



Case Study: New Hampshire Department of Transportation – I-93, Windham, NH

In 2011, the New Hampshire DOT initiated construction widening of 20 miles of highway lanes along I-93 and 20 new bridges near Windham, NH. The estimated cost of construction was \$800M.

On past projects, NH DOT typically performed limited temporary erosion control and stormwater management engineering design prior to construction commencement. DOT relied exclusively on contractors to develop and implement a SWPPP on their construction projects during construction. However, for the new I-93 project, DOT took on a new approach.

On the I-93 project, DOT made erosion control their top priority. Their main goal was to minimize the effects of turbid stormwater effluent on local streams and water bodies. To aid them, DOT selected Nobis Engineering to provide construction inspection support services related to soil erosion and sediment control and to act as a liaison between NH DOT and the NH Department of Environmental Services.

During the initial design process, John St. John from Nobis Engineering approached Terra Novo, Inc. regarding our erosion control product **EarthGuard**[®]. Mr. St. John was extremely interested in the fact that **EarthGuard** was specifically designed to work directly on soil to maintain soil structure and flocculate dislodged sediment being transported by effluent stormwater. Mr. St. John's top priority was to keep effluent stormwater clean and **EarthGuard** with its flocculating ability was just what he needed. Not only was **EarthGuard's** characteristics import, but the fact that the product was significantly less expensive than erosion control blankets and bonded fiber matrices that were also being considered.

After review from both DOT and DES , general contractor George R. Cairns & Sons, Inc. chose to compare **EarthGuard** to straw blankets on a detention pond near the Derby Weigh Station on I-93. AJ Cameron was the erosion control subcontractor who performed the hydroseeding for Cairns utilizing **EarthGuard**.

On Aug. 1, 2011, **EarthGuard** was installed on the western half of the detention pond. Straw blanket was installed a week prior on the eastern half.



Application Date: Aug 2011



Inspection Date: Sept 2011 after 9" of Rain



On Sept. 13th, Nobis Engineering performed an inspection of the site. From Aug 1 – Sept 13th the site had experienced almost 9" of precipitation. Mr. St John was quick to point out the remarkable difference in growth between the **EarthGuard** and the straw matting treated areas. In addition, **EarthGuard** had saved the DOT over \$1500/ac.

EarthGuard is a spray-on erosion control product being used by major land developers and public agencies as a cost effective BMP for slopes and pads.

EarthGuard is university tested and worksite proven and is typically used in the following situations:

- 1) Site Winterization/Dormant Seeding
- 2) Spring/Summer Seeding
- 3) Slope Stabilization
- 4) Storm-by-Storm Erosion Protection
- 5) Fire-Burn Rehabilitation
- 6) Day-to-Day or Extended Dust Control Protection

For further information, please visit the following web sites:

Short 10 min. Video: <http://www.earthguard.com/video.php>

Product Brochure: <http://www.earthguard.com/pdf/SalesBrochure.pdf>

Web site: www.EarthGuard.com