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- SUBJECT:** **FIRE HYDRANT FLOW TESTING**
- PURPOSE:** To follow the NFPA (National Fire Protection Agency) guidelines regarding hydrant flow testing.
- SCOPE:** Personnel conducting hydrant flows tests.
- PROCEDURE:** A flow test usually involves two fire hydrants. The first one is called the test hydrant or residual hydrant. The second one is called the flow hydrant. A test proceeds as follows:
1. The cap covering one of the hydrant outlets is unscrewed and replaced with one equipped with a pressure gauge. The valve on the test hydrant is 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. One of more caps on the flow hydrant are opened and the inside diameter of each outlet is measured and recorded. The flow hydrant valve is then fully opened to create a steady flow of water from the outlet. In some cases, the resulting horizontal geyser may be sufficiently disruptive to street closures.
 3. A Pitot gauge is used to measure the velocity pressure of the stream issuing from the hydrant. While the Pitot pressure is being recorded, a second pressure reading is taken at the test hydrant. This is called the residual pressure. The residual pressure records both the domestic 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. In that case, the flow test must be repeated after shutting down the pump. 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.