



Oxelia™

XYLEM'S FULLY INTEGRATED, OZONE-ENHANCED BIOLOGICALLY
ACTIVE FILTRATION SYSTEM FOR WATER REUSE



For optimum water reuse, contaminants and pathogens must be destroyed.

Broad classes of trace organic compounds including "contaminants of emerging concern" and regulated "micropollutants" often need to be removed to protect both human health and aquatic species. Some of these trace organic compounds are not readily removed by conventional wastewater treatment systems.



PCP



API



EDC



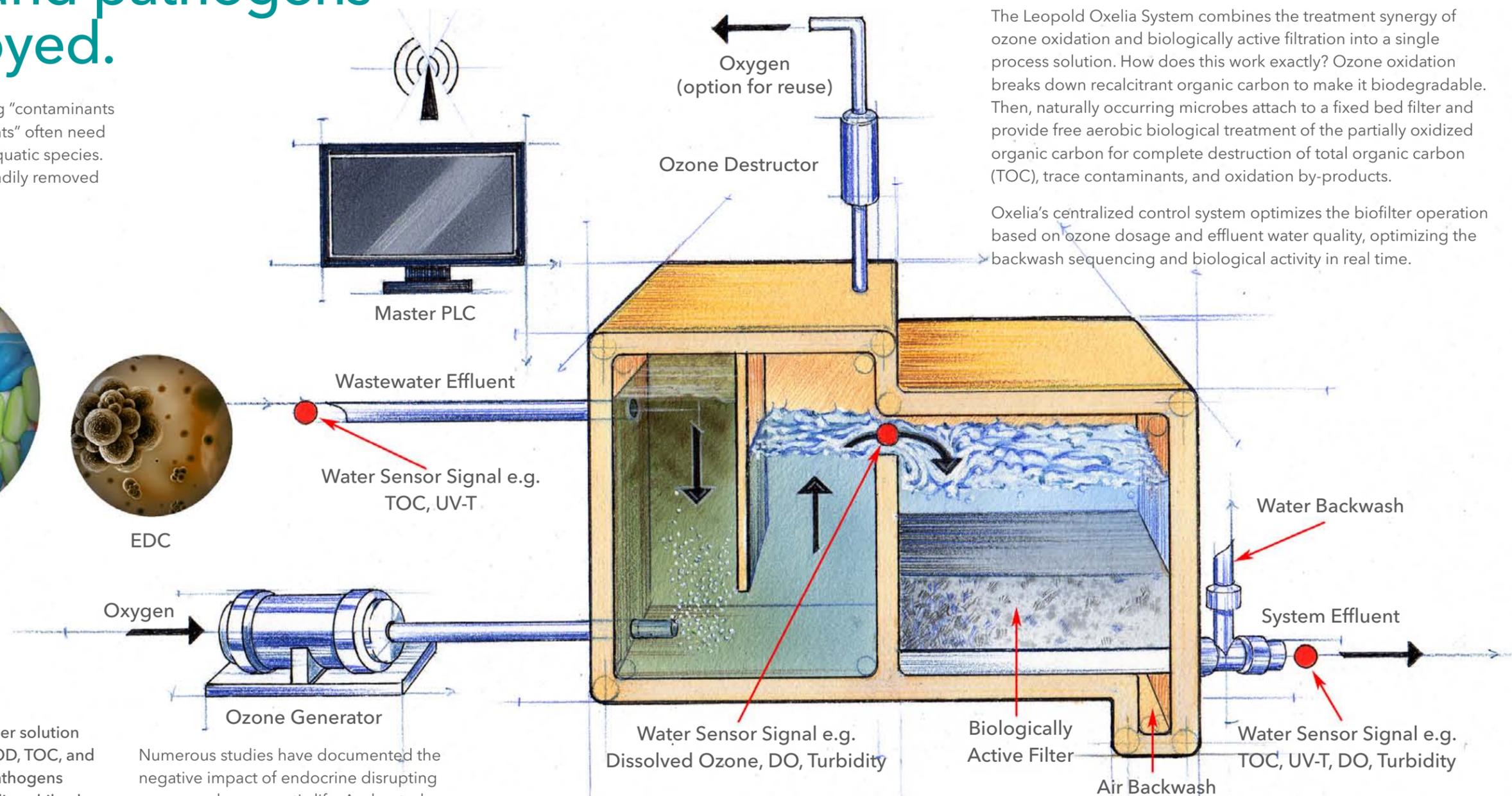
Pesticides

The Leopold Oxelia System is a powerful multi-barrier solution producing a safe and high quality effluent (lower BOD, TOC, and suspended solids) by simultaneously inactivating pathogens such as virus and filtering the water to reduce turbidity while also destroying persistent trace organic contaminants like:

- Personal care products (PCP's)
- Active pharmaceutical ingredients (API's) such as antibiotics, pain killers and prescription drugs
- Endocrine disrupting compounds (EDC's) such as estrogens, bisphenol A, and steroids
- Pesticides

Numerous studies have documented the negative impact of endocrine disrupting compounds on aquatic life. And a study by the U.S. Geological Survey showed the adverse effects of antibiotics on soil biology, including disruption of the nitrogen cycle and delays in cell growth.

How do we do it?



The Leopold Oxelia System combines the treatment synergy of ozone oxidation and biologically active filtration into a single process solution. How does this work exactly? Ozone oxidation breaks down recalcitrant organic carbon to make it biodegradable. Then, naturally occurring microbes attach to a fixed bed filter and provide free aerobic biological treatment of the partially oxidized organic carbon for complete destruction of total organic carbon (TOC), trace contaminants, and oxidation by-products.

Oxelia's centralized control system optimizes the biofilter operation based on ozone dosage and effluent water quality, optimizing the backwash sequencing and biological activity in real time.

With the Leopold Oxelia™ ozone-enhanced biologically active filtration system, dangerous compounds are destroyed.

The highest quality at the lowest cost.

Lower operating costs

Using reliable online sensors with an innovative multi-loop control system, the Leopold Oxelia system automatically adjusts the ozone-enhanced biologically active filter in real time to achieve the treatment goals at the lowest possible cost.

Sustainable reuse

Ozone-enhanced bio-filtration systems have lower capital costs than many other advanced treatment systems, including reverse-osmosis (RO) based membrane solutions.

Maximizes water production

Oxelia maximizes water production, producing a minimal filter backwash stream (typically 1-3% of filter flow) eliminating the concentrated waste stream of alternative processes. The backwash stream can be recycled to the plant headworks or easily treated using conventional systems.

Optimized operation

With online monitoring on a single integrated control platform, the Leopold Oxelia system provides operators with pre-designed and customizable protocols, delivering a cost effective and efficient solution that is reliable, easy to operate, and easy to maintain.



Let us design an Oxelia™ system tailored to your reuse requirements.

Xylem's process team, combining Leopold's filtration experts, Wedeco's ozonation experts, and YSI/WTW wastewater instrumentation experts will design the optimal system for your specific water reuse application. They will construct the optimal configuration to reduce cost, risk, and complexity, providing a reliable and efficient solution platform.

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Put Oxelia™ to the test.

Xylem's experts invite you to "test drive" the Oxelia System. The pilot test, with your water, will demonstrate the incredible pollutant destroying power of the system while fine tuning the Oxelia control parameters to optimize performance, assure compliance and lower risk for your specific needs. The Leopold Oxelia system is the perfect solution for the following applications.

Industrial- Internal recycling for many industries, including pharmaceutical, household products and personal care products. Reduces water footprint.



Municipal - Delivers a drought resistant water supply for irrigation, fire flows, aquifer recharge, and other direct and indirect potable uses. Added ozone disinfection assures safer supply and lower risk.

Pretreatment for advanced membrane treatment and UV - Reduces organic fouling and improves membrane performance for microfiltration, ultrafiltration, nanofiltration and reverse osmosis. Increases UV transmittance for improved disinfection.



Agricultural - Provides a stable water source for irrigation. Destroys broad classes of emerging contaminants like endocrine disruptors and pesticides. Disinfects, destroying pathogens, so it is safer for users, farm workers and consumers.



Effluent release to sensitive receiving streams - Capable of treating a broad array of CEC, the Leopold Oxelia system is ideally equipped to protect sensitive waters, such as source waters for drinking water and lakes for recreational activities.

- The Leopold Oxelia ozone-enhanced biologically active filtration system comes with a process guarantee that only a custom fit can provide. This guarantee assures compliance with application requirements and current regulations.
- Leopold filtration systems and Wedeco ozone systems have reliably served the industry for decades with thousands of installations worldwide. In all types of water, in all types of conditions, Xylem systems perform.
- Our client support is the best in the business. We'll be there with you on day one and for many years to come making sure you get the results you expect.
- With the ability to treat a broad array of CEC, the Leopold Oxelia system is equipped to take on more stringent regulations currently under consideration.

Water is
too valuable
to waste.
Let Xylem
show you
how.

The Oxelia™ system comes with Xylem's ultimate client support. **We guarantee it.**

For more information go to:
www.xylem.com/treatment



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