

# **AEROBIC TREATMENT SOLUTIONS**

**BIOLOGICAL TREATMENT FOR ORGANIC WASTEWATER** 



### WHAT IS AEROBIC WASTEWATER TREATMENT?

Aerobic treatment is a biological wastewater treatment process that takes place in the presence of oxygen. Aerobic biomass converts organics in the wastewater into carbon dioxide and new biomass.

Aerobic treatment technologies can act as stand-alone systems for treating raw wastewater, or can be used to polish anaerobically pretreated wastewater to further remove biochemical oxygen demand (BOD) and total suspended solids (TSS). Aerobic technologies can also be used specifically as a biological nutrient removal system (BNR) to remove nitrogen and phosphorus.

#### **ADVANTAGES OF AEROBIC TREATMENT**

- Produces a very-high quality effluent
  - Suitable for direct discharge
  - Water reuse opportunities
- Biological nutrient removal (nitrogen and phosphorus)
- Tolerates some disinfection chemicals used in industrial processes
- Typically low capital cost and quick start-up





#### **ADI SYSTEMS' AEROBIC TREATMENT TECHNOLOGIES**

Evoqua's ADI Systems has extensive experience designing and building aerobic treatment systems worldwide.

#### **ADI MEMBRANE BIOREACTOR (MBR)**

An advanced activated sludge technology that uses a physical membrane barrier to separate liquids and solids instead of tradition gravity clarification. The system produces very high-quality effluent that meets even the strictest discharge limits, while minimizing system footprint.

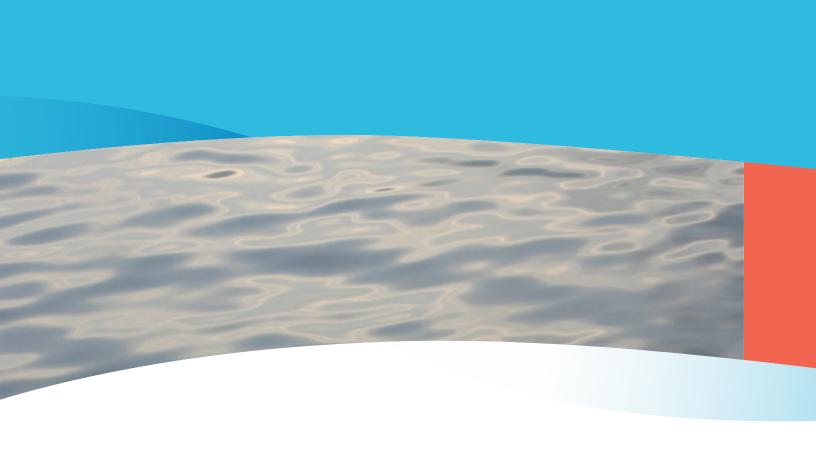
#### **ADI SEQUENCING BATCH REACTOR (SBR)**

A special form of activated sludge technology in which all biological process reactions and settling/clarification take place in a single reactor vessel. The process events are separated by time rather than space and can be easily adjusted, providing enhanced flexibility.

# ADI® CONVENTIONAL ACTIVATED SLUDGE SYSTEM

A system that reduces BOD and ammonia concentrations in an aeration tank, then biomass is separated into clarified water and thickened in a secondary clarifier or dissolved air flotation (DAF) unit.







## **PROJECT DELIVERY**

ADI Systems customizes each system to meet the unique needs of the application. Design/build project delivery offers a number of benefits, including a single point of contact and responsibility, and consistency in design and construction quality throughout the entire project. Technology-only packages are also available.



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