



Municipal Technical Advisory Service
INSTITUTE *for* PUBLIC SERVICE

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Identifying and Marking Deficient Fire Hydrants

Dear Reader:

The following document was created from the MTAS website ([mtas.tennessee.edu](https://www.mtas.tennessee.edu)). This website is maintained daily by MTAS staff and seeks to represent the most current information regarding issues relative to Tennessee municipal government.

We hope this information will be useful to you; reference to it will assist you with many of the questions that will arise in your tenure with municipal government. However, the *Tennessee Code Annotated* and other relevant laws or regulations should always be consulted before any action is taken based upon the contents of this document.

Please feel free to contact us if you have questions or comments regarding this information or any other MTAS website material.

Sincerely,

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Table of Contents

Identifying and Marking Deficient Fire Hydrants	3
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For the purposes of marking fire hydrants, a deficient fire hydrant is a fire hydrant that cannot provide a fire flow of at least 500 gpm at 20 psi residual pressure. Deficient fire hydrants (Class C hydrants) must be properly marked and identified. The public also needs to be educated in this area. A typical homeowner who sees a fire hydrant near their home, or a business owner who sees a hydrant near his business, may not realize that the fire hydrant cannot provide enough water to extinguish a fire in the home or business. In addition to giving the homeowner or business owner a false sense of security, inadequate fire flows result in higher property insurance premiums. Most insurance requirements state that adequate water flows must be available within 1,000 feet of structures to get full credit for fire hydrants.

Where fire hydrants are properly marked, most fire departments only connect to a Class C hydrant as a last resort. The fire department needs a reliable water source and according to the Insurance Services Office (ISO) on community water systems, a minimum of 500 gpm is needed to fight a basic residential structure fire. Actually, depending on the distances between structures, the needed fire flow is much higher. ISO also does not recognize hydrants on water mains less than six inches in diameter. Therefore, connecting into a red top hydrant does not supply basic needed fire flows and is only done as a last resort. However, ISO will recognize a fire hydrant in a rural setting as a suction point where tanker shuttles are necessary as long as the hydrant can deliver a minimum flow of 250 gpm at a residual pressure of 20 psi for two hours.

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