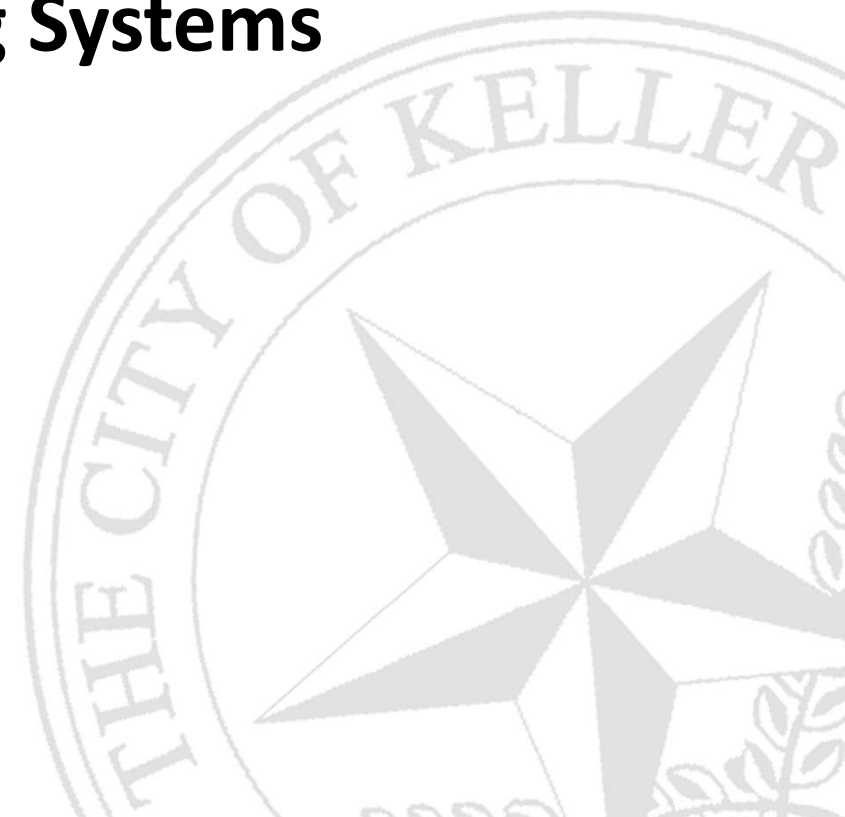


Bulk Storage of Carbon Dioxide in Beverage Dispensing Systems



Fire Code Adoption

2015 International Fire Code with Amendments was adopted on March 15, 2016

2015 IFC Section 5307 Carbon Dioxide(CO₂) Systems Used In Beverage Dispensing Applications

5307.1 General. Carbon dioxide systems with more than 100 pounds (45.4 kg) of carbon dioxide used in beverage dispensing applications shall comply with Sections 5307.2 through 5307.5.2.

International Code Council Interpretation

If a section requirement is addressing a feature or component that does exist as part of the current installation, the administration, operational and maintenance provisions of Section 102.2 would apply.

102.2 Administrative, operational and maintenance provisions. The administrative, operational and maintenance provisions of this code shall apply to:

- 1. Conditions and operations arising after the adoption of this code.***
- 2. Existing conditions and operations.***

What Influenced the Fire Code Change?

CO₂ is a simple asphyxiant that displaces oxygen and can cause rapid suffocation.

- Between 1995 and 2007 there were four deaths due to asphyxia from CO₂ exposure
- Between September 2011 and November 2015 there were two deaths due to asphyxia and multiple sicknesses from CO₂ exposure.
- Recent incidents and exposures:
 - January 2, 2018 Waco Texas evacuation of the McDonalds after the CO₂ alarm sounded.
 - August 17, 2018 New York City, twenty-eight people sickened and taken to a local hospital when CO₂ began leaking from the soda dispensing system.

How Keller is Addressing the Hazard

- If any occupancy currently has more than 100 pounds of CO₂ the minimum code is being enforced which requires emergency alarm notification as follows:
 - Continuous gas detection shall be provided to monitor areas where carbon dioxide can accumulate.
 - The threshold for activation of an alarm shall not exceed 5,000 parts per million (9,000 mg/m³).
 - Activation of the emergency alarm system shall initiate a local alarm within the room or area in which the system is installed.
- Less than 100 pounds of CO₂ no requirement for monitoring
- All CO₂ systems that exceed the maximum threshold of 100 pounds are required to meet the code requirement as outlined in Sections 102.2 and 5307.5.2

Department	IFC Edition	New	Existing	Both	Compliance
Flower Mound	2015			X	Dean Harden 100%
Bedford	2015			X	Joey Lankford 100%
McKinney	2015			X	Mike Smith In Process
Fort Worth	2015			X	Bob Morgan In Process
Coppell	2015			X	Tim Oates New and remodels, any portion of the building/lease space, then entire building shall be brought up to current code
Grapevine	2015	X			Russell Batchelor new and remodels
Euless	2015	X			Paul Smith new and remodels
Southlake	2015	X			Kelly Clements New and remodels
Roanoke	2015	X			Doug Parks at the restaurant owners discretion
Rockwall	2015	X			Ariana Hargrove new because the code does not specifically indicate retroactive requirement
Plano	2015	X			David Kerr adopting the 2018 this year will enforce the requirement for existing and new.
North Richland Hills	2012			X	Greg Lindsey Adopting the 2018 IFC in November & will Comply w/ 2018 and enforce retroactive
Azle	2012	NA	NA	X	Kenny Wilson Adopting the 2018 IFC in October. Will comply w/2018
Addison	2012	NA	NA	X	David Jones Adopting the 2018 IFC in October. Will comply w/2018
Colleyville	2012	NA	NA	NA	Rob McKeown No Plans to adopt 2015 or 2018 at this time
Lake Worth	2012	NA	NA	NA	Mike Voorhies Have not decided on what we are going to do with that.
Watauga	2012	NA	NA	NA	Brian Hatfield going to 2018 next year and will evaluate the requirements then
Haltom City	2015				Fred Napp Have not crossed that bridge yet. Are requiring operational permits for the CO2.
Hurst	2015			X	Matt Easter No alarms, building official requires the mechanical ventilation portion of the Code.
Burleson	2015				Stacy Singleton Has not made it that far into the Code

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Questions?
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