

# Arizona Flow Testing LLC

## HYDRANT FLOW TEST REPORT 1

Project Name: Sonoran Creek  
Project Address: John Wayne Pkwy. & Edison Rd. (SWC), Maricopa, Arizona 85139  
Client Project No: Not Provided  
Arizona Flow Testing Project No.: 20255  
Flow Test Permit No.: FP20-0071  
Date and Time flow test conducted: August 18, 2020 at 10:00 AM  
Data is current and reliable until: February 18, 2021  
Conducted by: Floyd Vaughan – Arizona Flow Testing, LLC (480-250-8154)  
Witnessed by: Salvador Erivez – Maricopa Fire Dept (520-709-0089)  
Witnessed by: Gilbert Sanchez - Maricopa Water (520-251-1896)

### Raw Test Data

Static Pressure: **72.0 PSI**  
(Measured in pounds per square inch)

Residual Pressure: **65.0 PSI**  
(Measured in pounds per square inch)

Pitot Pressure: **15.0 PSI**  
(Measured in pounds per square inch)

Diffuser Orifice Diameter: One 4-inch Hose Monster  
(Measured in inches)

Coefficient of Diffuser: 0.7875

Flowing GPM: **1,456 GPM**  
(Measured in gallons per minute)

GPM @ 20 PSI: **4,300 GPM**

### Data with 10 % Safety Factor

Static Pressure: **64.8 PSI**  
(Measured in pounds per square inch)

Residual Pressure: **57.8 PSI**  
(Measured in pounds per square inch)

Distance between hydrants: Approx. 290 Feet

Main size: Not Provided

Approx.: gallons used during flow test: 2,000 Gals.

Flowing GPM: **1,456 GPM**

GPM @ 20 PSI: **3,968 GPM**

### Flow Test Location

North ↑



# Arizona Flow Testing LLC

## HYDRANT FLOW TEST REPORT 2

Project Name:	Sonoran Creek
Project Address:	John Wayne Pkwy. & Edison Rd. (SWC), Maricopa, Arizona 85139
Client Project No:	Not Provided
Arizona Flow Testing Project No.:	20255
Flow Test Permit No.:	FP20-0071
Date and Time flow test conducted:	August 18, 2020 at 10:20 AM
Data is current and reliable until:	February 18, 2021
Conducted by:	Floyd Vaughan - Arizona Flow Testing, LLC (480-250-8154)
Witnessed by:	Salvador Erivez - Maricopa Fire Dept (520-709-0089)
Witnessed by:	Gilbert Sanchez - Maricopa Water (520-251-1896)

### Raw Test Data

Static Pressure: **72.0 PSI**  
(Measured in pounds per square inch)

Residual Pressure: **42.0 PSI**  
(Measured in pounds per square inch)

Pitot Pressure: **15.0 PSI**  
(Measured in pounds per square inch)

Diffuser Orifice Diameter: One 4-inch Hose Monster  
(Measured in inches)

Coefficient of Diffuser: 0.7875

Flowing GPM: **1,456 GPM**  
(Measured in gallons per minute)

GPM @ 20 PSI: **1,960 GPM**

### Data with 10 % Safety Factor

Static Pressure: **64.8 PSI**  
(Measured in pounds per square inch)

Residual Pressure: **34.8 PSI**  
(Measured in pounds per square inch)

Distance between hydrants: Approx. 680 Feet

Main size: Not Provided

Approx.: gallons used during flow test: 2,000 Gals.

Flowing GPM: **1,456 GPM**

GPM @ 20 PSI: **1,808 GPM**

### Flow Test Location

North ↑



TABLE B105.1  
MINIMUM REQUIRED FIRE-FLOW AND FLOW DURATION FOR BUILDINGS

Type IA and IB*	FIRE-FLOW CALCULATION AREA (square feet)				Type V-B*	FIRE-FLOW (gallons per minute) <sup>b</sup>	FLOW DURATION (hours)
	Type IIA and IIIA*	Type IV and V-A*	Type IIB and IIIB*	Type V-B*			
0-22,700	0-12,700	0-8,200	0-5,900	0-3,600	1,500	TEST	
22,701-30,200	12,701-17,000	8,201-10,900	5,901-7,900	3,601-4,800	1,750		
30,201-38,700	17,001-21,800	10,901-12,900	7,901-9,800	4,801-6,200	2,000	2	
38,701-48,300	21,801-24,200	12,901-17,400	9,801-12,600	6,201-7,700	2,250		
48,301-59,000	24,201-33,200	17,401-21,300	12,601-15,400	7,701-9,400	2,500	3	
59,001-70,900	33,201-39,700	21,301-25,500	15,401-18,400	9,401-11,300	2,750		
70,901-83,700	39,701-47,100	25,501-30,100	18,401-21,800	11,301-13,400	3,000	TEST	
83,701-97,700	47,101-54,900	30,101-35,200	21,801-25,900	13,401-15,600	3,250		
97,701-112,700	54,901-63,400	35,201-40,600	25,901-29,300	15,601-18,000	3,500	TEST	
112,701-128,700	63,401-72,400	40,601-46,400	29,301-33,500	18,001-20,600	3,750		
128,701-145,900	72,401-82,100	46,401-52,500	33,501-37,900	20,601-23,300	4,000	4	
145,901-164,200	82,101-92,400	52,501-59,100	37,901-42,700	23,301-26,300	4,250		
164,201-183,400	92,401-103,100	59,101-66,000	42,701-47,700	26,301-29,300	4,500	TEST	
183,401-203,700	103,101-114,600	66,001-73,300	47,701-53,000	29,301-32,600	4,750		
203,701-225,200	114,601-126,700	73,301-81,100	53,001-58,600	32,601-36,000	5,000	TEST	
225,201-247,700	126,701-139,400	81,101-89,200	58,601-65,400	36,001-39,600	5,250		
247,701-271,200	139,401-152,600	89,201-97,700	65,401-70,600	39,601-43,400	5,500	TEST	
271,201-295,900	152,601-166,500	97,701-106,500	70,601-77,000	43,401-47,400	5,750		
295,901-Greater	166,501-Greater	106,501-115,800	77,001-83,700	47,401-51,500	6,000	TEST	
		115,801-125,500	83,701-90,600	51,501-55,700	6,250		
		125,501-135,500	90,601-97,900	55,701-60,200	6,500	TEST	
		135,501-145,800	97,901-106,800	60,201-64,800	6,750		
		145,801-156,700	106,801-113,200	64,801-69,600	7,000	TEST	
		156,701-167,900	113,201-121,300	69,601-74,600	7,250		
		167,901-179,400	121,301-129,600	74,601-79,800	7,500	TEST	
		179,401-191,400	129,601-138,300	79,801-85,100	7,750		
		191,401-Greater	138,301-Greater	85,101-Greater	8,000	TEST	

For SI: 1 square foot = 0.0929 m<sup>2</sup>, 1 gallon per minute = 3.785 L/m, 1 pound per square inch = 6.895 kPa.

a. Types of construction are based on the *International Building Code*.  
b. Measured at 20 psi residual pressure.

SPROUTS ≈ 29,970  
RETAIL ≈ 22,000

## FIRE HYDRANT

The provisions contained in this appendix.

### SECTION C101 GENERAL

**C101.1 Scope.** Fire hydrants shall be provided with this appendix for the protection of buildings, hereafter constructed.

### SECTION C102 LOCATION

**C102.1 Fire hydrant locations.** Fire hydrants shall be provided along required fire apparatus access roads on public streets.

### SECTION C103 NUMBER OF FIRE HYDRANT

**C103.1 Fire hydrants available.** The minimum number of fire hydrants available to a building shall not be less than the number of fire hydrants listed in Table C105.1. The number of fire hydrants to a complex or subdivision shall not be less than the number of fire hydrants listed in Table C105.1. The number of fire hydrants shall not be less than the number of fire hydrants listed in Table C105.1. The number of fire hydrants shall not be less than the number of fire hydrants listed in Table C105.1. The number of fire hydrants shall not be less than the number of fire hydrants listed in Table C105.1.

FIRE-FLOW REQUIREMENT (gpm)	MINIMUM OF F
1,750 or less	
2,000-2,250	
2,500	
3,000	
3,500-4,000	
4,500-5,000	

# Arizona Flow Testing LLC

## HYDRANT FLOW TEST REPORT

Project Name: Lakes at El Rancho El Dorado Parcel 44 & 47  
Project Address: 40645 West Haley Drive, Maricopa, Arizona 85138  
Client Project No: Not Provided  
Arizona Flow Testing Project No.: 20321  
Flow Test Permit No.: FP20-0079  
Date and Time flow test conducted: October 29, 2020 at 9:00 AM  
Data is current and reliable until: April 29, 2021  
Conducted by: Floyd Vaughan – Arizona Flow Testing, LLC (480-250-8154)  
Witnessed by: Salvador Erivez – Maricopa Fire Dept (520-709-0089)  
Witnessed by: Jameson Rivers - Global Water (520-987-7138)

### Raw Test Data

Static Pressure: **65.0 PSI**  
(Measured in pounds per square inch)

Residual Pressure: **50.0 PSI**  
(Measured in pounds per square inch)

Pitot Pressure: **18.0 PSI**  
(Measured in pounds per square inch)

Diffuser Orifice Diameter: One 4-inch Hose Monster  
(Measured in inches)

Coefficient of Diffusers: 0.7875

Flowing GPM: **1,595 GPM**  
(Measured in gallons per minute)

GPM @ 20 PSI: **2,887 GPM**

### Data with 10 % Safety Factor

Static Pressure: **58.5 PSI**  
(Measured in pounds per square inch)

Residual Pressure: **43.5 PSI**  
(Measured in pounds per square inch)

Distance between hydrants: Approx. 450 Feet

Main size: Not Provided

Approx.: gallons used during flow test: 1,800 Gals.

Flowing GPM: **1,595 GPM**

GPM @ 20 PSI: **2,645 GPM**

### Flow Test Location

North ↑

