



January 23, 2023

BY ELECTRONIC MAIL ONLY: TGuarino@townofbourne.com

Town of Bourne Board of Health
Terri Guarino, RS, CHO
Bourne Town Hall
24 Perry Avenue
Bourne, MA 02532

Re: Variance Requests, 176 Scraggy Neck Road, Bourne (Map 51.0, Parcel 1)

Dear Members of the Board:

On behalf of neighbors and abutters¹ to the proposed residential construction project (the “Project”) at 176 Scraggy Neck Road (the “Site”), I am writing to provide information to the Board on the above-referenced variance requests filed on behalf of The Long Point Trust, c/o Stephen and Marybeth Bisson (the “Applicants”) by Bracken Engineering, Inc. (“BEI”). The Applicants’ January 18, 2023 submissions request eight (8) variances from the Bourne Board of Health Regulations (the “Regulations”) requiring 150-foot setbacks for septic leaching facilities. Four of the requested variances would be to locate the leaching facilities less than 75 feet from Coastal Bank Wetland Resource Areas. **However, the Applicants’ requests do not accurately describe the variances needed, because the requests fail to calculate all distances to Coastal Bank #3.** The Board should reject the variances for this reason, and also because the Project fails to comply with other mandatory requirements in the Board’s Regulations and in Title 5, as explained below.

1. The variance application does not accurately describe Project’s impacts, because it fails to list any setback distances to Coastal Bank #3.

BEI’s variance application is inaccurate and fails to account for all Project impacts, because it does not include *any* setback distances to Coastal Bank #3, which is the closest Coastal Bank to the proposed septic system. To illustrate this deficiency, I have attached a map (Exhibit A) prepared by our expert hydrologist, Scott Horsley, which shows the setbacks from the top of Coastal Bank #3 to the proposed septic system. As shown on Exhibit A, the leaching field is only 8 feet from the bottom and 22 feet from the top of Coastal Bank #3, and the reserve area is even closer. Accordingly, the variances needed and the setback distances listed by BEI in the application are inaccurate, such that Project impacts cannot be assessed by the Board.

¹ This firm represents: Maryfrances Galligan, 170 Scraggy Neck Road; Kevin and Kate McCarey, 168 Scraggy Neck Road; and Susan Malcom, 10 Winsor Road, all in Bourne, Mass.

The Bourne Conservation Commission’s November 23, 2022 Order of Conditions confirmed that the area labeled on BEI’s Existing Conditions Plan (last revised on September 26, 2022) as Coastal Bank #3 is a Coastal Bank Resource Area. As such, Coastal Bank #3 requires the same setbacks as the other Resource Areas on the Site, and there is no distinction under any wetlands or Board of Health regulation that permits Coastal Bank #3 to be treated differently or omitted here. We respectfully request that the Board require the Applicant to update its plans to accurately list all variances needed to Coastal Bank #3 before any action is taken on the variance requests.

2. The variance requests do not comply with mandatory requirements in the Board’s 150-foot Setback Regulation.

The variance requests also fail to comply with the requirements in the Board’s “150 Ft. Setback Regulation,” which states that:

a 150 foot setback will be required for all leaching facilities from the edge of a wetland resource or watercourse, as defined in 310 CMR 15.01 Title V. Setback distance shall be measured during periods of highest ground or surface water conditions. The Board of Health may grant a variance from the 150 foot setback requirement, based upon satisfactory documentation prepared by a hydro geologist or professional sanitary engineer. In addition, **a hydro geologic study, prepared by a hydro geologist or professional sanitary engineer, will be required by the Board of Health for all leaching facilities within 100 feet of a wetland or watercourse, as defined by 310 CMR 15.01, Title V. In no case shall a septic system leaching facility be placed within 75 feet of a wetland or watercourse, except in cases of repair or extreme hardship.**

150 Ft. Setback Regulation, Section 1. (Emphasis added). Section 2 further provides that: “Extreme hardship shall be defined as loss or damage to structure or septic system due to fire, flood, acts of nature, or land taking (by eminent domain).” The Applicants’ variance requests do not comply with the Regulation’s mandatory requirements, as follows:

- the hydro geologic study, prepared by a hydro geologist or professional sanitary engineer, that “will be required by the Board of Health for all leaching facilities within 100 feet of a wetland” has not been provided; and
- the Regulation does not allow a septic system leaching facility to be within 75 feet of a wetland, except in cases of repair or extreme hardship, both of which are inapplicable here, where the Site could accommodate a smaller house and septic system located farther away from the Coastal Bank Resource Areas.

The Applicants are attempting to circumvent the Board’s variance requirements by claiming – without any legal authority – that the Board’s “150 Ft. Setback Regulation” does not apply to Coastal Banks because it references to an “old” version of Title V that did not define

“wetland resource,” but did define “watercourse,” and/or by alleging that a Coastal Bank is not a wetland. These positions are nonsensical, and should be rejected by the Board.

First, under the principles of statutory interpretation, when a local regulation like the Board’s “150 Ft. Setback Regulation” refers to a state law or regulation, it is assumed that the state regulation will be updated over time to conform to evolving standards. There is no basis to revert back to an earlier version of Title 5 to interpret the local regulation. If in 1988 the Bourne Board of Health intended to enshrine the then-current Title 5 requirements in its local regulation, it could have easily copied those requirements directly into the local code. However, it chose not to do this, but instead referenced Title 5 knowing that it would change over time. Therefore, it is the current version of Title 5 that applies when interpreting the local 150 Ft. Setback Regulation.

In the current version of Title 5, 310 CMR 15.002 (definitions), a “**Wetland**” is defined as: “Any land area or surface area so defined by the Massachusetts Wetlands Protection Act, M.G.L. c. 131, § 40 and regulations promulgated pursuant thereto at 310 CMR 10.00: *Wetlands Protection...*” Under Title 5, 310 CMR 15.002 (definitions), “Bank (Coastal)” is also defined as: “Any land or surface area so defined by the Massachusetts Wetlands Protection Act, M.G.L. c. 131, § 40 and 310 CMR 10.30(2). Under the Massachusetts Wetlands Protection Act, M.G.L. c. 131, § 40, “The term “coastal wetlands’... shall mean any bank....” Under the state wetlands regulations at 310 CMR 10.00 *et seq.*: section 310 CMR 10.02 provides jurisdiction over “coastal wetlands;” section 310 CMR 10.21, which contains “Additional Regulations for Coastal Wetlands” applies to any “coastal bank;” and section 310 CMR 10.30 sets forth wetland resource area performance standards for Coastal Banks. Accordingly, there is no question that a Coastal Bank is a “wetland resource” under Title 5, the Massachusetts Wetlands Protection Act, and the Wetlands Regulations at 310 CMR 10.00 *et seq.*, such that the Applicant must comply with all applicable setbacks to the Coastal Bank wetland resource areas.

Second, even under the Applicants’ interpretation of “Watercourse” as defined in the “old” Title 5 regulation – which we do not believe is relevant here – the definition of “Watercourse” cited by the Applicant includes any “coastal wetland.” Since a “coastal wetland” includes a “coastal bank,” the local 150 Ft. Setback Regulation would apply even under the Applicant’s interpretation. Coastal Banks have been protected as wetland resources since 1978, when the coastal wetlands regulations – 310 CMR 10.21 to 10.37, including Coastal Banks at 310 CMR 10.30 – went into effect under the state Wetlands Protection Regulations. See 310 CMR 10.10(2) (“The effective date of 310 CMR 10.21 through 10.37 is August 10, 1978”). Therefore, Coastal Banks were protected as “wetland resources” under the state wetland regulations in 1988, when Bourne passed its 150 Ft. Setback Regulation.

Finally, the Applicant appears to be arguing that the local Regulations do not apply to a Coastal Bank because it is not “wet” like a pond or the ocean. Again, this allegation misinterprets all the applicable regulations. The Bourne 150 Ft. Setback Regulation requires a 150 foot setback “from the edge of a **wetland resource** or watercourse” (emphasis added). The use of the word “or” means that the setback must be from either a wetland resource or a watercourse, meaning that setbacks to either one must be considered. As stated above, a Coastal Bank has been considered a Coastal Wetland Resource Area protected under the state Wetlands

Protection Act and Regulations since at least 1978. A Coastal Bank is a “wetland resource” under any recognized definition of that term, even though it is not a body of water. Where the proposed septic system here is only 22 feet from the top of Coastal Bank #3, the proposed Project does not comply with the 150 Ft. Setback Regulation’s mandate that “In no case shall a septic system leaching facility be placed within 75 feet of a wetland.” Accordingly, the Board must deny the variances for the Project.

3. The Applicant has failed to apply for required variances from Title 5.

The Project also requires variances from the state Title 5 regulations, because the proposed septic system is only 22 feet away from the top of Coastal Bank #3. Pursuant to the provisions of Title 5, 310 CMR 15.211(3) for “Minimum Setback Distances”: “All setback distances from wetlands shall be measured in accordance with the criteria of the Wetlands Protection Act and 310 CMR 10.00: Wetlands Protection, from the most landward edge of the following features: ... **top of coastal bank as defined in 310 CMR 10.30(2)**” (emphasis added). This means that under Title 5, a septic system must be located 50 feet from all Coastal Banks, measured from the top of the Coastal Bank. See 310 CMR 15.211(3). Where the Applicant has failed at this point to even acknowledge that Title 5 applies here, and has not applied for any Title 5 variances, we request that the Board reject the current application.

4. The Applicants’ nitrogen loading calculations are incorrect.

According to Mr. Horsley, the Applicants’ nitrogen loading analysis is flawed, such that it does not accurately represent Site conditions. First, the actual flows for the existing 1-bedroom, seasonal cottage and the 4-bedroom house are estimated to be the same: 137.5 gallons/day. See Exhibit B, highlighting Actual Wastewater Flows. This is clearly not realistic or representative. Standard engineering practice is to estimate actual average flows at 50% of Title 5 flows. Therefore, the 1-bedroom cottage should be estimated at 55 gallons/day, and the 4-bedroom house at 220 gallons/day.

Furthermore, the purpose of the nitrogen loading analysis is to determine the load and concentrations of nitrogen that flow to a coastal embayment. This Site is located on a peninsula, and it is surrounded by Salt Marsh, Coastal Banks, and Lands Subject to Coastal Storm Flowage. Additionally, four salt ponds surround the Site and are hydrologically connected it, as illustrated on the graphic prepared by Mr. Horsley, attached as Exhibit C. As shown on Exhibit C, groundwater flows to four separate coastal embayments that surround the Site. Each embayment has a groundwater recharge area. The hydrogeologic study that is required by the Board’s 150 Ft. Setback Regulation should identify groundwater flow directions and groundwater drainage areas to the surrounding salt ponds, to fully evaluate Project impacts. The hydrogeologic study should also include revised nitrogen loading calculations based upon the Site hydrology, and should only include recharge as dilution within the delineated groundwater drainage area where the septic system is proposed.

Thank you in advance for your consideration of these comments.

Very truly yours,

/s/ Elizabeth M. Pyle

Elizabeth M. Pyle

Exhibit A

PR. HIGH AND LOW VENT
(SEE DETAIL)
(FINAL LOCATION TO BE
COORDINATED WITH OWNER)

PROPOSED PRESBY ENVIRO-SEPTIC
SOIL ABSORPTION SYSTEM
(SEE DETAIL)

8' to coastal bank

22' to top of
coastal bank

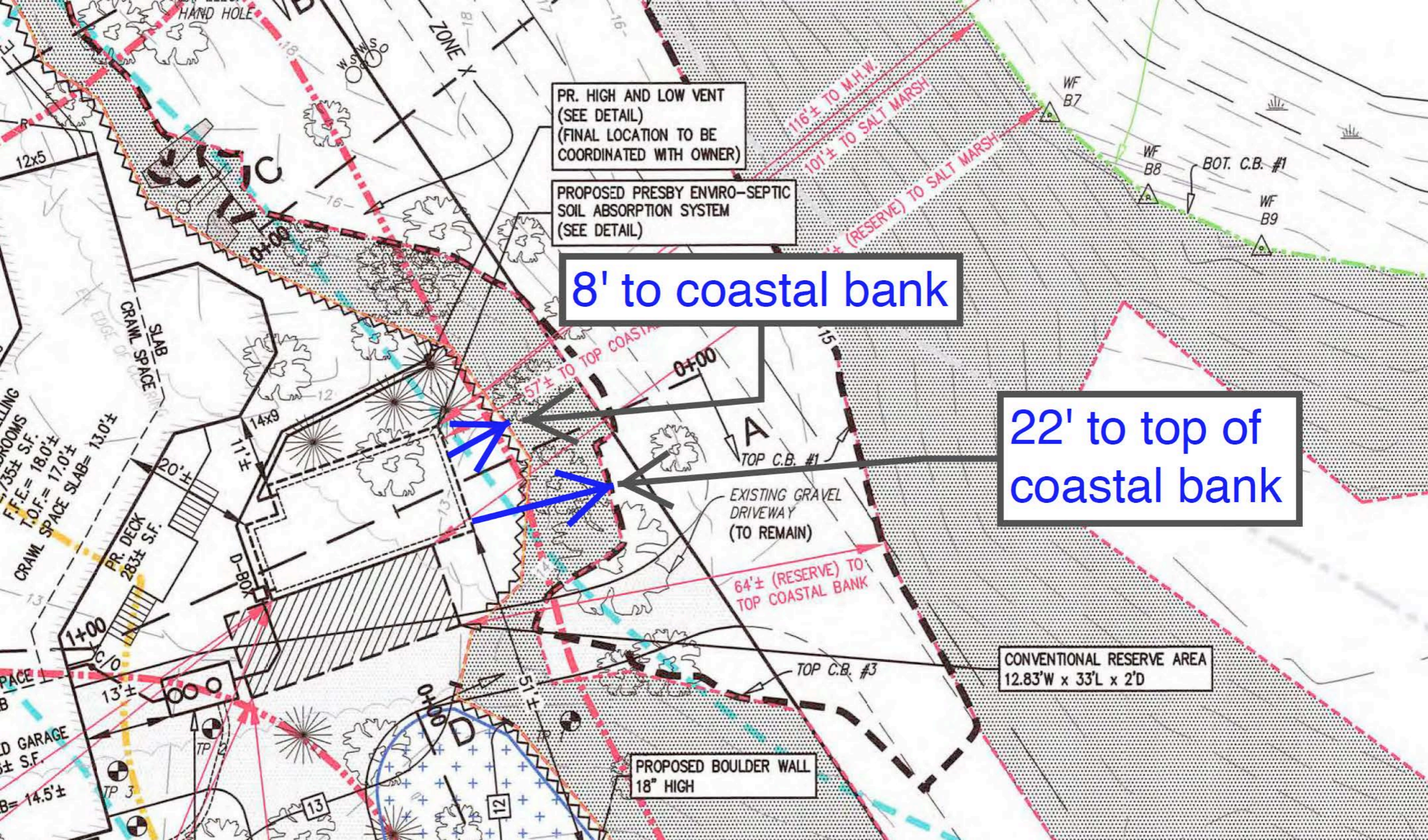


Exhibit B



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: 176 Scraggy Neck Road
 Preparer's Name: Bracken Engineering, Inc.
 Date: 1/9/2023
 Watershed: Pocasset Harbor

Project Nitrogen Load	Proposed Wastewater	New Construction/ Raze & Rebuild, Increases in Flow, or Repairs/ Upgrades	Existing Conditions
1.	Project Title-5 wastewater flows: <input type="text" value="440.0"/> gpd Actual wastewater flows: <input type="text" value="137.5"/> * Average wastewater flows: <input type="text" value="288.8"/> gpd	(a) _____ (b) _____ (A) (a)+(b) ÷ 2 = _____ * Title-5 flows prescribed by TB91-001 for commercial uses	Calculate (A') through (P') as w/ (A) through (P): Title-5 wastewater flows: <input type="text" value="110.0"/> gpd Actual wastewater flows: <input type="text" value="137.5"/> * Avg. wastewater flows: <input type="text" value="123.8"/> gpd (A')
Place <input checked="" type="checkbox"/> in applicable box: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Will the project be connected to sewer ? <input type="checkbox"/> <input checked="" type="checkbox"/> If project Title-5 wastewater flow 10,000 gpd or greater ?		Place <input checked="" type="checkbox"/> in applicable box: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is existing development on sewer ? (If 'Yes', then go to line 2.)	
Place <input checked="" type="checkbox"/> in applicable box and multiply unsewered wastewater flow by applicable conversion factor:		<input checked="" type="checkbox"/> Standard Title-5 System <input type="checkbox"/> DEP-approved I/A System (commercial) <input type="checkbox"/> DEP-approved I/A System (residential) <input type="checkbox"/> DEP-approved enhanced I/A	
	<input type="checkbox"/> Standard Title-5 System (35-ppm-N) x 0.048359 <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	} Type of system: <u>MicroFast</u>	
	Wastewater nitrogen load (Title-5 flows) = <input type="text" value="11.55"/> kg-N/yr (B) Wastewater nitrogen load (Actual flows) = <input type="text" value="3.61"/> kg-N/yr (C)		<input checked="" type="checkbox"/> Standard Title-5 System <input type="checkbox"/> DEP-approved I/A System (commercial) <input type="checkbox"/> DEP-approved I/A System (residential) <input type="checkbox"/> DEP-approved enhanced I/A <input type="text" value="5.32"/> kg-N/yr (B') <input type="text" value="6.65"/> kg-N/yr (C') wastewater offsets
Stormwater Runoff			

Exhibit C

