



ROCKINGHAM COUNTY CONSERVATION DISTRICT

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To: Michael Behrendt, Durham Town Planner

From: Danna Truslow, Project Manager for
Rockingham County Conservation District (RCCD)

cc: Leonard Lord, RCCD District Manager
Vicky Stafford, SCCD District Manager
Mark Kelley, Haley & Aldrich

Re: Planning board question regarding PRB site suitability

Date: October 20, 2015

Thanks for your question about the PRB Technology and its suitability for the site on Griffith Road. In particular Robin Mower asked:

The technology is promising; however passive PRBs (permeable reactive barriers) rely on natural hydraulic conductivity (easy flow from one side to the other). Hydric saturated wetland soils are really not suitable (or that would be my suspicion).

One criterion for site suitability was the characteristics of the subsurface materials. Ideally, a sandy material that can readily transmit groundwater over a less permeable material that will help focus the groundwater flow at the expected depth of the trench was hoped for. Sheet 2 of the design drawings includes well logs for MW-1, MW-2 and MW-3, which are immediately adjacent to the septic field in the approximate location of the planned PRB trench. The materials encountered are fine to coarse sand with some silt, which is suitable for this type of treatment trench. The underlying material is silty and less permeable which will help to isolate the nitrogen containing groundwater to the more permeable sand above it. No hydric soils were encountered in the area where the trench is planned.

The trench bottom will roughly correspond with the bottom of the sandy materials. The trench materials will be more permeable than the sands around it so water will preferentially flow into the trench for treatment and pass through to the down gradient side of the trench.