stone Bed/Trench	2	FEET
Thickness of Stone Beneath Laterals	6	INCHES
Soil Cover Thickness at Edge of Level Area	6	INCHES
Front Slope of Finished Mound	33	PERCENT
Side and Rear Slope of Finished Mound	33	PERCENT
Percolation Rate	45	MPI
Natural Ground Slope	9	PERCENT
Thickness of Sand on Upper Side of Level Area	2.66	FEET
Thickness of Sand on Lower Side of Level Area	3.74	FEET
Width of Level Area	12	FEET
Length of Level Area	30	FEET
Area of Distribution Stone Bed/Trench	280	SQUARE FT
Volume of Stone Required	6	CUBIC YARDS
Proposed Basal Area	800	SQUARE FEET
Volume of Mound Sand Required	203.9	CUBIC YARDS
Number of Laterals	4	
Length of Each Lateral	13	FEET
Number of Orifices in the Manifold	0	
Number of Orifices in Each Lateral	7	
Distance Between Manifold and First Orifice	1	FEET
Distance Between Orifices (on center)	2	FEET
Distribution Area per Orifice	10.00	SQ. FT.
Design Pressure Head	5	FEET
Diameter of Orifices (enter as fraction)	0.188	INCHES
Elevation From Pump Intake to Laterals (0 if siphon)	4	FEET
Diameter of Force Main	2	INCHES
Length of Force Main	42	FEET
Length of Manifold to Lateral	1.5	FEET
Diameter of Manifold Pipe	2	INCH
Diameter of Lateral Pipe	2	INCH
Friction Loss in Force Main	0.58	FEET
Friction Loss in Manifold	0.01	FEET
Friction Loss in Section 1	0.00	FEET
Friction Loss in Entire Lateral	0.00	FEET
Discharge Rate at First Orifice	0.93	GPM
Discharge Rate at Last Orifice	0.93	GPM
Percent Difference in Flow Rate First to Last Orifice	0.03	PERCENT
Total Dynamic Head Loss	9.598	FEET
Total Distribution System Flow	25.94	GPM
Volume of Distribution System	8.49	GALLONS
Pump Capacity	25.94 GPM vs	9.598 FEET OF HEAD
Volume per Dose	70	GALLONS
On/Off Float Swing (1,000 gal. Tank)	2.3	INCHES

PRESSURE DISTRIBUTION & MOUND DIMENSION DETAILS

CLIENT'S NAME: Lippert
 DATE: 7/16/2014 PERFORMED BY: T. Maynard LAG Project #: 14081

DIMENSIONS OF MOUND SYSTEM

Dimensions of Mound Sand	
6.3 feet from level area to uphill sand toe	9.0 ft corner of level area to upper toe corner
12 ft wide level area	8.1 ft to side toe from upper edge of level area
10 ft wide stone bed/trench	
28 ft long stone bed/trench	11.3 ft to side toe from lower edge of level area
30 ft long level area	
15.6 feet from level area to downhill sand toe	22.0 ft corner of level area to lower toe corner

Dimensions of Final Cover	
7.5 feet from level area to uphill toe	10.6 ft corner of level area to upper fill toe
	9.6 ft to side toe from upper edge of level area
12 ft wide level area	
30 ft long level area	
	12.8 ft to side toe from lower edge of level area
	25.0 ft corner of level area to lower fill toe
17.7 feet from level area to downhill toe	

PLOW AREA LAYOUT MEASUREMENTS	
Center of Bed/Trench to Downslope Toe	40.3 feet
End of Level Area @ Midpoint to Downslope Toe	29.5 feet
Center of Bed/Trench to Upslope Toe	26.3 feet
End of Level Area @ Midpoint to Upslope Toe	15.5 feet

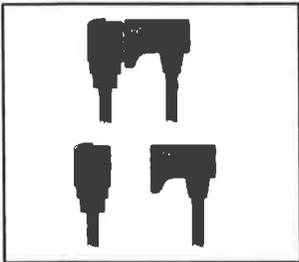
HYDROMATIC®

SHEF30

Submersible Effluent Pump

- Effluent Septic Tank

Automatic operation features easily adjustable, wide-angle float switch with a piggyback plug-in arrangement that allows for simple conversion to manual operation. Special inlet design allows pump to handle 3/4" solids. Cast iron body and an oil-filled motor provide superior cooling characteristics for longer pump life. Motor windings contain automatic thermal overload protection. Energy efficient .3 HP motor pumps up to 35 GPM at 10' total dynamic head. Discharge is 1-1/2" N.P.T.



May be operated manually or automatically with a piggyback switch.



HYDROMATIC®
Pentair Pump Group

SHEF30 - Submersible Effluent Pump

Details

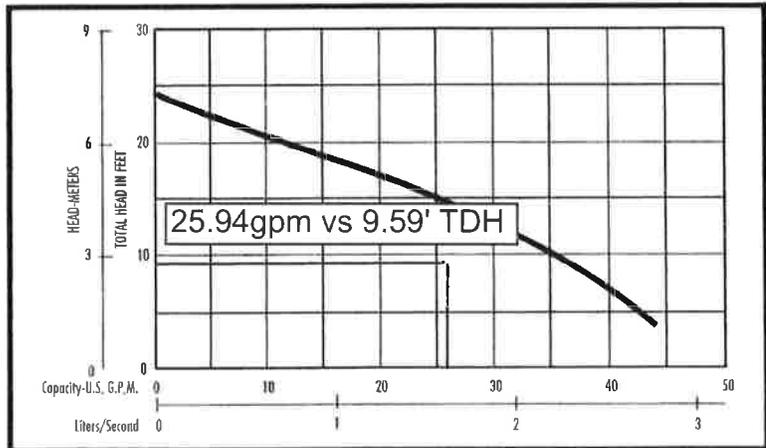
Pump Characteristics

Pump/Motor Unit	Submersible
Automatic Model	SHEF30A1
Horsepower	.30
Full Load Amps	8.0
Motor Type	Shaded Pole (4 pole)
R.P.M.	1550
Phase Ø	1
Voltage	115
Hertz	60
Temperature	120°F Ambient
NEMA Design	A
Insulation	Class A
Discharge Size	1-1/2" NPT (38mm)
Solids Handling	3/4" (19mm)
Unit Weight	30 lbs.
Power Cord	18/3, SJTW, 20' std.

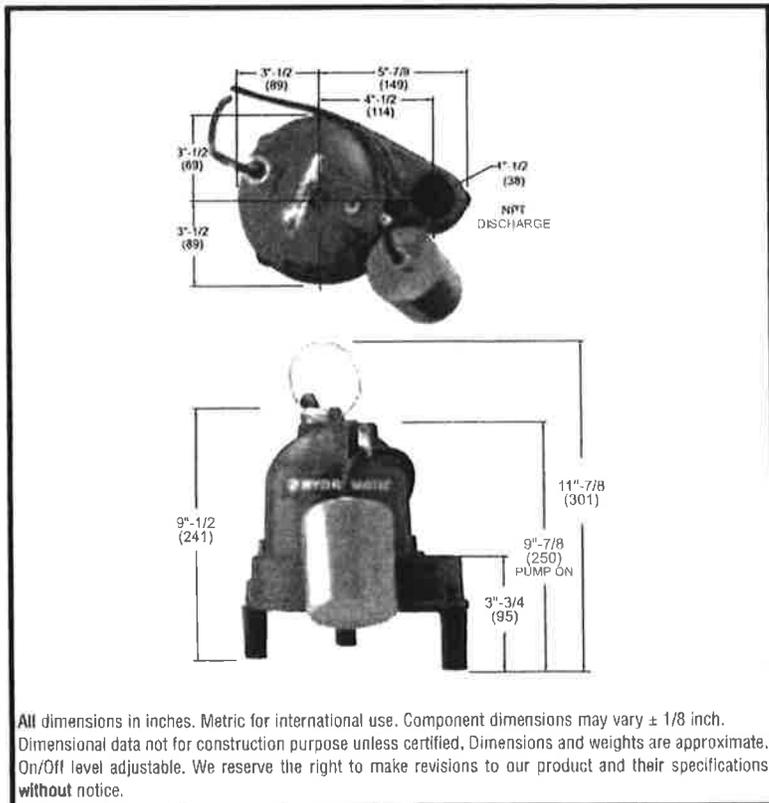
Materials of Construction

Handle	Stainless Steel
Lubricating Oil	Dielectric Oil
Motor Housing	Cast Iron
Pump Volute	Cast Iron
Shaft	Steel
Mechanical Shaft Seal	Seal Faces: Carbon/Ceramic Seal Body: Anodized Steel Spring: Stainless Steel Bellows: Buna-N
Impeller	Engineered Thermoplastic
Upper Bearing	Cast Iron Sleeve
Lower Bearing	Single Row Ball Bearing
Legs	Engineered Thermoplastic
Fastener	Stainless Steel

Performance Data



Dimensional Data



All dimensions in inches. Metric for international use. Component dimensions may vary $\pm 1/8$ inch. Dimensional data not for construction purpose unless certified, Dimensions and weights are approximate. On/Off level adjustable. We reserve the right to make revisions to our product and their specifications without notice.



HYDROMATIC®
Pentair Pump Group

USA

1840 Baney Road Ashland, Ohio 44805
Tel: 419-289-3042 Fax: 419-281-4087

www.hydromatic.com

—Your Authorized Local Distributor—

CANADA

269 Trillium Drive Kitchener, Ontario, Canada N2G 4W5
Tel: 519-896-2163 Fax: 519-896-6337