

Hydrant Inspections

CHAPTER 7.14

Issued: June 2003	Revised: October 2021
Submitted by: District Chief Rulapaugh	Approved by; Chief of Fire rescue

PURPOSE

The purpose of the annual hydrant inspections is to ensure the hydrant system is in good operating condition when needed for emergency operations. The inspections also provide personnel the opportunity to familiarize themselves with areas and locations, as well as a degree of confidence in knowing that the inspections meet an established acceptable standard.

Inspection guidelines will be conducted in accordance with the American Water Works Association Manual M-17 and comply with the Insurance Services Office (ISO).

RESPONSIBILITY

All Operations Branch personnel must be able to complete a standard hydrant inspection.

The Assistant Chief of Professional Standards is responsible for the oversight, implementation, and compliance of the Hydrant Inspection/Maintenance Program. The Deputy Chief may delegate authority of the Program to a District Chief.

The District Chief assigned to manage the Hydrant Program shall:

- Be responsible for the overall operation and management of the program.
- Identify Company Officers of a particular shift to supervise the Program.
- Assist in detecting deficiencies in the system and making the appropriate shift District Chief aware of said deficiencies.
- Immediately resolve the validated deficiencies.

District Chiefs are responsible and accountable for the implementation and compliance of this protocol within their district. This includes but is not limited to; monitoring the hydrant inspection activities within their district and ensuring that their Company Officers meet established hydrant inspection deadlines.

The Professional Standards Division shall conduct periodic training on both the SOP and the modifications to the Hydrant Inspection and Inventory Program, which will be documented through Vector Solutions.

Company Officers are responsible and accountable for the implementation and compliance of this protocol. This includes but is not limited to; supervision of the completed hydrant inspections in his/her company's assigned areas, ensuring that the appropriate procedures are followed during the inspection process, accurate recording of the information into the department hydrant tracking system and accurate marking of hydrant locations in the mapping system.

PROTOCOL

Hydrant inspections shall begin the first week of January and must be completed by December 31st. All inspection information is to be entered into the Hydrant Inspection and Inventory System by December 31st. Hydrants shall not to be flow tested or inspected from April 1st through September 30th. The water department having jurisdiction shall be notified the day of the hydrant maintenance so they can handle any water system related issues.

GRU contact: 352-334-2711

Archer contact: 352-495-2880

Alachua contact: 386-418-6100

Hawthorne contact: 352-562-1589

Waldo contact: 352-468-1001

HYDRANT INSPECTION PROCEDURES

General Instructions:

1. Each hydrant shall be inspected annually
2. Twenty five percent of the hydrants shall have a Fire Flow Testing conducted annually, ensuring that all hydrants will be flowed at least every 5 years
3. Each hydrant shall be cleared of all weeds, brush or other obstructions. In the event that a hydrant is obstructed by permanent fixtures, (shrubby, landscaping, fence etc.) on private property, an e-mail must be sent to the Fire Marshal's office and District Chief in charge of the hydrant program so appropriate measures can be taken
4. Each hydrant shall be visually inspected and operated to determine defects e.g. hydrant cracked, main stem nut in place, bonnet secured, discharge caps in place.
5. Hydrant is flushed to ensure it is free of debris.(see flushing below)

6. Pressure test each hydrant by attaching a closed gated wye. Open hydrant fully to check for leaks around the bonnet and housing.
7. Brush all hydrant threads with a stiff bristle brush.
8. Ensure a blue road marker is placed on the roadway.

HYDRANT FLUSHING

Remove the 2½” Hydrant cap away from any personal property and attach a Hydrant stream diffuser. Aim the diffuser away to an acceptable runoff area to minimize any citizen complaints. Tighten all other caps ‘hand tight’ to prevent leaks or blow off of the caps. Open the hydrant fully and let the water flow until clear. Close the hydrant slowly, observing for proper drainage (when water is heard draining from the hydrant). Water standing in hydrant after valve is closed indicates improper drainage. If so, replace cap and submit a repair request.

FIRE FLOW TESTING

Flow testing of twenty five percent of hydrants shall be conducted annually. All hydrants shall be fire flow tested every five years. To conduct a fire flow test:

- Select the hydrant to be flowed. Remove the 2½” cap, and prepare to flow.
- Select another hydrant in the area, preferably closer to the source supply (upstream). Install the cap gauge, and take a static reading. Record this reading as S. This is the static pressure.
- Attach the pitot/diffuser to the previously selected hydrant, open fully and record the reading. Record this reading as P. This is the pitot flow pressure.
- While the hydrant is flowing, record the pressure at the non-flowing hydrant. Record this reading as R. This is the residual pressure.
- Slowly close the hydrant and again record the pressure at the non-flowing hydrant. This reading should be equal to the previously recorded S. If not, calculate the average of the two. If the difference is more than 10 psi, repeat the test.
- Three pressures have now been recorded.
- Shut down the hydrant and observe for proper drainage.

Record all pressures in the department hydrant tracking system.

HYDRANT MARKER INSTALLATION GUIDELINES

All hydrant markers are blue in color which is the recognized standard color. All markers will be installed with the reflectors facing the main fire routes of travel. They should always be nearest the dividing line as possible for easy visibility.

Special epoxy glue is used for the installation of the hydrant markers. Two tubes are involved – one is epoxy resin and the other is hardener. The tubes must be dispensed equally onto a clean flat surface, (scrap cardboard). Then mix with a putty knife until the

color is uniform. Do not mix the glue on the bottom of the marker. The glue that is in direct contact with the surface will not mix and will leave an area under the marker that will not adhere. Place the marker on the pavement and press down firmly. Do not force all the glue from underneath the marker. Leave approximately 1/16" of glue underneath the marker.

GRU HYDRANT MAINTENANCE/REPAIR FORM

Report all hydrant maintenance/repair issues by e-mail, utilizing the [Hydrant Repair](#) Form.

In an attempt to streamline the communication process with our partner agencies, all hydrant repair requests are to be sent to the District Chief assigned to manage the hydrant program.

Hydrant repair requests shall include the following information.

- Hydrant ID number
- Closest physical address
- Hydrant make, model and year
- Description of repair needed
- Name of officer making request, station assignment, shift