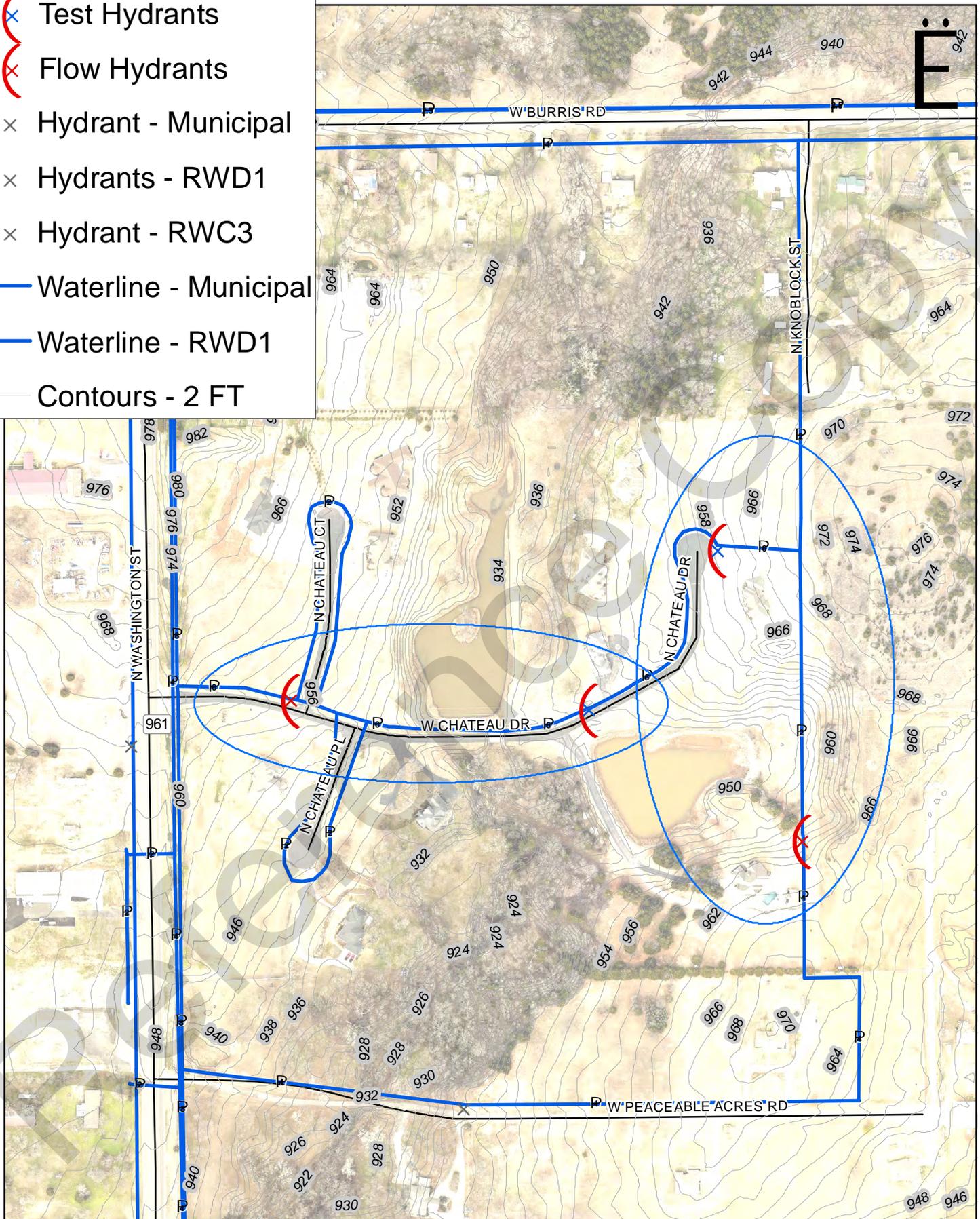


-  Test Hydrants
-  Flow Hydrants
-  Hydrant - Municipal
-  Hydrants - RWD1
-  Hydrant - RWC3
-  Waterline - Municipal
-  Waterline - RWD1
-  Contours - 2 FT



Flow Tests  
Epworth Alternate

1 inch = 300 feet  
10/9/2012

## Water Flow Test Summary Sheet

Project: Peacable Acres flow test  
 Test Date and Time: 10/18/2012 at 12:00  
 Conducted By: Charlie Nelson

	Test Hydrant	Flow Hydrant	
Hydrant Location:	5917 Chateau	5909 Chateau Behind house	
Hydrant Unique ID:	HD-D1-0182	HD-D1-0181	
Hydrant Elevation:	960	956	FT
Outlet Coefficient:	0.9	0.9	<i>0.9 typical</i>
Outlet Diameter:	2.5	2.5	<i>2.5 IN typical</i>
Measured Static Pressure:	80	80	PSI
Measured Residual Pressure:	31	31	PSI
Pitot Tube Reading:	8	8	PSI
Calculated Flow During Test <sub>1</sub> :	475	475	GPM <i>calculated</i>
Projected Flow at 20 PSI Residual:	529	529	GPM <i>calculated</i>
Static HGL During Test	1,145	1,145	
Residual HGL During Test	1,032	1,032	
25 PSI HGL	1,018	1,018	
20 PSI HGL	1,006	1,006	

**NOTES:**

1. Flow was calculated using the following formula:

$$Q_c = (29.83)(C_d)(D)^2(P)^{1/2}$$

$C_d$  = Coefficient of discharge.

$D$  = Internal orifice or nozzle diameter (IN).

$P$  = Velocity pressure measured with pitot tube (PSI).

2. Flow across the available range of residual pressures was projected using the following formula:

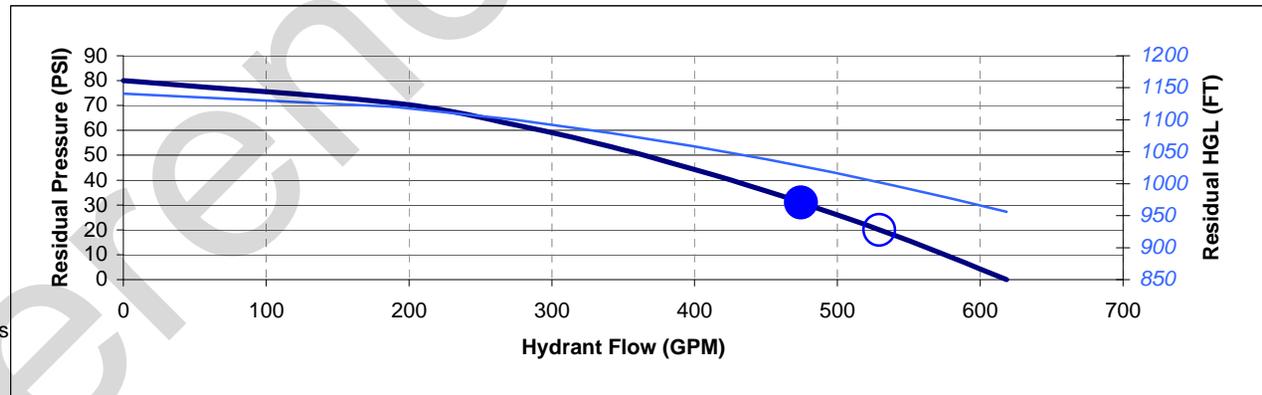
$$Q_p = Q_c * [(P_s - P_x) / (P_s - P_r)]^{0.54}$$

$Q_c$  = flow calculated during test (GPM)

$P_s$  = static pressure measured during test (PSI)

$P_r$  = residual pressure measured during test (PSI)

$P_x$  = residual pressure at which to predict flow



*These test results represent the condition of the distribution system at the date and time listed. They do not necessarily represent the capacity of the system during a 30-year future average of peak day condition or other specific design condition. Please contact the City of Stillwater for additional information regarding distribution system performance under specific design conditions.*

## Water Flow Test Summary Sheet

Project: Epworth at Peaceable Acres  
 Test Date and Time: 10/18/2012 10:00am  
 Conducted By: Charlie N

	Test Hydrant	Flow Hydrant	
Hydrant Location:	5906 Chateau	Chateau Ct	
Hydrant Unique ID:	HD-D1-0180	HD-D1-0183	
Hydrant Elevation:	958	942	FT
Outlet Coefficient:		0.9	<i>0.9 typical</i>
Outlet Diameter:		2.5	<i>2.5 IN typical</i>
Measured Static Pressure:	82		PSI
Measured Residual Pressure:	40		PSI
Pitot Tube Reading:		18	PSI
Calculated Flow During Test <sub>1</sub> :		712	GPM <i>calculated</i>
Projected Flow at 20 PSI Residual:		879	GPM <i>calculated</i>
Static HGL During Test	1,147		
Residual HGL During Test	1,050		
25 PSI HGL	1,016		
20 PSI HGL	1,004		

**NOTES:**

1. Flow was calculated using the following formula:

$$Q_c = (29.83)(C_d)(D)^2(P)^{1/2}$$

$C_d$  = Coefficient of discharge.

$D$  = Internal orifice or nozzle diameter (IN).

$P$  = Velocity pressure measured with pitot tube (PSI).

2. Flow across the available range of residual pressures was projected using the following formula:

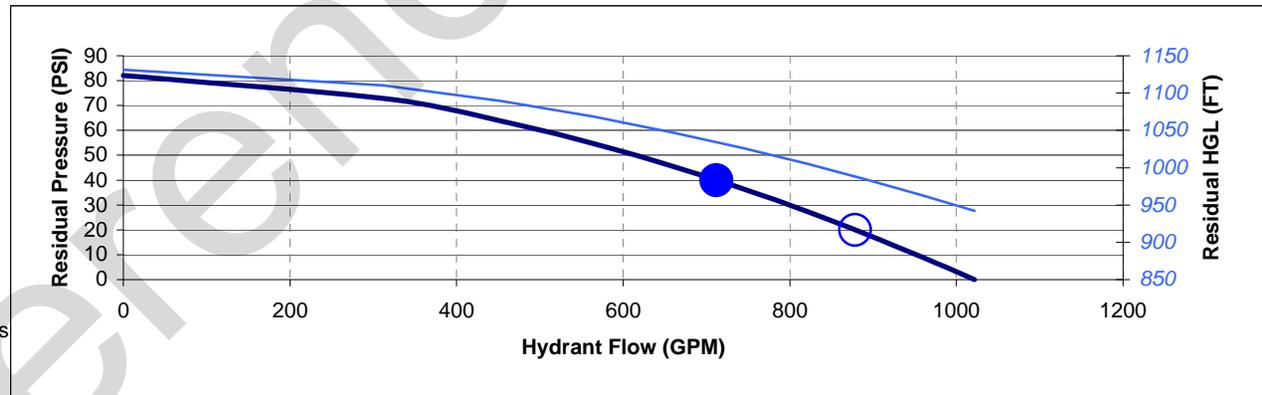
$$Q_p = Q_c * [(P_s - P_x) / (P_s - P_r)]^{0.54}$$

$Q_c$  = flow calculated during test (GPM)

$P_s$  = static pressure measured during test (PSI)

$P_r$  = residual pressure measured during test (PSI)

$P_x$  = residual pressure at which to predict flow



*These test results represent the condition of the distribution system at the date and time listed. They do not necessarily represent the capacity of the system during a 30-year future average of peak day condition or other specific design condition. Please contact the City of Stillwater for additional information regarding distribution system performance under specific design conditions.*