

MEMORANDUM

TO: File 61-7679

FROM: Daniel Nelson – Staff Hydrologist

DATE: March 6, 2015

SUBJECT: Licensing Review for 61-7679

This is the licensing review of the field exam submitted by Sandy Hemenway formerly in our state office. The field exam was done in 2012. The system associated with this permit allowed a water to be diverted directly from the Snake River or from a buried spring gallery that captures shallow spring water. This permit is specifically for the spring/ground water gallery. The field exam has some issues that need to be addressed to prior to licensing of the permit.

Source:

The source for this permit is ground water. Overlapping water right 61-4141 was decreed with the source of spring. Both water rights are diverted from the same spring gallery. The reason for filing this permit is that at some point in the past, the City of Glenn's Ferry (City) dug beyond the original spring to capture shallow ground water that was below land surface that may or may not have been associated with the spring. The channel dug into the hill side is called the spring gallery or infiltration gallery. In review of this permit, the construction of the infiltration gallery did increase the capacity of the system from 1140 gpm or 2.54 cfs to 1676 gpm or 3.74 cfs. This is an increase of 1.20 cfs from ground water. It is obvious from the diversion rates that the development of the spring galley did provide additional diversion rate from ground water of 1.20 cfs.

Diversion Rate:

Ms. Hemenway measured a diversion rate at the time of the field exam of 0.94 cfs. However, the system was not operating at full capacity of the system and was noted in Ms. Hemenway's notes. Water right 61-4141 was decreed with a diversion rate of 2.54 cfs based on theoretical calculations for the wells pumping the water. Ms. Hemenway knew at the time of the field exam that the flows recorded were not at the capacity of the system, and requested additional measurement information.

The City did supply measurement records, but they only supplied the daily water use volumes, and not the instantaneous diversion rate capacity of the system. The daily use records show a maximum average diversion rate of 304 gpm or 0.68 cfs, which clearly cannot be used, since the system does not operate 24 hours a day at maximum capacity.

I contacted the City's representative, and on December 8, 2014, he sent me photos of the system operating at maximum capacity from the spring gallery. The maximum flow was 1676 gpm or 3.74 cfs as measured by their flow meter. This would be the maximum capacity of both the springs and the ground water source. The ground water source adds an additional 1.20 cfs, (3.74 cfs max capacity – 2.54 cfs spring source = 1.20 cfs supplied by ground water). There will be no need to add a condition limiting the combined use of the spring and ground water, since both water rights are additive. I recommend that this permit be licensed for 1.20 cfs.

It must be noted that the Water Treatment Plant can only supply 1600 gpm instead of the 1676 recorded by the meter. The infiltration gallery was developed over the capacity of the Waste Treatment Plant to allow clean water to be diverted into the Sediment Retention basins to dilute the sludge water there, when the Water Treatment Plant is operating at full capacity. Regardless of the diversion rate from the infiltration gallery, only 1600 gpm can be diverted into the City's culinary system.

Some additional explanation is needed here. The water from the Snake River under 2-7470, ground water wells under 61-7228, and the infiltration gallery under 61-4141 and 61-7679 all go through a common Water Treatment Plant to treat or clean the water to Department of Environmental Quality standards. The water treatment plant can only process 1600 gpm worth of water at a time. The infiltration gallery pumping system under 61-4141 and 61-7679 does have a slightly larger capacity of diversion rate than the Water Treatment Plant, but the additional diversion rate is used to dilute the sediment basins. The sediment basins collect the sludge from the water treatment process. Water right 61-7228 is for a well that is only used as a back-up water source. It is only used when absolutely necessary.

Diversion Volume:

This permit is for a municipal use for the City, so no volume will be assigned to this permit. However, the City did supply documentation of the daily measurement reading from this source if needed in the future. In 2011 the maximum diversion volume through the spring gallery was 190 acre feet/

Points of Diversion:

The infiltration gallery does take up a larger area after it was drilled horizontally approximately 150 feet of more across the ground. However, the water is withdrawn from the infiltration gallery at the same location as the spring, so we will use the single diversion point recommended by Ms. Hemenway located in the Gov't Lot 4 (SWNW) of Section 32, Township 5 South, Range 10 East. This is the location described in the permit, so no amendment is necessary. I did change Ms. Hemenway's recommendation from the 10 acre tract to a 40 acre tract recommendation, since this is a ground water right.

Conditions:

Conditions 2(01G), 3 (052), 7(053), 8(26A), and 9(46B) were removed at licensing. Condition 1(051 was changed to R55 and the unnumbered conditions were changed to standard conditions 075, 124, and 180. Condition 4(004) was kept. Even though water rights 61-4141 and 617679 share the same point of diversion, there is no need to for a combined limitation on these rights, since the two water rights are additive. The spring can provide 2.54 cfs and the ground water can provide an additional 1.20 cfs for a total of 3.74 cfs. I did maintain the condition limiting this water right to a maximum of 2 af of diversion per day. In my review of the 2011 diversion records that maximum daily diversion for the infiltration gallery was 1.34 acre feet, so they have complied with this condition.

During the administrative review of this water right, it was determined that we needed to find out to the best of our ability the maximum instantaneous diversion rate for the entire city system. A combined condition would then need to be added to prevent creating a water right similar to a reasonably anticipated needs right without going through the process.

The City supplied information that states that the maximum that they divert into their culinary system out of the Water Treatment Plant at one time is 1600 gpm or 3.57 cfs. According to the average hourly demand, this rate seems a bit high, but there is a storage tank associated with this system. Therefore, it does seem reasonable that they would divert more water for a shorter period of time for efficiency reasons. Please note that the infiltration gallery under water rights 61-4141 and 61-7679 can divert a slightly higher diversion rate that is used to dilute the sediment stations.

Therefore, water rights 61-4141, 61-7679, 61-7228, and 2-7470 when combined should be limited to the Reported Actual Peak Flow of 3.57 cfs.

Please see attached spreadsheet for analysis of this right.

The administrative review also determined that condition R55 was needed with a 20 year review period. Evidently the condition was not included on the permit and should have been.

CITY OF GLENNS FERRY MAXIMUM DIVERSION ANALYSIS

MDD	Low MDD Ratio	High MDD Ratio	Low ADD	High ADD	Low PHD Ratio	High PHD Ratio	Low 1 PHD	Low 2 PHD	High 1 PHD	High 2 PHD
468	1.5	3	312.0	156.0	2.25	4.5	702.0	351.0	1404	702

Reported Actual Peak Flow (PID) = 1600 /448.8= 3.57 cfs

Estimated PID = 351 TO 1404

Determining the actual peak instantaneous diversion rate for municipal system is difficult at best. The City of Glenns Ferry states that the Maximum Daily Diversion(MDD) is 468 gpm and the Peak Instantaneous Diversion (PID) is 1600 gpm. According to general estimations of the ratios between the MDD and the Peak Hourly Diversion (PHD) found on page 13 of the Reasonably Anticipated Needs Administrative Memo, you can calculate the PHD from the MDD by using a set of ratios that convert the MDD to the Average Daily Diversion(ADD) and then back to the PHD. The PHD is the closest diversion rate we can estimate using this method, but it should be reasonably close to the PID. The Reported PID is much higher than the Estimated PID, but this system does have a storage unit, so it does sound reasonable to build a system that can fill a storage unit in a shorter period of time to avoid pumping costs.

Water Right	Water Right Diversion Rate in cfs
61-4141	2.54
61-7679	1.20
61-7228	0.45
2-7470	1.00
TOTAL	5.19

The only licensed water rights listing the City of Glenns Ferry as owner that supply culinary water are water rights 61-4141, 61-7679, 61-7228 and 2-7470. Water right 2-2209E is used for the City's irrigation system. Water right 2-7471 is a municipal right, but proof isn't due until 2016. 37-8851 is an application for permit that hasn't been approved. With these rights, water rights 61-4141, 61-7679, 61-7228, and 2-7470 when combined should be limited to the Reported Actual Peak Flow or 3.57 cfs.

This spreadsheet was created by Dan Nelson for the licensing review for water rights 2-7470 and 61-7679. This spreadsheet calculates the average daily diversion rates for this system. There are 2 sources that feed this system. One is from a spring horizontal well system known as the infiltration gallery and the other is the Snake River. The system is set up to divert water from both sources to reduce the clean up of the water for water quality purposes. The system can run up to 1600 gpm with the two sources combined.

2011 Infiltration Gallery

daily meter reading	gallons per day	af per day	Ave. Daily Gpm	Ave. daily cfs
311704				
311737	33000	0.10	23	0.05
311774	37000	0.11	26	0.06
311794	20000	0.06	14	0.03
311821	27000	0.08	19	0.04
311856	35000	0.11	24	0.05
311898	42000	0.13	29	0.06
311930	32000	0.10	22	0.05
311956	26000	0.08	18	0.04
312000	44000	0.14	31	0.07
312109	109000	0.33	76	0.17
312294	185000	0.57	128	0.29
312467	173000	0.53	120	0.27
312610	143000	0.44	99	0.22
312636	26000	0.08	18	0.04
312778	142000	0.44	99	0.22
312930	152000	0.47	106	0.24
313061	131000	0.40	91	0.20
313182	121000	0.37	84	0.19
313264	82000	0.25	57	0.13
313371	107000	0.33	74	0.17
313473	102000	0.31	71	0.16
313573	100000	0.31	69	0.15
313672	99000	0.30	69	0.15
313838	166000	0.51	115	0.26
313993	155000	0.48	108	0.24
314144	151000	0.46	105	0.23
314294	150000	0.46	104	0.23
314438	144000	0.44	100	0.22
314580	142000	0.44	99	0.22
314734	154000	0.47	107	0.24
314874	140000	0.43	97	0.22
315003	129000	0.40	90	0.20
315148	145000	0.44	101	0.22
315292	144000	0.44	100	0.22
315443	151000	0.46	105	0.23
315583	140000	0.43	97	0.22
315723	140000	0.43	97	0.22
315877	154000	0.47	107	0.24
316015	138000	0.42	96	0.21
316169	154000	0.47	107	0.24
316315	146000	0.45	101	0.23
316454	139000	0.43	97	0.22
316601	147000	0.45	102	0.23
316770	169000	0.52	117	0.26
316913	143000	0.44	99	0.22
317078	165000	0.51	115	0.26
317214	136000	0.42	94	0.21
317381	167000	0.51	116	0.26
317541	160000	0.49	111	0.25
317677	136000	0.42	94	0.21
317847	170000	0.52	118	0.26
318000	153000	0.47	106	0.24
318160	160000	0.49	111	0.25
318322	162000	0.50	113	0.25
318480	158000	0.48	110	0.24
318632	152000	0.47	106	0.24
318779	147000	0.45	102	0.23
318917	138000	0.42	96	0.21
319105	188000	0.58	131	0.29
319271	166000	0.51	115	0.26
319437	166000	0.51	115	0.26
319603	166000	0.51	115	0.26
319734	131000	0.40	91	0.20
319865	131000	0.40	91	0.20
319996	131000	0.40	91	0.20
320193	197000	0.60	137	0.30
320357	164000	0.50	114	0.25
320519	162000	0.50	113	0.25
320667	148000	0.45	103	0.23
320835	168000	0.52	117	0.26
320987	152000	0.47	106	0.24
321148	161000	0.49	112	0.25
321308	160000	0.49	111	0.25
321465	157000	0.48	109	0.24
321620	155000	0.48	108	0.24
321775	155000	0.48	108	0.24
321930	155000	0.48	108	0.24
322085	155000	0.48	108	0.24
322240	155000	0.48	108	0.24

2011 Snake River

daily meter reading	gallons per day	af per day	Ave. Daily Gpm	Ave. daily cfs
545857				
546028	171000	0.52	119	0.26
546284	256000	0.79	178	0.40
546508	224000	0.69	156	0.35
546668	160000	0.49	111	0.25
546868	200000	0.61	139	0.31
547080	212000	0.65	147	0.33
547274	194000	0.60	135	0.30
547472	198000	0.61	138	0.31
547718	246000	0.75	171	0.38
547794	76000	0.23	53	0.12
547871	77000	0.24	53	0.12
547949	78000	0.24	54	0.12
548062	113000	0.35	78	0.17
548289	227000	0.70	158	0.35
548391	102000	0.31	71	0.16
548503	112000	0.34	78	0.17
548606	103000	0.32	72	0.16
548751	145000	0.44	101	0.22
548873	122000	0.37	85	0.19
549027	154000	0.47	107	0.24
549157	130000	0.40	90	0.20
549281	124000	0.38	86	0.19
549449	168000	0.52	117	0.26
549520	71000	0.22	49	0.11
549579	59000	0.18	41	0.09
549680	101000	0.31	70	0.16
549788	108000	0.33	75	0.17
549892	104000	0.32	72	0.16
549996	104000	0.32	72	0.16
550109	113000	0.35	78	0.17
550210	101000	0.31	70	0.16
550306	96000	0.29	67	0.15
550412	106000	0.33	74	0.16
550513	101000	0.31	70	0.16
550618	105000	0.32	73	0.16
550716	98000	0.30	68	0.15
550814	98000	0.30	68	0.15
550920	106000	0.33	74	0.16
551014	94000	0.29	65	0.15
551123	109000	0.33	76	0.17
551231	108000	0.33	75	0.17
551333	102000	0.31	71	0.16
551442	109000	0.33	76	0.17
551565	123000	0.38	85	0.19
551666	101000	0.31	70	0.16
551777	111000	0.34	77	0.17
551870	93000	0.29	65	0.14
551973	103000	0.32	72	0.16
552065	92000	0.28	64	0.14
552158	93000	0.29	65	0.14
552229	71000	0.22	49	0.11
552304	75000	0.23	52	0.12
552389	85000	0.26	59	0.13
552468	79000	0.24	55	0.12
552536	68000	0.21	47	0.11
552613	77000	0.24	53	0.12
552688	75000	0.23	52	0.12
552756	68000	0.21	47	0.11
552846	90000	0.28	63	0.14
552932	86000	0.26	60	0.13
553018	86000	0.26	60	0.13
553104	86000	0.26	60	0.13
553166	62000	0.19	43	0.10
553228	62000	0.19	43	0.10
553290	62000	0.19	43	0.10
553403	113000	0.35	78	0.17
553484	81000	0.25	56	0.13
553566	82000	0.25	57	0.13
553642	76000	0.23	53	0.12
553726	84000	0.26	58	0.13
553803	77000	0.24	53	0.12
553885	82000	0.25	57	0.13
553966	81000	0.25	56	0.13
554046	80000	0.25	56	0.12
554124	78000	0.24	54	0.12
554202	78000	0.24	54	0.12
554280	78000	0.24	54	0.12
554358	78000	0.24	54	0.12
554436	78000	0.24	54	0.12

TOTALS

Gallons per day	af per day	ave daily gpm	ave daily cfs
204000	0.63	142	0.32
293000	0.90	203	0.45
244000	0.75	169	0.38
187000	0.57	130	0.29
235000	0.72	163	0.36
254000	0.78	176	0.39
226000	0.69	157	0.35
224000	0.69	156	0.35
290000	0.89	201	0.45
185000	0.57	128	0.29
262000	0.80	182	0.41
251000	0.77	174	0.39
256000	0.79	178	0.40
253000	0.78	176	0.39
244000	0.75	169	0.38
264000	0.81	183	0.41
234000	0.72	163	0.36
266000	0.82	185	0.41
204000	0.63	142	0.32
261000	0.80	181	0.40
232000	0.71	161	0.36
224000	0.69	156	0.35
267000	0.82	185	0.41
237000	0.73	165	0.37
214000	0.66	149	0.33
252000	0.77	175	0.39
258000	0.79	179	0.40
248000	0.76	172	0.38
246000	0.75	171	0.38
267000	0.82	185	0.41
241000	0.74	167	0.37
225000	0.69	156	0.35
251000	0.77	174	0.39
245000	0.75	170	0.38
256000	0.79	178	0.40
238000	0.73	165	0.37
238000	0.73	165	0.37
260000	0.80	181	0.40
232000	0.71	161	0.36
263000	0.81	183	0.41
254000	0.78	176	0.39
241000	0.74	167	0.37
256000	0.79	178	0.40
292000	0.90	203	0.45
244000	0.75	169	0.38
276000	0.85	192	0.43
229000	0.70	159	0.35
270000	0.83	188	0.42
252000	0.77	175	0.39
229000	0.70	159	0.35
241000	0.74	167	0.37
228000	0.70	158	0.35
245000	0.75	170	0.38
241000	0.74	167	0.37
226000	0.69	157	0.35
229000	0.70	159	0.35
222000	0.68	154	0.34
206000	0.63	143	0.32
278000	0.85	193	0.43
252000	0.77	175	0.39
252000	0.77	175	0.39
252000	0.77	175	0.39
193000	0.59	134	0.30
193000	0.59	134	0.30
193000	0.59	134	0.30
310000	0.95	215	0.48
245000	0.75	170	0.38
244000	0.75	169	0.38
224000	0.69	156	0.35
252000	0.77	175	0.39
229000	0.70	159	0.35
243000	0.75	169	0.38
241000	0.74	167	0.37
237000	0.73	165	0.37
233000	0.72	162	0.36
233000	0.72	162	0.36
233000	0.72	162	0.36
233000	0.72	162	0.36
233000	0.72	162	0.36

2011 Infiltration Gallery

daily meter reading	gallons per day	af per day	Ave. Daily Gpm	Ave. daily cfs
322490	250000	0.77	174	0.39
322688	198000	0.61	138	0.31
322848	160000	0.49	111	0.25
323071	223000	0.68	155	0.35
323291	220000	0.68	153	0.34
323499	208000	0.64	144	0.32
323711	212000	0.65	147	0.33
323896	185000	0.57	128	0.29
324080	184000	0.56	128	0.28
324279	199000	0.61	138	0.31
324478	199000	0.61	138	0.31
324784	306000	0.94	213	0.47
324826	42000	0.13	29	0.06
324868	42000	0.13	29	0.06
325061	193000	0.59	134	0.30
325260	199000	0.61	138	0.31
325464	204000	0.63	142	0.32
325672	208000	0.64	144	0.32
325853	181000	0.56	126	0.28
326039	186000	0.57	129	0.29
326257	218000	0.67	151	0.34
326447	190000	0.58	132	0.29
326670	223000	0.68	155	0.35
326858	188000	0.58	131	0.29
327077	219000	0.67	152	0.34
327267	190000	0.58	132	0.29
327453	186000	0.57	129	0.29
327657	204000	0.63	142	0.32
327812	155000	0.48	108	0.24
328007	195000	0.60	135	0.30
328189	182000	0.56	126	0.28
328370	181000	0.56	126	0.28
328549	179000	0.55	124	0.28
328767	218000	0.67	151	0.34
328949	182000	0.56	126	0.28
329117	168000	0.52	117	0.26
329303	186000	0.57	129	0.29
329463	160000	0.49	111	0.25
329646	183000	0.56	127	0.28
329864	218000	0.67	151	0.34
330132	268000	0.82	186	0.41
330324	192000	0.59	133	0.30
330471	147000	0.45	102	0.23
330613	142000	0.44	99	0.22
330756	143000	0.44	99	0.22
330987	231000	0.71	160	0.36
331215	228000	0.70	158	0.35
331391	176000	0.54	122	0.27
331558	167000	0.51	116	0.26
331700	142000	0.44	99	0.22
331857	157000	0.48	109	0.24
332018	161000	0.49	112	0.25
332206	188000	0.58	131	0.29
332394	188000	0.58	131	0.29
332517	123000	0.38	85	0.19
332665	148000	0.45	103	0.23
332784	119000	0.37	83	0.18
332900	116000	0.36	81	0.18
333022	122000	0.37	85	0.19
333160	138000	0.42	96	0.21
333321	161000	0.49	112	0.25
333485	164000	0.50	114	0.25
333647	162000	0.50	113	0.25
333906	259000	0.79	180	0.40
333970	64000	0.20	44	0.10
334105	135000	0.41	94	0.21
334253	148000	0.45	103	0.23
334350	97000	0.30	67	0.15
334441	91000	0.28	63	0.14
334454	13000	0.04	9	0.02
334484	30000	0.09	21	0.05
334646	162000	0.50	113	0.25
334920	274000	0.84	190	0.42
335170	250000	0.77	174	0.39
335477	307000	0.94	213	0.48
335758	281000	0.86	195	0.43
336072	314000	0.96	218	0.49
336315	243000	0.75	169	0.38
336556	241000	0.74	167	0.37
336812	256000	0.79	178	0.40
337068	256000	0.79	178	0.40
337352	284000	0.87	197	0.44
337614	262000	0.80	182	0.41
337949	335000	1.03	233	0.52
338251	302000	0.93	210	0.47

2011 Snake River

daily meter reading	gallons per day	af per day	Ave. Daily Gpm	Ave. daily cfs
554454	18000	0.06	13	0.03
554502	48000	0.15	33	0.07
554551	49000	0.15	34	0.08
554611	60000	0.18	42	0.09
554668	57000	0.17	40	0.09
554724	56000	0.17	39	0.09
554781	57000	0.17	40	0.09
554828	47000	0.14	33	0.07
554880	52000	0.16	36	0.08
554933	53000	0.16	37	0.08
554986	53000	0.16	37	0.08
555039	53000	0.16	37	0.08
555092	53000	0.16	37	0.08
555346	254000	0.78	176	0.39
555397	51000	0.16	35	0.08
555450	53000	0.16	37	0.08
555504	54000	0.17	38	0.08
555563	59000	0.18	41	0.09
555610	47000	0.14	33	0.07
555662	52000	0.16	36	0.08
555722	60000	0.18	42	0.09
555773	51000	0.16	35	0.08
555834	61000	0.19	42	0.09
555881	47000	0.14	33	0.07
555942	61000	0.19	42	0.09
556035	93000	0.29	65	0.14
556131	96000	0.29	67	0.15
556231	100000	0.31	69	0.15
556309	78000	0.24	54	0.12
556403	94000	0.29	65	0.15
556488	85000	0.26	59	0.13
556577	89000	0.27	62	0.14
556666	89000	0.27	62	0.14
556775	109000	0.33	76	0.17
556868	93000	0.29	65	0.14
556952	84000	0.26	58	0.13
557044	92000	0.28	64	0.14
557127	83000	0.25	58	0.13
557220	93000	0.29	65	0.14
557329	109000	0.33	76	0.17
557467	138000	0.42	96	0.21
557648	181000	0.56	126	0.28
557792	144000	0.44	100	0.22
557930	138000	0.42	96	0.21
558087	157000	0.48	109	0.24
558190	103000	0.32	72	0.16
558306	116000	0.36	81	0.18
558396	90000	0.28	63	0.14
558553	157000	0.48	109	0.24
558686	133000	0.41	92	0.21
558832	146000	0.45	101	0.23
558983	151000	0.46	105	0.23
559159	176000	0.54	122	0.27
559335	176000	0.54	122	0.27
559452	117000	0.36	81	0.18
559723	271000	0.83	188	0.42
559917	194000	0.60	135	0.30
560114	197000	0.60	137	0.30
560281	167000	0.51	116	0.26
560462	181000	0.56	126	0.28
560662	200000	0.61	139	0.31
560880	218000	0.67	151	0.34
561084	204000	0.63	142	0.32
561287	203000	0.62	141	0.31
561506	219000	0.67	152	0.34
561706	200000	0.61	139	0.31
561908	202000	0.62	140	0.31
562041	133000	0.41	92	0.21
562401	360000	1.10	250	0.56
562706	305000	0.94	212	0.47
563071	365000	1.12	253	0.56
563336	265000	0.81	184	0.41
563422	86000	0.26	60	0.13
563500	78000	0.24	54	0.12
563594	94000	0.29	65	0.15
563687	93000	0.29	65	0.14
563787	100000	0.31	69	0.15
563865	78000	0.24	54	0.12
563944	79000	0.24	55	0.12
564025	81000	0.25	56	0.13
564106	81000	0.25	56	0.13
564197	91000	0.28	63	0.14
564281	84000	0.26	58	0.13
564391	110000	0.34	76	0.17
564484	93000	0.29	65	0.14

TOTALS

Gallons per day	af per day	ave daily gpm	ave daily cfs
268000	0.82	186	0.41
246000	0.75	171	0.38
209000	0.64	145	0.32
283000	0.87	197	0.44
277000	0.85	192	0.43
264000	0.81	183	0.41
269000	0.83	187	0.42
232000	0.71	161	0.36
236000	0.72	164	0.37
252000	0.77	175	0.39
252000	0.77	175	0.39
359000	1.10	249	0.56
95000	0.29	66	0.15
296000	0.91	206	0.46
244000	0.75	169	0.38
252000	0.77	175	0.39
258000	0.79	179	0.40
267000	0.82	185	0.41
228000	0.70	158	0.35
238000	0.73	165	0.37
278000	0.85	193	0.43
241000	0.74	167	0.37
284000	0.87	197	0.44
235000	0.72	163	0.36
280000	0.86	194	0.43
283000	0.87	197	0.44
282000	0.87	196	0.44
304000	0.93	211	0.47
233000	0.72	162	0.36
289000	0.89	201	0.45
267000	0.82	185	0.41
270000	0.83	188	0.42
268000	0.82	186	0.41
327000	1.00	227	0.51
275000	0.84	191	0.43
252000	0.77	175	0.39
278000	0.85	193	0.43
243000	0.75	169	0.38
276000	0.85	192	0.43
327000	1.00	227	0.51
406000	1.25	282	0.63
373000	1.14	259	0.58
291000	0.89	202	0.45
280000	0.86	194	0.43
300000	0.92	208	0.46
334000	1.03	232	0.52
344000	1.06	239	0.53
266000	0.82	185	0.41
324000	0.99	225	0.50
275000	0.84	191	0.43
303000	0.93	210	0.47
312000	0.96	217	0.48
364000	1.12	253	0.56
364000	1.12	253	0.56
240000	0.74	167	0.37
419000	1.29	291	0.65
313000	0.96	217	0.48
313000	0.96	217	0.48
289000	0.89	201	0.45
319000	0.98	222	0.49
361000	1.11	251	0.56
382000	1.17	265	0.59
366000	1.12	254	0.57
462000	1.42	321	0.71
283000	0.87	197	0.44
335000	1.03	233	0.52
350000	1.07	243	0.54
230000	0.71	160	0.36
451000	1.38	313	0.70
318000	0.98	221	0.49
395000	1.21	274	0.61
427000	1.31	297	0.66
360000	1.10	250	0.56
328000	1.01	228	0.51
401000	1.23	278	0.62
374000	1.15	260	0.58
414000	1.27	288	0.64
321000	0.99	223	0.50
320000	0.98	222	0.50
337000	1.03	234	0.52
337000	1.03	234	0.52
375000	1.15	260	0.58
346000	1.06	240	0.54
445000	1.37	309	0.69
395000	1.21	274	0.61

2011 Infiltration Gallery

daily meter reading	gallons per day	af per day	Ave. Daily Gpm	Ave. daily cfs
338598	347000	1.06	241	0.54
338892	294000	0.90	204	0.45
339170	278000	0.85	193	0.43
339491	321000	0.99	223	0.50
339759	268000	0.82	186	0.41
340027	268000	0.82	186	0.41
340385	358000	1.10	249	0.55
340750	365000	1.12	253	0.56
341098	348000	1.07	242	0.54
341445	347000	1.06	241	0.54
341728	283000	0.87	197	0.44
342011	283000	0.87	197	0.44
342419	408000	1.25	283	0.63
342797	378000	1.16	263	0.58
343220	423000	1.30	294	0.65
343564	344000	1.06	239	0.53
343987	423000	1.30	294	0.65
344316	329000	1.01	228	0.51
344733	417000	1.28	290	0.65
345158	425000	1.30	295	0.66
345543	385000	1.18	267	0.60
345939	396000	1.22	275	0.61
346345	406000	1.25	282	0.63
346674	329000	1.01	228	0.51
346997	323000	0.99	224	0.50
347246	249000	0.76	173	0.39
347474	228000	0.70	158	0.35
347698	224000	0.69	156	0.35
347904	206000	0.63	143	0.32
348184	280000	0.86	194	0.43
348492	308000	0.95	214	0.48
348814	322000	0.99	224	0.50
349252	438000	1.34	304	0.68
349574	322000	0.99	224	0.50
349991	417000	1.28	290	0.65
350115	124000	0.38	86	0.19
350423	308000	0.95	214	0.48
350593	170000	0.52	118	0.26
350881	288000	0.88	200	0.45
351189	308000	0.95	214	0.48
351210	21000	0.06	15	0.03
351419	209000	0.64	145	0.32
351650	231000	0.71	160	0.36
351866	216000	0.66	150	0.33
351960	94000	0.29	65	0.15
352039	79000	0.24	55	0.12
352099	60000	0.18	42	0.09
352163	64000	0.20	44	0.10
352228	65000	0.20	45	0.10
352293	65000	0.20	45	0.10
352346	53000	0.16	37	0.08
352399	53000	0.16	37	0.08
352452	53000	0.16	37	0.08
352505	53000	0.16	37	0.08
352560	55000	0.17	38	0.09
352714	154000	0.47	107	0.24
352961	247000	0.76	172	0.38
353162	201000	0.62	140	0.31
353385	223000	0.68	155	0.35
353613	228000	0.70	158	0.35
353830	217000	0.67	151	0.34
354026	196000	0.60	136	0.30
354240	214000	0.66	149	0.33
354484	244000	0.75	169	0.38
354677	193000	0.59	134	0.30
354925	248000	0.76	172	0.38
355130	205000	0.63	142	0.32
355328	198000	0.61	138	0.31
355543	215000	0.66	149	0.33
355758	215000	0.66	149	0.33
355994	236000	0.72	164	0.37
356200	206000	0.63	143	0.32
356398	198000	0.61	138	0.31
356600	202000	0.62	140	0.31
356786	186000	0.57	129	0.29
357001	215000	0.66	149	0.33
357195	194000	0.60	135	0.30
357416	221000	0.68	153	0.34
357589	173000	0.53	120	0.27
357759	170000	0.52	118	0.26
357929	170000	0.52	118	0.26
358102	173000	0.53	120	0.27
358292	190000	0.58	132	0.29
358453	161000	0.49	112	0.25
358645	192000	0.59	133	0.30

2011 Snake River

daily meter reading	gallons per day	af per day	Ave. Daily Gpm	Ave. daily cfs
564597	113000	0.35	78	0.17
564695	98000	0.30	68	0.15
564785	90000	0.28	63	0.14
564888	103000	0.32	72	0.16
564978	90000	0.28	63	0.14
565065	87000	0.27	60	0.13
565179	114000	0.35	79	0.18
565296	117000	0.36	81	0.18
565402	106000	0.33	74	0.16
565515	113000	0.35	78	0.17
565627	112000	0.34	78	0.17
565739	112000	0.34	78	0.17
565849	110000	0.34	76	0.17
565967	118000	0.36	82	0.18
566100	133000	0.41	92	0.21
566205	105000	0.32	73	0.16
566340	135000	0.41	94	0.21
566443	103000	0.32	72	0.16
566576	133000	0.41	92	0.21
566712	136000	0.42	94	0.21
566829	117000	0.36	81	0.18
566952	123000	0.38	85	0.19
567080	128000	0.39	89	0.20
567183	103000	0.32	72	0.16
567425	242000	0.74	168	0.37
567740	315000	0.97	219	0.49
568051	311000	0.95	216	0.48
568363	312000	0.96	217	0.48
568819	456000	1.40	317	0.71
569012	193000	0.59	134	0.30
569239	227000	0.70	158	0.35
569481	242000	0.74	168	0.37
569789	308000	0.95	214	0.48
570051	262000	0.80	182	0.41
570184	133000	0.41	92	0.21
570612	428000	1.31	297	0.66
570839	227000	0.70	158	0.35
571251	412000	1.26	286	0.64
571478	227000	0.70	158	0.35
571705	227000	0.70	158	0.35
572205	500000	1.53	347	0.77
572494	289000	0.89	201	0.45
572804	310000	0.95	215	0.48
573096	292000	0.90	203	0.45
573597	501000	1.54	348	0.78
574028	431000	1.32	299	0.67
574462	434000	1.33	301	0.67
574865	403000	1.24	280	0.62
575317	452000	1.39	314	0.70
575766	449000	1.38	312	0.69
576190	424000	1.30	294	0.66
576614	424000	1.30	294	0.66
577038	424000	1.30	294	0.66
577462	424000	1.30	294	0.66
578015	553000	1.70	384	0.86
578372	357000	1.10	248	0.55
578683	311000	0.95	216	0.48
578956	273000	0.84	190	0.42
579235	279000	0.86	194	0.43
579540	305000	0.94	212	0.47
579817	277000	0.85	192	0.43
580075	258000	0.79	179	0.40
580351	276000	0.85	192	0.43
580665	314000	0.96	218	0.49
580916	251000	0.77	174	0.39
581237	321000	0.99	223	0.50
581505	268000	0.82	186	0.41
581793	288000	0.88	200	0.45
582102	309000	0.95	215	0.48
582426	324000	0.99	225	0.50
582754	328000	1.01	228	0.51
583062	308000	0.95	214	0.48
583340	278000	0.85	193	0.43
583641	301000	0.92	209	0.47
583900	259000	0.79	180	0.40
584216	316000	0.97	219	0.49
584506	290000	0.89	201	0.45
584827	321000	0.99	223	0.50
585088	261000	0.80	181	0.40
585326	238000	0.73	165	0.37
585564	238000	0.73	165	0.37
585825	261000	0.80	181	0.40
586157	332000	1.02	231	0.51
586431	274000	0.84	190	0.42
586724	293000	0.90	203	0.45

TOTALS

Gallons per day	af per day	ave daily gpm	ave daily cfs
460000	1.41	319	0.71
392000	1.20	272	0.61
368000	1.13	256	0.57
424000	1.30	294	0.66
358000	1.10	249	0.55
355000	1.09	247	0.55
472000	1.45	328	0.73
482000	1.48	335	0.75
454000	1.39	315	0.70
460000	1.41	319	0.71
395000	1.21	274	0.61
395000	1.21	274	0.61
518000	1.59	360	0.80
496000	1.52	344	0.77
556000	1.71	386	0.86
449000	1.38	312	0.69
558000	1.71	388	0.86
432000	1.33	300	0.67
550000	1.69	382	0.85
561000	1.72	390	0.87
502000	1.54	349	0.78
519000	1.59	360	0.80
534000	1.64	371	0.83
432000	1.33	300	0.67
565000	1.73	392	0.87
564000	1.73	392	0.87
539000	1.65	374	0.83
536000	1.64	372	0.83
662000	2.03	460	1.02
473000	1.45	328	0.73
535000	1.64	372	0.83
564000	1.73	392	0.87
746000	2.29	518	1.15
584000	1.79	406	0.90
550000	1.69	382	0.85
552000	1.69	383	0.85
535000	1.64	372	0.83
582000	1.79	404	0.90
515000	1.58	358	0.80
535000	1.64	372	0.83
521000	1.60	362	0.81
498000	1.53	346	0.77
541000	1.66	376	0.84
508000	1.56	353	0.79
595000	1.83	413	0.92
510000	1.57	354	0.79
494000	1.52	343	0.76
467000	1.43	324	0.72
517000	1.59	359	0.80
514000	1.58	357	0.80
477000	1.46	331	0.74
477000	1.46	331	0.74
477000	1.46	331	0.74
477000	1.46	331	0.74
608000	1.87	422	0.94
511000	1.57	355	0.79
558000	1.71	388	0.86
474000	1.45	329	0.73
502000	1.54	349	0.78
533000	1.64	370	0.82
494000	1.52	343	0.76
454000	1.39	315	0.70
490000	1.50	340	0.76
558000	1.71	388	0.86
444000	1.36	308	0.69
569000	1.75	395	0.88
473000	1.45	328	0.73
486000	1.49	338	0.75
524000	1.61	364	0.81
539000	1.65	374	0.83
564000	1.73	392	0.87
514000	1.58	357	0.80
476000	1.46	331	0.74
503000	1.54	349	0.78
445000	1.37	309	0.69
531000	1.63	369	0.82
484000	1.49	336	0.75
542000	1.66	376	0.84
434000	1.33	301	0.67
408000	1.25	283	0.63
408000	1.25	283	0.63
434000	1.33	301	0.67
522000	1.60	363	0.81
435000	1.33	302	0.67
485000	1.49	337	0.78

2011 Infiltration Gallery

daily meter reading	gallons per day	af per day	Ave. Daily Gpm	Ave. daily cfs
358808	163000	0.50	113	0.25
358988	180000	0.55	125	0.28
359173	185000	0.57	128	0.29
359341	168000	0.52	117	0.26
359523	182000	0.56	126	0.28
359713	190000	0.58	132	0.29
359920	207000	0.64	144	0.32
360116	196000	0.60	136	0.30
360277	161000	0.49	112	0.25
360447	170000	0.52	118	0.26
360610	163000	0.50	113	0.25
360788	178000	0.55	124	0.28
360973	185000	0.57	128	0.29
361191	218000	0.67	151	0.34
361377	186000	0.57	129	0.29
361584	207000	0.64	144	0.32
361778	194000	0.60	135	0.30
361956	178000	0.55	124	0.28
362142	186000	0.57	129	0.29
362326	184000	0.56	128	0.28
362510	184000	0.56	128	0.28
362741	231000	0.71	160	0.36
362972	231000	0.71	160	0.36
363133	161000	0.49	112	0.25
363247	114000	0.35	79	0.18
363429	182000	0.56	126	0.28
363611	182000	0.56	126	0.28
363725	114000	0.35	79	0.18
363773	48000	0.15	33	0.07
363860	87000	0.27	60	0.13
363966	106000	0.33	74	0.16
364078	112000	0.34	78	0.17
364198	120000	0.37	83	0.19
364291	93000	0.29	65	0.14
364398	107000	0.33	74	0.17
364505	107000	0.33	74	0.17
364612	107000	0.33	74	0.17
364705	93000	0.29	65	0.14
364798	93000	0.29	65	0.14
364905	107000	0.33	74	0.17
364988	83000	0.25	58	0.13
365094	106000	0.33	74	0.16
365176	82000	0.25	57	0.13
365269	93000	0.29	65	0.14
365360	91000	0.28	63	0.14
365461	101000	0.31	70	0.16
365561	100000	0.31	69	0.15
365648	87000	0.27	60	0.13
365730	82000	0.25	57	0.13
365824	94000	0.29	65	0.15
365906	82000	0.25	57	0.13
365999	93000	0.29	65	0.14
366092	93000	0.29	65	0.14
366212	120000	0.37	83	0.19
366296	84000	0.26	58	0.13
366390	94000	0.29	65	0.15
366482	92000	0.28	64	0.14
366567	85000	0.26	59	0.13
366656	89000	0.27	62	0.14
366851	195000	0.60	135	0.30
367046	195000	0.60	135	0.30
367174	128000	0.39	89	0.20
367449	275000	0.84	191	0.43
367587	138000	0.42	96	0.21
367679	92000	0.28	64	0.14
367774	95000	0.29	66	0.15
367800	26000	0.08	18	0.04
367874	74000	0.23	51	0.11
367965	91000	0.28	63	0.14
368078	113000	0.35	78	0.17
368182	104000	0.32	72	0.16
368278	96000	0.29	67	0.15
368385	107000	0.33	74	0.17
368492	107000	0.33	74	0.17
368575	83000	0.25	58	0.13
368685	110000	0.34	76	0.17
368792	107000	0.33	74	0.17
368875	83000	0.25	58	0.13
368971	96000	0.29	67	0.15
369081	110000	0.34	76	0.17
369194	113000	0.35	78	0.17
369352	158000	0.48	110	0.24
369474	122000	0.37	85	0.19
369585	111000	0.34	77	0.17
369696	111000	0.34	77	0.17

2011 Snake River

daily meter reading	gallons per day	af per day	Ave. Daily Gpm	Ave. daily cfs
586986	262000	0.80	182	0.41
587259	273000	0.84	190	0.42
587535	276000	0.85	192	0.43
587791	256000	0.79	178	0.40
588073	282000	0.87	196	0.44
588360	287000	0.88	199	0.44
588692	332000	1.02	231	0.51
589006	314000	0.96	218	0.49
589280	274000	0.84	190	0.42
589518	238000	0.73	165	0.37
589780	262000	0.80	182	0.41
590130	350000	1.07	243	0.54
590412	282000	0.87	196	0.44
590753	341000	1.05	237	0.53
591063	310000	0.95	215	0.48
591396	333000	1.02	231	0.52
591716	320000	0.98	222	0.50
591997	281000	0.86	195	0.43
592296	299000	0.92	208	0.46
592619	323000	0.99	224	0.50
592942	323000	0.99	224	0.50
593268	326000	1.00	226	0.50
593594	326000	1.00	226	0.50
593868	274000	0.84	190	0.42
594093	225000	0.69	156	0.35
594369	276000	0.85	192	0.43
594645	276000	0.85	192	0.43
594870	225000	0.69	156	0.35
595022	152000	0.47	106	0.24
595243	221000	0.68	153	0.34
595450	207000	0.64	144	0.32
595638	188000	0.58	131	0.29
595860	222000	0.68	154	0.34
596047	187000	0.57	130	0.29
596238	191000	0.59	133	0.30
596429	191000	0.59	133	0.30
596620	191000	0.59	133	0.30
596807	187000	0.57	130	0.29
596994	187000	0.57	130	0.29
597185	191000	0.59	133	0.30
597317	132000	0.41	92	0.20
597506	189000	0.58	131	0.29
597675	169000	0.52	117	0.26
597841	166000	0.51	115	0.26
598009	168000	0.52	117	0.26
598181	172000	0.53	119	0.27
598345	164000	0.50	114	0.25
598513	168000	0.52	117	0.26
598682	169000	0.52	117	0.26
598850	168000	0.52	117	0.26
599019	169000	0.52	117	0.26
599206	187000	0.57	130	0.29
599372	166000	0.51	115	0.26
599554	182000	0.56	126	0.28
599717	163000	0.50	113	0.25
599897	180000	0.55	125	0.28
600064	167000	0.51	116	0.26
600254	190000	0.58	132	0.29
600427	173000	0.53	120	0.27
600717	290000	0.89	201	0.45
601008	291000	0.89	202	0.45
601230	222000	0.68	154	0.34
602033	803000	2.46	558	1.24
602268	235000	0.72	163	0.36
602435	167000	0.51	116	0.26
602726	291000	0.89	202	0.45
602916	190000	0.58	132	0.29
602954	38000	0.12	26	0.06
603080	126000	0.39	88	0.19
603219	139000	0.43	97	0.22
603357	138000	0.42	96	0.21
603501	144000	0.44	100	0.22
603644	143000	0.44	99	0.22
603792	148000	0.45	103	0.23
603903	111000	0.34	77	0.17
604049	146000	0.45	101	0.23
604177	128000	0.39	89	0.20
604288	111000	0.34	77	0.17
604432	144000	0.44	100	0.22
604578	146000	0.45	101	0.23
604717	139000	0.43	97	0.22
604857	140000	0.43	97	0.22
604978	121000	0.37	84	0.19
605088	110000	0.34	76	0.17
605198	110000	0.34	76	0.17

TOTALS

Gallons per day	af per day	ave daily gpm	ave daily cfs
425000	1.30	295	0.66
453000	1.39	315	0.70
461000	1.41	320	0.71
424000	1.30	294	0.66
464000	1.42	322	0.72
477000	1.46	331	0.74
539000	1.65	374	0.83
510000	1.57	354	0.79
435000	1.33	302	0.67
408000	1.25	283	0.63
425000	1.30	295	0.66
528000	1.62	367	0.82
467000	1.43	324	0.72
559000	1.72	388	0.86
496000	1.52	344	0.77
540000	1.66	375	0.84
514000	1.58	357	0.80
459000	1.41	319	0.71
485000	1.49	337	0.75
507000	1.56	352	0.78
507000	1.56	352	0.78
557000	1.71	387	0.86
557000	1.71	387	0.86
435000	1.33	302	0.67
339000	1.04	235	0.52
458000	1.41	318	0.71
458000	1.41	318	0.71
339000	1.04	235	0.52
200000	0.61	139	0.31
308000	0.95	214	0.48
313000	0.96	217	0.48
300000	0.92	208	0.46
342000	1.05	238	0.53
280000	0.86	194	0.43
298000	0.91	207	0.46
298000	0.91	207	0.46
280000	0.86	194	0.43
280000	0.86	194	0.43
298000	0.91	207	0.46
215000	0.66	149	0.33
295000	0.91	205	0.46
251000	0.77	174	0.39
259000	0.79	180	0.40
259000	0.79	180	0.40
273000	0.84	190	0.42
264000	0.81	183	0.41
255000	0.78	177	0.39
251000	0.77	174	0.39
262000	0.80	182	0.41
251000	0.77	174	0.39
280000	0.86	194	0.43
259000	0.79	180	0.40
302000	0.93	210	0.47
247000	0.76	172	0.38
274000	0.84	190	0.42
259000	0.79	180	0.40
275000	0.84	191	0.43
262000	0.80	182	0.41
485000	1.49	337	0.75
486000	1.49	338	0.75
350000	1.07	243	0.54
1078000	3.31	749	1.67
373000	1.14	259	0.58
259000	0.79	180	0.40
386000	1.18	268	0.60
216000	0.66	150	0.33
112000	0.34	78	0.17
217000	0.67	151	0.34
252000	0.77	175	0.39
242000	0.74	168	0.37
240000	0.74	167	0.37
250000	0.77	174	0.39
255000	0.78	177	0.39
194000	0.60	135	0.30
256000	0.79	178	0.40
235000	0.72	163	0.36
194000	0.60	135	0.30
240000	0.74	167	0.37
256000	0.79	178	0.40
252000	0.77	175	0.39
298000	0.91	207	0.46
243000	0.75	169	0.38
221000	0.68	153	0.34
221000	0.68	153	0.34

2011 Infiltration Gallery

daily meter reading	gallons per day	af per day	Ave. Daily Gpm	Ave. daily cfs
369837	141000	0.43	98	0.22
369949	112000	0.34	78	0.17
370069	120000	0.37	83	0.19
370197	128000	0.39	89	0.20
370317	120000	0.37	83	0.19
370452	135000	0.41	94	0.21
370592	140000	0.43	97	0.22
370704	112000	0.34	78	0.17
370816	112000	0.34	78	0.17
370956	140000	0.43	97	0.22
371093	137000	0.42	95	0.21
371210	117000	0.36	81	0.18
371295	85000	0.26	59	0.13
371441	146000	0.45	101	0.23
371562	121000	0.37	84	0.19
371682	120000	0.37	83	0.19
371817	135000	0.41	94	0.21
371934	117000	0.36	81	0.18
372064	130000	0.40	90	0.20
372194	130000	0.40	90	0.20
372312	118000	0.36	82	0.18
372442	130000	0.40	90	0.20
372577	135000	0.41	94	0.21
372712	135000	0.41	94	0.21
372820	108000	0.33	75	0.17
372945	125000	0.38	87	0.19
373074	129000	0.40	90	0.20
373209	135000	0.41	94	0.21
373338	129000	0.40	90	0.20
373459	121000	0.37	84	0.19
Maximum	438000	1.34	304	0.68

Total Annual Gallons = 61755000
Total Annual Acre Feet = 190

2011 Snake River

daily meter reading	gallons per day	af per day	Ave. Daily Gpm	Ave. daily cfs
605332	134000	0.41	93	0.21
605441	109000	0.33	76	0.17
605557	116000	0.36	81	0.18
605684	127000	0.39	88	0.20
605799	115000	0.35	80	0.18
605931	132000	0.41	92	0.20
606066	135000	0.41	94	0.21
606175	109000	0.33	76	0.17
606284	109000	0.33	76	0.17
606419	135000	0.41	94	0.21
606551	132000	0.41	92	0.20
606664	113000	0.35	78	0.17
606854	190000	0.58	132	0.29
606886	32000	0.10	22	0.05
607001	115000	0.35	80	0.18
607118	117000	0.36	81	0.18
607248	130000	0.40	90	0.20
607364	116000	0.36	81	0.18
607492	128000	0.39	89	0.20
607620	128000	0.39	89	0.20
607729	109000	0.33	76	0.17
607857	128000	0.39	89	0.20
607987	130000	0.40	90	0.20
608117	130000	0.40	90	0.20
608208	91000	0.28	63	0.14
608325	117000	0.36	81	0.18
608448	123000	0.38	85	0.19
608575	127000	0.39	88	0.20
608697	122000	0.37	85	0.19
608811	114000	0.35	79	0.18
Maximum	803000	2.46	558	1.24

Total Annual Gallons = 62954000
Total Annual Acre Feet = 193

TOTALS

Gallons per day	af per day	ave daily gpm	ave daily cfs
275000	0.84	191	0.43
221000	0.68	153	0.34
236000	0.72	164	0.37
255000	0.78	177	0.39
235000	0.72	163	0.36
267000	0.82	185	0.41
275000	0.84	191	0.43
221000	0.68	153	0.34
221000	0.68	153	0.34
275000	0.84	191	0.43
269000	0.83	187	0.42
230000	0.71	160	0.36
275000	0.84	191	0.43
178000	0.55	124	0.28
236000	0.72	164	0.37
237000	0.73	165	0.37
265000	0.81	184	0.41
233000	0.72	162	0.36
258000	0.79	179	0.40
258000	0.79	179	0.40
227000	0.70	158	0.35
258000	0.79	179	0.40
265000	0.81	184	0.41
265000	0.81	184	0.41
199000	0.61	138	0.31
242000	0.74	168	0.37
252000	0.77	175	0.39
262000	0.80	182	0.41
251000	0.77	174	0.39
235000	0.72	163	0.36
Maximum	3.31	749	1.67

Total Annual Gallons = 124709000
Total Annual Acre Feet = 383