

U.S. Fire Administration / National Fire Academy

# Coffee Break Training

## Topic: Standpipe Classes

**Learning objective:** The student shall be able to explain the design differences among Class I, II, and III standpipe systems.

Standpipe systems are installed in buildings to help firefighting personnel deploy attack hoselines quickly and with adequate water pressure and volume to suppress a fire. They may be designed for “heavy stream applications,” as “first aid fire appliances,” or have the features of both.

Standpipe systems are described by classes to indicate their fire protection performance.



Typical Class I hose station outlet.

- Class I.** These systems are designed for use by personnel trained and equipped for “heavy stream applications.” Under current standards, they are designed to deliver 500 gallons per minute (gpm) for the first standpipe riser, and 250 gpm for each additional riser in a building. The flow has to be provided at 100 psi at the highest hose station outlet.
- Class II.** These systems are designed for use as “first aid fire appliances” by building occupants, and may be used by the firefighting forces for suppression or during mop-up. Under current standards, they are designed to deliver 100 gpm at 65 psi outlet pressure. Class II hose stations typically are outfitted with 100 feet of 1-1/2-inch diameter hose and a variable tip nozzle.
- Class III.** These systems are designed with the features of both Class I and II systems.

For additional information, refer to NFPA 14, Standard for the Installation of Standpipe, Private Hydrant, and Hose Systems.