

Overview of water re-use and the Plumbing Code

Plumbing Board in the process of adopting national model plumbing code

Increased movement toward green technologies has brought about more interest in rainwater catchment systems for water conservation in building plumbing designs in Minnesota.

Rainwater catchment system

Rainwater catchment systems – also known as rainwater harvesting systems – have several key components including roof drains, a conveyance system, a collection cistern for storage, a treatment system and a pressurized distribution system.



An example of a residential rain barrel used to collect rain water. (Photo: Minnesota Pollution Control Agency)

The Minnesota Plumbing Code allows rainwater catchment systems as an alternate material and method for non-potable uses like toilet flushing, vehicle washing or a combination of toilet flushing and lawn irrigation. Designs and methods are subject to approval by the administrative authority on a case-by-case basis in accordance with Minnesota Rules, part 4715.0330. More restrictive treatment is required when the use is in direct contact with humans or the installation is near potable water supply systems.

For single-family homes, cisterns and rain barrels that capture rain from rooftops through gutters and downspouts provide an acceptable supply of rainwater for outdoor, non-potable uses for plants and gardens with minimal health risks. Irrigating or aerosolizing with the captured rain water is not recommended.

Graywater systems

A graywater system is typically wastewater collected from showers, lavatories, bathtubs or clothes washers. Graywater can contain pathogens and other microorganisms that may cause illness, public exposure risks and other health concerns.

The Minnesota Plumbing Code does not allow for the collection of graywater for re-use in any plumbing

application. All plumbing fixtures must discharge into the building drainage and connect to a municipal sewer where available. In jurisdictions where a building's plumbing system is served by a subsurface sewage treatment system, a graywater system may be considered for a subsurface irrigation application as a disposal method subject to the rules and regulations of the Minnesota Pollution Control Agency and must also be approved by the local government. In this case, the plumbing (or conveyance) system up to the approved point of disposal must meet the requirements of the Minnesota Plumbing Code.

What's the future of water re-use?

The Minnesota Plumbing Board – responsible for the adoption of the plumbing code – is in the process of adopting a national model plumbing code. The proposed new code is the 2012 Uniform Plumbing Code adopted by reference with Minnesota amendments.

The proposed code with amendments allows rainwater catchment systems and addresses public health and safety concerns. The board, however, voted to delay including graywater systems for re-use in the proposed plumbing code until recommendations from multiple states are received to help coordinate and address requirements and language to protect public health and safety.

More information from the Web

Minnesota Plumbing Board details and rulemaking information:

www.dli.mn.gov/Pb.asp

Plumbing information from DLI:

www.dli.mn.gov/CCLD/Plumbing.asp