

**UNIVERSITY OF ROCHESTER
ENVIRONMENTAL HEALTH & SAFETY**

Policy No.: FS028	Approved by: Mark Cavanaugh
Title: Fire Hydrant Flow Testing	Date: 11/5/2019
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Prepared by: Brian Prinzing	

I. PURPOSE

This procedure establishes the proper steps for completing University owned yard fire hydrant flow testing for the University of Rochester River Campus, Medical Center, South Campus, Eastman Campus and Memorial Art Gallery Campus.

II. PERSONNEL AFFECTED

This procedure affects Fire Safety staff.

III. DEFINITIONS

Fire hydrants are the fire departments main source of water in the event of a fire and need to be tested and flowed annually to ensure proper water pressure, flow and function for the University of Rochester properties.

IV. RESPONSIBILITIES

The Fire Safety personnel conducting these tests are responsible for following the proper procedures to ensure accurate pressure readings from the yard fire hydrants.

For off-site leased properties it is the responsibility of the property owner to test yard hydrants.

It is the municipality's responsibility to test municipal fire hydrants.

V. PROCEDURES

A) Reference the fire hydrant testing matrix to determine what hydrants are going to be tested and in what order. The hydrants are in numerical order and the matrix will describe which hydrants are the flow hydrant and which hydrants are the test hydrants along with any special testing requirements.

B) At the test hydrant:

1. Remove one of the 2 ½" caps from the hydrant and verify the remaining caps are securely fastened to the hydrant.
2. Check the port for any obstructions and while standing behind the hydrant, slowly open the hydrant until water starts to flow. The hydrant should be opened a few turns to ensure the hydrant is properly flushed out and the hydrant is free and clear from any debris that may have been inside.
3. Once the water is flowing clear, close the hydrant.
4. Place the cap gauge on the 2 ½" connections and safely open the hydrant.
5. Bleed off the air in the hydrant by opening the small petcock valve on the side of the cap gauge. Once the air is out and water starts to flow, close the valve on the cap gauge.

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6. Once the hydrant valve is in the full open position, take the static pressure reading from the cap gauge.
- C) At the flow hydrant:
1. Another inspector will go to the next hydrant down the line from where you placed the cap gauge.
 2. Follow the previous steps for removing the cap, verifying all other caps are securely fastened, checking for obstructions, and flushing the hydrant.
 3. Attach diffuser to the open port on the hydrant. Angle the diffuser towards an area in order to prevent damage to grounds and property.
 4. Slowly open hydrant to begin flowing water. Once the hydrant is fully open, open the Pitot valve to bleed off excess air and water. This should take about 10 seconds. Close the Pitot valve and take your readings and record them. The readings will consist of the residual pressure from the test hydrant, and the static and residual pressures from the flow hydrant. The Pitot tube reading will provide the GPM reading from the diffuser.
- D) Once you have that pressure, the person at the first hydrant, with the cap gauge, will get the residual pressure reading while the second hydrant is flowing.
- E) Once you have obtained both pressures close down the hydrants SLOWLY and place the caps back on the connections. Record all pressures on the test matrix and note any deficiencies.
- F) Look inside the hydrant barrier to make sure the hydrant is draining properly.
- G) Move to the next hydrants being tested and repeat the process.
- H) Write work orders for any deficiencies identified during the test.

VI. REFERENCES

VII. APPENDICES/FORMS
Fire Hydrant Test Form

VIII. REVISION HISTORY

Date	Revision No.	Description
6/10/2011	New	Establish written procedures for hydrant testing
9/8/2014	1	Triennial review – Updated Appendix 1
3/8/2018	2	Expanded procedure for using diffuser
11/5/2019	3	Clarification of procedures

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**Appendix 1:
Fire Hydrant Test Form**

	Static Hydrant	Static	Residual	Flow Hydrant	Pressure	Flow (GPM)	Comments
Day 1 South Campus & River Campus							
Laboratory for Laser Energetics	37			38			
Laboratory for Laser Energetics	38			39			
Laboratory for Laser Energetics	39			40			
Laboratory for Laser Energetics	40			41			
Laboratory for Laser Energetics	41			42			
Laboratory for Laser Energetics	42			43			
	LLE EP Fire Pump			43			
University Park entrance from Castleman Road	61			62			
GLC by deKiewiet Tower	35			36			
GLC @ Valentine Lot	36			35			
	County hyd on E. River Rd			44			E River Road facility
	Inside AAC @ sprink riser			44			E River Road facility
300 E. River Road AAC front driveway	44			44			E River Road facility- cap hyd for static & residual
Grounds Building	63			63			
Meliora Lot @ Intercampus Drive	7			8			2 cap gauges allows you to do one test
Library Road @ Susan B. Anthony Road	9			8			
Library Road @ Intercampus Drive	8			9			
Susan B. Anthony Circle	10			12			
Susan B. Anthony @ Spurrier Hall	11			14			2 cap gauges allows you to do one test
Susan B. Anthony @ northeast hill	12			10			
Wilder Tower	13			14			
Anderson Tower	14			11			

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Day 2 River Campus	Static Hydrant	Static	Residual	Flow Hydrant	Pressure	Flow (GPM)	Comments
Biomedical Engineering/Hutchison Hall	1			33			
Trustee Road @ Hutchison Hall dock	33			1			
Hutchison Road @ Dewey Lot	2			3			
Behind Hopeman Hall	4			2			
Dewey Lot @ Hopeman Hall	3			23			
Biomedical Engineering @ Intercampus Drive	30			5			
Harkness Lot	5			4			
Bausch & Lomb Lot	6			5			
Fraternity Road @ Drama House	15			16			
Wilson Quad @ LeChase Hall	16			15			
Wilson Quad @ Goergen Athletic Center	17			18			
	Goergen Sprinkler			17			
Library Road @ Fauver Stadium	18			9			
	Fauver Sprinkler			18			
Fraternity Road @ Tiernan Hall	19			29			
Inside Veterans Court @ Res Quad	29			19			
Lattimore Hall garage	34			23			
Dewey Lot @ Simon School	23			34			
Hillcourt by Gale House	24			26			Flow switch may trip @ Kendrick
Morey @ Lattimore	21			34			
Hillcourt by Fairchild House	26			27			
Hillcourt entrance	27			24			
Behind 612 Wilson Blvd.	32			24			
Faculty Road @ Gilbert Hall	28			28			Use cap gauge at hydrant for residual
	612 Sprinkler			32			

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Day 3 Medical Center	Static Hydrant	Static	Residual	Flow Hydrant	Pressure	Flow (GPM)	Comments
Medical Center @ Musculoskeletal Drive	51			51			Musculoskeletal Dr- cap hydrant for static & residual
570 Intercampus Drive @ HazWaste Building	53			56			
SMH Thomas Jackson Drive @ garage entrance/exit	52			53			
SMH Thomas Jackson drive @ garage link to lobby by FDC	56			53			
Medical Center @ S&A loading dock lot	55			55			
	Inside G-4900 HVAC shop riser			55			
SMH Crittenden Upper Loop	57	No test	No test	57	No test	No test	HYD 57 removed for GCHaS - Upper Circle
SMH Crittenden Loop @ Cancer Center Lot	58	No test	No test	58	No test	No test	HYD 57 removed for GCHaS - Upper Circle
East Drive @ Cancer Center	59			54			
East Drive @ Garage entrance/exit	54			59			
East Drive @ Eastman Dental Center	50			54			