



Managing Your Wastewater

SIMPLE. SMART. RELIABLE.

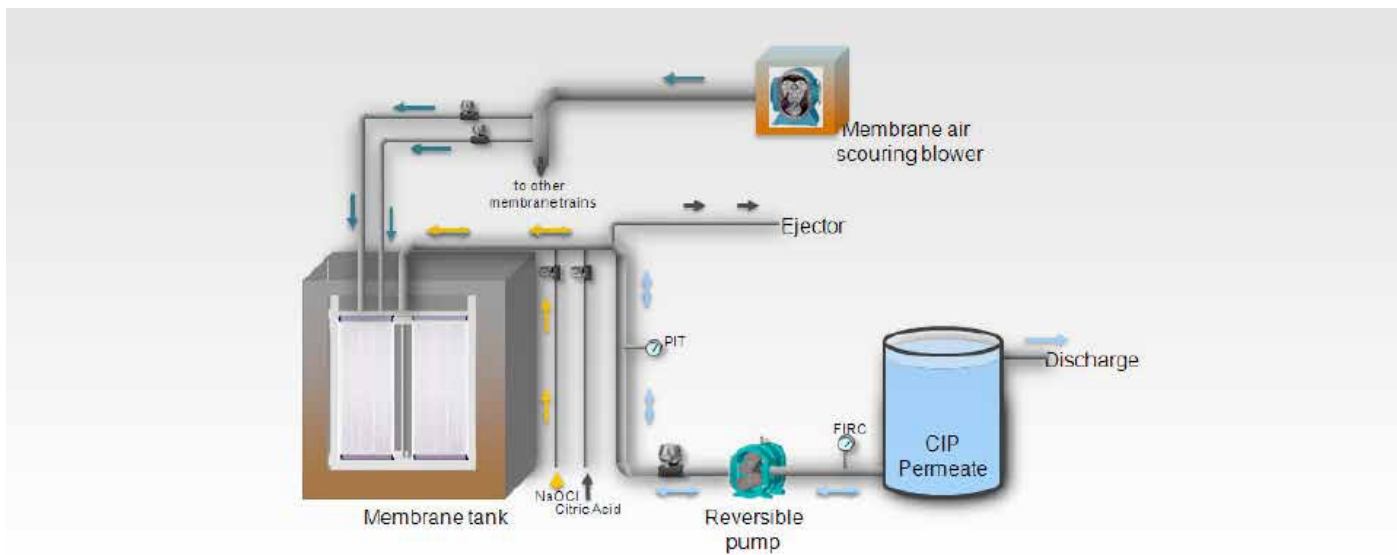
xylem
Let's Solve Water

Mining exploration, development and operations often happen in remote, water stressed locations and without ready access to useable water. Your employees require access to clean and reliable sanitary facilities. Regulators require limited impact to the environment. You need systems that can be easily mobilized and require minimal operator intervention.

Xylem's containerized solutions provide the flexibility to accommodate mobile exploration and mine development camps. Xylem processes provide non-potable reuse water that can be further enhanced with Xylem engineered UV, ozone or tertiary filtration. All

systems including influent water treatment systems are designed for expandability, limited maintenance and rugged environments.

Xylem's Flygt and Godwin brands have been providing pumps, controls and service to the mining industries for decades. Today, Xylem is also able to bring more than a century of wastewater treatment experience to the mining industry, featuring a compact footprint, simplified operation and reduced lifecycle costs. Xylem's portfolio of products includes filtration, clarification, biologic processes, membrane technology, disinfection and oxidation.



Pre-engineered MBR modular plant

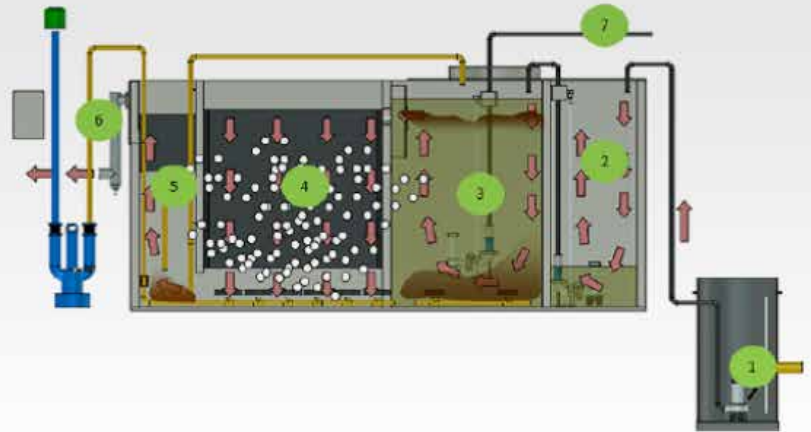
Xylem's pre-engineered MBR modular plant covers a domestic flow range from 50 m³/day to 300 m³/day in containerized versions that are fully automated and require limited operator intervention. Xylem process design and project management teams work with our clients to provide larger and "fit to purpose" integrated systems for a variety of mining wastewater applications.

Xylem MBR systems meet or exceed increasingly stringent water treatment requirements.

- Provides high level of public health protection from waterborne pathogens
- Produces high-quality feedwater for reuse, reverse osmosis and ion exchange applications

- High quality effluent for reuse applications
- Compact footprint
- Simple operations with remote monitoring capability
- Reduced lifecycle costs
- Optional Operations and Maintenance Service Contracts available

For solids removal and storage, all systems have a septic tank upstream to reduce the solids load to the SAF and to safely store biosolids for occasional removal. Optional biosolids management systems are also available.



Submerged Aerated Filter (SAF) technology

Sanitaire's Submerged Aerated Filter (SAF) technology utilizes plastic media submerged in aerated sewage. Biomass is encouraged to attach and grow on the media to remove the organic pollutants. As the biomass is retained on the media, the process is particularly suited to low temperature applications, giving BOD removal at water temperatures from 4 - 35 °C.

- Modular or portable containerized designs available for economic installation and startup at any site. Standard systems range from 50 m³/day to 200 m³/day hydraulic capacity in a single container and up to 500 m³/day for separate septic tank and biological containerized units.
 - Nutrient removal is possible with additional tanks in series
 - Increased hydraulic capacity with additional process trains
- Patented recirculation system for odor reduction and biomass feeding even in times of zero sewage flow
- Biomass on media naturally adapts to variations in load with no operator input
- Minimal maintenance with a simple reliable blower as the only mechanical equipment

1. Feed pumping station
2. Buffer tanks for flow and load equalization (can be external for increased capacity)
3. Settling zone for heavier solids and sludge storage tank (septic tank)
4. Biological zone where aerated bacteria remove pollutants
5. Settlement zone where solids from the biological zone are removed and returned to the sludge storage tank (3)
6. UV system for disinfection
7. Sludge removal pump (if required)

Target Quality of Effluent	MBR	SAF	
BOD5	<5	10	mg/l
COD	40	100	mg/l
N total	15	10	mg/l
NH4-N	<1	1	mg/l
NO3-N	10		mg/l
Norg-N	2		mg/l
Ptot	0.5	1	mg/l
SS	<3	10	mg/l
Turbidity	<1		NTU
Coliforms	Log 4 removal	Log 2 removal	/100 ml

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DEPEND ON XYLEM

We have a team of knowledgeable, professional and highly skilled staff, who pride themselves in their ability to help customers. Our standardized service packages meet your every need - from the very basic to the advanced. The more basic the service, the easier it is on your budget. The more advanced it is, the greater your peace of mind will be. Our global expertise and local presence means you can rely on us as your trustworthy partner.



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Xylem, Inc.
14125 South Bridge Circle
Charlotte, NC 28273
Tel 704.409.9700
Fax 704.295.9080
855-XYL-H2O1 (855-995-4261)

Flygt, Leopold, Sanitaire, Wedeco, YSI, PCI and Water Equipment Technologies are brands of Xylem, whose 12,000 employees are addressing the most complex issues in the global water market.

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