



POINT BAY MARINA WASTEWATER SYSTEM AND POTABLE WATER SUPPLY APPLICATION

TCE 15-203
1401 Thompson Point Road
Charlotte, VT

Date:
October 2018

Prepared For:
PBM Acquisition, LLC
1401 Thompson Point Road
Charlotte, VT 05445

Prepared By:
Amanda Raab



WASTEWATER SYSTEM AND POTABLE WATER SUPPLY
PERMIT APPLICATION

TABLE OF CONTENTS

1. SITE REPORT
2. ANR FORM 5
3. ANR INTEREST LOCATOR MAP & HAZARDOUS SITE LIST
4. FEMA MAP
5. WASTEWATER SYSTEM AND POTABLE WATER SUPPLY APPLICATION
6. DESIGN CALCULATIONS
7. PUMP SPECIFICATION – GOULDS PE51
8. REFERENCE MATERIAL PREVIOUS PERMIT WW-4-0290-2, -3
9. ATTACHED DRAWINGS
 - a. COVER
 - b. C1-02 EXISTING CONDITIONS
 - c. C2-01 OVERALL SITE PLAN
 - d. C3-01 SANITARY PLAN
 - e. C8-10 WATER AND SANITARY DETAILS BATHROOM RELOCATE
 - f. C8-11 NOTES BATHROOM RELOCATE

15-203 Point Bay Marina
Wastewater System and Potable Water
Supply Application
Charlotte, VT
October 2018



SITE REPORT

The applicant, PBM Acquisition LLC, is submitting this wastewater system and potable water supply permit application to approve the relocation of bathrooms from one existing building to another on a parcel located at 1401 Thompson Point Road in Charlotte, Vermont. The existing parcel is approximately 25.6 acres in size with numerous approved wastewater systems within the property. Refer to the Site Plan for permit approvals for each system. Currently the site is approved under latest permit WW-4-0209-5 which approved a 74 seat restaurant. This amendment is to permit WW-4-0209-3 as it relates to the A-frame's restrooms and associated septic system. This project proposes to relocate all but one bathroom from the A-frame to the restaurant building as the restaurant building is a more desirable location for the facility bathrooms. The bathrooms will occupy the northern most portion of the restaurant building and the remainder of the building will be reserved for the restaurant. The restaurant is Permitted Not Constructed (PNC) and is referred to as such on the plans. The building is referred to as the 'restaurant building' although no restaurant exists at this time and the building is actually vacant. This project does not propose to change any flows or approvals per WW-4-0209-5. This project does not propose infrastructure in the location previously approved under WW-4-0209-5 in order to keep the existing design valid.

Design Flow Note: The A-Frame building and Slips/Moorings flows (currently 1098 gpd) have always been included as one design flow and we have continued this pattern for the water supply since they both draw from the same source, WSID 8204. Since the WW application requires each structure list the wastewater disposal system, the flow was split under WW-4-0209-5. The A-Frame disposes of bathroom waste on-site, in ground and the Slips/Moorings dispose of boat waste in a 4,000 gallon holding tank. For this, 110 gpd was assigned to the A-Frame and 998 gpd for the Slips/Moorings. NO CHANGE is proposed to the A-Frame or Slips/Moorings water or wastewater demands under this application. No additional slips/moorings are proposed as part of this project, therefore, there is no change in design flow for this relocated use.

Fixture count as it relates to water demand is tabulated herein and the faucets proposed to be installed in the new bathroom will conserve even more water than those proposed under WW-4-0209-3, due to modern advances.

Water will be delivered to the bathrooms via a new 1.25" PE connection from a nearby 1" service line. The 1" service line currently comes from the A-frame down to the garbage location near the restaurant building. From here, it will be brought underground to the restaurant building to serve the bathrooms. This project is permitted under WSID 8204. Since this project is proposing the extension of a water service connection that is less than 500' in length, and there is no increase in demand, an amendment to the PTC is not required.

15-203 Point Bay Marina
Wastewater System and Potable Water
Supply Application
Charlotte, VT
October 2018

A new 1000 gallon simplified step tank (septic/pump station combo tank) is proposed to serve the new, relocated bathrooms. This tank will be located on the northern portion of the building and will provide settlement for incoming effluent in a 683 gallon capacity chamber. Effluent will pass through an outlet filter and into a pump station with a 330 gallon capacity. The pumps will move fluid up to the A-frame's existing 1000 gallon septic tank which is in good condition and is already outfitted with an outlet filter. Here, effluent will have secondary settlement before gravity flowing to the D-box and disposal field.

Floor drains are proposed in the bathrooms to collect shower runoff and allow for entire bathroom washdown/spray cleaning.

The existing disposal system was observed the summer of 2018 and based on surface evidence, appears to be in good working condition with no signs of failure noted. The d-box was noted to be in good condition.

Both water and sewer service lines are installed shallow buried and/or on the ground surface as this is a seasonally used facility and depth to ledge creates obstacles for deep bury depths. For this project, both the water and sewer services are proposed underground as they are in or cross roadways. These services will be installed shallow, but with enough cover to protect them from vehicular traffic.

Three hazardous waste sites were identified within a one mile radius of the site and a list of these sites can be found within this application. No increased threat of contamination is anticipated to the proposed water sources as part of this project as the sites are closed.

Department of Environmental Conservation
Wastewater System & Potable Water Supply Permit Application

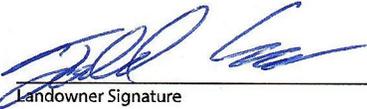
ANR Form 5: Certification Statement for Wastewater System & Potable Water Supply Permits when there is no Required Notification of Overshadowed Property Owner(s)

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.

Landowner Certification

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.



Landowner Signature

Todd Smith

Print Landowner Name

10/11/2018

Certification Date

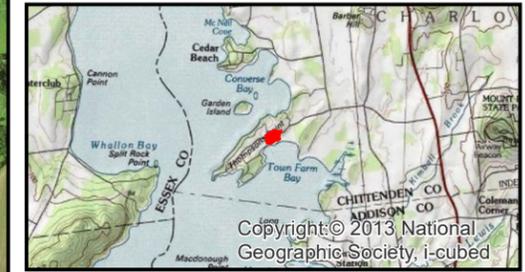
1401 Thompson's Point Road, Charlotte, VT

Property Address or Property Tax ID#

Hazardous Site List - 1401 Thompson Point Road

SITE NUMBER	SITE NAME	LAND USE RESTRICTION	ADDRESS	TOWN	PRIORITY	STAFF	CLOSURE DATE	SITE STATUS	SOURCE OF CONTAMINATION	CONTAMINANTS
982352	Point Bay Marina	No	1401 Thompsons Point Rd	Charlotte	SMAC	Lynda Provencher	6/27/2011		UST-Gasoline	Gasoline
20053385	Gellis Residence	No	45 Island Farm Rd	Charlotte	SMAC	Ashley Desmond	5/8/2006		UST-Heating Oil	Heating Oil
20053428	Sheuer Property	No	5261 Lake Rd	Charlotte	SMAC	Ashley Desmond	12/30/2005		UST-Heating Oil	Heating Oil

Location



Legend

- Project Area
- Project 1 Mile Buffer
- ⊙ Hazardous Sites
- ▲ Public Water Sources
- ▲ Private Wells
- VHD Stream
- VHD Open Water
- Special Flood Hazard Area
- A*
- AE
- State River Corridor
- State Significant Wetland
- State Wetland Advisory
- Groundwater Protection Area*
- Surface Water Protection Area*
- Class A Watershed*
- Floodways*
- State Class 3 Wetland*

*Layer does not occur within map extent.

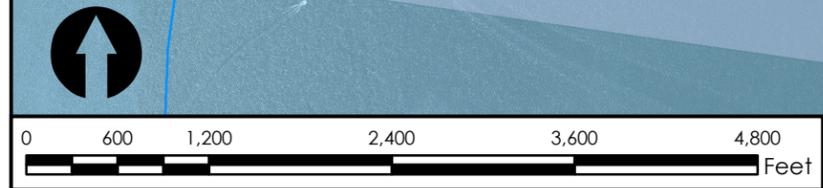
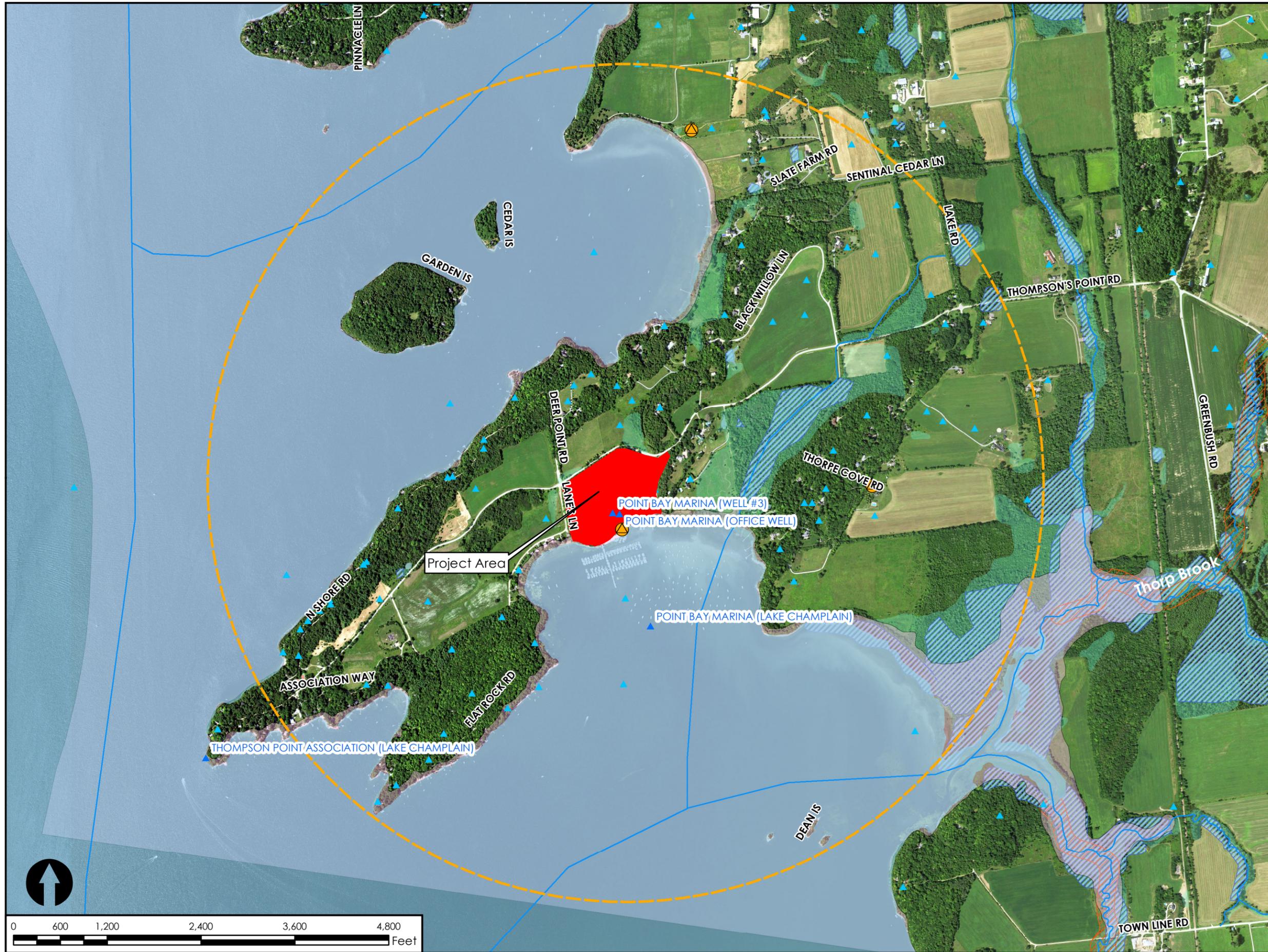
Sources: ESRI Aerial Imagery (2015); VT E911 Roads (2015); Hazardous Waste Sites by ANR (2017); Private & Public Water Sources by DEC (2001/2017); Groundwater & Surface Water Protection Areas by ANR (2011/2010); Streams by VHD (2013); VT Water Classifications by ANR (2017); FEMA Flood Hazard Area & Floodway by ANR (2015); River Corridor by ANR (2015); VT Significant Wetland by ANR (2015); Project Area and Buffer by TCE (2018).

Disclaimer: The accuracy of information presented is determined by its sources. TCE is not responsible for any errors or omissions that may exist. Questions of on-the-ground location can be resolved by site inspections and/or surveys by a registered surveyor. This map is not a replacement for surveyed information or engineering studies.

Point Bay Marina
 1401 Thompson's Point Road
 Charlotte, VT

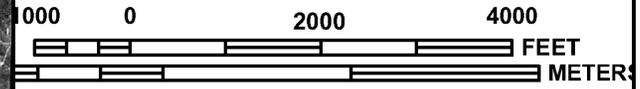
Wastewater Application Map

Project: 15-203
 Prepared By: BJL
 10/11/2018
 1 inch = 1,200 feet





MAP SCALE 1" = 2000'



PANEL 0375D

FIRM
FLOOD INSURANCE RATE MAP
CHITTENDEN COUNTY,
VERMONT
 (ALL JURISDICTIONS)

PANEL 375 OF 500
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHARLOTTE, TOWN OF	500309	0375	D
SHELBURNE, TOWN OF	500193	0375	D

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.



MAP NUMBER
50007C0375D
EFFECTIVE DATE
JULY 18, 2011

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

INFORMATION
 IN THIS MAP
 IS THE PROPERTY
 OF
 CHITTENDEN COUNTY

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"/>

General Information:

IMPORTANT: This application form **IS NOT** intended to be printed and filled out by hand. Because of the dynamic nature of the form, it is required that the information be typed directly into the fields using a computer.

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: <http://dec.vermont.gov/sites/dec/files/dwgwp/wastewater/pdf/WWApplInstructionsRules.pdf>.

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

A. Prior Permits

1 Please enter any prior or related WW permit or Act 250 permit number(s) (if applicable)

WW-4-0209 many

B. Project Name

1 Please enter a name that can be used as a reference for the project

Point Bay Marina

C. Landowner Information**Landowner Name**

1 Legal Entity/Organization Name (if the Landowner is a legal entity or organization rather than a person)

PBM Acquisition, LLC

2 Landowner First Name (and Middle Initial if appropriate)

3 Landowner Last Name

Landowner Contact Information

4 Mailing Address Line 1

1401 Thompson's Point Road

5 Mailing Address Line 2

6 City

Charlotte

7 State/Province

VT

8 Country

United States

9 Zip/Postal Code

05445

10 Email Address

skipper@pointbaymarina.com

11 Telephone

802-425-2431

Landowner Certifying Official Information (if applicable)

12 First Name (and MI if appropriate)

Todd

13 Last Name

Smith

14 Title

Member

15 Email Address

skipper@pointbaymarina.com

16 Telephone

802-425-2431

Add Another Landowner

D. Primary Contact Information (if other than Landowner)

1 First Name (and Middle Initial if appropriate)

2 Last Name

3 Company/Organization Name

4 Mailing Address Line 1

5 Mailing Address Line 2

6 City

7 State/Province

8 Country

United States

9 Zip/Postal Code

10 Email Address

11 Telephone

E. Lot(s) Affected by this Project

1 Please list any and all proposed lots or existing parcels that are directly affected by this project. If this application is an amendment to a previous project, please use consistent lot numbers.

(a) Existing or Proposed Lot	(b) Lot Number	(c) SPAN	(d) Parcel ID	(e) Acres
Existing	1	138-043-11172	41-50-19	26.78

(f) Book Number (ref. 1)	(g) Page Number(s) (ref. 1)	(h) Book Number (ref. 2)	(i) Page Number(s) (ref. 2)	(j) Book Number (ref. 3)	(k) Page Number(s) (ref. 3)
71	682				

(l) Comments



Add Another Lot

F. Project Information

1 Project Description

Move all but one bathroom from the A-Frame/restroom building to the restaurant building - the restaurant is permitted but not yet constructed. No change in design flow, relocating existing use.

2 Total Acreage of Property	3 Town (primary)	4 Town (secondary - if located in more than one town)
25.6	Charlotte	

5 Street Address (911 address if available, otherwise a brief description of the location)

1401 Thompson's Point Road, Charlotte, VT 05445

6 Center of property GPS coordinates - Enter the approximate center of the project 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°)
44.27651	-73.28571

7 If someone from the Drinking Water & Groundwater Protection Division's Regional Office has been to the property for a site visit, please indicate who visited the property and the date of the visit.

(a) Name of Staff Person	(b) Date of Visit (m/d/yyyy)
Brian Tremback	11/11/2015

G. Application Fee

Please refer to the [Application Fee Schedule](#) prior to selecting the Application Fee Code for your project below.

1 Select Application Fee Code	2 Fee Amount Due
(RO1) 560 gpd or less	\$306.25

H. Wastewater System and Water Supply Component Details**Component Information:**

PLEASE READ: The purpose of this section is to provide supplementary information for system components when there are proposed changes to existing conditions or previous permits. In the case that the application includes site plans, the component names on this worksheet must match those on the site plans. If there is a prior permit, the component names must be labeled consistent with plans from the prior permit(s). It is ***required*** that, at a minimum, the following component types must be included for each application: final disposal; pre-treatment (if applicable); building unit(s); water treatment (if applicable); and water source. To add components after the third entry, click the green button labeled "Add Another Component". You may also insert components between components you've already added by clicking the "Insert Component Between" button. For large projects with many components, you may consider using the "Show/Hide Component Set Separator" button to separate sets (or groups) of connected components by naming each set. For additional instructions, please review the appendix to the application instructions: <http://dec.vermont.gov/sites/dec/files/dwgwp/wastewater/pdf/WWApplInstructionsRules.pdf>.

Component 1 Information

Show/Hide Component Set Separator

Remove This Component

Component Group Type	(WW) Final Disposal	Component Type	In-ground
----------------------	---------------------	----------------	-----------

--Component 1 Details--

Component Name	Existing A-Frame Disposal System
----------------	----------------------------------

Insert Component Between

Component 2 Information

Show/Hide Component Set Separator

Remove This Component

Component Group Type	Building	Component Type	Building-Unit	
--Component 2 Details--				
Component Name	A-Frame			
Insert Component Between				
Component 3 Information		Show/Hide Component Set Separator	Remove This Component	
Component Group Type	Building	Component Type		
--Component 3 Details--				
Component Name	Restaurant Building - Bathrooms Only			
Insert Component Between				
Component 4 Information		Show/Hide Component Set Separator	Remove This Component	
Component Group Type	(WS) Source	Component Type	TNC	
--Component 4 Details--				
Component Name	WSID 8204			
Insert Component Between				
Add Another Component				
I. Project Plan Reference				
1 Please provide the following information for all water supply and wastewater system plans being submitted.				
(a) Sheet#	(b) Title	(c) Plan Date	(d) Last Revision Date	
Cover	Cover	2/10/2016		<input checked="" type="checkbox"/>
C1-02	Existing Conditions	10/10/2018		<input checked="" type="checkbox"/>
C2-01	Overall Site Plan	2/1/2016	10/10/2018	<input checked="" type="checkbox"/>
C3-01	Sanitary Plan	2/1/2016	10/10/2018	<input checked="" type="checkbox"/>
C8-10	Water and Sanitary Details Bathroom Relocate	10/10/2018		<input checked="" type="checkbox"/>
C8-11	Notes Bathroom Relocate	10/10/2018		<input checked="" type="checkbox"/>
Add Another Plan Reference				
J. Project Scoping Questions				
1	Does this project involve the replacement of a failed wastewater system?	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
2	Does this project involve the replacement of a failed water supply?	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
3	Does this project involve construction within the buffer for a Class 2 Wetland?	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
4	Does this project involve construction within a river corridor?	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
5	Is the property within 250 feet of the mean water level of lakes greater than 10 acres in size?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
6	Will the project require a public water supply permit?	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
7	Is any portion of the proposed wastewater system located in a Water Source Protection Area (SPA) as designated by the Drinking Water & Groundwater Protection Division?	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
8	Does this project require an Underground Injection Control Permit?	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
9	Is this project located in a Class A Watershed?	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
10	If this project is in a Class A Watershed, does the design flow for the project exceed 1,000 gpd or is the project located on the same lot as other buildings, structures, or campgrounds where the total design flow for the lot is greater than 1,000 gpd?	<input type="radio"/> Yes	<input type="radio"/> No <input checked="" type="radio"/> NA	
11	Are any of the proposed water sources located within 1 mile of a hazardous waste site as designated by the Waste Management & Prevention Division and identified on the Agency mapping website (if Yes, please submit additional information on the site)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
12	Does any building(s) on the property or the proposed project include any floor drains?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	

Not Applicable



Add Another Activity

17 Is there a wastewater discharge from the activities selected in the previous question?

Yes No

K. Consultant/Designer Certification

Consultant/Designer 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."

WW/WS Designer
Consultant/Designer Role

John P. Pitrowiski, P.E.
Print Consultant/Designer Name

Consultant/Designer Signature

10/18/18
Signature Date



Add Second Consultant/Designer

L. Signatures & Acknowledgements of Landowner(s)

This application must be signed by each Landowner listed on the property deed or by individuals with legal authority to sign on behalf of each Landowner. In order to insure compliance with the requirements of the regulations administered by the Department of Environmental Conservation, Drinking Water and 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.

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

[Empty text box for special instructions]

"By signing this application, I certify that I am a landowner listed on the property deed or that I have the legal authority to sign on behalf of the landowner. I understand that by signing this application I am granting permission for the Department employees to enter the property, during normal business 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."

Todd Smith
Print Landowner Name

Landowner Signature

10-16-18
Signature Date



Add Landowner Signature Block

DESIGN CALCULATIONS

WSID 8204

AVERAGE DAY DEMAND (ADD)

EXISTING/PROPOSED – NO CHANGE

Use	Units	Quantity	Wastewater		Water	
			Flow Per Unit (GPD)	Total (GPD)	Flow Per Unit (GPD)	Total (GPD)
Boats	Slips	197	4	788	197	788
	Moorings	108	4	432	108	432
Restaurant	Seats	74	30	2220	74	2220
Total Base Flow				3440		3440
10% Low Flow Fixtures (Table 3 WSPWSR)				-344		-344
Total WSID 8204 Proposed Flow (ADD)				3096		3096
Total Proposed Flow to New Septic System				1998		1998

MAXIMUM DAY DEMAND (MDD)

$$MDD = ADD/720 = 3,096/720 = 4.3 \text{ GPM}$$

INSTANTANEOUS PEAK DEMAND (IPD)

Fixture Group	Quantity	Fixture Units	Total Fixture Units
Bathroom Group (A-Frame/Bathhouse)	1	3.6	3.6
Bathroom Group (Located to Rest. Bld)	4	3.6	14.4
Urinal (Located at Rest. Bld)	1	5.0	5.0
Service Sink (A-Frame/Bathhouse)	1	3.0	3.0
Service Sink (Located at Rest. Bld)	1	3.0	3.0
Kitchen Sink (Restaurant)	2	4.0	8.0
Kitchen Sink (Restaurant Wash)	1	1.4	1.4
Total			38.4
Instantaneous Peak Demand E103.3(3) International Plumbing Code		Table	Q = 25.6 gpm

$$\text{RELOCATED BATHROOM FU} = 22.4 \quad Q = 15.5 \text{ GPM}$$

SIZE WATER LINE FROM A-FRAME TO RESTAURANT BUILDING BATHROOMS

$$C = 140 \text{ FOR PE} \quad L = 307' \text{ AFRAME TO REST. BLD.} \quad D = \text{NOMINAL DIAMETER} \quad Q = 15.5 \text{ GPM} \quad H = \text{HEAD LOSS}$$

$$\text{ASSUME PRESSURE FROM BOOSTER} = 60 \text{ PSI}$$

$$\text{ASSUME MINIMUM REQUIRED PRESSURE AT SINK} = 30 \text{ PSI} \quad \therefore \Delta H_{PD} = 2.31 \text{ FT/PSI} (60 \text{ PSI} - 30 \text{ PSI}) = 69.3'$$

$$\text{DOWNGRADIENT, NEGATIVE GAIN IN HEAD DUE TO ELEVATION} \quad \therefore \Delta H_E = -20'$$

$$\text{FRICTION LOSS FROM 15.5 GPM THROUGH 307' OF 1" (ASSUMED) DR9 5.5'/100' x 307'} \quad \therefore \Delta H_f = 16.8'$$

WASTEWATER SYSTEM AND POTABLE WATER SUPPLY PERMIT
15-203 POINT BAY MARINA
CHARLOTTE, VT
OCTOBER 2018

MAXIMUM ALLOWABLE HEAD LOSS $(H) = H_{\text{PRESSURE DROP}} + H_{\text{ELEVATION}} + H_{\text{FRICTION}} = 69.3' - 20' + 16.8' = 66.1'$

$$h = \frac{10.4 (L)(Q^{1.85})}{C^{1.85} D^{4.87}} \therefore D = \left(\frac{10.4 (L)(Q^{1.85})}{C^{1.85} (h)} \right)^{0.2055} = \left(\frac{10.4 (307)(15.5^{1.85})}{140^{1.85} (66.1)} \right)^{0.2055} = \left(\frac{508,493}{356,215} \right)^{0.2055} = 1.08''$$

USE EXISTING 1" DR9 PIPE

EXTEND SERVICE WITH 1.25" DR9 PIPE

PUMP STATION DESIGN COMPUTATIONS

Bathroom Pump Station

Project Location:

*1401 Thompson's Point Road
Charlotte, VT*

Project Name:

Point Bay Marina

Client:

*Point Bay Marina
1401 Thompson's Point Road
Charlotte, VT 05445*

Date:

October 10, 2018

Project No.:

15-203



478 Blair Park Road
Williston, VT 05495
VOICE (802) 879-6331

PUMP STATION DESIGN COMPUTATIONS

For: 1401 Thompson's Point Road
 Date: October 10, 2018

Project No. 15-203
 Calculated by: ALR
 Checked by: 1

DESIGN DATA:

DESIGN FLOW: **110 Gal/Day**
 NUMBER OF DOSES PER DAY: 8
 FORCE MAIN DIA. (INCHES): 2 inch SDR 21 PVC
 PUMP STA. PIPE DIA (INCHES): 2 inch SDR 21 PVC
 HAZEN WILLIAMS C-VALUE: 130

PUMP CHAMBER SPECIFICATIONS:

DIMENSIONS:

Length: (Inside) 28.00 inches = 2.33 feet
 Width: (Inside) 58.00 inches = 4.83 feet
 DEPTH: (inside) 56.00 inches = 4.67 feet

Weep hole at pump station? (yes / no) no

STORAGE: VOL PER FOOT: 84 gal/ft = 7 gal/in

PRIMARY VOLUME (between on & off) 14 gal/dose

RESERVE VOLUME (above alarm, below inlet) 344 gal = 3.13 days

VOL. IN PIPE RUN (used with weep only) 0 gal

STORAGE ABOVE OFF LEVEL 359 gal

ELEVATIONS: PUMP STA. INLET: 100.04 feet

	<u>Float Elevations</u>	<u>Float Settings</u>
LAG	96.12 feet	1 " above alarm
ALARM	95.96 feet	2 " above on
ON	95.79 feet	6 " above off
OFF	95.62 feet	3 " above pedestal
PEDESTAL	95.37 feet	

CALCULATE STATIC HEAD:

DISCHARGE ELEVATION 120.5 feet
 PUMP OFF ELEVATION 95.6 feet

TOTAL STATIC HEAD ⇒ 24.9 feet

PUMP STATION DESIGN COMPUTATIONS

For: 1401 Thompson's Point Road
 Date: October 10, 2018

Project No. 15-203
 Calculated by: ALR
 Checked by: 1

CALCULATE EQUIVALENT LENGTH:
FRICION LOSSES IN PUMP CHAMBER:

<u>QTY</u>	<u>DIA (IN)</u>	<u>LOSS/FITTING (FT)</u>	<u>FITTING</u>	<u>TOTAL</u>	
2	2	5.5	90 bend	11.0	FT
0	2	2.5	45 bend	0.0	FT
1	2	12.0	tee	12.0	FT
1	2	13.0	check valve	13.0	FT
1	2	55.0	gate or ball valve	55.0	FT
0	2	2.0	reducer (1 size)	0.0	FT
0	2	1.0	increaser (1 size)	0.0	FT
EQUIVALENT LENGTH:				91.0	FT
				91.0	FT

FITTING FRICTION TABLE

<u>Dia:</u>	<u>1.5</u>	<u>2</u>	<u>2.5</u>	<u>3</u>	<u>4</u>
90 bend	4.3	5.5	6.5	8	10.0
45 bend	2	2.5	3	3.8	5.0
tee	9	12	14	17	22.0
check valve	11	13	16	20	26.0
gate valve	43	55	67	82	110.0
reducer (1 size)	1.0	2.0	2.0	3.0	4.0
increaser (1 size)	1.0	1.0	1.0	1.0	1.0

sch 40 (standard weight pipe)

FRICION LOSSES IN PIPE RUN:

<u>QTY</u>	<u>DIA (IN)</u>	<u>LOSS/FITTING (FT)</u>	<u>FITTING</u>	<u>TOTAL</u>	
0	2	5.5	90 bend	0.0	FT
12	2	2.5	45 bend	30.0	FT
0	2	12.0	tee	0.0	FT
0	2	13.0	check valve	0.0	FT
0	2	55.0	gate or ball valve	0.0	FT
0	2	2.0	reducer (1 size)	0.0	FT
0	2	1.0	increaser (1 size)	0.0	FT
				380.0	FT
EQUIVALENT LENGTH:				380.0	FT

TOTAL EQUIVALENT LENGTH: ⇒ 471.0 FT

PUMP STATION DESIGN COMPUTATIONS

For: 1401 Thompson's Point Road
Date: October 10, 2018

Project No. 15-203
Calculated by: ALR
Checked by: 1

SYSTEM CURVE: (For Gravity Feed Distribution Only)

1 min. run time would require max. pump rate of: 14.1 GPM
Select flow range below from 0 to 60 GPM

Q GPM	V FPS	H _F /100 FT	H _F FT	H _S FT	T _{DH} FT
0	0.0	0.0	0.0	24.9	24.9
10	1.0	0.3	1.5	24.9	26.3
20	2.0	1.1	5.3	24.9	30.1
30	3.1	2.4	11.1	24.9	36.0
40	4.1	4.0	19.0	24.9	43.9
50	5.1	6.1	28.7	24.9	53.6
60	6.1	8.5	40.2	24.9	65.1

- 1). Plot Flow (Q) and Head (TDH) on Pump Curve to determine Operating Point
- 2). This table is for free discharge systems only (I.e. D-box & gravity trenches)
- 3). Use Pressure System Curve For Pressure Distribution Fields (mound systems)

SUBMERSIBLE PUMP SPECIFICATIONS:

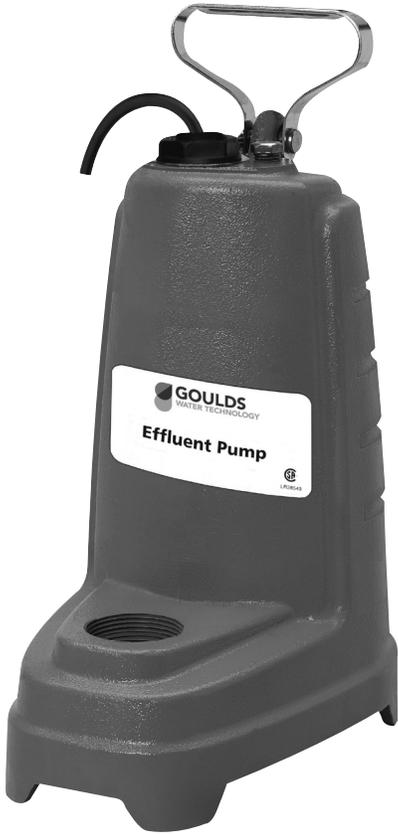
MANUFACTURER: GOULDS
MODEL #: PE51
HORSEPOWER: 0.5

DISCHARGE: 2"
PHASE: 1
IMP:

OPERATING POINT (From Attached Pump Curve):

NOTE: PUMP SHALL MEET THE SPECIFICATIONS ABOVE AND BE CAPABLE OF MEETING THE FOLLOWING FLOW AND HEAD CONDITION. ANY CHANGES TO THE PUMP SPECIFICATION SHALL BE APPROVED BY THE ENGINEER.

240 gpm @ 10 TDH Run time: 0.1 min.



FEATURES

- Corrosion resistant construction
- Cast iron body
- Thermoplastic impeller and cover.
- Upper sleeve and lower heavy duty ball bearing construction.
- Motor is permanently lubricated for extended service life.
- Powered for continuous operation.
- All ratings are within the working limits of the motor.
- Quick disconnect power cord, 20' standard length, heavy duty 16/3 SJTW with 115 or 230 volt grounding plug.
- Complete unit is heavy duty, portable and compact.
- Mechanical seal is carbon, ceramic, BUNA and stainless steel.
- Stainless steel fasteners

PE

SUBMERSIBLE EFFLUENT PUMP



APPLICATIONS

Specially designed for the following uses:

- Mound Systems
- Effluent/Dosing Systems
- Low Pressure Pipe Systems
- Basement Draining
- Heavy Duty Sump/Dewatering

SPECIFICATIONS

Pump - General:

- Discharge: 1½" NPT
- Temperature: 104°F (40°C) maximum, continuous when fully submerged.
- Solids handling: ½" maximum sphere.
- Automatic models include a float switch.
- Manual models available.
- Pumping range: see performance chart or curve.

PE31 Pump:

- Maximum capacity: 53 GPM
- Maximum head: 25' TDH

PE41 Pump:

- Maximum capacity: 61 GPM
- Maximum head: 29' TDH

PE51 Pump:

- Maximum capacity: 70 GPM
- Maximum head: 37' TDH

MOTOR

General:

- Single phase
- 60 Hertz
- 115 and 230 volts
- Built-in thermal overload protection with automatic reset.
- Class B insulation
- Oil-filled design
- High strength carbon steel shaft

PE31 Motor:

- .33 HP, 3000 RPM
- 115 volts
- Shaded pole design

PE41 Motor:

- .40 HP, 3400 RPM
- 115 and 230 volts
- PSC design

PE51 Motor:

- .50 HP, 3400 RPM
- 115 and 230 volts
- PSC design

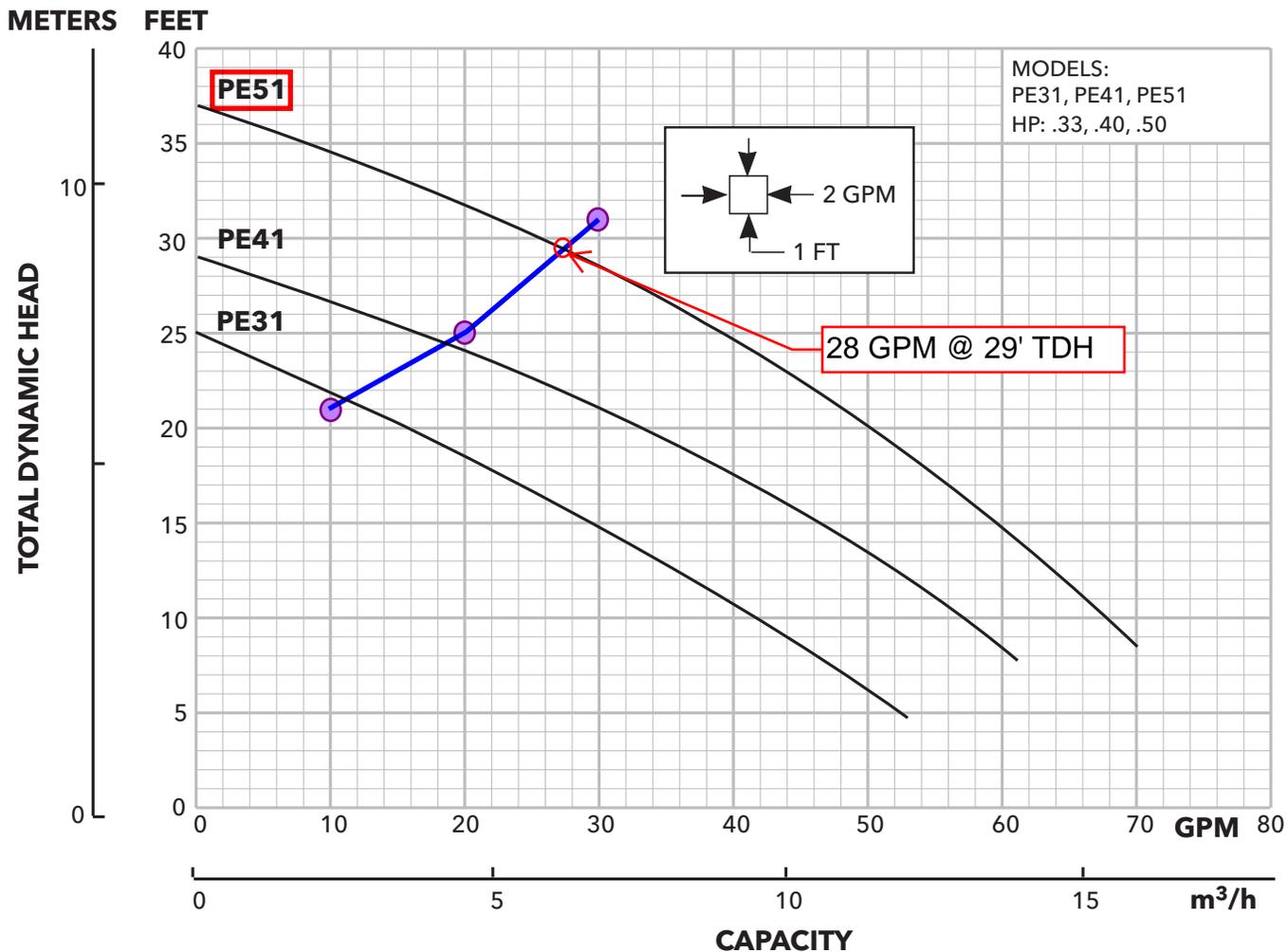
AGENCY LISTINGS



Tested to UL 778 and CSA 22.2 108 Standards
By Canadian Standards Association
File #LR38549

PUMP INFORMATION

Order No.	HP	Volts	Amps	Minimum Circuit Breaker	Phase	Float Switch Style	Cord Length	Discharge Connection	Minimum Basin Diameter	Maximum Solids Size	Shipping Weight lbs/kg
PE31M	0.33	115	12	20	1	Manual / No Switch	20'	1.5"	18"	.5"	31 / 14.1
PE31P1						Piggyback Float Switch					
PE41M	0.4	230	7.5	15		Manual / No Switch					
PE41P1				Piggyback Float Switch							
PE42M	0.4	230	3.7	10		Manual / No Switch					
PE42P1				Piggyback Float Switch							
PE51M	0.5	115	9.5	20		Manual / No Switch					
PE51P1						Piggyback Float Switch					
PE52M	0.5	230	4.7	10		Manual / No Switch					
PE52P1						Piggyback Float Switch					



PERFORMANCE RATINGS

PE31

Total Head (feet of water)	GPM
5	52
10	42
15	29
20	16
25	0

PE41

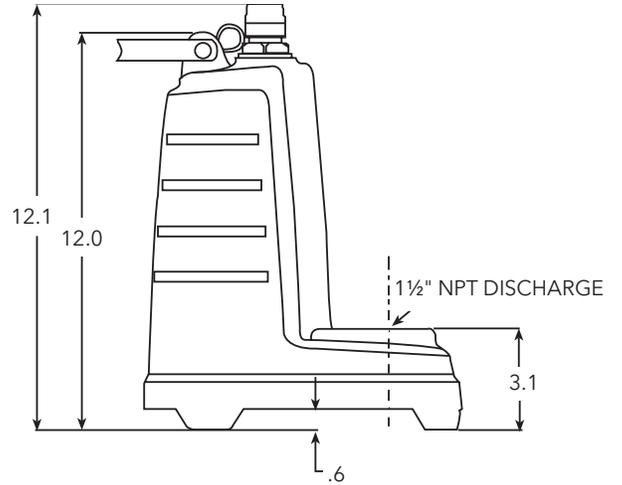
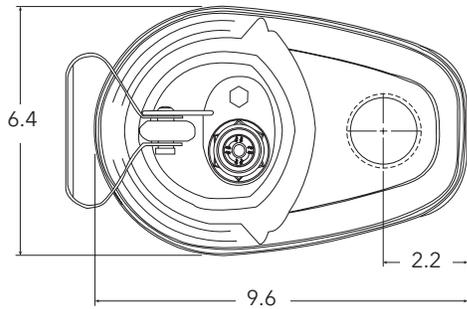
Total Head (feet of water)	GPM
8	61
10	57
15	46
20	33
25	16

PE51

Total Head (feet of water)	GPM
10	67
15	59
20	50
25	39
30	26
35	8

DIMENSIONS

(All dimensions are in inches. Do not use for construction purposes.)



xylem
Let's Solve Water

Xylem Inc.
2881 East Bayard Street Ext., Suite A
Seneca Falls, NY 13148
Phone: (866) 325-4210
Fax: (888) 322-5877
www.gouldswatertechnology.com

Goulds is a registered trademark of Goulds Pumps, Inc. and is used under license.
© 2016 Xylem Inc. BPE R1 September 2016



State of Vermont

WATER SUPPLY AND WASTEWATER DISPOSAL PERMIT

CASE NO. WW-4-0209-2
APPLICANT Allen Martin
ADDRESS Thompson's Point Road
Charlotte, VT 05445

LAWS/REGULATIONS INVOLVED
Environmental Protection Rules
Effective September 10, 1982

This project, consisting of expanding the dock slips at Point Bay Marina by 14 so that the total number of dock slips will be 189 and there will be a maximum of 100 boat moorings located off Thompson's Point Road in the Town of Charlotte, Vermont is hereby approved under the requirements of the regulations named above, subject to the following conditions.

GENERAL

- (1) The project shall be completed as shown on the plans "Site Plan" dated 11/3/93 prepared by Phelps Engineering, Inc. and which have been stamped "approved" by the Wastewater Management Division. The project shall not deviate from the approved plans without prior written approval from the Wastewater Management Division.
- (2) No alterations to any building that would change or affect the exterior water supply or sewage disposal, or the approved use of the building shall be allowed without prior review and approval from the Agency of Natural Resources.
- (3) In the event of a transfer of ownership (partial or whole) of this project, the transferee shall become permittee and be subject to compliance with the terms and conditions of this permit.
- (4) By acceptance of this permit, the permittee agrees to allow representatives of the State of Vermont access to the property covered by the permit, at reasonable times, for the purpose of ascertaining compliance with Vermont environmental/health statutes and regulations, with this permit.

Water Supply and Wastewater Disposal Permit

WW-4-0209-2, Martin

Page 2

- (5) This permit shall in no way relieve you of the obligations of Title 10, Chapter 48, Subchapter 4, for the protection of groundwater.
- (6) The Wastewater Management Division now reviews the sewage and water systems for public buildings under 10 V.S.A., Chapter 61 - Water Supply and Wastewater Disposal Permit.
- (7) All conditions set forth in Water Supply & Wastewater Disposal Permits #WW-4-0209 dated May 31, 1990 and WW-4-0209-1 dated July 30, 1991 shall remain in effect except as modified or amended herein.

SEWAGE DISPOSAL

- (8) The project is approved for the existing subsurface wastewater disposal system. No buildings, roads, water lines, or other construction that might interfere with the installation or operation of the sewage disposal field is permitted on or near the replacement area. All isolation distances as set forth in Chapter 7, of the Environmental Protection Rules, will be incorporated into the construction/installation of the sewage disposal field. Compliance with these isolation distances is required. "The Wastewater Management Division is to be immediately notified if at any time this system fails to function properly and/or creates a health hazard."

Dated at Essex Jct., Vermont this 23rd day of December, 1993.

Jack Long, Commissioner
 Department of Environmental Conservation

By *Ernest P. Christianson*
 Ernest P. Christianson
 Regional Engineer

- cc: For the Record
- Town of Charlotte Planning Commission
- Town of Charlotte Selectmen
- Act 250 Coordinator
- Water Supply Division
- Department of Health
- Department of Labor and Industry
- Phelps Engineering, Inc.

MEMORANDUM

To: File WW-4-0209

From: Ernest P. Christianson, Regional Engineer *EMC*

Date: October 11, 2002

Subject: Point Bay Marina
Dock Expansion

I spoke with Lance Phelps, P.E., today regarding a possible expansion to the docks at Point Bay Marina. I believe they would like 30 additional slips. We had agreed to 4.0 gallons per boat back in File WW-4-0209-2 for the last expansion and information in the file indicates that the number may be 3.1 gallons per boat. I suggested contacting Champlain Marina, the Moorings, and Lance thought about Tudhope's to get more recent data. Lance would also suggest replacing the toilets with ultra low flow or urinals in the men's room.

The information most likely will not be daily readings with the exception of Tudhope's who may have data for past expansions. I said we'd be open to review the data since marinas are not specifically mentioned in the Rules so we have no basis to make a decision except for the water information from similar operations.

Rev. 5/26/93

AGENCY OF NATURAL RESOURCES
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
PERMITS, COMPLIANCE & PROTECTION DIVISION

FOR OFFICE USE ONLY
Permit # WW-4-0209-2
Date Application Received _____
Fee Received _____
Check # _____

WATER SUPPLY AND WASTEWATER DISPOSAL
(Schedule "C" to Master Act 250 Land Use Permit Application)

THERE IS TO BE NO SITE WORK OR CONSTRUCTION COMMENCED ON THIS PROJECT WITHOUT WRITTEN APPROVAL FROM THE AGENCY OF NATURAL RESOURCES.

LANDOWNER:
Name: Allen Martin
(As shown on Deed for Property)

CO-APPLICANT:
Name: _____

Mailing Address: Thompson's Point
Charlotte, VT 05445

Mailing Address: _____

Tele. No.: 802-425-2431

Tele. No.: _____

Business Name (if other than above): Point Bay Marina, Inc.

CONSULTANT: (architect, engineer, site technician)
Name: Peter DeGraff, PE Phelps Engineering, Inc. Tele. No. 802-388-7829

Address: 79 Court Street P.O. Box 367 Middlebury, VT 05753
(mailing) (Street) (Town) (State) (Zip)

A. PROJECT LOCATION: (Attach Map)
Town: Charlotte Road/Highway: Thompson Point Road

B. When was the parcel created? Pre 1970 Size of Parcel: 26.8 acres

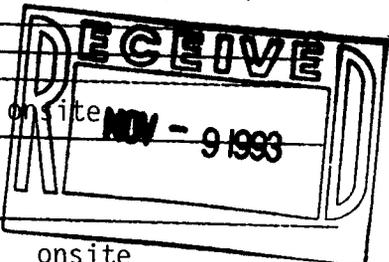
C. List any prior Environmental or Act 250 permits issued for A above: _____

D. Describe the project (be specific: see item #1 on back) (Attach 2 sets of plans)
(See Attached)

E. TYPE OF WATER SOURCE: (Municipal, offsite, community, onsite) onsite
(Attach approval - see #6 on back)

F. Does this water supply serve 2 or more buildings? Yes

G. TYPE OF SEWAGE DISPOSAL: (municipal, offsite, community, onsite) onsite
(if municipal, attach approval - see #5 on back)



H. Number of gallons of sewage generated:
Existing Flows: 1100 gpd Proposed Flows: 56 gpd Total Flows: 1046*

I. APPLICATION FEE: (\$0.36 per gallon of design flow of project - minimum fee of \$100.00 per application.) Make check payable to STATE OF VERMONT. (Municipalities Exempt) (*with low flow retro-fit)

AMOUNT ENCLOSED \$ 56 x \$0.36 = 20.16 \$100 enclosed

11-8-93
DATE

Allen M Martin
SIGNATURE OF LANDOWNER

DATE

SIGNATURE OF CO-APPLICANT

PHELPS ENGINEERING, INC. • MIDDLEBURY, VERMONT

PROPOSED EXPANSION
POINT BAY MARINA
CHARLOTTE, VERMONT

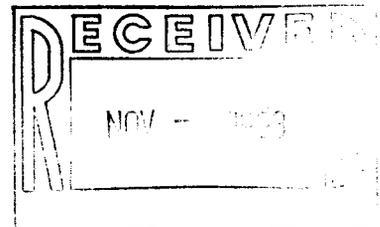
Project Description

The Point Bay Marina proposes the expansion of its existing facilities. Currently the mooring is permitted for 175 slips on a floating finger dock system and 100 moorings. This application is for the addition of 7 finger docks to allow for 14 new slips, as illustrated on the attached site plan. These docks will replace those removed in 1990 during previous State permitting review and will be constructed of the same materials as the existing system.

Subject to permitting, the proposed docks will be installed during the spring of 1994 with the rest of the dock system.

This proposed work is consistent with the current property use and with pre 1989 conditions.

PD:jlg
11/03/93
89431



**PHELPS ENGINEERING, INC.**

79 Court Street
P.O. Box 367
Middlebury, Vt. 05753
Telephone (802) 388-7829

89431

November 3, 1993

Mr. Ernest Christianson
Agency of Environmental Conservation
111 West Street
Essex Junction, VT 05452

Subject: Point Bay Marina Expansion

Dear Ernie:

As we have discussed over the phone, the Point Bay Marina is currently proposing to expand its dock system to allow for 14 additional slips. To offset the additional demands on the existing wastewater system for the public bathhouse, we proposed the replacement of the two existing 4 1/2 to 5 gallon flush toilets and lavatories with water conserving low-flow fixtures. The showers have already been equipped with low-flow shower heads. The 10% reduction in average day demand more than offsets the potential increase in flows from the additional boat slips as shown on the attached calculation sheets.

We will supply product information at your request. If you need additional information or have any questions, please call at your convenience.

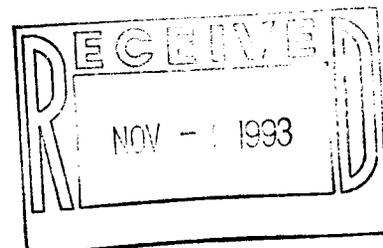
Sincerely,

A handwritten signature in black ink, appearing to read 'Peter DeGraff', is written over a faint, larger version of the signature.

Peter DeGraff, P.E.
Senior Project Engineer

PD:jljg

Enclosure



PHELPS ENGINEERING, INC.
79 Court Street
P.O. Box 367
MIDDLEBURY, VERMONT 05753
(802) 388-7829

JOB Pont Bay Marina 8943
SHEET NO. _____ OF _____
CALCULATED BY P. DeGraff DATE 10/27/93
CHECKED BY _____ DATE _____
SCALE Waste Water Flows

Current Use:

Marina / Bathhouse - Public Toilets / Showers

$$\begin{array}{l} 100 \text{ moorings} \\ 175 \text{ Slips} \\ \hline 275 \text{ boats} \end{array} \times 4 \text{ gpd}^* = 1100 \text{ gpd}$$

Proposed Increase in Boat Slips

$$14 \text{ boats} \times 4 \text{ gpd} = 56 \text{ gpd}$$

Proposal: Convert existing toilets and faucets in bathhouse to low flow fixtures (exist. shower heads are low-flow) for a 10% reduction in ADD.

✓ $1100 \text{ gpd} \times 10\% = 110 \text{ gpd} > 56 \text{ gpd}$ proposed

(Existing Toilets are 5 gallons per flush)

* Using metered information from Tudhope Marina, ADD

$$3.1 \text{ gpd}$$

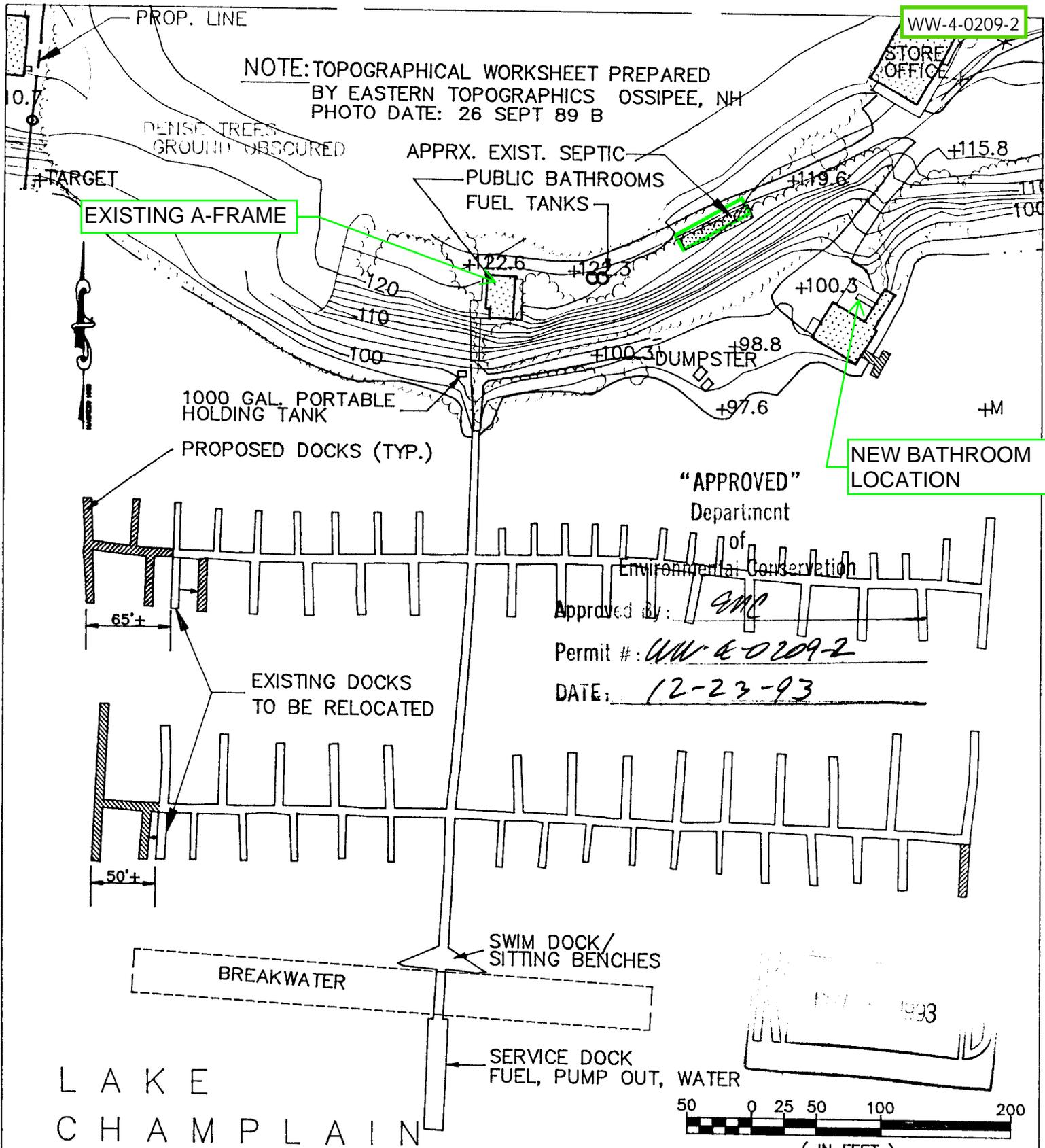
$$3.1 \text{ gpd} \times 275 = 853 \text{ gpd} \times 10\% = 85 > 43 \checkmark$$
$$3.1 \text{ gpd} \times 14 = 43$$

* Using metered

NOV - 1993

WW-4-0209-2

NOTE: TOPOGRAPHICAL WORKSHEET PREPARED
BY EASTERN TOPOGRAPHICS OSSIPEE, NH
PHOTO DATE: 26 SEPT 89 B



"APPROVED"
Department
of
Environmental Conservation
Approved by: *GMC*
Permit #: *WW-4-0209-2*
DATE: *12-23-93*

L A K E
C H A M P L A I N

PHELPS ENGINEERING, INC.
79 Court Street
P.O. Box 367
Middlebury, Vt. 05753
Telephone (802) 388-7829

POINT BAY MARINA
CHARLOTTE, VERMONT

SCALE: 1"=100' DR. BY: PD
DATE: 11/3/93 CK'D BY:

89431-1

SITE PLAN



State of Vermont

WASTEWATER SYSTEM AND POTABLE WATER SUPPLY PERMIT

LAWS/REGULATIONS INVOLVED

Environmental Protection Rules

Effective August 16, 2002

Case Number: WW-4-0209-3

PIN: EJ96-0210

Landowner: Allen M. Martin

Address: 1401 Thompson's Point Road
Charlotte VT 05445

This project, consisting of amending Water Supply and Wastewater Disposal Permit #WW-4-0209-2 for Point Bay Marina to have a maximum of 197 boat dock slips and 108 boat moorings located off Thompson's Point Road in the Town of Charlotte, Vermont, is hereby approved under the requirements of the regulations named above, subject to the following conditions.

GENERAL

1. This permit does not relieve the permittee from obtaining all other approvals and permits as may be required from the Department of Environmental Conservation and local officials **prior** to proceeding with this project.
2. The conditions of this permit shall run with the land and will be binding upon and enforceable against the permittee and all assigns and successors in interest. The permittee shall be responsible for the recording of this permit and the "Notice of Permit Recording" in the Charlotte Land Records within thirty, (30) days of issuance of this permit and prior to the conveyance of any lot subject to the jurisdiction of this permit.
3. Each prospective purchaser of the lot shall be shown copies of the Wastewater System And Potable Water Supply Permit and the approved plans prior to conveyance of the lot.
4. All conditions set forth in Water Supply and Wastewater Disposal Permits #WW-4-0209, #WW-4-0209-1 and #WW-4-209-2 shall remain in effect except as modified or amended herein.
5. The Wastewater Management Division now reviews the water supply and wastewater disposal systems for all buildings under 10 V.S.A., Chapter 64 – Potable Water Supply and Wastewater System Permit.
6. This permit shall in no way relieve you of the obligations of Title 1-, Chapter 48, Subchapter 4, for the protection of groundwater.

Wastewater System and Potable Water Supply Permit
WW-4-0209-3
Allen M. Martin
Page 2

7. A copy of the approved plans and this permit shall remain on the project during all phases of construction and, upon request, shall be made available for inspection by State of local personnel.

Dated at Essex Junction, Vermont on January 16, 2003.

Christopher Recchia, Commissioner
Department of Environmental Conservation

By *Ernest P. Christianson*
Ernest P. Christianson
Regional Engineer

C For the Record
Charlotte Planning Commission & Select Board
Phelps Engineering, Inc.
Water Quality Division

**PHELPS ENGINEERING, INC.**

Frog Hollow Mill • 3 Mill Street
P.O. Box 367
Middlebury, VT 05753
www.phelpseng.com

8943.03

December 11, 2002

Mr. Ernie Christianson
Agency of Natural Resources
Essex Junction Regional Office
111 West Street
Essex Junction, VT 05452

Subject: Point Bay Marina, Inc. - WW-4-0209

Dear Ernie:

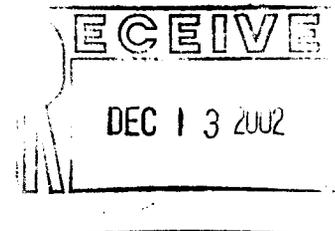
Per our previous telephone conversations and meeting, we have completed a Water Supply and Wastewater Disposal Permit amendment for Point Bay Marina, Inc. Point Bay is proposing to increase their dock slips to 197 and their moorings to 108. Based on previous meter readings by Tudhope Marina and utilizing the low flow fixture credit of 10%, we can increase the total boat allocation while maintaining an overall wastewater flow less than the original 1,100 gallons per day.

Thank you for your cooperation with this project. If you have any questions please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Luther H. Tenny', written over a horizontal line.

Luther H. Tenny, P.E.
Project Manager



LT:kw

c: Steve Gutowski

Enclosure

AGENCY OF NATURAL RESOURCES
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WASTEWATER MANAGEMENT DIVISION

WW-4-0209-3

(For Office Use Only)
Permit# 11-4-6203
PIN EJ96-0210
Comp Appl Rec'd 1/1
Fee Rec'd \$ _____
Check # _____

APPLICATION FOR WATER SUPPLY & WASTEWATER DISPOSAL PERMIT
Pursuant to Section 1-403 of the Environmental Protection Rules

PART I Please print clearly or type your responses.

A. LANDOWNER NAME Allen M. Martin PHONE (802) 425-2431
Please list the name(s) as shown on the deed. If multiple landowners, please provide a separate sheet listing each landowner, mailing address and signature.

MAILING ADDRESS 1401 Thompson's Point Road
Please provide the complete address, including street or P.O. box or rural route number.

Charlotte VT 05445
Town or City State Zip code

B. CO-APPLICANT NAME _____ PHONE _____
Please list the name(s) of the co-applicant, if appropriate. A co-applicant will receive copies of all correspondence regarding the application and permit.

MAILING ADDRESS _____
Please provide the complete address, including street or P.O. box or rural route number.

Town or City State Zip code

CONTACT PERSON: Steve Gutowski
If this application is being submitted by a business, please give us the name of a contact person within the organization, in case we have questions or need more information.

C. CONSULTANT NAME Phelps Engineering, Inc. PHONE (802) 388-7829

MAILING ADDRESS P.O. Box 367
Please provide the complete address, including street or P.O. box or rural route number.
Middlebury Vermont 05753
Town or City State Zip code

D. PROJECT DESCRIPTION

1. Does this project involve a failed water or wastewater system? Yes _____ No X

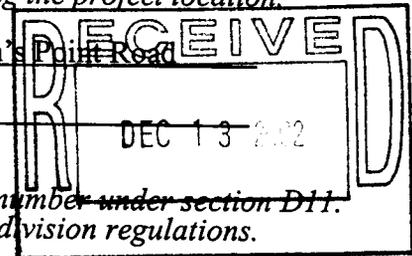
2. Location of project: Enclose a portion of a United States Geological Survey (USGS) Map, town highway map, or accurate site location map showing the project location.

3. Town Charlotte Road Thompson's Point Road

4. Business Name Point Bay Marina, Inc.

5. When was lot created? 1997 ±
If the lot was created after 9/18/69, please provide the permit number under section D11. or provide an explanation for why the lot was exempt from subdivision regulations.
Exceeded 10 acres

6. Size of lot: 16.2 acres ± Please identify the lot(s) by number or letter. Please indicate the size of the lot in acres or square feet. Please indicate the size of all contiguous tracts of land owned by the above landowner. 26.8 acres ±



7. Book 32 Page 1 and 2 Property Tax Map No. _____
Please specify the book and page where the deed for this property is recorded in the city or town land records. This information is not required, but would be helpful in tracking projects.

8. Detailed Project Description: Please describe the proposed use of the building, including number of seats (if a restaurant), number of living units and bedrooms (if residential), number of employees. If a conversion of a building is proposed, please provide prior uses as well as proposed use (use an attached sheet if needed)

Reallocate flows for additional boat slips as shown on attached plan.

Current flows = 189 dock slips and 100 moorings @ 3.6 gpd/boat*

Proposed flows = 197 dock slips and 108 moorings @ 3.6 gpd/boat*

*Original allocation was 4 gpd/boat. New allocation includes 10% low flow credit. Total original flow was 1,100 gpd.

9. Will or does the building have any floor drains? Yes _____ No X
If so, please show the floor drains on the plans and specify the use of the area where they are located, and where the drains discharge.

10. If the project involves an existing building, was this building constructed before 6/1/70? Yes X No _____
If the building was built after 6/1/70, please be sure to specify the permit number in prior permits section of the application form.

11. Prior permits: WW-4-0209-2
Please list all previous permits issued on the same tract of land, such as Land Use Permit, Public Building Permit, Subdivision Permit, Water Supply & Wastewater Disposal Permit, Certificate of Compliance, Deferral of Permit, Home Business Certification, remediation Certification or Act 250 Permits.

12. Description of water supply system: Please check all that apply.
a. X drilled well (bedrock or gravel well), _____ shallow well/spring (less than 30' deep), and X surface water (name of reservoir, lake or river) Lake Champlain
b. _____ individual water supply system or _____ shared water supply system
X public non-community transient or _____ public non-community non-transient water

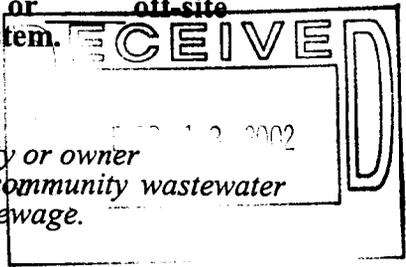
1 lots 2 buildings
Please provide the number of lots/buildings served by the water supply system. wsid??
-ALR
c. _____ public community or municipal water supply system
Water Supply Identification # 8204 name Point Bay Marina, Inc.
Please include a letter from the owner of the water system, or municipality authorizing the connection to the system, and allocation of the water.

d. X an existing water supply system, or _____ a proposed water supply system.

13. Description of wastewater disposal system:
a. X soil-based wastewater disposal system; X on-site, or off-site
b. _____ connection to a non-municipal community disposal system.
c. _____ connection to municipal system
d. _____ connection to Indirect Discharge System

Note: If 13 b, c, or d is checked, please include the name of the municipality or owner and a letter from the person authorized by the municipality or community wastewater disposal system entity approving the connection and allocation of sewage.

Name of system _____



14. Basis of design flow for project:

If the design flows for the project are from more than one type of use, please provide a breakdown of the design flows; such as number of bedrooms per unit, number of employees, number of seats in restaurant, etc. Please refer to the Environmental Protection Rules, Chapter 1, Small Scale Wastewater Treatment and Disposal Rules, effective August 8, 1996, Appendix 1-7A, Flow Quantities.

Number of gallons of sewage generated per peak day:

Existing flows: 1046* Increase in flow: 52 gpd Total Flows: 1,098 gpd
*original was 1,100 gpd

Breakdown of design flows:

197 boat slips and 108 moorings @ 3.6 gpd/boat = 1,098 gpd

15. Easement Information - If the water supply or wastewater disposal system (including any water or sewer lines) is located on land owned by others, or crosses land owned by others, please submit a letter from the landowner stating that they will provide an easement to the applicant. Please submit a copy of the signed easement agreement.

16. Is any portion of the property in or near a wetlands, or is there a wet area on the property? Yes X No . Adjacent to Lake Champlain. Coordinating with Lakes and Ponds and Corps of Engineers.

Wetlands, and sometimes a buffer around the wetland, are protected by federal and/or state laws. Where known and applicable, please show wetlands on the site plans. Contact the wetlands program at (802) 241-3770 for further information.

E. Application fee: \$37.00* A fee of \$0.42 per gallon of design flow is required. There is a minimum fee of \$115.00 per application.

*Amendment with little or no technical review.

Please make the check payable to STATE OF VERMONT. Municipalities are exempt from fee requirements unless the application is for a new public water supply.

For new public non-community transient or public non-community non-transient water sources, please include an additional fee of: (\$235.00 +(\$0.0047 x design flow)).

F. SIGNATURES/ACKNOWLEDGMENTS

1. In order to insure compliance with the requirements of the regulations administered by the Department of Environmental Conservation, it may be necessary to visit the property subject to this application. If we do visit your property, do you have any special instructions?

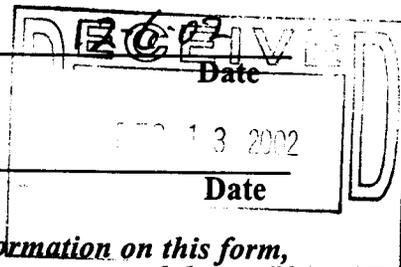
Call Prior

2. 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 Department employees to enter the property, during normal working hours, to insure compliance of the property with the applicable rules of the Department.

3. I 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.

Allen M. Martin
Landowner(s) Name (printed)
(as shown on Deed)

Allen M. Martin
Signature



Landowner(s) Name (printed)
(as shown on Deed)

Signature

Date

If there is more than one landowner, and there is not room to fit the information on this form, please provide an additional sheet with the names, mailing addresses, signatures and dates. If an attorney signs for the landowner(s), please submit a copy of the authorization document that grants the Power of Attorney specific to land transactions.

A. SITE DATA

1. Is any portion of the proposed wastewater system in a water Source Protection Area as designated by the Water Supply Division? yes no.
The Water Supply Division can be reached at 241-3400.

2. Is the proposed well located within 1 mile of a hazardous waste site as designated by the Hazardous Materials Division? yes no.
The Waste Management Division can be reached at 241-3888. The sites list can also be found on the Internet at www.anr.state.vt.us/dec/wastediv/rcra/list.htm

3. Classification of Water System

- a. non public - private water system serving less than 25 persons
- b. X public transient non-community - serving 25 or more people for at least 60 days per year. For example, restaurants, motels, campgrounds, convenience stores with deli.
- c. public non-transient non-community -serving 25 or more of the same people for more than 6 months per year. For example, schools, factories, office buildings, licensed day care centers
- d. public community - serves residents on a year round basis (15 or more service connections, or 25 or more people)

4. Site visit with regional office staff: X yes no. Date of visit 1994

Please provide the name of regional office staff present _____

B. SOIL DATA (See Section 1-307C and Section 1-707 of the Environmental Protection Rules for further information.) The following information must be provided by the consultant for each lot, either as an addendum to the application or on the site plan, unless the project is to be served by municipal sewer services.

1. Soil Excavations: Submit test results of all pits which were excavated and show their location on the site plan. Each test pit description should include:

a. Date of soil excavations: _____ Lot # _____

Method of excavation: _____

Depth to the estimated seasonal high water table _____

Depth to ledge _____

b. Description of soil layers based on structure, density, texture, and color.

c. Description of compact layer, bedrock, water, signs of seasonal high water table, and mottling.

2. Percolation Tests: (See Appendix 1-7C of the Environmental Protection rules for information on percolation test procedures. Tests must be taken entirely within the most dense, least permeable native soil identified within one (1) to three (3) feet below the bottom of the infiltrative surface of the proposed wastewater disposal system. Submit the following information for each test:

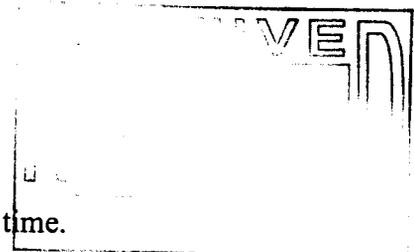
a. Date of test _____

b. Depth of hole _____

c. Diameter of hole _____

d. Depth of water used for testing _____

e. Time of each run, refill time between each run, and total elapsed time.

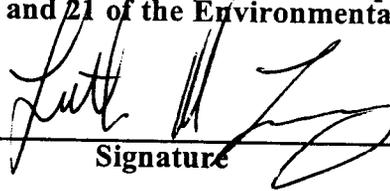


3. Site Modification: Sites requiring site modifications cannot be considered "Projects." WW-4-0209-3

- a. Is surface drainage required? Yes No If yes, please describe and indicate on the site plan. _____
- b. Is subsurface drainage required? Yes No If yes, please describe and indicate on the site plan. _____
- c. Is filling of the area required? Yes No If yes, please describe type of fill, depth of the fill and indicate the area to be filled on the site plan. _____
- d. Is regrading of the area required? Yes No If yes, please describe regrading, amount of area to be regraded, and indicate the area to be regraded on the site plan. _____

Consultant's Statement: The proposed design for each water supply and wastewater disposal system complies with Chapters 1 and 21 of the Environmental Protection Rules to the best of my knowledge.

Luther H. Tenny, P.E.
Consultant Name (printed)


Signature

12/11/02
Date

C. CONSULTANTS CERTIFICATION FOR MINOR PROJECTS
(Pursuant to Chapter 1 section 1.102(N) and 1-201(M) of the Environmental Protection Rules)

"Minor projects" means a single lot subdivision and projects with a design flow of less than 600 gallons per day where site conditions are favorable for on-site sewage disposal so that no site modifications are required. Projects involving industrial waste shall not be considered minor projects.

For minor projects as defined in section 1-102 (N) where the consultant submits a certification with the application stating that the project complies in all respects with these rules, the Division relied solely upon the certification and application as submitted and that the permit may be revoked if it is determined that the project does not comply with these rules as certified. False or misleading certification under this section shall be a violation of these rules, and the statute(s) under which the application is filed, by the person completing the certification.

The following shall be included in any certification submitted under this section:

"I hereby certify that the application submitted herewith is for a minor project as defined in the Vermont Environmental Protection Rules, section 1-102 (N), that all the information submitted with this application is true and correct, and that the design of this project complies in all respects with the Environmental Protection Rules."

Consultant Name (printed)

Signature

Date

This is the official Water Supply & Wastewater Disposal Permit. It is available on disk. Please do not alter or use your own version.

