

APPLICATION FOR A VARIANCE

To: Zoning Board of Adjustment, Town of New London, 375 Main Street

Name of owner/applicant: Samuel Drive, LLC (John L. Langill, Manager)

Mailing Address: 559 Pembroke St, Pembroke State: NH Zip: 03275

Home Telephone: N.A. Work Telephone: 603-228-9888 Cell: 603-234-6836

Email address: john@cherryhillhomesinc.com

Owner of property: Same
(if same as applicant, write "same")

Location of property Hall Farm Road

Tax Map Number: 086 Lot Number: 22.003 Zone: ARR

A variance is requested from the provisions of Article: II(8)(a) & XIII(F)(1) Section: _____
of the Zoning Ordinance to permit the location of an individual sewage disposal system within
75 feet of a wetland.

Facts supporting this request:

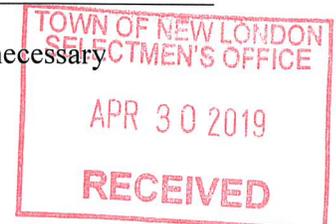
1. The variance will not be contrary to the public interest:
See attached Exhibit A, and accompany attachments thereto, which set forth a supporting narrative for
each of the five variance criteria.

2. The spirit of the ordinance is observed: See Exhibit A.

3. Substantial justice is done: See Exhibit A.

4. The values of surrounding properties are not diminished; and:
See Exhibit A.

5. Literal enforcement of the provisions of the ordinance would result in an unnecessary
hardship.



- A. For purposes of this subparagraph, “unnecessary hardship” means that, owing to special conditions of the property that distinguish it from other properties in the area:
- (1) No fair and substantial relationship exists between the general public purposes of the ordinance provision and the specific application of that provision to the property;
See Exhibit A.
-
-
- and
- (2) The proposed use is a reasonable one;
See Exhibit A.
-
-
- B. If the criteria in subparagraph (A) are not established, an unnecessary hardship will be deemed to exist if, and only if, owing to special conditions of the property that distinguish it from other properties in the area, the property cannot be reasonably used in strict conformance with the ordinance, and a variance is therefore necessary to enable a reasonable use of it.
See Exhibit A.
-
-

Owner/applicant(s) Signature:  Date: April 29, 2019
 By: SAMUEL DRIVE, LLC
 By: John L. Langill, Its Manager

NOTE:

This application is not acceptable unless all required statements have been made. Additional information may be supplied on a separate sheet if the space provided is inadequate.

For questions or assistance in completing these forms, please contact:
 Zoning Administrator
 603-526-1246
 Email: zoning@nl-nh.com

Or

Assessing Coordinator
 603-526-1243
 Email: landuse@nl-nh.com



EXHIBIT A to VARIANCE APPLICATION OF SAMUEL DRIVE, LLC
Variance Criteria

A variance is requested from Article II(8)(a) and Article XIII(F)(1) of the zoning ordinance to permit the location of an individual sewage disposal system within 75 feet of a wetland.

1. The Variance will not be contrary to the public interest:

The variance will not be contrary to the public interest because it will not change the character of the neighboring areas, nor have any adverse impact on the healthy, safety, or general welfare because:

- The proposed variance will provide for a residential development in keeping with the character of the existing neighborhood;
- It will occur on a 4 acre lot, and enable residential development that preserves the majority of the parcel in an open state (*See Appx., 05*);
- It will utilize an enviro-septic system that is widely recognized as offering significantly improved water treatment compared to traditional pipe and stone construction (*see Appx., 10 & Appx., 15* (letter of NH DES acknowledging enviro-septic system benefits));
- It will enable installation of the system with minimal changes to the existing topography (Finished elevation grade is designed for 1163, and bottom of enviro-septic pipe to be laid at 1160.25, approximately at existing grade);
- It is designed in keeping with NH DES requirements (*see Appx., 07*); and
- The wetlands on site are "poorly drained soils," which are recognized by the state as requiring less separation from sewage disposal areas than "very poorly drained soils." *See id.*

2. The spirit of the ordinance is observed:

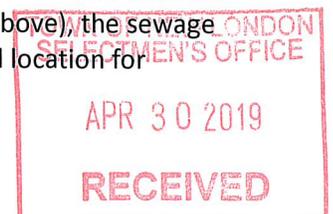
The variance adheres to the spirit of the ordinance because the surrounding wetlands are protected under the proposed design for the reasons set forth at #1 above, and because the proposed location has the best existing receiving soils on site, with depth to ledge of 66" (compare to test pits 7A, 7B, and 11, which have a depth to ledge of 16", 9", and 53" respectively).

3. Substantial justice is done:

The proposed variance ensures that substantial justice is done by ensuring that the lot remains a buildable lot (as intended by the September 2014 subdivision approval), and may be constructed in a manner that is in keeping with the character of the surrounding area while preserving wetland quality. In contrast, absent a variance, there is a tangible loss to the Applicant's property interests, with no appreciable gain to the public. Further, as demonstrated in the attached aerial images, the subdivision of the lot and surrounding parcels has enabled a redevelopment of the site that significantly improved pre-existing conditions on the land.

4. The values of surrounding properties are not diminished:

The proposed variance will not diminish surrounding property values because the variance from the setback does not materially change the protection afforded by it (as addressed above), the sewage disposal systems is away from the neighboring homes and street and at the ideal location for



existing soil depths, and it enables a residential development of the property in keeping with the character of the area. In contrast, absent relief, the future of the lot would be uncertain, and would not be buildable in the manner approved under the September 2014 subdivision approval, which could have an adverse impact on surrounding property values.

5. Literal enforcement of the provisions of the ordinance would result in an unnecessary hardship.

A. For purposes of this subparagraph, “unnecessary hardship” means that, owing to special conditions of the property that distinguish it from other properties in the area:

(1) No fair and substantial relationship exists between the general public purposes of the ordinance provision and the specific application of that provision to the property:

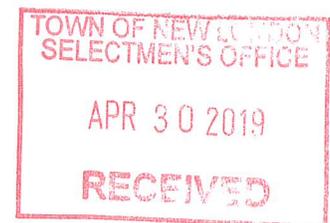
There is no fair and substantial relationship between the general public purpose of the setback and its specific application to this property for the reasons previously stated above, and because the setback requirement in the ordinance applies to all lots regardless of size, wetland soil types, or type of sewage disposal system, but here, the lot is of a large size (4 acres) and presents with soil types that do not require the same degree of separation.

(2) The proposed use is a reasonable one:

The proposed use – a residential home with an individual enviro-septic disposal system – is reasonable because it is a permitted use, in keeping with the character of the area, and designed to maximize water quality.

B. If the criteria in subparagraph (A) are not established, an unnecessary hardship will be deemed to exist if, and only if, owing to special conditions of the property that distinguish it from other properties in the area, the property cannot be reasonably used in strict conformance with the ordinance, and a variance is therefore necessary to enable a reasonable use of it:

In addition to the criteria set forth in 5.A. above, the variance may also be granted under 5.B. because there are special conditions of this property that distinguish it from others in the area, including, the property does not have a viable location for the sewage disposal system that is 75’ from wetlands, and therefore it cannot be reasonably used in strict conformance with the ordinance, and a variance is therefore necessary to enable a reasonable use of it.



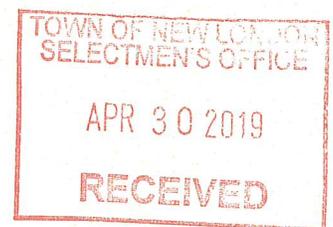
APPENDIX TO
APPLICATION FOR VARIANCE

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TAX MAP



[Variance - Appx. 01]



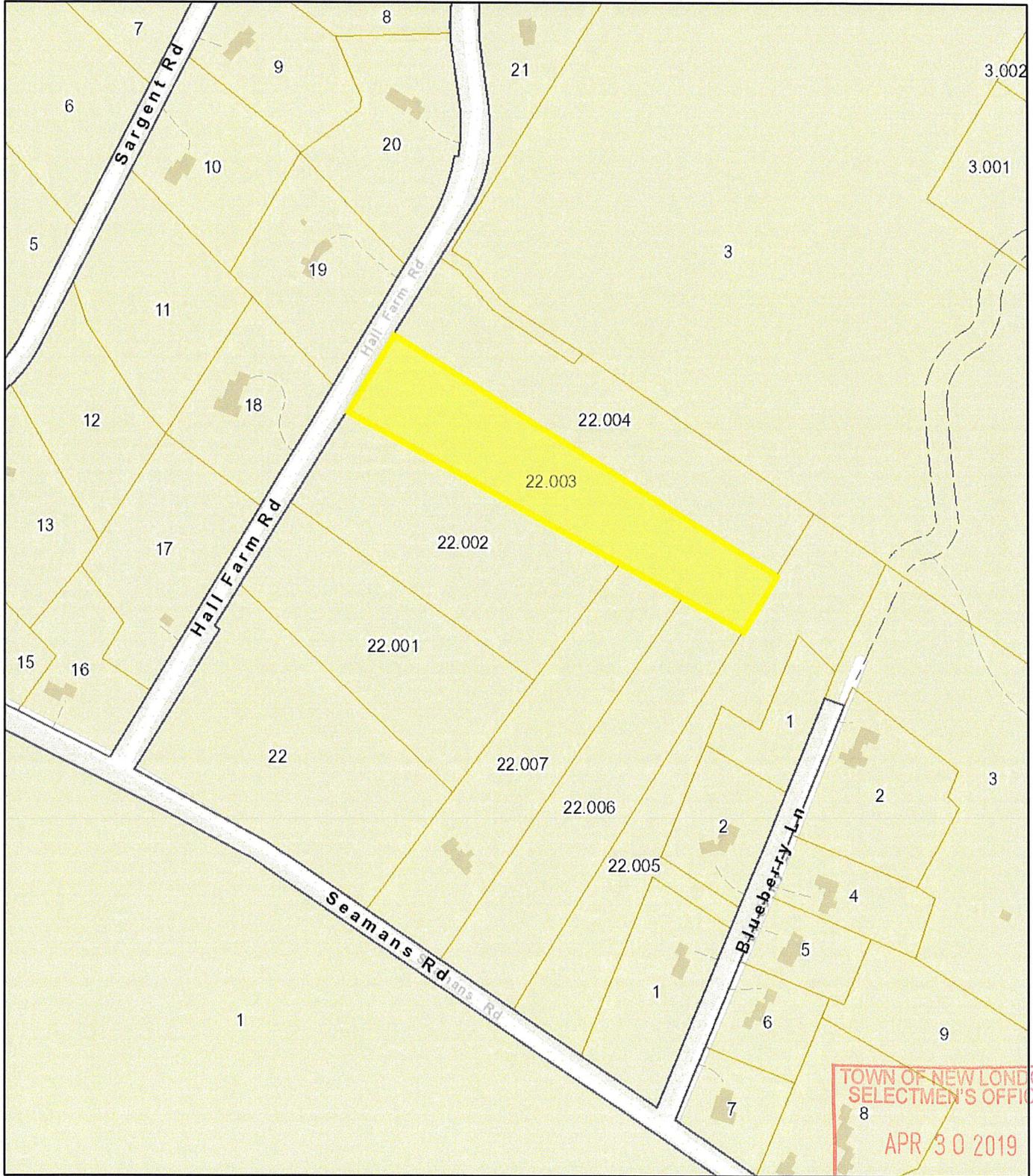
Tri Town, NH



April 27, 2019

1 inch = 300 Feet

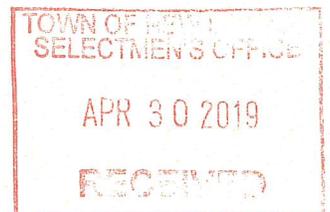
www.cai-tech.com



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APR 30 2019
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Data shown on this map is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this map. [Variance - Appx. 021]

AERIAL IMAGES



[Variance - Appx. 03]

2011-April: Prior to acquisition. Significant rutting shown due to prior logging on site by previous owner.



2017-September: Following acquisition and subdivision approval. Initial homes constructed. Vegetation returning to site.



NEW LONDON
PLANNING DEPARTMENT
PLANNING COMMISSIONER'S OFFICE

[Variance - Appx. 04]

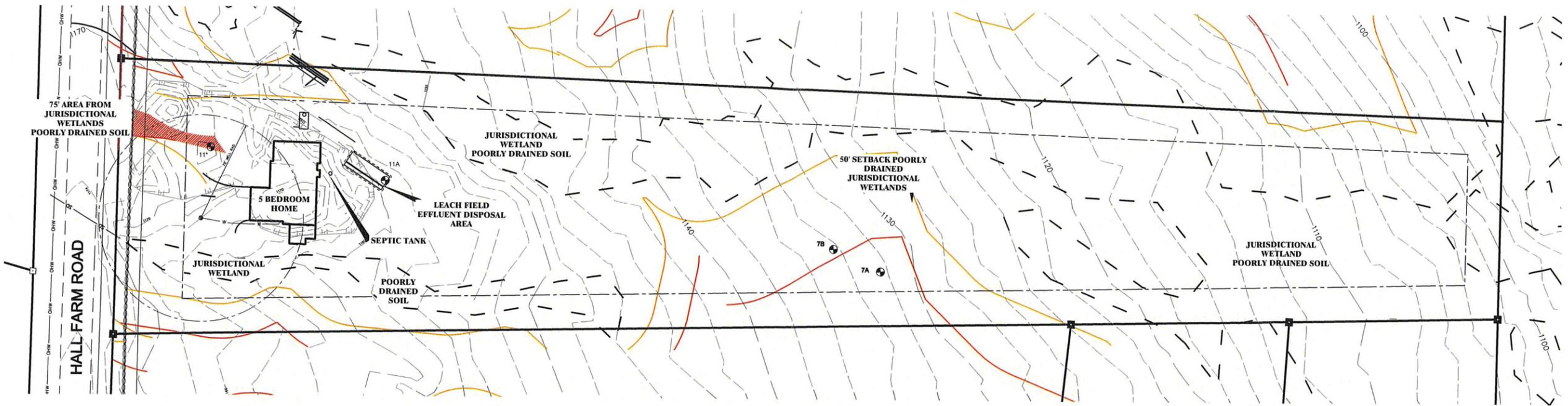
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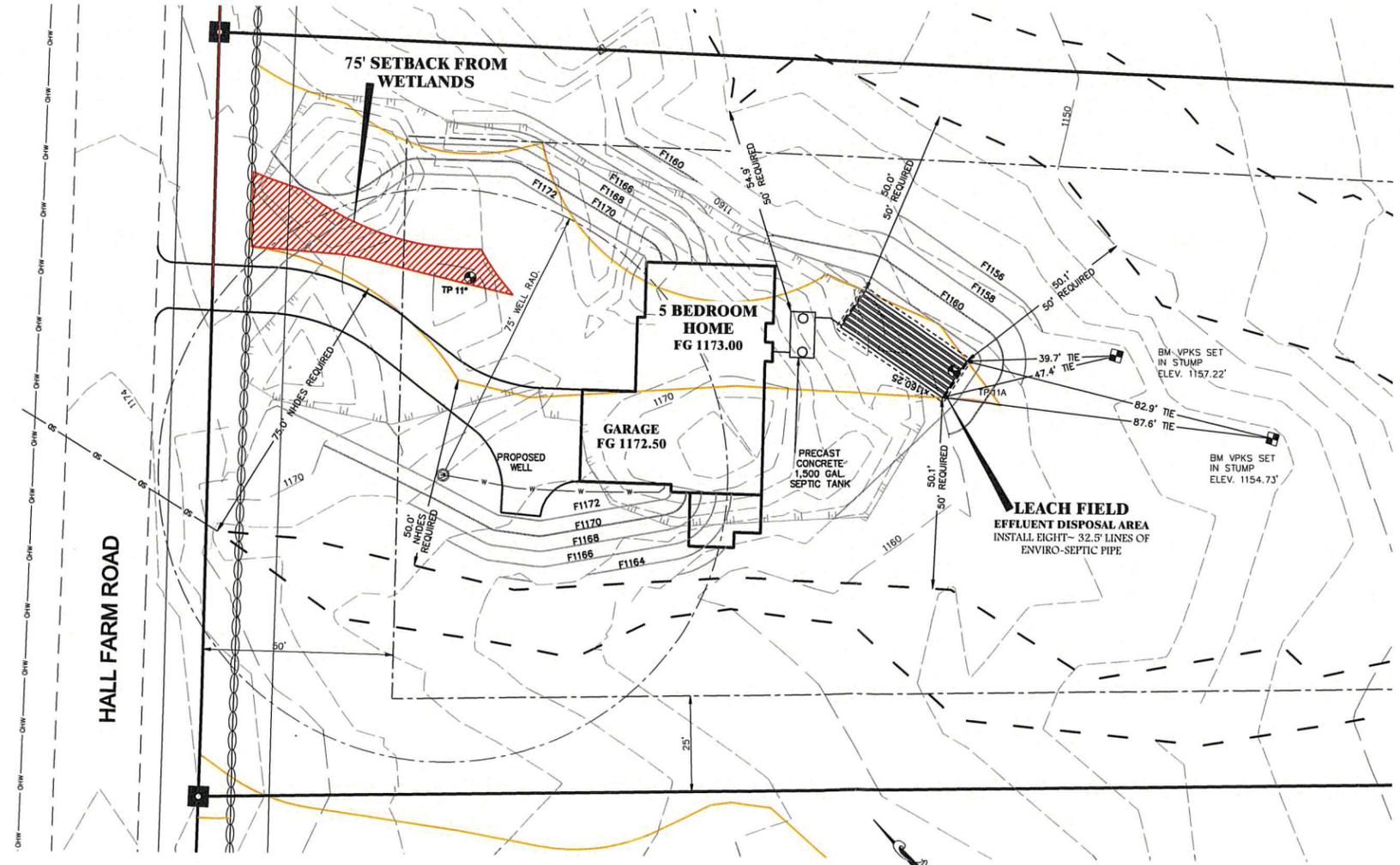
**PLAN DETAIL
(SHOWING WETLAND SETBACKS &
TEST PIT LOCATIONS)**

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[Variance - Appx. 05]



OVERVIEW PLAN SCALE: 1"=40'



SITE PLAN SCALE: 1"=20'

LEGEND

| EXISTING | |
|----------|------------------|
| ⊕ | TEST PIT |
| ⊙ | UTILITY POLE |
| • | BENCH MARK |
| — | CONTOUR NORMAL |
| — | CONTOUR HIGH |
| — | PROPERTY LINE |
| — | STONE WALL |
| — | EDGE OF PAVEMENT |
| — | EDGE OF GRAVEL |
| — | WETLANDS |
| — | DRAIN LINE |

PROPOSED
 BUILDING
 CONTOUR NORMAL
 SEPTIC SYSTEM

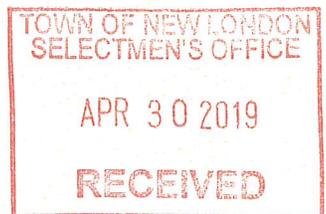
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 APR 30 2019



PREPARED BY: **M** McCourt Engineering Associates, PLLC
 Civil Engineering & Land Planning
 42 Ezekiel Smith Road, Hamlin, NH 03242
 mccourtengineering@ids.net
 (603) 428-6682

EFFLUENT DISPOSAL SYSTEM DESIGN
ZBA EXHIBIT
 MAP 86 - LOT 22-3
 HALL FARM ROAD, NEW LONDON, NH
 OWNED BY:
 SAMUEL DRIVE, LLC
 559 PEMBROKE STREET, PEMBROKE, NH 03275
 APRIL 28, 2019 SCALE: AS SHOWN

ENV-WQ 1014.04



[Variance - Appx. 07]

NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES

(4) Be homogeneous, and if bedding planes or other discontinuities are present, the applicant shall submit detailed soil analysis from a person or laboratory qualified to perform the analysis with the application to establish that the fill meets the above criteria.

(e) If a technology that has received approval under Env-Wq 1024 with a smaller separation distance to impermeable soil or bedrock will be used on a property, the separation distance(s) specified in the technology approval shall govern the down-slope receiving area requirement.

Source. (See Revision Notes #1 and #2 at chapter heading)
#11184, eff 10-1-16

Env-Wq 1014.05 Basis for Poorly and Very Poorly Drained Soils.

(a) The purpose of the criteria for poorly drained soils is to identify soil conditions where ground water is present within the upper part of the soil surface during the growing season.

(b) The purpose of the criteria for very poorly drained soils is to identify soil conditions where water is present at or above the soil surface during the growing season such that a significant organic surface layer accumulates.

Source. (See Revision Notes #1 and #2 at chapter heading)
#11184, eff 10-1-16

Env-Wq 1014.06 Delineation of Wetlands; Hydric Soils Determinations.

(a) Wetlands shall be delineated in accordance with RSA 482-A and Env-Wt 100 et seq.

(b) For sites in an undisturbed natural state, the presence or absence of hydric soils shall be determined by evaluating shovel or auger holes to a depth of 2 feet. A sufficient number of holes shall be dug to establish the hydric soil boundary to within 5 feet.

(c) The suitability of a site as a receiving layer shall be determined in accordance with (d), below, if any of the following apply:

(1) No fill has been placed on the site, but the natural vegetation and soil have been disturbed to the extent that it is not possible to determine the presence or absence of hydric soils based on a visual examination of the soil horizons revealed by shovel or auger holes; or

(2) Fill has been placed on the site prior to 1967 for tidal areas, or prior to 1969 for freshwater areas, or pursuant to authorization of the New Hampshire water resources board prior to 1979, or pursuant to a valid permit from the New Hampshire wetlands board issued prior to August 9, 1996, or issued by the department pursuant to RSA 482-A, and either:

a. Visual examination of a test pit establishes that the original soil was hydric, or

b. It cannot be determined by a visual examination of a test pit whether the original soil was a hydric soil or not.

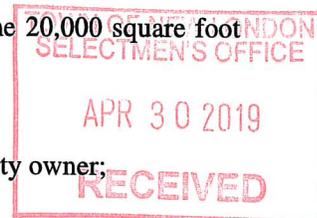
(d) If any of the conditions set forth in (c) above apply, the presence of a suitable receiving layer shall be determined based on the hydrology of the site as shown by data obtained from piezometric monitoring wells in accordance with the following:

(1) One monitoring well shall be placed in the proposed leaching area and one monitoring well shall be placed at a point between 65 and 75 feet downgradient of the proposed leaching area;

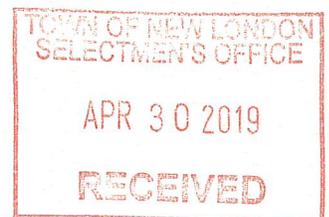
(2) Additional monitoring wells shall be installed as needed to establish the 20,000 square foot area required for subdivision applications;

(3) Water level readings shall be taken every 2 weeks;

(4) Water level readings may be taken more often at the option of the property owner;



**ENVIRO-SEPTIC DESCRIPTION
(DESCRIBING TREATMENT CAPABILITIES)**



[Variance - Appx. 10]



Presby Environmental

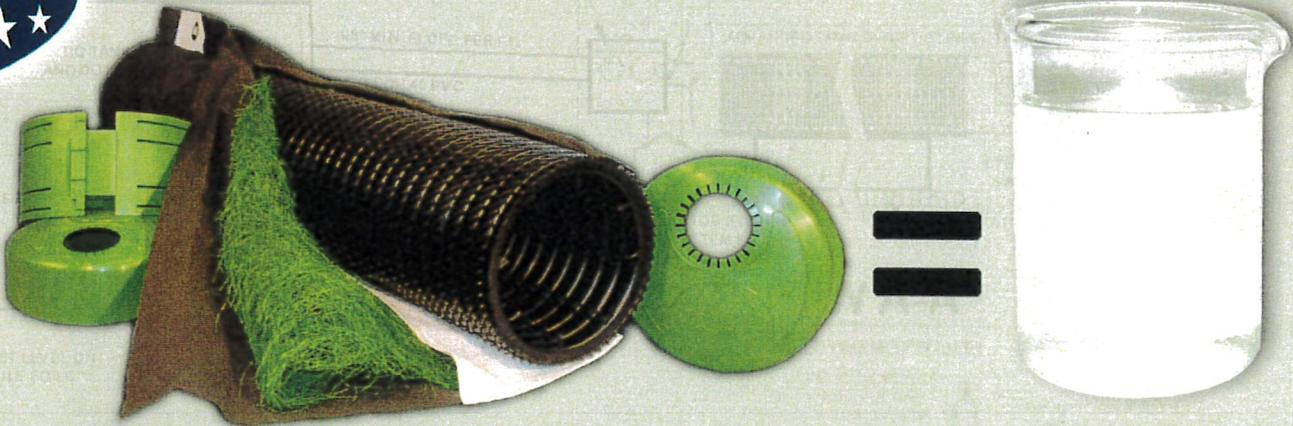
The Next Generation of Wastewater Treatment Technology

✓ *Minimizes the Expense* ✓ *Protects the Environment* ✓ *Preserves the Site*

Passive Onsite Wastewater Treatment System

ADVANCED ENVIRO))SEPTIC™

COMBINED TREATMENT AND DISPERSAL



BNQ Certified:
NQ 3680-910



The Public Health and Safety Company™



TOWN OF NEW LONDON
BUILDING DEPARTMENT OFFICE
APR 30 2019



Australian Standard
QPW: 2013
LIC:SMK40495

[Variance - Appx. 11]

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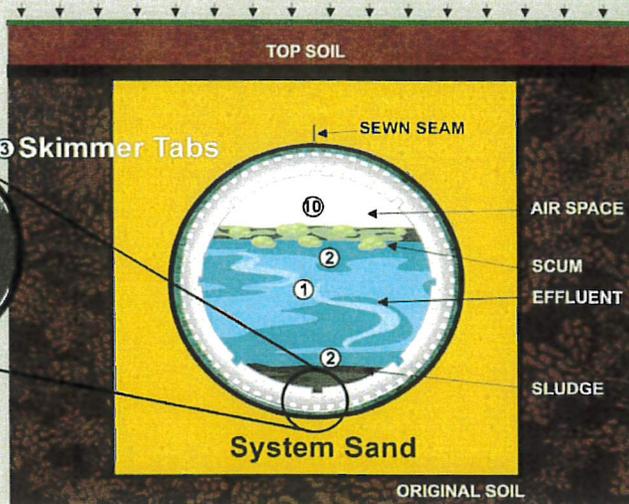


ADVANCED ENVIRO-SEPTIC

ADVANCED ENVIRO-SEPTIC™

TREATMENT STAGES

- 1 WARM EFFLUENT ENTERS THE PIPE AND IS COOLED TO GROUND TEMPERATURE
- 2 SUSPENDED SOLIDS SEPARATE FROM THE COOLED LIQUID EFFLUENT.
- 3 SKIMMERS FURTHER CAPTURE GREASE AND SUSPENDED SOLIDS FROM THE EXITING EFFLUENT.
- 4 PIPE RIDGES ALLOW THE EFFLUENT TO FLOW UNINTERRUPTED AROUND THE CIRCUMFERENCE OF THE PIPE AND AID IN COOLING.
- 5 BIO-ACCELERATOR® GEO-TEXTILE FABRIC FILTERS ADDITIONAL SOLIDS FROM THE EFFLUENT, ENHANCES AND ACCELERATES TREATMENT, FACILITATES QUICK START-UP AFTER PERIODS OF NON-USE, PROVIDES ADDITIONAL SURFACE AREA FOR BACTERIAL GROWTH, PROMOTES EVEN DISTRIBUTION, AND FURTHER PROTECTS OUTER LAYERS AND THE RECEIVING SURFACES SO THEY REMAIN PERMEABLE.
- 6 A MAT OF COARSE RANDOM FIBERS SEPARATES MORE SUSPENDED SOLIDS FROM THE EFFLUENT.
- 7 EFFLUENT PASSES INTO THE GEO-TEXTILE FABRIC AND GROWS A PROTECTED BACTERIAL SURFACE.
- 8 SAND WICKS LIQUID FROM THE GEO-TEXTILE FABRIC AND ENABLES AIR TO TRANSFER TO THE BACTERIAL SURFACE.
- 9 THE FABRIC AND FIBERS PROVIDE A LARGE BACTERIAL SURFACE TO BREAK DOWN SOLIDS.
- 10 AN AMPLE AIR SUPPLY AND FLUCTUATING LIQUID LEVELS INCREASE BACTERIAL EFFICIENCY.



Conventional

AES

Third Party Testing

| BNQ Testing Parameters | Advanced Enviro-Septic® Test Results* |
|------------------------------|---------------------------------------|
| CBOD (mg/L) | <2 |
| TSS (mg/L) | <2 |
| Fecal Coliforms (CFU/100 mL) | 218 |

Industry Standards

| EPA Tertiary | NSF-40 Class I | BNQ Advanced Secondary |
|--------------|----------------|------------------------|
| 10 | <25 | <15 |
| 10 | <30 | <15 |
| 1000 | n/a | 50,000 |

* (N/Ref: 30825-049-A) BNQ Test Center, Quebec

A powerful ecosystem of aerobic and anaerobic bacteria digests up to **99%** of wastewater contaminants, recycling clean water into the environment

Conventional systems may require as much as 4 times the footprint of AES

[Variance - Appx. 12]

For more information on our complete line of products

C[®] TREATMENT SYSTEM

Ridges

- ▶ Increase surface area and airflow
- ▶ Improve cooling
- ▶ Provide more bacterial growth areas

Skimmers at Each Perforation

- ▶ Prevent grease and suspended solids from leaving the pipe
- ▶ Protect green fibers and geo-textiles from clogging



Black Geotextile

- ▶ Surrounds the pipe and fibers
- ▶ Provides protected bacterial treatment surface

Green Plastic Fiber Mat

- ▶ Filters more suspended solids
- ▶ Protects outer geotextile bacterial treatment surface
- ▶ Creates a massive bacterial treatment area

Bio-Accelerator™ Fabric

- ▶ Quickly develops treatment biomat
- ▶ Screens more solids from the wastewater
- ▶ Ensures distribution of wastewater along the entire length of the pipes
- ▶ Provides additional treatment surface
- ▶ Enhances and accelerates treatment
- ▶ Facilitates quick start-up
- ▶ Further protects outer layers and the receiving surfaces



The Health and Safety Company™



BNQ Certified:
NQ 3680-910



European Conformity



Australian Standard
QPW: 2013
LIC:SMK40495



The Presby Difference

- Removes up to 99% of wastewater contaminants
- Treats and disperses in the same small footprint
- Proven and reliable track record
- No electricity replacement media or expensive maintenance required

"We were so impressed with the performance in both new situations and use on repair[s] of previous system[s] that by 2008, almost all septic systems were Presby"

-Randy Raines,
Monroe County Health Department, Indiana



[Variance - Appx. 13]

Products visit www.PresbyEnvironmental.com

Presby Environmental

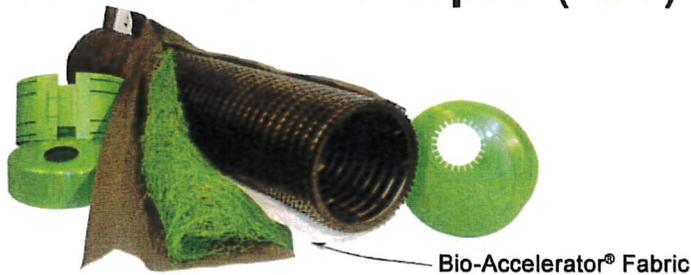
...changing the way the world approaches wastewater treatment.

Presby Environmental, Inc. (PEI), founded in 1995 by inventor and entrepreneur David Presby, is an innovative environmental organization that engineers new technology to change the way the world approaches wastewater treatment. Today, PEI is on the cutting edge of wastewater treatment technology to help protect and preserve our most precious natural resources.

Through extensive field testing and R&D, PEI has developed the world's most practical and effective wastewater treatment system, the Advanced Enviro-Septic® Wastewater Treatment System (AES). AES combines superior treatment and dispersal in the same footprint, offering design, installation, and cost advantages no other system can. This System is so effective, it is the only one of its kind to meet the stringent standards of NSF-40 Class I and BNQ Advanced Secondary.

Presby Environmental combines innovation, simplicity and extensive research and development into a patented line of complimentary onsite wastewater treatment technologies, designed and manufactured at PEI's state-of-the-art facility. Mr. Presby continues to lead the industry by striving to improve the techniques and technology used in the field, always pushing to provide the next generation of wastewater treatment technology.

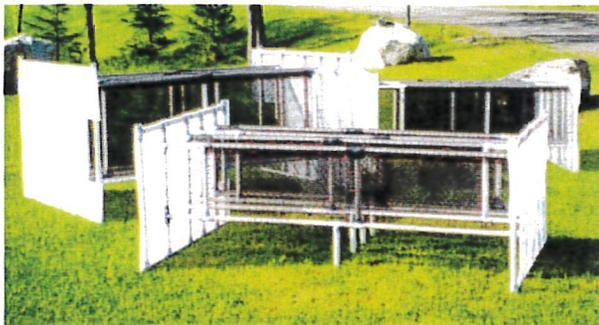
Advanced Enviro-Septic®(AES)



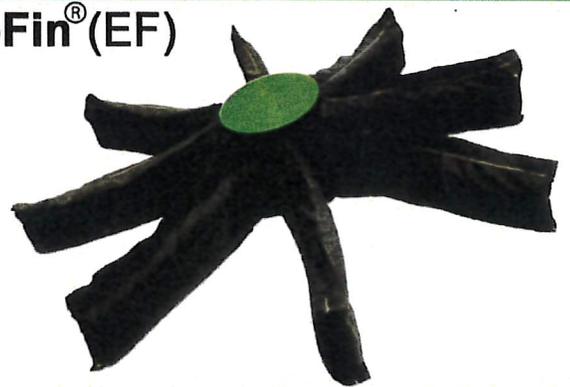
Enviro-Septic® (ES)



Presby Maze®



EnviroFin® (EF)



The Best Customer Service in the Industry...for us it's personal

- Design layouts
- User-friendly website
- Design, Installation & Operations Manuals

- Online training classes
- Technical support
- System Sand Supplier List

To contact our Customer Service Team

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

Tel: 800-473-5298
Fax: 603-837-9864
Email: info@presbyeco.com

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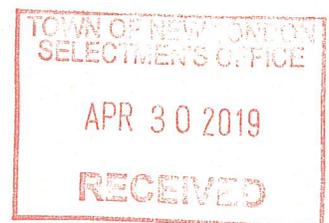
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[Variance - Appx. 14]

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**LETTER OF NH DES
(NOTING BENEFITS OF ENVIRO-SEPTIC)**





The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES



Thomas S. Burack, Commissioner

February 23, 2015

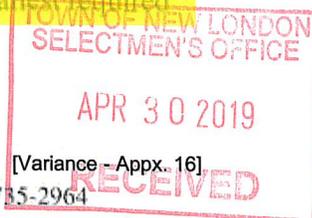
David W. Presby, President
Presby Environmental, LLC.
143 Airport Road
Whitefield, New Hampshire 03598

Subject: Presby Environmental, Inc., Septic Star™

Dear Mr. Presby:

Thank you for taking the time on Thursday, February 12th to demonstrate and explain Septic Star™, Presby Environmental, LLC.'s (Presby) new and innovative on-site wastewater treatment and disposal system. The New Hampshire Department of Environmental Services (DES) looks forward to receiving and reviewing your application for Innovative/Alternative Technology Approval (ITA) for this product. As you know, to obtain an ITA, you must first apply for approval in accordance with Env-Wq 1024 of the Subdivision and Individual Sewage Disposal System Design Rules (Rules). The requirements for approval include but are not limited to the submittal of test data demonstrating that the proposed system is "at least as protective of the environment as a conventional system". You indicated that you have already performed the required testing and, therefore, may be able to submit the application in the very near future. I assure you, once the complete ITA application is received, it will be reviewed in a very timely manner.

DES has a long history of encouraging applications for the use of technologies Env-Wq 1024 of the Rules, which has enabled the employment of alternative and innovative technologies to manage standard as well as more difficult on-site wastewater issues in NH. Since 1995, Presby has developed, manufactured and sold advanced on-site wastewater treatment technologies, including Simple-Septic®, Enviro-Septic®, Advanced Enviro-Septic®, and the Presby Maze®. All of these products have received ITA approval for use in New Hampshire under the Env-Wq 1024 Rules. Those approvals were based on third party testing which demonstrated that the treatment capabilities of the Presby systems were superior to traditional on-site (pipe and stone) systems. This allowed DES to approve the use of these systems with a smaller required separation distance from restrictive features, such as the seasonal high groundwater table and bedrock. In fact, one of these systems, the Advanced Enviro-Septic®, has the smallest required



separation distance, of all systems holding ITAs in the State of New Hampshire. Taken as a whole these Presby products have been, and continue to be, used in a high percentage of on-site wastewater system designs approved by the state of New Hampshire.

Over the years, DES has observed that the Presby products are supported by a company emphasis on excellence of technical support and customer service. DES has also observed Presby's emphasis on the development of product specific design and installation manuals and its efforts to provide training, site visits and other assistance to design and installation professionals. We look forward to seeing these same emphases in your Septic Star™ product.

DES believes that its ITA process has provided the state's residents with a wide range of innovative and cost effective wastewater treatment technologies, including the Presby products granted ITAs by DES. DES has also served as a resource to other states and entities seeking to learn from NH's positive experiences with this regulatory program.

Again, DES looks forward to reviewing an ITA application for the Presby Septic Star™ product. While I can be reached at 603-271-3449 or at thomas.burack@des.nh.gov, please direct all communications regarding ITA applications to Eugene Forbes, Director, Water Division, (603-271-3308, Eugene.Forbes@des.nh.gov) and Rob Tardif, Administrator, Subsurface Bureau (603-271-2904, Robert.Tardif@des.nh.gov).

Sincerely,



Thomas S. Burack
Commissioner

cc: Eugene Forbes, P.E., DES Water Division Director
Rob Tardif, DES, Bureau Administrator, Subsurface Systems Bureau

