



Wastewater Disposal Evaluation

The Pinehills, Plymouth, Massachusetts

The Horsley Witten Group, Inc. (HW) conducted a hydraulic loading test to confirm the capacity of a site to accept treated wastewater from five 8,500 square foot rapid infiltration basins. These basins accept a portion of the treated wastewater from what will be a 450,000 gallons per day wastewater treatment facility that serves the Pinehills residential, commercial, and golf course development. The loading test was designed and conducted according to flooding basin procedures outlined in the *Process Design Manual, Land Treatment of Municipal Wastewater* published by the U.S. EPA. The test included the monitoring of groundwater response to loading from applied water and rainstorms along with recording infiltration rates.



All data collected from soil borings, monitoring wells, deep hole soil observation tests, loading test basin excavations, infiltration tests and constant head tests were compiled, analyzed, and summarized into a design basis report. This report outlined the maximum loading rates for the selected area, maximum groundwater mounding conditions and the limits of unsuitable soil that would have to be removed to optimize the disposal capacity. The design basis report and subsequent engineering design of the infiltration basins were reviewed and approved by the Massachusetts DEP, and the basins have been in use since 2001.

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