HYDRANT FLOW TEST PROCEDURE

A fire flow test provides actual pressure and flow data measured at specific fire hydrants within the City of Fullerton's Water Distribution System. To help ensure public safety, the data is used to assess the pressure and flow available for fire protection, sprinkler system design and proper sizing of domestic/fire service lines.

A flow test usually involves three fire hydrants. The first hydrant is called the flow hydrant, which is located closest to the property. The second and third hydrants are called the test (residual) hydrants and are located directly upstream and downstream from the flow hydrant. A test proceeds as follows:

1. The cap covering both of the test (residual) hydrant outlets is unscrewed and replaced with a pressure gage. The valve on the test hydrants are opened, allowing water under pressure into the hydrant. The pressure is referred to as the static pressure. This represents the water pressure in the water main as measured at the elevation of the hydrant outlet.

2. A cap on the flow hydrant is opened and the inside diameter of the outlet is measured and recorded. The flow hydrant valve is then fully opened to create a steady flow of water from the outlet. (For traffic safety, be sure to use a diffuser and per NPDES requirements always dechlorinate the discharged water).
* In some cases, the resulting horizontal geyser may be sufficiently disruptive to justify street closures.

3. A pitot gage is used to measure the velocity pressure of the stream discharging from the flow hydrant. While the pitot pressure is being recorded, a second pressure reading is taken at the test (residual) hydrants, simultaneously. This is called the residual pressure. The residual pressure records both the domestic demand and fire flows occurring in the water main.

4. The final step in the flow test involves shutting down the flow hydrant and taking another static pressure reading as a check on the previous reading. The two readings must be similar. If the second reading is higher, it may be due to a pump automatically starting to meet the demand imposed by the flow test. There are good reasons to double-check the static pressure. If the second static pressure reading falls very far below the first one recorded, it's possible that a water main broke during the test.

To request a Fire Flow Test:

1. Contact the Water Engineering Division to request a map, (714) 738-6887.
2. Take map to Fire Station 1, pull Fire hydrant and valve permit ($135) and schedule a date to perform test. * Fire Station 1 is located at 312 E. Commonwealth Ave.

Minimum Requirements (to be met by Contractors):

1. Must have or obtain a current business license to operate within the City of Fullerton.
2. Insurance requirements: General liability, Employers' Liability and Workers' compensation minimum of $1,000,000.00 each accident.
3. Hold harmless agreement

* Owner/Applicant will have to hire own private company to perform the Fire Flow Test, the City of Fullerton Fire Dept will be out only to witness the event.

HYDRANT FLOW TEST FORM
CITY OF FULLERTON FIRE DEPARTMENT

312 E. Commonwealth Ave., Fullerton, CA 92832-2900
Phone (714) 738-6500 Fax (714) 738-3392
email: FFPrevention@ci.fullerton.ca.us

I. PROJECT INFORMATION (TO BE COMPLETED BY APPLICANT)

Name: _____ Phone: (_____)_____

Company Address:_____

Project Address: _____

Nearest Cross Street/Distance (ft): _____

Occupancy (Use of Building):_____ Sprinklered (Y/N): _____

Square Footage:_____ Number of Stories: _____

II. FLOW TEST DATA (TO BE COMPLETED BY APPLICANT)

FLOW HYDRANT:

ATLAS PAGE: _____ HYDRANT #: _____ OUTLET DIAMETER: 4" _____ 2-1/2" _____

SIZE & MATERIAL OF WATER MAIN: _____

Static PSI: _____ Residual PSI: _____ Pitot (PSI): _____ Observed Flow (GPM)_____

Calculated Fire Flow @ 20 PSI: _____ Duration of Flow: _____ Date and Time: _____

TEST (RESIDUAL) HYDRANT:

ATLAS PAGE: _____ HYDRANT #: _____

SIZE & MATERIAL OF WATER MAIN: _____

Static PSI: _____ Residual PSI: _____

TEST (RESIDUAL) HYDRANT:

ATLAS PAGE: _____ HYDRANT #: _____

SIZE & MATERIAL OF WATER MAIN: _____

Static PSI: _____ Residual PSI: _____

III. PUBLIC FIRE HYDRANT FIRE FLOW REQUIREMENTS (TO BE COMPLETED BY FIRE DEPARTMENT)

_____ _____

Signature of FIRE DEPARTMENT WITNESS — Please Print Name

Time: _____ (am / pm)

Date: _____/_____/_____ Title: _____

IV. TESTER / COMPANY INFORMATION

Flow Test Conducted by:_____ Ph: (_____) _____

Company Name

Business License #: _____

Company Address:_____

Date: _____/_____/_____ Signature: _____