



**TOWN OF BRIGHTON**  
**Office of the Fire Marshal**  
 2300 Elmwood Avenue  
 Rochester, New York 14618  
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## Private Fire Hydrant Maintenance Report

The purpose of this Standard is to clarify the requirements for the testing, inspection, maintenance, and marking of private fire hydrants. It is the responsibility of the property owner to have all the fire hydrants located on his/her property tested once every year in accordance with NFPA 25.

Address	Owner		Date of Inspection			Inspection Type		
	Property Address		New Installation					
	City	State	Zip Code	Annual				
	Phone Number	Mobile Number	5 Year Flow Test					
Service Data	Servicing Company							
	Company Address							
	City	State	Zip Code	Phone #				
	Make of Hydrants	Model of Hydrants	# of Hydrants Serviced					
Semi-Annual Inspections	Hydrants are accessible and free of obstructions. All vegetation, landscaping, and other obstructions are at least three feet away from hydrants						Yes = Satisfactory	No = Unsatisfactory
	Top of hydrant is not leaking when hydrant is on							
	Gaskets under caps are not leaking when hydrant is on							
	Hydrant barrel is in good condition without cracks or corrosion							
	Operating nut is not worn and does not have rounded corners							
	Outlet threads are not damaged							
	Outlet caps secured							
	Annual Tests & Maintenance	Open hydrant fully and flow for not less than 1 minute at full capacity until flowing water is clear						
Hydrant drains completely within 60 minutes of closing valve								
Number of turns to full open hydrant		GPM		Flow available @ 20psi				
No. of ports flowed		Static Pressure	Residual Pressure		Pitot Reading PSI			
		YES	NO	YES	NO	YES	NO	
Will not open		Stem broken	Set too low/high	Lube operating nut				
Nipples loose		Opens hard	Dome missing	Lubricate hydrant packing				
Off at gate		Caps missing	Faced wrong	Gate valve accessible				
Base leaks		Poor spanner fit	Stem leaking	Lubricate thrust collar				
Barrel broken		Set improperly	Poor spanner fit					
*All "No" indications shall be explained in detail								

NFPA 291 hydrant testing procedure will apply when the 5-year flow testing is required in accordance with NFPA 25. For the purpose of an annual measurement of flow for reliability purposes, a single fire hydrant flow is sufficient using a pitot or in-line gauge to record static, residual and GPM readings to extrapolate GPM flow out to 20 psi residual pressure. This ensures that each private hydrant continues to meet the original design flow as originally approved in lieu of waiting 5 years.

I hereby certify that inspection, maintenance and flow testing of the hydrants listed above was conducted in accordance with the Fire Code of New York State and referenced National Fire Protection Association Standards 25 and 291; and that the foregoing data, statements and documentation are correct.

**NOTICE TO OWNER:** For items noted as failed or needing attention on this report, you are responsible for correcting these items and resubmitting an inspection report when the work is completed and passes inspection.

I acknowledge a copy of this report must be provided to Office of the Fire Marshal at the above contact information.

Owner/Owner's Representative Signature			
Tester's Signature	Date		
Print Name			

## Scope

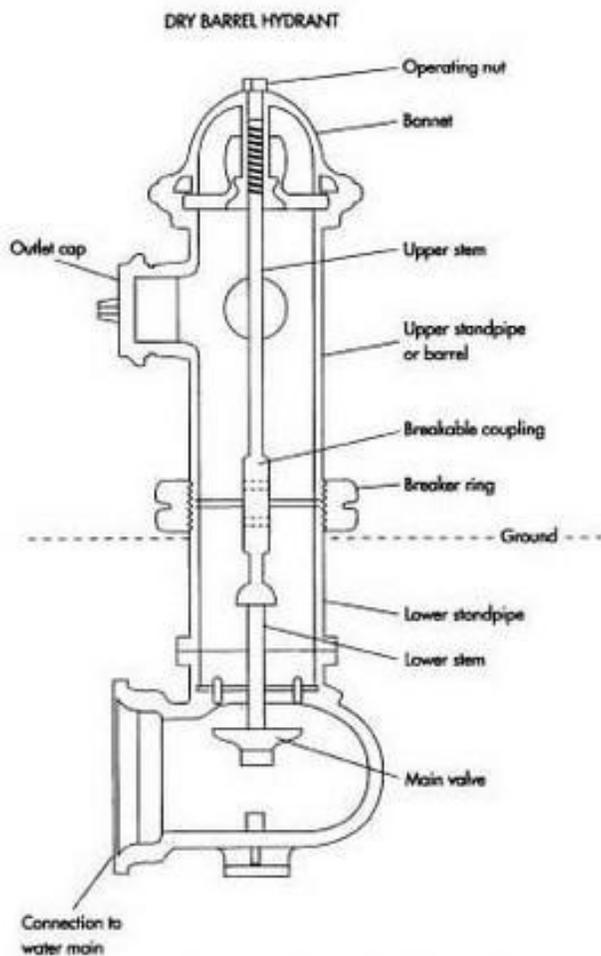
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This document is intended to aid informed, and registered individuals with information for proper maintenance, testing, and marking of private fire hydrants for private developments and businesses in the town. In no way will this document replace proper training and experience, therefore it should not be viewed as a training manual but as a guide to the equipment and expertise required for the proper execution of these functions.

A guide for the fire flow testing and marking of hydrants can be found in the National Fire Protection Association (NFPA) Standard 291: "Recommended Practice for Fire Flow Testing and Marking of Hydrants." The maintenance and periodic testing of hydrants is covered in NFPA Standard 25: "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protecting Systems." Specifically, Chapter 4 of this standard addresses private water mains and their appurtenances. Additionally, an outstanding reference guide on this is the American Water Works Association (AWWA) Manual M-17 "Installation, Field Testing and Maintenance of Fire Hydrants."

## Anatomy of a Typical Dry Hydrant

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All hydrants in this part of the country are dry hydrants because of the freezing weather conditions we experience.

This means that the barrel of the hydrant stays dry until the hydrant is opened at the Operating nut.

This drives the stem to open the valve at the bottom of the barrel. Notice in the detail to the left that the stem is split into two parts with a safety coupling which acts as a breakaway valve in case the hydrant is run over.

As can be seen, a hydrant is an intricate water delivery mechanism with many moving parts.

In addition to the stem and valve that bring water into the barrel, other important moving parts are the 2½ and 4½ inch nozzle caps (identified as hose and pumper nozzle respectively) which keep the nozzles protected from dirt and the elements.

The caps can easily lock up due to corrosion, neglect, and sloppy painting.

## Regularly Scheduled Maintenance

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It really doesn't take much to keep a hydrant operating in peak condition if regular (and proper) maintenance is followed. NFPA 25 "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems" is the standard used for the periodic maintenance and testing of hydrants.

NFPA 25, Chapter 4 indicates that hydrants must be inspected, lubricated, and flushed on an annual basis.

## Inspection

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This should be done annually or after each use in conjunction with the maintenance and the flow test. Where possible, check the fire hydrant manufacturer's maintenance manual.

- ❖ Check the hydrant's appearance. Remove obstructions within a 3 foot radius.
- ❖ Check to see whether the hydrant needs to be raised because of a change in the ground surface grade. If adjustments are needed, schedule the work.
- ❖ Inspect the hydrant for leaks, either from the operating nut, nozzle caps, or the drain.
- ❖ Locate the foot valve and completely close and open the valve.
- ❖ Making sure the hydrant is off, remove the port caps and check for standing water by use of plumb bob or other suitable means. (Indicates a faulty drain)
- ❖ Remove all nozzle caps and check threads and operating nuts for damage.
- ❖ Make repairs as necessary.

## Maintenance

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In conjunction with regular inspections, the following maintenance should be performed annually.

- ❖ Loosen one outlet-nozzle cap to allow air to escape.
- ❖ Open the hydrant only a few turns. Allow air to vent from the outlet-nozzle cap.
- ❖ Tighten the outlet-nozzle cap. Never use excessive force.
- ❖ Completely open and close the operating nut, verifying the drain valve closed and open properly - Check for ease of operation.
- ❖ Check for leakage at flanges, around outlet nozzles, at packing or seals, and around the operating stem - Repair as needed.
- ❖ Partially close the hydrant so the drains open and water flows through under pressure for about 10 seconds, flushing the drain outlets.

- ❖ Close the hydrant completely. Remove an outlet-nozzle cap and check the operation of the drain valve by placing the palm of one hand over the outlet nozzle. Drainage should be sufficiently rapid to create noticeable suction.
- ❖ Remove all outlet nozzle caps, clean the threads, check the condition of the gaskets, and lubricate the threads with a manufacturer approved lubricant. There are several never-seize compounds available. Check the ease of operation of each cap.
- ❖ Check outlet-nozzle-cap chains or cables for free action on each cap. If the chains or cables bind, open the loop around the cap until they move freely. This will keep the chains or cables from kinking when the cap is removed during an emergency.
- ❖ Replace the caps. Tighten them, and then back off slightly so they will not be excessively tight. Leave them tight enough to prevent their removal by hand.
- ❖ Check the lubrication of operating-nut threads. Lubricate per the manufacturer's recommendations.
- ❖ Locate and exercise the auxiliary valve. Leave it in the open position.
- ❖ Check the breakaway device for damage.
- ❖ If the hydrant is inoperable, bag it with a brightly colored, weather-resistive cover that bears the stenciled warning: "HYDRANT OUT OF SERVICE". Notify the Office of the Fire Marshal and schedule the hydrant for repair.

## Flushing a Hydrant

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Flushing a hydrant removes any accumulated sediment in the barrel and on the valve. Flushing must be performed annually along with the regular inspection and maintenance items described above. Circumstances will sometimes not permit flushing; at a minimum, perform the regular inspection and maintenance.

### To flush a hydrant:

Contact the appropriate Water Department to inform them that a hydrant flush is about to take place. Often, when a large volume of water is moved through an orifice such as a hydrant, sediment in the line will be stirred up and the Water Department may receive complaints about brown water.

Prepare to flow water from the hydrant. Following are acceptable discharge locations for the water:

- Sanitary Sewer
- Storm Sewer if water has been de-chlorinated
- Other locations must receive prior approval

Open the hydrant **very slowly** until it is fully open;

Let water flow for a minimum of 3 minutes or until water is clear.

Do not open more than one hydrant at a time - this will minimize the amount of flow created in the main;

Shut the hydrant down, again very slowly, until the valve is completely shut;

Remove hardware and replace cap.