

**UNIVERSITY OF ROCHESTER
ENVIRONMENTAL HEALTH & SAFETY**

Policy No.: FS027	Approved by: Mark Cavanaugh
Title: Standpipe Testing	Date: 11/5/2019
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Prepared by: Brian Prinzing	

I. PURPOSE

This procedure establishes the proper steps for completing standpipe testing for the University of Rochester River Campus, Medical Center, Eastman Campus, Memorial Art Gallery Campus and Off-Site locations.

II. PERSONNEL AFFECTED

This procedure affects Fire Safety Staff.

III. DEFINITIONS

Standpipes are part of the fire suppression system in buildings. Standpipes, generally located in the stairwells of buildings, allow the fire department to connect their hose on a certain floor to minimize the need for large amounts of hose. Standpipes can be pressurized from the building fire pump or by the fire department connecting to the fire department connection outside the building. This allows the fire department to have the water needed as if they were connected directly to the truck.

IV. RESPONSIBILITIES

The Fire Safety Specialists shall schedule which buildings will be tested for the upcoming year and verify all standpipes are flow tested every 5 years.

The Fire Safety personnel conducting these tests are responsible for following the proper procedures to ensure accurate pressure readings off the standpipe.

V. PROCEDURES

- A) Reference the standpipe testing book, located in the EH&S library to determine which standpipes need to be tested for that time period. The books will have a table in the front of them that identifies the building/ (area for the medical center) and the date that the standpipe was last tested and then the date on the next due test. The testing sheets for each building/area will also indicate the amount of hose needed to conduct the test.
- B) Buildings that have fire pumps in them will have to have the fire pump **running** during the entire testing period for each standpipe to get proper static and residual pressure readings for each standpipe tested.
- C) Dry standpipe systems need to be hydro tested every 5 years.

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- D) Call Public Safety and let them know you will be testing standpipes in “XX” building and that you will be bypassing the fire panel for “XX” building and they can ignore troubles and water flow alarms.
- E) At the top most outlet of the standpipe, connect the gate valve to the outlet and then connect the predetermined amount of 3” hose to ensure that the water will be flowing away from the building.
- F) At the end of the hose, (once a safe distance from the building,) connect the hose monster, with pitot gauge, to the end of the hose. Record the size of the hose monster insert orifice and record on the test data sheet.
- G) At the floor below the top most outlet remove the standpipe cap and connect a cap gauge to that outlet. Open the valve from the side, bleed off any air through the petcock valve and obtain a static pressure reading from this outlet and record it on the building standpipe test sheet. Clean up any water.
- H) At the lowest floor with an outlet on the standpipe, remove the cap to the valve and place a cap gauge on there as well. Open the valve from the side, bleed off any air through the petcock valve and obtain a pressure reading from the gauge and record it on the building standpipe test sheet. Clean up any water.
- I) Once you have the pressures recorded from the cap gauges on the building testing sheets, slowly open the top most valve from the side and start flowing water to the hose monster.
- J) Once the valve is **fully** open, take your residual pressure readings from the level below the highest outlet and also the level of the lowest outlet. Record these pressures on the building standpipe test sheets.
- K) Once you have those pressures recorded, take the pressure reading from the hose monster. Record this pressure on the building test sheets.
- L) Once you have recorded all static, residual, and pitot pressures and recorded them on the building standpipe test sheets, slowly shut down the valves and remove the cap gauges and hose from the standpipe and place standpipe caps back on.
- M) Be sure to have a bucket handy when removing the cap gauges to catch any water that may drip from the valves.
- N) Shut down the fire pump, (if the building being tested has one) and restore your fire panel back to normal operation.
- O) Notify Public Safety you are done testing in “XX” building.

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VI. REFERENCES

NFPA 14
NFPA 25

VII. APPENDICES/FORMS

Standpipe testing sheet

VIII. REVISION HISTORY

Date	Revision No.	Description
6/10/2011		Establish written procedure for standpipe testing
6/24/2014	1	Updated "Security" to "Public Safety"
1/24/2018	2	Regular review.
11/5/2019	3	Clarification of procedures

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Appendix 1
Standpipe Testing Sheet

STANDPIPE AND HOSE SYSTEMS		
5-Year Flow Testing/Flushing		
Building	Test Date	
Standpipe System	Inspectors	
Hydrostatic Testing: Dry standpipes should be tested at 200 psi for 2 hrs (or 50 psi above normal water pressure).		
Flow Test: Flow water from the hydraulically most remote standpipe outlet. The minimum flow should be 500 gpm with a residual pressure of 65 psi.		
Pressure Regulating Device Flow Test: Standpipe outlets equipped with pressure regulating valves should be flow tested to assure adequate water flow is provided. Record flow and pressure from each outlet on separate sheet and attach to this form.		
Static	Residual	Flow
Notes:		
1 1/4" Insert used with the Hose Monster		
Leave building fire pump on (if applicable) for all standpipes being tested		
By-pass building fire alarm panel		
Hose Monster flow	Pitot reading=	
Cap gauge standpipe at X floor		
	Static Pressure=	
	Residual Pressure=	
Cap gauge standpipe at X floor		
	Static Pressure=	
	Residual Pressure=	

F: fire/blankforms/standpipe 5-year testing