

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 65-22350

Exam Date: 8/24/2012

1. Current Owner: KATHERINE S VOGEL
1033 LILAC LN
EMMETT ID 83617
(208)365-2873
2. Accompanied by: Katherine (Sue) Vogel & sister Lucille
Phone No: 365-2873
Address:
Relationship to Permit Holder: Owner

3. SOURCE

PAYETTE RIVER

TRIBUTARY

SNAKE RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 65-1131A
2. Other water rights with the same point of diversion: 65-587, 65-2950, 65-5558, 65-12721, 65-1131A, 65-1148A, 65-1148B, (Smith Ditch)

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

PAYETTE RIVER L3 NW1/4NW1/4 Sec. 7, Twp 06N, Rge 01W, B.M.GEM County

Method of Determination: GIS and location of overlapping water right POD's. Since location identified was Gov L3 and permit describes Gov L3, no amendment is needed.

2.

PLACE OF USE: IRRIGATION

TwpRgeSec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
06N02W11			.9										2.6				3.5
			L 8										L 8				

Total Acres: 3.5

Method of Determination: Visual inspection.

3. 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.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Home Made	4 cylinder	?	None	None	

**Code to correspond with No. on map and aerial photo*

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Theoretical						

2. Measurements: The home made gas engine pump supplies a sprinkler line using 1/8" Rainbird heads with 32 total heads on the system. Flow measurements correlated with WD65 flow records (See attached).

E. FLOW CALCULATIONS

X Additional Computation Sheets Attached

Measured Method: Theoretical calculated by number of 1/8" rainbird nozzles multiplied by psi. According to the field exam handbook, the discharge of a 1/8" nozzle at 40 psi equals 2.96 gpm.

$$2.96 \text{ gpm} \times 32 \text{ nozzles} = 94.72 \text{ gpm}$$

$$94.72 \text{ gpm} \div 448 = \underline{0.21 \text{ cfs}}$$

Permit limits flow to 0.15 cfs. Condition R69 limits to 0.03/acre.

$$\underline{3.5 \text{ acres} \times .03 = 0.11 \text{ cfs. Recommend 0.11 cfs.}}$$

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 3.5 \times 4.5 = \underline{15.75 \text{ AF}}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.15 \times 260 \times 1.9835 = \underline{77.36 \text{ AF}}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = \underline{15.75 \text{ AF}}$$

2. Volume Calculations for Other Uses: n/a

G. NARRATIVE/REMARKS/COMMENTS

Permit 65-22350 requests surface water to irrigate grass fields and trees. The overlap comparison indicates surface water is licensed under 65-1131A for irrigation and 65-12721 for wildlife storage, recreation storage and diversion to storage. Water Right 65-1131A covers the 0.9 acres identified at location Section 11, NESE Lot 8, so that land will be removed leaving 3.5 acres being irrigated.

There are multiple licenses with the same POD. According to Ron Shurtleff, Watermaster for WD65, the name of the diversion is called Smith Ditch. There are two weirs located on Smith Ditch between the POD and POU for this permit. He indicated a lot of water flows over the upper weir so those readings are probably not accurate for this permit. The lower weir is a Broadcrested weir which is located south of the water treatment plant next to a walking path, downstream of the road into the treatment plant. This is approximately 600 yards above the location where water is pumped. I was not aware of this weir at the time of the field exam so Ron sent his measurements which are included with this exam.

There is a mobile home-made pump using a 4 cylinder car motor located at the southeast corner of the acreage. The pump pulls water from a ditch which flows along the south end of the acreage and back into the Payette River. The grass field has been mowed this year and there are 2 rows of trees planted to block the view from the sewage treatment plant. The pump was not running at the time of the field exam so size and number of sprinklers was collected to perform a theoretical calculation. Sprinklers were 1/8 " with 32 sprinklers at a pressure of 40 psi.

The Watermaster measured the flow past the weir on September 18th at 3.47 cfs. Depending on users upstream the flow varies but is always equal or greater than the amount diverted for this permit and overlapping water rights so there is sufficient water. Records indicate the greatest flow was in June 2010, measured at 4 cfs. (See attached flow records).

The POD is incorrectly listed on the permit as Section 7, SWNW L3 but according to GIS imagery the POD is located at Section 7, NWNW L3. Since both locations are in Gov. Lot 3, no amendment is required.

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>
IRRIGATION	03/01 to 11/15	0.11 CFS	
	<u>Totals:</u>	0.11 CFS	

2. Recommended Amendments

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

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

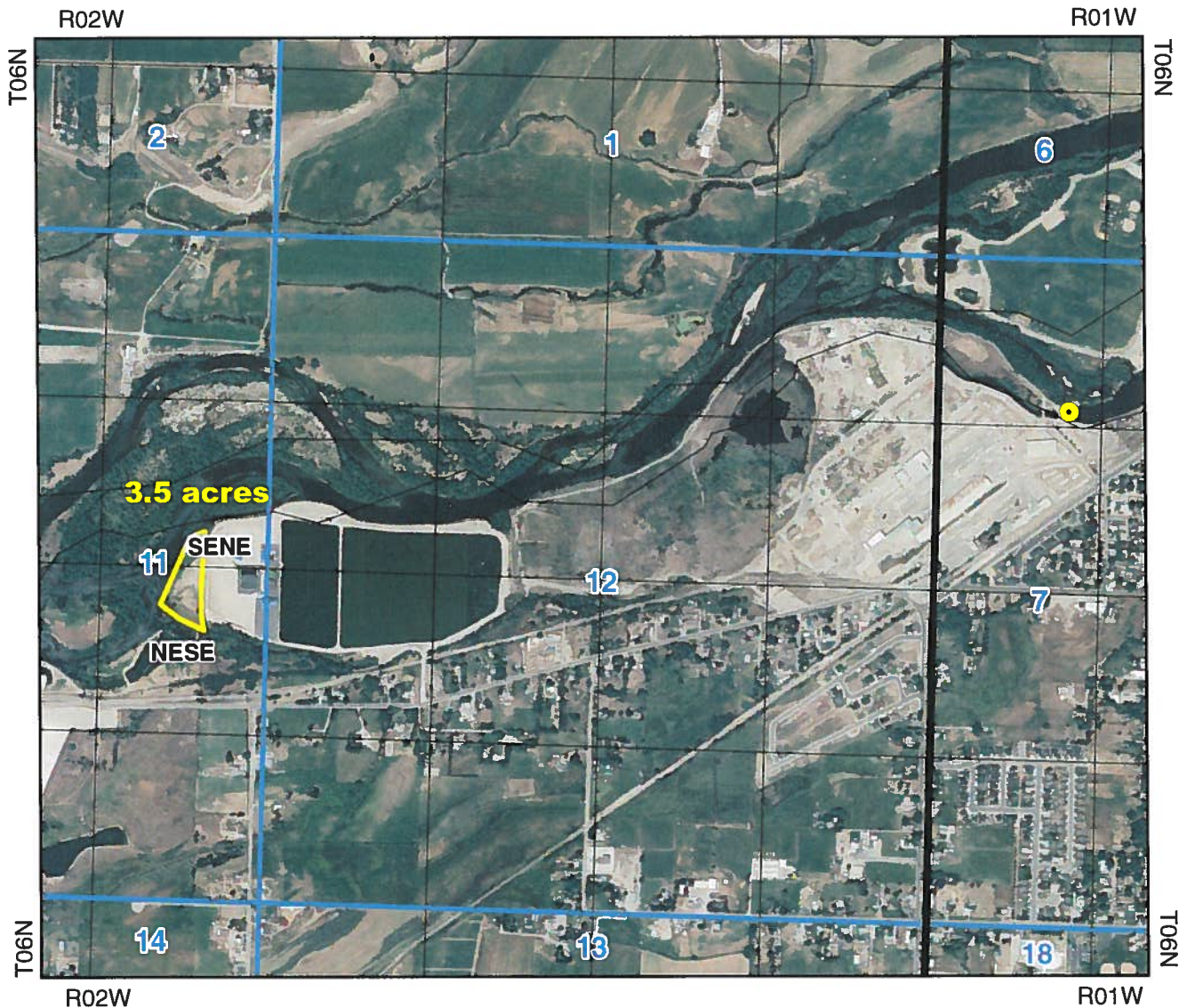
I. AUTHENTICATION

Field Examiner's Name John Sandner Date 21 Sept 2012

Reviewer _____ Date _____

State of Idaho
Department of Water Resources
Attachment To Water Right License
65-22350

This map depicts the IRRIGATION place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.

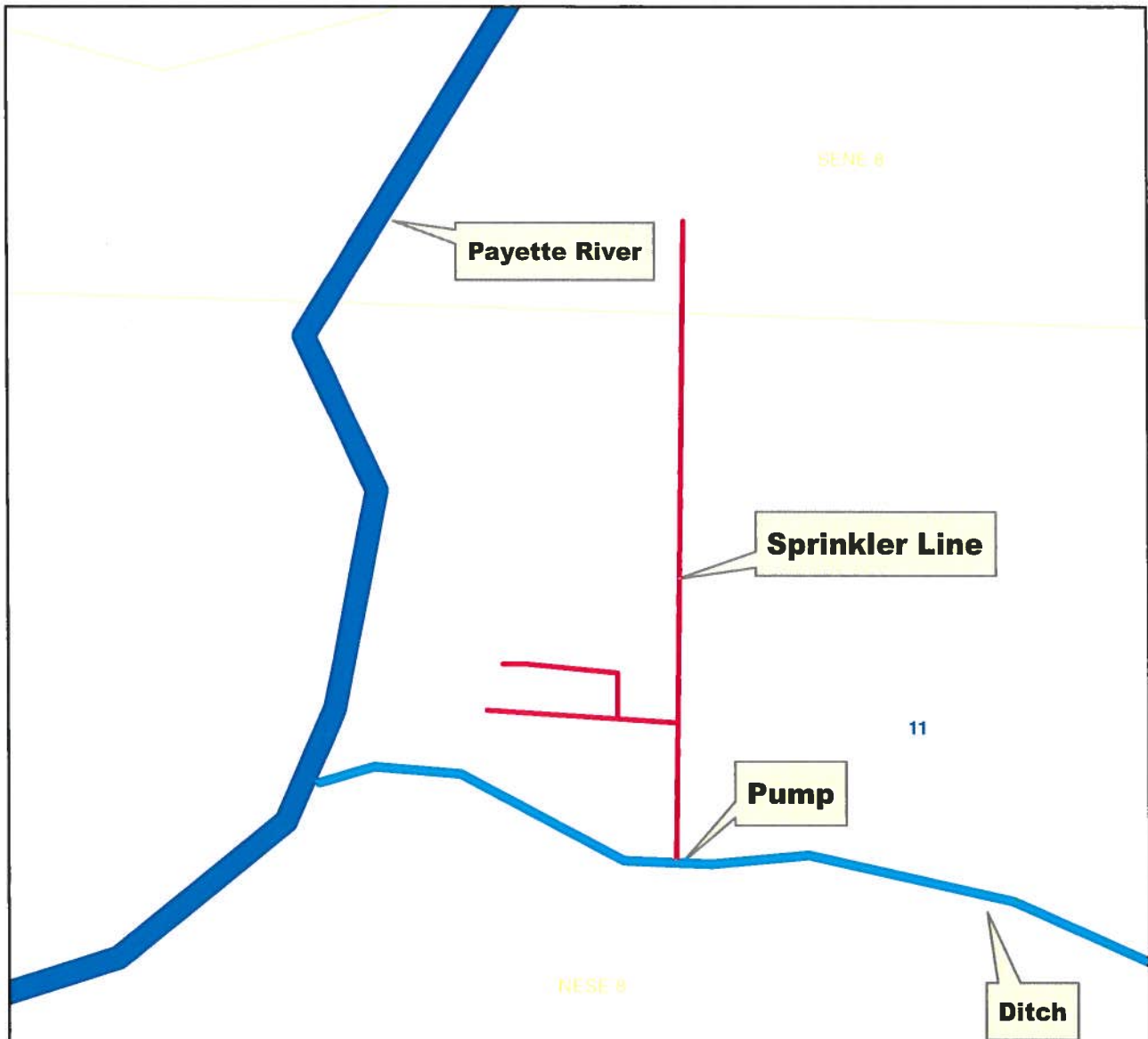


-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections
-  Quarter Quarters



Field Exam Map for 65-22350

System Diagram



There is a mobile home-made pump using a 4 cylinder car motor located at the southeast corner of the acreage. The pump pulls water from a ditch which flows along the south end of the acreage and back into the Payette River. The grass has been mowed this year and there are 2 rows of trees planted to block the sewage treatment plant. The pump was not running at the time of the field exam so size and number of sprinklers were collected to perform a theoretical calculation. Sprinklers were 1/8 " with 32 sprinklers with a pressure of 40 psi.

Gardiner, Glen

From: waterdist65 [waterdist65@srvinet.com]
Sent: Thursday, September 20, 2012 12:26 PM
To: Gardiner, Glen
Subject: Vogel Diversion from Smith Ditch
Attachments: Vogel-Smith Ditch04.xls; Vogel-SmithDitch05.xls; Vogle-smithDitch06.xls; Vogel-SmithDitch10.xls; Vogel-SmithDitch11.xls

Glen,

It appears that from 2004 onward I have data for the Vogel diversion from the Smith Ditch. The data points are wide spread and interpolated between points.

I have attached 2004, 5, 6, 10 and 11.

On the day you contacted me, (9/18/12) I happened to make a trip to Emmett so I stopped and read the weir which I spoke to you about that sends water to the Vogel property. It is a 2' rectangular weir that was not actually designed for measurement but lends itself to the job reasonable well. On that day I calculated a flow over the weir of 3.47 CFS.

I hope this is helpful,

Ron Shurtleff
State Water District No. 65
102 N. Main
Payette, ID 83661
Phone: 208-642-4465
Fax: 208-642-1042
E-mail: waterdist65@srvinet.com

Katherine Vogel

Smith Ditch

2004

Day	Apr	May	Jun	Jul	Aug	Sep	Oct	
1	1.42	1.6	2.6	2.3	2.2	1.1	0.4	
2	1.4	1.6	2.6	2.4	2.2	1	0.4	
3	1.4	1.6	2.6	2.4	2.2	1	0.4	
4	1.4	1.6	2.6	2.4	2	1	0.4	
5	1.5	2.2	2.6	2.4	2	1	0.4	
6	1.5	2.2	2.6	2.4	2	1	0.4	
7	1.5	2.2	2.6	1.8	2	1	0.4	
8	1.5	2.2	2.6	1.8	2	0.9	0.4	
9	1.5	2.2	2.5	1.8	1.8	0.8	0.4	
10	1.5	2.2	2.5	1.8	1.8	0.8	0.4	
11	1.5	2.4	2.5	1.8	1.6	0.7	0.4	
12	1.5	2.4	2.4	1.8	1.6	0.5	0.4	
13	1.5	2.4	2.5	1.8	1.4	0.4	0.4	
14	1.5	2.4	2.5	2.1	1.4	0.4	0.4	
15	1.5	2.4	2.5	2.1	1.4	0.4	0.5	
16	1.5	2.4	2.3	2.2	1.4	0.4	0.5	
17	1.5	2.2	2.3	2.3	1.4	0.4	0.5	
18	1.6	2.2	2.3	2.4	1.4	0.4	0.4	
19	1.6	2.5	2.3	2.4	1.4	0.4	0.4	
20	1.6	2.5	2.3	2.4	1.4	0.4	0.2	
21	1.6	2.5	2.3	2.5	1.4	0.4	0	
22	1.6	2.5	2.3	2.5	1.4	0.4	0	
23	1.6	2.5	2.4	2.4	1.3	0.4	0	
24	1.6	2.4	2.3	2.4	1.3	0.4	0	
25	1.6	2.4	2.4	2.4	1.3	0.4	0	
26	1.6	2.05	2.4	2.2	1.3	0.4	0	
27	1.6	2.05	2.4	2.2	1.3	0.4	0	
28	1.6	2.4	2.2	2.2	1.3	0.5	0	
29	1.6	2.4	2.2	2.2	1.3	0.4	0	
30	1.6	2.4	2.2	2.2	1.2	0.4	0	
31	--	2.4	--	2.2	1.1	--	0	Yearly Average
Average	1.530667	2.23871	2.426667	2.2	1.574194	0.603333	0.405	1.568367127

Vogel, Katherine

Smith Ditch 2005

Day	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
1	0	1.1	1.25	1.1	1.2	1.1	1	0.6
2	0	1.1	1.25	1.1	1.2	1.1	1	0.6
3	0	1.1	1.25	1.1	1.2	1.1	1	0.6
4	0	1.1	1.2	1.2	1.2	1.1	1	0.6
5	0	1.1	1.2	1.2	1.2	1.1	0.9	0.6
6	0	1.1	1.3	1.2	1.1	1.1	0.8	0.6
7	0	1.1	1.3	1.2	1.2	1.1	0.7	0.6
8	0	1.1	1.3	1.1	1.2	1.1	0.7	0.6
9	0	1.1	1.2	1.1	1.2	1.1	0.7	0.6
10	0	1.1	1.1	1.2	1.2	1	0.7	0.5
11	0	1.1	1.2	1.2	1.2	1	0.7	0.5
12	0	1.1	1.2	1.2	1.1	1	0.7	0.6
13	0	1.1	1.3	1.2	1.1	1	0.7	0.5
14	0	1.1	1.2	1.2	1.1	1	0.7	0.5
15	0	1.1	1.1	1.2	1.1	1	0.8	0.5
16	0	1.1	1.1	1.2	1.1	1	0.9	0.5
17	1.2	1.1	1.2	1.2	1.1	1	0.9	0.4
18	1.2	1.1	1.2	1.2	1.1	1	0.9	0.4
19	1.2	1.3	1.2	1.2	1.1	1	0.8	0.4
20	1.2	1.3	1.2	1.2	1.1	1	0.7	0.4
21	1.2	1.3	1.2	1.2	1.1	1	0.7	0
22	1.2	1.3	1.2	1.2	1.1	1	0.6	0
23	1.2	1.3	1.2	1.1	1.1	1	0.6	0
24	1.2	1.3	1.2	1.3	1.1	1	0.6	0
25	1.2	1.3	1.2	1.3	1.1	1	0.6	0
26	1.2	1.3	1.2	1.3	1.1	1	0.6	0
27	1.2	1.3	1.2	1.3	1.1	1	0.6	0
28	1.2	1.3	1.2	1.3	1.2	1	0.6	0
29	1.2	1.3	1.2	1.3	1.2	1	0.6	0
30	1.2	1.3	1.2	1.3	1.2	1	0.5	0
31	1.2	--	1.1	--	1.2	1	--	0

Yearly average

Average	1.2	1.18	1.20484	1.203333	1.145161	1.029032	0.7433	0.53	1.029462366
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Day	Apr	May	Jun	Jul	Aug	Sep	Oct
1	0	2	2.5	2.4	1.8	1.2	0.8
2	0	2	2.5	2.4	1.7	1.2	0.7
3	0	3.01	2.5	2.3	1.7	1.2	0.7
4	0	3.01	2.5	2.3	1.6	1.2	0.7
5	0	2.59	2.5	2.2	1.6	1.2	0.7
6	0	2.59	2.5	2.2	1.6	1	0.7
7	0	2.59	2.5	2.1	1.6	0.8	0.7
8	0	2.59	2.6	2.1	1.6	0.9	0.6
9	0	2.59	2.6	2	1.7	0.9	0.6
10	0	2.59	2.6	1.8	1.7	0.9	0.7
11	0	2.59	2.6	1.8	1.7	0.9	0.7
12	0	2.6	2.6	1.8	1.7	0.8	0.7
13	0	2.6	2.6	1.8	1.7	0.8	0.6
14	0	2.6	2.6	1.8	1.7	0.8	0.6
15	1	2.6	2.6	1.8	1.7	0.9	0.6
16	2	2.6	2.4	1.8	1.6	0.9	0.6
17	2	2.6	2.4	1.9	1.6	1	0.6
18	2	2.6	2.4	1.9	1.7	1.1	0.5
19	2	2.6	2.4	1.9	1.7	0.8	0.5
20	2	2.6	2.4	1.9	1.7	0.9	0.4
21	2	2.6	2.4	1.8	1.6	0.9	0.1
22	2	2.6	2.3	1.8	1.6	0.8	0
23	2	2.5	2.3	1.7	1.6	0.8	0
24	2	2.5	2.3	1.7	1.7	0.6	0
25	2	2.5	2.3	1.7	1.8	0.6	0
26	2	2.5	2.4	1.7	1.7	0.6	0
27	2	2.5	2.4	1.7	1.7	0.7	0
28	2	2.5	2.3	1.9	1.6	0.7	0
29	2	2.5	2.3	1.9	1.4	0.8	0
30	2	2.5	2.3	1.9	1.4	0.8	0
31	--	2.5	--	1.9	1.3	--	0

Yearly Average

Average

1.9375

2.556452

2.453333

1.932258

1.63871

0.89

0.609524

1.716825214

Kathrine Vogel

Smith Ditch

2010

Day	Apr	May	Jun	Jul	Aug	Sep
1	1.6	2.05	2.43	2.15	1.75	1.57
2	1.6	2.07	2.95	2.2	1.7	1.5
3	1.6	2.08	3.48	2.25	1.68	1.4
4	1.6	2.1	4	2.3	1.8	1.3
5	1.6	2	3.93	2.35	1.8	1.2
6	1.6	2	3.86	2.4	1.8	1.1
7	1.6	1.97	3.79	2.3	1.75	1.25
8	1.6	1.93	3.71	2.2	1.7	1.4
9	1.6	1.9	3.64	2.13	1.77	1.45
10	1.6	1.92	3.57	2.07	1.83	1.5
11	1.82	1.94	3.5	2	1.9	1.55
12	1.83	1.96	2.75	1.98	1.95	1.6
13	1.85	1.98	2	1.95	2	--
14	1.86	2	2.05	1.93	1.9	--
15	1.88	2.02	2.09	1.9	1.8	--
16	1.89	2.04	2.14	1.88	1.6	--
17	1.9	2.06	2.18	1.85	1.2	--
18	1.92	2.08	2.23	1.83	1.3	--
19	1.93	2.1	2.27	1.8	1.7	--
20	1.93	2.13	2.32	1.8	1.7	--
21	1.94	2.15	2.36	1.8	1.7	--
22	1.95	2.18	2.41	1.7	1.8	--
23	1.96	2.2	2.45	1.73	1.6	--
24	1.97	2.16	2.5	1.77	1.7	--
25	1.98	2.13	2.46	1.8	1.5	--
26	1.99	2.09	2.39	1.8	1.6	--
27	1.99	2.05	2.32	1.9	1.63	--
28	2.01	2.01	2.24	2	1.65	--
29	2.02	1.98	2.17	1.9	1.68	--
30	2.04	1.94	2.1	1.85	1.7	--
31	--	1.9	--	1.8	1.63	

monthly average

Average

1.822

2.036129

2.743

1.978065

1.703871

1.401667

1.947455197

Day	Apr	May	Jun	Jul	Aug	Sep	Oct
1	0	3.5	2.4	2.44	2.19	1.19	1.99
2	0	3.58	2.48	2.43	2.14	1.17	1.89
3	0	3.66	2.56	2.42	2.1	1.15	1.9
4	0	3.68	2.64	2.41	2.1	1.13	1.91
5	1.5	3.68	2.72	2.4	2.07	1.1	1.96
6	1.5	3.5	2.8	2.39	2.04	1.2	2.01
7	1.58	3.32	2.7	2.38	2	1.22	2.06
8	1.66	3.14	2.8	2.37	1.9	1.46	2.11
9	1.74	2.96	2.9	2.36	1.89	1.48	2.16
10	1.82	2.78	2.9	2.35	1.88	1.54	2.2
11	1.9	2.59	2.75	2.34	1.83	1.6	2.3
12	1.98	2.7	2.6	2.29	1.78	1.5	2.27
13	2.06	2.84	2.55	2.28	1.89	1.2	2.24
14	2.14	2.98	2.5	2.26	2	0.97	2.21
15	2.22	3.12	2.45	2.24	1.88	1.02	2.18
16	2.3	3.26	2.4	2.22	1.88	1.07	2.15
17	2.38	3.4	2.4	2.19	1.89	1.12	2.1
18	2.46	3.3	2.4	2.19	1.89	1.17	2.1
19	2.54	3.22	2.4	2.13	1.9	1.2	2.11
20	2.62	3.14	2.4	2.07	1.96	1.2	2.12
21	2.7	3.06	2.4	2.01	2.02	1.6	2.13
22	2.78	2.98	2.4	2	1.98	2	2.14
23	2.86	2.9	2.4	2.15	1.89	1.9	2.15
24	2.94	2.82	2.4	2.3	1.82	1.92	2.16
25	3.02	2.74	2.38	2.8	1.78	1.94	2.17
26	3.1	2.7	2.39	2.7	1.8	1.96	2.18
27	3.18	2.7	2.4	2.6	1.85	1.98	2.2
28	3.26	2.62	2.41	2.5	1.9	2	2.1
29	3.34	2.54	2.42	2.4	1.8	2	2.03
30	3.42	2.46	2.44	2.3	1.3	2.1	1.96
31	--	2.4	--	2.22	1.2	--	1.9
Average	2.423077	3.040968	2.526333	2.327097	1.88871	1.469667	2.099677

Yearly Average
2.253646934

PHOTOGRAPHER AND DATE OF PHOTOS Glen Gardiner 23-Aug-2012

FILE NUMBER 65-22350



Home made
gas engine
pump irrigates
acres west of
sewage
treatment plant.



Photo of 3.5
acres west of
sewage
treatment plant.
Sprinkler line
follows trees
and T's off to
left.