



CHECKLIST FOR THE REVIEW OF WATER REUSE SYSTEMS

Submit applications for Plumbing Device Permit to Operate (PTO) via the eSLA portal: <https://esla.wi.gov/PortalCommunityLogin>

Definitions:

1. “Blackwater” means wastewater contaminated by human body waste, toilet paper and any other material intended to be deposited in a receptor designed to receive urine or feces. [Wis. Admin. Code § SPS 381.01 (31)]
2. “Clear water” means wastewater other than storm water, having no impurities or where impurities are below a minimum concentration considered harmful by the department, including but not limited to noncontact cooling water and condensate drainage from refrigeration compressors and air conditioning equipment, drainage of water used for equipment chilling purposes and cooled condensate from steam heating systems or other equipment. [Wis. Admin. Code § SPS 381.01 (56)]
3. “Graywater” means wastewater contaminated by waste materials, exclusive of urine, feces or industrial waste, deposited into plumbing drain systems. [Wis. Admin. Code § SPS 381.01 (112)]
4. “Wastewater treatment device” means a device or method that is intended to beneficially alter the characteristics of wastewater.” [Wis. Admin. Code § SPS 381.01 (277e)]

Wis. Admin. Code § SPS 382.34 (3) (a), Treatment for Reuse:

1. Except as limited in subd. 2., graywater, stormwater, clear water, blackwater, and other wastewaters, as approved by the Department, may be reused in conformance with Wis. Admin. Code § SPS 382.70.
2. Except as provided in subd. 3., wastewater discharged from water closets or urinals shall not be reused for drinking water.
3. All treatment works permitted by the Department of natural resources or a POWTS which includes an in situ soil dispersal or treatment component may treat wastewater discharged from water closets or urinals for reuse. [Wis. Admin. Code § SPS 382.34 (3) (a)]

Table SPS 382.70-1, Plumbing Treatment Standards:

Intended Uses	Plumbing Treatment Standards ^f
1. Drinking, cooking, food processing, preparation and cleaning, pharmaceutical processing and medical uses	NR 811 and 812 approved sources only
2. Personal hygiene, bathing and showering	NR 811 and 812 approved sources only
3. Automatic Fire Protection Systems	As required by local authority
4. Swimming pool makeup water	NR 811 and 812 approved sources only
5. Swimming pool fill water	DHS 172 requirements
6. Cooling water ^b	pH: 6-9 BOD ₅ : ≤ 50 mg/l TSS: ≤ 30 mg/l Free chlorine residual: 1-10 mg/l ^b
7. Subsurface infiltration and irrigation, using reuse as the source ^c	Grease and oil: ≤ 15 mg/l BOD ₅ : ≤ 30 mg/l TSS: ≤ 35 mg/l Fecal coliform: < 200 CFU/100 ml ^d
8. Subsurface infiltration and irrigation, using stormwater as the source ^c	Oil and grease: < 15 mg/l TSS: < 60 mg/l
9. Surface or spray irrigation using stormwater or clearwater as the source ^c	BOD ₅ : ≤ 10 mg/l TSS: ≤ 5 mg/l
10. Surface irrigation (except food crops), vehicle washing, clothes washing, air conditioning, soil compaction, dust control, aggregate washing, manufacturing concrete ^{a,c}	pH: 6-9 BOD ₅ : ≤ 10 mg/l TSS: ≤ 5 mg/l Free chlorine residual: 1-10 mg/l ^b
11. Toilet and urinal flushing ^g	pH: 6-9 BOD ₅ : ≤ 200 mg/l TSS: ≤ 5 mg/l Free chlorine residual: 0.1-4 mg/l ^b
12. Uses not specifically listed above	Contact department for standards

a = Refer to DATCP for commercial uses.

b = Applies only to wastewater treatment devices for reuse systems. Equivalent disinfection methods may be approved by the department.

c = These requirements do not apply to the treatment of industrial wastewater or other wastewater discharges that are subject to a WPDES permit issued by the WDNR.

d = ≥ 12-in. separation of medium sand or finer material above high groundwater or bedrock.

f = For stormwater, the plumbing treatment standards are based on the annual average.

g = contingency plan required

BOD₅ = biological oxygen demand, 5-day test

TSS = total suspended solids

Be prepared to attach the following to the application in the form of a PDF; fees are remitted via credit card or purchase order.

The following information must be provided with each water reuse system application:

General: All plans and specifications, signed and/or stamped by a Wisconsin registered Architect, Designer, Engineer or licensed Master Plumber in accordance with Wis. Admin. Code § SPS 382.20 (4) (c).

1. A \$250.00 (US) fee for each application submitted.
2. A copy of sales brochures, web content or other promotional materials that will be used in Wisconsin.
3. A written detailed description of device function(s).
4. Detailed assembly drawings or exploded view of the device which clearly shows the water flow paths within the device.
5. Detailed information on the size, color, location, information shown and methods for labeling the device. Actual labels are acceptable.
6. Complete installation instructions including detailed installation drawings indicating all connections between the device and plumbing system.

7. A list and copy of all national standards that are not referenced in Wis. Admin. Code § SPS 381.20, to which the device conforms.
8. The trade name, scientific name and chemical formula of any chemical used in the device that may be added to or leached into the water as part of the process or because of the process. Acceptable documentation must be provided showing that the chemical(s) is accepted for use with potable water by an ANSI accredited listing agency acceptable to the Department. See ch. 384 appendix, A-384.11. Devices that contain a media that requires the sacrificial release of a regulated contaminant to reduce other specific contaminants from water must include effluent monitoring for the sacrificial contaminant in conjunction with all effluent target contaminant samples.
9. Disposal requirements of any wastewater, backwash water, filters, membranes, or other expendable system components.
10. A signed report, or engineering specifications, by an ANSI accredited third party testing laboratory acceptable to the Department (see ch. 384 appendix, A-384.11) or the manufacturer, which concludes that the device performs in accordance with the assertions submitted to the Department. The test report or engineering specifications must be complete enough to verify an acceptable testing protocol was used and to identify the laboratory that performed the testing. Acceptable testing protocols include those specified in the following standards:

NSF/ANSI Standards 42, 44, 53, 55, 58, or 62.

If varying from the testing protocols contained in these standards, it is *strongly* recommended that the variations be accepted by this Department in writing *prior to* performing any testing on the device. Otherwise, the Department cannot ensure the results of the testing will be acceptable.

For devices that are not covered by the given NSF Standards, contact the Department for an acceptable testing protocol.

11. Hydrostatic pressure testing. At minimum, the Department requires a hydrostatic pressure test performed at 150 psig, for a duration of 15 min., at a water temperature of approximately 73.4° F. This information is only required for in-line devices subject to line pressure.

Devices that discharge to atmosphere are exempt from this requirement.

Plumbing Products Contact:

Glen W. Schlüter
Plumbing Device Reviewer
Department of Safety and Professional Services
Division of Industry Services
Bureau of Technical Services
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7:45AM-4:30PM CDT M-F **Work Hours**

ADDITIONAL INFORMATION:

Confidential Information:

Information may be identified as confidential by a submitter. Such identification must be made at the time of submittal by permanently marking "confidential business information" on **each** page containing information deemed a trade secret under Wis. Stat. § 134.90 (1) (c) which reads:

(c) "Trade secret" means information, including a formula, pattern, compilation, program, device, method, technique or process to which all of the following apply:

1. The information derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use.
2. The information is the subject of efforts to maintain its secrecy that are reasonable under the circumstances.

Links:

1. Plumbing Code (i.e., chs. SPS 381-387 Wis. Adm. Code, chs. SPS 382 and 384 are the primary plumbing related code chapters): https://docs.legis.wisconsin.gov/code/admin_code/sps/safety_and_buildings_and_environment/380_387
2. Plumbing Product Listing Service (Search under the “Plumbing Products” tab): <https://esla.force.com/publiclookup>

General Information:

If granted, the term of approval is five years and effective statewide. All submitters are notified six months prior to their expiration date via email notifications. Approvals can be renewed for additional five-year terms; the renewal fee is \$125.00.

Approvals can be revised (modified) after being approved, however, the manufacturer must apply for a revision; the revision fee is \$125.00. Revising a file does not extend the expiration date of the original approval.

If an approved plumbing product is modified or additional assertions of function or performance are made, the approval shall be considered null and void, unless the change is submitted to the Department for review and the approval is reaffirmed.