

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 98-7923

Exam Date: 8/3/2012

1. Current Owner: MATT COSSALMAN
1986 HIGHWAY 1
BONNERS FERRY ID 83805
(208)267-1190
2. Accompanied by: MATT COSSALMAN
Phone No:
Address:
Relationship to Permit Holder:

3. SOURCE

MISSION CREEK

TRIBUTARY

KOOTENAI RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use:
2. Other water rights with the same point of diversion:

C. DIVERSION AND DELIVERY SYSTEM1. LOCATION OF POINT(S) OF DIVERSION:

MISSION CREEK SE1/4NW1/4 Sec. 17, Twp 64N, Rge 01E, B.M. BOUNDARY County

Method of Determination: GPS AND MAP

2.

PLACE OF USE: POWER

Twp	Rge	Sec	NE				NW				SW				SE				
			<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>Totals</u>
64N	01E	17							X										

Method of Determination:

3. ☒ Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.
- ☐ Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.
- ☐ Aerial Photo Attached (required for irrigation of 10+ acres).
- ☐ Photo of Diversion and System Attached

E. FLOW CALCULATIONS☐ Additional Computation Sheets Attached

Measured Method:

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 =$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} =$$

2. Volume Calculations for Other Uses:

G. NARRATIVE/REMARKS/COMMENTS This right was split from 98-7861 because of the power use. The power use was removed from right 98-7922. No power rights are to be licensed before the new rules of 7-1-2013. The flow data was from measuring devices on the system (weir) and PSI.

Have conditions of permit approval been met? ☒ Yes ☐ No

H. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
POWER	01/01 to 12/31	0.490 CFS	
<u>Totals:</u>		0.490 CFS	

2. Recommended Amendments

☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☐ None

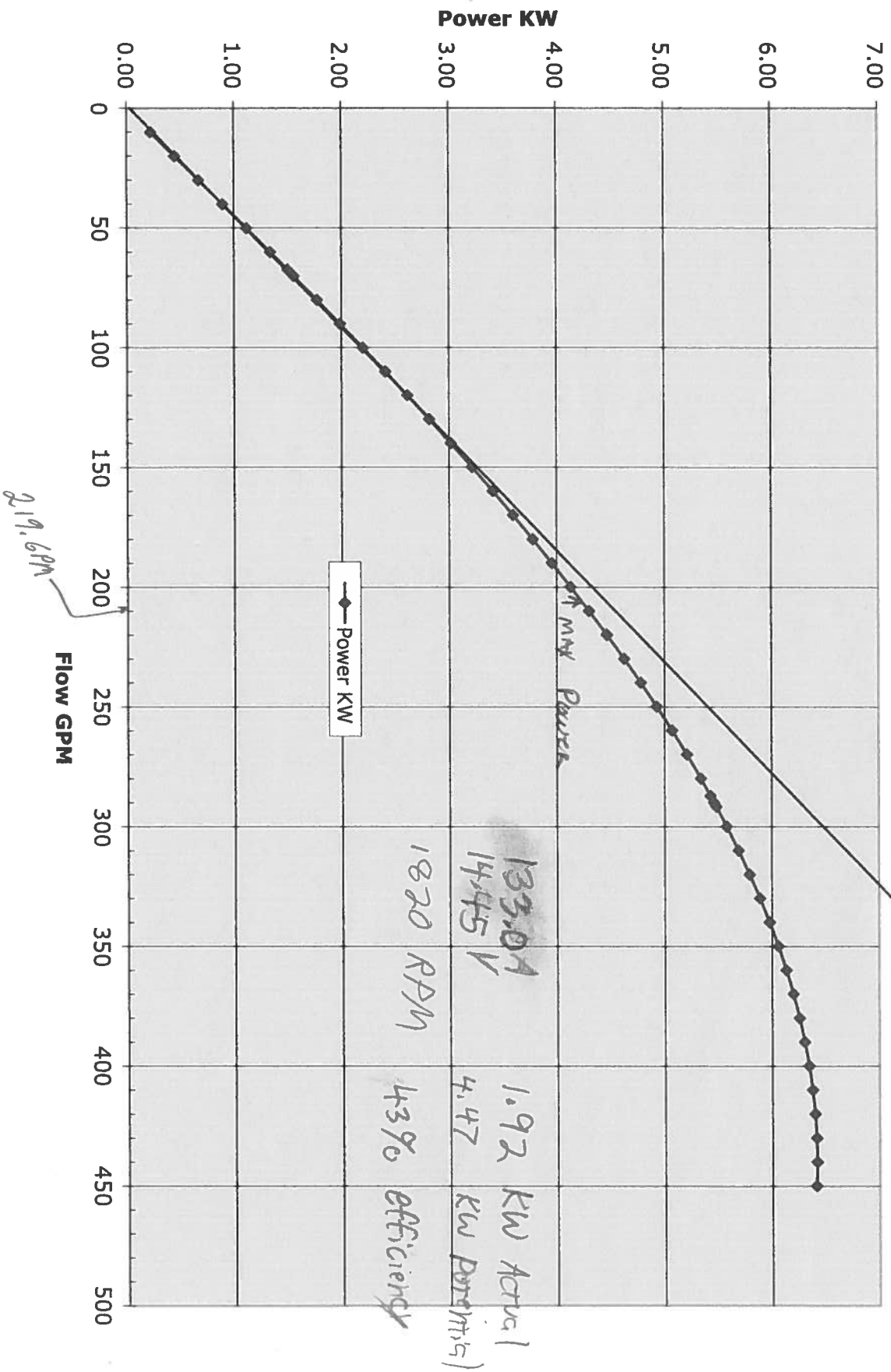
☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

I. AUTHENTICATION

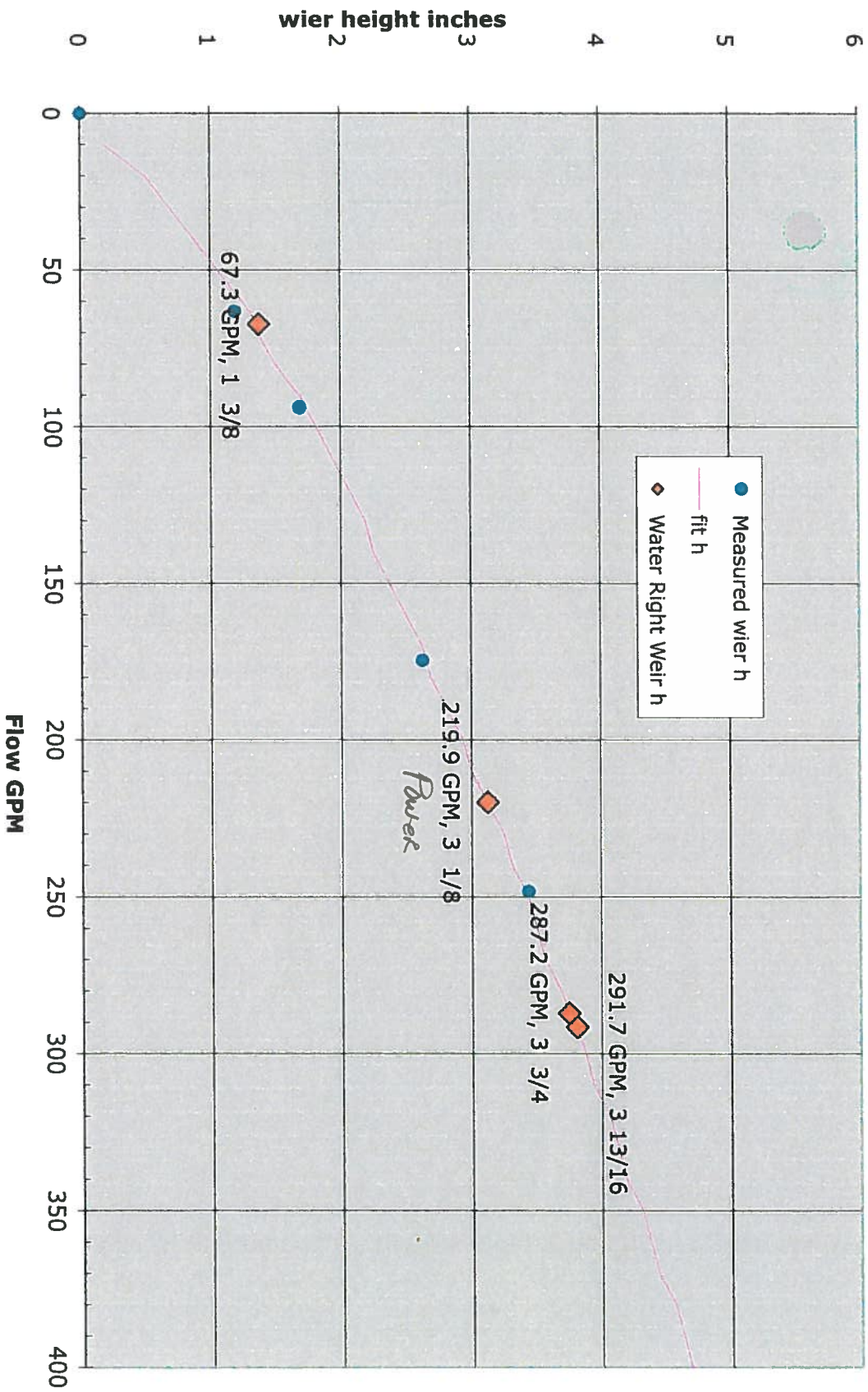
Field Examiner's Name Eric Plummer Date 4-3-2013

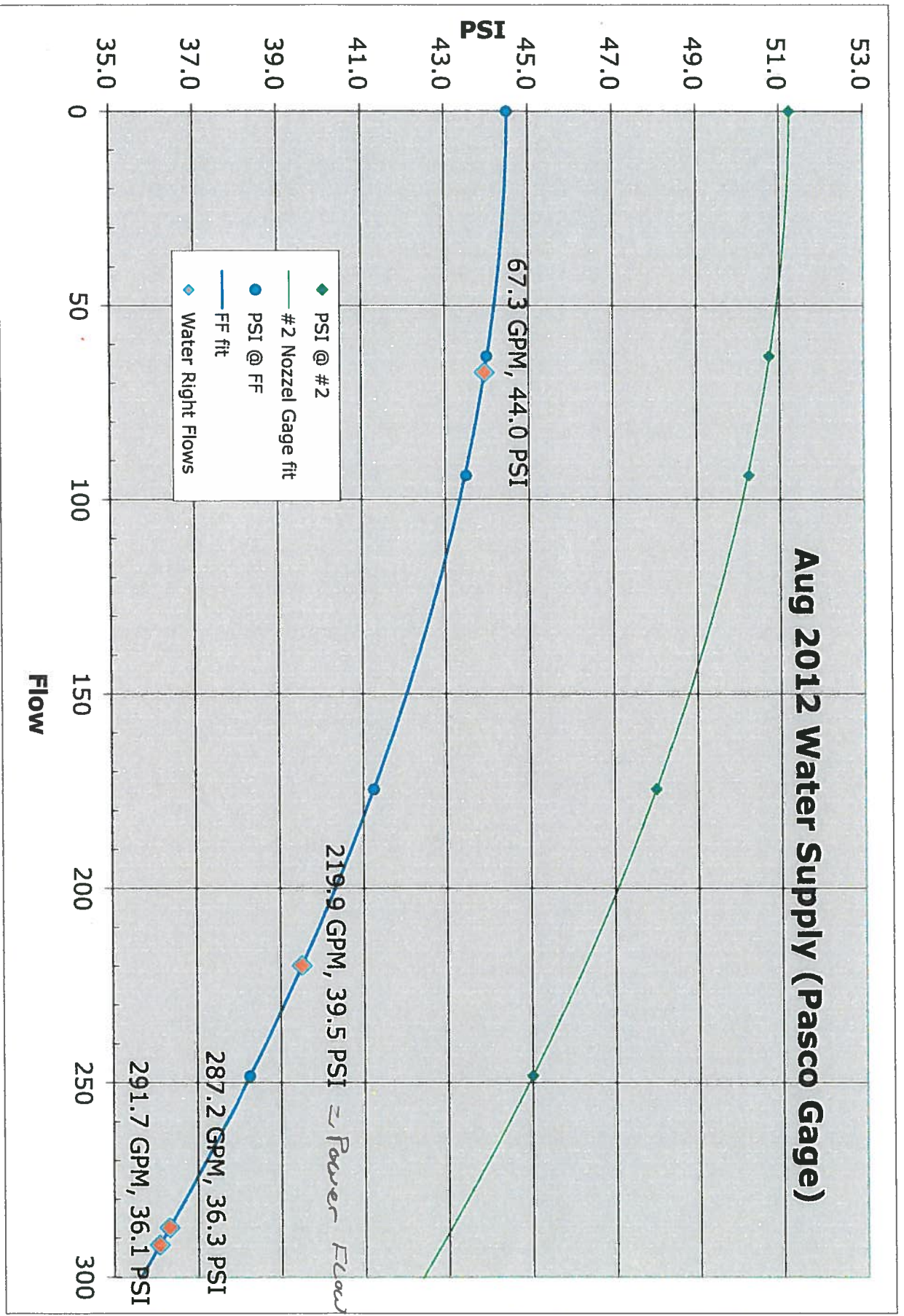
Reviewer _____ Date _____

Aug 2012 Power Curve KW



July 2012 Flow via Wier Curve fit From Flow Measurements





PSI @ FF	PSI @ #2	Volume (gal)	Time (s)	GPM	GPM ^1.8	Measured v	wier gpm	h^1.5
44.5	51.3	0	1	0	0	0	0	0.00
44.0	50.8	61	58	63	2138	1	3/16	47
43.5	50.3	61	39	94	4456	1	11/16	80
41.3	48.0	64	22	175	14045	2	5/8	155
38.3	45.0	60	14.5	248	26954	3	7/16	233

Flow gpm	#2 Nozzel G ₂ FF fit	flow CFS	Power KV fit h	expected c ₂	Water Ri	Water Right	Weir h
.0 GPM	51.3	44.5 PSI	0.00	0.00	#NUM!	#NUM!	
10.0 GPM	51.2	44.5 PSI	0.02	0.22	3/16	3	
20.0 GPM	51.2	44.5 PSI	0.04	0.45	1/2	13	
30.0 GPM	51.1	44.4 PSI	0.07	0.67	11/16	21	
40.0 GPM	51.0	44.3 PSI	0.09	0.90	7/8	30	
50.0 GPM	50.9	44.2 PSI	0.11	1.12	1 1/16	40	
60.0 GPM	50.8	44.1 PSI	0.13	1.34	1 1/4	51	
67.3 GPM	50.7	44.0 PSI	0.15	1.50	1 3/8	59	44.0 PSI 1 3/8
70.0 GPM	50.7	43.9 PSI	0.16	1.56	1 3/8	59	
80.0 GPM	50.5	43.7 PSI	0.18	1.77	1 1/2	67	
90.0 GPM	50.3	43.6 PSI	0.20	1.99	1 11/16	80	
100.0 GPM	50.1	43.3 PSI	0.22	2.20	1 13/16	89	
110.0 GPM	49.9	43.1 PSI	0.25	2.41	1 15/16	98	
120.0 GPM	49.6	42.9 PSI	0.27	2.61	2 1/16	108	
130.0 GPM	49.4	42.6 PSI	0.29	2.82	2 3/16	118	
140.0 GPM	49.1	42.3 PSI	0.31	3.02	2 1/4	123	
150.0 GPM	48.8	42.0 PSI	0.33	3.21	2 3/8	134	
160.0 GPM	48.5	41.7 PSI	0.36	3.41	2 1/2	144	
170.0 GPM	48.2	41.4 PSI	0.38	3.59	2 5/8	155	
180.0 GPM	47.8	41.1 PSI	0.40	3.78	2 11/16	161	
190.0 GPM	47.4	40.7 PSI	0.42	3.96	2 13/16	172	
200.0 GPM	47.1	40.3 PSI	0.45	4.13	2 15/16	184	
210.0 GPM	46.7	39.9 PSI	0.47	4.30	3	190	
219.9 GPM	46.3	39.5 PSI	0.49	4.47	3 1/8	202	39.5 PSI 3 1/8
220.0 GPM	46.3	39.5 PSI	0.49	4.47	3 1/8	202	
230.0 GPM	45.8	39.1 PSI	0.51	4.63	3 1/4	214	
240.0 GPM	45.4	38.6 PSI	0.54	4.78	3 5/16	220	
250.0 GPM	44.9	38.2 PSI	0.56	4.93	3 7/16	233	
260.0 GPM	44.4	37.7 PSI	0.58	5.07	3 1/2	239	
270.0 GPM	44.0	37.2 PSI	0.60	5.21	3 9/16	245	
280.0 GPM	43.4	36.7 PSI	0.62	5.34	3 11/16	258	
287.2 GPM	43.1	36.3 PSI	0.64	5.43	3 3/4	265	36.3 PSI 3 3/4
290.0 GPM	42.9	36.2 PSI	0.65	5.46	3 3/4	265	
291.7 GPM	42.8	36.1 PSI	0.65	5.48	3 13/16	272	36.1 PSI 3 13/16
300.0 GPM	42.4	35.6 PSI	0.67	5.58	3 7/8	278	
310.0 GPM	41.8	35.1 PSI	0.69	5.69	3 15/16	285	
320.0 GPM	41.3	34.5 PSI	0.71	5.80	4 1/16	299	
330.0 GPM	40.7	33.9 PSI	0.74	5.89	4 1/8	306	
340.0 GPM	40.1	33.3 PSI	0.76	5.98	4 3/16	313	
350.0 GPM	39.5	32.7 PSI	0.78	6.06	4 5/16	327	
360.0 GPM	38.8	32.1 PSI	0.80	6.13	4 3/8	334	
370.0 GPM	38.2	31.4 PSI	0.83	6.20	4 7/16	341	
380.0 GPM	37.5	30.8 PSI	0.85	6.26	4 9/16	356	
390.0 GPM	36.8	30.1 PSI	0.87	6.31	4 5/8	363	
400.0 GPM	36.1	29.4 PSI	0.89	6.35	4 11/16	370	
410.0 GPM	35.4	28.7 PSI	0.91	6.38	4 3/4	378	
420.0 GPM	34.7	28.0 PSI	0.94	6.40	4 7/8	393	
430.0 GPM	34.0	27.2 PSI	0.96	6.41	4 15/16	400	
440.0 GPM	33.2	26.5 PSI	0.98	6.42	5	408	
450.0 GPM	32.5	25.7 PSI	1.00	6.41	5 1/16	416	

Irrigation Only:
Creek Sprinklers

Hydro Nozzle
Combination
1/2 + 9/16 + 3/4

Irrigation add
Creek + Volleyball
sprinklers & open
5/8 nozzle 1/2 turn
(weir 3 1/8")

Fire Protection:
Fire hose mostly
open

	PSI #2	PSI FF	h
Slope:	-0.00023209	-0.00023209	0.0259006
INDEX(LINEST(known_y's,known_x's),1)			
Y-intercept:	51.25923879	44.50923879	-0.1807932
INDEX(LINEST(known_y's,known_x's),2)			



IMG_1255.JPG



FLOW.JPG



IMG_1257.JPG



IMG_1258.JPG



IMG_1259.JPG



IMG_1260.JPG



POD.JPG



IMG_1222.JPG



POD1.JPG



PSI.JPG



IMG_1252.JPG



IMG_1253.JPG



IMG_1254.JPG

98-7923





