

The Florida Fire Marshals and Inspectors Association, "Organization" (§633.026)

### **Informal Interpretation Request**

**Date:** 6/23/22

National Fire Protection Association (NFPA) Document No. applied by the LFO: <u>NFPA 1</u>
Edition of the NFPA Document: <u>7th Edition</u>
Chapter and Paragraph of the NFPA Document <u>Chapter 18.5.4.2</u>

Explain how the Petitioner's substantial interests are being affected by the LFO's interpretation of the NFPA citation above:

This project is in the City of Coleman in Sumter County. Coleman has small water system and can't supply the 4,250 gpm required by the LFO. The line we will connect to is an 8" main across the street from our project. A fire hydrant flow test was conducted on this main close to the point of connection to the fire main we have proposed for our project will connect. A flow rate of 1,563 gpm at 20 psi was obtained. A fire flow of 4,250 gpm is not possible.

Enter a statement of the LFO's interpretation of the NFPA citation above and identify the manner in which the statement was rendered:

The LFO's statement in multiple emails and over the phone that by adding 3 or 4 fire hydrants to the proposed dead in 8" fire line, we then could provide the required 4,250 gpm. These hydrants would be located within a 200' circle. The LFO said we then could flow test these hydrants individually, and could sum these flows using **Table 18.5.4.3** – **Maximum Fire Hydrant Flow Capacity** to provide the 4,250 gpm they are requiring.

As an engineer, I know this hydraulically impossible. We will still only be supplying about 1,500 gpm to the project.



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Enter a statement of the interpretation that the Petitioner contends should be given to the NFPA citation above and a statement supporting the Petitioner's interpretation:

Fire hydrants can only be tested individually and the results summed if there is a lines large enough to provide the required flow, or the hydrants are on different lines and the system can provide the required flow.

The following information on the Coleman Water System was provided by ECO2000 who operates the system:

Number of Wells: 2 Wells

GPM of each well: 175 gpm Each

Gallons of water storage: 200,000 gallons

Plant Capacity Gallons per day: 495,000 gpd (Permitted Capacity)

Giving these numbers, there is no way this system can provide 4,250 gpm of fire flow. The addition of hydrants may increase the flow to the site, however, the increase would be minimal. More than likely less than 100 gpm.

### Enter the Petitioner's question concerning an interpretation of the FFPC:

If an 8" fire line that is being fed by an 8" water main has 4 or 5 hydrants all installed within 350' of each other at the end of the fire line, can you flow test the fire hydrants individually and add the results to determine if you are meeting the fire flow requirements of a project?

#### **Committee majority answer:**

No, the fire hydrants cannot be flow tested individually and combined. The proper method to flow test is called out in NFPA 291. Basically, this method requires flow testing the hydrant at the dead end of the line and then taking a residual reading at the next closest hydrant. The results are then plotted on a curve to determine the water supply available at 20 psi residual. As an alternative if the line is not already constructed, the civil design engineer can use flow test results from existing hydrants and the civil design engineer can provide hydraulic calculations to demonstrate the water supply that will be available at 20 psi when the line is constructed. Once constructed, the actual approve fire flow will need to be demonstrated by flow tests.

Rulings herein expressed are not the formal position of the Florida State Fire Marshal's Office

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**Region 1** - Delegate: <u>Byron Bennett</u>, Fire Chief North Bay Fire Control District Alternate: <u>William (Michael) Hall</u>, Fire Chief, Marianna Fire Rescue

Region 2 - Delegate: Jason R. Greisl Division Chief of Fire Prevention/Fire Marshal Tallahassee Fire

Alternate: N/A\*

**Region 3** - Delegate: *James Groff*, Jacksonville Fire Rescue.

Alternate: **Robert Growick** Division Chief /Fire Marshall City of St. Augustine

Region 4 - Delegate: *Cheryl Edwards*, Lakeland Fire Rescue

Alternate: *Karl Thompson* 

Region 5 - Delegate: Anthony Apfelbeck, Altamonte Springs Building and Fire Safety Department

Alternate: Christina Diaz, Seminole County Fl.

Region 6 - Delegate: *Robert Salvaggio*, Cape Corral Fire Rescue

Alternate: *Janet Washburn*, Bonita Springs Fire Control and Rescue District

Region 7 - Delegate: Matthew E. Welhaf, Boca Raton Fire Rescue Services Department

Alternate: **(Kenneth)** *Sean Brown*, Broward Sheriff Fire Rescue & Emergency Services Department.



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### **Committee Region Map**

