



AQUA-AEROBIC SYSTEMS, INC.
A Metawater Company

RESEARCH & TECHNOLOGY CENTER ROCK RIVER WATER RECLAMATION DISTRICT, ROCKFORD, IL



Making a difference in the future advancements of water and wastewater treatment



ROCK RIVER WATER RECLAMATION DISTRICT (RRWRD)

- Founded in 1926
- Serves 240,000 people covering 88 square miles of Winnebago County
- Conventional activated Sludge



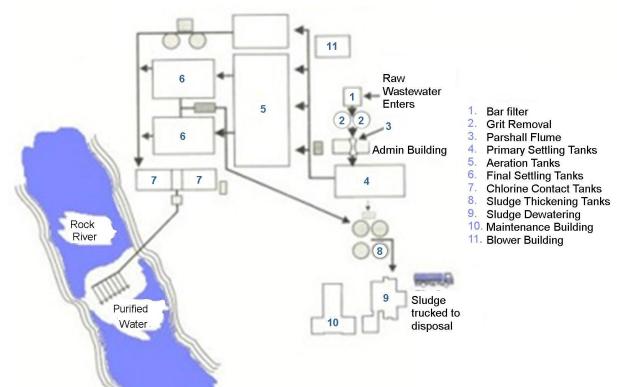
RESEARCH & TECHNOLOGY CENTER

- Building dimensions: approximately 80 ft (24 m) by 60 ft (18 m) providing a working area of 4,800 ft² (446 m²)
- Testing Sources:
 - Primary clarified effluent
 - Secondary effluent
 - Return activated sludge
- Electrical: the motor control center is designed with the flexibility to accomodate multiple treatment units and varying demands
- Controls: Aqua-Aerobic Systems, Inc. provides remote monitoring and control of the Center
 - Each treatment unit is independently controlled with its own PLC and HMI
 - Information is networked via Ethernet connection to a central SCADA system
 - Parallel data monitoring is performed with an IntelliPro® system
 - Live, on-line video streaming of facility

RRWRD Permit Values	
Design Avg. Flow	40 MGD
Design Max. Flow	80 MGD
Effluent CBOD ₅	< 20 mg/L
Effluent TSS	< 25 mg/L
Effluent NH ₄ -N	< 1.5 mg/L (April-Oct.)

For more information, visit www.rrwrd.dst.il.us

ROCK RIVER WATER RECLAMATION DISTRICT
TREATMENT PLANT
SCHEMATIC DIAGRAM





OptiFiber® Cloth Filtration Media: A primary goal of the Research & Technology center is to advance the science of cloth media filtration. The center provides a unique opportunity to facilitate performance testing of various configurations of engineered media under controlled conditions to deliver reliable insights into optimizing commercial application.

Aqua MiniDisk® Cloth Media Filter

- 10 Disks, each has 11 ft² (1 m²) filtration area
- Nominal capacity: 0.5-1.0 MGD (1,900-3,800 m³/day)



AquaDisk® filters (left) and Aqua MultiBore® ultrafiltration membrane pilot unit (right)

Two (2) AquaDisk® Cloth Media Filters

- 1-2 disks, each has 54 ft² (5 m²) filtration area
- Test filter nominal unit capacity: 0.5-1.0 MGD (1,900-3,800 m³/day)
- Production units available to 24 disks (nominal capacity 7 MGD or 26,500 m³/day)



Internal view of Aqua MegaDisk®

Aqua MultiBore® Ultrafiltration Membrane System

- Package membrane system with a hydraulic capacity of 30,000 GPD (115 m³/day)
- Multiple bore ultrafiltration membrane module with a nominal pore size of 0.02 µm
- Dead-end, inside-out filtration with robust PES membranes
- Bacteria > 6-log removal
- Viruses > 4-log removal

AquaSBR® Batch Reactor System

- 300 gallon (1.1 m³) capacity, fully automated SBR pilot system
- Independent mixing and aeration with Aqua MixAir® system
- Used to determine treatability testing of high-strength industrial wastes



THANK YOU

We want to thank you for joining us today for a tour of the Aqua-Aerobic Systems, Inc. **Research & Technology Center**. We are excited to work collaboratively with the staff of the Rock River Water Reclamation District.

To learn more about Aqua-Aerobic Systems, Inc., please visit our website at www.aqua-aerobic.com

Aeration & Mixing

Biological Processes

Filtration

Disinfection

Membrane Systems

Controls & Monitoring Systems

Aftermarket Products & Services



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