



Experts in non-sewered development

CASE STUDY:

E C H E L O N Home of the Georgia Tech Club

Background:

Echelon, Home of the Georgia Tech Club, is a 610-acre tract in Alpharetta Georgia with 200 home sites and featuring an 18-hole Rees Jones-designed golf course and the southeast's largest Golf Learning Center. Sewer service is not available in this part of Cherokee County. The Melrose Company, site developer, contracted with NCS Wastewater Solutions to design, build and operate a private wastewater treatment and dispersal system to support the development.

Special Challenge:

Despite 610 total acres in the tract, very little space is available with potential for wastewater dispersal.



The Solution:

After considering the potential for spray irrigation of the golf course or using subsurface drip irrigation for treated wastewater dispersal, the Melrose Company and NCS elected to place a drip irrigation field in the 10+ acre driving range. Drip dispersal requires less investment in wastewater treatment with substantially lower operating costs than for spray irrigation. In addition, irrigation requirements for the driving range are reduced while Bermuda grass plant root uptake further limits the treatment plant investment required for nitrogen removal.

Details of Project and Pictures on the back

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The Project:

To collect wastewater and working in conjunction with Civil Engineering Consultants, Inc., NCS designed a low-pressure sewer using a Septic Tank Effluent Pump (S.T.E.P) system. S.T.E.P. systems limit the potential for Inflow and Infiltration problems, provide primary treatment at the source and provide for cost effective installation and ongoing operation.

NCS specified the use of Bioclere® trickling filters to provide reliable secondary treatment and nitrogen reduction. A Surflo Control System provides automated dosing controls to the drip field's 21 zones. Alarms and controls are remotely accessible through telemetry. Nearly 24 miles of Bioline drip tubing is spread throughout the golf course driving range.

Georgia EPD issued a Groundwater Discharge Permit in spring 2005 with construction begun in the fall 2005.



Drip Field Design



Treatment Facility



Drip Field/Driving Range Preparation