

Spring Flow Report 2005-2007

Measurement Date	Original Average Data					15/(sec/qt) Data				
	Spring #1 Gamble	Spring #2 Heuver	Spring #3 Barber 1	Spring #4 Barber 2	Spring #5 Healey	Spring #1 Gamble	Spring #2 Heuver	Spring #3 Barber 1	Spring #4 Barber 2	Spring #5 Healey
	Average seconds per quart					Gallons per minute				
5-Apr-05	25.00	34.70	6.30	13.00		0.60	0.43	2.38	1.15	
13-Apr-05	22.55	34.26				0.67	0.44			
14-Apr-05	22.68	34.26	6.52	12.94		0.66	0.44	2.30	1.16	
17-Apr-05	23.77	34.81	6.61	13.14		0.63	0.43	2.27	1.14	
20-Apr-05	20.99	31.94	5.88	12.45		0.71	0.47	2.55	1.20	
1-May-05										
2-May-05	28.54					0.53				
5-May-05	13.57	34.25	6.60	13.23		1.11	0.44	2.27	1.13	
16-May-05	20.96	31.38	6.70	13.39		0.72	0.48	2.24	1.12	
26-May-05	19.40	31.95	6.58	14.16	81.34	0.77	0.47	2.28	1.06	0.18
30-May-05	19.57	32.26	6.74	14.84	86.10	0.77	0.46	2.23	1.01	0.17
1-Jun-05										
3-Jun-05	20.04		6.94	16.54		0.75		2.16	0.91	
7-Jun-05			6.63	13.63				2.26	1.10	
16-Jun-05			6.70	12.92				2.24	1.16	
23-Jun-05			6.67	12.79				2.25	1.17	
1-Jul-05										
7-Jul-05	23.66					0.63				
9-Jul-05	28.57	33.72	7.56	14.32		0.53	0.44	1.98	1.05	
13-Jul-05	27.33		7.67	14.42		0.55		1.96	1.04	
26-Jul-05	29.13	33.17	7.63	14.44		0.51	0.45	1.97	1.04	
1-Aug-05										
16-Aug-05	25.58	39.15	8.61	15.77		0.59	0.38	1.74	0.95	
19-Aug-05	31.06	35.62	8.46	16.04		0.48	0.42	1.77	0.94	
1-Sep-05										
4-Sep-05	41.02	40.14	8.59	16.35		0.37	0.37	1.75	0.92	
14-Sep-05	46.33	39.65	9.06	16.82		0.32	0.38	1.66	0.89	
1-Oct-05										
2-Oct-05	17.62	38.59	7.96	15.67	153.00	0.85	0.39	1.88	0.96	0.10
1-Nov-05										
30-Nov-05	23.47	34.02	8.17	15.22		0.64	0.44	1.84	0.99	
1-Dec-05										
21-Dec-05	36.73		8.55	22.24		0.41		1.75	0.67	
24-Dec-05	33.08		8.92	17.57		0.45		1.68	0.85	
3-Jan-06	22.76	37.40	8.06	14.99		0.66	0.40	1.86	1.00	
25-Jan-06	18.88	37.68	8.50	16.22		0.79	0.40	1.76	0.92	
3-Feb-06	22.06	40.50	8.08	15.58		0.68	0.37	1.86	0.96	
7-Feb-06	30.27		8.48	16.18		0.50		1.77	0.93	
9-Feb-06	30.87	39.40	8.36	16.65		0.49	0.38	1.79	0.90	
15-Feb-06	36.21		9.01	15.26		0.41		1.66	0.98	
22-Feb-06	37.60		9.19	15.30		0.40		1.63	0.98	
07-Mar-06	32.89		9.56	15.24		0.46		1.57	0.98	
05-Apr-06	19.25	28.45	7.69	12.09		0.78	0.53	1.95	1.24	
14-Apr-06	21.23	37.82	7.81	12.13		0.71	0.40	1.92	1.24	
21-Apr-06	21.32	36.16	7.58	11.94		0.70	0.41	1.98	1.26	
03-May-06	19.03	28.43	7.56	12.27		0.79	0.53	1.98	1.22	
24-May-06	17.89	22.22	7.67	12.33		0.84	0.68	1.96	1.22	
04-Jun-06		23.25	7.47	12.69			0.65	2.01	1.18	
04-Jul-06	11.20	22.45	7.35	12.27		1.34	0.67	2.04	1.22	
15-Jul-06	20.14	22.85	7.57	13.00		0.74	0.66	1.98	1.15	
23-Jul-06	17.13	21.30	7.58	12.03		0.88	0.70	1.98	1.25	
15-Aug-06		26.62	8.57	13.65			0.56	1.75	1.10	
22-Aug-06	23.02	27.18	9.20	13.87		0.65	0.55	1.63	1.08	
2-Sep-06	22.41	25.49	8.93	13.88		0.67	0.59	1.68	1.08	
7-Sep-06	22.93	22.46	9.42	13.55		0.65	0.67	1.59	1.11	
15-Sep-06	19.87	21.27	8.95	13.71		0.75	0.71	1.68	1.09	
17-Sep-06	19.69	21.99	8.93	13.27		0.76	0.68	1.68	1.13	

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	Spring #1 Gamble	Spring #2 Heuver	Spring #3 Barber 1	Spring #4 Barber 2	Spring #5 Healey	Spring #1 Gamble	Spring #2 Heuver	Spring #3 Barber 1	Spring #4 Barber 2	Spring #5 Healey	
	Average seconds per quart					Gallons per minute					
7-Oct-06	24.33	20.67	9.97	14.27		0.62	0.73	1.50	1.05		
21-Oct-06	22.78	22.34	9.37	12.60		0.66	0.67	1.60	1.19		
28-Oct-06	24.46	23.65	8.84	12.96		0.61	0.63	1.70	1.16		
12-Nov-06	21.38	22.10		12.61		0.70	0.68		1.19		
17-Nov-06	24.91	25.86		12.41		0.60	0.58		1.21		
23-Nov-06	24.66	27.20	7.74	13.29		0.61	0.55	1.94	1.13		
27-Nov-06	23.68	25.01	7.19	12.92		0.63	0.60	2.09	1.16		
8-Dec-06	31.30	25.35	6.78	12.05		0.48	0.59	2.21	1.24		
10-Dec-06	25.16	25.80	6.56	12.16		0.60	0.58	2.29	1.23		
19-Dec-06	22.67	26.42	6.77	12.11		0.66	0.57	2.22	1.24		
27-Dec-06	18.99	23.00	6.28	11.58		0.79	0.65	2.39	1.30		
3-Jan-07	19.54	24.52	6.46	11.58		0.77	0.61	2.32	1.30		
13-Jan-07	19.72	25.09	6.29	11.88		0.76	0.60	2.38	1.26		
21-Jan-07	21.85	27.37	6.63	12.08		0.69	0.55	2.26	1.24		
29-Jan-07	23.33	27.97	6.60	12.04		0.64	0.54	2.27	1.25		
1-Feb-07	22.71	25.69	6.50	12.00		0.66	0.58	2.31	1.25		
9-Feb-07	31.57	25.22	6.42	12.62		0.48	0.59	2.34	1.19		
16-Feb-07	22.66	26.71	6.82	12.41		0.66	0.56	2.20	1.21		
25-Feb-07	21.99	25.63	6.67	12.04		0.68	0.59	2.25	1.25		
3-Mar-07	22.41	30.92	6.59	12.37		0.67	0.49	2.28	1.21		
8-Mar-07	20.81	24.71	6.58	12.05		0.72	0.61	2.28	1.24		
12-Mar-07	18.03					0.83					
13-Mar-07	18.02		5.67	11.02		0.83		2.65	1.36		
14-Mar-07	16.43	28.01	5.86	11.67		0.91	0.54	2.56	1.29		
15-Mar-07	17.07	27.32				0.88	0.55				
16-Mar-07	17.47	27.83	5.88	10.71		0.86	0.54	2.55	1.40		
19-Mar-07	19.86	29.65				0.76	0.51				
22-Mar-07	20.52	27.33	5.72	10.62		0.73	0.55	2.62	1.41		
23-Mar-07	17.51	22.44	5.97	10.25		0.86	0.67	2.51	1.46		
26-Mar-07	17.96	26.68	5.85	10.72		0.84	0.56	2.56	1.40		
27-Mar-07	19.73	25.96	5.88	10.88		0.76	0.58	2.55	1.38		
30-Mar-07	16.72	24.04	5.94	10.95		0.90	0.62	2.53	1.37		
31-Mar-07	20.01	25.09	5.98	10.98		0.75	0.60	2.51	1.37		
1-Apr-07	16.45	23.75	5.96	10.93		0.91	0.63	2.52	1.37		
4-Apr-07	12.77		6.38			1.17		2.35			
7-Apr-07	17.08	20.52	5.61	10.35		0.88	0.73	2.67	1.45		
9-Apr-07	16.48	22.06	5.58	10.33		0.91	0.68	2.69	1.45		
16-Apr-07	16.40	21.84	5.42	10.48		0.91	0.69	2.77	1.43		
22-Apr-07	17.05	21.77	5.39	10.74		0.88	0.69	2.78	1.40		
4-May-07	22.74	19.47	5.21	10.49		0.66	0.77	2.88	1.43		
9-May-07	17.18	20.20	5.35	10.88		0.87	0.74	2.80	1.38		
18-May-07	17.52	19.71	5.39	10.56		0.86	0.76	2.78	1.42		
24-May-07	19.00	20.56	5.51	10.86		0.79	0.73	2.72	1.38		
1-Jun-07	21.31	19.57				0.70	0.77				
6-Jun-07	17.18	16.97	5.57	10.56		0.87	0.88	2.69	1.42		
10-Jun-07	16.92	17.79	5.61	10.78		0.89	0.84	2.67	1.39		
15-Jun-07	19.73	18.92	5.64	11.28		0.76	0.79	2.66	1.33		
29-Jun-07	21.35	19.24	5.81	11.56		0.70	0.78	2.58	1.30		
	Averages						0.71	0.58	2.17	1.18	

This file analyzes the data provided by Pete Kumlien on measured flow rates
at Upper Phantom Lake during 2005, 2006, and 2007

SAMPLE DATA

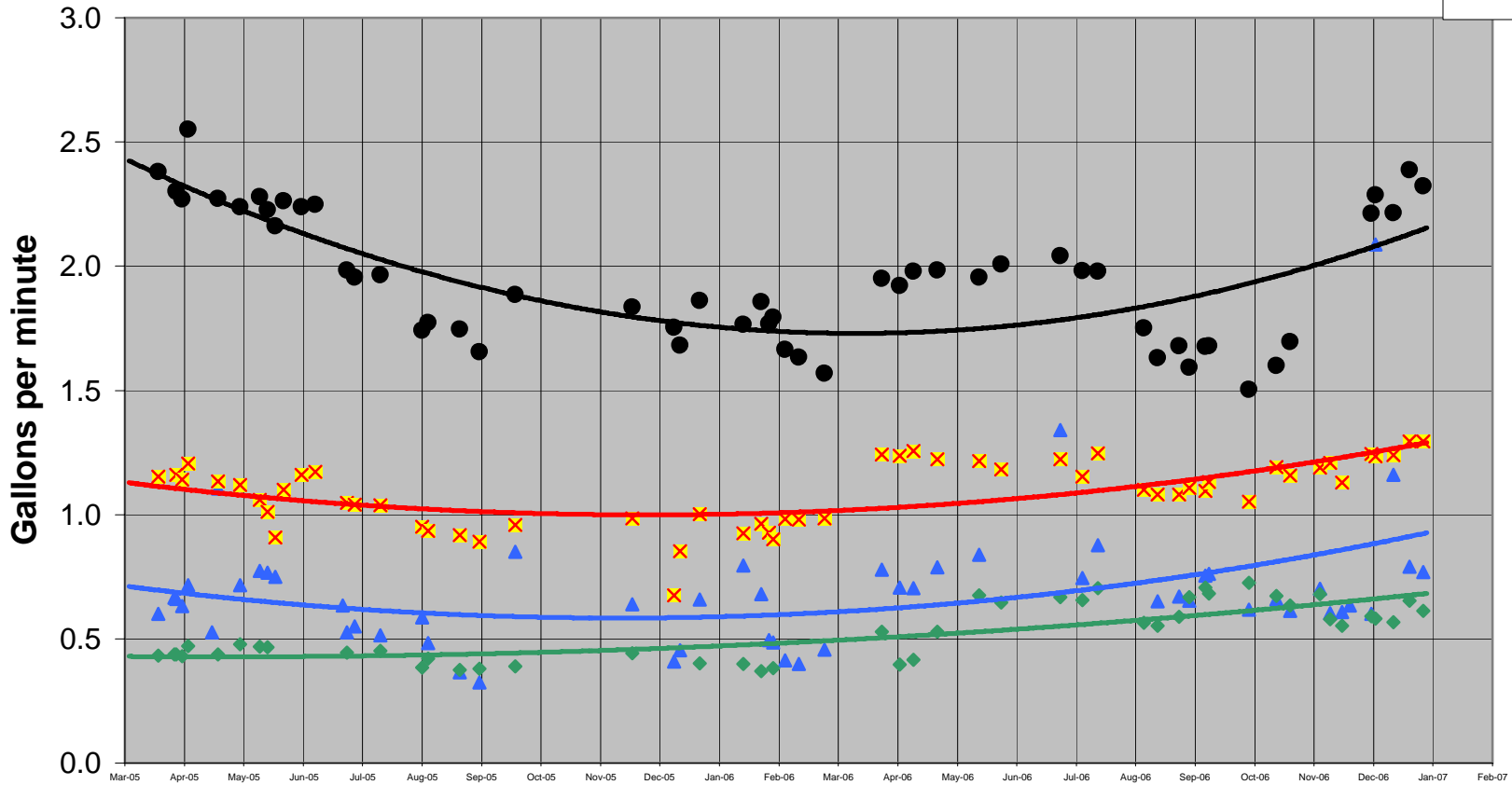
Measurement Date	Gamble Avg. gal/min.	Heuver Avg. gal/min.	Barber 1 Avg. gal/min.	Barber 2 Avg. gal/min.
5-Apr-05	0.60	0.43	2.38	1.15
13-Apr-05	0.67	0.44		
14-Apr-05	0.66	0.44	2.30	1.16
17-Apr-05	0.63	0.43	2.27	1.14
20-Apr-05	0.71	0.47	2.55	1.20

Flow Rates for Four Phantom Lake Springs

**Averages -
Gal/Min (22
Months)**

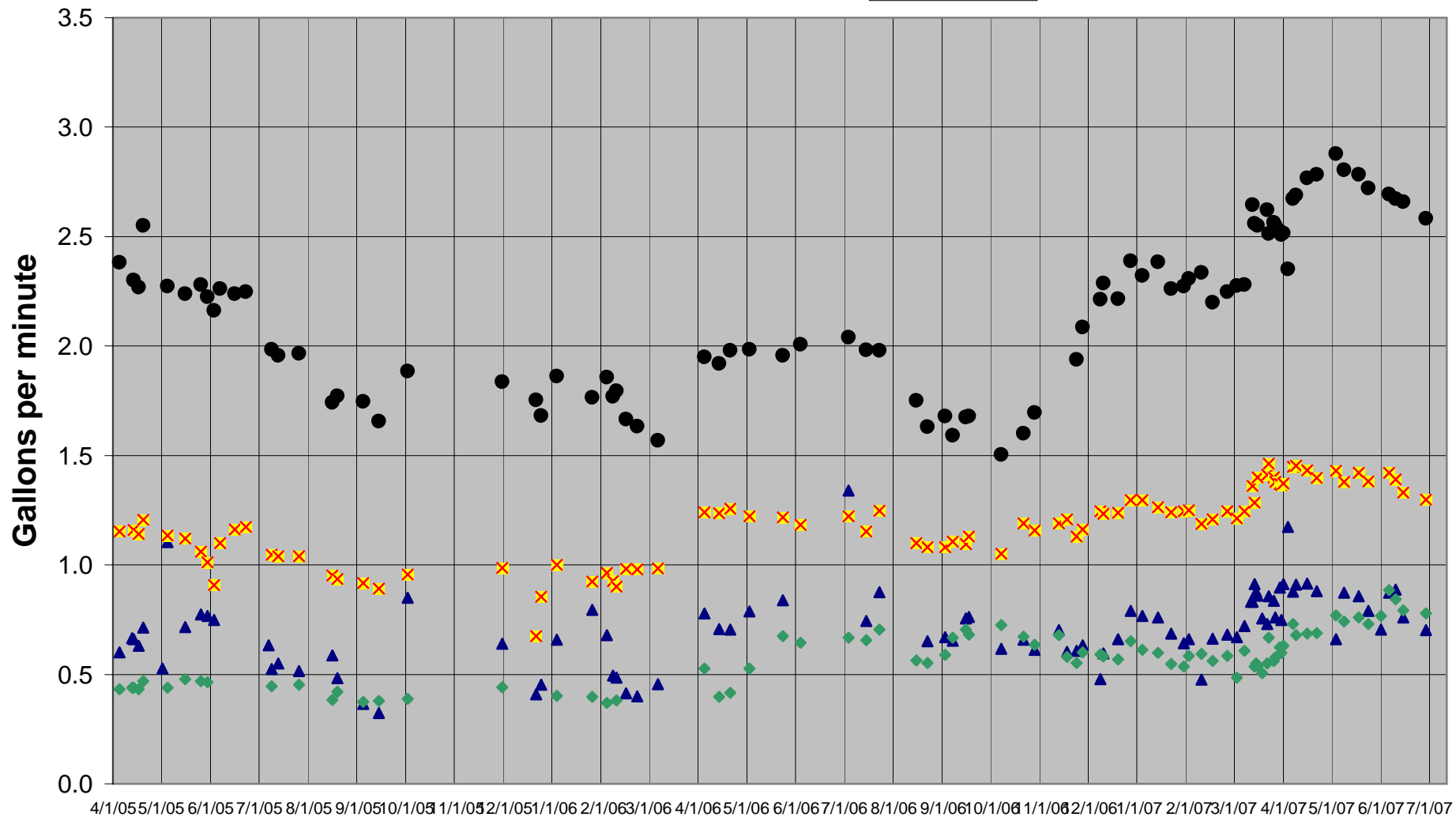
Gamble - 0.69
 Heuver - 0.53
 Barber 1 - 1.96
 Barber 2 - 1.09

- ▲ Gamble
- ◆ Heuver
- Barber 1
- ✕ Barber 2



Flow Rates for Four Phantom Lake Springs

Series5		SAMPLE DATA			
		Gamble	Heuver	Barber 1	Barber 2
Measurement	Date	Avg. gal/min.	Avg. gal/min.	Avg. gal/min.	Avg. gal/min.
	5-Apr-05	0.60	0.43	2.38	1.15
	13-Apr-05	0.67	0.44		
	14-Apr-05	0.66	0.44	2.30	1.16
	17-Apr-05	0.63	0.43	2.27	1.14
	20-Apr-05	0.71	0.47	2.55	1.20



Flow Rates for Four Phantom Lake Springs

- Series5
- ▲ Gamble
 - ◆ Heuver
 - Barber 1
 - ✕ Barber 2

SAMPLE DATA				
Measurement Date	Gamble Avg. gal/min.	Heuver Avg. gal/min.	Barber 1 Avg. gal/min.	Barber 2 Avg. gal/min.
5-Apr-05	0.60	0.43	2.38	1.15
13-Apr-05	0.67	0.44		
14-Apr-05	0.66	0.44	2.30	1.16
17-Apr-05	0.63	0.43	2.27	1.14
20-Apr-05	0.71	0.47	2.55	1.20

