AQUA-AEROBIC SYSTEMS, INC.
A Metawater Company

AquaSBR® Systems Above 10 MGD

Since 1986, Aqua-Aerobic Systems, Inc. has installed more than 1,200 AquaSBR® Systems worldwide in a variety of municipal and industrial applications at flows ranging from a few thousand gallons to millions of gallons per day.

All of the benefits that the AquaSBR offers for small flow plants are also applicable to large flows. These benefits include components that can be retrievable and accessible, small footprint, separation of aeration and mixing for power cost savings and operational flexibility and the ability to achieve nutrient removal. Also, the AquaSBR operates in a True Batch treatment mode, which means that only the highest quality effluent is achieved.

According to an EPA Summary Report, SBR technology is a more economical alternative compared to conventional activated sludge and oxidation ditch systems. This conclusion was based on total installed capital cost and overall life cycle cost for flows ranging from 1 MGD to 50 MGD.

The company's vast experience with large flow AquaSBR systems has earned Aqua-Aerobic the reputation as the leader in SBR technology, and an expert in large flow wastewater treatment applications.

19 MGD
Newburgh WWTP
Newburgh, IN

The Newburgh treatment plant was updated in 2000 to a 5-basin AquaSBR® system, designed to treat a maximum day flow of 9.4 MGD and a peak hour flow of 14.8 MGD. In 2010, three additional reactors were added to handle a maximum day flow of 14.9 MGD and a peak hour flow of 19 MGD.

27 MGD
Sulphur WWTP
Sulphur, LA

The AquaSBR® system at Sulphur started operation in March 2008. As population increased, it was found that the existing 30-year-old activated sludge plant was in need of a significant upgrade. The new system is a 4-basin SBR system fed by 29 pump stations located throughout the city and also receives septage from local haulers.

18 MGD
Withlacoochee WPCP
Valdosta, GA

The Withlacoochee plant was designed after disastrous flooding was experienced by the old plant in April 2009. The new plant is situated outside of the flood plain at a 60 foot higher elevation than the old plant. The new SBR system assists in the successful handling of high flow rainstorm events by preventing the overloading of units downstream.

AquaSBR® Systems Above 10 MGD
(continued)

17 MGD
Keegans Bayou WWTF
Biloxi, MS

To accommodate increased growth, Keegans Bayou replaced an old trickling filter system with an AquaSBR® system. The expansion tripled the plant's capacity and services all of east Biloxi including an area of casino-hotel chains.

14 MGD
Tulare Industrial WWTP
Tulare, CA

Operated by the City of Tulare, the Tulare Industrial WWTP is surrounded by rich farming communities. The 6-basin AquaSBR® system treats primarily industrial processing waste from six large milk processing facilities. This plant is one of the largest industrial SBR systems in the nation and provides quality recycled water to the Tulare community.

15 MGD
Broad River WWTP
Irmo, SC

The Broad River WWTP consists of a 4-basin AquaSBR® system. One of the main drivers for the technology selection was the system's biological phosphorus removal capability. The plant started up in October 2008.

13 MGD
St. Andrews WWTP
Panama City, FL

This 3-basin AquaSBR® system was built to expand the capacity of the existing oxidation plant which was re-purposed for storage tanks. The system has been designed to easily add a fourth SBR basin to increase treatment capacity in the future. The SBR system started operation late 2019.

AquaSBR® Systems Above 10 MGD
(continued)

12 MGD
Millville WWTP
Panama City, FL

The AquaSBR® system at Millville is a 3-basin system designed to meet advanced wastewater treatment standards. The plant has been in operation since November of 2000 and has provided the Panama City area with a low cost, efficient system that consistently meets its treatment objectives.

10 MGD
West Central Conservancy District
Hendricks County, IN

The West Central Conservancy District (WCCD) in Hendricks County, IN was established in 1992 and comprised of 5 geographical locations. An expansion in 2005 included the installation of a 4-basin AquaSBR® system which has the capacity to treat a much larger capacity (up to 8 basins) in a small footprint on the available land space.

10 MGD
Camp Pendleton WWTP
Camp Pendleton, CA

The Camp Pendleton AquaSBR® system was built in phases, starting in 2006 with 4-basins, then expanding in 2013 with the addition of two SBR reactors. One of the main drivers of the system was the turn-down capability with the ability to operate with seasonal flows and loadings.

AquaSBR® SYSTEM ADVANTAGES

- Low construction, installation, operation and maintenance costs
- Tolerates variable hydraulic and organic loads
- Limits filamentous growth
- Independent aeration and mixing provides lower energy consumption
- True-batch system allows React, Settle and Decant phases to occur within the same reactor
- Time-managed operation offers process flexibility with greater handling of hydraulic fluctuations
- Durable, floating decanter provides subsurface withdrawal of decant volume
- No secondary clarifiers or return activated sludge (RAS) lines
- Small footprint
- Simple to expand or upgrade
- Produces low effluent BOD_5, COD, TSS, TN & TP from industrial and municipal wastewater treatment processes