

MAIN OFFICE:

49 Herring Pond Road
Buzzards Bay, MA 02532
TEL: (508) 833-0070
FAX: (508) 833-2282



NANTUCKET OFFICE:

19 Old South Road
Nantucket, MA 02554
TEL: (508) 325-0044
www.brackeneng.com

March 26, 2024

Hand Delivery & Email [kshea@townofbourne.com]

RECEIVED

By Bourne Health Department at 3:36 pm, Mar 26, 2024

Bourne Board of Health
Kaitlyn Shea, Assistant Health Director
24 Perry Avenue
Bourne, MA 02532

**RE: Bourne Board of Health Variance/Waiver Request – Proposed Septic Upgrade
18 Spindrift Lane (Map 26.3, Parcel 51)**

Dear Members of the Board:

On behalf of the owner/applicant, Vincent Michienzi, please accept this letter as a request for the following variances to 310 CMR 15.00 (Title 5) & the Town of Bourne Health Regulations for a proposed septic installation at the above referenced property. We request the following *Local Upgrade Approval Waivers and Local Variances*:

- 310 CMR 15.405(1)(b) – a reduction in the required setback to the existing cellar wall: an 8’ divergence for a 12’ setback for the Presby EnviroSeptic leaching system (system component).
- 310 CMR 15.405(1)(f) – a 50’ divergence from full compliance for a soil absorption system within an existing Coastal Bank “A”.
- 310 CMR 15.405(1)(f) – a 27’ divergence from full compliance is requested for a 23’± setback to a soil absorption system from an existing Coastal Bank “B”.
- 310 CMR 15.405(1)(f) – a 4’ divergence from full compliance is requested for a 21’± setback to a septic tank from an existing Coastal Bank “B”.
- A variance to local setback requirements for a 150’ reduction in setback for a 0’ setback to a Coastal Bank “A” from a soil absorption system.
- A variance to local setback requirements for a 127’ reduction in setback for a 23’ setback to a Coastal Bank “B” from a soil absorption system.
- A variance to local setback requirements for a 84’ reduction in setback for a 66’ setback to a Bordering Vegetated Wetland from a soil absorption system.

The above variance and Local Upgrade Approval requests are being made as a result of the size and existing topography of the parcel located at 18 Spindrift Lane and would upgrade the existing septic to comply with Title 5 to the maximum extent possible. The subject locus is a 13,803 s.f. developed parcel containing an existing single-family home. It is surrounded by single-family dwellings to the west and east and north with Spindrift Lane to the south. Resource areas on or adjacent to the parcel include Bordering Vegetated Wetlands, Land Subject to Coastal Storm Flowage (LSCSF), and Coastal Bank. The parcel partially lies within the FEMA Special Flood Hazard Zone “VE” (El. 18) and entirely within Zone “AE” (El. 15).

The location of the proposed Soil Absorption System was chosen to maximize setback distances from structures and resource areas while being contained within existing disturbed areas and the extents of the parcel. The proposed system has been sited to have the least effect on public health, safety and the environment. To aid in effluent treatment, additional nitrogen removal shall occur via the proposed MicroFAST 0.5 unit. Bracken Engineering, Inc. is requesting that the Bourne Board of Health diverge from the goal of full compliance by



allowing the variances requested above. The design allows for the best feasible upgrade within the borders of the lot and confines of the existing resource areas.

Bracken Engineering, Inc. is requesting that the Bourne Board of Health deviate from the goal of full compliance by allowing the *Local Upgrade Approval Waivers and Local Variance* requested above. The above *Local Upgrade Approval Waivers and Local Variances* are being made because of the parcel's small size and its proximity to adjacent resource areas. The design provides the best treatment within the borders of the lot and confines of the existing resource areas.

Thank you for your time and consideration on this matter. We look forward to reviewing this project with the Board of Health at the April 10, 2024 Public Hearing. Should you have any questions regarding this project or require any further information please contact the undersigned at either 508-833-0070, zac@brackeneng.com or robert@brackeneng.com.

Sincerely,

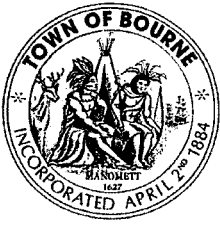
BRACKEN ENGINEERING, INC.

A handwritten signature in black ink, appearing to read 'Zachary L. Basinski', written over a horizontal line.

Zachary L. Basinski, P.E., C.F.M.
Senior Project Manager

A handwritten signature in black ink, appearing to read 'Robert E. Dewar', written over a horizontal line.

Robert E. Dewar, E.I.T.
Project Engineer



Bourne Board of Health Application for Septic Variance or Waiver Requests



In accordance with the established procedures of the Bourne Board of Health, this application is for septic variances and waivers which have not been approved administratively and require approval at a public meeting. Please use the following application form for guidance on how to apply for variances and waivers which serve new construction, changes in use, increases in flow, or repairs and upgrades to on-site sewage disposal systems with design flows of less than 10,000 gallons/ day.

1. Facility Name and Address:

Owner's Name
 Vincent P. & Noreen Michienzi

Facility's Street Address
 18 Spindrift Lane (Map 26.3, Parcel 51)

Owner's Telephone Number
 508-326-8645

Owner's E-mail Address
 vpmichienzi@aol.com

Owner's Mailing Address
 76 Mashnee Road, Bourne, MA 02532

2. Applicant or Preparer's Name and Address (if different from above):

Preparer's Name
 ZACHARY L. BASINSKI, PE, CFM

Company
 BRACKEN ENGINEERING, INC.

Telephone Number
 508-833-0070

E-mail Address
 ZAC@BRACKENENG.COM

Mailing Address
 49 HERRING POND ROAD, BUZZARDS BAY, MA 02532

3. Type of Facility (check all that apply):

Residential Commercial Institutional School Industrial Mixed Use

4. Describe Facility (i.e. single-family dwelling, 45 seat restaurant): _____
 Single-family dwelling. _____

5. Type of System Proposed (check all that apply): Conventional Title 5 I/A System

Pumped System Gravity System Pressure Dosed Tight Tank Other

6. Describe the existing and proposed septic system components: _____
Proposed - MicroFast 0.5 unit septic tank and blower unit
Proposed SAS - Presby Enviro-Septic with an effective leaching field of 532 SF.

7. Design Flow per 310 CMR 15.203 (in gallons/ day):

	EXISTING	PROPOSED
Design flow of system:	110 GPD/Bedroom	110 GPD/Bedroom
Total design flow of facility: <i>(if more than one system on subject property)</i>	440 GPD	440 GPD


8. Enclose a **letter of request for variances/waivers** which makes reference to the specific provisions of Title 5 and/ or the Board Bourne of Health Regulations for which a variance is sought. Please use this opportunity to demonstrate compliance with 310 CMR 15.410, and to justify the relevant facts and circumstances of the individual case. Note that with regard to variances for new construction, enforcement of the provision from which a variance is sought must be shown to deprive the applicant of substantially all beneficial use of the subject property in order to be manifestly unjust. Be sure to explain why full compliance with the applicable regulations is not feasible, and how a level of environmental protection that is at least equivalent to that provided under Title 5 and the Board of Health Regulations can be achieved without strict application of said regulations.


9. In order for this Application to be deemed complete, it must be accompanied by the following:

- \$125 filing fee + any other applicable permit application fees paid to the Town of Bourne.
- Application for a Disposal System Construction Permit (may be filled out by installer).
- Six copies of Letter of Request describing nature of variances.
- Six sets of complete engineered plans and specifications, one with original stamp of design engineer; plus, one electronic copy. All variances/ waivers must also be listed on the plans per 310 CMR 15.220(4).
- Six sets of floor plans, existing and proposed.
- Six copies of [Nitrogen Loading Calculation Worksheet](#) *required for all applications.
- If abutter notification is required, one of each of the following must be submitted:
 - A copy of the certified list of abutters from the Assessor's Department.
 - Sample letter for abutter notification postmarked 10 days prior to meeting date.
 - Proof of certified mailing (receipts) meeting requirements of 310 CMR 15.405(2).
- Proposals for installation of Innovative/Alternative septic systems must be accompanied by:
 - A copy of the Certification for Use including technology specific conditions.
 - Draft [disclosure notice for the I/A technology](#) to be recorded in the deed.
- Hydrogeologic data may be required for new leaching facilities proposed within 100ft of a wetland/watercourse.
- [Percentage of Increase Worksheet](#) may be required for waivers or increases in flow.

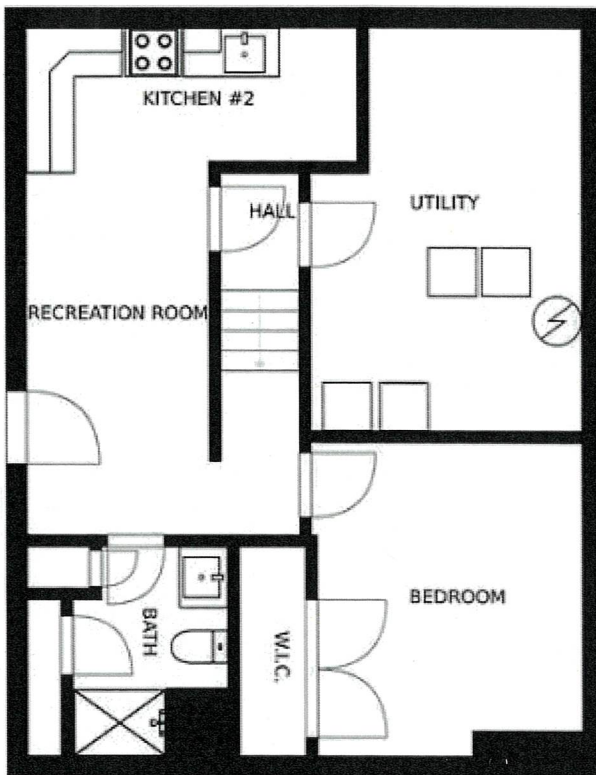
10. Certification:

"I certify under penalty of law that this document and all attachments, to the best of my knowledge and belief, are true, accurate, and complete. I am aware that there may be significant consequences for submitting false information, including, but not limited to, penalties or fine and/or imprisonment for deliberate violations."

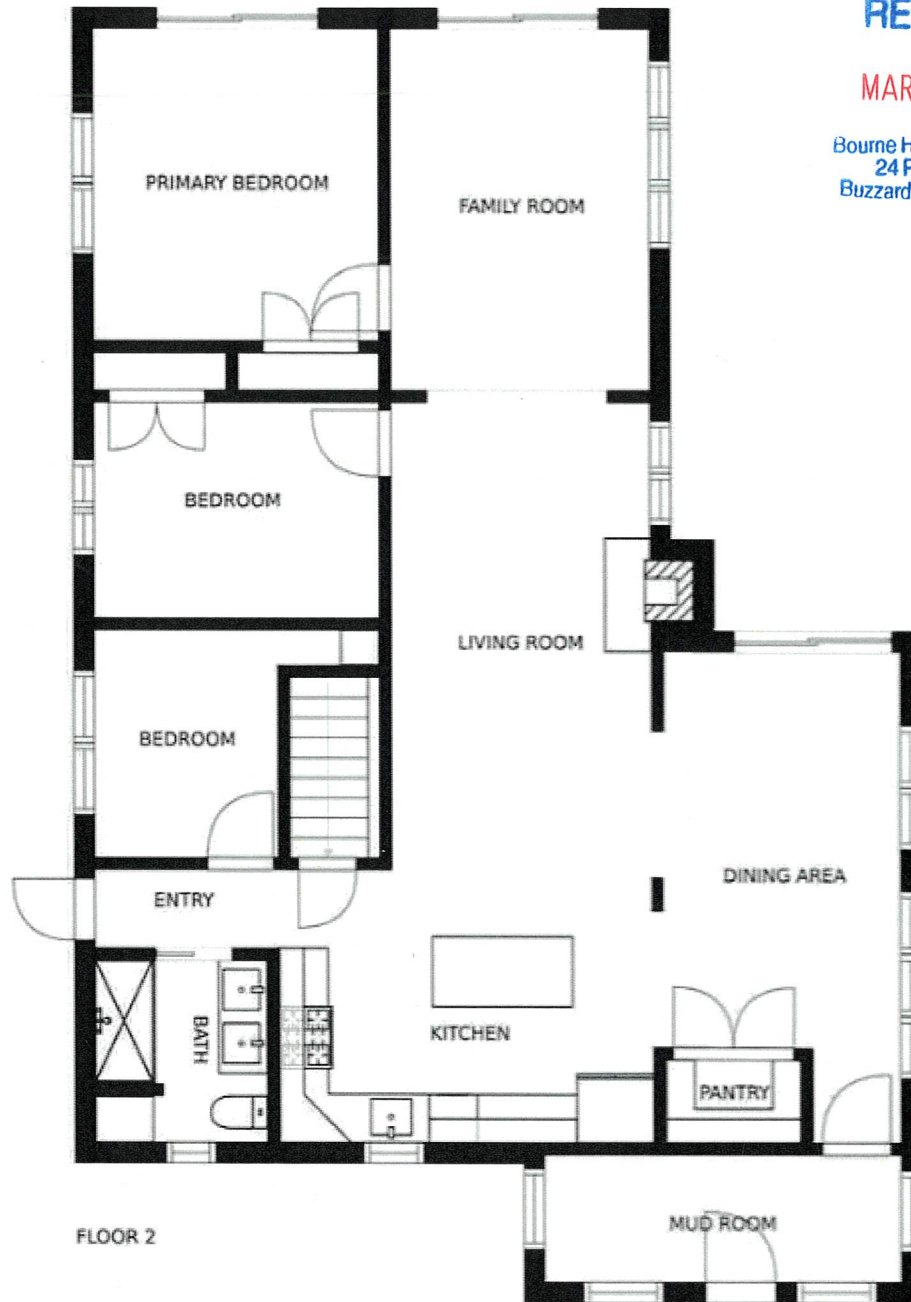
Facility Owner's Signature  Zachary L. Basinski Date 3/24/2024
 Print Name Vincent P. Michienzi Bracken Engineering
AS Agent for

Signature of Preparer  Zachary L. Basinski, PE, CFM Date 3/24/2024
 Print Name ZACHARY L. BASINSKI, PE, CFM AS AGENT

**EXISTING FLOOR
PLANS
18 SPINDRIFT LN**



FLOOR 1



FLOOR 2

RECEIVED

MAR 28 2024

Bourne Health Department
24 Perry Avenue
Buzzards Bay, MA 02532



Town of Bourne - Water Resources Nitrogen Loading and Mitigation Worksheet

See Cape Cod Commission Technical Bulletin 91-001 for further details:
https://capecodcommission.org/resource-library/file/?url=/dept/commission/team/Website_Resources/regulatory/NitrogenLoadTechbulletin.pdf

Facility Address: 18 Spindrift Lane
 Preparer's Name: BRACKEN ENGINEERING
 Date: 3/26/2024
 Watershed: Buzzards Bay

Project Nitrogen Load

Proposed Wastewater

1. Project Title-5 wastewater flows: gpd (a)
 Actual wastewater flows: * (b)
 Average wastewater flows: gpd (a)+(b) ÷ 2 = (A)
 * Actual water use flows per unit in Bourne

Place in applicable box:

Yes No Will the project be connected to sewer?
 Yes No Is project Title-5 wastewater flow 10,000 gpd or greater?

Place in applicable box and multiply unsewered wastewater flow by applicable conversion factor:

<input type="checkbox"/>	Standard Title-5 System (35-ppm-N)	x	0.048359	} Type of system: _____
<input type="checkbox"/>	DEP-approved I/A System (25-ppm-N)	x	0.034542	
<input checked="" type="checkbox"/>	DEP-approved I/A System (19-ppm-N)	x	0.026252	
<input type="checkbox"/>	DEP-approved Enhanced I/A (12-ppm-N)	x	0.016580	

Wastewater nitrogen load (Title-5 flows) = kg-N/yr (B)
 Wastewater nitrogen load (Actual flows) = kg-N/yr (C)

Existing Conditions

Calculate (A') through (P') as w/ (A) through (P):

Title-5 wastewater flows: gpd
 Actual wastewater flows: *
 Avg. wastewater flows: gpd (A')

Place in applicable box:

Yes No Is existing development on sewer?
 (If 'Yes', then go to line 2.)

Standard Title-5 System
 DEP-approved I/A System (commercial)
 DEP-approved I/A System (residential)
 DEP-approved enhanced I/A

kg-N/yr (B')
 kg-N/yr (C')
 wastewater offsets

Project site area: acres (D)
 Project site wetland area: acres (E)
 Project site upland area: acres (F)
 Pervious unpaved upland: acres (G)
 Paved area: s.f. (H)
 Paving runoff offset: kg-N/yr (I')
 Roof area: s.f. (J')
 Roof runoff offset: kg-N/yr (K')

Stormwater Runoff

Town of Bourne Recharge rate for Bourne (inches; for natural areas from Technical Bulletin 91-001): (RECH)

Project site area: acres (D)
 Project site wetland area: acres (E)
 Project site upland area: acres (F)
 Pervious unpaved upland: acres (G)

% using LID Paved area: s.f. (H)
 Factor may be adjusted for employment of LID → x 1.4158E-04 = kg-N/yr (I)
 LID = low impact development

Roof area: s.f. (J)
 x 7.0792E-05 = kg-N/yr (K)

Fertilizer

Previous unpaved upland - roof area =
 Managed turf/ lawn area: s.f.
 x 3.4019E-04

Project site area: acres (D)
 Project site wetland area: acres (E)
 Project site upland area: acres (F)
 Pervious unpaved upland: acres (G')
 Paved area: s.f. (H')
 Paving runoff offset: kg-N/yr (I')
 Roof area: s.f. (J')
 Roof runoff offset: kg-N/yr (K')

Managed Turf/ lawn area: s.f.

	=	<input type="text" value="2.357"/>	kg-N/yr	(L)		Fertilizer offset:	<input type="text" value="2.357"/>	kg-N/yr	(L')
Total Nitrogen Load						Existing nitrogen load (Title-5 flows):	<input type="text" value="24.14"/>	kg-N/yr	(M')
Total project nitrogen load (Title-5 flows):		<input type="text" value="14.41"/>	kg-N/yr	(M)=	(B)+(I)+(K)+(L)	Existing nitrogen load (Actual flows):	<input type="text" value="11.32"/>	kg-N/yr	(N')
Total project nitrogen load (Actual flows):		<input type="text" value="7.45"/>	kg-N/yr	(N)=	(C)+(I)+(K)+(L)	Nitrogen offset per acre:	<input type="text" value="55.95"/>	kg-N/yr/acre	(O')
Nitrogen load per acre (Average):		<input type="text" value="34.50"/>	kg-N/yr/acre	(O)=	(M)+(N) ÷ 2 ÷ (D)				

Proposed Nitrogen Loading Concentration					Existing nitrogen loading concentrations:				
Project nitrogen loading concentration (Title-5 flows):	<input type="text" value="9.55"/>	ppm-N	(P)=	$(a) \div 723.76 + (G) \times (\text{RECH}) \div 9.7286 + (H) \div 10,594 + (K) \div 0.75$	(M)	Title-5 flows	<input type="text" value="15.99"/>	ppm-N	(P')
Project nitrogen loading concentration (Actual flows):	<input type="text" value="6.52"/>	ppm-N	(Q)=	$(b) \div 723.76 + (G) \times (\text{RECH}) \div 9.7286 + (H) \div 10,594 + (K) \div 0.75$	(N)	Actual flows	<input type="text" value="9.90"/>	ppm-N	(Q')
Project nitrogen loading concentration (Average):	<input type="text" value="8.03"/>	ppm-N	(R)=	(P)+(Q) ÷ 2		Average	<input type="text" value="12.95"/>	ppm-N	(R')

next page -->

Resource/ Impact Based Criteria

Marine Water Recharge Areas / Coastal Embayments

2. Yes No
 Is the project located in any of the following watersheds: **Buttermilk Bay Basins, Phinneys Harbor / Back River / Eel Pond, Pocasset River Basin, Pocasset Harbor / Hen Cove / Red Brook Harbor, Megansett / Squeteague Harbors** ?**
 (If 'No', then go to line 3.)

Name of Watershed

(from Regional Policy Plan Data Viewer):

Buzzards Bay

Critical Nitrogen-loading limit** : kg-N/year/acre (S)

Yes No
 Does project's nitrogen load (O) exceed the existing load (O') AND the critical nitrogen load (S) ?
 (If 'No', then go to line 3.)

Excess project nitrogen load to be mitigated: kg-N/yr (T)= LESSER OF (O)-(S) x(F) AND (O)-(O') x(F)

** When a nitrogen-loading limit has been determined through either a Total Maximum Daily Load (TMDL), a Massachusetts Estuaries Project-accepted technical report, or specified by a Commission-approved comprehensive wastewater management plan pursuant to Objective WR3, or if impaired water quality has been documented for the receiving coastal waters, the nitrogen loading limit shall be 0 kg-N/yr per acre pursuant to Objective WR3.

Groundwater Quality

3. Yes No
 Does the project's nitrogen loading concentration in groundwater (R) exceed the greater of 5 ppm or the existing concentration (R') ?
 (If 'Yes', the project will need to provide an alternative strategy for meeting these thresholds by using another worksheet)

Potential Public Water Supply Areas

4. Yes No
 Is project in a Potential Public Water Supply Area (PPWSA) ?

(If 'No', then go to line 5.)

Does the project's nitrogen loading concentration (R) exceed the greater of 1 ppm or the existing concentration (R) ?
(If 'Yes', the project must provide an alternative strategy for meeting Objective WR1)

Does the project use, treat, generate, store or dispose of hazardous materials in excess of the greater of a) household quantities or b) existing quantities ?
(If 'Yes', the project must provide an alternative strategy for meeting Objective WR1)

Wellhead Protection Areas

5. Is project in a Wellhead Protection Area (WHPA) ?

Does the project's nitrogen loading concentration (R) exceed the greater of 5 ppm or the existing concentration (R) ?
(If 'Yes', the project must provide an alternative strategy for meeting Objective WR1)

Does the project use, treat, generate, store or dispose of hazardous materials in excess of the greater of a) household quantities or b) existing quantities ?
(If 'Yes', the project must provide an alternative strategy for meeting Objective WR1)

Fresh Water Recharge Areas

6. Is project wastewater disposed of within 300 feet of a stream or fresh surface water body?
(If 'No', then go to line 7.)

Is the project located in a freshwater recharge area (FWRA) hydraulically upgradient of a stream or fresh surface water body?
(If 'Yes', the project must provide an alternative strategy for meeting Objective WR2)

Other Potential Impacts

7. Will the project withdraw more than 20,000 gallons of water per day ?
(If 'Yes', then the project must provide documentation demonstrating that there will not be significant impacts to water levels, surface waters and wetlands)

8. **The project must demonstrate compliance with Objective WR4, including use of Low Impact Development to mitigate impacts of stormwater runoff and O & M plans for maintaining stormwater infrastructure and landscaping.**

NOTICE OF ALTERNATIVE SEWAGE DISPOSAL SYSTEM
M.G.L. c. 21A, § 13 and 310 CMR 15.287(10)

ADDRESS OF PROPERTY SERVED BY ALTERNATIVE SYSTEM:

18 Spindrift Lane, Bourne, MA

TITLE REFERENCE FOR PROPERTY SERVED BY ALTERNATIVE SYSTEM

Deed recorded with the **Barnstable** Registry of Deeds in **Book 33228, Page 148**

NAME(S) OF OWNER OF PROPERTY SERVED BY ALTERNATIVE SYSTEM:

Vincent P. Michienzi and Noreen Michienzi

OWNER(S) MAILING ADDRESS: 76 Mashnee Lane, Bourne, MA 02532

WHEREAS, Section 15.280 of Title 5 of the State Environmental Code (“Approval of Alternative Systems”), provides for the Massachusetts Department of Environmental Protection (the “Department”) to approve or certify, as appropriate, all proposals to construct, upgrade or replace on-site sewage disposal systems using alternative systems;

WHEREAS, owners and/or operators of approved or certified alternative systems are subject to general conditions, as specified in Section 15.287 of Title 5 of the State Environmental Code, 310 CMR 15.287, and may be subject to special conditions, as specified in the Department’s approvals or certifications; such general and special conditions potentially including, without limitation, requirements relating to the use of trained operators, periodic inspections, maintenance, sampling, reporting and/or recordkeeping;

WHEREAS, the owners and/or operators this alternative system acknowledges and agrees to comply with the provisions of all of the Bourne Board of Health Alternative Septic System Regulations and any other conditions for the existence of the system;

WHEREAS, Section 15.287(10) of Title 5 of the State Environmental Code, 310 CMR 15.287(10), requires that “prior to obtaining a Certificate of Compliance for installation of a new or upgraded system, the system owner shall record in the chain of title for the property served by the alternative system in the Registry of Deeds and/or Land Registration Office, as applicable, a Notice disclosing both the existence of the alternative on-site system and the Department’s approval of the system. The system owner shall also provide evidence of such recording to the Bourne Board of Health; and

WHEREAS, the Property is served by an alternative sewage disposal system.

NOW, THEREFORE, Notice of an alternative sewage disposal system is hereby given for the above- referenced Property, as follows:

1. Existence System #1. An alternative system has been installed as a new or upgraded alternative sewage disposal system, on or adjacent to the Property, and serves the Property. The trade name and model number(s) of the alternative system are as follows:

Trade name of technology:	<i>MicroFAST</i> [®]
Manufacturer Name:	Bio-Microbics, Inc.
Model number(s):	MicroFAST 0.5 Unit

2. Approval/Certification. On 6/16/2006, modified 1/23/2008, revised 11/5/2012, the Department, pursuant to its authority under the section of Title 5 as specified below, approved or certified the technology used in the above referenced alternative system, under MassDEP Transmittal Number W072367.

- Approved for remedial use under 310 CMR 15.284

3. Existence System #2. An alternative system has been installed as a new or upgraded alternative sewage disposal system, on or adjacent to the Property, and serves the Property. The trade name and model number(s) of the alternative system are as follows:

Trade name of technology: Presby Enviro-Septic® Wastewater Treatment

Manufacturer Name: Presby-Environmental, Inc.

4. Approval/Certification. On 9/26/2014 the Department, pursuant to its authority under the section of Title 5 as specified below, approved or certified the technology used in the above referenced alternative system, under MassDEP Transmittal Number X233395.

- Approved for remedial use under 310 CMR 15.284

A copy of the Department of Environmental Protection’s Approval/Certification is available online at the Department’s website:

<https://www.mass.gov/guides/approved-title-5-innovativealternative-technologies>

This Notice of Alternative Sewage Disposal System must be submitted to the Bourne Board of Health

WITNESS the execution hereof under seal this ____ day of _____, 20____, made by the above-named Alternative System Owner(s).

Vincent P. Michienzi

COMMONWEALTH OF MASSACHUSETTS

_____, ss

On this ____ day of _____, 20____, before me, the undersigned notary public, personally appeared _____, proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

(official signature and seal of notary)

WITNESS the execution hereof under seal this ____ day of _____, 20____, made by the above-named Alternative System Owner(s).

Noreen Michienzi

COMMONWEALTH OF MASSACHUSETTS

_____, ss

On this ____ day of _____, 20__, before me, the undersigned notary public, personally appeared _____, proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

(official signature and seal of notary)

Approved and Accepted By:

Agent of the Board of Health.
Health Department
Town of Bourne



Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

REVISION OF APPROVAL FOR REMEDIAL USE

Pursuant to Title 5, 310 CMR 15.00

Name and Address of Applicant:

Bio-Microbics, Inc.
8450 Cole Parkway
Shawnee, KS 66227

Trade name of technology and models: MicroFAST® Treatment System Models *MicroFAST® 0.5, 0.75, 0.9, 1.5, 3.0, 4.5 and 9.0*; HighStrengthFAST® Treatment System Models *HighStrength FAST® 1.0, 1.5, 3.0, 4.5 and 9.0* and NitriFAST® Treatment System Models *NitriFAST® 0.5, 0.75, 1.0, 1.5, 3.0, 4.5 and 9.0* (hereinafter called the "System"). Schematic Drawings illustrating each System, a design and installation manual, an owner's manual, an operation and maintenance manual, and an inspection checklist are part of this Approval.

Transmittal Number: W 072367
Date of Issuance: June 16, 2006 (modified January 23, 2008)
Revision date: November 05, 2012

Authority for Issuance

Pursuant to Title 5 of the State Environmental Code, 310 CMR 15.000, the Department of Environmental, Protection hereby issues this Approval for Remedial Use to: Bio-Microbics, Inc., 8450 Cole Parkway, Shawnee, KS 66227, (hereinafter "the Company"), approving the System described herein for Remedial Use in the Commonwealth of Massachusetts. The sale, design, installation, and use of the System are conditioned on compliance by the Company, the Designer, the Installer, the Service Contractor, and the System Owner with the terms and conditions set forth below. Any noncompliance with the terms or conditions of this Approval constitutes a violation of 310 CMR 15.000.

David Ferris, Director
Wastewater Management Program,
Bureau of Resource Protection

November 05, 2012

Date

Technology Description

The System is a Secondary Treatment Unit (STU). The Systems, MicroFAST® 0.5, 0.75, 0.9, 1.5, 3.0, 4.5 and 9.0, and HighStrengthFAST® 1.0, 1.5, 3.0, 4.5 and 9.0, and, NitriFAST® 0.5, 0.75, 0.9, 1.5, 3.0, 4.5 and 9.0 units are installed in a tank or tanks having a primary settling zone and an aerobic biological zone. Solids settle in the primary settling zone that is quiescent. In the aerobic zone, the sewage is continually agitated and aerated. Bacteria in the sewage attach to the surface of a submerged plastic media; they reproduce by consuming the organic material in the sewage.

Conditions of Approval

The term “System” refers to the STU in combination with the other components of an on-site treatment and disposal system that may be required to serve a facility in accordance with 310 CMR 15.000.

The term “Approval” refers to the technology-specific Special Conditions, the conditions applicable to all STU’s with Remedial Use Approval, the General Conditions of 310 CMR 15.287, and any Attachments.

For Secondary Treatment Units that have been issued Remedial Use Approval for the upgrade or replacement of an existing failed or nonconforming system., the Department authorizes reductions in the effective leaching area (310 CMR 15.242), the depth to groundwater (310 CMR 15.212), and/or the depth of naturally occurring pervious material (310 CMR 15.240(1)) subject to the conditions that apply to all Secondary Treatment Units Approved for Remedial Use and subject to the Special Conditions applicable to the Technology.

Special Conditions

1. The System is Secondary Treatment Unit Approved for Remedial Use. In addition to the Special Conditions contained in this Approval, the System shall comply with all the “Standard Conditions for Secondary Treatment Units Approved for Remedial Use”, except where stated otherwise in these Special Conditions.
2. The System is approved for facilities where the local approving authority finds that:
 - a) there is no increase in the actual or proposed design flow;
 - b) the System is for the upgrade of a failed, failing or nonconforming system; and
 - c) a conventional system with a reserve area, designed in accordance with the standards of 310 CMR 15.100 through 15.255, cannot feasibly be built on-site.

3. The MicroFAST® 0.5, 0.75 and 0.9, HighStrengthFAST® 1.0 and NitriFAST® 0.5, 0.75 and 0.9 are installed in the second compartment of a two-compartment tank with a total liquid capacity of at least 1,500 gallons constructed in accordance with 310 CMR 15.226.
4. The MicroFAST®, HighStrengthFAST® and NitriFAST® 1.5 are installed in the second compartment of a two compartment 3,000-gallon tank constructed in accordance with 310 CMR 15.226.
5. The MicroFAST®, HighStrengthFAST® and NitriFAST® 3.0, 4.5, and 9.0 units are installed in a separate tank constructed in accordance with 310 CMR 15.226. The units are located between a standard Title 5 septic tank, designed in accordance with 310 CMR 15.223 and 15.224, and the soil adsorption system (SAS).
6. Access shall be provided to all tanks in the primary settling and aerobic biological zones in accordance with 310 CMR 15.228 (2). The primary settling tank shall have at least three manholes with readily removable impermeable covers of durable material provided at grade. Two manholes, over the inlet and outlet of the primary settling tank, shall have a minimum opening of 20 inches. All access ports and manhole covers shall be installed and maintained at grade to allow for maintenance of the System.



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

DEVAL L. PATRICK
Governor

MAEVE VALLELY BARTLETT
Secretary

DAVID W. CASH
Commissioner

REMEDIAL USE APPROVAL Pursuant to Title 5, 310 CMR 15.00

Name and Address of Applicant:

Presby Environmental, Inc.
143 Airport Road
Whitefield, NH 03598

Trade name of technology and models: **Presby Enviro-Septic® Wastewater Treatment System** (hereinafter called the "System"). The *Massachusetts Enviro-Septic® Wastewater Treatment System Quick Reference Guide* including schematic drawings of typical Systems, an inspection checklist, and a System Installation Form are part of this Approval.

Transmittal Number: X233395
Date of Issuance: Revised September 26, 2014

Authority for Issuance

Pursuant to Title 5 of the State Environmental Code, 310 CMR 15.000, the Department of Environmental, Protection hereby issues this Approval for Remedial Use to: Presby Environmental, Inc., 143 Airport Road, Whitefield, NH 03598 (hereinafter "the Company"), certifying the System described herein for Remedial Use in the Commonwealth of Massachusetts. The sale, design, installation, and use of the System are conditioned on compliance by the Company, the Designer, the Installer and the System Owner with the terms and conditions set forth below. Any noncompliance with the terms or conditions of this Approval constitutes a violation of 310 CMR 15.000.

David Ferris, Director
Wastewater Management Program
Bureau of Resource Protection

September 26, 2014
Date

Technology Description

The System is an alternative subsurface Soil Absorption System (SAS) that replaces a conventional SAS designed in accordance with 310 CMR 15.000. The System consists of an 11 5/8-inch diameter corrugated, high-density plastic pipe with a 9.5-inch interior diameter and a standard length per unit of 10 feet. The pipe is perforated with eight holes equally distributed around its inner circumference at each corrugation. Each hole has a plastic skimmer extending inwards. The exterior of the pipe has ridges on the peak of each corrugation and is wrapped with two layers of fabric material. The inner layer is a thick layer of coarse, randomly oriented polypropylene fibers. The outer fabric layer is a non-woven geo-textile polypropylene. The System includes required connectors designed to connect pipe units together. The System also includes six inches of sand, specified as concrete sand meeting ASTM C-33 (also called ‘System sand’), surrounding the pipe on all sides.

Conditions of Approval

The term “System” refers to the Alternative Soil Absorption System in combination with the other components of an on-site treatment and disposal system that may be required to serve a facility in accordance with 310 CMR 15.000.

The term “Approval” refers to the technology-specific Special Conditions, the Standard Conditions for General and Remedial Use Approval of Alternative Soil Absorption Systems (the ‘Standard Conditions’), the General Conditions of 310 CMR 15.287, and any Attachments.

For Alternative Soil Absorption Systems that have been issued Remedial Use Approval for the installation of Systems to serve facilities where the site meets the requirements for new construction, the Department authorizes reductions in the effective leaching area (310 CMR 15.242), subject to the applicable portions of the Standard Conditions, and subject to the below Special Conditions applicable to this Technology.

Special Conditions

1. The System is an approved Patented Sand Filter System for use as an Alternative Soil Absorption System. In addition to the Special Conditions contained in this Approval, the System shall comply with all Standard Conditions for Alternative Soil Absorption Systems, except where stated otherwise in these Special Conditions.
2. This Approval applies to the installation of a System for the upgrade or replacement of an existing failed or nonconforming system, provided that the facility meets the siting requirements for upgrades, as provided in II(7) and II(9) of the Standard Conditions. For the upgrade or replacement of an existing failed or nonconforming system, all installed Systems shall also comply with the Notice requirement of paragraph II(23) and the transferee notification requirements of paragraph IV(1) of the Standard Conditions. The proposed use of the System shall also comply with any other Standard Conditions which pertain wholly or in part to upgrades of existing systems.
3. SAS Design - For the upgrade or replacement of an existing failed or nonconforming system, Systems sited in soils with a percolation rate of 60 minutes or less per inch, the size of the

SAS shall be sized with 40 percent less effective leaching area than required when using the loading rates for gravity systems of 310 CMR 15.242(1)(a). For soils with a recorded percolation rate of between 60 and 90 minutes per inch, the size of the SAS shall be sized with 40 percent less effective leaching area than required when using the loading rate of 0.15 gpd/square foot as specified by 310 CMR 15.245(4).

No reduction greater than 40% in the required effective leaching area is allowed, including any reductions under a LUA or a variance.

The required effective leaching area of the SAS shall be reduced in accordance with the above requirements, except a minimum of 400 square feet of effective leaching area shall be provided if any proposed reduction in the leaching area would result in less than 400 square feet of effective leaching area. Where 400 square feet of effective leaching is not feasible, the greatest effective leaching area shall be installed provided that no more than a 40 percent reduction is taken.

4. Alternative Design Standards - Provided that the Designer demonstrates that the impact of the proposed Alternative System has been considered and the design requirements of 310 CMR 15.000 have been varied to the least degree necessary so as to allow for both the best feasible upgrade within the borders of the lot and the least effect on public health, safety, welfare and the environment, the local approving authority may allow any combination of the following alternative design standards without the need for granting a variance under 310 CMR 15.400 or obtaining Department approval:
 - a) If a reduction in the depth to groundwater required by 310 CMR 15.212 is necessary, the depth to groundwater may be reduced by up to 2 feet, resulting in a minimum separation distance of two feet in soils with a recorded percolation rate of more than two minutes per inch and three feet in soils with a recorded percolation rate of two minutes or less per inch, measured from the bottom of the soil absorption system to the high groundwater elevation, only if;
 - i. An approved Soil Evaluator who is a member or agent of the local Approving Authority determines the high groundwater elevation;
 - ii. No reduction is granted under LUA for setbacks from public or private wells, bordering vegetated wetlands, surface waters, salt marshes, coastal banks, certified vernal pools, water supply lines, surface water supplies or tributaries to surface water supplies, or drains which discharge to surface water supplies or their tributaries, is allowed; and
 - iii. In accordance with 310 CMR 15.212(2), for systems with a design flow of 2,000 gpd or greater, the separation to high groundwater as required by 310 CMR 15.212(1) shall be calculated after adding the effect of groundwater mounding to the high groundwater elevation as determined pursuant to 310 CMR 15.103(3).
 - b) If a reduction in the depth of the naturally occurring pervious material layer is necessary, a proposed reduction of up to 2 feet may be allowed in the four feet of naturally occurring pervious material layer required by 310 CMR 15.240(1) provided that it has been demonstrated that no greater depth in naturally occurring pervious material can be met anywhere on the site.

5. In no case, shall the reductions in the effective leaching area, depth to groundwater, and depth of naturally occurring pervious material allowed under this Approval be made less stringent. Any reductions in the effective leaching area, depth to groundwater, and depth of naturally occurring pervious material allowed under this Approval shall not be combined with any reduction that may allowed under the procedures of Local Upgrade Approval or the variance procedures of 310 CMR 15.401-413. The local Approving Authority may vary other design requirements under the LUA provisions of 310 CMR 15.405 or under the variance procedures of 310 CMR 15.411.
6. The System shall only be installed in bed or field configuration, as described in 310 CMR 15.252. The System shall not be installed in trench configuration and no sidewall area shall be considered in the total effective leaching area provided. The effective leaching area shall be the bottom area only (length times width) of the sand bed.
7. Systems shall be installed with differential venting for aeration and inspection access at end of each run of pipe, section or serial bed and whenever the System is installed under impervious surfaces.
8. Serial distribution laterals shall be limited to no more than 500 gpd with each lateral a maximum of 100 feet, and must be laid level. Multi-level systems shall not be allowed.
9. System component material specifications for the pipe, plastic components, fabric and sand shall comply with the specifications identified in the initial I/A technology approval. Prior approval from the Department for any change from these specifications shall be requested in writing.
10. Any changes to the approved plans must receive Local Approving Authority (LAA) approval prior to any changes. Before a Certificate of Compliance can be issued by the LAA the System Designer must include any changes to the approved plan into the as-built plans.



Michael Leitzel, Chairperson
Ellen Doyle Sullivan, Clerk
Donna Barakauskas, Member

TOWN OF BOURNE
Board of Assessors
24 Perry Avenue
Buzzards Bay, MA 02532
(508) 759-0600 Ext. 1510



Rui Pereira, MAA
Director of Assessing

March 20, 2024

Vincent P. Michienzi
c/o Bracken Engineering, Inc.
49 Herring Pond Rd.
Buzzards Bay, MA 02532

Re: Abutters List for Map 26.3 Parcel 51
Property address: 18 Spindrift Lane

As required by the Bourne Board of Health, pursuant with section 310 CMR 15.411(1), this is to certify that the attached list of names and addresses constitutes all of the parties in interest as shown on the most recent tax list of the Town of Bourne.

Abutting properties are: Map 26.3 Parcels 47, 50, 52, 53 & 80.

Your filing fee of \$25.00 has been received by the Bourne Assessor's Office.

Please be advised that this abutters list is only good for 30 days from the date on this letter. Expired abutters list can be recertified for an additional filing fee.

See enclosed for abutters mailing addresses.

Board of Assessors

*Ellen Doyle Sullivan -
Donna Barakauskas
Michael Leitzel*

Extract: ABUTTERS LIST
 Database: LIVE
 Filter: Key IN 5610,5614,5616,5617,5644
 Sort:

Report #24: Owner Listing Report
 Fiscal Year 2025

Bourne MA

Key	Parcel ID	Owner	Location	LCU/CI	Bk-Pa(Cert) /Dt	Mailing Street	Mailing City	ST	Zip Cd/County
5610	26.3-47-0	RIORDAN MICHAEL R TRUSTEE OF RIORDAN REALTY TRUST	6 BRENDON LN	N 1090	18445/24 4/13/2004	6 BRENDON LANE	BOURNE	MA	02532
5614	26.3-50-0	HARRIS ROBERT J TR MARGARET T HARRIS IRREVOCABLE TRUST	16 SPINDRIFT LN	N 1010	26779/226 10/19/2012	C/O ROBERT J HARRIS 90 NYE ROAD	CENTERVILLE	MA	02532
5616	26.3-52-0	22 SPINDRIFT LANE LLC	22 SPINDRIFT LN	N 1010	28231/170 6/27/2014	c/o DEBRA MOSEL UNIT 6100, BOX 054	DPO	AE	09802-054
5617	26.3-53-0	DOLPHIN BAY ASSOCIATION BEACH VINCENT & NOREEN MICHENZI	0 SPINDRIFT LN	N 1320	33228/148 9/3/2020	76 MASHNEE RD	BOURNE	MA	02532
5644	26.3-80-0	YOUNG DAVID TRS DL YOUNG TR & SUZANNE YOUNG TRS SM YOUNG TR	7 AGAWAM POINT RD	N 1010	30270/1 1/31/2017	7 AGAWAM POINT RD	BOURNE	MA	02532

Total Records 5

MAIN OFFICE:

49 Herring Pond Road
Buzzards Bay, MA 02532
TEL: (508) 833-0070
FAX: (508) 833-2282

**NANTUCKET OFFICE:**

19 Old South Road
Nantucket, MA 02554
TEL: (508) 325-0044
www.brackeneng.com

March 26, 2024

CERTIFIED MAIL

RE : Notice of Public Hearing

Dear Abutter:

In accordance with the State Environmental Code, Title 5: 310 CMR 15.00, you are hereby notified that **Vincent Michienzi** has requested a hearing before the Bourne Board of Health for relief from MA 310 15.00 (Title 5) and the Bourne Board of Health Regulations for the installation of an upgraded septic system utilizing Innovative/Alternative technology. The location of the property for which approval is sought is **18 Spindrift Lane (Map 26.3, Parcel 51), Gray Gables** where you are listed as an abutter. The following *Local Upgrade Approval Waivers and Local Variances* will be discussed at the hearing:

- 310 CMR 15.405(1)(b) – a reduction in the required setback to the existing cellar wall: an 8' divergence for a 12' setback for the Presby EnviroSeptic leaching system (system component).
- 310 CMR 15.405(1)(f) – a 50' divergence from full compliance for a soil absorption system within an existing Coastal Bank "A".
- 310 CMR 15.405(1)(f) – a 27' divergence from full compliance is requested for a 23'± setback to a soil absorption system to an existing Coastal Bank "B".
- 310 CMR 15.405(1)(f) – a 4' divergence from full compliance is requested for a 21'± setback to a septic tank to an existing Coastal Bank "B".
- A variance to local setback requirements for a 150' reduction in setback for a 0' setback to a Coastal Bank "A" from a soil absorption system.
- A variance to local setback requirements for a 127' reduction in setback for a 23' setback to a Coastal Bank "B" from a soil absorption system.
- A variance to local setback requirements for a 84' reduction in setback for a 66' setback to a Bordering Vegetated Wetland from a soil absorption system.

This hearing is **tentatively** scheduled for Wednesday, **April 10th** at **5:30 p.m.** in Conference Room #2 at the Bourne Veteran's Memorial Community Building, 239 Main Street, Buzzards Bay. ***Please confirm the date, time and location of the meeting with the Town, in case of any changes.*** Information regarding the hearing may be available for your review one week prior to the meeting by contacting the Bourne Health Department at 508-790-0600, Ext. 1513, Monday through Friday from 8:30 a.m. until 4:30 p.m.

Meeting agendas are posted on the Town of Bourne website, www.townofbourne.com/health no less than 48 hours in advance of the hearing. Should you have any questions or concerns, please do not hesitate to contact the undersigned at zac@brackeneng.com or the Bourne Health Department at 508-790-0600, Ext. 1513.

Sincerely,

BRACKEN ENGINEERING INC.

A handwritten signature in black ink, appearing to read 'Zachary L. Basinski', is written over a horizontal line.

Zachary L. Basinski, PE, CFM
Senior Project Manager
Agent for the Applicant

9589 0710 5270 1225 2492 64

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Michael R. Riordan
Riordan Realty Trust
6 Brendon Lane
Bourne, MA 02532

18 Spindrift Lane, Bourne - BOH

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

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22 Spindrift Lane
c/o Debra Mosel
Unit 6100, Box 054
DPO, AE 09802-054

18 Spindrift Lane, Bourne - BOH

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David Young, TRS
DL Young TR & Suzanne Young TRS, SM
Young TR
7 Agawam Point Road
Bourne, MA 02532

18 Spindrift Lane, Bourne - BOH

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Dolphin Bay Association Beach
Vincent & Noreen. Michienzi
76 Mashnee Road
Bourne, MA 02532

18 Spindrift Lane, Bourne - BOH

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Robert J. Harris, TR
Margaret T. Harris Irrevocable Trust
c/o Robert J. Harris
90 Nye Road
Centerville, MA 02632

18 Spindrift Lane, Bourne - BOH

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

