



## Building Division Policies and Procedures

<b>Subject:</b>	New and Existing Buildings - Fire Water Flow Test Reports And Fire Sprinkler Hydraulics		
<b>Approved by:</b>	Suzanne Tyler, Building Official	<b>Approved Date:</b>	06/14/24
		<b>Effective Date:</b>	06/20/24
<b>Revisions:</b>			

### Reference

**2022 OSSC** §903.3.8.5 and §903.3.5.

**2022 OFC** §903.3.8.5 and §903.3.5.

**NFPA13-19** §24.2.2.2.

**NFPA 291** §4.6.4

### Policy

## FIRE WATER FLOW TESTING AND REPORTING REQUIREMENTS FOR TUALATIN

### **NEW BUILDINGS**

All new buildings that include a fire sprinkler protection system shall require a fire water flow test witnessed by an approved 3<sup>rd</sup> party. The fire water flow test will be conducted using industry standards as described in NFPA 291. The fire water flow test date must occur within the 12 month period immediately preceding the date of application for a fire sprinkler permit. A signed fire water flow test report must be submitted with the sprinkler permit application to obtain a fire sprinkler permit from the city.

### **EXISTING BUILDINGS**

Fire sprinkler protection systems installed in existing buildings that were not previously protected with a fire sprinkler system shall require submittal of a fire water flow test report as required for new buildings.

EXCEPTION: Modifications to an existing fire sprinkler system in an existing building that propose a design density increase shall require a fire water flow test report as required for new buildings.

### **FLOW TEST REPORTS**

Fire flow test reports shall be prepared as described in NFPA 291 (see example below.) The fire water flow test shall be performed by or in the presence of a 3<sup>rd</sup> party witness that has been approved by the city. A 3<sup>rd</sup> party witness is considered approved when a test is observed or performed by the local fire marshal, a special inspection agency, or an approved engineer competent in hydraulic design. City of Tualatin Water Division staff do not witness flow tests – their presence is to validate no damage occurs to City



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property. It is the contractor's responsibility to provide a competent witness for a fire water flow test.

All fire water flow tests shall calculate a 10% safety margin. The report shall note the actual measured water flow data and shall report 90% of the water flow capacity as the available supply capacity, and results shall be documented at 20 psi.



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**WATER FLOW TEST REPORT**



Location: \_\_\_\_\_ Test by: \_\_\_\_\_

Address: \_\_\_\_\_ Date: \_\_\_\_\_

\_\_\_\_\_ Time: \_\_\_\_\_

**SYSTEM DATA**

Size of main: \_\_\_\_\_ Dead end: \_\_\_\_\_ Looped: \_\_\_\_\_

Comments: \_\_\_\_\_

**TEST DATA**

Location of test hydrants: \_\_\_\_\_ Residual hydrants: \_\_\_\_\_

Flow hydrant A: \_\_\_\_\_

Flow hydrant B: \_\_\_\_\_

Static pressure: \_\_\_\_\_

Test No.	No. of Outlets	Orifice Size (in.)	Orifice Coeff.	Residual Pressure (psig)	Pitot Pressure (psig)	Flow (US gpm)	Comments
1							
2							
3							
4							
5							

Projected results @ 20 psi: \_\_\_\_\_

Sketch of test configuration