



February 14, 2011

Mr. Robert McIntyre, Chairman  
Old Saybrook Planning Commission  
302 Main Street  
Old Saybrook, CT 06475

**RE: River Sound Development  
Preliminary Open Space Subdivision Modification**

Dear Mr. McIntyre:

The following is in response to REMA Ecological Services, January 19, 2011 letter regarding the above referenced project, specifically with respect to Section 2.2 *Adverse Nutrient Impacts*, as it applies to septic system discharge. Since this claim is within my area of expertise, particularly as to hydrology and experience in septic system design, I am responding on behalf of our firm.

The claim in essence is that even with a properly designed septic system under the current Public Health Code, nitrogen/nitrate discharges from the 19 new systems proposed (11 in the Ingham Hill Road area and 8 in the Bokum Road area), plus the one existing system on Bokum Road are reasonably likely to cause pollution of the waters of the state.

This claim is unsubstantiated with regard to the character of the recipient water bodies, and is substantially inaccurate as to the effect under current parameters for septic system design. Additionally, existing technology provides available remedies if the location of a potentially adversely affected water body (such as a low nutrient wetlands) were involved.

Specifically, assuming 40 percent removal in the septic tank, the total nitrogen concentration in the wastewater discharge from a subsurface sewage disposal system is 60 percent of the raw domestic wastewater concentration. Based on the existing watershed areas and the ability to aerate the systems, nitrogen removal can not only easily meet the drinking water standard of 10 mg/l at the point of environmental concern, but also can reduce nitrogen/nitrate levels to meet more conservative limits.

Therefore, in my professional opinion there is no reasonable likelihood that the modification to the plan providing for individual septic systems in three separate areas (11 in the Ingham Hill Road area, 8 plus one existing in the Bokum Road area and 11, with public water, in the PRD

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West area) will cause any pollution, impairment or destruction of the public trust in the air, water or other natural resources of the State.

Should you have any questions, Bob Doane who also has extensive experience in septic system design and functioning will be available at the continued public Hearing on February 16, 2011 to respond.

Very truly yours,

DOANE-COLLINS ENGINEERING ASSOCIATES, LLC



Darcey R. Collins, P.E.

DRC/laa