

IOWA DEPARTMENT OF NATURAL RESOURCES

LEADING IOWANS IN CARING FOR OUR NATURAL RESOURCES

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Water Main and Sewer Separation Requirements FAQ

Reason for Changes

Updates to 567 IAC 43.3 (2)“a”(3) to replace subparagraph (3) with new subparagraphs (3) and (4) were made to allow for added flexibility for water main project design with regards to separation from sanitary and storm sewers effective March 16, 2022. Previously, water main separation from sewers was covered by Chapter 12 of the Wastewater Engineering Design Standards, which were written based on sewer construction rather than water main construction. The previous requirements did not account for conflicts with existing sewer infrastructure and treated sanitary sewers and storm sewers equally. The updates to 567 IAC 43.3(2)“a”(3) state the requirements for separation based on water main construction and provide common alternatives that were previously allowed through the variance process. The following tables outline the requirements and options for handling separation conflicts between a water main and sewer based on the updated rule.

Separation of Water Mains and Sanitary Sewers

Horizontal Separation: Gravity Sanitary and Combined Sewers

Scenario	Requirements
Separation \geq 10 feet, edge to edge	No additional requirements
3 feet \leq separation < 10 feet, edge to edge, with water main located at least 18 inches above top of sewer	Sewer must be placed in a separate trench than the water main or on a bench of undisturbed earth in the same trench as the water main
3 feet \leq separation < 10 feet, edge to edge, with water main located less than 18 inches above top of sewer	Option 1: construct water main within watertight casing pipe with evenly spaced annular gap and watertight end seals, or Option 2: construct sewer of water main materials.
2 feet \leq separation < 3 feet, edge to edge	Sewer must be constructed of water main materials
Separation < 2 feet	Not allowed

Horizontal Separation: Sanitary Sewer Force Mains

Scenario	Requirements
Separation \geq 10 feet, edge to edge	No additional requirements
4 feet \leq separation < 10 feet, edge to edge	Sewer must be constructed of water main materials
Separation < 4 feet	Not allowed

Vertical Separation / Crossings: Gravity Sanitary and Combined Sewers

Scenario	Requirements
Separation \geq 18 inches, water main located above sewer	No additional requirements
6 inches \leq separation < 18 inches, water main located above sewer	Option 1: construct water main within watertight casing pipe with evenly spaced annular gap and watertight end seals, or
Separation \geq 18 inches, water main located below sewer	Option 2: construct sewer of water main materials
Separation < 6 inches, water main above sewer	Not allowed
Separation < 18 inches, water main below sewer	

Manholes: Water main must have 3 feet of horizontal separation from sanitary and combined sewer manholes.

Separation of Water Mains and Storm Sewers

Horizontal Separation: Gravity Storm Sewers

Scenario	Requirements
Separation \geq 10 feet, edge to edge	No additional requirements
3 feet \leq separation < 10 feet, edge to edge	Option 1: construct water main of ductile iron pipe with gaskets impermeable to hydrocarbons, or Option 2: construct water main within watertight casing pipe with evenly spaced annular gap and watertight end seals, or Option 3: construct sewer of water main materials, or Option 4: reinforced concrete pipe storm sewers shall be constructed with gaskets manufactured in accordance with ASTM C443

*A minimum of 3 feet of horizontal separation shall be maintained.

Vertical Separation / Crossings: Gravity Storm Sewers

Scenario	Requirements
Separation \geq 18 inches	No additional requirements
6 inches \leq separation < 18 inches, water main located above sewer	Option 1: construct water main of ductile iron pipe with gaskets impermeable to hydrocarbons, or Option 2: construct water main within watertight casing pipe with evenly spaced annular gap and watertight end seals, or Option 3: construct sewer of water main materials, or Option 4: reinforced concrete pipe storm sewers shall be constructed with gaskets manufactured in accordance with ASTM C443
Separation < 6 inches, water main above sewer	Not allowed
Separation < 18 inches, water main below sewer	