CASE STUDY

PROJECT NAME
Gold Beach, Oregon

SYSTEM SPECIFICATIONS
New WWTP with innovative 2.0 MGD chamber drainfield design

INFILTRATOR PRODUCTS USED
Infiltrator Quick4™
Equalizer 24 Chambers

INSTALLATION DATE
Spring 2012

ENGINEER
Aaron Speakman
The Dyer Partnership Engineers

OWNER
City of Gold Beach, Oregon

New WWTP with Innovative 2.0 MGD Infiltrator Chamber Drainfield Solves Effluent Surfacing and Overflow Challenges for Oregon Community

SUMMARY
The community of Gold Beach, Oregon has approximately 2,250 residents. Wastewater is treated by a Sequencing Batch Reactor Plant, disinfected with Ultraviolet Disinfection, and then discharged to a series of subsurface drainfields located at the nearby airport.

The existing drainfields did not have the capacity for the peak wet weather flows and were experiencing effluent surfacing along with overflows discharged to a creek.

The Port of Gold Beach, which leases the property to the City, expressed concerns about the construction of additional drainfields and requested that drainfield operations be confined to the limited, existing easement.

A new treatment plant and chamber drainfield system designed by Aaron Speakman of The Dyer Partnership Engineers was approved and constructed to treat, convey, and discharge the final effluent meeting Clean Water Act regulations, the WPCF permit, and the limits set forth in the NPDES permit.

The new system design is based on the maximum allowable area within the existing easement and is strategically placed adjacent to an airport runway. It is designated as a Runway Safety Area (RSA) defined as an area “prepared or suitable for reducing the risk of damage to airplanes in the event of an excursion from the runway.”

As the RSA must be clear of obstacles and capable of supporting the occasional aircraft, the 2.0 MGD chamber drainfield design was modified to include stone. This increased the structural capacity of the drainfield in case of an airport emergency condition. The system is covered with a geotextile to prevent sand intrusion into the stone.

The innovative design has 21 drainfields rather than the original nine and offers flexibility and redundancy to the City. Flushing ports and isolation valves also allowed the City to flush the lines during new plant construction, which was critical when the existing plant failed prior to startup of the new plant.

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4 Business Park Road, Old Saybrook, CT 06475
(800) 221-4436 • info@infiltratorwater.com