



CASE STUDY

PROJECT NAME

Forest Lakes Country Club
Ardoise, Nova Scotia

SYSTEM SPECIFICATIONS

2700-single and multi-family 4-season resort community with Nicolas Design championship golf course, clubhouse and commercial town center

PRODUCTS USED

Infiltrator Quick4 Plus Standard Chambers

DESIGN FLOW

Phase 1B: 13,526 USGPD (51,200 LPD)

INSTALLATION DATE

Phase 1B completed Spring 2016.
Total project completion 2019.

OWNER

Terra Firma Development Corp
Ardoise, NS

DISTRIBUTOR

Atlantic Purification Systems
Ltd, Dartmouth, NS



INFILTRATOR
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STEP System Utilizing Infiltrator Quick4 Plus Standard Chamber Dispersal System Key to 2700-home Nova Scotia Development

CHALLENGES

Forest Lakes Country Club is a four-season resort community under construction just outside Halifax in Ardoise, Nova Scotia. The development will ultimately include 2700 single-family, townhouse and multi-unit buildings residential units, the only Nicklaus Design championship golf course in Atlantic Canada, and a Village Centre with commercial and retail operations. Developer, Terra Firma Development Corporation, is utilizing a low impact development strategy along with a phased cluster-style "neighborhood" approach to help them retain the rural characteristics of the area including, large green spaces and recreational areas.

SYSTEM DETAILS

Each neighborhood at Forest Lakes utilizes a decentralized wastewater collection, treatment, and disposal system. A key design consideration was that the systems work reliably 24/7, 365 days a year in the northern, maritime climate typical of Nova Scotia. The initial neighborhood system, serving 50 single family and semi-detached homes, is designed to treat a peak flow of 13,526 US Gallons per day (51,200 Litres per day) of residential sanitary wastewater.

It includes a watertight Septic Tank Effluent Pump (STEP) pressurized effluent sewer collection system that delivers primary effluent via small-diameter mainlines to an AdvanTex® AX100 Secondary Wastewater Treatment Plant. Treated effluent from the AX100 system is directed into the dispersal system dosing tank where it is pumped, on a timed and intermittent basis using pressurized micro-dosing, to a multi-celled, soil dispersal system that incorporates Infiltrator Quick4 Plus Standard Chamber laterals in an area bed arrangement. The area beds provide onsite secondary effluent dispersal and treatment in two cells, each with five zones. A hydraulic distributing valve at the head of each cell automatically and sequentially directs the pumped flow to the appropriate zone.

RESULTS

The Infiltrator chambers simplified the large bed construction and the chamber beds provide improved maintenance access and additional storage as compared to traditional methods. The open bottom chamber system design preserves the infiltrative capabilities of the soils which is especially helpful on larger sites.

The low impact development strategy and distributed wastewater treatment approach at Forest Lakes enabled project developers and engineers to protect the environment and maximize usable space.