

Wastewater management is no longer just a compliance requirement, it's an opportunity for innovation and value creation. By adopting advanced treatment technologies and resource recovery solutions, companies can transform waste into assets, reduce costs, and demonstrate leadership in sustainable practices. Acting now positions your organization at the forefront of environmental innovation and competitive advantage.



Wastewater Management

Effective wastewater management is essential to protecting public health, maintaining ecosystem integrity, and building long-term water resilience across the Great Lakes region. As pressures from climate change, aging infrastructure, and growing water demands increase, organizations have a critical opportunity to shift from a linear “use-and-dispose” approach to one that treats wastewater as a recoverable resource.

Modern wastewater practices align closely with broader stewardship frameworks such as the Circular Economy of Water (CEW) and Net Positive Water Impact (NPWI), helping companies reduce risk while contributing to regional sustainability goals.

By adopting best-in-class wastewater strategies, organizations can:

- ❖ Protect public health by preventing contaminants from entering drinking water sources.
- ❖ Preserve aquatic ecosystems by reducing nutrient loads, chemicals, and emerging pollutants.
- ❖ Strengthen operational resilience through improved compliance, reduced liabilities, and cost-efficient treatment systems.
- ❖ Support regional water goals by contributing to shared stewardship and healthier Great Lakes communities.

Context-Specific Considerations

Water-related impacts vary widely across the Great Lakes region, making wastewater management inherently location-dependent. Effective strategies must reflect the unique conditions and priorities of each basin, including:

Local water stress and seasonal variability, which influence both treatment needs and discharge sensitivity.

Community and stakeholder priorities, such as Indigenous water rights, public health concerns, and ecological values.

Regulatory expectations and enforcement capacity, which shape compliance requirements and operational responsibilities.

Recognizing these local factors ensures that wastewater practices are both effective and aligned with broader regional water stewardship



Call to Action: Elevate Wastewater Management

Water stewardship is a strategic imperative. Businesses must lead in reducing pollutant loads, embracing circular practices, and strengthening transparency to protect local waterways and secure long-term operational resilience.



1. Reduce Pollutant Loads at the Source



- Proactive action starts upstream:

Identify Risks: Assess pollutants of concern based on site activities, sector-specific risks, and discharge profiles.

Prevent Before Treating: Minimize pollutant volume and concentration through process optimization and material substitution.

2. Integrate Circular Approaches



- Turn waste into value:

Recycle Treatment Byproducts: Reuse internally or explore safe external market opportunities.

Advance Reuse Models: Evaluate feasibility of innovative approaches, including potable reuse, where technically sound.



3. Strengthen Monitoring & Transparency



- Data drives accountability:

Meter Discharges: Track volumes, detect anomalies, and verify system performance.

Monitor Effluent Quality: Ensure treatment systems meet compliance and sustainability goals.

Leverage Digital Tools: Use platforms like WWF Risk Filter Suite to assess risk, prioritize investments, and inform decisions.

Report Transparently: Share withdrawals, consumption, and discharge data in watershed context to build trust with regulators, communities, and partners.

4. Plan for Long-Term Resilience



- Future-proof your operations:

Integrate Climate Risk: Factor changing precipitation patterns and aging infrastructure into planning.

Collaborate Locally: Engage municipal utilities, watershed groups, and Indigenous communities to align goals and strengthen shared outcomes.

Implementing these strategies reduces regulatory risk, enhances brand reputation, and positions your company as a leader in sustainable water management. Acting now ensures compliance-resilience, and competitive advantage in a resource, constrained future. Champion wastewater management as a strategic priority.

Mobilize cross-functional teams, invest in innovation, and lead the transition toward circular, transparent, and resilient water practices.

