

August 1, 2014

City of Minor Hill, Tennessee
Mayor Tracy Wilburn
13200 Minor Hill Highway
Minor Hill, Tennessee 38473

VIA ELECTRONIC MAIL

Dear Mayor Wilburn:

In response to a question as to why your fire department pumpers are not permitted to connect to hydrants during a working fire, the following is provided in consultation with MTAS Fire Consultant Dennis Wolf.

Tennessee Department of Environment and Conservation Rule 0400-45-01-.17, Operations and Maintenance, provides in subsection (18) as follows:

(18) All community water systems planning to or having installed hydrants must protect the distribution system from contamination. All water mains designed for fire protection must be six inches or larger and be able to provide 500 gallons per minute with 20 pounds per square inch residual pressure. Fire hydrants shall not be installed on water mains less than six inches in diameter or on water mains that cannot produce 500 gpm at 20 psi residual pressure unless the tops are painted red. Out of service hydrants shall have tops painted black or covered with a black shroud or tape.

Existing Class C hydrants (hydrants unable to deliver a flow of 500 gallons per minute at a residual pressure of 20 pounds per square inch (psi) shall have their tops painted red by January 1, 2008.

The water system must provide notification by certified mail at least once every five years beginning January 1, 2008, to each fire department that may have reason to utilize the hydrants, that fire hydrants with tops painted red (Class C hydrants) cannot be connected directly to a pumper fire truck. Fire Departments may be allowed to fill the booster tanks on any fire apparatus from an available hydrant by using the water system's available pressure only (fire pumps shall not be engaged during refill operations from a Class C hydrant).

The basis for the rule is that red top, or Class C, hydrants are not sufficient for fire protection purposes. The low pressure and low flow volume poses a risk for cross-contamination and physical damage to the water system if the fire department connects a pumper and creates a negative pressure situation in the water main. This is the reason for the prohibition on connecting a pumper and engaging the fire pump. The fire department can, however, use the available pressure in the hydrant to fill tanks at all other times.

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The water purveyor is responsible for the water system, so the authority to use the hydrants rests with that entity. If the city believes there is more than 500 gallons available, it should request that either the fire department or the water purveyor perform a two hydrant flow test to determine the available fire flow at 20 psi. A single hydrant test should not be used as it will not be accurate. If the two hydrant test ends up flowing more than 500 gpm, the fire department should be allowed to use the hydrant with the pump engaged.

Please let Dennis or I know if you have further questions regarding this matter.

Very truly yours,



Jeffrey J. Broughton
Municipal Management Consultant

Cc: Dennis Wolf