

# *Fire Hydrant Inspection and Maintenance*



*City of Defiance  
Water Division*

*November 24, 2009*

**This manual was developed by  
the City of Defiance Water Division  
with the assistance of  
the Fire Division and Engineering Division.**

**This manual was adopted by action of the  
City of Defiance Board of Control  
on November 24, 2009.**

**This manual is available online at  
[www.cityofdefiance.com/water/reports.shtml](http://www.cityofdefiance.com/water/reports.shtml)**

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## **Background**

The City of Defiance has over 1000 public fire hydrants. All public fire hydrants are maintained by the Water Division. The Water Division has prepared this document to provide guidance for conducting tests and inspections of public hydrants. This information may also be used as guidance for the operation and maintenance of privately-owned hydrants connected to the water system.

## **Scope**

This document is intended to aid informed and registered individuals with information for proper maintenance, testing and marking of public hydrants and privately-owned fire hydrants. In no way will this document replace proper training and experience. 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. This manual is available online at [www.cityofdefiance.com/water/reports.shtml](http://www.cityofdefiance.com/water/reports.shtml).

## **Privately-Owned Hydrants**

Fire hydrants spend most of their time unused and ignored, yet they are called upon in a moment's notice to provide fire flow for the protection of a business or home. They are an indispensable facet of the overall fire protection features of a building. Because of the way land is platted and easements are granted, there are a large number of private fire hydrants within the City. These hydrants are required for the fire protection of a building, but they are useless unless regularly maintained. Furthermore, they should be painted and labeled as described in this document so that firefighters can quickly identify the system capability of the hydrant.

The owner is responsible for testing, maintenance and marking of privately-owned fire hydrants and assumes all liability for the proper operation, maintenance, and marking of private hydrants. *Maintenance, testing and inspection of private hydrants may only be performed by a contractor registered with the City of Defiance Engineering Division.*

## **Guidance Manuals and Publications**

The following publications should be used when installing, testing or inspecting fire hydrants. These publications were also used in the preparing of this document.

Installation, Field Testing, and Maintenance of Fire Hydrants (AWWA M17)

Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems (NFPA 25)

Standard for the Installation of Sprinkler Systems (NFPA 13)

Recommended Practice for Fire Flow Testing and Marking of Hydrants (NFPA 291)

AWWA Standard for Dry-Barrel Hydrants (C502-94)

AWWA Standard for Disinfecting of Water Mains (C651-99)

AWWA Standards for Installation of Pipe (C600 thru C606)

## **Dynamics of Water**

When performing any sort of flow test or exercising of hydrants, there are several important concepts that must be understood to avoid causing damage to the hydrants and to the water system in general.

### **WATER HAMMER**

Water hammer is caused by an abrupt change in the velocity of flowing water. It is most often the result of shutting down a valve too quickly. Imagine driving into a brick wall at 60 mph. The energy of your momentum has to be transferred somewhere. In this case it is shared, though unequally, by you, the car, and the brick wall.

Water is incompressible. It will not absorb ANY of the energy it gives off by being forced to suddenly decelerate. Therefore, the system, pipes, hydrants, and ground have to absorb all of the energy. If a valve is shut down too quickly, the weak link in the system will go first. The weak links are almost always at the flanges.

### **BROWN WATER**

Brown water is the basic complaint the Water Division receives when people turn on their faucet and see less than clear water coming out. This may be caused by several things. One thing that will often cause brown water is a sudden change in the amount of flow in a water main, such as when operating a fire hydrant.

During normal conditions, water flows through the center portion of a water main. Because of friction between water and the wall of the pipe it is easier for the center portion to flow than the outer portion. As the average velocity increases, so too will the velocity of the water close to the wall of the pipe. As this water moves faster, it begins to kick up sediment that usually stays at the bottom of the pipe. This sediment gets stirred up and does not settle back down until the velocity slows. Once the sediment has been kicked up into the center portion of the pipe, it is now in the main stream of flow.

## **Purpose and Uses of Fire Hydrants**

### **FIRE SUPPRESSION**

Although fire hydrants are often used for other purposes, their primary function is to supply water for fire protection. Any other use is considered of secondary importance and rigorously controlled for the protection of the water distribution system.

### **LINE FLUSHING**

The fire hydrants ease of operation and high flow capability make it a natural for use in flushing distribution system main lines. When line flushing is done in conjunction with systematic hydrant inspection, the primary function of the fire hydrant is kept in proper perspective.

### **TESTING SYSTEM**

The City often uses fire hydrants to test the hydraulic capabilities of the distribution system. These tests, like line flushing, should be conducted in conjunction with tests to evaluate distribution system flow capacities in accordance with fire flow requirements as well as customer flow and pressure needs.

## OTHER USES

Fire hydrants are also commonly used as a water source for street cleaning, sewer cleaning, commercial construction, street construction, and as a watering point for other commercial applications.

### BACKFLOW PREVENTION REQUIREMENTS

Anytime a public or privately-owned hydrant is used for purposes other than fire suppression, flushing, or flow testing, a backflow prevention device must be used to protect the City water system. The Water Division has backflow prevention devices that can be installed by City personnel. Further information on using a hydrant for purposes listed under 'Other Uses' above, may be obtained by contacting the Utility Billing Office. A signed form and deposit are required prior to using a hydrant.

## **Notification to Water Division**

### PRIOR TO OPERATION

The Defiance Water Division should be contacted prior to performing any maintenance, repairs or other work on the public water system or on any privately-owned fire suppression system connected to the public water system. The Water Division must be notified before a public or private fire hydrant is used for purposes other than emergency fire suppression. Often, when a large volume of water is moved through a device such as a hydrant, sediment in the line will be stirred up and the Water Division will receive complaints about brown water. If the Water Division knows the reason for the brown water, it is easier to reassure the customer and explain the cause and time required to clear up the brown water in the system.

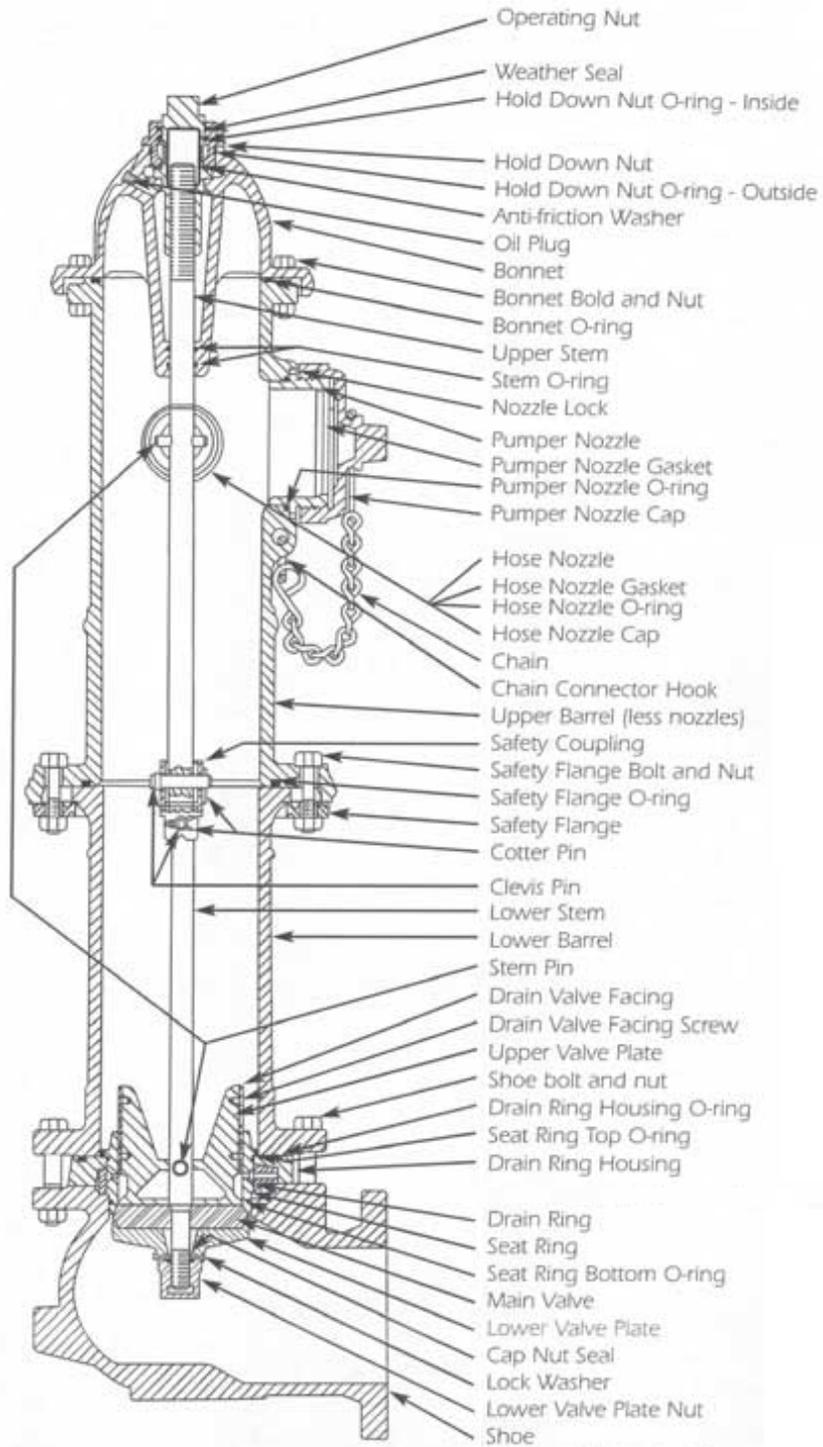
### AFTER OPERATION

After operating a public hydrant, the Water Division should again be notified. This is especially important during cold weather. The Water Division will check the hydrant to ensure the barrel is dry to prevent freezing and ensure the hydrant is shut off completely. The owner of a private hydrant is responsible to ensure it is shutoff correctly and pumped.

## **Dry Barrel Hydrants**

The City of Defiance uses dry barrel hydrants. Dry barrel hydrants are manufactured in accordance with AWWA Standard C-502. Dry barrel hydrants have the main valve located below ground and the section that extends above ground is void of water except during operation. These hydrants are equipped with drain valves to allow the portion of the hydrant above the main valve to automatically drain. However, most hydrants in Defiance have had this drain valve permanently plugged to prevent ground water contamination of the water system. Therefore, all of the hydrants connected to the Defiance water distribution system must be inspected and pumped prior to winter to prevent freezing of the hydrant.

## Typical Hydrant Parts Names for Dry Barrel Hydrants



## Storz Fittings

Many of the hydrants in Defiance are fitted with a special 5" Storz fitting on the large pumper nozzle. Storz is a type of hose coupling invented by Carl August Guido Storz in 1882 composed of interlocking hooks and flanges. To couple a Storz connection, the two opposing couplings are pressed together such that the hooks of each one are inserted into the slots in the flange of the other. Then they are rotated in opposite directions until they are tight, or latches engage. This creates a water-tight connection between the internal packing gaskets. To uncouple them, the latches are released and the couplings are turned in the opposite directions from coupling, and then separated when the hooks and slots are aligned. Special wrenches are designed for assisting with Storz connectors.

## Painting and Color Coding Fire Hydrants

### PURPOSE

The appearance of fire hydrants has a direct impact on the public's confidence in the quality of the drinking water and Fire Divisions' ability to protect their homes and businesses. Therefore, it is necessary to maintain the appearance of the hydrants by painting.

Fire hydrants are also color coded to indicate various system conditions including flow, type or size of water main, type of distribution system (potable, non-potable, or private) and system pressure.

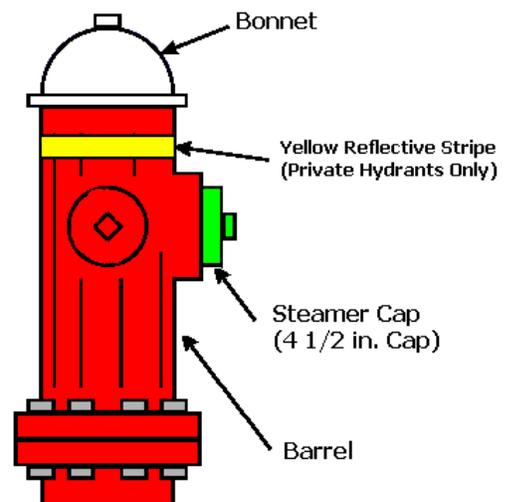
### DEFIANCE HYDRANT COLORS

All fire hydrants in Defiance are painted red for the main color. This color makes hydrants more visible and separates them from surrounding landscaping and structures. The bonnet of the hydrant shall be painted white to match Sherwin Williams Industrial Enamel Pure White B54W101.

Each hydrant shall be given two coats of good weatherproofing paint before leaving the factory and another after installation. The portion of the hydrant below ground shall be painted with black paint and the portion above ground shall be painted red to match the existing hydrants throughout the City of Defiance. The color of the field coating shall be submitted to the Owner for approval prior to application on the new hydrant.

All hydrants shall arrive on site painted the standard red color as stated in the previous paragraphs. At the time of the pressure testing and bacteria testing of a newly installed waterline, the City will perform flow tests to determine the gallons per minute (GPM) available at each hydrant. The City will inform the contractor of the flow testing results at which time the contractor will paint the hydrant pumper nozzle according to the flow ranges as stated below.

Typical Hydrant Paint Scheme



## FIRE FLOW COLOR CODES

All fire hydrants are also color coded, as set forth in NFPA Standards, to indicate the expected fire flows from the hydrant during normal operation. In most cases only the pumper cap is painted with the following colors to indicate available flow:

<u>Flow</u>	<u>Color</u>	<u>Match Color</u>
More than 1500 GPM *	Light Blue	Sherwin Williams Industrial Enamel Laser Blue SW4079
1000 to 1500 GPM	Green	Sherwin Williams Industrial Enamel Safety Green SW4085
500 to 999 GPM	Orange	Sherwin Williams Industrial Enamel Safety Orange SW4083
Less than 500 GPM	Red	Sherwin Williams Industrial Enamel Safety Red SW4081

\*This may require bringing more than one pump on line at the WTP

Private hydrants are distinguished by the addition of a yellow reflective strip applied to the hydrant just below the pumper nozzle on the barrel of the hydrant. Some existing private hydrants may be painted yellow. As these hydrants are identified, the owners will be required to re-paint them red with white bonnets to conform to municipal specifications.

## Hydrant Repairs and Maintenance

### RESPONSIBILITY

The Water Division is responsible for all repairs to the public fire hydrants in the City. The maintenance of public hydrants is a shared responsibility between the Water Division and Fire Division. If during inspection or operation, a public hydrant is found to be inoperable, or in need of major repairs, the hydrant should be reported to the Water Division and bagged.

The owner is solely responsible for testing, maintenance and marking of all privately- owned fire hydrants. Information regarding the testing and repair of privately-owned hydrants must be provided to the Defiance Fire Division on an annual basis. The Fire Division is responsible for keeping records pertaining to the certification and maintenance of private hydrants but does not assume any responsibility for the testing and maintenance of privately-owned hydrants.

**All** out-of-service hydrants should be immediately reported to the Fire Division and Water Division and bagged.

## Installation of Hydrants

### RESPONSIBILITY FOR INSTALLATION

Public fire hydrants are installed by the owner/developer of land incident to subdivision or by the Water Division. In either case, a Contractor hired by the City or developer may perform the actual work. A general specifications diagram is included below showing general requirements for installation of a new hydrant. All water mains, valves, and other devices, connected to the City of Defiance water system, must conform to municipal specifications and must be approved

by the City of Defiance Engineering Division prior to installation. Information on City of Defiance Specifications may be obtained by contacting the Engineering Division.

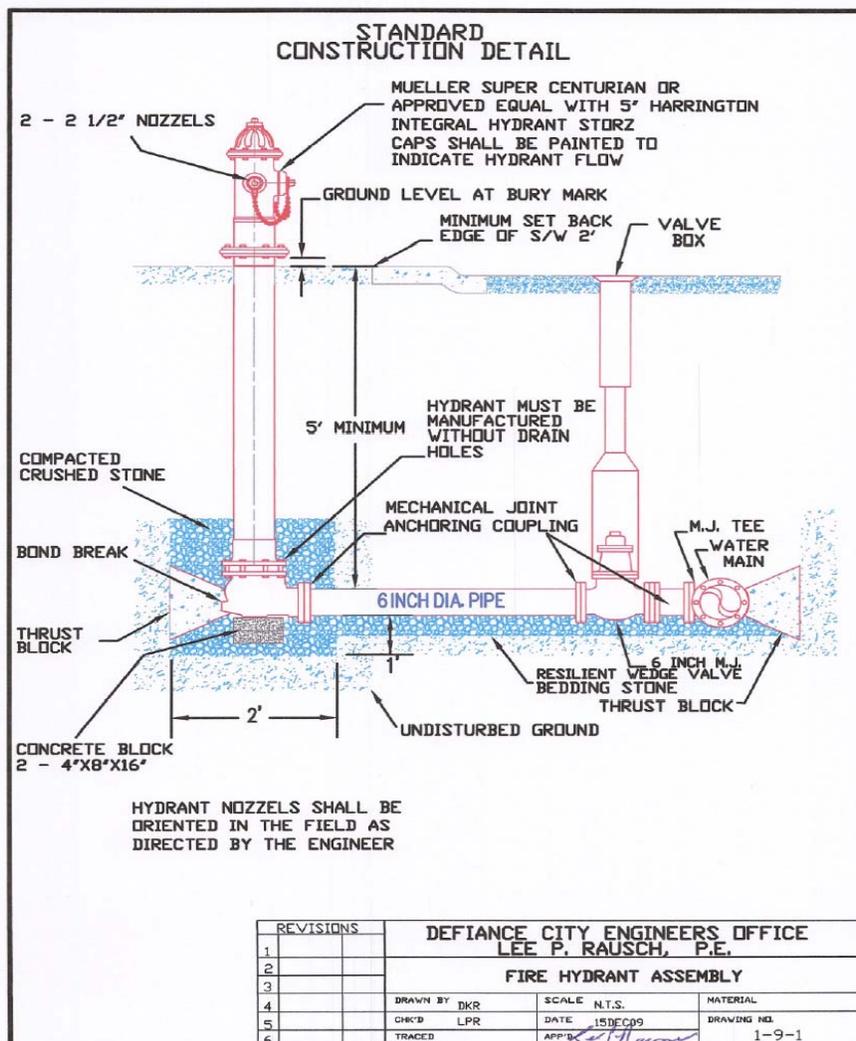
### HYDRANT EXTENSIONS

Hydrants come in various bury lengths (the length of the barrel) to accommodate most installations. Hydrant extensions are available to raise hydrants to the proper level above ground. Only one hydrant extension may be used on a hydrant. If more than one extension is required, the hydrant shall be replaced with a new hydrant having the proper bury length. A special pipe, called a Gradeloc fitting, can also be used to adjust the elevation of a hydrant. However, it is best to install the proper bury length hydrant to begin with. The Defiance Water Division maintains an assortment of sizes to fit most installations.

### INSPECTION OF NEW HYDRANTS

All new public and private hydrant installations shall be inspected by the Water Division and/or Engineering Division. Inspections shall include the checklist shown below and a fire flow test.

## General Specification Sheet for Hydrant Installation



## **Routine Inspection**

### **FREQUENCY**

In freezing climates, AWWA fire hydrant standards committee recommends that hydrants be inspected in the fall, in the spring and after each use. Lack of experience with the brands being inspected and time between inspections increase the length of time necessary to inspect a fire hydrant. To control these factors, the City specifies the types of hydrants that may be installed and endeavors to inspect public hydrants on a regular schedule. Routine inspection of common fire hydrants by experienced operators should take approximately 20 minutes per hydrant.

### **PROCEDURE**

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

1. Notify the Water Division of the area(s) you will be in prior to beginning.
2. Visually inspect the area around the hydrant.
  - a. Hydrants are required to have a minimum clearance of 3 feet in all directions.
  - b. 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.
3. Visually check the hydrant for any defects.
  - a. Remove all caps and check the threads. Remove the first cap slowly to ensure there is no pressure on the hydrant. Clean threads with a wire brush. Lubricate the threads if necessary.
    - i. Currently the City uses Hydra-Eze, from Certified Labs, as a thread lubricant.
  - b. Check for water or ice in barrel.
  - c. Replace caps.
  - d. If hydrant is equipped with safety chains, ensure the chains are loose and do not bind on the cap.
  - e. Check the breakaway flange for damage or loose bolts.
  - f. Lubricate the operating nut if required. Kennedy hydrants have grease fitting on the operating nut that requires grease. Detailed manufacturer specific instructions for most hydrants are available in the Water Distribution office or online.
4. Remove a cap. Attach hose or diffuser if necessary to protect surrounding area.
5. Open the hydrant SLOWLY approximately 3 to 5 turns. Allow time for the air to escape from the hydrant barrel. Then SLOWLY open hydrant to the full open position to check operation.
  - a. 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.
  - b. Flow may then be reduced if desired.
  - c. Check for leakage at the flanges, operating nut, nozzles and nozzle caps.

- d. Allow the water to flow for a minimum of 3 to 5 minutes to flush the hydrant and water lines.
6. When testing is complete, check the water using a solid white cup.
  - a. Look for discoloration and debris.
  - b. Continue to flush hydrant until water is clear.
  - c. If needed, the flow may be reduced by closing down the hydrant VERY SLOWLY.
7. Once the water is clear (using the white cup to check), close down hydrant VERY SLOWLY.
  - a. 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.
8. Wait to make sure the hydrant stops dripping. It should not be necessary to close the hydrant with great force.
  - a. 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.
9. After the hydrant is closed, back off on the operating nut about 1/4 turn.
  - a. This removes the pressure from the operating nut and stem. The main valve will remain closed.
10. Pump out hydrant to remove water from the barrel.
11. Remove any fittings or hoses and replace the caps.
  - a. 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.
12. Repair any damages from running water.
13. Report any problems with the hydrant to the Water Division.
14. Notify the Water Division when you are done for the day.

**Warning!:** *Never use antifreeze to prevent a hydrant from freezing or to coat the thread of the caps!* Under certain conditions antifreeze may be able to enter the water distribution system and cause contamination of the water. Any hydrant found to contain antifreeze must be isolated and steam cleaned to remove all traces of the antifreeze.

## **Fire Flow Testing**

### **PURPOSE**

Fire flow tests are conducted to determine pressure and flow-producing capabilities at any location within the distribution system. The primary function of fire flow tests is to determine how much water is available for fighting fires, but the tests also serve as a means of determining the general condition of the distribution system. Heavily tuberculated water mains or those with heavy wall deposits can reduce flow-carrying capacities of pipe; this reduced capacity can be detected by means of a flow test. Flow tests can also help detect closed valves in the system. The results of flow tests are used by insurance underwriters as a factor in setting rates for insurance premiums and by designers of fire-sprinkler systems.

It is good practice to conduct flow tests on all parts of the distribution system approximately every 10 years (or whenever needed) to identify the service areas affected by significant changes in the distribution system.

### **RECORD KEEPING**

An accurate record, filed systematically so it is readily available, should be kept of each test. The Engineering Division uses a data base program called "Fire Flow Tester". This program stores and calculates the test information with a graph. Static, residual and pitot pressures are used for test information. Also hard copies are filed in a notebook in the Engineering Division.

### **PLANNING**

It is important to plan ahead when conducting fire flow testing. Review distribution-system maps and determine which hydrants will be used to measure flow and which will be used to measure the static and residual pressures. Review previous tests to estimate the flow and pressures that can be expected. Select a day for testing when system consumption will be normal and weather predictions indicate that conditions will be reasonable. The Water Division should be notified as to the time and location of the tests so necessary adjustments to the system can be made. As flow testing can greatly increase the velocity in the main, this may cause brown water complaints. The Water Division and possibly the customers in the affected area should be notified of potential water quality issues in advance of the testing. Investigate traffic patterns, as the tests may affect traffic flow.

### **RESPONSIBILITY FOR TESTING**

The City Engineering Division shall conduct all flow testing with the assistance of the Water Division and/or the Fire Division. The NFPA manual, 'Fire Flow Tests – Discharge Tables for Circular Outlets Friction Losses in Pipes', is currently used by Engineering as a guide. AWWA Manual M17 also has a complete procedure and tables for the flow testing of hydrants.

### **CAUTIONS TO BE OBSERVED WHEN FIELD TESTING**

Opening a hydrant rapidly can cause a negative pressure fluctuation. Therefore, hydrants should be opened slowly until fully opened. Closing the hydrants is more critical, and it must be done very slowly. Closing a hydrant rapidly causes a pressure surge, or water hammer, and this could cause a weakened main to fail.

Hydrants should be opened and closed one at a time to minimize the effect on the distribution system. Dry-barrel hydrants must be opened fully because the drain-valve mechanism operates with the main valve. A partially opened hydrant could force water through the drain outlets under pressure, eroding the thrust support from behind the hydrant. After the test, the hydrant

barrel should be drained before tightening the outlet-nozzle cap. A tight outlet-nozzle cap could prevent proper drainage and possibly cause ice blockage in either the upper or lower barrels.

Gauge measurements should be taken only when the water is running clear because sediment could damage the instruments. Use a solid white cup to check water clarity before testing and again before shutting down the hydrant to ensure water is clear.

#### PROCEDURE

It is recommended that the procedure outlined in AWWA Manual M17, 'Installation, Field Testing, and Maintenance of Fire Hydrants', be used for conducting flow testing.

### **Using Hydrants for Hydrostatic Testing**

#### PURPOSE

At certain times, usually during the installation of a new water main, fire hydrants may be used to conduct a pressure test at pressures above main pressure. Certain steps should be followed to ensure the safety of the persons conducting the pressure test and to protect the system.

**WARNING!:** Hydrostatic testing described in this section shall be conducted with water because of the inherent safety hazard potential associated with testing components and systems with compressed air or other compressed gases.

#### NOTIFICATION

The Defiance Water Division should be contacted prior to performing any maintenance, repairs or other work on the public water system or private system connected to the public water system. See 'Notification to Water Division' on page 7.

#### PROCEDURE

Visually inspect the hydrant for any defects. Check the bolts and breakaway flange. Check the nozzle-caps and gaskets. Ensure the caps are tightened; a loose cap or damaged nozzle can blow off under pressure. Visible leaks shall be stopped. Defective elements shall be repaired or removed and replaced and the test repeated until the test requirements have been met.

To prevent damage to the system it is imperative that hydrants are opened and closed slowly. When the test is completed and the pressure is removed from the main, close the hydrant slowly. Once all testing is done, ensure that the hydrant is pumped to prevent freezing.

Verify the water elevation in the tower serving the hydrant being tested. The Engineering Division uses this elevation in their calculations. A general procedure for hydrostatic testing of PVC waterline, the main type of material used in Defiance is detailed in AWWA Standard C605 *Underground Installation of Polyvinyl Chloride (PVC) Pressure Pipe and Fittings for Water*. Similar standards exist for other types of pipe.

### **For More Information**

For more details on the information in this document, contact the following:

Defiance Water Division 419-782-1886  
Defiance Fire Division 419-782-2771  
Defiance Engineering Division 419-784-2249

**Dry Barrel Hydrant  
Simplified Inspection Checklist**

**Hydrant #** \_\_\_\_\_ **Location** \_\_\_\_\_  
**Date** \_\_\_\_\_ **Inspected by** \_\_\_\_\_

- 1. Notified Water Division of work to be performed.
- 2. Visually inspect the area.
- 3. Visually check hydrant.
- 4. Remove caps. Clean and lubricate threads. Replace caps.
- 5. Install hose or diffuser if necessary.
- 6. Open hydrant SLOWLY to full open position.
- 7. Perform Fire Flow Test if required.
- 8. Check for leakage.
- 9. Reduce flow and run for at least 3 minutes.
- 10. Check water clarity with solid white cup.
- 11. Reduce flow SLOWLY and shut off hydrant.
- 12. Watch to see hydrant stops dripping. Re-flush if necessary.
- 13. Pump water from barrel of hydrant.
- 14. Remove hose or fittings, replace cap.
- 15. Repair any damage to surrounding area.
- 16. Report problems to Water Division.

Problems Identified:

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Problems Resolved:

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Notes:

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**City of Defiance**  
**APPLICATION FOR PERMIT TO ACCESS WATER**  
**FROM A FIRE HYDRANT**

WATER PURCHASER:  
NAME: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
TELEPHONE NUMBER \_\_\_\_\_

IDENTIFICATION OF HYDRANT TO BE TAPPED: \_\_\_\_\_  
PURPOSE FOR WHICH WATER IS TO BE USED: \_\_\_\_\_  
DATE ON WHICH SERVICE IS REQUESTED TO BEGIN: \_\_\_\_\_  
DATE ON WHICH SERVICE IS EXPECTED TO END: \_\_\_\_\_  
MAXIMUM FLOW REQUIRED DURING PERIOD OF SERVICE: \_\_\_\_\_  
ESTIMATED TOTAL QUANTITY TO BE WITHDRAWN: \_\_\_\_\_

COPY

**POLICY STATEMENT**

Fire hydrants are not designed to supply water for everyday industrial, commercial or residential purposes. Protective devices required in other plumbing installations to safeguard the water system against damage from sudden pressure changes and to insure against bacterial contamination and are omitted from fire hydrants in order to maximize the amount of water that can be delivered during an emergency. For this reason, only municipal employees that have been trained to use them may operate fire hydrants.

With approval of the City Administrator, water may be purchased from fire hydrants when needed in larger quantities than can be efficiently supplied from conventional outlets or when needed at locations where conventional outlets do not exist. Common examples of such uses are to fill a swimming pool or supply water to a construction site.

Applications for permission to use a fire hydrant for non-emergency water supply are available at the Utility Billing Office. The application collects information necessary to permit the City Administrator to determine that the hydrant can be tapped without disruption of the water distribution system and without impairment of the City's ability to combat a fire. The application will be granted unless it appears that such disruption or impairment will result from the proposed use. Under certain circumstances, the application may be approved subject to restrictions that prohibit use of the hydrant certain times in order to assure that adequate supplies are available for other users drawing water from that portion of the distribution system.

After the application is approved a deposit will be required. The purpose of the deposit is to secure payment of the estimated value of the water to be withdrawn from the hydrant and payment of other costs incident to the installation and use of equipment necessary to safely draw water from the hydrant.

Once the application is approved and deposit paid, City employees will attach the necessary equipment to permit use of the hydrant for non-emergency water supply. This equipment will include a backflow prevention device to safeguard the water system against bacterial, viral and chemical contamination, a meter to determine the value of the water purchased and valves that the user may use to turn the water on and off without subjecting the distribution system to shock loads and pressure fluctuations that would result from use of the hydrant's internal valves. These remote valves are the only controls that the purchaser will be permitted to use. All operation of the hydrant' internal valves must be performed by City employees in order to safeguard the water distribution system against contamination and damage. If the installed equipment requires adjustment or does not perform satisfactorily, the water purchaser should call the Utility Billing Office to arrange for inspection, repair or replacement by City personnel. Unauthorized operation of the hydrant or tampering with the backflow prevention device or meter will result in termination of the service.

The equipment supplied by the City will consist only of the backflow prevention device, meter and downstream valves. The water purchaser must supply any hoses or pipes necessary to transport water from the hydrant to the place where it is to be used. Hoses and pipes may not be laid on any street that is open to vehicular traffic.

The water purchaser is responsible for the safety of all municipal equipment attached to the hydrant and will be charged the cost of any repairs or replacements needed because of damage sustained while it is in use.

City personnel will close the hydrant and remove the backflow prevention device, meter and downstream valves after the water purchaser has withdrawn the water needed. The cost of the water, incidental charges for the installation and removal of the meter and the cost to repair or replace any equipment damaged while it is in use will be deducted from the deposit. All funds deposited in excess of these charges will be promptly refunded.

*White - Contractor; Yellow - UBO; Blue - Water Division*

'Date'

'Business Name'

'Street'

Defiance, Ohio 43512

COPY

Dear Property Owner:

Our records indicate that you have privately owned fire hydrant(s) on your property. It is your responsibility to maintain these hydrants to ensure that they are in proper working order in the event of a fire incident. We are requiring that these hydrants be inspected, serviced and maintained on an annual basis.

According to the Ohio Fire Code, Section 508.5.2, "Fire hydrant systems shall be subject to periodic tests as required by the fire code official. Fire hydrant systems shall be maintained in an operative condition at all times and shall be repaired where defective. Additions, repairs, alterations and servicing shall comply with approved standards."

Please notify the City Water Treatment Plant at 419-782-1886 at least 24 hours in advance of scheduled service on your hydrant(s). Following maintenance, please complete the form below and return to Defiance Fire and Rescue in the self-addressed envelope. Please contact Defiance Fire and Rescue with any questions at 419-782-2771.

Property Owner \_\_\_\_\_  
Address \_\_\_\_\_

Number of Hydrants \_\_\_\_\_

Description of Maintenance

Date Performed

Performed By

Flowed

Flushed

Pumped Down

Lubricated

COPY

Describe any problems found and/or corrected