

AN ACT; Requires Environmental Quality Commission to adopt by rule risk-based water quality standards for on-site treatment and reuse of nonpotable water.

What are Onsite Non-potable Water Systems?

Onsite non-potable water systems (ONWS) represents an innovative strategy to transform the way water is managed. Throughout the world, onsite water systems are being utilized to meet non-potable needs, thereby offsetting potable water demand and maximizing the efficiency of existing on site water. These systems collect wastewater, storm water, and/or rainwater (aka “alternative water sources”) generated at a building and treat it, so that it can be used onsite again and again.

Legislative Intent

The legislative intent is to create regulatory structure for the safe and efficient use of onsite non-potable water systems (ONWS) based on the work of the Water Research Foundation (WRF). Treatment and monitoring requirements will be based upon the 2017 WRF ‘Risk-Based Framework for the Development of Public Health Guidance for Decentralized Non-Potable Water Systems’ that employs log (exponential) reduction targets of human-infectious pathogens for different alternative water sources. Current regulations are interpreted by the DEQ, lack a standard approach and use expensive and misapplied potable water treatment requirements regardless of the end use. The risk-based framework reduces cost while still protecting public health by matching alternate water sources with the appropriate end use. For example, using harvested rainwater would require a less extensive treatment for toilet flushing than water collected from a shower (graywater) would. These onsite non-potable water systems offset valuable potable water supplies and unlock untapped potential for more resilient and sustainable water management.

Benefit of the Legislation

- **The legislation will streamline a clear permitting pathway for these onsite systems, which currently doesn’t exist.**
- **The risk-based framework is a science-based methodology. Adopting the framework will reduce the agencies’ exposure to risk associated with meeting their public health and environmental regulatory requirements.**
- **Financial costs of implementing, operating and maintaining ONWS are reduced, which accelerates their adoption and positive outcomes for water conservation and infrastructure expansion**
- **Implementing ONWS can reduce the impact to centralized water systems from natural disasters and climate change by diversifying a city’s or state’s water portfolio.**

Multi-Benefits of Adopting the Risk-based Framework for Onsite Nonpotable Water Reuse Systems

Regulatory - Regulations for non-potable water reuse largely grew out the potable water purveying system. Moreover, as currently regulated, non-potable water reuse is labor intensive, expensive and rely upon a highly skilled workforce to implement. **The legislation will establish a clear permitting pathway for these onsite systems, which currently doesn't exist.**

Public Health Benefits - Currently, there are no national standards or guidelines for onsite systems in the U.S. The proposed risk-based framework for onsite water reuse systems is more protective than our current regulations. **By using this science based methodology, agencies can reduce their exposure to risk associated with meeting their public health and environmental regulatory requirements.**

Environmental Benefits - Even in water-rich places, the watershed naturally uses most of its water to maintain ecological health and environmental services for people, plants and animals. When we draw water from the watershed, this natural balance is impacted. **Water reuse is a form of deep conservation that keeps more water in the watershed, creates a healthier environment for fish and wildlife, resulting in better air and water quality.**

Energy Benefits - Hydroelectric power is directly connected to the volume of water that drives it. **Water conservation in the form of reuse returns more potential energy to the power grid and lowers overall costs.** On a local level, utilities see a lower demand for water and reduce the need for utility expansion or expensive well operations.

Environmental Justice Benefits - Even with existing massive infrastructure systems and well-meaning subsidy programs, water is inequitably distributed in the United States and becoming less and less affordable for more and more people. e.g. "over 500 hazardous wastes sites and several Superfund sites contribute toxic air, land and water pollutants in the Albina communities" where 1 in 3 are at the poverty level.

Financial Benefits - Implementing a deep water conservation program such as water reuse or diversified water treatment infrastructure directly affects the affordability of water by reducing the financial burden for expansion of wastewater treatment plants. Developers and small utility operators are already profiting from onsite water reuse systems by providing on-site water conservation savings back into their development portfolio. Inclusion of on-site systems into the existing public infrastructure is a fiscally responsible and equitable action.

Resilient Communities - **Onsite water reuse can diversify a city or state's water portfolio, and with climate change and natural disasters regularly threatening large-scale centralized systems.** Earthquakes damage pipes and interrupt service for years. Utilities must avoid singular failure points and a diversified water infrastructure does this by spreading water supply and treatment out into smaller volumes and reduces the amount of piping and failure points. These diversified systems also have to ability to respond better and faster following a disaster than conventional systems.