	COMMERCE FIRE DEPARTMENT Standard Operating Guidelines
	Subject: Fire Hydrant Inspections
	Reference Number: 5.05
	Effective Date: 11/15/2012 **Last Date Revised:** 2/5/2015
	Approved By: Chief Kevin Dean

Purpose: This standard has been developed for the purpose of standardizing the fire hydrant inspection procedures used by all members of this department. As the water distribution systems that are in place in the Commerce Fire Department district are managed by other departments or agencies, it is imperative that this department handle those pieces of equipment with care.

Common Terminology:

Flow Test: A procedure used at a fire hydrant in which the quantity and pressure of available water is measured and recorded.
Residual Pressure: The pressure that exists in a distribution system, measured either at the flow hydrant or at a secondary hydrant while the discharge hydrant is open and fully flowing water.
Static Pressure: The pressure that exists at a given measurement point under normal distribution system conditions.
Fixed Property: Any privately or publicly owned property such as, driveways, fences, landscaping, buildings, roadways, signs, mailboxes, walls, or any other property improvements.

Policy: Hydrants shall be inspected in accordance with AWWA manual M17, *Installation, Field Testing, and Maintenance of Fire Hydrants* and *NFPA 291, Recommended Practice for Fire Flow Testing and Marking of Hydrants.*

Scope: Shall apply to all Commerce Fire Department personnel.

General:

1. The appropriate member of this department, as appointed by the Chief of the Department, shall issue notification to all personnel as to the dates of the year that all fire hydrants should be inspected. Hydrants shall be inspected annually.
2. Flow tests shall be performed every 5 years to meet requirements of ISO.
3. Hydrants shall be inspected in accordance to the recommendations of the American Water Works Association as illustrated in the Manual of Water Supply Practices M-17.
4. Care shall be given to all equipment used in the hydrant inspection process. This equipment shall include but not be limited to hydrants, mains, valves, caps, chains, wrenches, and forms.

5. Care shall also be given to the fixed property at the location of each hydrant being inspected.
6. The process of annual inspections of fire hydrants is an important part of our ability to assess the operational readiness, the hydrant locations, and document our operation for the ISO Commercial Risk survey that rates our protection capabilities. It is very important that this operation be done in a complete and timely manner.

Operation Guidelines:

1. Personnel will receive notice as to when to begin hydrant flow testing operations along with the appropriate documentation, and a date on which all data collection is to be completed.
2. Fire hydrants shall be inspected on any workday with the exceptions:
    A. No hydrant shall be inspected on Sundays.
    B. No hydrant shall be inspected on a holiday.
    C. No hydrant shall be inspected after 16:00 hours.
    D. No hydrant shall be inspected if the outdoor temperature is above 100 degree f. according to the National Weather Service.
    E. No hydrant shall be inspected if the outdoor temperature is below 50 degree f. according to the National Weather Service.
    F. Hydrants should be inspected only Monday thru Thursday 09:00 - 16:00 hours and Friday 09:00 - 13:00 hours.
    G. Hydrants may not be inspected on Saturdays unless special provisions are made through the Chief.
3. When approaching a hydrant for inspection, document the location as closely as possible. This information is valuable to share with the utilities provider so as to develop maps for hydrant locations.
4. All hydrant locations shall be described in terms of closest street address to the hydrant, street name faced by the hydrant's 4.5" steamer cap, geographical direction to the closest cross street, and the name of the closest cross street to the hydrant's location.
5. Note any obstructions to the hydrant. If any obstructions are found that will impede the use of the hydrant by the fire department, notify the Chief of the Department Laws protecting the access to hydrants by the fire department are:
    A. Ga. Criminal & Motor Vehicle Laws: 40- 6- 203. Parking prohibited in certain areas. Section 2 B. No parking of vehicles within 15 feet of a hydrant.
    B. Standard Fire Prevention Code, 1991. 602.5. Obstructing Fire Hydrants. Section 02.5.1 No fence, growth, trash, or material that would hinder visibility or use of the hydrant by the fire department.
6. Do not inspect hydrants that are completely obstructed. Make the proper notification to the Chief and continue to the next hydrant. You will need to return to the obstructed hydrant at a later time for an inspection after the obstruction has been cleared.
7. Note the numbers on the hydrant tag to assure that you are at the hydrant that you intend to inspect.
8. Remove any overgrown weed, grass, briar, or trash from around the hydrant that are usually found at road right of ways.
9. Properly remove the lubrication plug and add hydrant oil if needed. Replace damaged or missing plugs if available. (Note: screws found in the center of the stem are not for lubricant

and should not be removed)
10. Prior to removing any discharge caps, insure that the hydrant's operational valve is in the closed position.
11. Remove all caps, including the 4- 1/2" steamer if the hydrant offers such. Lubricate the threads of the caps, not the hydrant's threaded nozzle part, as needed with a non-watersoluble lubricant.
12. Replace all caps and slightly tighten, with the exception of one 2.5" cap that should be loosened approximately one full turn from the seated position.
13. Slowly open the hydrant's operating valve to a fully opened position. Note any leaking of water from the capped discharge areas, the bonnet base, and the hydrant body base (or safety flange) area. Note the operation of the hydrant's drain (weep) system. Not the operation of the hydrant's operating stem and foot valve. These features should become easier to manually operate as water pressure equalizes from both above and below the foot valve.
14. Slowly close the hydrant.
15. Allow built up pressure to drain.
16. No water flow tests are to be performed on fire hydrants without the authorization of this department's chief. The above operational procedure is established for an inspection of the hydrant only.
17. It shall be the responsibility of all personnel to either repair or report any damage done to fixed property as a result of fire hydrant inspections to their designated officer as soon as possible.
18. Equipment should be secured and personnel shall proceed to the next location.
19. All data collected from this type of fire hydrant inspection practice is the responsibility of the person performing inspections and must be appropriately added to the department's prescribed data management system.

Operational Procedures for Fire Hydrant Flow Test:

*This procedure shall be implemented only with the authorization of the department chief (or designee)
1. Prior to removing any discharge caps, insure that the hydrant's operational valve is in the closed position.
2. Remove all caps, including the 4- 1/2" steamer if the hydrant offers such. Lubricate the threads of the caps, not the hydrant's threaded nozzle part, as needed with a non-watersoluble lubricant.
3. Operate the hydrant long enough to establish a clean water stream.
4. Slowly close the hydrant's operating valve.
5. Replace all caps and slightly tighten, with the exception of one 2.5".
6. Affix a 2.5" NST cap gauge to the open 2.5" discharge. Assure that the cap gauge's 'pit cock' drain is in the open position.
7. Slowly open the hydrant's operating valve to a fully opened position. Once all air appears to have evacuated from the hydrant body, close the gauged cap's 'pit cock' drain valve.
8. Note any leaking of water from the capped discharge areas, the bonnet base, and the hydrant body base (or safety flange) area. Note the operation of the hydrant's drain (weep) system.

Note the operation of the hydrant's operating stem and foot valve. These features should become easier to manually operate as water pressure equalizes from both above and below the foot valve.
9. Record this static pressure reading.
10. Slowly close the hydrant.
11. Allow built up pressure to drain.
12. Remove a second 2.5" hydrant discharge cap while leaving the 2.5" NST cap gauge in place.
13. If available, affix a water diffuser appliance to the open discharge.
14. Slowly open the hydrant's operating valve to a full open position.
15. Note and record the cap gauge reading or residual pressure.
16. If a pitot type flow gauge is available, insert the pitot 'blade' into the discharging water stream as proscribed by the instrument's manufacturer. Note and record the pitot instrument's pressure reading.
17. Slowly close the hydrant.
18. Remove and maintain all gauges.
19. Replace all fire hydrant discharge caps and return the hydrant to an operationally ready condition.
20. All data collected from this type of fire hydrant flow test practice is the responsibility of the inspecting Officer and must be appropriately added to the department's prescribed data management system.

Overview

At a minimum, this department shall continue to perform bi annual fire hydrant inspections. It is very important to operate each fire hydrant slowly and make every effort not to damage the distribution system for this valuable resource. In emergency situations we must utilize the water distribution system to meet our needs, however, during fire hydrant inspection practices, caution shall be the order of the day.