



# Roaring Brook News

## ENGINEERING A BETTER FUTURE

Fall 2007

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### Engineering Diversity

Many civil engineers work in a particular discipline, including construction, environmental, geotechnical, land use, and structural engineering. A multi-disciplined engineering firm offers services in two or more disciplines and provides a wide range of services. Its clients may be working in diverse industries or may even be homeowners.

Homeowners can find the services of a structural engineer useful if they are considering buying a home or looking to make changes in their current home. It can be important to know the long-term stability of a structure and whether making changes to the structure will affect the stability. If the homeowner wants to subdivide a lot, a land use engineer would be able to work with the surveyor, draw up the plans, and assist with obtaining approvals through the regulatory process, including special items such as wetland or dune permits.

Owners of facilities often need types of services similar to homeowners, especially if they are making changes to their facilities. A land use engineer can help lay out a new parking lot. A structural engineer can determine whether a floor will be able to support a new piece of equipment.

Insurers and attorneys often use the services of an engineer to help them understand issues related to buildings or land use involved in claims or disputes. A structural engineer can help determine the cause and extent of damages to foundations, roofs, retaining walls, windows and interiors. The damages may or

may not be related to severe weather, construction, design, or installation, and often it is the "may or may not" that is the question. Engineers can also do cost estimates for repairs, or help determine whether repairs are necessary or economically feasible.

Contractors also require a variety of engineering services. To assist the contractors in their projects, a construction engineer must have a full understanding of the construction process in addition to the engineering knowledge necessary to solve the contractors' problems. Contractors may need a land use engineer to lay out a site plan or to provide an erosion control plan. They may need a structural or geotechnical engineer to design shoring or other construction fixtures, temporary or permanent. These engineers also can design foundations, retaining walls and other similar structures.

Architects often turn to structural engineers to ensure that their buildings will be stable as well as beautiful.

Those involved with environmental concerns use the services of environmental engineers. They can assist with a plan for treatment of chemical, biological or thermal waste. They also deal with plans for the remediation of contaminated sites and can help in assessing the environmental impact of proposed projects.

If you have a project coming up, give us a call. Find out how the diversified skills of Roaring Brook Consultants can help you.

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### ❖ *Erosion Control Inspection for Stormwater Discharge*

Currently the EPA administers all Phase I and 2 projects dealing with stormwater discharge in NH and MA. In 2003, a General Permit was established that covers qualifying towns and cities (MS4 communities - please see the minimum requirements, below) and construction sites of more than one acre. Entities covered by the permit needed to file a Notice of Intent stating they would comply with its terms. The General Permit expires in 2008 and a new permit is being formulated. It is expected that the new General Permit will place more emphasis on reporting and analyzing the effectiveness of actions taken. For example, it is not enough to hold a public awareness night; its effectiveness must be analyzed. The EPA knows that there is no one approach that will fit all, but it expects that if an approach is unsuccessful, an attempt will be made to modify it and try again. The annual report from the General Permit holder should address what was done and what will be done next year.

Construction permit holders are also expected to have more reporting requirements placed on them. During the construction period, the contractor is expected to follow the Stormwater Pollution Prevention Plan (SWPPP) and inspect, maintain and repair the Best Management Practices (BMPs) installed on the project site. The new General Permit is expected to require reporting of inspections, repairs and alterations. A log is to be maintained and shown to an inspector from the permitting agency upon request.

Both temporary BMPs, such as haybale barriers, silt fences, and check dams, and permanent BMPs, such as buffers and ponds, are installed during the construction. Other permanent BMPs

relate to practices, such as street sweeping or removal of debris and dead trees from ditches, ponds, etc. The permanent BMPs must be inspected and maintained by the entity that has ownership of the property. This might be a condominium association, a homeowners' association, or the town that accepts the roads and infrastructure installed in the project. The responsible party for the inspection and maintenance of the permanent BMPs is supposed to continue inspecting the BMPs. The new permit is expected to make this transition of responsibility clearer.

Inspection and maintenance of the BMPs is left to the entity responsible for the site in the states of ME, NH, and MA. While the use of an independent inspection of the BMPs associated with SWPPP is not a requirement, the use of an independent inspector can: (1) provide assurance to the town and regulating agencies that the SWPPP is being implemented, (2) ensure a valuable task is performed on a routine basis, and (3) provide clear documentation of the plan's implementation and adjustment to meet changing site conditions.

Roaring Brook Consultants can provide a plan for your SWPPP or act as an independent inspector for your requirements. Call now to find out how we can help.

The minimum requirements for the MS4 towns and cities include: (1) public education and outreach, (2) public participation and involvement, (3) illicit discharge detection and elimination, (4) construction site runoff control - temporary and permanent, (5) post-construction runoff control, and (6) pollution prevention and good housekeeping.

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## ❖ *Terra Solutions, LLC*

Terra Solutions is helping commercial clients that are in close proximity to residential neighborhoods, be a better neighbor. Terra Solutions, LLC has teamed up with Maruyama Equipment, a manufacturer of chemical application equipment, to solve odor problems affecting residential neighborhoods in Maine and Massachusetts. As an authorized dealer of Maruyama application equipment, Terra Solutions brings a complete solution by pairing product and equipment to solve the problem.

Landfills, composting facilities and waste hauling companies are likely to have odors which can give a negative image to a company that is simply doing its job. Not dealing with the odor problem is the biggest reason for complaints about certain facilities. Recognizing and prioritizing the need to eliminate the problem is accomplished with the right product and the right piece of equipment, and putting both to use with the right process. Facing the problem will allow companies to spend more time doing what they do best and to project a better company image.



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## Personnel Profile Highlight

Paul H. Roberts, Jr. is the chief crane inspector at Roaring Brook Consultants. Paul has 16 years working on and inspecting cranes in the commercial market and for the U.S. Military. Paul has been deemed a competent person under OSHA rules and guidelines. Paul has attended the Crane Institute of America and is a Certified Crane Inspector.



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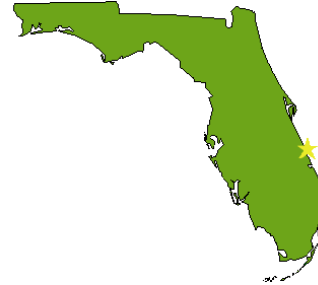
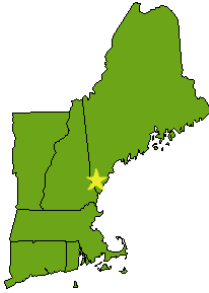
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