



# City of Peoria Fire Department

8351 West Cinnabar Avenue, Peoria, Arizona 85345

Phone: 623-773-7279 Fax: 623-773-7295

## Fire Hydrant Flow Test Request

In order for a fire hydrant flow test to be scheduled, the following information must be provided and this form faxed to the Fire Department at (623) 773-7295. Once this form is received, the request will be reviewed and the Fire Inspector for that inspection zone will contact the person listed on this form to schedule a specific time to witness the flow test. Failure to provide all of the required information or incorrect information can delay or prevent the scheduling of the test.

### Project Information

Required fire flow for the project: \_\_\_\_\_ gpm @ 20 psi

Project Name: \_\_\_\_\_

Project Address: \_\_\_\_\_

Project Permit Number: \_\_\_\_\_

City of Peoria water service: Yes \_\_\_\_\_ No \_\_\_\_\_

Private water service: Yes \_\_\_\_\_ No \_\_\_\_\_ Water Company: \_\_\_\_\_

### Billing Information (flow tests are billed out at \$50.00 for each test)

Company Name: \_\_\_\_\_

Company Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Fax Number: \_\_\_\_\_

Contact Person: \_\_\_\_\_

### Disclaimers

- The Fire Department only witnesses the fire hydrant flow test and does not provide the equipment or personnel necessary to perform the tests.
- It is the responsibility of the company performing the test to ascertain what the required fire flow for the project is, which utility company the water system belongs to, that the fire hydrants tested are in the correct water service/pressure zone for the project, etc.
- Fire flow requirements are determined by applying the total building square footage and building construction type to Table B105.1 of the IFC. Reductions in the required fire flow are not automatic and must be approved in writing by the Fire Marshal. In claiming a reduction, a copy of the approval must be provided.
- Fire hydrant flow tests can be cancelled by the Fire Inspector due to inclement weather, safety concerns or insufficient access to a job site. Tests not cancelled prior to the Fire Inspector's arrival are subject to an additional inspection fee.
- Fire hydrant flow tests are not official until the test results are sent to the Fire Inspector by the testing company and recorded into the Fire Department database. Plans are not approved until tests are recorded.
- Fire hydrant flow tests are to be conducted per the included City of Peoria Fire Department's written policy (SOP 600.05) and NFPA 291 *Recommended Practices for Fire Flow Testing and Marking of Fire Hydrants* (2007).
- The contractor is responsible for any and all damages or clean-up associated with the flow test. The contractor shall provide the necessary clean-up or repairs at the time of the flow test. Clean-up or repairs in a City of Peoria right of way that are not corrected up will be corrected by the Public Works Division and charged back to the contractor.
- By signing this form you are agreeing to the terms and conditions stated for conducting a fire hydrant flow test with the City of Peoria Fire Department.

Signature: \_\_\_\_\_

Print Name: \_\_\_\_\_

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



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## Fire Hydrant Flow Test Policy

This policy memorandum is derived from City of Peoria Fire Department SOP 600.05

### **PURPOSE**

Fire flow tests are conducted on water distribution systems to determine the rate of flow available at various locations for fire fighting purposes and systems design.

### **POLICY**

In order to accurately predict the strength of the distributing system, the fire flow test shall comply with the NFPA 291 *Recommended Practice for Fire Flow Testing and Marking of Hydrants* (2007) with modifications. The flow tests for design purposes shall be witnessed by authorized personnel of City of Peoria Fire Department.

### **PROCEDURE**

- Tests are to be conducted during a period of ordinary demand that approximates maximum daily demand. The testing time is between 6:00am and 8:00am. The testing agents shall check with the Fire Department and/or the Utilities Department for system map prior to the tests.
  - This is to verify that the both the test hydrant and the flow hydrant are in the same pressure zone.
- One hydrant, designated the residual hydrant, is chosen to be the hydrant where normal static pressure will be observed with the other hydrants in the group closed, and where the residual pressure will be observed with other hydrants flowing.
- The residual hydrant is chosen so it will be located between the hydrant to be flowed and the large mains that constitute the immediate sources of water supply in the area.
- To obtain a satisfactory theoretical calculation of the expected flows, sufficient discharge should be achieved to cause a drop in pressure at the residual hydrant of at least 25 percent, or you must flow the total demand necessary (fire flow) for fire-fighting purposes.
  - Exception 1: When the actual flow is larger than the required flow, the 25% pressure drop shall not be required.
- In the tests without a 25% pressure drop, the actual flow would be determined as the available flow at 20psi.
- All pressure gauges should be calibrated at least every 12 months.
- From the standpoint of accuracy, the 2.5-in. outlets should be used. When two or more hydrants are open, and the pressure drop is less than 25%, the pumper outlets (4.5") can be used. The coefficient of discharge of 0.83 should be applied for pumper outlets with a pitot reading of 7psi or greater.
- The test results shall be prepared and sealed by a registered engineer in the State of Arizona. Alternatively the test results can be prepared and signed by an individual with Level III NICET certification in Fire Sprinkler Design.
- The flow test results are to be recorded in the Fire House database. The flow test results are valid for 180 days unless the Fire Code Official determines that the area is subject to changes due to development.