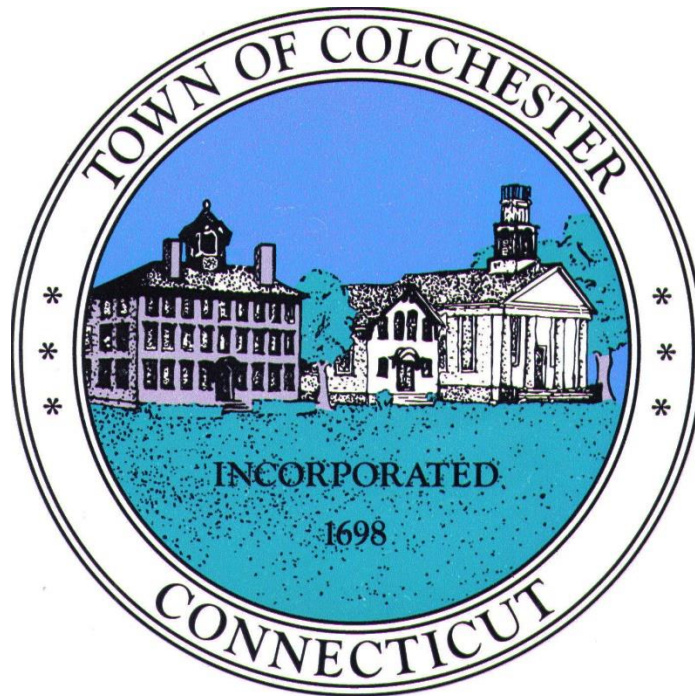


Regulation Proposal

Town of Colchester Fire Protection Water Supply Regulation



Proposed by Donald Lee

Deputy Fire Chief

Town of Colchester Fire Department

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CHAPTER XX.FIRE FIGHTING WATER SUPPLY

XX.X Requirements for Fire Fighting Water Supply

In all new developments the developer shall provide one of the following types of water supply:

- A. Public water supply: hydrants connected to municipal water supply system meeting the water department's water main and hydrant standards.
- B. A Natural or dug water source capable of meeting the minimum requirements of dry hydrant installation as described below.
- C. Fiberglass Tank with a Ten Thousand (10,000) gallon minimum capacity underground fiberglass tank.
- D. An approved precast concrete underground cistern with a Ten Thousand (10,000) gallon minimum capacity installed as part of the ground water retention system requirements.

In instances where a fire pond or cistern is to be located on private property as part of a building lot, necessary easements shall be conveyed to the Town of Colchester to ensure the Town's perpetual right to access the pond; to maintain the integrity of the pond for firefighting purposes, including but not limited to cleaning the pond of accumulated sediments, removing snow, and removing trees and brush; and to use the pond for firefighting training purposes. Deed restrictions shall be prepared which define the property owners' obligation to not alter the pond or locate any structures in a manner which inhibits the ability of firefighting equipment and personnel to utilize the pond in the event of an emergency. Easements and deed restrictions may be subject to review and approval by the Town Attorney.

XX.X Definitions

New Development: Five (5) or more new residences on an existing or new access point or subdivision. New or expanded commercial / industrial development exceeding 2,500 square feet.

Parking Area: Twelve foot (12') wide by forty-five foot (45') long paved or compacted gravel area accessible year round adjacent to hydrant drafting head.

Lift: Distance between the average surface level of the water supply and the surface in which the engine will park, plus thirty two inches. (32")

Access Point: Any public / private roadway / driveway established for the purpose of entry to the development or residences.

Water Supply:

- A. Natural or Dug Fire Pond (static water supply) with a minimum usable capacity of two hundred thousand (200,000) gallons year round.
- B. Cistern: An underground fiberglass tank with a minimum capacity of ten thousand (10,000) gallons.

Exemption:

Exemption to these requirements shall be granted for the following:

- A. The commercial / industrial building(s) are protected by an NFPA 13 (2019 edition) compliant sprinkler system from an approved water source.
- B. Residential properties that are protected by residential sprinklers in accordance with NFPA 13 D (2022 edition)

XX.X Dry Hydrants

Each dry hydrant shall be deemed to provide the desired firefighting protection for a distance of 2,000 feet as measured along the centerline of existing or proposed streets.

XX.X Certification:

Certification of the water supply capacity available during a 50-year drought cycle by a certified geological engineer or hydrologists shall be provided to the Colchester Hayward Fire Department.

XX.X Dry Hydrant Installation

- A. Dry hydrants shall be installed according to NFPA 1142. The minimum pipe size used in conjunction with a dry hydrant shall be eight (8) inches.
- B. All dry hydrants must be designed such that the total lift is not more than fifteen (15) feet, ten (10) feet is an optimal lift.
- C. Horizontal pipe length shall be limited to no more than forty (40) feet from hydrant head.
- D. Hydrant head shall be a minimum of thirty-six (36) inches from finish grade and no more than forty-eight (48) inches. The hydrant head shall be parallel with the finish grade. Hydrant head shall be within ten (10) feet of the parking area.
- E. All dry hydrant piping shall be PVC schedule 40 with a minimum diameter of (8) inches with a (6) six inch national standard swivel female connection approval by the fire department.
- F. All joints shall be cleaned and securely glued before being placed in the water.
- G. All piping extending into the water supply shall be supported on and secured to concrete or stone block within ten (10) feet of the strainer, such that the strainer portion is minimum of thirty-six (36) inches off the bottom of the water supply, and forty-eight (48) inches from the top of the water. The strainer and hydrant head will be purchased from the Colchester Hayward Fire Department, at their cost.

- H. The hydrant riser shall be protected by two (2) steel concrete filled posts, six (6) inches in diameter, placed twenty-four (24) inches either side of the riser and extending forty-eight (48) inches above the finish grade. These posts shall be embedded in concrete after the hydrant is accepted the Colchester Hayward Fire Department. Posts shall be painted safety yellow with a six (6) inch red band at the top.
- I. Piping installation shall be scheduled at least three (3) business days ahead of time with the Colchester Hayward Fire Department as there must be an officer or department representative on site before any piping is buried or submerged.
- J. Upon testing and acceptance of the hydrant, the Colchester Hayward Fire Department will assume responsibility for future service and / or maintenance.

XX.X Underground fiberglass tanks

- A. The cistern design and installation shall comply with NFPA 1142 (2001 edition) NFPA 22 (2018 edition) and be approved by the Colchester Hayward Fire Department.
- B. Tank to be constructed of fiberglass with a minimum capacity of ten thousand (10,000) gallons of water.
- C. Tank will have a six (6) inch PVC schedule 40 dry hydrant drafting pipe,
- D. Tank shall be installed below the frost line and the only visible plumbing shall be the hydrant head, fill pipe, vent pipe, and water gauge. Hydrant head and associated plumbing shall be protected by six (6) inch steel concrete filled posts located no more than twenty –four (24) inches on both sides and extending forty-eight (48) inches above final grade. These posts shall be embedded in concrete after acceptance by the Colchester Hayward Fire Department. Posts shall be painted safety yellow, with a six (6) inch red band at the top. Posts are to be set in concrete. Hydrant head shall be located no more than ten (10) feet from the parking area.
- E. The number of tanks shall be determined by the fire chief and town engineer.
- F. The owner / developer will be responsible for the initial filling of the tank and the Colchester Fire Department shall conduct a flow test prior to acceptance of the tank / plumbing.
- G. Upon testing and acceptance of the system, the Town of Colchester Fire Department will assume responsibility for future inspections, maintenance, and filling.
- H. The cistern shall be installed in accordance with the National Fire Protection Association NFPA 1142 (2001 edition) appendix B, and NFPA 22 (2018 edition) and the manufacturer’s instructions.

Dry Hydrant concept drawing:

