

## Water is Water

Water is “consumed” in the sense that it is transformed from drinking water into a variety of lower quality grades, all of which are discharged directly to the drain and makes its way to the treatment plant.

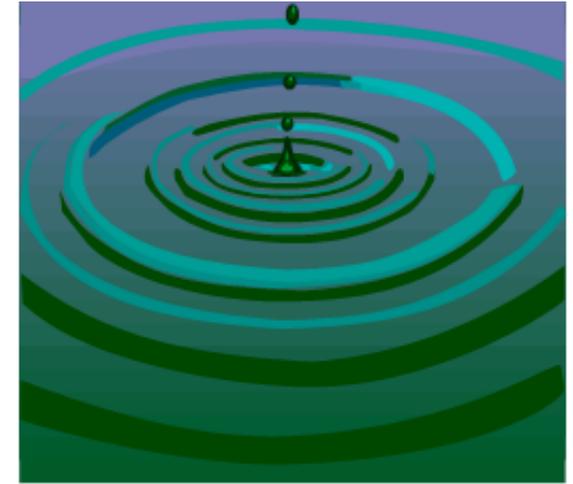
Not all functions associated with water need potable water in order to perform satisfactorily. Only 15% of all water used in the home needs to be potable (drinking water). Homes have the most potential to save water.

## Water Reuse Initiative

In and around the home, wastewater generated from showers, lavatories, and clothes washers, and stormwater from roof areas can be collected and put through a filtration and disinfection process to supply water to toilets, hose valves and to irrigate lawns and landscaping.

The filtration and disinfection equipment is predicated on the quality of the collected wastewater, be it graywater, blackwater or stormwater. The purpose of this equipment is to condition the water to a level of quality consistent with the intended reuse of the water as per Table 382.70-1.

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# Water Reuse

Using water to its full potential



On May 1, 2003 the Division of Industry Services created Wisconsin Administrative Code SPS 382.70 to specify water quality standards for specific intended water reuse. These standards apply to potable and non-potable waters. This rulemaking largely focuses on water quality and its intended use. As always, the underlying objectives of rulemaking are to ensure that Wisconsin’s rules protect environmental quality and public health.

## SPS 382.70 Plumbing Treatment Standards

**(1) Purpose.** The purpose of this section is to establish plumbing treatment standards for plumbing systems that supply water to outlets based on intended use.

**(2) Scope.** The provisions of this section apply to plumbing systems that supply water to outlets.

**(3) General Requirements.** A plumbing system shall supply water that is of a quality that will protect public health and the waters of the state and be suitable for the intended use.

### **(4) Minimum Requirements.**

(a) Except as provided under par. (b), a plumbing system shall supply a quality of water at the outlet or at the termination of the plumbing system that meets or exceeds the minimum requirements as specified in Table 382.70-1.

(b) For an outlet other than a plumbing fixture, appliance or appurtenance, there may be more stringent requirements assigned by a municipality, governmental unit, state agency or the owner of the plumbing system.

### Other Plumbing References

- SPS 382.30 Drain Systems
- 382.31 Venting Systems
- 282.34 Wastewater Treatment
- 382.35 Cleanouts
- 382.36 Stormwater Plumbing
- 382.38 Discharge Points
- 382.40 Water Distribution
- 382.41 Cross Connection Control
- 382.60 Supports
- 384.00 Plumbing Products

Table 382.70-1  
Plumbing Treatment Standards

Intended Use	Plumbing Treatment Standards <sup>f</sup>
1. Drinking, cooking, food processing, preparation and cleaning, pharmaceutical processing and medical uses	NR 811 and 812 approved sources
2. Personal hygiene, bathing and showering	NR 811 and 812 approved sources
3. Automatic fire protection systems	As acceptable by local authority
4. Swimming pool makeup water	NR 811 and 812 approved sources
5. Swimming pool fill water	DHS 172 requirements
6. Cooling water <sup>b</sup>	pH 6 – 9 <sup>b</sup> ≤ 50 mg/L BOD <sub>5</sub> ≤ 30 mg/L TSS Free chlorine residual 1.0 – 10.0 mg/L <sup>b</sup>
7. Subsurface infiltration and irrigation, using reuse as the source <sup>c</sup>	≤ 15 mg/L oil and grease ≤ 30 mg/L BOD <sub>5</sub> ≤ 35 mg/L TSS < 200 fecal coliform cfu/100 mL <sup>d</sup>
8. Subsurface infiltration and irrigation, using stormwater as the source <sup>c</sup>	< 15 mg/L oil and grease < 60 mg/L TSS
9. Surface or spray irrigation using stormwater and clearwater as the source <sup>c</sup>	≤ 10 mg/L BOD <sub>5</sub> ≤ 5 mg/L TSS
10. Surface irrigation except food crops, vehicle washing, clothes washing, air conditioning, soil compaction, dust control, washing aggregate and making concrete <sup>a, c</sup>	pH 6 – 9 <sup>b</sup> ≤ 10 mg/L BOD <sub>5</sub> ≤ 5 mg/L TSS Free chlorine residual 1.0 – 10.0 mg/L <sup>b</sup>
11. Toilet and urinal flushing	pH 6 – 9 <sup>b</sup> 200 mg/L BOD <sub>5</sub> ≤ 5 mg/L TSS Free chlorine residual .1 mg/L – 4.0 mg/L <sup>b</sup>
12. Uses not specifically listed above	Contact department for standards

## Plan Review Requirement

A site specific plan needs to be created by the installing plumber or by a licensed engineer and submitted to the Department of Safety and Professional Services for plan review and approval. State level plan review and approval is required for all plumbing systems that reuse wastewater and storm water. Plan review focuses on the plumbing engineering of the system, components' reliability, contingency plans, cross-connection control, and system maintenance and reporting. A deed attachment is also required for residential installations that defines the system and related maintenance protocol and required test reports.

### Care and Diligence

Extreme care must be exercised to avoid exposure to or accidental consumption of non-potable reuse water systems and contamination of any drinking water supply. The main issues to be considered are those of health and hygiene.

*For more information, contact a Wisconsin Department of Safety and Professional Services Plumbing Consultant at 608-267-9421 or send an e-mail to: DspsSbPlbgTech@wisconsin.gov*