Improving resilience and sustainability of health care facilities through enhanced plumbing systems

CSA Z317.1:26, *Special requirements for plumbing installations in health care facilities*

Plumbing installations in health care facilities (HCFs), including specialized water supply systems for operating rooms, laboratories, dialysis units, and sterile systems, are essential for safe and effective care. Efficient, reliable, and adaptive plumbing systems also support the facility's overall sustainability and resilience.

The 2026 edition of the National Standard of Canada, CSA Z317.1:26, expands its requirements and guidance to promote responsible use of water, energy, and other resources, help reduce greenhouse gas (GHG) emissions, and enhance climate adaptation. Applied across the design, construction, operation, and maintenance of plumbing installations in HCFs, these updates can help the health care sector transition toward low-carbon, sustainable, and climate-resilient operations.

Sustainable, resilient, and adaptive HCF plumbing systems



INCORPORATE PRINCIPLES
of sustainable and resilient design to support responsible use of resources, operational GHG emission reduction, and business continuity and adaptive capacity of HCFs

EVALUATE OPTIONS
and select applicable and efficient systems and equipment tailored to that health care facility, to reduce energy and water consumption and emissions of new installations or when modifying existing ones

ENHANCE PREPAREDNESS
of plumbing and drainage systems to respond to climate-related events and minimize disruption of health care services

BETTER ACCOUNTING FOR FUTURE RAINFALL INTENSITY
in planning, design, construction, and maintenance of stormwater drainage and detention systems to reduce the impact of floods, erosion, sedimentation, and pollution

IMPROVED ACCOMMODATION OF CLIMATE PROJECTIONS
in planning, design, construction, and maintenance of plumbing installations, including impacts of changing temperatures, permafrost degradation, wildfires, and flooding

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Who should use the standard?

- Architects
- Engineers
- Contractors
- Facility and maintenance managers
- Health care facility staff
- Federal, provincial, and territorial governments and regulators

Adopting the sustainability and climate resilience guidance of the standard CSA Z317.1:26 can help:

Increase energy efficiency

of HCF plumbing systems

Reduce consumption

of resources, including water and energy

Lower emissions

related to HCF plumbing systems

Reduce operational costs

by conserving resources energy, water, and other resources

Enhance the adaptive capacity

of a HCF by considering future climate projection in the design and retrofits of plumbing systems

Enhance business continuity

to help ensure uninterrupted service in case of events that may impact plumbing or drainage systems

Get CSA Z317.1:26

csagroup.org/store

healthandwellbeing@csagroup.org

For more on CSA Group research and standards for more resilient and sustainable health care facilities, visit csagroup.org/ResilientHCF

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