

POLICIES AND PROCEDURES

STANDARD OPERATING PROCEDURES

Hydrant Inspection Procedures

SECTION II 7.0 – 7.1

November 4, 2014

Approved by R. Dale Horne – Fire Chief

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7.0 PURPOSE:

- a. The inspection of fire hydrants is critical to determining the readiness of the hydrants to provide water at fire emergencies. The inspections shall verify the location, accessibility, proper mechanical operation, and water flow from the hydrant.
- b. National fire standards, DHEC, and ISO (Insurance Service Office) recommend that fire hydrants are inspected once each year in order to receive maximum credit. Every effort should be made to visit each hydrant, within the assigned zone, and complete the needed documentation.
- c. Hydrants will be inspected by American Water Works Association (AWWA) recommended standards

7.1 PROCEDURE:

(A simplified check list is included at the end of this document)

- a. Notify the Water Division of the area(s) you will be in prior to beginning.
- b. Position apparatus as necessary to assure the safety of firefighters from passing traffic. Do not obstruct traffic unnecessarily. Personnel used to direct traffic shall wear a reflective vest and helmet.
- c. Inspect the fire hydrant for accessibility.
- i. The center of the 4 ½ “ connection should be no lower than 18” above the ground.
- d. Visually inspect the area around the hydrant.
 - i. Hydrants are required to have a minimum clearance of 3 feet in all directions.
 - ii. In order to protect landscape, vehicles, etc. in the surrounding area, it may be necessary to use a diffuser or hose to direct water away from the area.
- e. Visually check the hydrant for any defects.
 - i. Remove all caps and check the threads. Remove the first cap slowly to ensure there is no pressure on the hydrant.
 - ii. Replace caps.
 - iii. If hydrant is equipped with safety chains, ensure the chains are loose and do not bind on the cap.
 - iv. Check the breakaway flange for damage or loose bolts.
- f. Remove a cap. Attach gated wye to a pressure gauge and, if necessary, a hose or diffuser to protect surrounding area.
- g. Open the hydrant SLOWLY approximately 3 to 5 turns. Allow time for the air to escape from the hydrant barrel. Then SLOWLY open hydrant fully to check operation.

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- h. When the hydrant is flowing full, a flow test can be conducted. Some styles of deflectors offer an opening designed specifically to allow a Pitot Tube measurement to be taken.
- i. Flow may then be reduced if desired.
- j. Check for leakage at the flanges, operating nut, nozzles and nozzle caps.
- k. Allow the water to flow for a minimum of 3 to 5 minutes to flush the hydrant and water lines.
- l. When testing is complete, check the water:
 - i. Look for discoloration and debris.
 - ii. Continue to flush hydrant until water is clear.
 - iii. If needed, the flow may be reduced by closing down the hydrant VERY SLOWLY.
- m. Once the water is clear, close the gate valve and note pressure on gauge. Completely close down hydrant VERY SLOWLY.
 - i. Be aware that some hydrants may not seem to slow down when you turn them. This usually means the hydrant may slam (it will have some slop in the stem and may make a thump sound when closing). This causes water hammer and could cause major damage to the water distribution system. This is why it is imperative that hydrants are closed VERY SLOWLY.
- n. Wait to make sure the hydrant stops dripping. It should not be necessary to close the hydrant with great force.
 - i. If the hydrant does not shutoff completely, there may be debris stuck between the disc and seat. Over tightening of the hydrant can do permanent damage to the disc. Open the hydrant to flush the debris, then close down the hydrant again. If the hydrant will not shut off completely, notify the Water Division.
- o. After the hydrant is closed, back off on the operating nut about 1/4 turn.
 - i. This removes the pressure from the operating nut and stem. The main valve will remain closed.
- p. Pump out hydrant to remove water from the barrel.
- q. Remove any fittings or hoses and replace the caps.
 - i. Tighten the cap and then back off slightly. Caps should be tight enough to prevent removal by hand but loose enough to be removed with ease using a spanner wrench.
- r. Repair any damages from running water.
- s. Fill Out Hydrant Inspection Form (see form IV 7.2).
- t. Report any problems with the hydrant to the Water Department.