



Bioengineering GROUP

Building Sustainable Communities
on an Ecological Foundation

For Immediate Release
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FIRST PRIVATE COMMUNITY-SCALE DECENTRALIZED SEPTIC SYSTEM IN STATE BEING PLANNED IN MANCHESTER-BY-THE-SEA, MA

Salem, MA – August 26, 2010 – Bioengineering Group, a woman-owned consulting and design firm headquartered in Salem, MA, is leading the design effort for a unique and cost-effective solution to handling wastewater at the neighborhood scale. The science and engineering team is coordinating with the MA Department of Environmental Protection, the Manchester Conservation Commission, Board of Health, and Town Engineer, and local residents for the installation of a community septic system that can be utilized by numerous homeowners, to be located in the Raymond Street neighborhood in Manchester-By-The-Sea. The feasibility study has been completed and included, among other tasks, soil and percolation testing, inspection of existing septic systems, topographic and utility survey, wetland delineation, preliminary engineering and cost estimation. The results of the study indicate that the selected Raymond Street residential lot can handle wastewater flow from as many as 36 bedrooms. The proposal involves collecting wastewater from multiple homes which have serious constraints such as small lot size, shallow bedrock, and high water tables that limit their ability to accommodate modern septic systems, and treating many homes wastewater in a shared system located on the lot with the most space and best access. In addition, EPA grant money is being pursued to help offset the cost of the project and cover a detailed documentation and outreach effort to help other towns understand the methods and benefits of this type of system. The system is currently in the design phase with installation expected to begin in the spring of 2011.

Inadequate wastewater treatment in the region leads to high surface and groundwater bacteria levels and increased frequency of beach closings. Individual septic systems are standard solutions, but are expensive to build and often are not regularly maintained. Shared or decentralized wastewater treatment systems collect wastewater from multiple homes; treat it using state-of-the-art technology; and remove more nutrients, pollutants, and pathogens than is possible with an individual system. Additionally, due to economy of scale, the cost is far lower when considered on a per bedroom basis. Highly cleansed water can be beneficially reused for subsurface drip irrigation as well, making the approach truly sustainable.

Bioengineering Group identified opportunities and methods to integrate design, landscape, and permitting needs. The wastewater system proposed on Raymond Street will help neighbors with questionable or failing septic systems who would otherwise face high costs and greatly altered landscapes in attempting to repair or construct their own new septic systems. The effort is currently being funded privately under a cooperative agreement between participants, and will be built on private property, using the Town road for siting the sewer pipe that collects wastewater. When complete, the potential exists to turn over the entire system to the municipality, or to continue operating it under private control. With today's Title 5 requirements for septic system performance, homes become less saleable and property values decrease when they have problem septic systems. However communities often lack the ability to create or extend conventional sewage systems. Community-scale shared septic systems offer a promising middle ground that is technically proven elsewhere in the country but relatively new in this region. Both the MA DEP and the US EPA are very supportive of this technical approach. Dr. Erin Bennett of Bioengineering Group, who is leading the planning phase of this project, is currently compiling contact information for interested neighbors who wish to join in the project, or obtain more information as limited opportunity remains to connect to this system. For more information, contact Dr. Bennett at ebennett@bioengineering.com or at (978) 224-3129.

About Bioengineering Group



Founded in 1992, Bioengineering Group has been a pioneer in the field of ecological restoration and the application of sustainability principles to site planning, development, and water management. The firm provides a full range of science, engineering, landscape architecture, and construction management services with a mission of "Building sustainable communities on an ecological foundation." Distinguished by their interdisciplinary staff of ecologists, scientists, engineers, and landscape design professionals, Bioengineering Group is uniquely positioned to guide large-scale site planning, development, and ecosystem restoration projects toward sustainable outcomes. The firm has worked with many municipalities, states, and government agencies to provide innovative site engineering and landscape architectural design; parks and greenways planning and design; integrated water management assessment and design; stream and shoreline restoration; as well as plan review, environmental permitting and remediation.

For more information about Bioengineering Group, visit www.bioengineering.com.

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