

CASE STUDY

Quick4 Chambers Used in 2.0 MGD Drainfield for WWTP

Gold Beach, OR

SYSTEM SPECIFICATIONS

2.0 MGD Drainfield for New WWTP

INSTALLATION DATE

Spring 2012

PRODUCTS

Quick4® Equalizer 24 Chambers

OWNER

City of Gold Beach, Oregon

ENGINEER

The Dyer Partnership Engineers, Sutherlin, OR

DESCRIPTION

The community of Gold Beach, OR, 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.

