

# Routine Operations

Book:	2 - Routine Operations
Chapter	III – Equipment Operations
Subject	6- Hydrant Inspection and Flow Testing
Code	2 – III - 6
Revised	6/26/2003

## 6.01 Purpose

To insure the proper inspection, testing and operation of all fire hydrants and provide guidelines relative the flow testing of hydrants.

## 6.02 Policy

- A. Each fire hydrant shall be inspected twice during the calendar year (April 1 – May 31 and October 1 – November 30)
- B. In so much as possible, each hydrant shall be cleared of all weeds, brush or other obstructions. In the event that the hydrant, obstructed by shrubbery, etc. is on private property, permission shall be obtained before making any alterations. If permission is not granted, obtain the property owners name and phone number and inform the Fire Chief so that appropriate actions can be taken.
- C. 25 hydrants will be inspected each workday during the above time period until all hydrants are inspected.
- D. 10% of all hydrants shall be flow tested each year. The flow test shall be conducted in accordance with NFPA 291 (Fire Flow Testing and Marking of Hydrants). Hydrants selected for flow testing shall be random with the desired results being to test a cross section of the entire water distribution system.
- E. Hydrant test data will be retained for a period of not less than five (5) years.

## 6.03 Responsibility

- A. The Fire Chief shall have overall responsibility for managing the fire hydrant inspection and testing program within the Jersey Village Emergency Services.
- B. The Administrative Secretary to the Fire Chief shall have responsibility for data entry of completed hydrant inspection and testing information.
- C. The Administrative Secretary to the Fire Chief shall complete a work request on any hydrant needing repair and forward it to Public Works Department.
- D. Staff employees shall inspect hydrants from the list and map provided by the Administrative Secretary to the Fire Chief in accordance with this policy.
- E. The Fire Chief or designee shall determine the number of hydrants to be flow tested and the location.
- F. Staff employees shall inspect and flow test hydrants in accordance with this policy.

## 6.04 Procedure

### Hydrant Inspection

1. Hydrant Inspection (visual)

Each hydrant shall be visually inspected for damage including but not limited to the following:

- a. Hydrant leaning
- b. Cracks in the barrel
- c. Damaged operating nut
- d. Missing caps
- e. Needs painting
- f. Objects in the barrel
- g. Obstructions that may have been added.

2. Hydrant Inspection (operation)

Each hydrant shall be inspected for proper operation using the following method:

- a. Loosen and tighten each cap to insure it is not cross-threaded and is securely attached to hydrant.
- b. Open operating nut to full open position, close operating nut to full closed position. This flushes the drain and checks the drain operation.
- c. Check for leaks around the bonnet, threaded nipples, and base while operating nut is open.
- d. After closing operating nut remove a 2 ½” cap and re-open operating nut.
- e. Flush hydrant until water is clear.
- f. If it is possible that water discharging from hydrant may cause damage to surrounding shrubs or landscaping place a diffuser on outlet to prevent damage.
- g. If it is possible that water discharging from hydrant may cause traffic flow problems place a diffuser on outlet to prevent interfering with traffic.
- h. Hydrant operating nut should be opened and closed very slowly to prevent a water hammer that could damage water distribution system.
- i. Check for “Blue Marker” in street and that curb is painted.
- j. Record problems on hydrant list.
- k. Return hydrant list and map to the Administrative Secretary to the Fire Chief.

### Annual Flow Test

10% of all hydrants in the City of Jersey Village water distribution system will be flow tested each year using the following procedure:

1. Test shall be made during a period of ordinary demand.

2. One hydrant, designated the “Residual Hydrant”, is chosen to be the hydrant where the normal static pressure will be observed with the other hydrants in the group closed, and where the residual pressure will be observed with the other hydrants in the group flowing.
3. One hydrant, designated the “Flow Hydrant”, is chosen to be the hydrant where flow pressure will be observed, using a Pitot tube.
4. A 2 ½” cap with gauge will be attached to the residual hydrant and the hydrant opened full.
5. A reading (static pressure) is taken when the needle comes to a rest. Record this reading on the Hydrant Flow Test Work Sheet.
6. At a given signal the other hydrant (Flow Hydrant) shall be opened, water should be allowed to flow long enough to clear any debris and foreign substances from stream. Close hydrant.
7. Attach the Pitot tube to the 2 ½” outlet and open hydrant again.
8. Observe the Pitot Gauge reading and record
9. While water is flowing from the “Flow Hydrant” observe the cap gauge pressure (residual pressure) on the “Residual Hydrant”. Record on the Hydrant Flow Test Work Sheet.
10. Complete the other necessary information on the Hydrant Flow Test Work Sheet.
11. Return the completed work sheet to the Administrative Secretary to the Fire Chief.