

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-11413

Exam Date: 12/1/2015

1. Current Owner: CITY OF EAGLE
PO BOX 1520
EAGLE ID 83616
(208)939-6813
2. Accompanied by: Ken Acuff
Phone No: (208) 489-8777
Address: 660 E. Civic Lane; Eagle, ID 83616
Relationship to Permit Holder: City of Eagle – Water Superintendent

3. SOURCE

TRIBUTARY

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: Many overlaps – City of Eagle has a large “generally described” POU: 63-12017, 63-12448, 63-32089, 63-32090, 63-33876, 63-33878
2. Other water rights with the same point of diversion: City of Eagle 63-12448 (permit)

C. DIVERSION AND DELIVERY SYSTEM

1. LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER	NW1/4SW1/4	Sec. 3, Twp 04N, Rge 01E, B.M.	ADA County
GROUND WATER	SW1/4SW1/4	Sec. 3, Twp 04N, Rge 01E, B.M.	ADA County
GROUND WATER	SW1/4SW1/4	Sec. 4, Twp 04N, Rge 01E, B.M.	ADA County

Method of Determination: GIS

2. PLACE OF USE: MUNICIPAL

[illegible]

Twp Rge Sec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
04N 01W 13	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	L 8
04N 01W 14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
04N 01W 15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
04N 01W 16	X			X									X			X	L 1
04N 01W 24	X	X	X	X	X	X	X	X					L 1				
05N 01E 31									X	X	X	X	X	X	X	X	
05N 01E 32									X	X	X	X	X	X	X	X	
05N 01E 33									X	X	X	X	X	X	X	X	
05N 01E 34	X			X					X	X	X	X	X	X	X	X	
05N 01E 35					X	X	X	X	X	X							
05N 01W 33	X	X	X	X									X	X		X	
05N 01W 34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
05N 01W 35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
05N 01W 36					X	X	X	X	X	X	X	X	X	X	X	X	

Method of Determination: GPS and GIS**3. FIGURE AND MAP REQUIREMENTS:**

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

4. DIVERSION INFRASTRUCTURE:

Well or Diversion Identification No.	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
City Municipal Well No 1 (Lexington Hills No 1) Two Pumps	Franklin Electric X 2	75 and 30	Unknown 236 616 90	Crown BL 600-4 (600 GPM) Gould 6CHC (250 GPM)	6" discharge pipe and 3" discharge pipe
City Municipal Well No 2 (Lexington Hills No 2)	Baldor	75	ID12475-E Serial no. 30292	Crown BL 600-4 (600 GPM)	6" discharge pipe
City Municipal Well No 3 (Brookwood) Well Tag D0047605	Franklin Electric	100	8" - no. 239 604 60	Berkeley	Model 8T 100-950

D. FLOW MEASUREMENTS

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calibration Date
City Municipal Well No 1 (Lexington Hills No 1) Two Pumps	Magnetic	McCrometer	10DX3311GDE17P1B 2BA1138X1AAAC1;	01W034909	6-inch	5/24/2004
	Magnetic	McCrometer	10DX3311GDBE14P1 B2BA1138X1AAAC1	01W034908	3-inch	5/24/2004
City Municipal Well No 2 (Lexington Hills No 2)	Propeller	McCrometer		92 6 1165	6-inch	Unknown
City Municipal Well No 3* (Brookwood) Well Tag D0047605	UltraMag	McCrometer	UM06-08	UM20070563	8-inch	08/2007

E. FLOW CALCULATIONS

 X Additional Computation Sheets Attached

Measured Method: installed flow meters and SCADA

Flow Measurements were taken daily using the flow meters noted above. The system was on and operational at the time of the exam, but midday demand was met using storage. Therefore, no pumps were pumping. Mr. Acuff supplied me with SCADA information for the previous day (Monday, November 30, 2015), a series of continuous flow measurements.

The City did not initially have a record of all diversions during the development period of right 63-11413. Prior to the field exam, on October 28, 2015, I met with Mr. Ken Acuff at IDWR's state office. We discussed the type and time period of the records that I would need access to, in order to draft a license for 63-11413. In the following 30 days, he and the City of Eagle utility billing staff set out to locate the necessary records. Some of the diversion records were available from the City's water right documents and billing documentation. Some of this research included a public records request to United Water Idaho, the organization that managed the City's drinking water system until 2008.

All of this data has been compiled into a spreadsheet, which is an attachment to this field exam report. Because only volumetric readings were available, theoretical flow rates have been derived from the monthly volumes.

F. VOLUME CALCULATIONS

- ### 1. Volume Calculations for Irrigation:

$$V_{LB} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \underline{N/A}$$

$$V_{DB} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = \underline{N/A}$$

$$V = \text{Smaller of } V_{LB} \text{ and } V_{DB} = \underline{N/A}$$

2. Volume Calculations for Other Uses: MUNICIPAL; see attached sheet

The theoretical MDD and PHD values from 1999 demonstrate that permit 63-11413 can be licensed for 3.15 cfs, the maximum value of the permit. The greatest diversion volume from this system also occurred in 1999, 434 AF.

City of Eagle													
***Permit 63-11413 development period highlighted in orange: September 11, 1991 to August 29, 2000.													
Start Date	End Date	Days Elapsed	Sum Gallons	Sum AF	Users	GPD gal/day	ADD cfs	Lo MDD cfs PF = 1.5	Md MDD cfs PF = 2.25	Hi MDD cfs PF = 3	Lo PHD cfs PF = 2.25	Md PHD cfs PF = 3.375	Hi PHD cfs PF = 4.5
1/1/1999	3/31/1999	90	13,460,000	41.3	578	149,556	0.23	0.35	0.52	0.69	0.52	0.78	1.04
4/1/1999	6/30/1999	91	14,570,000	44.7	607	160,110	0.25	0.37	0.56	0.74	0.56	0.84	1.11
7/1/1999	9/30/1999	91	45,060,000	138.3	645	495,165	0.77	1.15	1.72	2.30	1.72	2.59	3.45
10/1/1999	12/31/1999	91	68,280,000	209.5	696	750,330	1.16	1.74	2.61	3.48	2.61	3.92	5.22
*The theoretical MDD and PHD values from 1999 demonstrate that permit 63-11413 can be licensed for 3.15 cfs, the maximum value of the permit. The greatest diversion volume from this system also occurred in 1999, 434 AF.													

G. NARRATIVE/REMARKS/COMMENTS**Field Examination and System Overview**

On Tuesday, December 1, 2015, Ken Acuff (City of Eagle Water Superintendent) met me at the Brookwood well (City of Eagle Municipal Well No. 3) at 2 PM. We entered the Brookwood well house, and I took some photos and gps-ed the site. Ken explained that the Brookwood well mostly supplies the storage tank for this system. This was the reason for the high pressures shown on the distribution line. Supplied with a 100 Hp pump, this well is considered the "workhorse" for the City's east water system. At the time of the exam, the system was powered on and operational, but midday demand was met using storage. Therefore, no pumps were pumping. Therefore, Ken provided me a few screenshots of his SCADA system's measurements from the previous day, November 30, 2015. The SCADA information includes a series of continuous flow measurements over a given time period, in this case two days.

Next, we drove to Lexington No. 2 well (City of Eagle Municipal Well No. 2). As we approached and entered the well house, I photographed and gps-ed the site. Ken explained that this well is fully functional, even operating with a 211 gallon Well-x-Trol pressure tank and a 75 Hp pump. He explained that this well does not produce water that easily meets the necessary quality levels for direct introduction into the distribution system without further treatment. Therefore, the City does not currently use the well. The Lexington Hills HOA has expressed interest in acquiring the well (and its water right) to "top off" their water amenity ponds before and after the irrigation season (during the fringe times when irrigation water is not being delivered by Farmers Union Canal Company). In the past, City's legal council has advised their elected officials not to release ownership of the well.

After that, we drove to Lexington No. 1 well (City of Eagle Municipal Well No. 1). I photographed and gps-ed the site. I learned that the Lexington No. 1 well supplies water directly to the distribution system first, and to the storage tank second. This well is equipped with two pumps, one 30 Hp and one 75 Hp, and two supply lines which combined into one mainline before exiting the well house to the distribution system.

Finally, we visited the 1 million gallon water tank in the foothills within City of Eagle's Sports Complex off of Horseshoe Bend Rd. The cylindrical tank was constructed in 2008 and measures 75 feet in diameter by 30 feet in depth. At the time of the field exam, the City had hired a contractor to fence-in and enclose the water tank to prevent further vandalism. The exam ended at the storage tank.

Condition Recommendations

Condition No. 1 (01M) was retained from the permit to the license.

Condition No. 2 (004) was removed because ownership of the diversion properties is no longer an issue.

Condition No. 3 (046) was removed because the well drilling is complete.

Condition No. 4 was removed because the permit holder has complied by supplying the Department with diversion records throughout the development period.

Condition No. 5 was retained because of protestant concerns at the time of permitting.

Condition No. 6 was modified to standard condition 102.

Condition No. 7 was modified to standard condition R19.

Condition No. 8 was retained from the permit to the license.

Condition No. 9 was modified to standard condition WB4.

Condition No. 10 was modified to standard condition F06.

Condition No. 11 was removed because the City well nomenclature is confirmed within this field exam.

Condition No. 12 was modified to standard condition 124.

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>
MUNICIPAL	1/01 to 12/31	3.150 CFS	434.00 AF
<u>Totals:</u>		3.150 CFS	434.00 AF

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

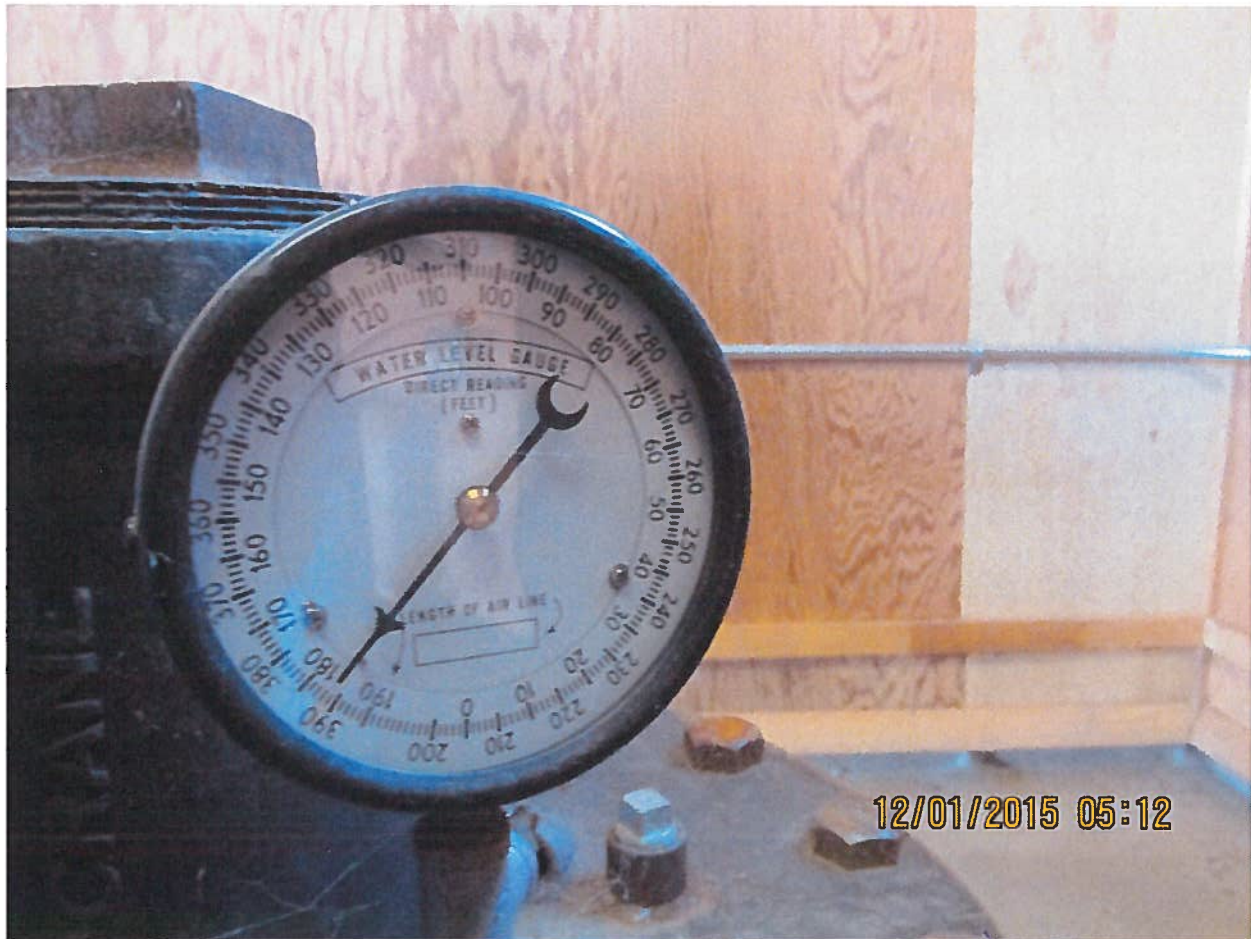
I. AUTHENTICATION

Field Examiner's Name Ashley Newberry Date 12/1/2015

Attachment to Field Exam Report 1/4/2015

I found evidence of compliance with permit condition no. 6 at the field examination: "The right holder is responsible on an on-going basis to provide a well suitable for monitoring as determined by the Department." I believe this permit condition was added as a part of the measures taken to pacify 90 protests to this permit application.

City of Eagle municipal well no. 2 does not currently produce water of a quality acceptable to be introduced into the distribution system. At one time during the development period, it was beneficially used, and the permit holder installed an instrument to measure depth-to-water.



A. Newberry
1-4-2016



Lexington

P1 Pump OK

High PSI OK

P1 VFD OK

AC Power OK

P2 Pump OK

Low PSI OK

P2 VFD OK

Well Int

System Status

23.75 ft	82 psi	0 gpm
Tank Level	Pressure	Aggregate Flow
0 %	0 gpm	0 gpm
Chem Pmp Spd	Flow 1	Flow 2

Well Pump 1



Auto

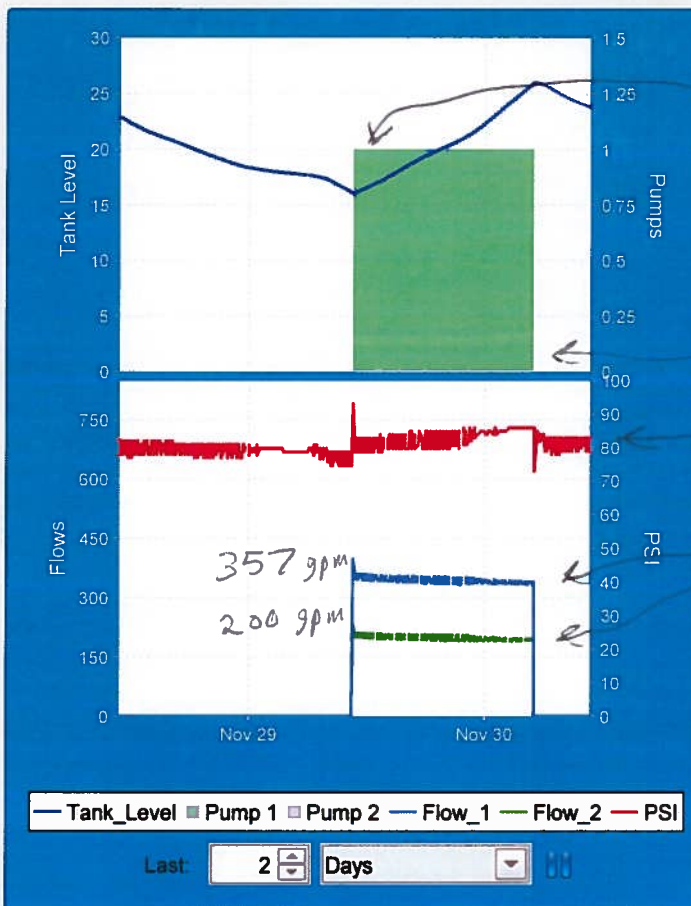
Runtime
10,886.0 hrs
Speed
94.0 %

Well Pump 2



Auto

Runtime
8,188.0 hrs
Speed
96.0 %



start
11/29/15
10:11 am

finish
11/30/15
5:09 am

pressure 93 high - 73 low
19 hrs runtime

557 gpm pump flow
634,980 gallons
per total run (1 time)

SCADA received
at Field exam

02-11413



Brookwood

ATS OK

P1 VFDOK

High PSI OK

Generator Off

AC Power OK

P1 Pump OK

Low PSI OK

Generator OK

Well Intr

System Status

388.2 ft

Well L

120.2 psi

Pressure

850 gpm

Flow

30 %

Chem Pump Spd

19.64 ft

Tank Level

Well Pump 3

100 HP, Max flow 800 GPM



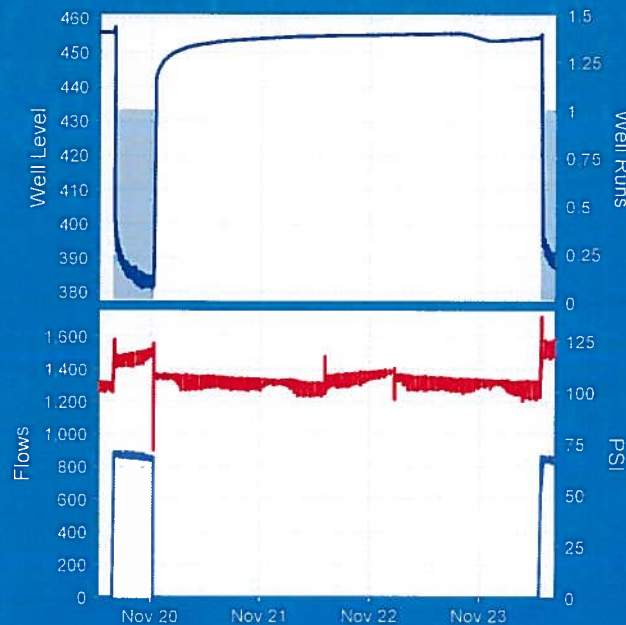
Auto

Runtime

32,767.0 hrs

Speed

84.0 %



Last:

100

Hours

☒	Active Time	Display Path	Name	Notes	Clear...	Current ...	Pri...	Ack Pip...	Act...
☒	11/23/15 1:2...	Eagle/Lexington	High Pressure Alarm	Reset by clicking on la...		Active, A...	High		3 h...

Acknowledge

Shelve

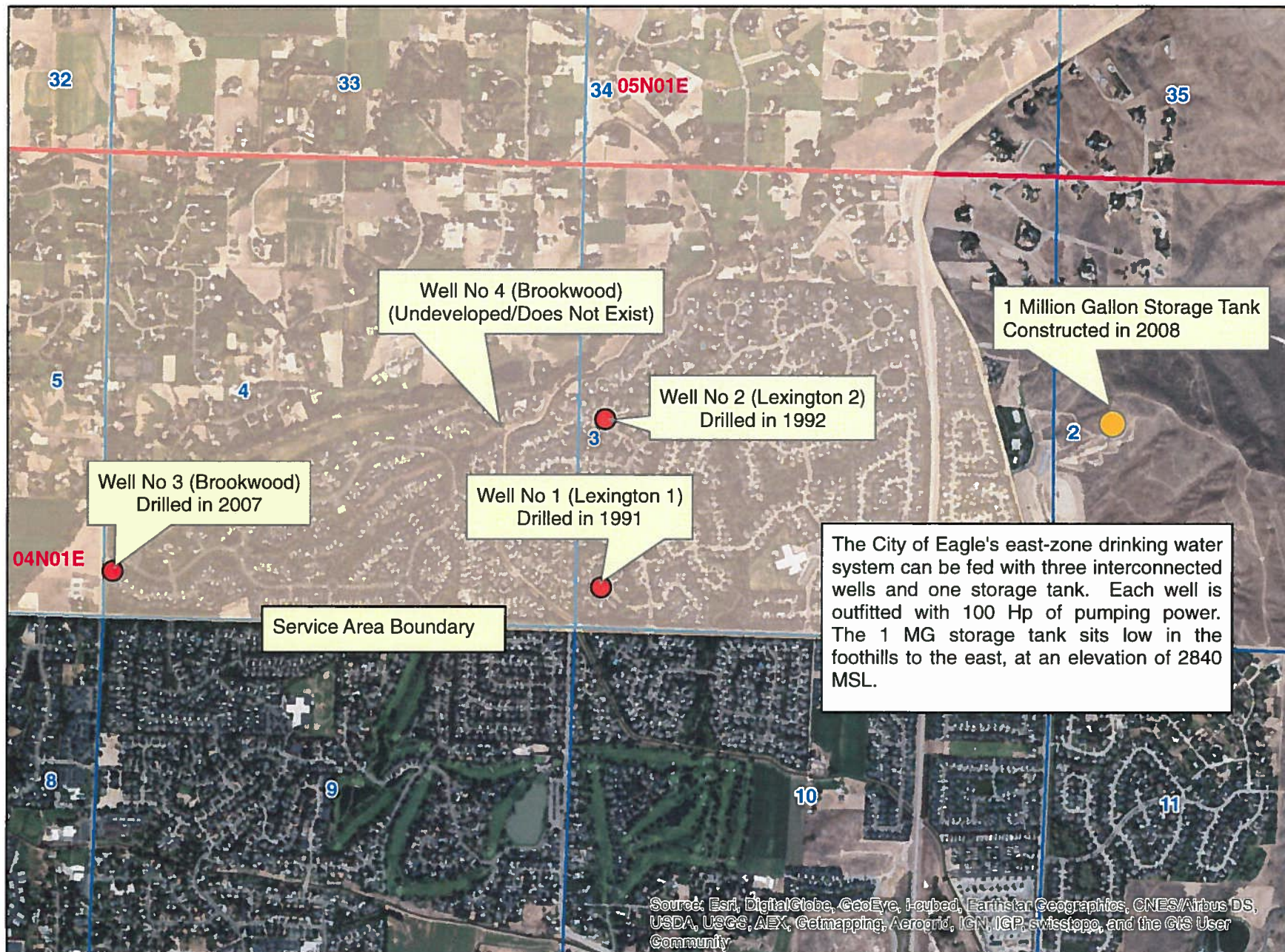
each run:
start
11/27/15
12:08 PM

9:07 PM 945 PM
8 hrs 59 m run
@ 850 gpm.

458,250 gallons
per TOTAL RUN (1 Time)

SCADA received
at Field Exam

63-11413



City of Eagle

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City Records

5/2/1992	12/6/1992	219	17,860,000	55	81,553	0.13	0.19	0.28	0.38	0.28	0.43	0.57
12/7/1992	6/29/1993	205	22,310,000	68	108,829	0.17	0.25	0.38	0.51	0.38	0.57	0.76
6/30/1993	12/28/1993	182	27,690,000	85	152,143	0.24	0.35	0.53	0.71	0.53	0.79	1.06
12/29/1993	6/24/1994	178	57,790,000	177	324,663	0.50	0.75	1.13	1.51	1.13	1.70	2.26
6/25/1994	1/3/1995	193	30,530,000	94	158,187	0.24	0.37	0.55	0.73	0.55	0.83	1.10
1/4/1995	6/30/1995	178	35,800,000	110	201,124	0.31	0.47	0.70	0.93	0.70	1.05	1.40
7/1/1995	12/31/1995	184	43,960,000	135	238,913	0.37	0.55	0.83	1.11	0.83	1.25	1.66

1/1/1999	3/31/1999	90	13,460,000	41.3	578	149,556	0.23	0.35	0.52	0.69	0.52	0.78	1.04
4/1/1999	6/30/1999	91	14,570,000	44.7	607	160,110	0.25	0.37	0.56	0.74	0.56	0.84	1.11
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10/1/1999	12/31/1999	91	68,280,000	209.5	696	750,330	1.16	1.74	2.61	3.48	2.61	3.92	5.22

*The theoretical MDD and PHD values from 1999 demonstrate that permit 63-11413 can be licensed for 3.15 cfs, the maximum value of the permit. The greatest diversion volume from this system also occurred in 1999, 434 AF

1/1/2000	3/31/2000	90	18,350,000	56.3	748	203,889	0.32	0.47	0.71	0.95	0.71	1.06	1.42
4/1/2000	6/30/2000	90	24,209,000	74.3	800	268,989	0.42	0.62	0.94	1.25	0.94	1.40	1.87
7/1/2000	9/30/2000	91	21,490,000	66.0		236,154	0.37	0.55	0.82	1.10	0.82	1.23	1.64
10/1/2000	12/31/2000	91	25,070,000	76.9		275,495	0.43	0.64	0.96	1.28	0.96	1.44	1.92
1/1/2001	3/31/2001	89	29,570,000	90.7		332,247	0.51	0.77	1.16	1.54	1.16	1.74	2.31
4/1/2001	6/30/2001	90	25,208,000	77.4		280,089	0.43	0.65	0.98	1.30	0.98	1.46	1.95
7/1/2001	9/30/2001	91	24,550,000	75.3		269,780	0.42	0.63	0.94	1.25	0.94	1.41	1.88
10/1/2001	12/31/2001												
1/1/2002	1/31/2002	31	7,600,000	23.3	958	245,161	0.38	0.57	0.85	1.14	0.85	1.28	1.71
2/1/2002	2/28/2002	28	5,703,000	17.5	977	203,679	0.32	0.47	0.71	0.95	0.71	1.06	1.42
3/1/2002	3/31/2002	31	5,933,000	18.2	989	191,387	0.30	0.44	0.67	0.89	0.67	1.00	1.33
4/1/2002	4/30/2002	30	7,124,000	21.9	1004	237,467	0.37	0.55	0.83	1.10	0.83	1.24	1.65
5/1/2002	5/31/2002	31	8,929,000	27.4	1008	288,032	0.45	0.67	1.00	1.34	1.00	1.50	2.01
6/1/2002	6/30/2002	30	9,102,000	27.9	1026	303,400	0.47	0.70	1.06	1.41	1.06	1.58	2.11
7/1/2002	7/31/2002	31	11,189,000	34.3	1040	360,935	0.56	0.84	1.26	1.68	1.26	1.88	2.51
8/1/2002	8/31/2002	31	10,229,000	31.4	1040	329,968	0.51	0.77	1.15	1.53	1.15	1.72	2.30
9/1/2002	9/30/2002	30	9,527,000	29.2	1040	317,567	0.49	0.74	1.11	1.47	1.11	1.66	2.21
10/1/2002	10/31/2002	31	8,806,000	27.0	1042	284,065	0.44	0.66	0.99	1.32	0.99	1.48	1.98
11/1/2002	11/30/2002	30	10,697,000	32.8	1070	356,567	0.55	0.83	1.24	1.66	1.24	1.86	2.48
12/1/2002	12/31/2002	31	6,729,000	20.7	1078	217,065	0.34	0.50	0.76	1.01	0.76	1.13	1.51
1/1/2003	1/31/2003	31	7,508,000	23.0	1083	242,194	0.37	0.56	0.84	1.12	0.84	1.26	1.69
2/1/2003	2/28/2003	28	5,818,000	17.9	1087	207,786	0.32	0.48	0.72	0.96	0.72	1.09	1.45
3/1/2003	3/31/2003	31	6,073,000	18.6	1097	195,903	0.30	0.45	0.68	0.91	0.68	1.02	1.36
4/1/2003	4/30/2003	30	7,325,000	22.5	1100	244,167	0.38	0.57	0.85	1.13	0.85	1.28	1.70
5/1/2003	5/31/2003	31	8,975,000	27.5	1127	289,516	0.45	0.67	1.01	1.34	1.01	1.51	2.02
6/1/2003	6/30/2003	30	10,595,000	32.5	1132	353,167	0.55	0.82	1.23	1.64	1.23	1.84	2.46
7/1/2003	7/31/2003	31	10,849,000	33.3	1139	349,968	0.54	0.81	1.22	1.62	1.22	1.83	2.44
8/1/2003	8/31/2003	31	11,617,000	35.7	1144	374,742	0.58	0.87	1.30	1.74	1.30	1.96	2.61
9/1/2003	9/30/2003	30	9,414,000	28.9	1152	313,800	0.49	0.73	1.09	1.46	1.09	1.64	2.18
10/1/2003	10/31/2003	31	8,501,000	26.1	1160	274,226	0.42	0.64	0.95	1.27	0.95	1.43	1.91
11/1/2003	11/30/2003	30	11,575,000	35.5	1166	385,833	0.60	0.90	1.34	1.79	1.34	2.01	2.69
12/1/2003	12/31/2003	31	8,110,000	24.9	1177	261,613	0.40	0.61	0.91	1.21	0.91	1.37	1.82
1/1/2004	1/31/2004	31	8,890,000	27.3	1182	286,774	0.44	0.67	1.00	1.33	1.00	1.50	2.00
2/1/2004	2/29/2004	29	8,330,000	25.6	1196	287,241	0.44	0.67	1.00	1.33	1.00	1.50	2.00
3/1/2004	3/31/2004	31	8,958,000	27.5	1197	288,968	0.45	0.67	1.01	1.34	1.01	1.51	2.01
4/1/2004	4/30/2004	30	15,883,000	48.7	1219	529,433	0.82	1.23	1.84	2.46	1.84	2.76	3.69
5/1/2004	5/31/2004	31	9,643,000	29.6	1222	311,065	0.48	0.72	1.08	1.44	1.08	1.62	2.17
6/1/2004	6/30/2004	30	10,025,000	30.8	1230	334,167	0.52	0.78	1.16	1.55	1.16	1.75	2.33
7/1/2004	7/31/2004	31	12,739,000	39.1	1238	410,935	0.64	0.95	1.43	1.91	1.43	2.15	2.86
8/1/2004	8/31/2004	31	12,029,000	36.9	1241	388,032	0.60	0.90	1.35	1.80	1.35	2.03	2.70
9/1/2004	9/30/2004	30	12,272,000	37.7	1248	409,067	0.63	0.95	1.42	1.90	1.42	2.14	2.85
10/1/2004	10/31/2004	31	8,353,000	25.6	1250	269,452	0.42	0.63	0.94	1.25	0.94	1.41	1.88
11/1/2004	11/30/2004	30	8,603,000	26.4	1255	286,767	0.44	0.67	1.00	1.33	1.00	1.50	2.00
12/1/2004	12/31/2004	31											

United Water Idaho Records

1/1/1996	1/31/1996	31	6,540,000	92	210,968	0.33	0.49	0.73	0.98	0.73	1.10	1.47
2/1/1996	2/29/1996	29	5,960,000	18	205,517	0.32	0.48	0.72	0.95	0.72	1.07	1.43
3/1/1996	3/31/1996	31	5,560,000	17	179,355	0.28	0.42	0.62	0.83	0.62	0.94	1.25
4/1/1996	4/30/1996	30	6,850,000	21	228,333	0.35	0.53	0.79	1.06	0.79	1.19	1.59
5/1/1996	5/31/1996	31	2,640,000	8	85,161	0.13	0.20	0.30	0.40	0.30	0.44	0.59
6/1/1996	6/30/1996	30	2,970,000	9	99,000	0.15	0.23	0.34	0.46	0.34	0.52	0.69
7/1/1996	7/31/1996	31	3,060,000	9	98,710	0.15	0.23	0.34	0.46	0.34	0.52	0.69
8/1/1996	8/31/1996	31	3,080,000	9	99,355	0.15	0.23	0.35	0.46	0.35	0.52	0.69
9/1/1996	9/30/1996	30	2,530,000	8	84,333	0.13	0.20	0.29	0.39	0.29	0.44	0.59
10/1/1996	10/31/1996	31	4,820,000	15	155,484	0.24	0.36	0.54	0.72	0.54	0.81	1.08
11/1/1996	11/30/1996	30	11,030,000	34	367,667	0.57	0.85	1.28	1.71	1.28	1.92	2.56
12/1/1996	12/31/1996	31	4,300,000	13	138,710	0.21	0.32	0.48	0.64	0.48	0.72	0.97
1/1/1997	1/31/1997	31	4,290,000	13	138,387	0.21	0.32	0.48	0.64	0.48	0.72	0.96
2/1/1997	2/28/1997	28	5,860,000	18	209,286	0.32	0.49	0.73	0.97	0.73	1.09	1.46
3/1/1997	3/31/1997	31	7,310,000	22	235,806	0.36	0.55	0.82	1.09	0.82	1.23	1.64
4/1/1997	4/30/1997	30	4,000,000	12	133,333	0.21	0.31	0.46	0.62	0.46	0.70	0.93
5/1/1997	5/31/1997	31	10,100,000	31	325,806	0.50	0.76	1.13	1.51	1.13	1.70	2.27
6/1/1997	6/30/1997	30	3,070,000	9	102,333	0.16	0.24	0.36	0.48	0.36	0.53	0.71
7/1/1997	7/31/1997	31	4,180,000	13	134,839	0.21	0.31	0.47	0.63	0.47	0.70	0.94
8/1/1997	8/31/1997	31	3,540,000	11	114,194	0.18	0.27	0.40	0.53	0.40	0.60	0.80
9/1/1997	9/30/1997	30	3,020,000	9	100,667	0.16	0.23	0.35	0.47	0.35	0.53	0.70
10/1/1997	10/31/1997	31	5,090,000	16	164,194	0.25	0.38	0.57	0.76	0.57	0.86	1.14
11/1/1997	11/30/1997	30	5,080,000	16	169,333	0.26	0.39	0.59	0.79	0.59	0.88	1.18
12/1/1997	12/31/1997	31	5,160,000	16	166,452	0.26	0.39	0.58	0.77	0.58	0.87	1.16
1/1/1998	1/31/1998	31	3,640,000	11	117,419	0.18	0.27	0.41	0.55	0.41	0.61	0.82
2/1/1998	2/28/1998	28	3,970,000	12	141,786	0.22	0.33	0.49	0.66	0.49	0.74	0.99
3/1/1998	3/31/1998	31	5,350,000	16	172,581	0.27	0.40	0.60	0.80	0.60	0.90	1.20
4/1/1998	4/30/1998	30	5,460,000	17	182,000	0.28	0.42	0.63	0.84	0.63	0.95	1.27
5/1/1998	5/31/1998	31	2,980,000	9	96,129	0.15	0.22	0.33	0.45	0.33	0.50	0.67
6/1/1998	6/30/1998	30	4,450,000	14	148,333	0.23	0.34	0.52	0.69	0.52	0.77	1.03
7/1/1998	7/31/1998	31	5,580,000	17	180,000	0.28	0.42	0.63	0.84	0.63	0.94	1.25
8/1/1998	8/31/1998	31	4,890,000	15	157,742	0.24	0.37	0.55	0.73	0.55	0.82	1.10
9/1/1998	9/30/1998	30	3,620,000	11	120,667	0.19	0.28	0.42	0.56	0.42	0.63	0.84
10/1/1998	10/31/1998	31	5,830,000	18	188,065	0.29	0.44	0.65	0.87	0.65	0.98	1.31
11/1/1998	11/30/1998	30	5,130,000	16	171,000	0.26	0.40	0.60	0.79	0.60	0.89	1.19
12/1/1998	12/31/1998	31	5,350,000	16	172,581	0.27	0.40	0.60	0.80	0.60	0.90	1.20
1/1/1999	1/31/1999	31	4,090,000	13	131,935	0.20	0.31	0.46	0.61	0.46	0.69	0.92
2/1/1999	2/28/1999	28	3,220,000	10	115,000	0.18	0.27	0.40	0.53	0.40	0.60	0.80
3/1/1999	3/31/1999	31	6,150,000	19	198,387	0.31	0.46	0.69	0.92	0.69	1.04	1.38
4/1/1999	4/30/1999	30	5,050,000	15	168,333	0.26	0.39	0.59	0.78	0.59	0.88	1.17
5/1/1999	5/31/1999	31	4,480,000	14	144,516	0.22	0.34	0.50	0.67	0.50	0.75	1.01
6/1/1999	6/30/1999	30	5,040,000	15	168,000	0.26	0.39	0.58	0.78	0.58	0.88	1.17
7/1/1999	7/31/1999	31	11,050,000	34	356,452	0.55	0.83	1.24	1.65	1.24	1.86	2.48
8/1/1999	8/31/1999	31	17,180,000	53	554,194	0.86	1.29	1.93	2.57	1.93	2.89	3.86
9/1/1999	9/30/1999	30	16,830,000	52	561,000	0.87	1.30	1.95	2.60	1.95	2.93	3.91
10/1/1999	10/31/1999	31	25,600,000	79	825,806	1.28	1.92	2.88	3.83	2.88	4.31	5.75
11/1/1999	11/30/1999	30	32,650,000	100	1,088,333	1.68	2.53	3.79	5.05	3.79	5.68	7.58
*The theoretical MDD and PHD values from 1999 demonstrate that permit 63-11413 can be licensed for 3.15 cfs, the maximum value of the permit. The greatest diversion volume from this system also occurred in 1999, 434 AF.												
12/1/1999	12/31/1999	31	10,030,000	31	323,548	0.50	0.75	1.13	1.50	1.13	1.69	2.25
1/1/2000	1/31/2000	31	5,970,000	18	192,581	0.30	0.45	0.67	0.89	0.67	1.01	1.34
2/1/2000	2/29/2000	29	6,390,000	20	220,345	0.34	0.51	0.77	1.02	0.77	1.15	1.53
3/1/2000	3/31/2000	31	5,990,000	18	193,226	0.30	0.45	0.67	0.90	0.67	1.01	1.35
4/1/2000	4/30/2000	30	9,260,000	28	308,667	0.48	0.72	1.07	1.43	1.07	1.61	2.15
5/1/2000	5/31/2000	31	6,190,000	19	199,677	0.31	0.46	0.70	0.93	0.70	1.04	1.39
6/1/2000	6/30/2000	30	8,480,000	26	282,667	0.44	0.66	0.98	1.31	0.98	1.48	1.97
7/1/2000	7/31/2000	31	8,690,000	27	280,323	0.43	0.65	0.98	1.30	0.98	1.46	1.95
8/1/2000	8/31/2000	31	7,390,000	23	238,387	0.37	0.55	0.83	1.11	0.83	1.24	1.66
9/1/2000	9/30/2000	30	5,410,000	17	180,333	0.28	0.42	0.63	0.84	0.63	0.94	1.26
10/1/2000	10/31/2000	31	7,880,000	24	254,194	0.39	0.59	0.88	1.18	0.88	1.33	1.77
11/1/2000	11/30/2000	30	9,420,000	29	314,000	0.49	0.73	1.09	1.46	1.09	1.64	2.19
12/1/2000	12/31/2000	31	7,770,000	24	250,645	0.39	0.58	0.87	1.16	0.87	1.31	1.75

THEORETICAL HORSEPOWER EQUATION WORKSHEET

Water Right No.: 63-11413
 Reviewer: Ashley Newbry
 Date of Review: 12/4/2015

P/D No.:	Well 1 Lexington 1	Well 2 Lexington 2	Well 3 Brookwood
PUMP HORSEPOWER (HP)	105	75	100
BOOSTER HORSEPOWER (HP)	0	0	0
PUMPING LEVEL (FT)	153	305	155
DISCHARGE PRESSURE (PSI)	60	50	60
RATE OF FLOW (CFS)	2.218	1.099	2.098
RATE OF FLOW (GPM)	995.6	493.1	941.7
designed tdh	292 tdh	420 tdh	294 tdh
TOTAL DYNAMIC HEAD (FT)	291.6	420.5	293.6

The above calculates the formula =

$$Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}}$$

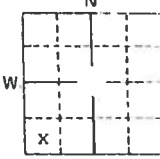
Assumptions: %70 efficiency.
 No Friction

Examiners Notes:

TDH values were determined from the City Master Water Plan excerpt in the field exam report for 63-12448. TDH values provided by the report demonstrate that pumps are not currently set near the bottom of each well.

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORTState law requires that this report be filed with the Director, Department of Water Resources
within 30 days after the completion or abandonment of the well.USE TYPEWRITER OR
BALLPOINT PEN

MAY - 1 1991

1. WELL OWNER Name <u>Floating Feather Hills, Inc.</u> Address <u>2417 Bank Drive-Suite 101</u> <u>Boise, ID 83705</u> Owner's Permit No. <u>63-91-W-044</u> <u>63-11413 (App. Pending)</u>		7. WATER LEVEL Department of Water Resources Western Regional Office Static water level <u>68</u> feet below land surface. Flowing? ☐ Yes ☐ No G.P.M. flow _____ Artesian closed-in pressure _____ p.s.i. Controlled by: ☐ Valve ☐ Cap ☐ Plug Temperature _____ °F. Quality _____ <i>Describe artesian or temperature zones below.</i>																																																																																																																																																																																																																
2. NATURE OF WORK ☒ New well ☐ Deepened ☐ Replacement ☐ Well diameter increase Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)		8. WELL TEST DATA ☐ Pump ☐ Bailor ☐ Air ☐ Other _____																																																																																																																																																																																																																
3. PROPOSED USE ☐ Domestic ☐ Irrigation ☒ Test ☐ Municipal ☐ Industrial ☐ Stock ☐ Waste Disposal or Injection ☐ Other _____ (specify type)		<table border="1"><thead><tr><th>Discharge G.P.M.</th><th>Pumping Level</th><th>Hours Pumped</th></tr></thead><tbody><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></tbody></table>		Discharge G.P.M.	Pumping Level	Hours Pumped																																																																																																																																																																																																												
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5. WELL CONSTRUCTION Casing schedule: ☒ Steel ☐ Concrete ☐ Other Thickness Diameter From To .250 inches 16 inches + 18" feet 215 feet .250 inches 16 inches 265 feet 375 feet .250 inches 16 inches 385 feet 405 feet inches inches feet feet Was casing drive shoe used? ☐ Yes ☒ No Was a packer or seal used? ☐ Yes ☒ No Perforated? ☐ Yes ☒ No How perforated? ☐ Factory ☐ Knife ☐ Torch ☐ Gun Size of perforation inches by inches Number From To perforations feet feet perforations feet feet perforations feet feet Well screen installed? ☒ Yes ☐ No Manufacturer's name <u>Roscoe Moss</u> Type <u>Hvy. Stainless Steel</u> Model No. <u>Wirewrap</u> Diameter <u>16"</u> Slot size <u>0.40</u> Set from <u>215</u> feet to <u>265</u> feet Diameter <u>16"</u> Slot size <u>0.40</u> Set from <u>375</u> feet to <u>385</u> feet Gravel packed? ☒ Yes ☐ No ☐ Size of gravel <u>3/8-</u> Placed from <u>315</u> feet to <u>190</u> feet Surface seal depth <u>90'</u> ☒ Cement grout Sealed also at <u>190'</u> ☐ Mudfilling clay Sealing procedure used: ☐ Slurry pit ☐ Temp. surface casing ☐ Overbore to seal depth Method of joining casing: ☐ Threaded ☒ Welded ☐ Solvent Weld ☐ Cemented between strata Describe access port <u>2"</u>		10. Work started <u>2/26/91</u> finished <u>3/7/91</u>																																																																																																																																																																																																																
6. LOCATION OF WELL Sketch map location must agree with written location:  Subdivision Name _____ Lot No. _____ Block No. _____ County <u>Ada</u> SW SE SW 3 T 4N S 1 R 1E W 1		11. DRILLERS CERTIFICATION I/We certify that all minimum well construction standards were complied with at the time the rig was removed. PETE COPE DRILLING CO., INC. 213 Firm Name _____ Firm No. _____ Address <u>6505 W. Chinden Blvd.</u> <u>Meridian, ID</u> Date <u>3/12/91</u> Signed by (Firm Official) <u>[Signature]</u> and (Operator) <u>Kevin Chastain</u>																																																																																																																																																																																																																

USE ADDITIONAL SHEETS IF NECESSARY - FORWARD THE WHITE COPY TO THE DEPARTMENT

Lexington No. 1

63-11413

WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

USE TYPEWRITER OR

MAY - 1 1991

[illegible]

USE ADDITIONAL SHEETS IF NECESSARY – FORWARD THE WHITE COPY TO THE DEPARTMENT

Lexington No. 1 (cont'd)

63-11413

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

USE TYPEWRITER OR
BALLPOINT PEN

State law requires that this report be filed with the Director, Department of Water Resources
within 30 days after the completion or abandonment of the well.

1. WELL OWNER Name <u>LEXINGTON HILLS INC.</u> Address <u>2417 BANK DR BOISE ID 83705</u> Drilling Permit No. <u>63-92-W-11413</u> Water Right Permit No. <u>11413</u>	7. WATER LEVEL Static water level <u>90</u> feet below land surface. Flowing? ☐ Yes ☐ No G.P.M. flow _____ Artesian closed-in pressure _____ p.s.i. Controlled by: ☐ Valve ☐ Cap ☐ Plug Temperature _____ °F. Quality _____ <i>Describe artesian or temperature zones below</i>																																																																																																																																																																																																										
2. NATURE OF WORK <u>NEW WELL</u> ☐ New well ☐ Deepened ☐ Replacement ☐ Well diameter increase ☐ Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)	8. WELL TEST DATA <u>NOT AVAILABLE</u> ☐ Pump ☐ Bailor ☐ Air ☐ Other _____ <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Discharge G.P.M.</th><th>Pumping Level</th><th>Hours Pumped</th></tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Discharge G.P.M.	Pumping Level	Hours Pumped																																																																																																																																																																																																							
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3. PROPOSED USE <u>MUNICIPAL</u> ☐ Domestic ☐ Irrigation ☐ Test ☐ Municipal ☐ Industrial ☐ Stock ☐ Waste Disposal or Injection ☐ Other _____ (specify type)	9. LITHOLOGIC LOG <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Bore Diam.</th><th colspan="2">Depth</th><th rowspan="2">Material</th><th colspan="2">Water</th></tr> <tr> <th>From</th><th>To</th><th>Yes</th><th>No</th></tr> </thead> <tbody> <tr><td>28</td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td>0</td><td>4</td><td> </td><td>TOPSOIL</td><td> </td><td>X</td></tr> <tr><td>4</td><td>10</td><td> </td><td>SANDY LOAM</td><td> </td><td>X</td></tr> <tr><td>10</td><td>15</td><td> </td><td>GLEACHE</td><td> </td><td>X</td></tr> <tr><td>15</td><td>20</td><td> </td><td>CRSE SAND</td><td> </td><td>X</td></tr> <tr><td>30</td><td>33</td><td> </td><td>BROWN CLAY</td><td> </td><td>X</td></tr> <tr><td>33</td><td>50</td><td> </td><td>CRSE SAND</td><td> </td><td>X</td></tr> <tr><td>50</td><td>56</td><td> </td><td>BRN CLAY</td><td> </td><td>X</td></tr> <tr><td>56</td><td>101</td><td> </td><td>CEMENTED GRAVEL</td><td>X</td><td> </td></tr> <tr><td>101</td><td>115</td><td> </td><td>BRN CLAY</td><td> </td><td>X</td></tr> <tr><td>115</td><td>123</td><td> </td><td>FINE BRN SAND</td><td>X</td><td> </td></tr> <tr><td>123</td><td>126</td><td> </td><td>BRN CLAY</td><td> </td><td>X</td></tr> <tr><td>126</td><td>143</td><td> </td><td>FINE BRN SAND</td><td>X</td><td> </td></tr> <tr><td>143</td><td>172</td><td> </td><td>BRN CLAY</td><td> </td><td>X</td></tr> <tr><td>172</td><td>235</td><td> </td><td>GREY CLAY</td><td> </td><td>X</td></tr> <tr><td>235</td><td>350</td><td> </td><td>SANDY GREY CLAY</td><td> </td><td>X</td></tr> <tr><td>350</td><td>353</td><td> </td><td>FINE TO CRSE SAND</td><td>X</td><td> </td></tr> <tr><td>353</td><td>451</td><td> </td><td>SANDY GREY CLAY</td><td> </td><td>X</td></tr> <tr><td>451</td><td>469</td><td> </td><td>FINE GREY SAND</td><td>X</td><td> </td></tr> <tr><td>469</td><td>475</td><td> </td><td>FINE SAND AND CLAY</td><td> </td><td>X</td></tr> <tr><td>475</td><td>478</td><td> </td><td>FINE SAND</td><td>X</td><td> </td></tr> <tr><td>478</td><td>499</td><td> </td><td>SANDY GREY CLAY</td><td> </td><td>X</td></tr> <tr><td>499</td><td>513</td><td> </td><td>FINE TO MED SAND</td><td>X</td><td> </td></tr> <tr><td>513</td><td>519</td><td> </td><td>GREY CLAY</td><td> </td><td>X</td></tr> <tr><td>519</td><td>528</td><td> </td><td>FINE TO MED SAND</td><td>X</td><td> </td></tr> <tr><td>528</td><td>553</td><td> </td><td>GREY CLAY</td><td> </td><td>X</td></tr> <tr><td>553</td><td>555</td><td> </td><td>FINE TO MED SAND</td><td>X</td><td> </td></tr> <tr><td>555</td><td>561</td><td> </td><td>GREY CLAY</td><td> </td><td>X</td></tr> <tr><td>561</td><td>575</td><td> </td><td>FINE TO MED SAND</td><td>X</td><td> </td></tr> <tr><td>575</td><td>592</td><td> </td><td>GREY CLAY</td><td> </td><td>X</td></tr> <tr><td>592</td><td>598</td><td> </td><td>FINE TO MED SAND</td><td>X</td><td> </td></tr> <tr><td>598</td><td>615</td><td> </td><td>GREY CLAY</td><td> </td><td>X</td></tr> </tbody> </table>	Bore Diam.	Depth		Material	Water		From	To	Yes	No	28						0	4		TOPSOIL		X	4	10		SANDY LOAM		X	10	15		GLEACHE		X	15	20		CRSE SAND		X	30	33		BROWN CLAY		X	33	50		CRSE SAND		X	50	56		BRN CLAY		X	56	101		CEMENTED GRAVEL	X		101	115		BRN CLAY		X	115	123		FINE BRN SAND	X		123	126		BRN CLAY		X	126	143		FINE BRN SAND	X		143	172		BRN CLAY		X	172	235		GREY CLAY		X	235	350		SANDY GREY CLAY		X	350	353		FINE TO CRSE SAND	X		353	451		SANDY GREY CLAY		X	451	469		FINE GREY SAND	X		469	475		FINE SAND AND CLAY		X	475	478		FINE SAND	X		478	499		SANDY GREY CLAY		X	499	513		FINE TO MED SAND	X		513	519		GREY CLAY		X	519	528		FINE TO MED SAND	X		528	553		GREY CLAY		X	553	555		FINE TO MED SAND	X		555	561		GREY CLAY		X	561	575		FINE TO MED SAND	X		575	592		GREY CLAY		X	592	598		FINE TO MED SAND	X		598	615		GREY CLAY		X
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4. METHOD DRILLED <u>REVERSE ROTARY</u> ☐ Rotary ☐ Air ☐ Hydraulic ☐ Reverse rotary ☐ Cable ☐ Dug ☐ Other _____	10. Work started <u>4/4/92</u> finished <u>4/14/92</u>																																																																																																																																																																																																										
5. WELL CONSTRUCTION <u>SEE ATTACHED</u> Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____ Thickness _____ inches Diameter _____ inches From _____ feet To _____ feet Was casing drive shoe used? ☐ Yes ☒ No Was a packer or seal used? ☐ Yes ☒ No Perforated? ☐ Yes ☒ No How perforated? ☐ Factory ☐ Knife ☐ Torch ☐ Gun Size of perforation _____ inches by _____ inches Number _____ perforations From _____ feet To _____ feet _____ perforations _____ feet _____ feet _____ perforations _____ feet _____ feet Well screen installed? ☒ Yes ☐ No Manufacturer's name <u>ROSCOE MOSS</u> Type <u>STAINLESS</u> Model No <u>HEAVY</u> Diameter _____ Slot size _____ Set from _____ feet to _____ feet Diameter _____ Slot size _____ Set from _____ feet to _____ feet Gravel packed? ☒ Yes ☐ No ☐ Size of gravel <u>3/8</u> Placed from <u>115</u> feet to <u>615</u> feet Surface seal depth <u>15</u> Material used in seal: ☒ Cement grout ☒ Bentonite ☐ Pudding clay ☐ _____ Sealing procedure used: ☐ Slurry pit ☐ Temp. surface casing ☒ Overbore to seal depth Method of joining casing: ☐ Threaded ☒ Welded ☐ Solvent Weld _____ ☐ Cemented between strata Describe access port <u>2" PIPE</u>	11. DRILLERS CERTIFICATION I/We certify that all minimum well construction standards were complied with at the time the rig was removed. Firm Name <u>PETE COPE DRILLING</u> Firm No. <u>213</u> Address <u>505 W CHINDEN</u> Date <u>4/14/92</u> Signed by (Firm Official) <u>Joseph Jones</u> and (Operator) <u>Joseph Jones</u>																																																																																																																																																																																																										
6. LOCATION OF WELL Sketch map location must agree with written location Subdivision Name _____ County <u>ADA</u> Lot No. _____ Block No. _____ NW ¼ Sec. <u>3</u> T. <u>4N</u> R. <u>1E</u> W ☐	12. ADDITIONAL SHEETS IF NECESSARY - FORWARD THE WHITE COPY TO THE DEPARTMENT																																																																																																																																																																																																										

Lexington No. 2

63-11413

Form 238-7
6/02

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

1. WELL TAG NO. D 0047605
DRILLING PERMIT NO. 897368-843489
Water Right or Injection Well No. 63-12448

2. OWNER:
Name CITY OF EAGLE
Address PO Box 1520
City EAGLE State ID Zip 83616

3. LOCATION OF WELL by legal description: WELL #3
You must provide address or Lot, Blk, Sub. or Directions to well.
Twp. 4 North ☒ or South ☐
Rge. 1 East ☒ or West ☐
Sec. 4 1/4 SW 1/4 SW 1/4
Gov't Lot _____ County ADA
Lat: N43: 42: 47.6 Long: W116: 21: 21.5
Address of Well Site APPROX 300 FT NORTH OF EAGLE RD +
FLOATING FEATHER City EAGLE
(Give at least name of road + Distance to Road or Landmark)
Lt. _____ Blk. _____ Sub. Name BROOKWOOD SUB.

4. USE:
☐ Domestic ☒ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other

5. TYPE OF WORK check all that apply (Replacement etc.)
☒ New Well ☐ Modify ☐ Abandonment ☐ Other

6. DRILL METHOD:
☐ Air Rotary ☐ Cable ☐ Mud Rotary ☒ Other REVERSE

7. SEALING PROCEDURES

Seal Material	From	To	Weight / Volume	Seal Placement Method
BENTONITE	0	206	28,000	DRY POUR
BENTONITE	330	364	5,000	DRY POUR

Was drive shoe used? ☐ Y ☒ N Shoe Depth(s) _____
Was drive shoe seal tested? ☐ Y ☒ N How? _____

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
12	+3	244	.315	STEEL	☒	☐	☒	☐
12	314	324	.375	Steel	☒	☐	☒	☐

Length of Headpipe _____ Length of Tailpipe 10'
Packer ☐ Y ☒ N Type _____

9. PERFORATIONS/SCREENS PACKER TYPE

Perforation Method _____
Screen Type & Method of Installation JOHNSON WIRE WRAP

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
244	314	.030		12	S.S.	☒	☐

10. FILTER PACK

Filter Material	From	To	Weight / Volume	Placement Method
#8 - 12 SAND	206	330	27,000	DRY POUR

11. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

87 ft. below ground Artesian pressure _____ lb.
Depth flow encountered _____ ft. Describe access port or control devices: 1 1/2" pipe on side

12. WELL TESTS:

☒ Pump	☐ Bailor	☐ Air	☐ Flowing Artesian
Yield gal./min.	Drawdown	Pumping Level	Time
1000 gpm	25'	52	72 hrs

Water Temp. _____ Bottom hole temp. _____
Water Quality test or comments: _____

13. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
24"	0	8	TOP SOIL		
24"	8	54	MED - COARSE SAND, RIVER CORALS		
24"	54	75	BRN CLAY		
24"	75	94	MED - COARSE BRN SAND		
24"	94	100	BRN CLAY		
24"	100	108	SAND		
24"	108	113	BRN CLAY		
24"	113	165	MED - COARSE SAND, PEA GRAVEL		
24"	165	167	BRN CLAY		
24"	167	204	FINE - MED SAND		
24"	204	206	BRN CLAY		
24"	206	244	MED - COARSE SAND		
24"	244	284	FINE - MED SAND		
24"	284	324	MED - COARSE SAND		
24"	324	354	FINE SAND		
24"	354	364	FINE - COARSE SAND		

RECEIVED

MAR 20 2007

WATER RESOURCES
WESTERN REGION

Completed Depth 324' (Measurable)
Date: Started 11-27-06 Completed 3-2-07

14. DRILLER'S CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Company Name RIVERSIDE INC Firm No. 333
Principal Driller [Signature] Date 3-15-07
and Driller or Operator II Jeff Johnson Date 3-15-07
Operator I _____ Date _____

Principal Driller and Rig Operator Required.
Operator I must have signature of Driller/Operator II.

FORWARD WHITE COPY TO WATER RESOURCES

Brookwood (city well 3)

63-1141

Lexington # 1

pump 2 1- Gould model 6CHC, 250 gpm sub.
 @ 96.0% speed w/ 30 hp franklin motor 2366169020 460 volt 39.5 amp
 3 phase 60 cy.

pump 1 1- Crown model BL-600-4, 600 gpm sub.
 @ 94.0% speed w/ 75 hp sub motor 460 volt 540 gpm @ 420 t/h

Lexington # 2 (not used)

1- Crown BL 600-4 with 75 hp sub motor 460 volt
 540 gpm at 420 t/h

Brookwood # 3

SO2D BY Riverside inc fiveside@rsi corp.net
 Parma, Idaho

Pump Berkeley 8T series 8T100-950

@ 84.0% speed motor - 8" model 239604 100 hp 460 volt

Anewbury Note:

"Crown Pump" no longer exists as a pump manufacturer. They were acquired by Sulzer, who mostly produces pumps for industrial & wastewater applications.

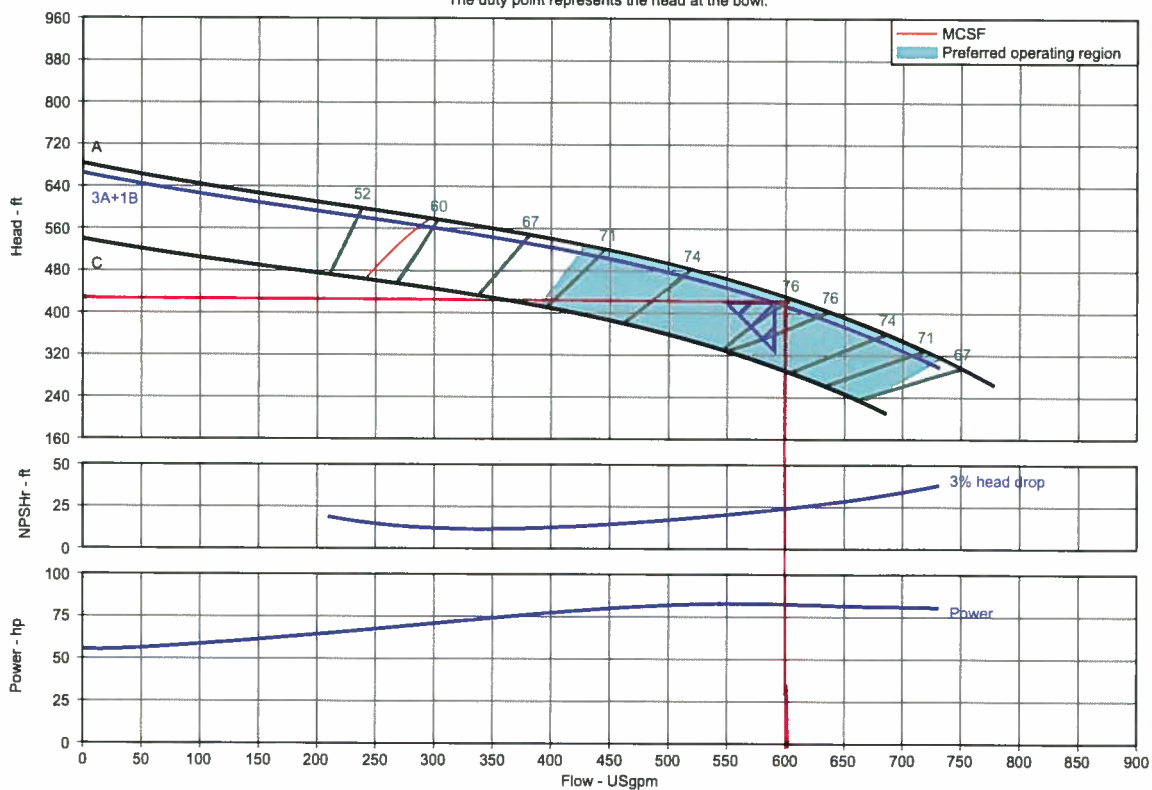
Crown Pump manufacturer info. is no longer available.

63-11413

Pump Performance Datasheet

Customer :		Sulzer Reference ID :	XXX.1552-NSP.15.0019-P0
Inquiry Number/ID :		Type / Size :	CS-8L
Item number :	069	Stages :	4 (3 / 1x / 0x)
Service :		Based on curve number :	CS-08L-EC3352 Rev A
Quantity :	1	Date of Last Update :	08 Dec 2015 1:41 PM
Operating Conditions		Liquid	
Flow, rated :	590.0 USgpm	Liquid type :	Water
Differential head / pressure, rated (requested) :	420.0 ft	Additional liquid description :	
Suction pressure, rated / max :	0.00 / 0.00 psi.g	Solids diameter, max :	0.00 in
NPSH available, rated :	Ample	Solids concentration, by volume :	0.00 %
Frequency :	60 Hz	Temperature, rated / max :	68.00 / 68.00 deg F
Performance		Fluid density, rated / max :	1.000 / 1.000 SG
Speed, rated :	3525 rpm	Viscosity, rated :	1.00 cP
Impeller diameter, rated :	3A+1B	Vapor pressure, rated :	0.34 psi.a
Impeller diameter, maximum :	A	Material	
Impeller diameter, minimum :	C	Material selected :	Cast Iron / Bronze
Efficiency (bowl / pump) :	75.8 / 74.9 %	Pressure Data	
NPSH (3% head drop) / margin required :	23.3 / 3.0 ft	Maximum casing/bowl working pressure :	See the Additional Data page
Ns (imp. eye flow) / Nss (imp. eye flow) :	2,700 / 7,650 US Units	Maximum allowable working pressure :	See the Additional Data page
MCSF :	296.4 USgpm	Maximum allowable suction pressure :	150.0 psi.g
Head, maximum, rated diameter :	665.0 ft	Hydrostatic test pressure :	See the Additional Data page
Head rise to shutoff (bowl / pump) :	58.17 / 59.09 %	Driver & Power Data	
Flow, best eff. point (bowl / pump) :	611.0 / 607.3 USgpm	Driver sizing specification :	Rated power
Flow ratio, rated / BEP (bowl / pump) :	96.57 / 97.15 %	Margin over specification :	0.00 %
Diameter ratio (rated / max) :	100.00 %	Service factor :	1.00
Head ratio (rated dia / max dia) :	95.91 %	Power, hydraulic :	62.62 hp
Cq/Ch/Ce/Cn [ANSI/HI 9.6.7-2010] :	1.00 / 1.00 / 1.00 / 1.00	Power (bowl / pump) :	82.58 / 83.08 hp
Selection status :	Acceptable	Power, maximum, rated diameter :	83.28 hp
		Minimum recommended motor rating :	100.00 hp / 74.57 kW

Bowl performance. Adjusted for construction and viscosity.
The duty point represents the head at the bowl.

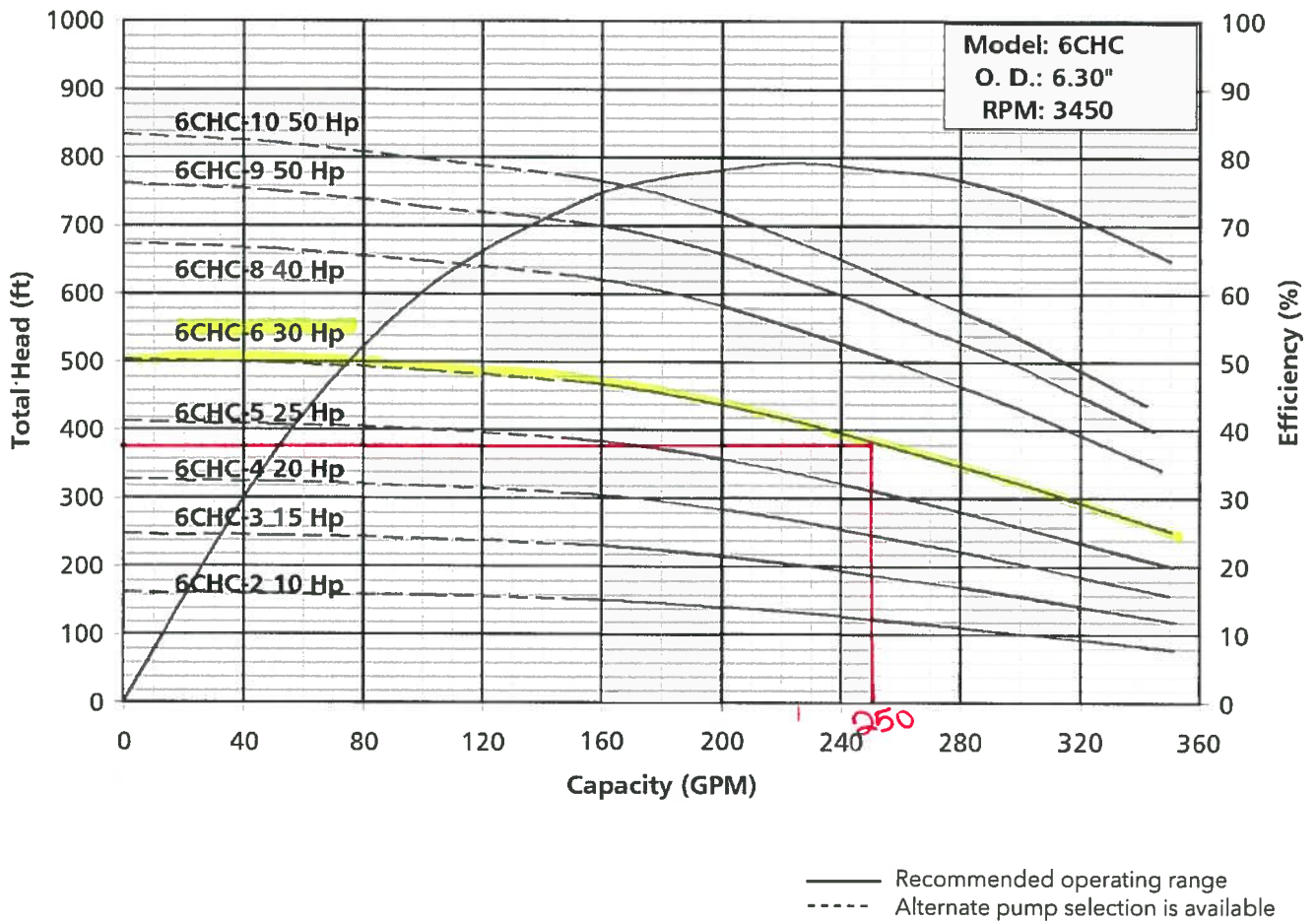


Lexington 1, pump 1

63-11413

Turbine

MODEL 6CHC 250 GPM



DIMENSIONS AND WEIGHTS

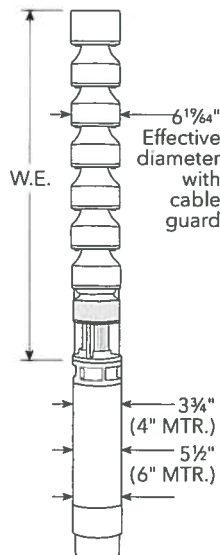
HP	Stages	W.E. Order Number	W.E. Length	W.E. Wt. (lbs.)
10	2	C06CHC010A64B	24.6	72
15	3	C06CHC015A64B	29.7	89
20	4	C06CHC020A64B	34.8	106
25	5	C06CHC025A64B	40.0	123
30	6	C06CHC030A64B	50.3	157
40	8	C06CHC040A64B	55.4	174
50	9	C06CHC050B64B	60.5	191
50	10	C06CHC050A64B	65.6	208

(All dimensions in inches and weights in lbs. Do not use for construction purposes.)

NOTES:

1. All dimensions in inches and weights in lbs.
2. Solid line is recommended operating range.
3. For intermediate horsepower pumps consult factory.
4. Please specify all options changes in W.E. order number.
5. 50 hp performance curve based on using 8" motor with 6" flange. Consult factory if you want 6" motor.

4" NPT DISCHARGE CONNECTION



MATERIALS OF CONSTRUCTION

Part Name	Material
Shaft	ASTM A582 S41600
Coupling	ASTM A582 S41600
Suction Adapter	ASTM A536 Gr. 60-40-18
Suction Bearing	ASTM B584 C89835
Impeller	ASTM A744 CF8M
Taperlock	ASTM A108 Gr. 1018
Intermediate Bowl	ASTM A49 Cl. 30B
Intermediate Bowl Bearing	ASTM B584 C89835 (Std.)
Intermediate Bowl Bearing	Rubber (optional)
Upthrust Collar	Polyethylene
Discharge Bowl	ASTM A48 Cl. 30B
Discharge Bowl Bearing	ASTM B584 C89835
Fasteners	SAE J429 Gr. 8
Cable Guard	ASTM A240 S30400
Suction Strainer	ASTM A240 S30400

Lexington No 1, Pump 2

63-11413

6" Submersible Motors Standard

Franklin Electric

6-Inch Models

HP (KW)	CONSTRUCTION	DESCRIPTION							MODEL	STOCK STATUS
		PH	VOLTS	HZ	SUBTROL HEAT SENSOR	S.F.	# LEADS	WIRE SIZE (AWG)		
30 hp 22 kW	WATER WELL	3P	200-208	60	Not Available	1.15	3	#8 w/GND	236 656 90	YES
		3P	220	50	Not Available	1.00	3	#8 w/GND	236 686 90	
		3P	220	50	Not Available	1.00	6-90°	#10 w/GND	236 676 90	
		3P	230	60	Not Available	1.15	3	#8 w/GND	236 606 90	YES
		3P	230	60	Not Available	1.15	6-90°	#10 w/GND	236 726 90	
		3P	380	60	Not Available	1.15	3	#10 w/GND	236 666 90	YES
		3P	380	60	Not Available	1.15	6-90°	#10 w/GND	236 786 90	
		3P	415	50	Not Available	1.00	3	#10 w/GND	236 696 90	
		3P	460/380-415	60/50	Not Available	1.15/1.00	3	#10 w/GND	236 616 90	YES
		3P	460/380-415	60/50	Not Available	1.15/1.00	6-90°	#10 w/GND	236 716 90	YES
		3P	575	60	Not Available	1.15	3	#10 w/GND	236 626 90	
	SAND FIGHTER	3P	200-208	60	YES	1.15	3	#8 w/GND	236 656 81	YES
		3P	220	50	YES	1.00	3	#8 w/GND	236 686 81	
		3P	220	50	YES	1.00	6-90°	#10 w/GND	236 676 81	
		3P	230	60	YES	1.15	3	#8 w/GND	236 606 81	YES
		3P	230	60	YES	1.15	6-90°	#10 w/GND	236 726 81	YES
		3P	380	60	YES	1.15	3	#10 w/GND	236 666 81	
		3P	380	60	YES	1.15	6-90°	#10 w/GND	236 786 81	
		3P	415	50	YES	1.00	3	#10 w/GND	236 696 81	
		3P	460/380-415	60/50	YES	1.15/1.00	3	#10 w/GND	236 616 81	YES
		3P	460/380-415	60/50	YES	1.15/1.00	6-90°	#10 w/GND	236 716 81	
		3P	575	60	YES	1.15	3	#10 w/GND	236 626 81	YES
	316 SS	3P	200-208	60	YES	1.15	3	#8 w/GND	236 656 40	
		3P	220	50	YES	1.00	3	#8 w/GND	236 686 40	
		3P	220	50	YES	1.00	6-90°	#10 w/GND	236 676 40	
		3P	230	60	YES	1.15	3	#8 w/GND	236 606 40	
		3P	230	60	YES	1.15	6-90°	#10 w/GND	236 726 40	
		3P	380	60	YES	1.15	3	#10 w/GND	236 666 40	
		3P	380	60	YES	1.15	6-90°	#10 w/GND	236 786 40	
		3P	415	50	YES	1.00	3	#10 w/GND	236 696 40	
		3P	460/380-415	60/50	YES	1.15/1.00	3	#10 w/GND	236 616 40	YES
		3P	460/380-415	60/50	YES	1.15/1.00	6-90°	#10 w/GND	236 716 40	
		3P	575	60	YES	1.15	3	#10 w/GND	236 626 40	

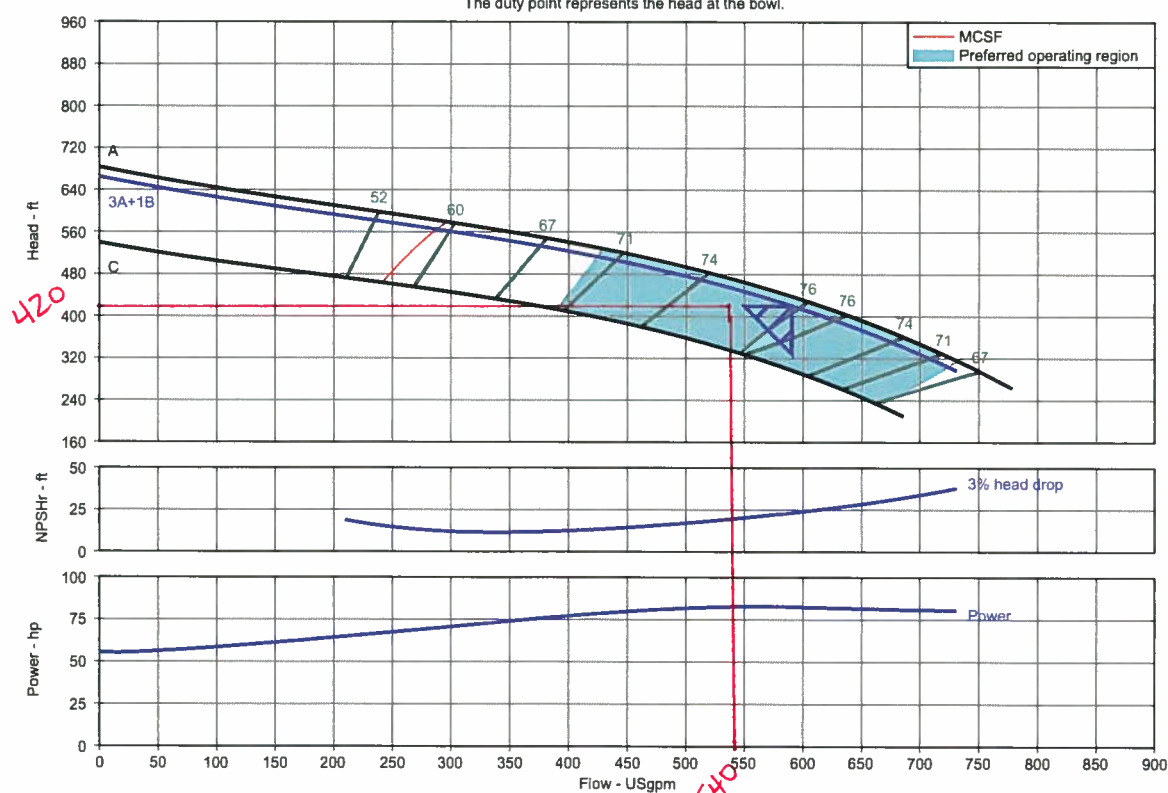
Lexington No 1, Motor 2

63-11413

Pump Performance Datasheet

Customer :		Sulzer Reference ID :	XXX.1552-NSP.15.0019-P0
Inquiry Number/ID :		Type / Size :	CS-8L
Item number :	069	Stages :	4 (3 / 1x / 0x)
Service :		Based on curve number :	CS-08L-EC3352 Rev A
Quantity :	1	Date of Last Update :	08 Dec 2015 1:41 PM
Operating Conditions		Liquid	
Flow, rated :	590.0 USgpm	Liquid type :	Water
Differential head / pressure, rated (requested) :	420.0 ft	Additional liquid description :	
Suction pressure, rated / max :	0.00 / 0.00 psi.g	Solids diameter, max :	0.00 in
NPSH available, rated :	Ample	Solids concentration, by volume :	0.00 %
Frequency :	60 Hz	Temperature, rated / max :	68.00 / 68.00 deg F
Performance		Fluid density, rated / max :	1.000 / 1.000 SG
Speed, rated :	3525 rpm	Viscosity, rated :	1.00 cP
Impeller diameter, rated :	3A+1B	Vapor pressure, rated :	0.34 psi.a
Impeller diameter, maximum :	A	Material	
Impeller diameter, minimum :	C	Material selected :	Cast Iron / Bronze
Efficiency (bowl / pump) :	75.8 / 74.9 %	Pressure Data	
NPSH (3% head drop) / margin required :	23.3 / 3.0 ft	Maximum casing/bowl working pressure :	See the Additional Data page
Ns (imp. eye flow) / Nss (imp. eye flow) :	2,700 / 7,650 US Units	Maximum allowable working pressure :	See the Additional Data page
MCSF :	296.4 USgpm	Maximum allowable suction pressure :	150.0 psi.g
Head, maximum, rated diameter :	665.0 ft	Hydrostatic test pressure :	See the Additional Data page
Head rise to shutoff (bowl / pump) :	58.17 / 59.09 %	Driver & Power Data	
Flow, best eff. point (bowl / pump) :	611.0 / 607.3 USgpm	Driver sizing specification :	Rated power
Flow ratio, rated / BEP (bowl / pump) :	96.57 / 97.15 %	Margin over specification :	0.00 %
Diameter ratio (rated / max) :	100.00 %	Service factor :	1.00
Head ratio (rated dia / max dia) :	95.91 %	Power, hydraulic :	62.62 hp
Cq/Ch/Ce/Cn [ANSI/HI 9.6.7-2010] :	1.00 / 1.00 / 1.00 / 1.00	Power (bowl / pump) :	82.58 / 83.08 hp
Selection status :	Acceptable	Power, maximum, rated diameter :	83.28 hp
		Minimum recommended motor rating :	100.00 hp / 74.57 kW

Bowl performance. Adjusted for construction and viscosity.
The duty point represents the head at the bowl.



Lexington 2 Pump

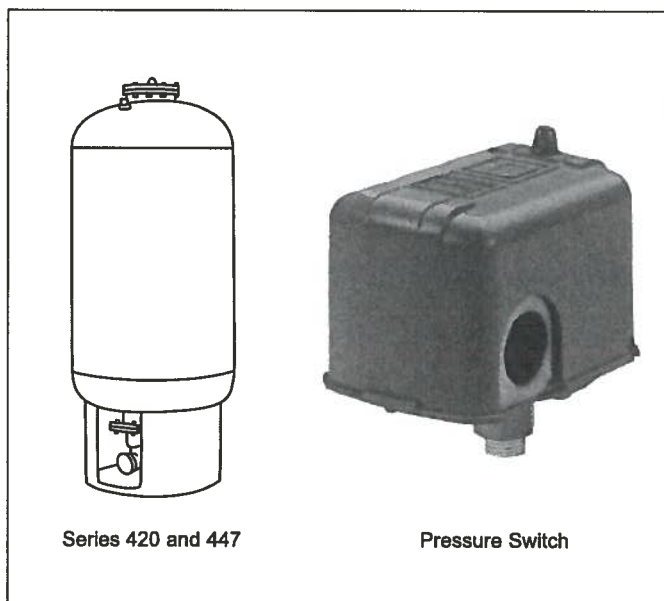


SIZING THE WELL-X-TROL®

For Commercial Well System Applications

This handbook will discuss the basic sizing used for our larger, full acceptance bladder Well-X-Trol well tanks. This allows you to use the Well-X-Trol principle of separation of air and water on larger jobs that are beyond the typical residential range.

Larger Well-X-Trol well tanks are designed and built for maximum acceptance on each operating cycle. This allows you to replace a large galvanized tank with a more space efficient Well-X-Trol and improve system performance.



For example, a 900 gallon galvanized tank is 48" in diameter, 168" long, and weighs approximately 10,000 pounds when filled with water. A WX-423, with a total volume of only 275 gallons, can be used instead and is only 36" in diameter and 84" high. When filled with water to the 65% maximum acceptance it only weighs 1,489 pounds. It can be easily handled, requires no support structures and occupies a fraction of the space of the galvanized tank.

Aside from initial cost, the cost of rigging and handling large galvanized tanks, providing adequate support and the cost of space required significantly adds to the overall installation cost.

Table 1

WX Model Non-Code (Non-ASME)	WX Model Code (ASME)	Total Volume (Gallons)	Maximum Acceptance Factor (MAF)	Maximum Acceptance Factor (MAF)
WX-401	WX-401C	18	11	.65
WX-402	WX-402C	25	11	.45
WX-403	WX-403C	34	11	.33
WX-404	WX-404C	68	34	.50
WX-405	WX-405C	90	34	.39
WX-406	WX-406C	110	34	.31
WX-407	WX-407C	132	46	.35
WX-421	not available	158	103	.65
WX-422	not available	211	137	.65
WX-423	not available	264	172	.65
WX-424	not available	317	206	.65
WX-426	not available	422	274	.65
WX-427	not available	528	343	.65
WX-447	WX-447C	53	34	.65
WX-448	WX-448C	80	52	.65
WX-449	WX-449C	106	69	.65
WX-450	WX-450C	132	86	.65
WX-451	WX-451C	158	102	.65
WX-452	WX-452C	211	136	.65
WX-453	WX-453C	264	170	.65
WX-454	WX-454C	317	205	.65
WX-455	WX-455C	370	239	.65
WX-456	WX-456C	422	273	.65
WX-457	WX-457C	528	341	.65

Based on 30 PSIG pre-charge (P_1).

At higher pressures, the galvanized tank will waterlog at an accelerated rate, so some provision must be made to maintain the required air cushion. This means the cost of an air compressor or other means of recharging must be added to the installation.

Since the Well-X-Trol's air cushion is sealed-in, there is no need for external air compressors or control devices.

Using the maximum acceptance of the 420 and 450 Series Well-X-Trol, can service much larger jobs, with large pumps, without paying the penalty of higher installation and maintenance costs.

Lexington No.2 Pressure Tank

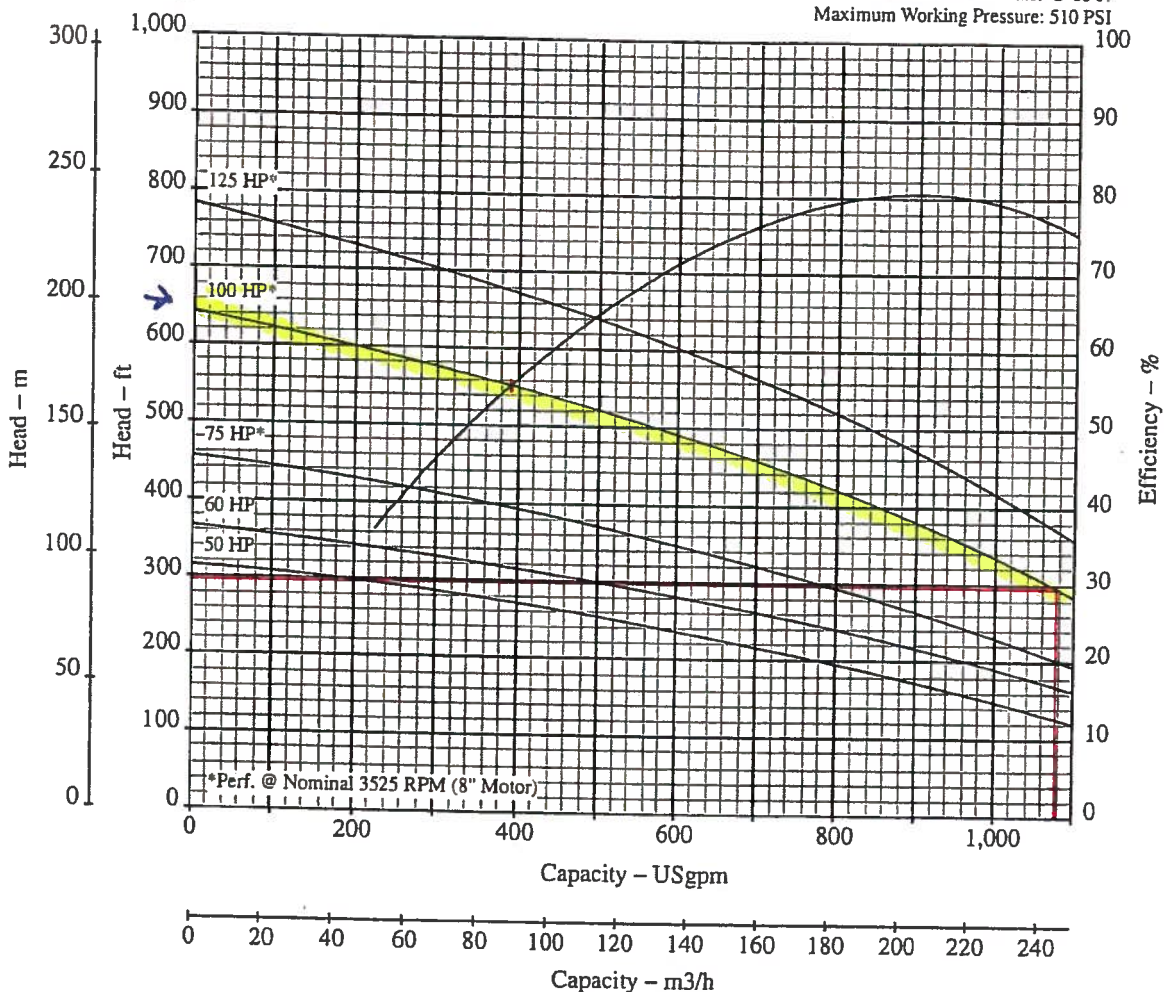
63-11413



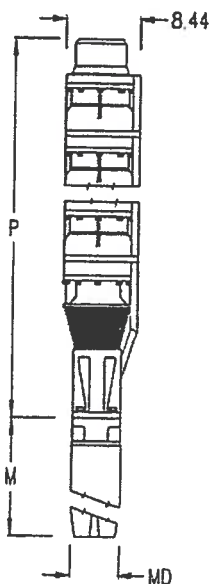
SUBMERSIBLE TURBINE

8T-950

Nominal RPM: 3450
Based on Fresh Water @ 68 F.
Maximum Working Pressure: 510 PSI



TDH =
295 f



OUTLINE DIMENSIONS / WEIGHTS

HP	stages	Motor size	P length	M* length	MD* dia.	Mtr. wt.	Pump wt.
50	3	6"	36.00	52.20	5.51	251	176
50	3	8"	36.75	38.80	7.69	350	181
60	3	6"	36.00	55.70	5.51	269	176
60	3	8"	36.75	41.80	7.69	385	181
75	4	8"	43.25	54.90	7.69	424	213
100	5	8"	49.75	58.90	7.69	469	245
125	6	8"	56.25	68.80	7.69	700	277

Note: dimensions = inches; weight = U.S. lbs.

M* Maximum length
MD* Motor diameter

SPECIFICATIONS

Minimum Well I.D.	10.0 Inches
Minimum Submergence @ BEP (above inlet)	10.0 Feet
Capacity Range	450 - 1000 GPM
Discharge	6" F NPT
See manufacturer's data for motor cooling requirements	

SUPERSEDES

All Previous

Date 04/01/05

Section 8T

Page 4.02

Brookwood
Pump

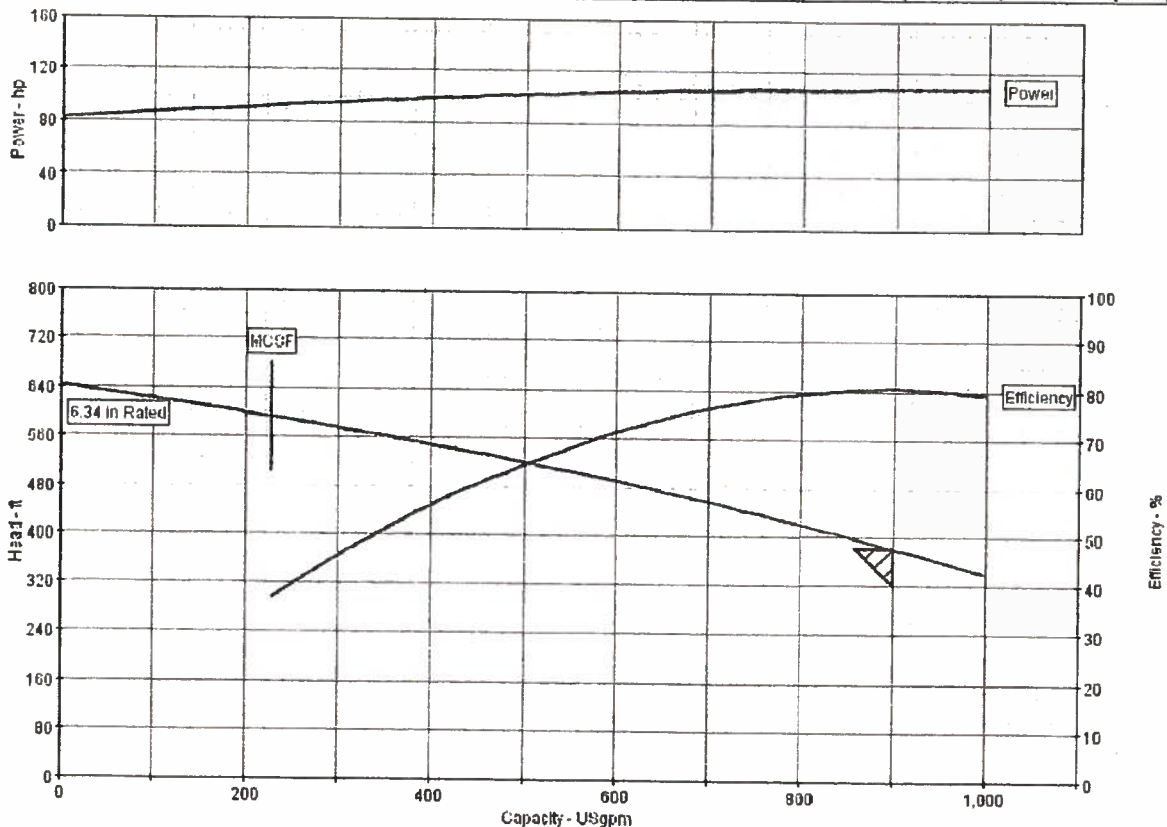
63-11413

Pump Performance Datasheet

Customer	:	Quote number	:
Customer reference	:	Pump size	: 8T100-950
Item number	:	Stages	: 5
Service	:	Based on curve number	: 8T100-950(3@6.34x5.2616 + 2@5.82x4.634)
Quantity of pumps	: 1	Date last saved	: 13 Jul 2007

Operating Conditions		Liquid	
Flow, rated	: 899.8 USgpm	Liquid type	: --Water
Head, rated (requested)	: 380.4 ft	Additional liquid description	:
Head, rated (actual)	: 380.4 ft	Solids diameter, max	: 0.00 in
Suction pressure, rated / max	: 0.00 / 0.00 psi.g	Temperature, max	: 68.00 deg F
NPSH available, rated	: Ample	Fluid density, rated / max	: 0.998 / 0.998 SG
Frequency	: 60 Hz	Viscosity, rated	: 1.00 cP

Performance		Material	
Pump speed, rated	: 3,525 rpm	Material requested	: Not specified
Impeller diameter, rated	: 6.34 in	Material selected	: Not specified
Impeller diameter, maximum	: 6.34 in		
Impeller diameter, minimum	: 6.34 in	Pressure Data	
Efficiency	: 80.56 %	Maximum working pressure	: 278.4 psi.g
NPSH required / margin required	: N/A / 0.00	Maximum allowable working pressure	: 510.0 psi.g
Specific speed / Suction specific speed	: N/A / 0 US units	Maximum allowable suction pressure	: N/A
MCSF	: 227.0 USgpm	Hydrostatic test pressure	: N/A
Head, maximum, rated diameter	: 643.3 ft	Driver & Power Data	
Head rise to shutoff	: N/A %	Driver sizing specification	: Rated power
Flow, best eff. point (BEP)	: 899.8 USgpm	Margin over specification	: 0.00 %
Flow ratio (rated / BEP)	: 100.00 %	Service factor	: 1.00 (used)
Diameter ratio (rated / max)	: 100.00 %	Power, hydraulic	: 86.28 hp
Head ratio (rated dia / max dia)	: 100.00 %	Power, rated	: 107 hp
Viscous coefficients (CQ / CH / CE)	: 1.00 / 1.00 / 1.00	Power, maximum, rated diameter	: 107 hp
Selection status	: Acceptable	Minimum recommended motor rating	: 100 hp / 74.57 kW (Fixed)



8" Submersible Motors Standard

Franklin Electric

8-Inch Models

HP (KW)	CONSTRUCTION	DESCRIPTION							MODEL	STOCK STATUS
		PH	VOLTS	HZ	SUBTROL HEAT SENSOR	S.F.	# LEADS	POWER WIRES		
100 hp 75 kW	WATER WELL	3P	380	60	YES	1.15	3	#4 w/o GND	239 664 60	YES
		3P	380	60	YES	1.15	6-90°	#4 w/o GND	239 684 20	
		3P	415	50	YES	1.00	3	#4 w/o GND	239 744 60	
		3P	460/380-415	60/50	YES	1.15/1.00	3	#4 w/o GND	239 604 60	YES
		3P	460/380-415	60/50	YES	1.15/1.00	6-90°	#4 w/o GND	239 624 20	YES
		3P	575	60	YES	1.15	3	#4 w/o GND	239 614 60	YES
	SAND FIGHTER	3P	380	60	YES	1.15	3	#4 w/o GND	239 664 85	
		3P	380	60	YES	1.15	6-90°	#4 w/o GND	239 684 86	
		3P	415	50	YES	1.00	3	#4 w/o GND	239 744 85	
		3P	460/380-415	60/50	YES	1.15/1.00	3	#4 w/o GND	239 604 85	YES
		3P	460/380-415	60/50	YES	1.15/1.00	6-90°	#4 w/o GND	239 624 86	
		3P	575	60	YES	1.15	3	#4 w/o GND	239 614 85	
	316 SS	3P	380	60	YES	1.15	3	#4 w/o GND	239 664 62	
		3P	380	60	YES	1.15	6-90°	#4 w/o GND	239 684 22	
		3P	415	50	YES	1.00	3	#4 w/o GND	239 744 62	
		3P	460/380-415	60/50	YES	1.15/1.00	3	#4 w/o GND	239 604 62	YES
		3P	460/380-415	60/50	YES	1.15/1.00	6-90°	#4 w/o GND	239 624 22	
		3P	575	60	YES	1.15	3	#4 w/o GND	239 614 62	
125 hp 93 kW	WATER WELL	3P	380	60	YES	1.15	3	#4 w/o GND	239 165 60	
		3P	380	60	YES	1.15	6-90°	#4 w/o GND	239 185 20	
		3P	415	50	YES	1.00	3	#4 w/o GND	274 365 60	
		3P	460/380-415	60/50	YES	1.15/1.00	3	#4 w/o GND	239 105 60	YES
		3P	460/380-415	60/50	YES	1.15/1.00	6-90°	#4 w/o GND	239 125 20	YES
		3P	575	60	YES	1.15	3	#4 w/o GND	239 115 60	YES
	SAND FIGHTER	3P	380	60	YES	1.15	3	#4 w/o GND	239 165 85	
		3P	380	60	YES	1.15	6-90°	#4 w/o GND	239 185 86	
		3P	415	50	YES	1.00	3	#4 w/o GND	239 365 85	
		3P	460/380-415	60/50	YES	1.15/1.00	3	#4 w/o GND	239 105 85	YES
		3P	460/380-415	60/50	YES	1.15/1.00	6-90°	#4 w/o GND	239 125 86	
		3P	575	60	YES	1.15	3	#4 w/o GND	239 115 85	
	316 SS	3P	380	60	YES	1.15	3	#4 w/o GND	239 165 62	
		3P	380	60	YES	1.15	6-90°	#4 w/o GND	239 185 22	
		3P	415	50	YES	1.00	3	#4 w/o GND	239 365 62	
		3P	460/380-415	60/50	YES	1.15/1.00	3	#4 w/o GND	239 105 62	YES
		3P	460/380-415	60/50	YES	1.15/1.00	6-90°	#4 w/o GND	239 125 22	
		3P	575	60	YES	1.15	3	#4 w/o GND	239 115 62	

Brookwood
Motor

PHOTOGRAPHER AND DATE OF PHOTOS ASHLEY NEWBRY • December 1, 2015
FILE NUMBER 63-11413

The field exam began at the City of Eagle municipal well no. 3 (Brookwood) and commenced through the east system, traveling eastward.



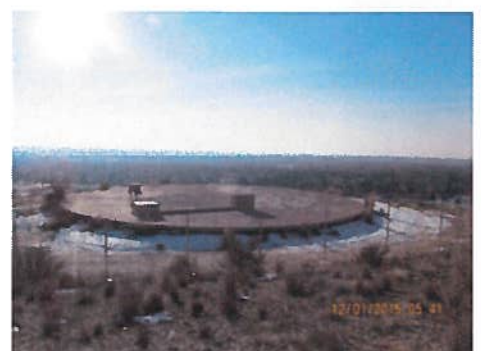
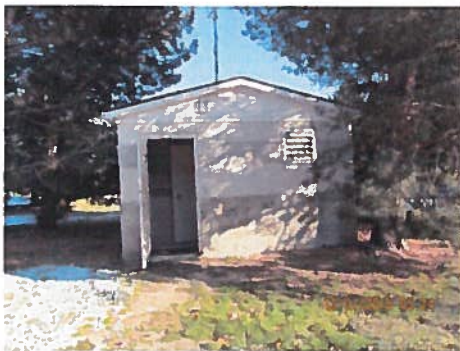
The Brookwood well house (upper left) contains City of Eagle Municipal Well No. 3 (upper center). The well flowmeter is a McCrometer UltraMag (upper right). The pressure (lower center) at the Brookwood well is higher than typical values for municipal distribution (lower left) because it supplies most of the water to the storage tank. This well also has a backup generator (lower right).



The Lexington No. 2 well house (left) contains City of Eagle Municipal Well No. 2 (center). When the well is operational, it utilizes an approximately 200 gallon pressure tank (right).



At this time, the well is functional, but is not utilized by the City to introduce drinking water to the distribution system. At the time of the field exam, the system was pressurized (center), but the valve was closed (left). The well also has a propeller McCrometer (right).



The Lexington No. 1 well house (upper left) contains City of Eagle Municipal Well No. 1 (upper center) drilled in 1991. The well has two distribution lines (upper and lower center) and two flow meters (lower left)—one for each pump—which recombine before entering the distribution system. The 1 MG storage tank is located in the foot hills, near the Eagle Sports Complex and Velodrome park (lower right).

End of Field Exam Reports 63-11413

Newbry, Ashley

From: Kellie Rekow [krekow@cityofeagle.org]
Sent: Friday, December 11, 2015 9:46 AM
To: Newbry, Ashley; Ken Acuff
Subject: RE: Well Pump and Motor - Manufacturer's info
Attachments: img-151211104606-0001.pdf

Hi Ashley,

Attached is some additional information on the 75 HP pumps which are located at both Lexington Well #1 and Lexington Well #2.

Let us know if we can get you any additional information.

Thank you,

Kellie

City of Eagle

*Kellie Rekow, CMC
Water Department
660 E Civic Lane
PO Box 1520
Eagle, ID 83616
Phone: 208-489-8777
Fax: 208-939-6827
Office Hours: M-F, 8:00 AM to 5:00 PM
krekow@cityofeagle.org
www.cityofeagle.org*

From: Newbry, Ashley [<mailto:Ashley.Newbry@idwr.idaho.gov>]
Sent: Monday, December 07, 2015 7:56 AM
To: Ken Acuff
Cc: Kellie Rekow
Subject: Well Pump and Motor - Manufacturer's info

Ken,

By chance, have you been able to locate the pump and motor manufacturer's information for your wells: Lexington No 1 and 2 and Brookwood? I am looking for the pump curves specifically, if you have them. I thought we had that info in our records, but it turns out it was for wells at "Eagle Ranch Sub" which don't think is owned by the City.

Thanks again for your help,

Ashley Newbry

*Associate Engineer
Idaho Dept. of Water Resources
State Office
322 E. Front Street
PO Box 83720
Boise, ID 83720-0098
208.287.4800 X 4846*

This is the 75 HP pump for both
Lexington #1 and #2

8 L-600

MODEL 8 L-600 PERFORMANCE CHARACTERISTIC

BOWL — CAST IRON or NI-RESIST — DIA. 8"
IMPELLER BRONZE or NI-RESIST
DISCHARGE 5" STANDARD
K FACTOR 4.5
MAX. O.D. W/CABLE GUARD 8½"
BEARING — CUTLESS RUBBER OR BRONZE

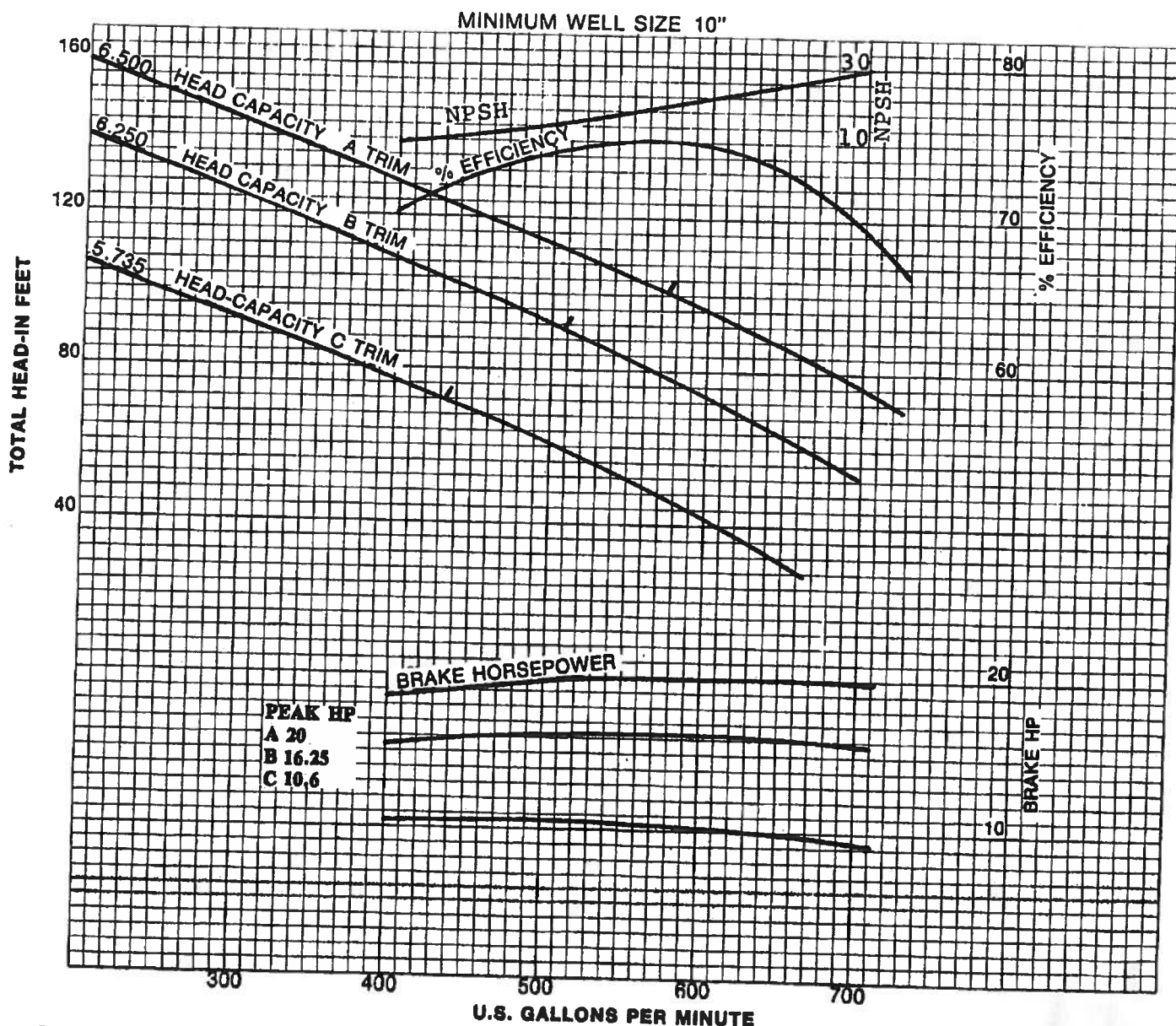
CHANGE EFFICIENCY AS FOLLOWS	
No. of Points	No. of Stages
-3	1
-2	2
0	3
0	4

POWER: ELECTRIC
CYCLE: 60 Hz
R P M: 3450
IMPELLER TYPE: ENCLOSED
BOWL TYPE: FLANGED
CURVE SHEET NO. 1

NOTE: EFFICIENCY PERFORMANCE BASED ON CAST IRON BOWLS - POLISHED BRONZE IMPELLERS AND 6 FEET SUBMERGENCE.

THIS CHARACTERISTIC CURVE IS BASED ON FACTORY TESTS WHEN PUMPING CLEAR, FRESH, NON-AERATED WATER AT A TEMPERATURE NOT EXCEEDING 85° F. AND UNDER SUCTION CONDITIONS AS INDICATED.

PUMP PERFORMANCE RATING IS FOR THE DESIGNATED POINT ONLY AND IS SUBJECT TO TEST TOLERANCES AND PROCEDURES AS SPECIFIED IN THE STANDARD OF THE HYDRAULIC INSTITUTE.



CROWN

CROWN PUMP CORPORATION • HIGHWAY 16 & BIVAR • DE LEON, TEXAS

Newbry, Ashley

From: Ken Acuff [kacuff@cityofeagle.org]
Sent: Monday, December 07, 2015 9:53 AM
To: Newbry, Ashley
Subject: RE: Well Pump and Motor - Manufacturer's info

Hi Ashley,

I found everything but a pump curve for the two submersibles at Lexington #1. If you need that I might be able to get it from the manufacturer. Ken

From: Newbry, Ashley [mailto:Ashley.Newbry@idwr.idaho.gov]
Sent: Monday, December 07, 2015 7:56 AM
To: Ken Acuff <kacuff@cityofeagle.org>
Cc: Kellie Rekow <krekow@cityofeagle.org>
Subject: Well Pump and Motor - Manufacturer's info

Ken,

By chance, have you been able to locate the pump and motor manufacturer's information for your wells: Lexington No 1 and 2 and Brookwood? I am looking for the pump curves specifically, if you have them. I thought we had that info in our records, but it turns out it was for wells at "Eagle Ranch Sub" which don't think is owned by the City.

Thanks again for your help,

Ashley Newbry

Associate Engineer
Idaho Dept. of Water Resources
State Office
322 E. Front Street
PO Box 83720
Boise, ID 83720-0098
208.287.4800 X 4846

Newbry, Ashley

From: Kellie Rekow [krekow@cityofeagle.org]
Sent: Monday, December 07, 2015 9:48 AM
To: Newbry, Ashley; Ken Acuff
Subject: RE: Well Pump and Motor - Manufacturer's info
Attachments: img-151207104749-0001.pdf

Hi Ashley,

Attached is some pump information that Ken compiled for you. He will follow up on this email with some additional comments as well.

Thank you,

Kellie

City of Eagle

*Kellie Rekow, CMC
Water Department
660 E Civic Lane
PO Box 1520
Eagle, ID 83616
Phone: 208-489-8777
Fax: 208-939-6827
Office Hours: M-F, 8:00 AM to 5:00 PM
krekow@cityofeagle.org
www.cityofeagle.org*

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To: Ken Acuff
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Thanks again for your help,

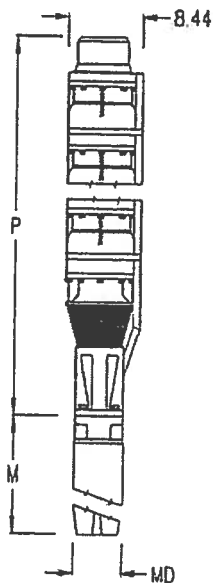
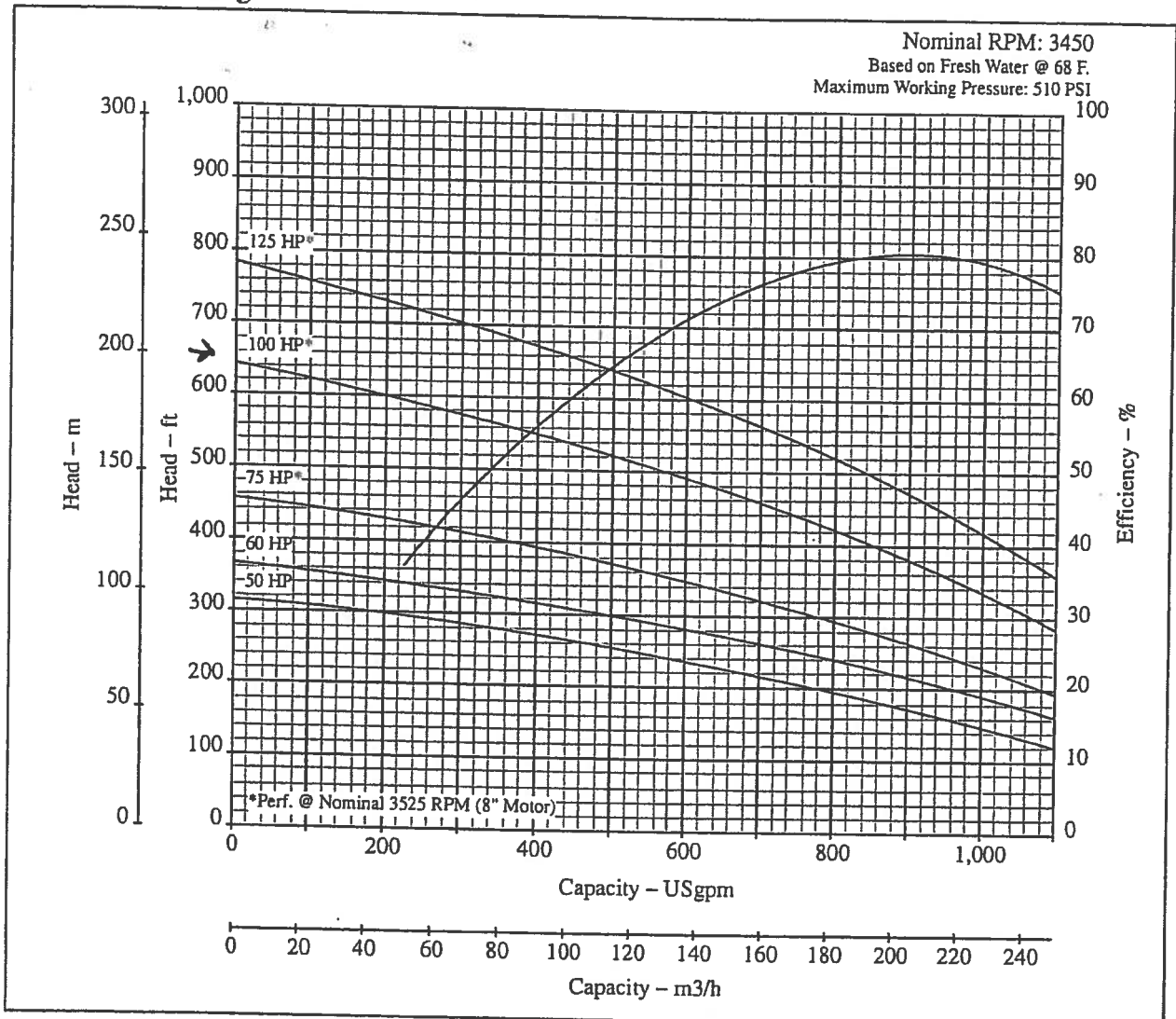
Ashley Newbry

*Associate Engineer
Idaho Dept. of Water Resources
State Office
322 E. Front Street
PO Box 83720
Boise, ID 83720-0098
208.287.4800 X 4846*



SUBMERSIBLE TURBINE

8T-950



OUTLINE DIMENSIONS / WEIGHTS

HP	stages	Motor size	P length	M* length	MD* dia.	Mtr. wt.	Pump wt.
50	3	6"	36.00	52.20	5.51	251	176
50	3	8"	36.75	38.80	7.69	350	181
60	3	6"	36.00	55.70	5.51	269	176
60	3	8"	36.75	41.80	7.69	385	181
75	4	8"	43.25	54.90	7.69	424	213
100	5	8"	49.75	58.90	7.69	469	245
125	6	8"	56.25	68.80	7.69	700	277

Note: dimensions = inches; weight = U.S. lbs.

M* Maximum length
MD* Motor diameter

SPECIFICATIONS

Minimum Well I.D.	10.0 Inches
Minimum Submergence @ BEP (above inlet)	10.0 Feet
Capacity Range	450 - 1000 GPM
Discharge	6" F NPT
See manufacturer's data for motor cooling requirements	

SUPERSEDES

All Previous

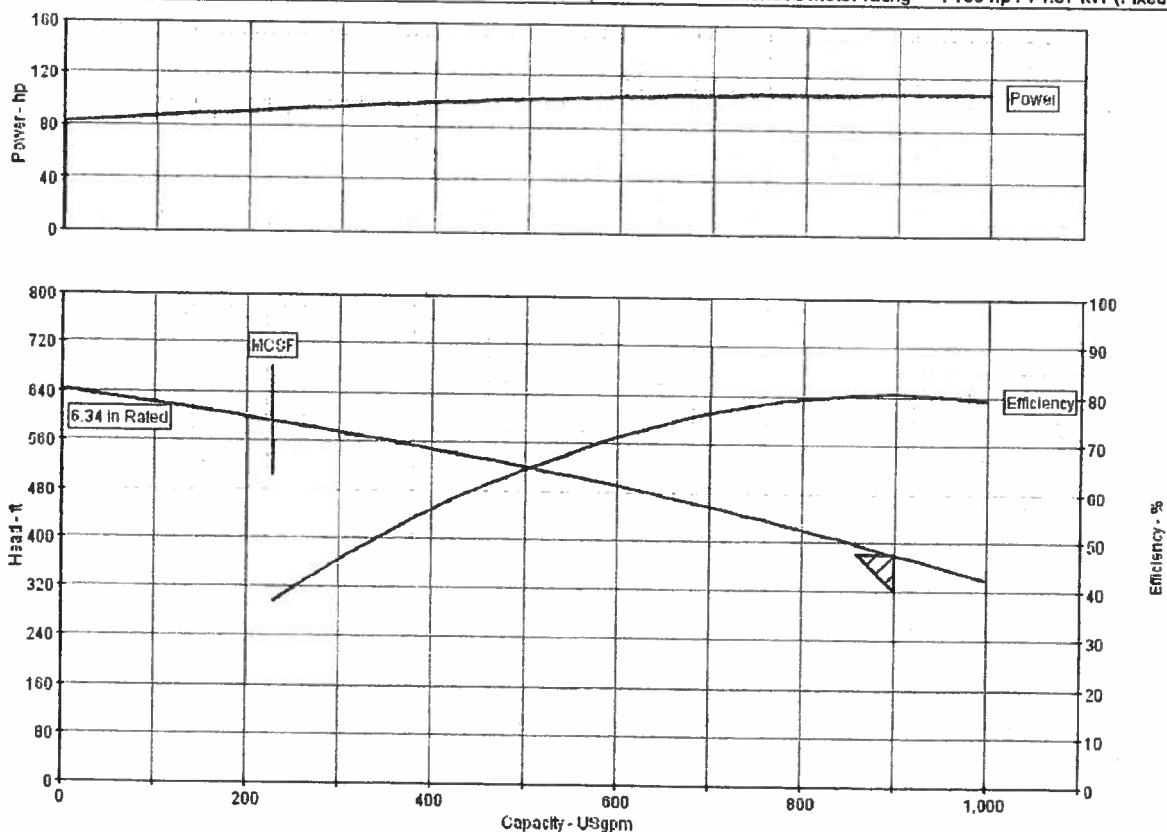
Date 04/01/05

Section **8T**

Page 4.02

Pump Performance Datasheet

Customer :		Quote number :	
Customer reference :		Pump size :	8T100-950
Item number :		Stages :	5
Service :		Based on curve number :	8T100-950(3@8.34x5.2616 + 2@5.82x4.634)
Quantity of pumps : 1		Date last saved :	13 Jul 2007
Operating Conditions		Liquid	
Flow, rated :	899.8 USgpm	Liquid type :	--Water
Head, rated (requested) :	380.4 ft	Additional liquid description :	
Head, rated (actual) :	380.4 ft	Solids diameter, max :	0.00 in
Suction pressure, rated / max :	0.00 / 0.00 psi.g	Temperature, max :	68.00 deg F
NPSH available, rated :	Ample	Fluid density, rated / max :	0.998 / 0.998 SG
Frequency :	60 Hz	Viscosity, rated :	1.00 cP
Performance		Material	
Pump speed, rated :	3,525 rpm	Material requested :	Not specified
Impeller diameter, rated :	6.34 in	Material selected :	Not specified
Impeller diameter, maximum :	6.34 in	Pressure Data	
Impeller diameter, minimum :	6.34 in	Maximum working pressure :	278.4 psi.g
Efficiency :	80.56 %	Maximum allowable working pressure :	510.0 psi.g
NPSH required / margin required :	N/A / 0.00	Maximum allowable suction pressure :	N/A
Specific speed / Suction specific speed :	N/A / 0 US units	Hydrostatic test pressure :	N/A
MCSF :	227.0 USgpm	Driver & Power Data	
Head, maximum, rated diameter :	643.3 ft	Driver sizing specification :	Rated power
Head rise to shutoff :	N/A %	Margin over specification :	0.00 %
Flow, best eff. point (BEP) :	899.8 USgpm	Service factor :	1.00 (used)
Flow ratio (rated / BEP) :	100.00 %	Power, hydraulic :	86.28 hp
Diameter ratio (rated / max) :	100.00 %	Power, rated :	107 hp
Head ratio (rated dia / max dia) :	100.00 %	Power, maximum, rated diameter :	107 hp
Viscous coefficients (CQ / CH / CE) :	1.00 / 1.00 / 1.00	Minimum recommended motor rating :	100 hp / 74.57 kW (Fixed)
Selection status :	Acceptable		



Lexington # 1

pump 2 1- Gould model 6CHC, 250 gpm sub.
 @ 96.0% speed w/ 30hp franklin motor 2366169020 460 volt 39.5 amp
 3 phase 60 cy.

pump 1 1- Crown model BL-600-4, 600 gpm sub.
 @ 94.0% speed w/ 75hp sub motor 460 volt 540 gpm @ 420 t/h

Lexington # 2 (not used)

1- Crown BL 600-4 with 75hp sub motor 460 volt
 540 gpm at 420 t/h

Brookwood # 3

SOLO BY Riverside inc. fiveside@rsi corp. net
 Parma, Idaho

Pump Berkeley 8T series 8T100-950

@ 84.0% speed motor - 8" model 239604 100 hp 460 volt

Newbry, Ashley

From: Kellie Rekow [krekow@cityofeagle.org]
Sent: Tuesday, November 24, 2015 11:08 AM
To: Newbry, Ashley
Cc: Ken Acuff
Subject: RE: Lexington Water Use data for permit 63-11413
Attachments: Lexington Hills Production, as provided by UWI.xls

Hi Ashley,

We received the attached production information from United Water. Not sure if is still helpful for you or not but we thought we would send it along.

Thank you for all of your help and hard work on this project.

Kellie

City of Eagle

*Kellie Rekow, CMC
Water Department
660 E Civic Lane
PO Box 1520
Eagle, ID 83616
Phone: 208-489-8777
Fax: 208-939-6827
Office Hours: M-F, 8:00 AM to 5:00 PM
krekow@cityofeagle.org
www.cityofeagle.org*

From: Newbry, Ashley [<mailto:Ashley.Newbry@idwr.idaho.gov>]
Sent: Tuesday, November 17, 2015 2:57 PM
To: Ken Acuff
Cc: Kellie Rekow
Subject: RE: Lexington Water Use data for permit 63-11413

Ken,

By including today's submittals, I believe the data which you and Kellie have supplied to me will be sufficient for me to draft a water right license for 63-11413. If you happen to obtain more data (like flow rates) from United Water, that would be great, and I will definitely add it to what we have. For now, I believe I will be able to move forward with processing. Being able to produce data for years 1999 and 2000 will maximize the accuracy of the City's water right 63-11413, which you have done. 😊

Thank you both greatly,

Ashley Newbry

From: Ken Acuff [<mailto:kacuff@cityofeagle.org>]
Sent: Tuesday, November 17, 2015 10:06 AM
To: Newbry, Ashley; Kellie Rekow
Subject: RE: Lexington Water Use data for permit 63-11413

Ashley,

We have requested United Water to get these reports, they are searching their files for them. We do need to request a 30 day extension to allow them time to look. We have done an extensive search of our file room and the earliest report we found was 1999 and 2000. I can send those to you now if you like. I also found a copy of a 1995 request for extension stating 400 lots developed and 2.4cfs of 3.25cfs approved if that would be helpful. Please consider this as our formal request for 30 day time extension, we will stay in touch with the United Water people to keep them on task.

Thank You

Ken

From: Newbry, Ashley [<mailto:Ashley.Newbry@idwr.idaho.gov>]

Sent: Tuesday, November 17, 2015 8:43 AM

To: Ken Acuff <kacuff@cityofeagle.org>

Subject: Lexington Water Use data for permit 63-11413

Ken,

I am writing to remind you that this Friday, November 20 will mark 30 days from my letter requesting data. You and I met on October 28, 2015 to discuss what data is needed for me to issue a license for 63-11413.

At that time I learned that our IDWR records correctly reflect the current status of the City wells associated with permit 63-11413:

- City of Eagle Well 1 (Lexington 1) was drilled in 1991.
- City of Eagle Well 2 (Lexington 2) was drilled in 1992.
- City of Eagle Well 3 (Brookwood) was drilled in 2007.
- City of Eagle Well 4 does not exist in the Brookwood area.

At the time of our meeting, you agreed to make a request to United Water for volume and diversion rate data to determine the average and maximum demands which were put on the system (Wells 1 & 2) from 1991 – 2000. If you have determined that the data no longer exists, please notify me so I can proceed with a different methodology. If you need more time to implore United Water, please submit a request to me in writing for up to 30 additional days to complete your research (email is okay).

Thank you,

Ashley Newbry

Associate Engineer

Idaho Dept. of Water Resources

State Office

322 E. Front Street

PO Box 83720

Boise, ID 83720-0098

208.287.4800 X 4846

Lexington Hills Production

1992-2008

Totals for both wells X 1,000 Gallons

	1992-1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	
05-2-92 to 12-06-92	17860	6540	4290	3640	4090	5970	8350	8320	8630	5920	10780	10960	11450	11020	January
12-06-92 to 06-29-93	22310	5960	5860	3970	3220	6390	9310	10010	9010	0	9980	10880	11130	10590	February
06-29-93 to 12-28-93	27690	5560	7310	5350	6150	5990	11910	11140	9510	8190	12040	10240	13980	10400	March
12-28-93 to 06-24-94	57790	6850	4000	5460	5050	9260	6810	10600	8480	11027	11920	11370	12510	10060	April
06-24-94 to 01-03-95	30530	2640	10100	2980	4480	6190	8240	9360	8690	9041	10570	10920	13330	12460	May
01-03-95 to 06-30-95	35800	2970	3070	4450	5040	8480	9820	9550	9590	9960	11210	11320	10080	12040	June
06-30-95 to 12-30-95	43960	3060	4180	5580	11050	8690	8680	9690	9940	11410	15140	16390	15950	14460	July
		3080	3540	4890	17180	7390	8310	9390	8950	9860	14650	13530	11900	14410	August
		2530	3020	3620	16830	5410	7560	6930	7030	8370	11320	10980	8480	11340	September
		4820	5090	5830	25600	7880	14350	15640	9500	7410	14330	11850	11850	6460	October
		11030	5080	5130	32650	9420	8600	11530	9320	8380	10720	10190	10710		November
		4300	5160	5350	10030	7770	7300	10680	6970	8870	9850	10080	11180		December
	235940	59340	60700	56250	141370	88840	109240	1E+05	1E+05	98438	1E+05	1E+05	1E+05	1E+05	TOTAL

Newbry, Ashley

From: Ken Acuff [kacuff@cityofeagle.org]
Sent: Tuesday, November 24, 2015 9:05 AM
To: Newbry, Ashley
Subject: RE: WR 63-11413 Field Examination

Sounds good.

From: Newbry, Ashley [mailto:Ashley.Newbry@idwr.idaho.gov]
Sent: Tuesday, November 24, 2015 8:56 AM
To: Ken Acuff <kacuff@cityofeagle.org>
Subject: RE: WR 63-11413 Field Examination

Tuesday, December 1... at 2 pm ?

From: Ken Acuff [mailto:kacuff@cityofeagle.org]
Sent: Tuesday, November 24, 2015 8:49 AM
To: Newbry, Ashley
Subject: RE: WR 63-11413 Field Examination

Hi Ashley,
How about Tuesday, December 2 and you can pick the time?

From: Newbry, Ashley [mailto:Ashley.Newbry@idwr.idaho.gov]
Sent: Monday, November 23, 2015 4:09 PM
To: Ken Acuff <kacuff@cityofeagle.org>
Subject: WR 63-11413 Field Examination

Ken,

Could we set up a time for me to visit you for a formal water right field examination for 63-11413? I will need to photograph and GPS your Lexington/Brookwood wells to record their capacity. Is there a day/time between Nov 30 and Dec 11 that would work best for you?

Thank you,

Ashley Newbry

Associate Engineer
Idaho Dept. of Water Resources
State Office
322 E. Front Street
PO Box 83720
Boise, ID 83720-0098
208.287.4800 X 4846

Newbry, Ashley

From: Kellie Rekow [krekow@cityofeagle.org]
Sent: Tuesday, November 17, 2015 11:13 AM
To: Newbry, Ashley
Subject: RE: Lexington Water Use data for permit 63-11413

For sure.

City of Eagle

*Kellie Rekow, CMC
Water Department
660 E Civic Lane
PO Box 1520
Eagle, ID 83616
Phone: 208-489-8777
Fax: 208-939-6827
Office Hours: M-F, 8:00 AM to 5:00 PM
krekow@cityofeagle.org
www.cityofeagle.org*

From: Newbry, Ashley [<mailto:Ashley.Newbry@idwr.idaho.gov>]
Sent: Tuesday, November 17, 2015 10:57 AM
To: Kellie Rekow
Subject: RE: Lexington Water Use data for permit 63-11413

Great, thank you. If you come across any more of these between 1991 and 2000, please let me know.

Thanks again,

Ashley

From: Kellie Rekow [<mailto:krekow@cityofeagle.org>]
Sent: Tuesday, November 17, 2015 10:57 AM
To: Ken Acuff; Newbry, Ashley
Subject: RE: Lexington Water Use data for permit 63-11413

Hi Ashley,

Here is one more sheet which will complete the information for the year 2000, including the entire 3rd Quarter. It also includes the first three quarters of 2001 which might be helpful as well.

Thank you again,

Kellie

City of Eagle

*Kellie Rekow, CMC
Water Department
660 E Civic Lane
PO Box 1520
Eagle, ID 83616
Phone: 208-489-8777*

Fax: 208-939-6827
Office Hours: M-F, 8:00 AM to 5:00 PM
krekow@cityofeagle.org
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Sent: Tuesday, November 17, 2015 10:06 AM
To: Newbry, Ashley; Kellie Rekow
Subject: RE: Lexington Water Use data for permit 63-11413

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Thank You
Ken

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Sent: Tuesday, November 17, 2015 8:43 AM
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Subject: Lexington Water Use data for permit 63-11413

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Ashley Newbry

Associate Engineer
Idaho Dept. of Water Resources
State Office
322 E. Front Street
PO Box 83720
Boise, ID 83720-0098
208.287.4800 X 4846

City of Eagle Contract
United Water Operations Idaho
Quarterly Report - September 19, 2000

	<u>1999</u>	<u>2000</u>
Total Production (in 1,000 gallons)		
1st Quarter (March 31)	13,460	18,350
2nd Quarter (June 30)	14,570	24,209
3rd Quarter (Sept. 30)	45,060	16,887*
4th Quarter (Dec. 31)	68,280	

*Through August 2000

City of Eagle Contract
United Water Operations Idaho
Quarterly Report - September 19, 2000

	<u>1999</u>	<u>2000</u>
Total Customers		
1st Quarter (March 31)	578	748
2nd Quarter (June 30)	607	800
3rd Quarter (Sept. 30)	645	818*
4th Quarter (Dec. 31)	696	

*Through August 2000

**City of Eagle Contract
United Water Operations Idaho
Quarterly Report - Quarter Ending September 30, 2001**

	<u>2000</u>	<u>2001</u>
Total Production (in 1,000 gallons)		
1st Quarter (March 31)	18,350	29,570
2nd Quarter (June 30)	24,209	25,208
3rd Quarter (Sept. 30)	21,490	24,550
4th Quarter (Dec. 31)	25,070	-

Newbry, Ashley

From: Ken Acuff [kacuff@cityofeagle.org]
Sent: Tuesday, November 17, 2015 10:06 AM
To: Newbry, Ashley; Kellie Rekow
Subject: RE: Lexington Water Use data for permit 63-11413

Ashley,

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Thank You
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Thank you,

Ashley Newbry

Associate Engineer
Idaho Dept. of Water Resources
State Office
322 E. Front Street
PO Box 83720
Boise, ID 83720-0098
208.287.4800 X 4846

Newbry, Ashley

From: Ken Acuff [kacuff@cityofeagle.org]
Sent: Tuesday, October 27, 2015 12:42 PM
To: Newbry, Ashley
Subject: RE: Water Right Permit 63-11343

Ashley,

Great, I'll be there. For this I don't see the need for more people unless you do, we can do a quick comparison of what info each of us has and expand on that as we need. If you are more comfortable having someone else there that's fine as well. Ken

From: Newbry, Ashley [mailto:Ashley.Newbry@idwr.idaho.gov]
Sent: Tuesday, October 27, 2015 12:09 PM
To: Ken Acuff <kacuff@cityofeagle.org>
Subject: RE: Water Right Permit 63-11343

Yep, that works. I am actually stationed at our State Office downtown. 322 E. Front Street; Boise, ID 83720

You can enter the parking garage from Avenue A, the street that runs north-south in front of Winco.

Do you want anyone additional from IDWR to be invited to our meeting?

Thanks,
Ashley

From: Ken Acuff [mailto:kacuff@cityofeagle.org]
Sent: Tuesday, October 27, 2015 12:04 PM
To: Newbry, Ashley
Subject: RE: Water Right Permit 63-11343

Ashley,

Tomorrow afternoon would be perfect for me, 1:30 ?

From: Newbry, Ashley [mailto:Ashley.Newbry@idwr.idaho.gov]
Sent: Tuesday, October 27, 2015 11:58 AM
To: Ken Acuff <kacuff@cityofeagle.org>
Subject: RE: Water Right Permit 63-11343

Ken,

Sure, that would be fine. Tomorrow afternoon or anytime on Thursday would be fine. Please let me know what you decide, so I can get it on the schedule.

Thanks,

Ashley Newbry

Associate Engineer
Idaho Dept. of Water Resources
State Office
322 E. Front Street
PO Box 83720

From: Ken Acuff [<mailto:kacuff@cityofeagle.org>]
Sent: Tuesday, October 27, 2015 11:58 AM
To: Newbry, Ashley
Subject: RE: Water Right Permit 63-11343

Hi Ashley,

I would like to come over to discuss some of the history of our water system . Is that something we could do in an informal setting? I have some time this week. Thanks, Ken Acuff

From: Newbry, Ashley [<mailto:Ashley.Newbry@idwr.idaho.gov>]
Sent: Friday, October 09, 2015 3:46 PM
To: miked@holladayengineering.com
Cc: Ken Acuff <kacuff@cityofeagle.org>
Subject: Water Right Permit 63-11343

Hello Mr. Davis and Mr. Acuff,

I have already begun my research of water permit 63-11413 for licensing. I will also be working 63-12448, and possibly 63-12017 in the coming months.

I would like to begin the "Field Examination" process for permit 63-11413 with this information request (below). After that, we will need to schedule a time for me to come and view the system. At that time, I will take photos of the wells, read the flow meters, and GPS the well locations. (This will be a process much like the exam performed by Scott King with SPF Water Engineering in 2009; he was accompanied by Brent Arte at the time.)

1.) Points of Diversion (Wells)

From my review of the correspondence between IDWR and the City, I found the following:

City of Eagle Well 1 (Lexington 1) was drilled in 1991.

City of Eagle Well 2 (Lexington 2) was drilled in 1992.

City of Eagle Well 3 (Brookwood) was drilled in 2007.

City of Eagle Well 4 is not yet drilled. If this is incorrect, please supply a copy of the well drilling log.

*Please confirm that the data above correct. If incorrect, please specify.

2.) Beneficial Use during Development Period

The development period for 63-11413 ran from September 11, 1991 to August 29, 2000, so I will be looking for data from that time period. To the extent that you are able, please research and report diversion records (gallons per minute and/or gallonage recorded) from this time period, for all of the wells above that were online and producing.

I will be looking for the maximum demands which were put on the system from 1991 – 2000, so that I can issue a license for the maximum amount. Also, please specify whether the City uses a storage reservoir to meet Peak Hour Demand or if this need is also met by the well pumps alone.

Thank you, and please feel free to call me if you have any questions.

Ashley Newbry
Associate Engineer
Water Rights Permits Section



State of Idaho

DEPARTMENT OF WATER RESOURCES

322 East Front Street • P.O. Box 83720 • Boise, Idaho 83720-0098

Phone: (208) 287-4800 • Fax: (208) 287-6700 • Web Site: www.idwr.idaho.gov

GARY SPACKMAN
Director

C.L. "BUTCH" OTTER
Governor

October 21, 2015

CITY OF EAGLE
C/O CHERESE D MCLAIN
950 W BANNOCK STE 520
BOISE ID 83702

Dear Ms. McLain:

I am writing to formalize some of my recent email correspondence with City of Eagle personnel. I have already begun my research of water permit 63-11413 for licensing review. I would like to begin the Beneficial Use Field Examination process with the information request below. After I can look at the data, I will contact Ken to coordinate a site visit to the wells.

Points of Diversion (Wells)

From my review of the correspondence between IDWR and the City, I found the following:

- City of Eagle Well 1 (Lexington 1) was drilled in 1991.
- City of Eagle Well 2 (Lexington 2) was drilled in 1992.
- City of Eagle Well 3 (Brookwood) was drilled in 2007.
- City of Eagle Well 4 is not yet drilled.

Please confirm that this data is correct. If it is incorrect, please specify and supply a copy of the well drilling log.

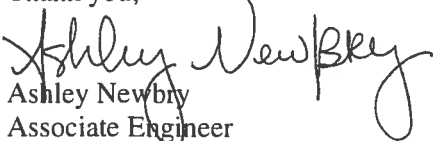
Beneficial Use during Development Period

I will need City records of water diversion from the above wells from September 11, 1991 to August 29, 2000. This time period represents the development period of permit 63-11413. To the extent that you are able, please search City well diversion records from this time period, for all of the wells above that were online and producing. I will be looking for volume and diversion rate data to calculate the average and maximum demands which were put on the system from 1991 – 2000. Also, please specify whether the City uses a storage reservoir to meet Peak Hour Demand or if this need is met by the well pumps alone.

Utility billing data can be supplied for the purposes of this request, but it may not accurately reflect the total City use. Often times, cities use more water than the volume billed to customers. For example, water is often used for flushing, exercising hydrants, irrigation of smaller landscaped areas, distribution system loss, etc. If the City has records of your well flow-meter readings, these would be best.

Please submit the information required by within 30 days, or your permit may be at risk to become void. If you need additional time to submit the required information, please submit a written request.

Thank you,


Ashley Newbry
Associate Engineer

Newbry, Ashley

From: Newbry, Ashley
Sent: Wednesday, October 14, 2015 9:04 AM
To: 'Ken Acuff'
Cc: 'miked@holladayengineering.com'
Subject: RE: Water Right Permit 63-11343

Thank you Ken,

I'm not sure that I have met Kellie, but your website says that she supervises Utility Billing. Often times, cities use more water than just what their customers pay for... like for flushing, exercising hydrants, irrigation of smaller landscaped areas, distribution system loss, etc. If I only consider customer water, it could result in a smaller water right license. But if it is the only information available, I can request the data from her instead.

If the Water Dept. has actual records of your well flow-meter readings, these would be best. I need them for the following dates: September 1991 to August 2000.

Call me if you have questions.

Thanks,
Ashley

Ashley Newbry
Associate Engineer
Water Rights Permits Section
Idaho Dept. of Water Resources
State Office
322 E. Front Street
PO Box 83720
Boise, ID 83720-0098
(208) 287-4800 X 4846



From: Ken Acuff [<mailto:kacuff@cityofeagle.org>]
Sent: Tuesday, October 13, 2015 2:58 PM
To: Newbry, Ashley
Subject: RE: Water Right Permit 63-11343

Ashley,

We would be happy to be your guide for a field exam. Kelly can get updated info for you and either I or Greg can show you the system. Tell me when you would like and we will make it happen. Ken

From: Newbry, Ashley [<mailto:Ashley.Newbry@idwr.idaho.gov>]
Sent: Friday, October 09, 2015 3:46 PM
To: miked@holladayengineering.com

Cc: Ken Acuff <kacuff@cityofeagle.org>

Subject: Water Right Permit 63-11343

Hello Mr. Davis and Mr. Acuff,

I have already begun my research of water permit 63-11413 for licensing. I will also be working 63-12448, and possibly 63-12017 in the coming months.

I would like to begin the "Field Examination" process for permit 63-11413 with this information request (below). After that, we will need to schedule a time for me to come and view the system. At that time, I will take photos of the wells, read the flow meters, and GPS the well locations. (This will be a process much like the exam performed by Scott King with SPF Water Engineering in 2009; he was accompanied by Brent Arte at the time.)

1.) Points of Diversion (Wells)

From my review of the correspondence between IDWR and the City, I found the following:

City of Eagle Well 1 (Lexington 1) was drilled in 1991.

City of Eagle Well 2 (Lexington 2) was drilled in 1992.

City of Eagle Well 3 (Brookwood) was drilled in 2007.

City of Eagle Well 4 is not yet drilled. If this is incorrect, please supply a copy of the well drilling log.

*Please confirm that the data above correct. If incorrect, please specify.

2.) Beneficial Use during Development Period

The development period for 63-11413 ran from September 11, 1991 to August 29, 2000, so I will be looking for data from that time period. To the extent that you are able, please research and report diversion records (gallons per minute and/or gallonage recorded) from this time period, for all of the wells above that were online and producing.

I will be looking for the maximum demands which were put on the system from 1991 – 2000, so that I can issue a license for the maximum amount. Also, please specify whether the City uses a storage reservoir to meet Peak Hour Demand or if this need is also met by the well pumps alone.

Thank you, and please feel free to call me if you have any questions.

Ashley Newbry

Associate Engineer

Water Rights Permits Section

Idaho Dept. of Water Resources

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