



People Helping People Build a Safer World®

CSA B805/ICC 805-2018 Standard, Rainwater Harvesting Systems Why it Should be Adopted



INTENT

Over the past decade rainwater harvesting systems have become more common across North America. The code officials responsible for inspecting these systems have voiced their need for more detailed design parameters to ensure safe implementation of these systems. For this reason, the Canadian Standards Association and the International Code Council formed a joint committee to create a rainwater harvesting standard for use in North America. The intent of the standard is to:

- Provide detailed design parameters to ensure rainwater harvesting systems are designed and installed in a way that protects the health and safety of others.
- Make it easier for local jurisdictions to accept and approve rainwater harvesting systems.
- Provide a framework for designers and code officials to implement systems meeting the intent of existing codes.

SCOPE

The CSA B805/ICC 805 Standard applies to the design, materials, installation, and operation of rainwater harvesting systems for potable and non-potable applications. Some of the key provisions covered by the standard include:

- These Standard addresses roof surface rainwater and stormwater being used as source water.
- It addresses rainwater intended for use in nonpotable applications (e.g., irrigation, fire protection, toilet and urinal flushing, clothes washing, hose bibbs, decorative fountains, and vehicle washing) as well as potable applications (e. g., human consumption, oral care, food preparation, dishwashing, and bathing).
- This Standard provides different methods for protecting water based on the influent water quality, the system, and the application. Stormwater runoff is expected to have a higher likelihood of contamination as a result of its flowing overland. Therefore, this Standard specifies additional treatment process requirements for stormwater runoff and does not cover its use for potable water applications.

- This Standard requires that a water safety plan be developed for all rainwater harvesting systems. The water safety plan considers the specific challenges and risks presented by the site and associated impact on source water quality, operation of system components, and the risk associated with the end use.
- Applications for harvested rainwater are separated into four end use tiers that consider the exposure potential through ingestion, inhalation, and skin contact. It further separates these tiers into two groups, one for single-family residential and one for multifamily, commercial and public facilities.
- This Standard specifies minimum performance criteria for each end use tier in consideration of the health risk and identifies possible treatment process options to meet the specified performance criteria.
- Based on the expected source water quality, this Standard establishes suitable water quality parameters that are used to substantiate that the treatment process is operating as intended to produce safe water for the specified end use.

BENEFITS

Currently, Chapter 13 of the International Plumbing Code does not address the use of rainwater for potable applications, nor does it contain provisions for the use of stormwater for nonpotable applications. Adoption of the CSA B805/ICC 805 Standard provides code officials with the following benefits:

- The guidance needed for reviewing and inspecting rainwater harvesting systems of all types.
- An alternate compliance path for rainwater to be used in both potable and nonpotable applications.
- An alternate compliance path for stormwater to be used in nonpotable applications.

COST IMPACT

The adoption of the CSA B805/ICC 805 Standard will not increase or decrease the cost of construction. The standard is a voluntary standard that provides an alternate compliance path to existing codes. It is an option provided to the user, not a requirement. Therefore, no added cost is mandated to the user of the standard.

The CSA B805-18/ICC 805-2018 Rainwater Harvesting Systems Standard is available electronically at codes.iccsafe.org.

For more information, contact:

Rich Anderson, Director
PMG Technical Resources:
1-888-422-7233 ext. 6245

Susan Dowty, Government
Relations Manager:
1-888-422-7233, x3111