Broward County Amendments to Chapter 3, Subsection 307.2 of the 2023 Florida Building Code, Mechanical, 8th Edition

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SECTION 307 CONDENSATE DISPOSAL

Section 307.2 Evaporators and cooling coils.

Condensate drain systems shall be provided for *equipment* and *appliances* containing evaporators or cooling coils. Condensate drain systems shall be designed, constructed, and installed in accordance with Sections 307.2.1 through 307.2.5.

Exception: Evaporators and cooling coils that are designed to operate in sensible cooling only and not support condensation shall not be required to meet the requirements of this section.

Section 307.2.1 Condensate disposal.

Condensate from all cooling coils and evaporators <u>of equipment served by an onsite</u> <u>cooling tower in a building or structure wherein the aggregate cooling capacity of the</u> <u>equipment exceeds 65,000 Btu/hr shall be collected and conveyed from the drain pan</u> <u>outlet and discharged to the cooling tower. Where an on-site cooling tower is not</u> <u>installed, the condensate from all cooling coils and evaporators</u> shall be conveyed from the drain pan outlet to an *approved* place of disposal. Such piping shall maintain a minimum horizontal slope in the direction of discharge of not less than one-eighth unit vertical in 12 units horizontal (1-percent slope). Condensate shall not discharge into a street, alley, or other areas so as to cause a nuisance.

Exceptions:

1. Condensate from cooling coils and evaporators is not required to be collected and conveyed to an on-site cooling tower, provided 1.1 through 1.3 are met:

<u>1.1 The equipment comprises 10% or less of the total capacity of the cooling tower</u> system,

1.1 The equipment is located in an isolated or remote area,

1.2 The size of the equipment is 65,000 Btu/hr or less.

2. In existing buildings, condensate may be collected and conveyed to a cooling tower or discharged to an approved place of disposal.

Broward County Amendments to Subsection 908.3 and Chapter 15 of the 2023 Florida Building Code, Mechanical, 8th Edition

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CHAPTER 9 SPECIFIC APPLIANCES, FIREPLACES, AND SOLID FUEL-BURNING EQUIPMENT

SECTION 908 COOLING TOWERS, EVAPORATIVE CONDENSERS, AND FLUID COOLERS

Section 908.3 Location

Cooling towers, evaporative condensers, and fluid coolers shall be located to prevent the discharge vapor plumes from entering occupied spaces. Plume discharges shall be not less than 5 feet (1524 mm) above or 20 feet (6096 mm) away from any ventilation inlet to a building. Location on the property shall be as required for buildings in accordance with the Florida Building Code, Building.

Section 908.3.1 Sitting of cooling towers shall comply with Section 7.2.1 of ASHRAE 188-2021. Exception: The replacement of existing cooling towers on previously permitted and approved locations.

CHAPTER 15 REFERENCED STANDARDS

ASHRAE	American Society of Heating, Refrigera and Air-Conditioning Engineers, Inc. 1791 Tullie Circle, NE Atlanta, GA 30329	ating
Standard Reference Number	Title	Referenced in Code Section Number
ASHRAE—2021	ASHRAE Fundamentals Handbook	603.2
15—2019	Safety Standard for Refrigeration Systems	1101.6, 1105.8, 1108.1
34—2019	Designation and Safety Classification of Refrigerants	202, 1102.2.1, 1103.1
62.1—2019	Ventilation for Acceptable Indoor Air Quality	403.3.1.1.2.3.2
170—2017	Ventilation of Health Care Facilities	407
ANSI/AMCA 210- ANSI/ASHRAE 51—16	Laboratory Methods of Testing Fans for Aerodynamic Performance Rating	403.3.2.4
<u>188-2021</u>	<u>Legionellosis:</u> <u>Risk Management for</u> Building Water Systems	<u>908.3.1</u>

Broward County Amendments to Chapter 9, Subsection 908.8 of the 2023 Florida Building Code, Mechanical, 8th Edition

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CHAPTER 9 SPECIFIC APPLIANCES, FIREPLACES, AND SOLID FUEL-BURNING EQUIPMENT

SECTION 908 COOLING TOWERS, EVAPORATIVE CONDENSERS, AND FLUID COOLERS

Section 908.8 Cooling Towers

Cooling towers, both open-circuit and closed-circuit type, and evaporative condensers shall comply with Sections 908.8.1 and 908.8.2 through 908.8.3.

Exception: Cooling water tower systems utilizing reclaimed water for the total amount of makeup water are exempt from the provisions of Sections 908.8.1 through 908.8.3 Florida Building Code.

Section 908.8.1 Conductivity-or and flow-based control of cycles of concentration. Cooling towers and evaporative condensers shall include controls that automate system bleed based on conductivity, fraction of metered makeup volume, metered bleed volume, recirculating pump run time, or bleed time. New cooling towers, and evaporative condensers, including replacements, shall be operated with conductivity controllers, as well as make-up and blowdown (bleed off) meters, and shall achieve a minimum of 8 cycles of concentration.

Section 908.8.2 Drift eliminators. Cooling towers and evaporative condensers shall be equipped with drift eliminators that have a maximum drift rate of 0.005 percent of the circulated water flow rate as established in the equipment's design specifications 0.002% of the recirculated water volume for counterflow towers and 0.005% of the recirculated water flow for crossflow towers.

Section 908.8.3 An affidavit of compliance demonstrating compliance with section 908.8.1 Florida Building Code, Mechanical, shall be submitted by the property manager/owner to the local water provider every 12 months following system installation. The affidavit shall be signed by the service provider and include all dates of service within the reporting period and verified system operation at a minimum of 8 cycles of concentration.