

## Products Highlight

PuraACE®

PuraSys SBR®

Puralinity®

## Quick Facts

**Application:**  
Commercial

**Products:**  
PuraACE, PuraSys SBR, Puralinity

**Engineer/Designer:**  
Pennoni Engineering

**Installer:**  
Eric Quigley of Clide, Quigley & Son

**Location:**  
Millsboro, DE

## PuraSys SBR Enables Expansion of Warehouse and Retail Space

### Situation

During an expansion project for a commercial office park and warehouse, the designer realized that the on-site treatment system needed a serious upgrade to the system's capacity and to meet the stringent nitrogen reduction requirements. Due to the limited land available, they needed a treatment system that could handle the larger flow without expanding the existing drainfield. The designers decided to utilize PuraSys SBR as their on-site treatment solution because of the small footprint, robust treatment capabilities, and approval for nitrogen reduction in the Chesapeake Bay watershed.



## Technical Details

### Products Used:

- (1) PuraACE
- (1) Puralinity 30" dia Basin
- (2) PuraSys SBR 1.2

### Influent:

- Hydraulic – 4,000 gpd
- Organic – 13.3 lbs BOD<sub>5</sub>/day

### Effluent:

- CBOD<sub>5</sub> – 25 mg/l
- TSS – 30 mg/l
- TN – 20 mg/l

### Tank Sizes:

- Primary – (2) 2,800 gal
- Flow Equalization – 2,800 gal
- PuraSys SBR Siphon/Reactor (2) – 2,800 gal
- Drainfield Dosing – 6,000 gal

## Solution

The PuraSys SBR batches treatment through cycles, including aerobic and anaerobic steps, to clean the water and reduce total nitrogen. Since the process is batched, the smart control can recognize water flow and then adjust aeration accordingly. This not only saves energy, but also improves treatment efficiency and avoids bulking. PuraSys SBR will provide a significant upgrade to treatment quality when added to an existing treatment system.

The designers were able to maximize their expansion efforts for the commercial facility because PuraSys SBR uses less tanks and saves space as compared to other treatment system options.

The 4,000 GPD system consists of one patented PuraACE pre-aeration unit, timed duplex flow equalization pumps, two commercial Purasys 1.2 units, and one Puralinity pH biobuffer. The system provides top level treatment in a compact footprint.



## Results

This makes PuraSys SBR the optimal choice for tight spaces. When it comes to treatment, PuraSys SBR does more with less.

### Facilities served:

- 8,125 sq ft warehouse building
- Four 9,900 sq ft retail units

