

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 73-11964

Exam Date: 9/10/2012

1. Current Owner: DOUBLE SPRINGS RANCH LLC
C/O DORIS F TUNNEY
PO BOX 3873
KETCHUM ID 83340
(714) 246-4658
2. Accompanied by: Doris Tunney
Phone No: (714) 246-4658
Address: PO Box 3873; Ketchum, ID 83340
Relationship to Permit Holder: permit holder

3. **SOURCE**
DOUBLESRING CREEK

TRIBUTARY
PAHSIMEROI RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: none
2. Other water rights with the same point of diversion: 73-2002, 73-7044, 73-7076, 73-7093

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

DOUBLESRING CREEK SW1/4SW1/4 Sec. 31, Twp 12N, Rge 23E, B.M. CUSTER County

Method of Determination: GPS and visual inspection

2.

PLACE OF USE: AESTHETIC and RECREATION

Twp Rge Sec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
12N 23E 29															X	X	
12N 23E 32	X																

Method of Determination:

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

4. Spring

Well or Diversion
ID No.*

Motor Make**Hp****Motor Serial No.****Pump Make**

Pump Serial No. or Discharge
Size

D. FLOW MEASUREMENTS

1. Measurements: Taken at weir between ponds 1 and 2: 6.46 cfs (see attached sheet)
 Permit allows 5 cfs
Recommended rate: 5 cfs

E. FLOW CALCULATIONS

Measured Method

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: none

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = n/a$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = n/a$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = n/a$$
2. Volume Calculations for Other Uses: Total of 4.5 acres
 5 cfs allowed under permit $\times 1.9835 \times 365 = 3,620 \text{ AF}$

Pond 1: 1.26 acres $\times$ 12 feet deep = 15.12

Pond 2: 0.64 acres $\times$ 5.5 feet deep = 3.52

Pond 3: 1.52 acres $\times$ 5.5 feet deep = 8.36

Pond 4: 1.08 acres $\times$ 5.5 feet deep = 5.94

32.94 Acre feet This storage volume is consistent with the volume authorized under water right 73-7093

Evaporation Loss Calculation: 14.35 AFA (see attached sheet)

32.94 (pond volume + 14.35 (evaporation loss) = 47.28 AF

No permit volume was listed

Total recommended acre feet for recreation storage: 3,620 AF

This right is for flow through. Storage for the ponds is authorized in water right 73-7093

G. NARRATIVE/REMARKS/COMMENTS

The permit for this water right shows Double Spring Creek as tributary to 'sinks'. A review of other water rights with the same, or near, point of diversion shows this creek as tributary to the Pahsimeroi River. Based upon this review, the license is issued to reflect the creek as tributary to the Pahsimeroi River.

The permit includes the condition that this water right be non-consumptive. The application for permit states that discharge from the ponds will flow north through a natural drainage and sink back into the aquifer. Because the water returns to the groundwater, the seepage would not be considered consumptive. Further, the consumptive use associated with the ponds is also mitigated by the reduction in irrigated acres of several other water rights. A condition in the license lists the reduced water rights intended to compensate for the pond's evaporative losses.

Double Springs, located in T12N R23E Section 31, SWSW in the southwestern Pahsimeroi valley supplies irrigation water for 4 central pivots and water for a series of 4 ponds at Double Springs Ranch. The

springs emerge from the ground in Township 12 N, Range 23 E, section 21, SWSW quarter quarter (lot 4). From the spring a 12 inch underground pipe carries water approximately .75 miles to the northeast. Eight inch pipes take water from that point to four central pivots. A six inch pipe carries water from the northeast central pivot and supplies water to the upper-most pond.

This is the only source of water for the ponds. The first pond is 1.26 acres, the second .64 acres, the third 1.52 acres and the downstream-most pond is 1.08 acres. Each pond is lined with clay. Some water flows out below the last pond; however, there is no water beyond approximately .2 of a mile below the pond. There it is a re-circulating pump at the lower end of the last pond. It isn't used.

A phone message from the owner of the permit confirmed water flows to the pond year around. A measurement taken for water right permit 73-7093 in July 1984 shows the Double Springs flow as 6.55 cfs (see attachment). The 6.46 cfs found during this field exam in mid September helps confirm the flow rate late into the season.

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>
AESTHETIC	01/01 to 12/31	5.0 CFS	3,620 AF
RECREATION	01/01 to 12/31	5.0 CFS	3,620 AF
<u>Totals:</u>		5.0 CFS	3,620 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

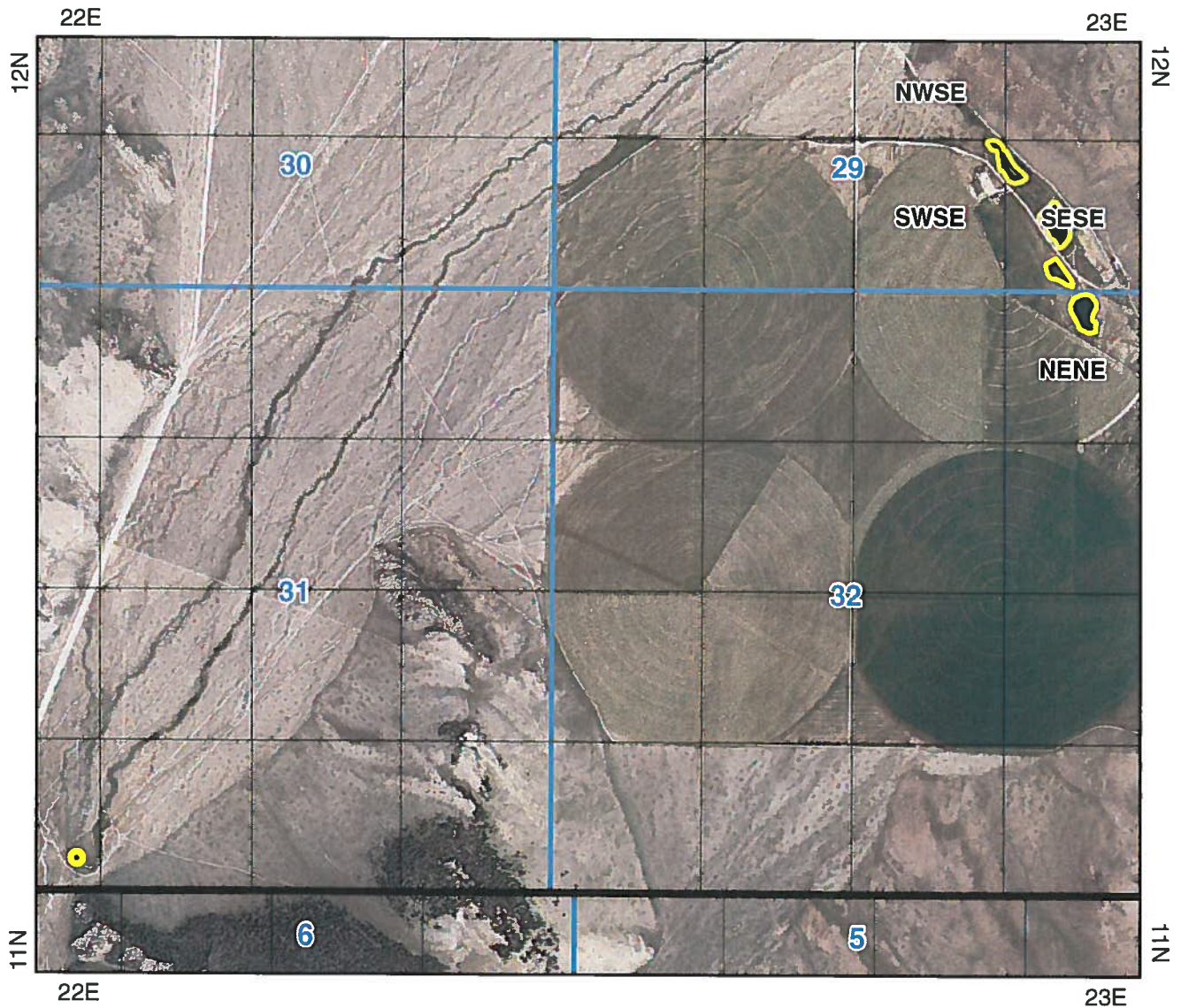
I. AUTHENTICATION

Field Examiner's Name Suma Thiel Date 2/6/2013

Reviewer _____ Date _____

State of Idaho
Department of Water Resources
Water Right License
73-11964

This map depicts the RECREATION and AESTHETIC 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

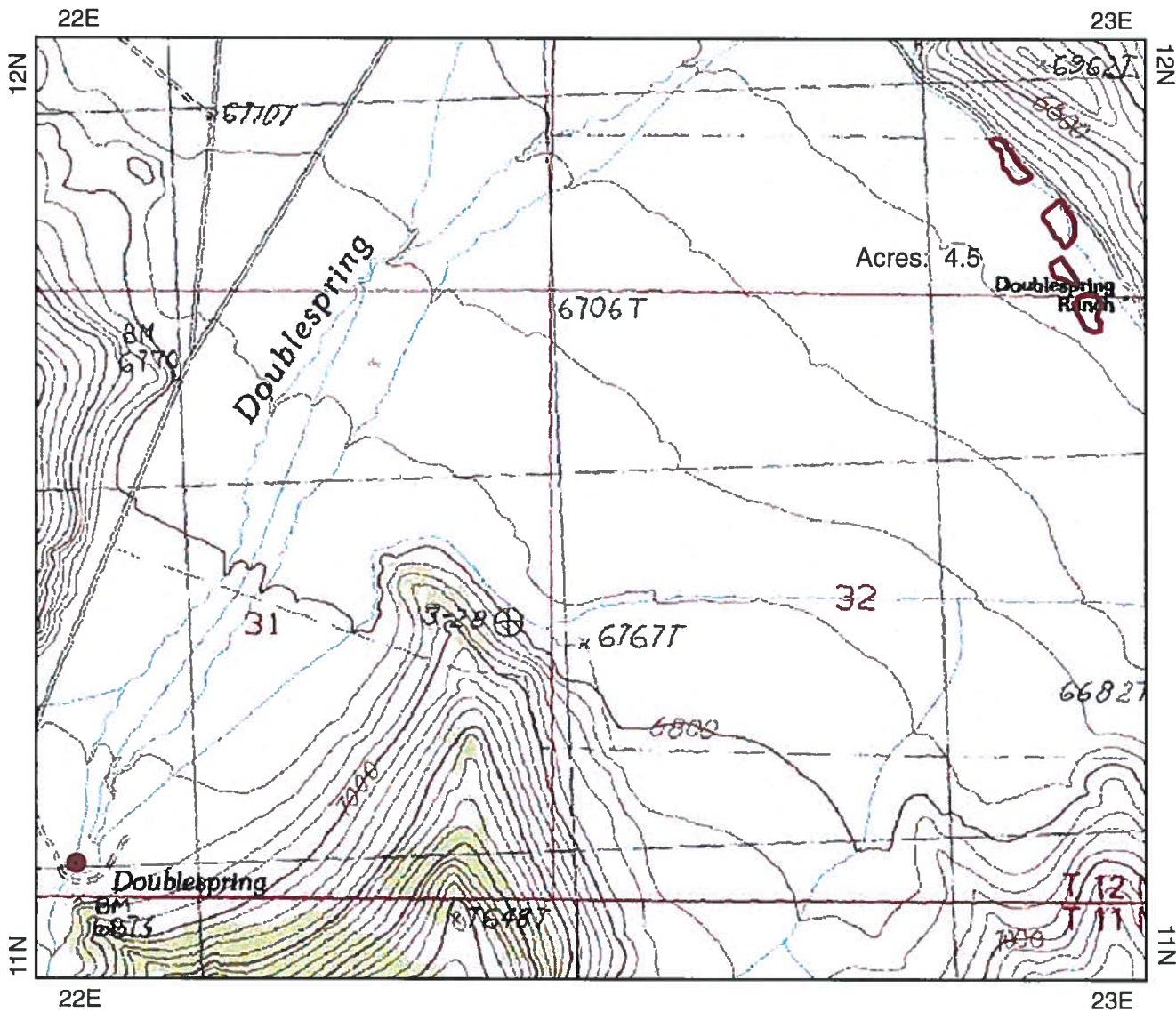


0 0.25 0.5 0.75 Miles

State of Idaho
Department of Water Resources
Water Right License

73-11964

This map depicts the RECREATION and AESTHETIC 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.

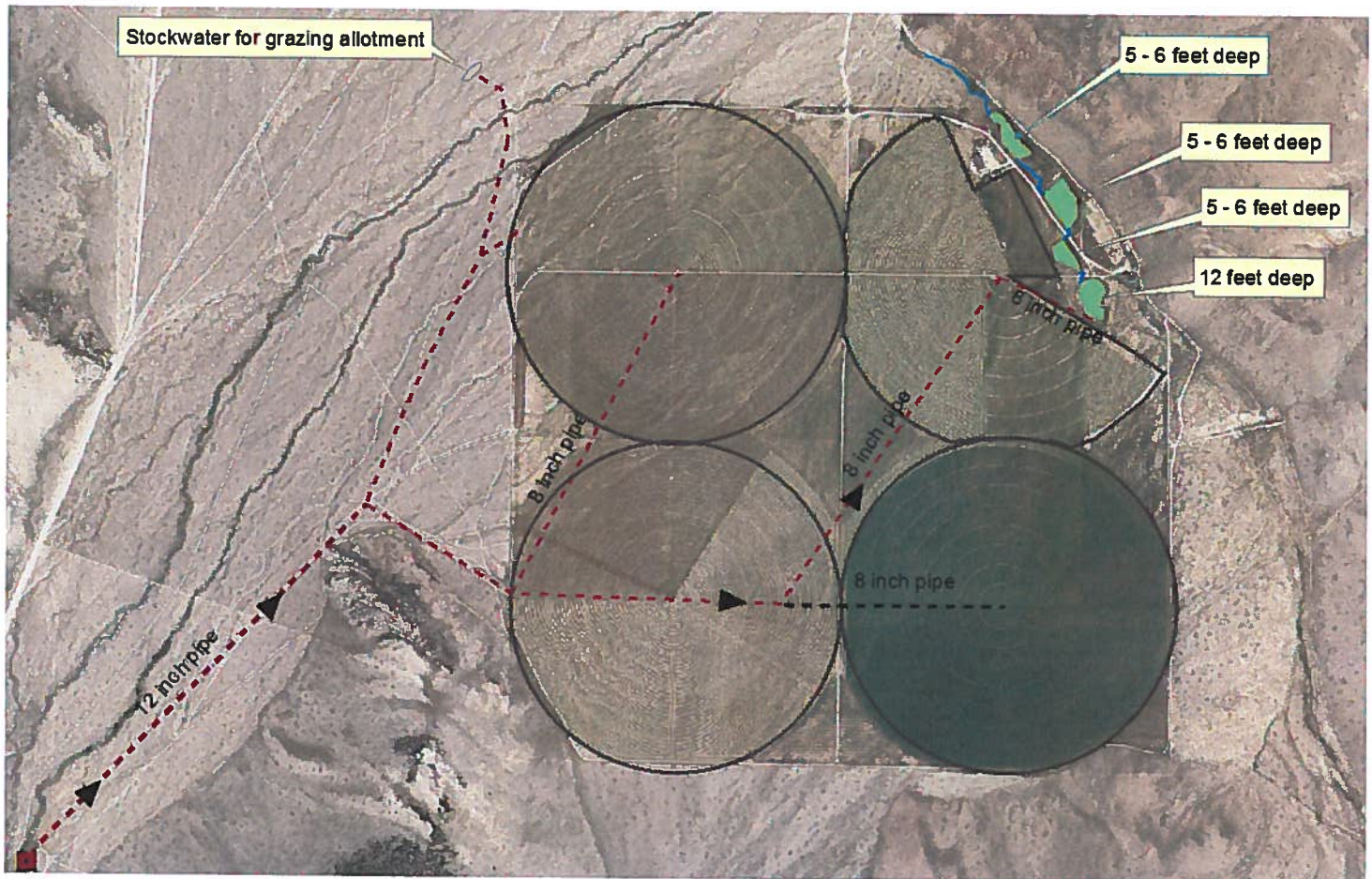


- Point of Diversion
- Place Of Use Boundary



0 0.25 0.5 0.75 Miles

System Diagram for Water Right 73-11964



Double Springs, shown as a red square above, located in T12N R23E Section 31, SWSW in the southwestern Pahsemeroi valley supplies irrigation water for 4 central pivots and water for a series of 4 ponds at Double Springs Ranch. The springs emerge from the ground in Township 12 N, Range 23 E, section 21, SWSW quarter quarter (lot 4). From the spring a 12 inch underground pipe carries water approximately .75 miles to the northeast. Eight inch pipes take water from that point to four central pivots. A six inch pipe carries water from the northeast central pivot and supplies water to the upper-most pond.

This is the only source of water for the ponds. The first pond is 1.26 acres, the second .64 acres, the third 1.52 acres and the downstream-most pond is 1.08 acres. Each pond is lined with clay. Some water flows out below the last pond; however, there is no water beyond approximately .2 of a mile below the pond. There it is a re-circulating pump at the lower end of the last pond. It isn't used. A second pipe takes water from the 12 inch pipe to the north, northeast, eventually supplying stockwater to an allotment on BLM land.

A phone message from the owner of the permit confirmed water flows to the pond year around. A measurement taken for water right permit 73-7093 in July 1984 shows the Double Springs flow as 6.55 cfs (see attachment). The 6.46 cfs found during this field exam in mid September helps confirm the flow rate late into the season.

Water Right Number = 73-11964
by Sandy Thiel
Date 9/10/2012

IN FEET

Wier width = 2
Water above weir= 0.98
Weir Coefficient= 3.33 (from BOR Water Measurement Mannual)

Flow rate calculated 6.46 cfs

To calculate this flow rate the calculation used was $=((\text{water above weir})^{1.5}) * \text{weir width} * \text{Weir Coefficient}$

.0 .10 .20 .30 .40 .50 .60 .70 .75

Date 16 July, 1984 DISCHARGE MEASUREMENT NOTES - ~~73-70444~~ 25

[illegible]

.0 .10 .20 .30 .40 .50 .60 .70 .80

MAR 06 1989

P_d

P_d = convert to AFA:

(mm/yr)

1

(convert to feet)

K

acres

=

972

304.8

4.5

(From ET Idaho)

$$P_d =$$

14.35 AFA

* Use the Precipitation Deficit for 'P' value

ET_{Idaho} 2012 -- Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho

Please send suggestions for improving this site to robison at kimberly dot uidaho dot edu Copyright 2012, University of Idaho.

May (NWS -- 105685)

Statistics based on thirty year normal spans 1963 to 2010 years

For a different land cover or crop click on the above link.

You can highlight this table and copy via the clipboard to a Microsoft Excel or OpenOffice spreadsheet to plot or otherwise work with this data.

Open water - small stock ponds														
Potential Evapotranspiration (Click here for a graph)														
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Growing Season ^a	Non Growing Season ^b
Mean ^j	mm/day												mm	
Monthly ^c	0.42	0.85	1.76	3.02	4.06	4.91	5.56	4.83	3.35	2.01	0.71	0.37	972	0
15-Day Moving Average ^d	0.42	0.84	1.75	3.02	4.04	4.88	5.58	4.81	3.27	2.01	0.69	0.37		
7-Day Moving Average ^e	0.42	0.85	1.76	3.02	4.03	4.88	5.56	4.83	3.30	2.01	0.70	0.37		
3-Day Moving Average ^f	0.42	0.85	1.76	3.02	4.05	4.90	5.56	4.84	3.34	2.01	0.71	0.37		
Standard Deviation ^k	mm/day												mm	
Monthly ^c	0.07	0.09	0.37	0.34	0.57	0.43	0.43	0.48	0.33	0.31	0.09	0.07	40	0
15-Day Moving Average ^d	0.07	0.12	0.34	0.43	0.56	0.59	0.37	0.49	0.48	0.33	0.15	0.06		
7-Day Moving Average ^e	0.09	0.17	0.43	0.60	0.79	0.79	0.48	0.62	0.62	0.46	0.21	0.08		
3-Day Moving Average ^f	0.13	0.23	0.51	0.77	0.98	0.98	0.65	0.74	0.74	0.57	0.26	0.11		
20% Exceedance ^l	mm/day												mm	
Monthly ^c	0.45	0.91	2.01	3.31	4.32	5.23	5.82	5.12	3.67	2.14	0.78	0.41	999	0
15-Day Moving Average ^d	0.51	1.05	2.33	3.59	5.17	5.69	6.07	5.50	3.94	2.55	0.99	0.46		
7-Day Moving Average ^e	0.58	1.21	2.64	4.04	5.68	6.10	6.46	5.89	4.44	3.04	1.19	0.55		
3-Day Moving Average ^f	0.74	1.38	2.97	4.61	6.08	6.62	6.62	6.12	4.75	3.28	1.42	0.65		

FILE NAME 73-11964
REVIEWER -----Sandy Thiel
DATE ----- 21-Jan-13

MAXIMUM DAILY WATER USE FOR DOMESTIC PURPOSES

INPUTS

POND 4.5 acres or 196020 square feet

SURFACE AREA (SQFT) 196020

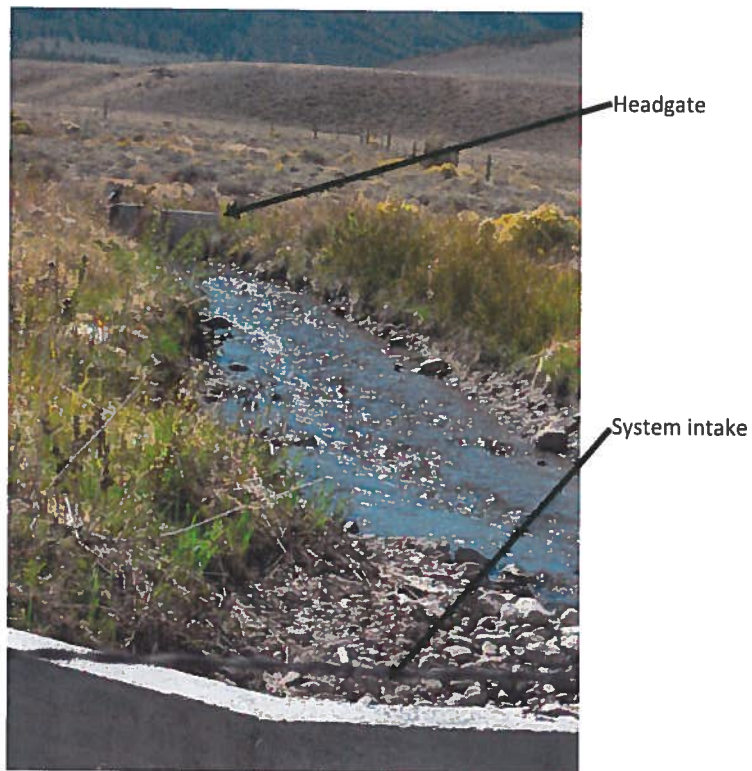
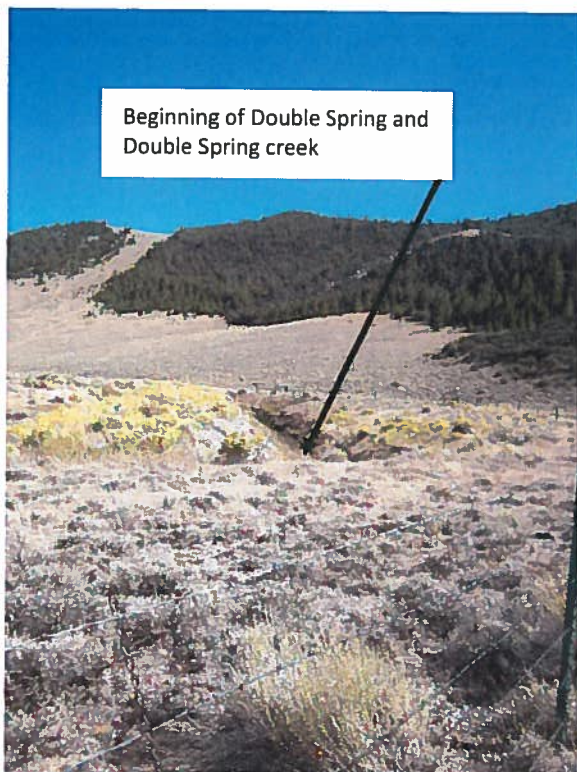
SEEPAGE RATE (FT/D) 0.50

SUGGES CONVERT TO GPD 733115 GPD
0 = NATURALLY FILLED FROM GW, OR LINED
0.5 = CLAY SOILS
1.5 = LOAMS
3.0 = GRAVELS

FORMULA: SA * SEEPAGE LOSS = POND SEEPAGE (CUFT/D)
CONVERSION: 1 CUFT = 7.48 G
NOTE: ASSUMES CONTINUOUS REPLACEMENT RATE

TOTAL Seepage Loss (AFA) 821.2 AFA TOTAL = FILL RATE + EVAP + SEEPAGE + FLOW THROUGH

PHOTOGRAPHER AND DATE OF PHOTOS Sandy Thiel, September 10, 2012
FILE NUMBER 73-11964



Double Springs is enclosed by a fence approximately three-quarters of a mile west of Double Springs Ranch. The photo on the left is looking southeast. The photo on the right is looking west.



Tag number A0017583 is on the northwest corner of the fenced in area of the spring. From the spring water flows through and underground pipe to deliver water to the sprinkler system, and from there to the ponds



An underground pipe from the sprinkler system delivers water flows through the same system that supplies four central pivots and into the southern most of four ponds. The water flows into the pond at a constructed waterfall on the southwest side of the first pond.

Waterfall



Waterfall

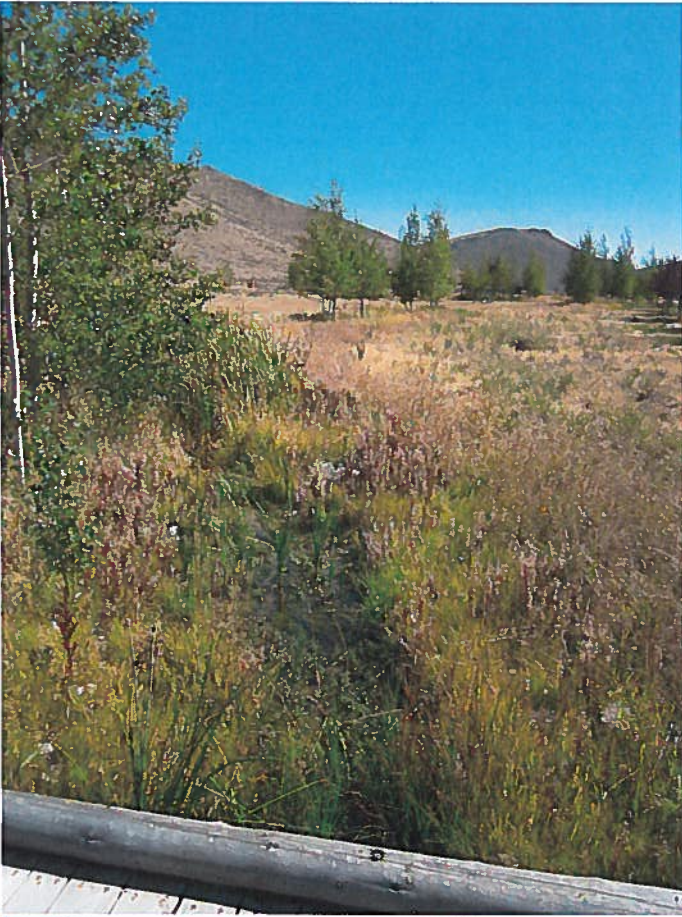
There is a weir at the outlet of the largest and most southern of the four ponds.



The ponds are connected by small ditches which flow to the north, northeast



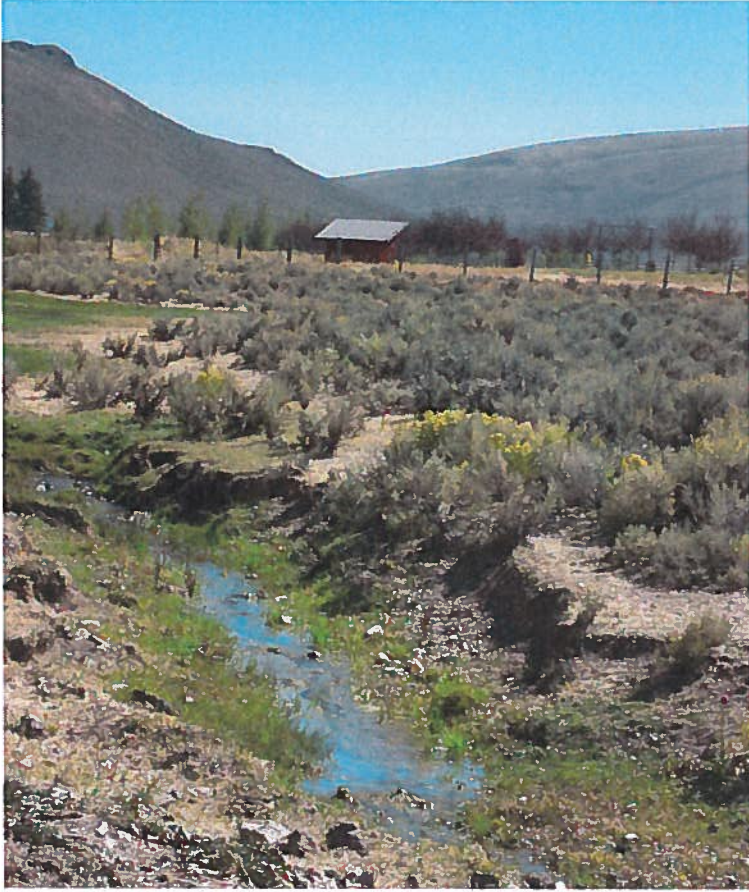
Pond 3



Channel connecting ponds 3 and 4



Pond 4



Little water remains downstream from the outlet of the fourth pond