

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, or increases in flow to on-site sewage disposal systems with design flows of less than 10,000 gallons/ day.

1. Facility Name and Address:

Owner's Name

Patrick Curran

Facility's Street Address

104 Rocky Point Road

Owner's Telephone Number

(617) 834-7721

Owner's E-mail Address

pdcurren2010@gmail.com

Owner's Mailing Address

15 River Street, Apt. 902 Boston, MA 02108

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

Preparer's Name

Michael J. Borselli

Company

Falmouth Engineering, Inc.

Telephone Number

508.495.1225

E-mail Address

erica@falmouthengineering.com

Mailing Address

17 Academy Lane, Ste. 200 Falmouth

State/ Zip Code

MA 02540

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

☒ Residential ☐ Commercial ☐ Institutional ☐ School ☐ Industrial

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

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

☐ Pumped System ☐ Gravity System ☐ Pressure Dosed ☐ Existing ☐ Proposed

6. Describe the existing/ proposed septic system components: Existing: 1,250 gallon septic tank, 4 infiltrators
no distribution box per health department records. Proposed: Singlair 750 GPD I/A system, 1,500 gallon pump chamber,
24 Cultec C100 chambers in aggregate free bed.

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

Design flow of system:
660 GPD

Total design flow of facility:
710 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:

- ☒ Application Fees paid to the Town of Bourne.
- ☒ Letter of request describing nature of variances (see samples)
- ☒ Six sets of complete plans and specifications. One with original stamp of design engineer.
- ☒ Nitrogen Loading Calculation Sheet(s) if applicable
- ☒ 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 for all 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  Date 7/29/22

Print Name Patrick D. Curran

Signature of Preparer  Date 8-1-22

Print Name Michael J. Borselli

For Office Use Only

Completed Application Received: _____

Reviewed By: _____

Hearing Date: _____

Permit #: _____

Circle all that apply:

Approved

Continued

Disapproved

Other

Notes: _____

Sample of Letter to Direct Abutters for Septic Variances

Certified Mail # - Must be post marked at least 10 days prior to the meeting date

Date

Abutter Name

Mailing Address

Per Assessor's Records

RE: Notice of Public Hearing

Dear *Mr. Abutter*:

In accordance with the [State Environmental Code, Title 5: 310 CMR 15.00](#), you are hereby notified that *Name of Applicant* has requested a hearing before the Bourne Board of Health for relief from [Title 5](#) and/or the Bourne Board of Health Regulations for the installation of an upgraded septic system. The location of the property for this proposal is [123 Address Street, Bourne, MA](#) where you are listed as an abutter. At said hearing the Board will discuss and possibly vote on:

- [List reason or reasons for the hearing being as specific as possible, for example...](#)
- [A 5 foot reduction in the required 10 foot setback distance from the proposed leaching facility to the rear property line \(310 CMR 15.211\)](#)
- [A 10 foot variance from the Bourne Board of Health 150 Foot Setback Regulation for the placement of a leaching facility within 140 feet of the coastal bank.](#)

This hearing is tentatively scheduled for *Date* at [6:00pm](#) in the [Lower Conference Room of the Bourne Town Hall](#). Information regarding the hearing may be available for your review one week prior to the meeting at the Bourne Health Department, 24 Perry Avenue, Buzzards Bay, Monday through Friday from 8:30am until 4:30pm.

Meeting agendas are posted on the Town of Bourne website, www.townofbourne.com/health no less than 48 hours in advance of the hearing. Please confirm the date, time, and location of the meeting with the Town, in case of any changes. Should you have any questions or concerns, please do not hesitate to contact me or the Bourne Health Department at 508-759-0600 ext. 1513.

Sincerely,

Name of Applicant

Telephone Number

E-mail Address

Sample Letter of Request for Waiver

Date

Bourne Board of Health
24 Perry Avenue
Buzzards Bay, MA

RE: Waiver request for *123 Address Street*

Dear Members:

Please accept this letter of request to be heard before the Board of Health at their next meeting to discuss a waiver from *Board of Health Regulations* for the continued use of the existing septic system at *123 Address Street, Bourne, MA* to accommodate proposed *renovations* of the property. The existing septic system is comprised of (*describe in detail*) *and does not meet* _____ *regulation*. We are proposing to...*describe nature of addition/ renovation/ reconstruction to dwelling*.

Enclosed is the completed application and design plans. Thank you in advance for your consideration of this request.

Sincerely,

Name of Applicant

Title

Telephone Number

E-mail Address

Sample Letter of Request for Septic Variances

Date

Bourne Board of Health
24 Perry Avenue
Buzzards Bay, MA

RE: Variance request for *proposed septic system*

Dear Members:

In accordance with the State Environmental Code, Title 5: 310 CMR 15.410, please accept this letter of request to be heard before the Board of Health at their next meeting to discuss relief from *Title 5 and/or Board of Health Regulations* for the installation of a *new septic system* at *123 Address Street, Bourne, MA*. We respectfully request consideration of the following variances to accommodate our project:

- *List all variances and specific circumstances being as precise as possible*
- *See code for requirements for variances for new construction*

Enclosed is the completed variance application and design plans. We have notified all abutters as required and attached proof of mailing. Thank you in advance for your consideration of this request.

Sincerely,

Name of Applicant

Title

Telephone Number

E-mail Address

Town of Bourne

CONSERVATION COMMISSION

Nitrogen Loading Calculation Sheet for Residential Housing

The following calculation sheet is based upon Technical Bulletin 91-001 issued by the Cape Cod Commission and deals with nitrate nitrogen ($\text{NO}_3\text{-N}$). Use the information from your PLAN OF RECORD to provide the following:

Number of bedrooms (Title 5 definition) = _____ bedrooms
Lot size (in square feet) = _____ sq. ft.
Impervious surfaces; **Roof area = _____ sq. ft. **Paved area = _____ sq. ft.
Natural Area = lot area minus all impervious surfaces = _____ sq. ft.
Lawn area in sq. ft. = _____ sq. ft.

TITLE 5 FLOW = 110 GAL. / DAY PER BEDROOM
WASTEWATER FLOWS (NITROGEN LOAD & WATER LOAD)

Nitrogen from Title 5 design = 14,572 mg $\text{NO}_3\text{-N}$ / day / bedroom

Water from Title 5 design = 416.3 L H_2O / day / bedroom

1a) Number of bedrooms = _____ X 14,572 = _____ mg. $\text{NO}_3\text{-N}$ / day

1b) Number of bedrooms = _____ X 416 = _____ L H_2O / day

Actual Nitrogen load = 6071.5 mg $\text{NO}_3\text{-N}$ / day / bedroom

Actual Water load = 173.5 L H_2O / day / bedroom

*Note: This assumes 2.5 people / unit average occupancy within the Town.

2a) Number of bedrooms = _____ X 6071.5 = _____ mg. $\text{NO}_3\text{-N}$ / day

2b) Number of bedrooms = _____ X 173.5 = _____ L H_2O / day

IMPERVIOUS SURFACES (NITROGEN LOAD & WATER LOAD)

$\text{NO}_3\text{-N}$ load number sq. ft. of roof surface X 0.19395 mg $\text{NO}_3\text{-N}$ / sq. ft.

H_2O load number sq. ft. of roof surface X 0.2586 L / sq. ft.

3a) Roof surface = _____ sq. ft. X 0.19395 = _____ mg $\text{NO}_3\text{-N}$

3b) Roof surface = _____ sq. ft. X 0.2586 = _____ L H_2O

$\text{NO}_3\text{-N}$ load number sq. ft. of paved surface X 0.388 mg / sq. ft.

H_2O load number sq. ft. of paved surface X 0.2586 L / sq. ft.

4a) $\text{NO}_3\text{-N}$ = _____ sq. ft. paved surface X 0.388 mg / sq. ft. = _____ mg $\text{NO}_3\text{-N}$

4b) H_2O = _____ sq. ft. paved surface X 0.2586 L / sq. ft. = _____ L H_2O

LAWN NITROGEN LOAD = 0.933 mg / sq. ft. lawn surface

5) sq. ft. of lawn = _____ X 0.933 = _____ mg

NATURAL AREA WATER LOADING

Natural area = lot size - impervious surface = _____ sq.ft.

6) Natural area = _____ X water recharge factor = _____ L
(0.1358 L / sq. ft. for Bourne)¹

SUMMARY OF NITROGEN LOADING

Estimated Title 5 Nitrogen & Water Loading

7a) ADD the above NO₃N load:

1a + 3a + 4a + 5
_____ + _____ + _____ + _____ = _____ mg NO₃-N / day

7b) ADD the above water (H₂O) load:

1b + 3b + 4b + 6
_____ + _____ + _____ + _____ = _____ L H₂O / day

7c) DIVIDE 7a by 7b = _____ ppm NO₃-N*****

Actual Nitrogen & Water Loading

8a) ADD the above NO₃N load:

2a + 3a + 4a + 5
_____ + _____ + _____ + _____ = _____ mg NO₃-N / day

8b) ADD the above water (H₂O) load:

2b + 3b + 4b + 6
_____ + _____ + _____ + _____ = _____ L H₂O / day

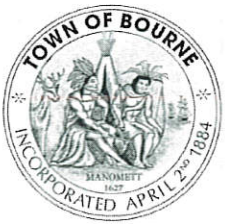
8c) DIVIDE 8a by 8b = _____ ppm NO₃-N*****

FINAL CALCULATION ADD 7c & 8c (ppm) = _____ divide by 2 = _____ ppm NO₃-N

This is the actual nitrate nitrogen load for the project as designed. The target for coastal areas is 5 ppm nitrate nitrogen. Certain critical embayments may require a LOWER figure to prevent degradation.

*****If your nitrate nitrogen load exceeds the target limit **USE A SECOND CALCULATION SHEET TO SHOW ALTERNATIVES IN TRYING TO ACHIEVE THE 5 PPM NITRATE NITROGEN LEVEL*******

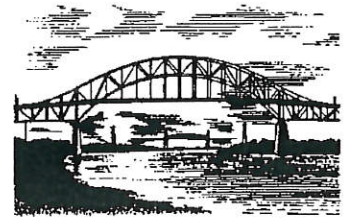
¹ Water recharge factors for data line 6: @21' / yr. use 0.1358 in Bourne and Falmouth; @ 19" / yr. use 0.1228 for Mashpee & Sandwich; @ 18" / yr. 0.1164 for Barnstable, Dennis & Yarmouth; @ 17" / yr. use 0.1101 for Brewster & Harwich; @ 16" / yr. use 0.1031 for Chatham, Eastham, Orleans, Provincetown, Truro & Wellfleet.



Terri A. Guarino
Health Agent

TOWN OF BOURNE BOARD OF HEALTH

24 Perry Avenue
Buzzards Bay, MA 02532
www.townofbourne.com/health
Phone (508) 759-0600 ext. 1513
Fax (508) 759-0679



Percentage of Increase Worksheet

Subject Address:

Request for variances or waivers that include renovations, alterations, or additions to the existing dwelling, architectural of the existing house and the proposed house must be submitted to the Board of health at the time of the variance or waiver request and shall include the following:

	EXISTING	PROPOSED	% INCREASE
Bedroom Square Footage (any labeled bedroom and or room which provides minimum seclusion as per Board of Health definition)			
Non-Bedroom Space (living room, kitchen, bathrooms, closets, hallways etc.)			

Percentage of Total Increase _____

For the purpose of any variances or waiver requests for a reduction in the 150 foot setback to the wetlands/top of coastal bank, which includes a proposal for renovations, alterations or additions to the existing dwelling, the following guidelines shall apply:

For projects where the renovations, alterations or additions result in an increase of bedroom space by Board of Health definition, of 25% or greater, a septic system which includes nitrogen removal, i.e. some type of Alternative Technology System with pressure dosing shall be required

For projects where the renovations, alterations or additions result in an increase of non-bedroom space such as kitchen, living room, bathroom etc. of 50% or greater an Alternative Technology system may be required.

Formula for total increase percentage:

Subtract existing from proposed = square footage added
Divide square footage added by existing = % increase

800 existing 1200 proposed
 $1200 - 800 = 400$ square footage added
 $400 / 800 = 50\%$ increase