

TO: Emily Wentworth
FROM: Susan Sarni, MPH, Executive Health Officer
RE: Riverstone 40B Comprehensive Permit (suggested comments)
DATE: 6-13-18

I offer the following revised language related to proposed River Stone conditions. The following is intended to clarify, rather than substantially change, the conditions previously discussed by the Board.

3. Wastewater Disposal: The wastewater disposal system shall be designed in full compliance with Title 5 (310 CMR 15) and all local Board of Health Supplementary Rules and Regulations for the Disposal of Sanitary Sewage not expressly waived in Appendix C and the conditions set forth below:
 - a. In an effort to minimize Project-related impacts related to nitrogen loading on private drinking water wells in the area, the Applicant shall either reduce the number of bedrooms such that the sewage disposal system shall not discharge more than 110 gallons of design flow per day per 10,000 SF in lot area; or design the onsite wastewater disposal system using advanced nitrogen reduction technology which has been certified by the Massachusetts Department of Environmental Protection for general use.
 - b. In selecting a wastewater disposal system with advanced nitrogen reduction technology as an alternative to compliance with the lot area per bedroom standard described in C.4.a above, the Applicant shall design the onsite sewage disposal system as follows:
 - i. Prior to construction and in accordance with a partial waiver from Section VI (8) of the local Board of Health Supplementary Septic Regulations, the Applicant shall provide the following analyses identified in Title 5 of the state environmental code guidelines relative to nutrient loading and nitrogen sensitivity. This information reflects the components of a basic septic Site-Specific Mass Balance Analysis.
 - (1) Hydrogeologic Assessment
 - (2) Mounding Analysis
 - (3) Nitrogen Analysis
 - (4) Groundwater Monitoring Program
 - ii. As the maximum daily sewage flow for the Project exceeds 7,500 gallons per day, the Applicant shall file a permit for a sewage treatment plant with the Zoning Administrator. In connection with the filing, the Applicant shall provide six (6) sets of plans prepared by a registered professional engineer. Said permit shall be subject to peer review (consistent with Condition A.6) to confirm compliance with all local Board

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of Health Supplementary Septic Regulations not expressly waived in Appendix C and the conditions set forth below.

- iii. The Applicant shall provide an advanced treatment, denitrifying wastewater disposal system which shall provide a level of treatment which would limit concentration of nitrate-nitrogen in groundwater to less than 10 milligrams per liter (mg/l) at the Project property boundaries, provided that this alternative shall not be deemed a waiver of any requirements of Title 5 related to such a system. Calculations shall be submitted to document that the design of the system will comply with this condition. A groundwater monitoring program shall be established which includes a preconstruction nitrate-nitrogen baseline assessment and post-construction quarterly nitrate-nitrogen sampling analyses to verify compliance with the 10 mg/l limit.
- c. All septic components under roadways shall be designed for loading of the Hingham Fire Department's largest apparatus (Tower Ladder). Leaching system piping under roadways shall consist of Schedule 80 PVC.
- d. New test pits shall be conducted and systematically located to confirm the subsurface characteristics of the soils in the area of the proposed soil absorption system.
- e. Separation from high groundwater shall be calculated after adding the effect of groundwater mounding to the high groundwater elevation as determined pursuant to 310 CMR 15.103(3).
- f. The system installed for the Project shall be equipped with sensors and alarms to protect against component and system failure consistent with Title 5 safeguards and industry standards.