

Jason Barnard
Consulting, LLC
4400 VT Route 17
Starksboro, VT 05487
(802) 453-2597 Phone
(802) 453-8497 Fax

October 26, 2015

Town of Charlotte
Planning and Zoning Department
Attn: Jeannine McCrumb
159 Ferry Road
Charlotte, Vermont 05445

Subject: Edward J. and Jacinta M. Monniere, 10.1+/- Acre Parcel, 6391 Ethan Allen Highway, Charlotte, Vermont - Wastewater System and Potable Water Supply Permit Application

Dear Jeannine:

Enclosed you will find two (2) copies of the Edward J. and Jacinta M. Monniere full size design drawings, two (2) copies of the 11" x 17" design drawings, electronic copies of the design drawings in PDF format and the required supporting documents (paper and electronic copies) relative to their 10.1+/- acre residential property located at 6391 Ethan Allen Highway in Charlotte. The subject property is improved with a 2-bedroom single-family residence that is provided water by an on-site drilled well and is served by an on-site in-ground wastewater disposal system. The existing in-ground wastewater system that serves the 2-bedroom single-family residence has failed (i.e. wastewater is surfacing near the leach field) and therefore will need to be replaced.

For this reason, Edward J. and Jacinta M. Monniere are applying for a Wastewater System and Potable Water Supply Permit so that a replacement pressurized in-ground wastewater system can be installed to properly treat and dispose of wastewater generated by the residential structure. In order to add bedrooms to the structure in the future (increase to a 4-bedroom single-family residence), the replacement wastewater system has been sized at 150% design flow capacity (i.e. no replacement area is required) for a 4-bedroom single-family residence. The proposed replacement wastewater disposal system is a pressurized in-ground system that has been designed in accordance with the current State of Vermont, Environmental Protection Rules (EPR) Chapter 1 "Wastewater System and Potable Water Supply Rules effective September 29, 2007.

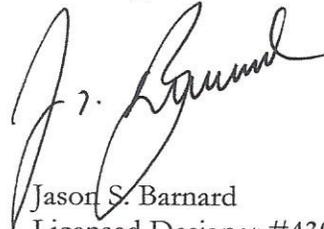
Included to facilitate your review of this permit application are the following:

1. Check made payable to the Town of Charlotte for the amount of five hundred dollars (\$500.00).
2. State of Vermont, Agency of Natural Resources, Potable Water Supply and Wastewater System Permit Application.
3. Adjoining Landowner Notification Forms No. 1 and No. 4.
4. Test Pit Logs.

5. Percolation Test Results.
6. Replacement In-Ground System Basis of Design.
7. Replacement In-Ground System Pressure Distribution Details.
8. Required Effluent Pump Specifications.
9. High Water Level Alarm Specifications.
10. Design Drawings No. 1 and No. 2 dated October 26, 2015.

Should you have any questions or comments relative to the information submitted herein, please do not hesitate to call me at (802) 453-2597.

Sincerely,

A handwritten signature in black ink, appearing to read "J. S. Barnard", written in a cursive style.

Jason S. Barnard
Licensed Designer #430-B

c: Edward and Jacinta Monniere

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 Monniere		2 First Name (and Middle Initial if appropriate) Edward J.	
3 Mailing Address Line 1 6391 Ethan Allen Highway		4 Mailing Address Line 2	
5 Town/City Charlotte	6 State/Province Vermont	7 Country United States	8 Zip/Postal Code 05445
9 Email Address			10 Telephone 802-425-2805

Remove This Applicant

1 Last Name Monniere		2 First Name (and Middle Initial if appropriate) Jacinta M.	
3 Mailing Address Line 1 6391 Ethan Allen Highway		4 Mailing Address Line 2	
5 Town/City Charlotte	6 State/Province Vermont	7 Country United States	8 Zip/Postal Code 05445
9 Email Address			10 Telephone 802-425-2805

Remove This Applicant

Add Another Applicant

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		2 Telephone	
3 Mailing Address Line 1		4 Mailing Address Line 2	
5 Town/City	6 State/Province	7 Country United States	8 Zip/Postal Code

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 style="width:95%;" type="text"/>	10 Certifying Official First Name (and MI if appropriate) <input style="width:95%;" type="text"/>
11 Certifying Official Title <input style="width:98%;" type="text"/>	
12 Certifying Official Email Address <input style="width:95%;" type="text"/>	13 Telephone <input style="width:50%;" type="text"/>
Remove This Applicant Add Another Applicant	

Section C - Primary Contact Information (if other than Applicant)			
1 Last Name <input style="width:95%;" type="text"/>	2 First Name (and Middle Initial if appropriate) <input style="width:95%;" type="text"/>		
3 Mailing Address Line 1 <input style="width:95%;" type="text"/>	4 Mailing Address Line 2 <input style="width:95%;" type="text"/>		
5 Town/City <input style="width:95%;" type="text"/>	6 State/Province <input style="width:50%;" type="text"/>	7 Country <input style="width:50%; text-align: center; value: United States;" type="text"/>	8 Zip/Postal Code <input style="width:50%;" type="text"/>
9 Email Address <input style="width:95%;" type="text"/>			10 Telephone <input style="width:50%;" type="text"/>

Section D - Building/Business Owner Information			
1 Last Name <input style="width:95%;" type="text"/>	2 First Name (and Middle Initial if appropriate) <input style="width:95%;" type="text"/>		
3 Mailing Address Line 1 <input style="width:95%;" type="text"/>	4 Mailing Address Line 2 <input style="width:95%;" type="text"/>		
5 Town/City <input style="width:95%;" type="text"/>	6 State/Province <input style="width:50%;" type="text"/>	7 Country <input style="width:50%; text-align: center; value: United States;" type="text"/>	8 Zip/Postal Code <input style="width:50%;" type="text"/>
9 Email Address <input style="width:95%;" type="text"/>			10 Telephone <input style="width:50%;" type="text"/>

Part II Certifying Designer(s) Information			
1 Designer Last Name <input style="width:95%; text-align: center; value: Barnard;" type="text"/>	2 Designer First Name (and Middle Initial if appropriate) <input style="width:95%; text-align: center; value: Jason S." type="text"/>		
3 Designer License# <input style="width:50%; text-align: center; value: 430;" type="text"/>	4 Company Name <input style="width:95%; text-align: center; value: Jason Barnard Consulting, LLC;" type="text"/>		
5 Mailing Address Line 1 <input style="width:95%; text-align: center; value: 4400 VT Route 17;" type="text"/>	6 Mailing Address Line 2 <input style="width:95%;" type="text"/>		
7 Town/City <input style="width:95%; text-align: center; value: Starksboro;" type="text"/>	8 State/Province <input style="width:50%; text-align: center; value: Vermont;" type="text"/>	9 Country <input style="width:50%; text-align: center; value: United States;" type="text"/>	10 Zip/Postal Code <input style="width:50%; text-align: center; value: 05487;" type="text"/>
11 Email Address <input style="width:95%; text-align: center; value: jason@jasonbarnardconsulting.com;" type="text"/>			12 Telephone <input style="width:50%; text-align: center; value: 802-453-2597;" type="text"/>
13 Designer Role(s) (check all that apply)			
<input type="checkbox"/> Water Supply Designer <input checked="" type="checkbox"/> Wastewater Disposal System Designer			
Remove This Designer			

Add Another 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	(b) Street or Road Location
Charlotte	6391 Ethan Allen Highway (U.S. Route 7)
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 <i>(in decimal degrees to five decimal places, ex. 44.38181°)</i>	(b) Longitude <i>(in decimal degrees to five decimal places, ex. -72.31392 °)</i>
N <input type="text" value="44.26658"/> °	W (-) <input type="text" value="73.23140"/> °

Part IV Project Information	
Section A - General Project Information & Questions	
1 Project Name (if applicable)	2 Total Acreage of Property
<input type="text"/>	10.1
3 Business Name (if applicable)	
<input type="text"/>	
4 Detailed Project Description	
Edward J. and Jacinta M. Monniere own a 10.1+/- acre parcel of land located at 6391 Ethan Allen Highway (U.S. Route 7) in Charlotte, Vermont. The property is improved with a 2-bedroom single-family residence that is served by an on-site in-ground wastewater disposal system and is provided water by an on-site drilled well. Based on information provided by Mr. Monniere, the existing wastewater system has failed (i.e. effluent is surfacing downslope of the system) and therefore will need to be replaced. For this reason, Edward and Jacinta Monniere are applying for a Potable Water Supply and Wastewater System Permit so that a replacement pressurized in-ground wastewater disposal system can be installed that will serve the residential property. The replacement pressurized in-ground wastewater disposal system is sized at 150% design flow capacity for a 4-bedroom single-family 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? <input checked="" type="radio"/> Yes <input type="radio"/> No	
(b) Were all existing improved and unimproved lots in existence before January 1, 2007? <input checked="" type="radio"/> Yes <input type="radio"/> No	
6 Does this application include subdividing the property? <input type="radio"/> Yes <input checked="" type="radio"/> No	
7 Has anyone from the Drinking Water & Groundwater Protection Division's Regional Office been to the property?..... <input checked="" type="radio"/> Yes <input type="radio"/> 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)
Brian Tremback	10/13/2015
8 Will any construction occur within 50 feet of a wetland boundary, mapped or designated? <input type="radio"/> Yes <input checked="" type="radio"/> 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? <input type="radio"/> Yes <input checked="" type="radio"/> 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
X		
Add Another Town/Lot		

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	M09B02L65	33	367-368
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	10/26/2015	
X	2	Replacement Wastewater System Details and Notes	10/26/2015	
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	10.1	Residential

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	Lot 1 House	Residential	Prior to 1980	None Found	<input checked="" type="radio"/> Yes <input type="radio"/> No
Add Another Building					
Remove This Lot					

Add Another Lot

Section E - Proposed Project Lot/BuildingDetails

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	10.1	Residential

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	Lot 1 House		<input type="checkbox"/>	Residential

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? Yes 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)? Yes No

3 Is there an existing connection to a water supply or water service line for this project? Yes No

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.

Section B - General Water Supply Questions

1 Does this project involve a failed water supply? Yes No

2 Will any of the proposed water sources serve 25 or more people or have 15 or more service connections? Yes No

If Yes, the applicant must contact the Drinking Water & Groundwater Protection Division at (802) 241-3400 for source, construction and an operating permit.

3 Are any of the existing or proposed water sources located within a special flood hazard area? Yes No

4 Are any of the existing or proposed water sources located within a floodway? Yes 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? Yes No
If Yes, please submit additional information on the site. The Waste Management Division can be reached at (802) 241-3888.

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? Yes No
If Yes, please submit a copy of the approval letter from the Drinking Water & Groundwater Protection Division.

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? Yes No
If Yes, please submit additional information regarding the constituent(s) that exceeds the standards and plans, details, and specifications of the treatment device.

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? Yes No
If in areas of known interference issues, contact the Drinking Water & Groundwater Protection Division at (802) 241-3400.

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 Lot 1 Drilled Well	2 Water Supply Owner (if not Applicant)
3 Water Source Type Non-Public Drilled Bedrock Well	4 Type of Change to Supply New Connection or Increased Flow

5 Lots/Buildings Served by this Water Supply System

	(a) Lot#	(b) Building ID	(c) Type of Change to the Building's Supply	Design Flows (Gallons Per Day)			(g) Rule or Meter Based Flows
				(d) Existing	(e) Change	(f) Total	
X	1	Lot 1 House	Increased Flow (No Construction)	280	210	490	Rule-based
Add Another Lot/Building Served by this Supply				6	7	8	
				280	210	490	

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	Lot 1 Drilled Well	280	210	490
Add Another Water Supply		2	3	4
		280	210	490

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="Lot 1 Replacement 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="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: 50px;" type="text" value="1"/>	<input style="width: 100px;" type="text" value="Lot 1 House"/>	<input style="width: 150px;" type="text" value="Replacement of Failed System"/>	<input style="width: 50px;" type="text" value="280"/>	<input style="width: 50px;" type="text" value="210"/>	<input style="width: 50px;" type="text" value="0"/>	<input style="width: 50px;" type="text" value="490"/>	<input style="width: 100px;" type="text" value="Rule-based"/>
<input style="width: 250px;" type="button" value="Add Another Lot/Building Served by this System"/>				<input style="width: 50px;" type="text" value="280"/>	<input style="width: 50px;" type="text" value="210"/>	<input style="width: 50px;" type="text" value="0"/>	<input style="width: 50px;" type="text" value="490"/>	

- 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

Add Another Wastewater System

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 Lot 1 Replacement System	280	210	0	490
Add Another Wastewater System	2	3	4	5
	280	210	0	490

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

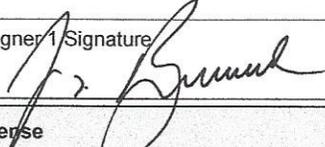
"I hereby certify that in the exercise of my reasonable professional judgment, the design-related information submitted with this application is true and correct, and that the design included in this application for a permit complies with the Vermont Wastewater System and Potable Water Supply Rules and 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	2 Designer 1 Signature	3 Signature Date
Jason S. Barnard		10-26-15

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	2 Designer 2 Signature	3 Signature Date

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	3 Applicant Signature	4 Signature Date
	Edward J. Monniere		
<input checked="" type="checkbox"/>	2 Print Applicant Name	3 Applicant Signature	4 Signature Date
	Jacinta M. Monniere		

Add Applicant Signature Block

ANR Form 4: Certification Statement for Notification of Overshadowed Property Owner(s) pursuant to the Wastewater System and Potable Water Supply Program

A person submitting an application to the Secretary for a Wastewater System and Potable Water Supply Permit where the proposed project has isolation distances (overshadowing) that extend onto property owned by persons other than the permit applicant shall submit the following certification with the application.

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 the individual(s) that own property that is overshadowed by my proposed project have been sent by certified mail a copy of the required notification form and the site plan(s) that accurately depicts all isolation distances. I also certify that I attached to this certification form a copy of all certified mail receipts for notifications that were sent to the affected property owners.

Signature _____

Name (Printed) Edward J. and Jacinta M. Monniere

Property Address or Property Tax ID # 6391 Ethan Allen Highway, Charlotte

Date of this certification _____

Please list all of the property owners who were sent a notification by certified mail.

Affected Property Owner(s) – (Please provide a second sheet using this format when there are more than three affected property owners)

Name Molly R. Smith

Address 6281 Ethan Allen Highway, Charlotte 05445

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

ANR FORM 1
Notice of Overshadowing at the time of Filing an Application for a Wastewater System and Potable Water Supply Permit

To Molly R. Smith (Overshadowed Landowner):

I am currently preparing an application for a State of Vermont Wastewater System and Potable Water Supply Permit. My project proposes a water supply and/or wastewater (septic) system designed to comply with the technical standards of the Wastewater System and Potable Water Supply Rules (Rules). The Rules include required isolation distances around the supply or system. These isolation distances are designed to prevent wastewater systems and water supplies from being built too close to each other in order to protect drinking water quality and human health.

The isolation distances for my proposed water supply and/or wastewater system extend onto your property. The extension of these isolation distances is often referred to as an “overshadowing” of property.

In 2010, the legislature determined that people who own property that will be “overshadowed” by the required isolation distance be notified of that fact. This form is being sent to you in order to provide that notice. Attached to this form is a copy of a plan that shows what I propose to build and the isolation distance(s) that extend onto your property.

Please consider the following facts to help you understand what this actually means to you:

1. Under the existing Rules, an evaluation of the horizontal relationship between existing wastewater systems and potable water supplies and newly proposed wastewater systems and potable water supplies is required during the review of any application. Therefore, the horizontal isolation distance between newly proposed wastewater systems and potable water supplies and the location of your current water supply and wastewater system will be evaluated and determined to comply with the Rules as part of the permit process.
2. A permit application review does not determine if the proposed water supply or wastewater system may affect or restrict potential future development of a water supply or wastewater system on your property. These possible restrictions exist because of the required isolation distances between potable water supplies and wastewater systems.
3. It is important to note that in many instances overshadowing may have no effect on the ability to develop adjoining properties. Whether there is actually any effect is a very site specific determination that depends on a number of factors. For example, the fact that an isolation distance from a wastewater system may prohibit where a well could be drilled may have no real effect because that portion of the neighboring property that is overshadowed by the wastewater system is too steep to be accessed by a well drilling rig. Another example is where a well isolation distance means that no wastewater system could be placed in a certain area but that area is a wetland that prevents the construction of a wastewater system.

ANR FORM 1
Notice of Overshadowing

4. When considering potential effects on your property, you should be aware that you may drill a well within the identified well isolation zone and you may build a wastewater systems in the identified septic isolation zones provided the well or wastewater system complies with the technical standards of the Rules. What may not be allowed without providing additional technical information is putting a wastewater system in a well isolation zone and putting a well in a wastewater system isolation zone.

5. The water supply and wastewater system isolation zones only restrict the construction of water supplies and wastewater systems. Construction of other things such as houses, garages, and driveways may be in the isolation zones as allowed by the Rules.

6. This notification requirement did not start until 2010 and the state permit program has been in place since 1969 so it is possible that there are already water supplies or wastewater systems that “overshadow” your property or that your own wastewater system and/or water supply “overshadows” your neighbor’s property.

7. The Legislature created the notification requirement so that neighbors have the opportunity to discuss the possible effects on future development and potentially resolve them before a well is drilled or a septic system is built. Therefore you are getting this notice before the permit application is filed so that you may consider having those discussions.

8. VERY IMPORTANT: Although the legislature has required notification to potentially affected landowners, the legislature did not give the Agency of Natural Resources the authority to deny a permit application based on isolation zones that may “overshadow” your property.

Please contact me if you have any questions.

Sincerely,

Name of Applicant Edward J. and Jacinta M. Monniere

Address 6391 Ethan Allen Highway, Charlotte, Vermont 05445

Phone Number (802) 425-2805

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

TEST PIT LOG

Client: Edward J. and Jacinta M. Monniere Date: October 13, 2015 Location: 6391 Ethan Allen Highway, Charlotte, Vermont

Project Description: Replacement Wastewater Disposal System Design and Permitting

Logged By: Jason Barnard, Licensed Designer #430-B Topographic Setting: Southerly Sloping Horse Pasture

Current/Historic Land Use: Residential Slope: 8-12% Vegetation: Grass

Weather Conditions: 55° Overcast Method of Excavation: Rubber Tired Backhoe

Test Pit #	Depth (inches)	Dominant Color	Soil Texture	Soil Structure	Consistency	Mottles	Comments
01	0-5"	Brown	Very fine sand (topsoil)	Granular	Loose	No	Well drained
	5-19"	Orange-brown	Gravelly, medium to coarse sand	Granular	Loose	No	Very well drained
	19-31"	Tan-brown	Stony, medium to coarse sand and gravel	Structureless	Loose	No	Very well drained
	31-37"	Tan-brown	Very fine to fine sand	Granular	Loose	No	Very well drained
	37-55"	Brown	Coarse sand and gravel	Structureless	Loose	No	Well drained
	55-60"	Tan-brown	Very fine sand	Granular	Loose	Fine, faint and few at 60"	Well drained, seasonal high water table (SHWT) estimated at 60"
	60-72"	Gray	Silty clay	Sub-angular blocky	Friable	Prominent, common and distinct at 64"	Poorly drained, no groundwater or ledge to 72"

Client: Edward J. and Jacinta M. Monniere Date: October 13, 2015 Location: 6391 Ethan Allen Highway, Charlotte, VT

Test Pit #	Depth (inches)	Dominant Color	Soil Texture	Soil Structure	Consistency	Mottles	Comments
02	0-5"	Brown	Very fine sand (topsoil)	Granular	Loose	No	Well drained
	5-18"	Brown	Medium to coarse sand and gravel	Granular	Loose	No	Very well drained
	18-36"	Brown	Stony, medium to coarse sand and gravel	Structureless	Loose	No	Very well drained
	36-53"	Tan-brown	Cobbly and stony, medium to coarse sand and gravel	Granular	Loose	No	Very well drained
	53-72"	Tan to light gray	Fine sand	Sub-angular blocky	Friable	No	SHWT estimated to be greater than 72" below grade, no groundwater or ledge to 72"

**Edward J. Monniere and
Jacinta M. Monniere
Replacement Wastewater Diposal System
6391 Ethan Allen Highway, Charlotte, Vermont
Percolation Tests of October 19, 2015**

Table 1

P-01	Drop Time (min)	Total Drop Time (min)	Total Drop (inches)	Drop Rate (min/inch)
	0.50	0.50	1	0.50
	1.00	1.50	2	0.75
	1.25	2.75	3	0.92
	1.45	4.20	4	1.05
	1.25	5.45	5	1.09
	2.00	7.45	6	1.24
	2.75	10.20	7	1.46
	---	1440.00	---	7.61

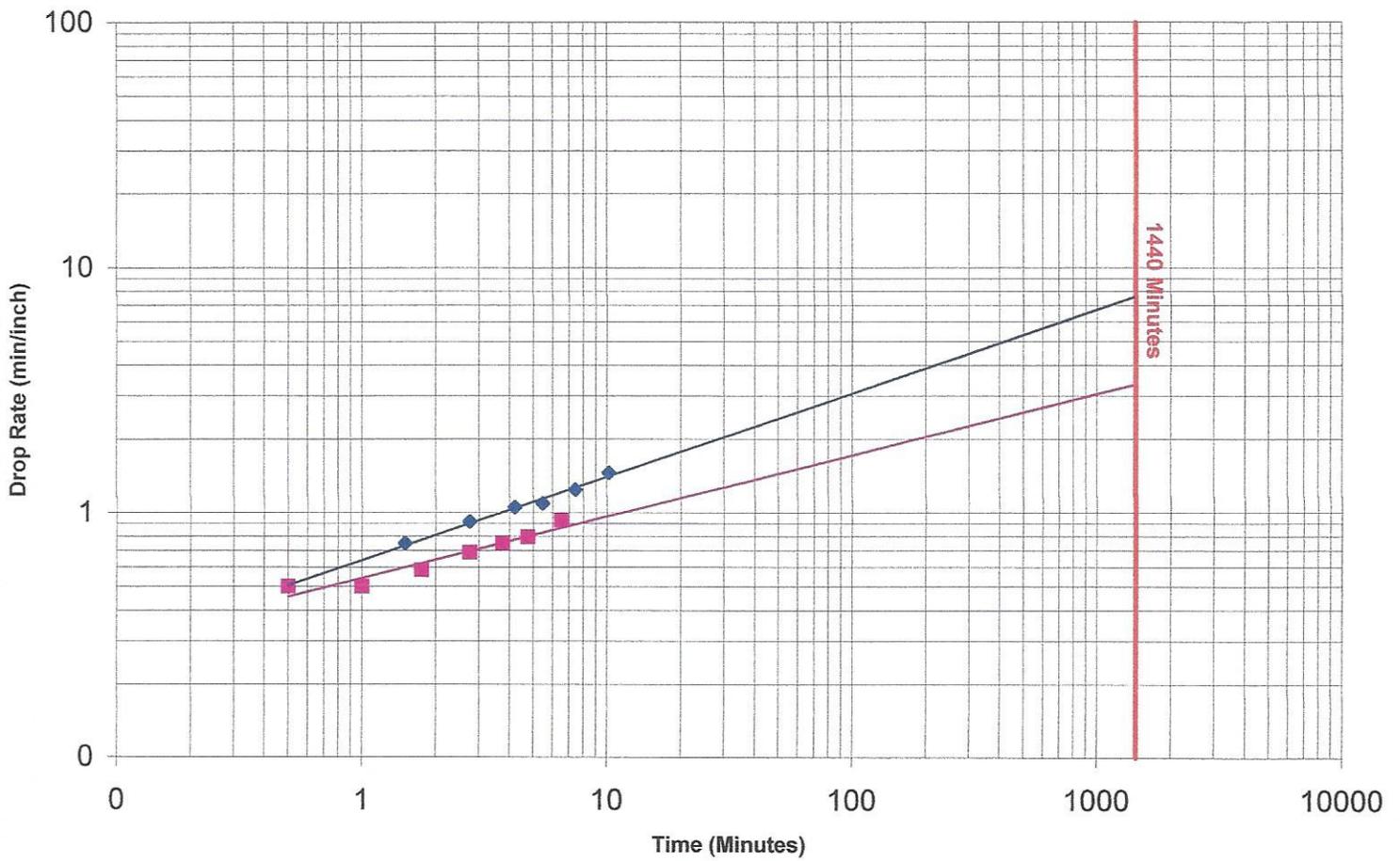
P-02	Drop Time (min)	Total Drop Time (min)	Total Drop (inches)	Drop Rate (min/inch)
	0.50	0.50	1	0.50
	0.50	1.00	2	0.50
	0.75	1.75	3	0.58
	1.00	2.75	4	0.69
	1.00	3.75	5	0.75
	1.00	4.75	6	0.79
	1.75	6.50	7	0.93
	---	1440.00	---	3.35

NOTES:

1. Percolation tests performed at 24 to 34 inches below ground surface.

Edward J. Monniere and
Jacinta M. Monniere
Replacement Wastewater Diposal System
6391 Ethan Allen Highway, Charlotte, Vermont
Percolation Tests of October 19, 2015

Chart 1



PRESSURIZED IN-GROUND WASTEWATER DISPOSAL SYSTEM BASIS OF DESIGN

Edward J. and Jacinta M. Monniere
Replacement Wastewater Disposal System
6391 Ethan Allen Highway, Charlotte, Vermont
October 22, 2015

Prepared By: Jason S. Barnard, Licensed Designer #430-B

Replacement In-Ground Wastewater Disposal System

I. WASTEWATER FLOWS AND IN-GROUND DISPOSAL SYSTEM SIZING

A. WASTEWATER FLOWS

3	Bedrooms	140	gpd/bedroom=	420	gpd
1	Bedrooms	70	gpd/bedroom=	70	gpd
				Total Flows =	490 gpd
150% System Sizing is Utilized = 490 gpd x 1.5 =				Project Design Flows =	735 gpd

B. PERCOLATION RATE

The second slowest percolation rate **3.35 min/inch (P-2)** was used to determine the application rate.

C. WASTEWATER APPLICATION RATE

AR = Application rate for sizing required leachfield area (RLA)
AR maximum = 1.5 gpd/sf for Inground Absorption Trenches
AR = 3/(square root P) for Inground Absorption Trenches
AR maximum = 1.2 gpd/sf for Inground Seepage Beds
AR = 3/(square root P) x 0.8 for Inground Seepage Beds

Selected Ra = **1.5** gpd/sf

D. REQUIRED LEACHFIELD AREA (RLA)

RLA = Q / AR
RLA = **735** / **1.5**
RLA = **490** sf

E. LEACHFIELD AREA PROPOSED (LA)

A = LENGTH (L) x WIDTH (W) x NUMBER (N) OF TRENCHES or BEDS
L = **66** ft
W = **4** ft
N = **2** trenches
LA = **528** sf supplied

F. REQUIRED SEPTIC TANK

Required Septic Tank Capacity = **1,000 gallons** for a **4-bedroom** single-family residence.

II. IN-GROUND DISPOSAL SYSTEM PRESSURE DISTRIBUTION DETAILS

A. PROPOSED PRESSURE DISTRIBUTION SYSTEM

SEE THE ATTACHED ORENCO SYSTEMS, INC. PUMP SELECT SPREAD SHEET FOR THE PROPOSED IN-GROUND DISPOSAL SYSTEM PRESSURE DISTRIBUTION DETAILS.

B. TOTAL NUMBER OF ORIFICES IN THE DISTRIBUTION SYSTEM

Number of Orifices = **22** orifices

C. LEACHFIELD AREA (LA) PER ORIFICE

LA/Orifice = LA / Total Number of Orifices
LA/Orifice = **24.0** sf
LA/Orifice is less than 25 SF per Orifice, therefore the proposed number of orifices is in accordance with the current State of Vermont, EPRs.

PRESSURIZED IN-GROUND WASTEWATER DISPOSAL SYSTEM BASIS OF DESIGN

**Edward J. and Jacinta M. Monniere
Replacement Wastewater Disposal System
6391 Ethan Allen Highway, Charlotte, Vermont
October 22, 2015**

Prepared By: Jason S. Barnard, Licensed Designer #430-B

III. PROPOSED PUMP STATION DESIGN

A. REQUIRED PUMP STATION

Required Pump Station Capacity = **1,000 gallons** for a **4-bedroom** single-family residence.

B. REQUIRED SYSTEM DOSE

Required Dose Volume = **122** Gallons
Pump Station Dimensions: On-Site Septic Solutions 1,000 Gallon Pump Station = 4.67 ft x 7.5 ft
Area of Pump Station = **35.0** sf
Volume per Inch of depth = **21.8** gallons / vertical inch
Pump on/off switch difference setting required for dose: **6** inches

C. REQUIRED PUMP STATION STORAGE

Storage Required = **490** gallons (1 day's flow)

D. PUMP STATION STORAGE

Pump alarm to overflow point height difference = **29** inches
Storage Provided = **633** gallons
Storage provided is greater than 1 day's flow, therefore the proposed pump station is adequately sized.

E. PROPOSED EFFLUENT PUMP

Champion Model Number **CPE5A-22** **1/2 hp** **230 volt** **1 phase**

F. PROPOSED EFFLUENT PUMP OPERATING POINT

See Attached Effluent Pump Curve

Pump Selection for a Pressurized System - Single Family Residence Project

Edward and Jacinta Monniere, 6391 Ethan Allen Hwy, Charlotte / Replacement In-Ground System Pressure Distribution Details

Parameters

Discharge Assembly Size	2.00	inches
Transport Length	260	feet
Transport Pipe Class	40	
Transport Line Size	2.00	inches
Distributing Valve Model	None	
Max Elevation Lift	25	feet
Manifold Length	8	feet
Manifold Pipe Class	40	
Manifold Pipe Size	2.00	inches
Number of Laterals per Cell	2	
Lateral Length	60	feet
Lateral Pipe Class	40	
Lateral Pipe Size	2.00	inches
Orifice Size	7/32	inches
Orifice Spacing	6	feet
Residual Head	4	feet
Flow Meter	None	inches
'Add-on' Friction Losses	0	feet

Calculations

Minimum Flow Rate per Orifice	1.19	gpm
Number of Orifices per Zone	22	
Total Flow Rate per Zone	26.1	gpm
Number of Laterals per Zone	2	
% Flow Differential 1st/Last Orifice	0.8	%
Transport Velocity	2.5	fps

Frictional Head Losses

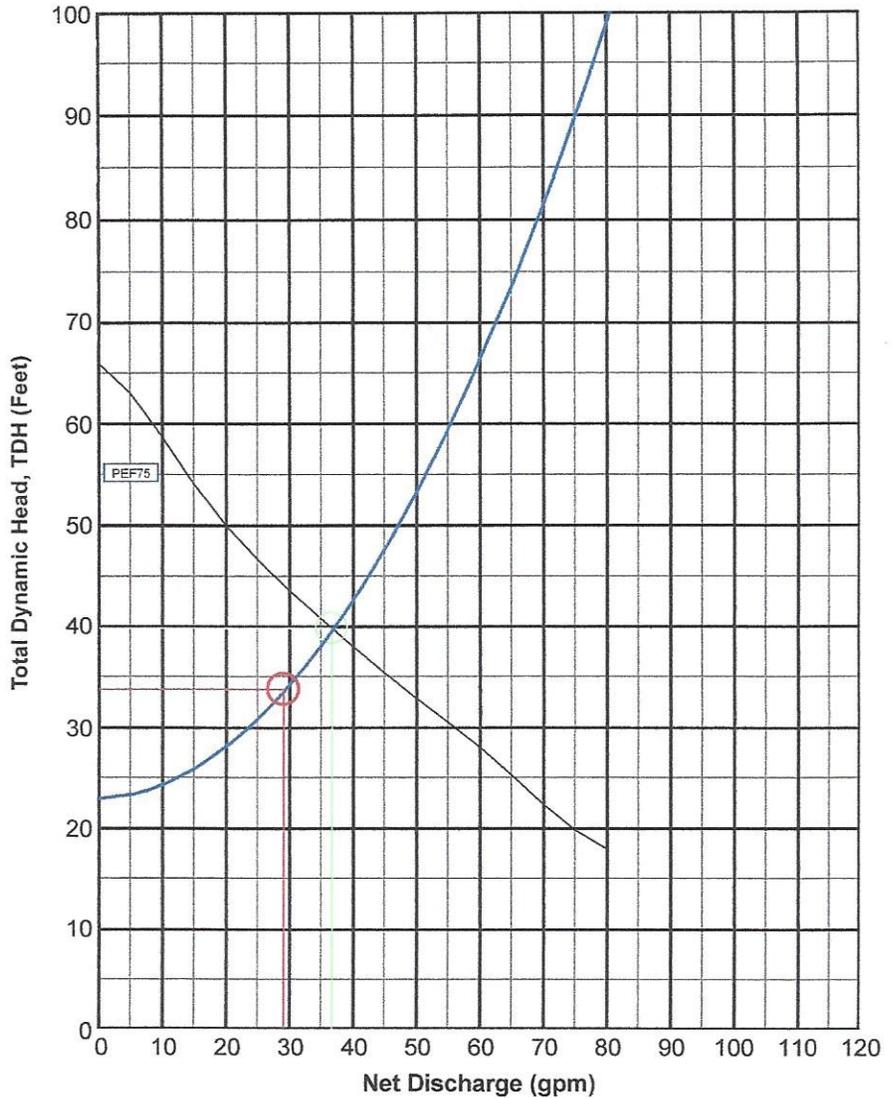
Loss through Discharge	1.4	feet
Loss in Transport	3.1	feet
Loss through Valve	0.0	feet
Loss in Manifold	0.0	feet
Loss in Laterals	0.1	feet
Loss through Flowmeter	0.0	feet
'Add-on' Friction Losses	0.0	feet

Pipe Volumes

Vol of Transport Line	45.3	gals
Vol of Manifold	1.4	gals
Vol of Laterals per Zone	20.9	gals
Total Volume	67.6	gals

Minimum Pump Requirements

Design Flow Rate	26.1	gpm
Total Dynamic Head	33.6	feet



PumpData

PEF75 Effluent Pump
3/4HP, 230V 1Ø

Legend

System Curve:	—
Pump Curve:	—
Pump Optimal Range:	—
Operating Point:	○
Design Point:	○

Champion Pump

CPE 4/10HP & 1/2HP

Edward J. & Jacinta M. Moniere
6391 Ethau Allen Highway, Charlotte -
Replacement Wastewater System

EFFLUENT

Required Effluent Pump
or Equal

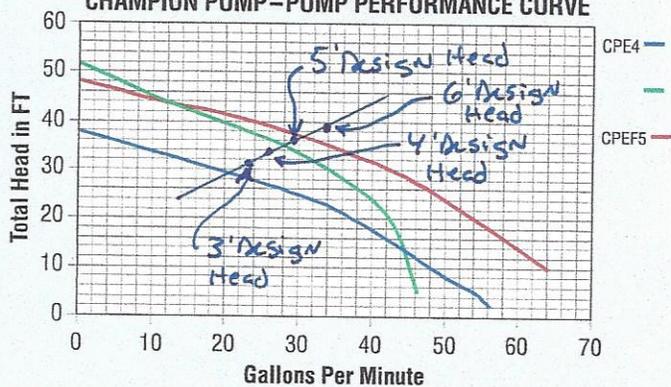
FEATURES/BENEFITS

- High Efficient Motor With Upper & Lower Ball Bearings /Runs Cooler & Last Longer
- Cast Iron Vortex Impeller /Helps Prevent Clogging
- Inboard Seal-Rotating Components Of Seal Are In The Motor Housing, Lubricated By The Motor Oil /Seal Will Last Longer If Pump Runs Dry, Hair And Debris Cannot Wrap Around Seal Components
- Secondary Exclusion Seal /Keeps Debris From Entering Seal Cavity
- Sealed Entry-Replaceable Power Cord /Easy To Replace In The Field, Prevents Water From Entering The Motor Housing Through A Cut Power Cord (Up To 50' Available)
- Piggy-Back Switch Design /Defective Switches Can Be Diagnosed By Phone; Pump Can Be Operated Manually by Overriding The Switch
- Every Pump Is Tested In Water /Ensures That The Pump Meets Head & Flow Requirements

APPLICATIONS

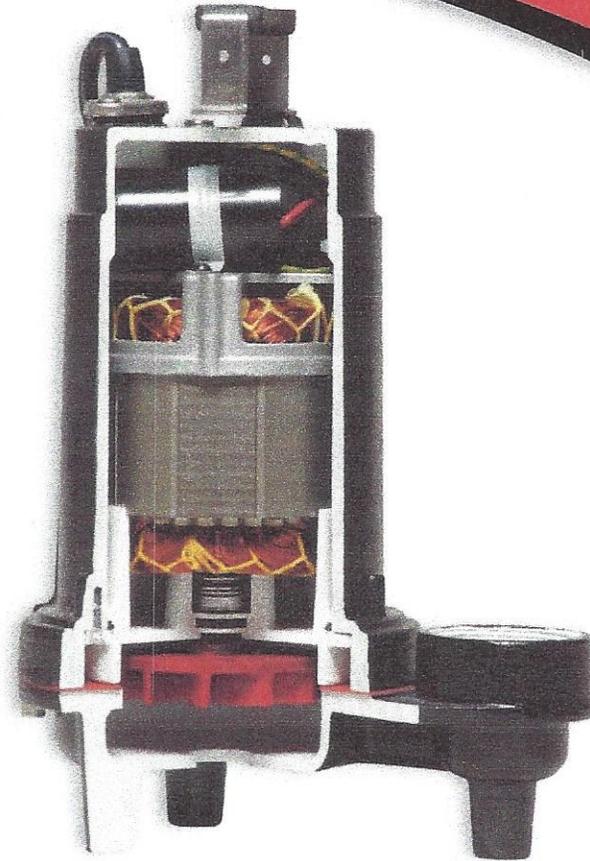
- Dewatering, Elevator Pits, Septic Systems

CHAMPION PUMP - PUMP PERFORMANCE CURVE



Distributed by:

On-site Septic Solutions, LLC
802-644-5500



CPE5V-12



CPE5A-12

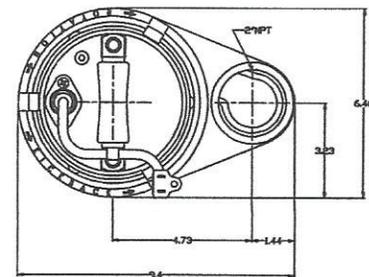
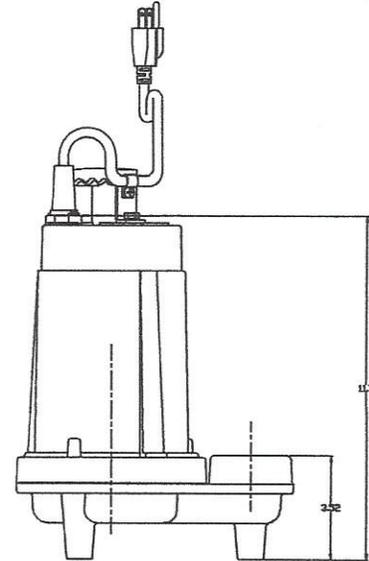
www.championpump.com

Edward J. & Jacinta M. Manziere
6391 Emon Allen Highway, Charlotte
Replacement Wastewater System

Required Effluent Pump
OR Equal

DISCHARGE	2" NPT. Vertical
SOLIDS HANDLING	3/4"
LIQUID TEMPERATURE	140 Degrees F. (Intermittent)
MOTOR HOUSING	Cast Iron
VOLUTE	Cast Iron
SEAL PLATE	Cast Iron
IMPELLER	Cast Iron
SHAFT	Stainless Steel
SHAFT SEAL	Inboard Mechanical With Secondary Exclusion Seal Carbon - Rotating Face Ceramic - Stationary Face Buna-N - Elastomer 300 Series Stainless Steel - Hardware
BEARING (UPPER & LOWER)	Single Row, Ball, Oil Lubricated
HARDWARE	300 Series Stainless Steel
SQUARE RINGS	Buna-N
CORD	(UL/CUL) Listed 16 AWG, Type SJTW 20' Length Standard. Other Lengths Available.
CORD ENTRY	Compression Grommet - Outer Jacket Seal Quick Disconnect Pin Terminals
MOTOR (SINGLE PHASE)	4/10 & 1/2 HP, 3450 RPM. 60Hz NEMA L Includes Overload Protection In The Motor. Oil Filled, Class B Permanent Split Capacitor
WEIGHT	35lbs (Manual)

Required Effluent Pump or Equal



Model	HP	Volts	Phase	Amps	Cord Length	Switch
CPE4-12 • CPE5-12 • CPEF5-12	4/10 • 1/2 • 1/2	115	1	6.6 • 7.2 • 8.5	20	Manual
CPE4-22 • CPE5-22 • CPEF5-22	4/10 • 1/2 • 1/2	230	1	3.3 • 3.6 • 4.3	20	Manual
CPE4-13 • CPE5-13 • CPEF5-13	4/10 • 1/2 • 1/2	115	1	6.6 • 7.2 • 8.5	30	Manual
CPE4-15 • CPE5-15 • CPEF5-15	4/10 • 1/2 • 1/2	115	1	6.6 • 7.2 • 8.5	50	Manual
CPE4A-12 • CPE5A-12 • CPEF5A-12	4/10 • 1/2 • 1/2	115	1	6.6 • 7.2 • 8.5	20	Float
CPE4A-22 • CPE5A-22 • CPEF5A-22	4/10 • 1/2 • 1/2	230	1	3.3 • 3.6 • 4.3	20'	Float
CPE4A-13 • CPE5A-13 • CPEF5A-13	4/10 • 1/2 • 1/2	115	1	6.6 • 7.2 • 8.5	30	Float
CPE4V-12 • CPE5V-12 • CPEF5V-12	4/10 • 1/2 • 1/2	115	1	6.6 • 7.2 • 8.5	20	Vertical Float
CPE4V-22 • CPE5V-22 • CPEF5V-22	4/10 • 1/2 • 1/2	230	1	3.3 • 3.6 • 4.3	20	Vertical Float



ITT

Edward J. & Jacinta M. Monniere
6391 Ethan Allen Highway, Charlotte
Replacement Wastewater System
Pump Station High Water Level
Alarm or Equal

CENTRIPRO Wastewater and Water Systems

TAN3M (XT Alarm System)

- The Tank Alert® XT can be used as a high level alarm in lift chambers, sump pump basins and holding tanks.
- UL Listed (for indoor and outdoor use) and CSA Certified.
- Voltage: 120 VAC, 50/60 Hz, 8.5 watts maximum, (alarm condition)
- Enclosure meets Type 3R water-tight standards, listed for indoor or outdoor use under UL standard 864. Dimensions are 6.5" x 4.5" x 3.0"
- Premounted terminal block so enclosure can also be used as a junction box for splicing pump, pump switch and pump power. Meets NEC standard for junction boxes.
- N.O. float switch has a 15' long, 18 gauge, 2 conductor SJOW (UL) cord
- Mechanical SignalMaster® Float on TAN3M, switches are rated for a maximum fluid temperature of 140° F (60° C)
- Automatic alarm reset, alarm test switch and horn silence switch
- Alarm Horn: 85 decibels at 10 feet (3 meters)
- Does not control or interface with pump
- Operates even if pump circuit fails when wired on separate circuit
- No power cord.

TAN4M (4X Alarm System)

- The Tank Alert® 4X can be used as a weatherproof high level alarm in lift chambers, sump pump basins and holding tanks.
- UL and cUL Listed
- Single phase, 120 volt, 60/50 hertz power supply required, 7 watts max. during alarm condition
- NEMA 4X enclosure rated for indoor or outdoor use.
- No power cord.
- Float Switch: Sensor Float® control switch with mounting clamp, 15' long, 18 gauge, SJOW.
- Stainless steel alarm horn sounds at 88db @ 10' (3 meters)
- NEMA 4X alarm beacon
- Automatic alarm reset and alarm test/normal/horn silence switch
- Dimensions are 6.4" x 5.3" x 5.0"
- Switches are rated for a maximum fluid temperature of 140° F (60° C)
- Does not control or interface with pump
- Operates even if pump circuit fails when wired on separate circuit.

