

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 45-7746

Exam Date: 10/18/2012

1. Current Owner: HEIDI F MATTHEWS
1249 S HWY 27
OAKLEY ID 83346
(208)677-2818

And

E EUGENE MATTHEWS
1249 S HWY 27
OAKLEY ID 83346
(208) 431-3260

2. Accompanied by: Eugene Matthews

Phone No: office (208) 677-2818, hm: (208)862-3261, cell (208)431-3260

Address: 1249 S Hwy 27, Oakley, ID 83346

Relationship to Permit Holder: current owner and permit holder

3. **SOURCE**

MILL CREEK
SPRING CREEK

TRIBUTARY

BIRCH CREEK
MILL CREEK

B. OVERLAP REVIEW

1. **Other water rights with the same point of diversion:** All of the following Matthews water rights: 45-577A, 45-577B, 45-579A, 45-579B, 45-578B, 45-586, 45-587, 45-588, 45-12927, 45-12929 with the same two PODs on all of these water rights. There are some other water rights in the same location but they are from different weirs.

2. **Other water rights with the same place of use:** All of the following Matthews water rights: 45-14216 Bedke Spring, irrigation, 45-2406 groundwater, irrigation, 45-12929 Spring Creek, irrigation, 45-588 Spring Creek, irrigation, 45-600 Spring, irrigation, 45-577A Spring Creek, irrigation, 45-777B Spring Creek, irrigation, 45-578A Spring Creek, irrigation, 45-578B Spring Creek, irrigation, 45-579A Spring Creek, irrigation, 45-579B Spring Creek, irrigation, 45-2661 groundwater, irrigation, 45-12930 groundwater, irrigation, 45-586 Spring Creek, irrigation, 45-2405 groundwater, irrigation, 45-12927 Spring Creek, irrigation, 45-587 Spring Creek, irrigation (all of the ones above that state Spring Creek, also have Mill Creek as the 2nd source).

The combined POU for the above water rights is 905.9 acres on those water rights, but when the same was copied over to AdHoc, the number of acres comes out 1.1 acres less, although Matthews stated that it is the same POU.

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**

MILL CREEK	SE1/4NE1/4	Sec. 10,	Twp 14S,	Rge 23E, B.M.	CASSIA County
SPRING CREEK	SW1/4SE1/4	Sec. 3,	Twp 14S,	Rge 23E, B.M.	CASSIA County

Method of Determination: Garmin GPS Map 76S, 2004 – 2013 ArcMap Imagery, and confirmation from Matthews.

2. Place Of Use

IRRIGATION FROM STORAGE within CASSIA County

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
13S	23E	20			0.2	31.0					0.3		0.2	34.0	33.0	34.0	31.0	1.0	164.7
13S	23E	21							38.0			39.0	39.0						116.0
13S	23E	28		32.0	33.0		32.0	12.0	4.9	35.0	37.0	28.0	36.0	35.0		36.0	0.8		321.7
13S	23E	29	3.5	35.0	39.0	37.0	36.0	0.3	0.3	34.0	37.0	0.4		0.5	40.0	37.0	0.7	1.6	302.3
13S	23E	33					0.1												0.1

POU Total Acres: 904.8

****Using the same shape file for the overlapping water rights, the total number of acres calculated out on AdHoc comes out different than what is shown on the overlapping water rights report. They show 905.9 acres. This may need to be checked into further. An amendment will be required to change the POU to show it as it was developed.**

IRRIGATION STORAGE within CASSIA County

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
13S	23E	28															X		
14S	23E	3														X			

****An amendment is required for this, since the High Flow (large reservoir) is located in Section 3, and the small storage pond near the POU is located in Section 28.**

DIVERSION TO STORAGE same as IRRIGATION FROM STORAGE

Method of Determination: Garmin GPS Map 76S, 2004 – 2013 ArcMap Imagery, and confirmation from Matthews.

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.

Well or Diversion

ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
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A0009763 Spring Creek Source weir (gravity flow system) thru (2) 12" buried pipes that open discharge to the large reservoir used to capture the High Water during Good Water Years.

A0018552 Mill Creek Source weir (gravity flow)

The booster pumps located at the small pond are as follows:

Premium Electrical 100 Hp 3-phase fame #40502, SR#8785852032010R060H,
Century 50 Hp SR# 6-357278-01, with a 6" discharge.

*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

None.

2. Measurements:

None.

E. FLOW CALCULATIONS

Measured Method:

(2) 12" buried pipes conversation, if full, would have a maximum capacity of: 7.86 cfs (this would be to store High Water during a Good Water Year, and would be only from the Spring Creek Source.

Weirs:

Spring Creek weir 52" X 2", with 52" X 7" historically = 5.7 cfs capacity

Mill Creek weir 47" X 4" historically = 2.48 cfs capacity

Combined historical capacity: 8.18 cfs

RECOMMEND:

Diversion to Storage: 2.90 cfs (to compensate for High Water during Good Water Years)

Total Diversion: 2.90 cfs (with combined limits with other water rights)

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: N/A

2. Volume Calculations for Other Uses:

Storage Ponds (Irrigation Storage and Irrigation from Storage):

Large and Small Storage Ponds = 2.5 acres X 4' average size = 10.0 af* recommend 9.5 af (as permitted)

**looking through ArcMap Imagery there are some years where there is not as much High Water that can be stored, but using the 2004 ArcMap Imagery for the High Water shapefile, it was determined to be 2.5 acres between the 2 ponds. For this reason, I would recommend allowing 9.5 af as permitted so when there is High Water, they will not be out of compliance.*

RECOMMEND:

Irrigation from Storage 2.9 af

Irrigation Storage 2.9 af

G. NARRATIVE/REMARKS/COMMENTS:

There are 2 PODs used on this system.

- (1) Spring Creek Source A0009763, 52" X 2" weir (at the time of the field examination, but 52" X 7" historically by markings on the weir). Flow from the weir converts into (2) 12" buried pipes that run to the northwest down the hill to the "large storage reservoir/pond" with an average depth of 4'. This storage reservoir has a 9' dam (therefore is not regulated by IDWR), and was built for the purposes of storing High Water during Good Water Years. Flow from the large storage reservoir is discharged into an 18" tiled pipeline (shared also by a groundwater source located directly west of the dam). The 18" buried pipeline travels northwest and discharges into the "small storage pond" located at the southeast corner of the POU (acres irrigated). The average depth of the small pond is 4'. On the west side of the small pond are located (2) booster pumps that discharge flow through 4", 6", 8", 10" and 12" mains throughout the POU to run pivots, hand line and wheel line throughout the POU. The intake from the small pond to the booster pumps is 6", with (2) 11", a 9" and a 6" lines running to the mains. The booster pumps are as follows: Premium Electrical 100 Hp 3-phase fame #40502, SR#8785852032010R060H, and the other one a Century 50 Hp SR# 6-357278-01, with a 6" discharge.
- (2) Mill Creek has its main weir (A0009760) with Matthews's weir down a little further (A0018552). The measurement on the weir at the time of the field examination was 47" X 2", but showed evidence of historically being 47" X 4".
- (3) Prior to reaching the small storage pond, flow from the well, Spring Creek and Mill Creek co-mingle, and then are discharged into the small pond.

The property where the POU for irrigation storage (small pond) and irrigation from storage is located is owned by the current owner. The POU for the large pond, the property was sold, but the water right was retained by Matthews. The property where the PODs are located is owned by Smith, with easement agreements for the weirs controlled under the jurisdiction of WD45A.

Beneficial Use is for Irrigation Storage (the 2 ponds), Irrigation from Storage (the same acres irrigated as all the other water rights that Matthews has), and Diversion to Storage.

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>
DIVERSION TO STORAGE	04/01 to 10/01	2.900 CFS	
IRRIGATION STORAGE	01/01 to 12/31		9.50 AF
IRRIGATION FROM STORAGE	04/01 to 10/31		9.50 AF
<u>Totals:</u>		2.900 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

Jandy Hornumway

Date: 4/16/2014

45-7746 The System S. Hemerway

3

14S23E

NWSE

45-7746 large irrigation storage reservoir
used to store High Water on Good Water
Years. 9' dam, average depth 4' SH

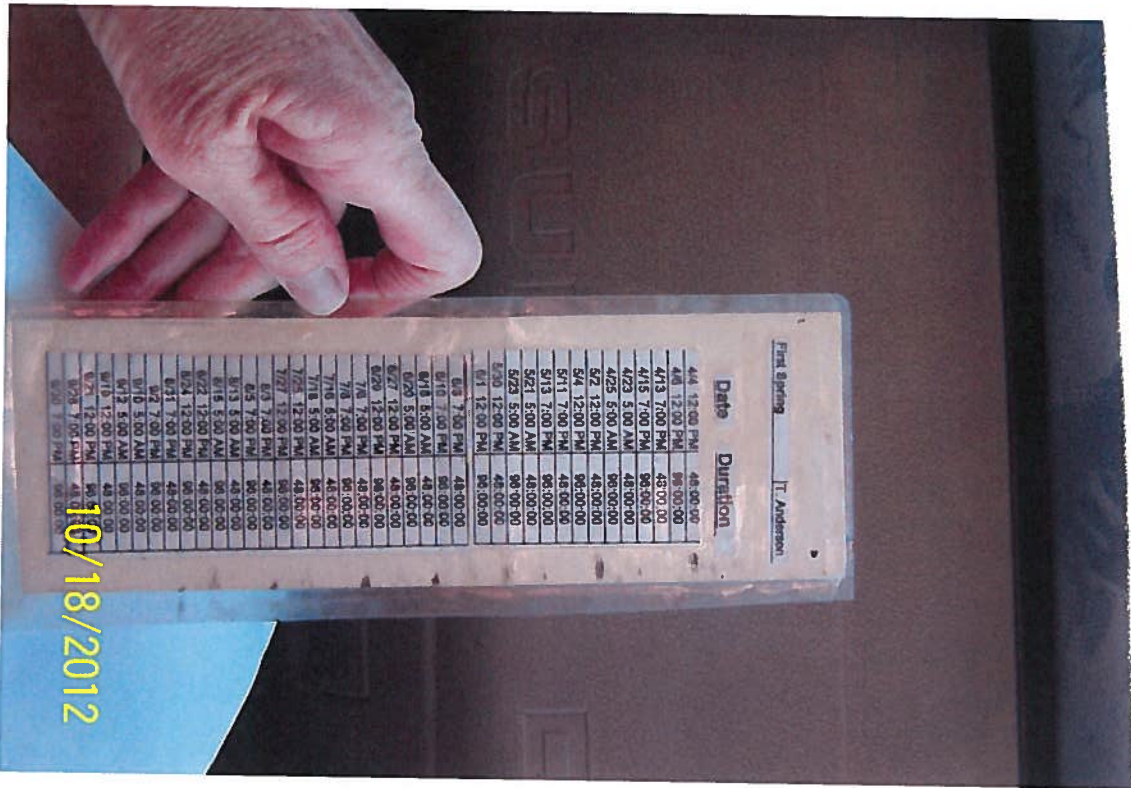
2004 ArcMap Imagery 1:1,215

SWSE

45-7746

High Water storage

S. Hemenway



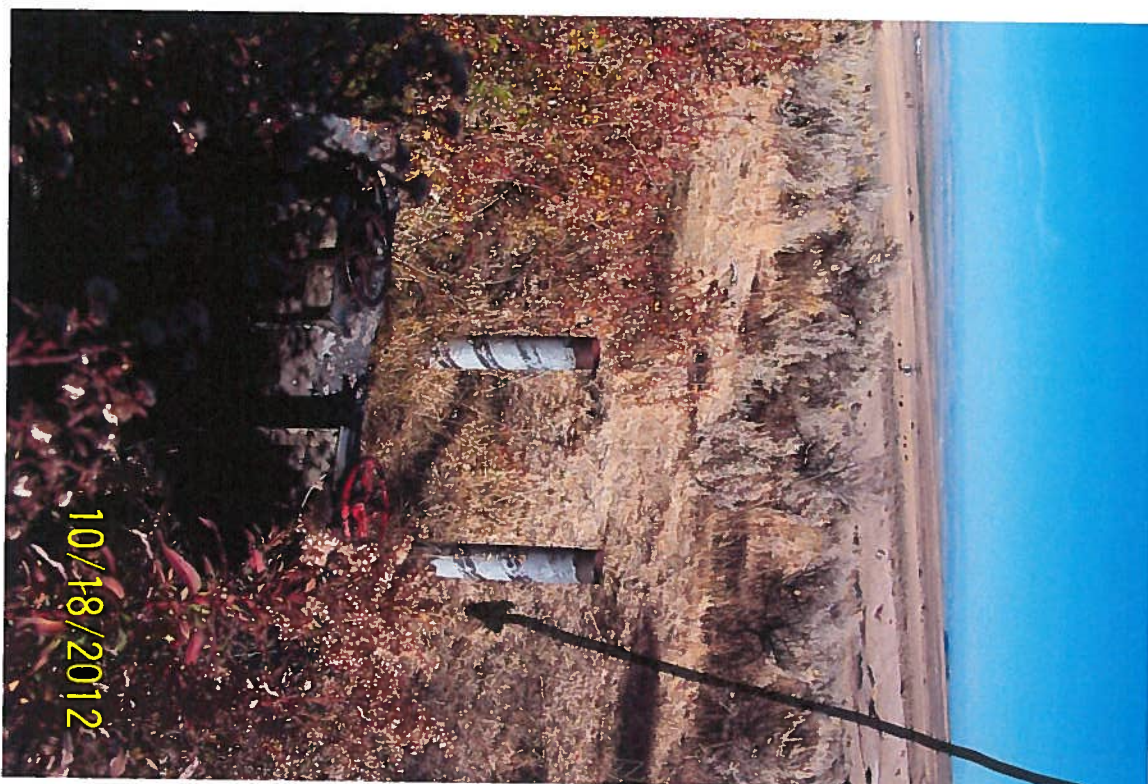
Measuring Chart



POD:
A0009763
Spring Creek
52" wide
X 2", but
historical
evidence
of 7" Height.

45-7746

S. Hemerway



Looking
NW from
POD, is
the
location
for the
(2) 12"
buried
pipes
& the
"dry"
reservoir



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S. Hennenway



45-7746

POU:

Irrigation
Storage

(looking
from
north to
southwest)

10/18/2012



45-7746

dam
for
storage

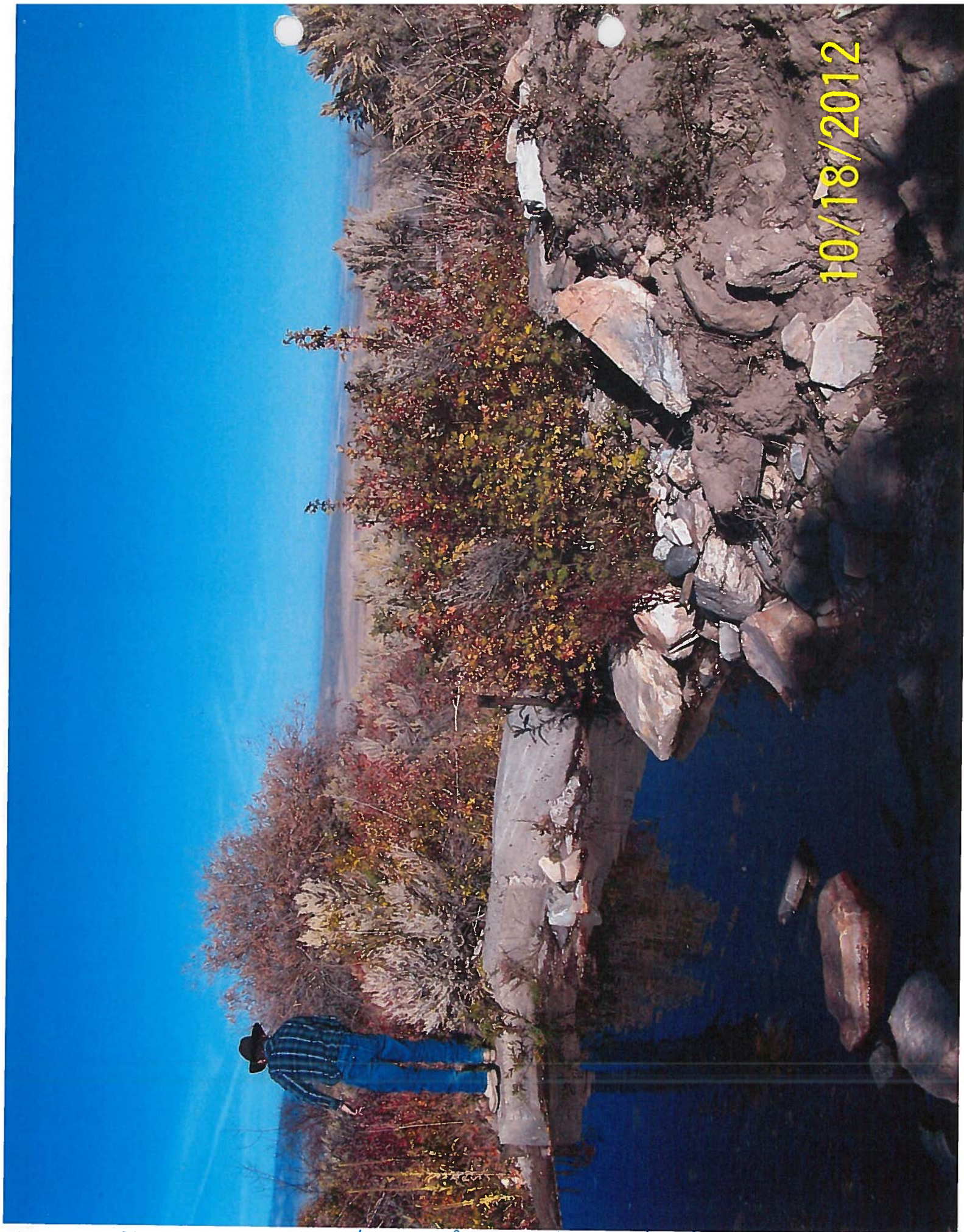
18" tiled

ground
water
source
+
spring
creek
are
diverted
through
same
18" tiled
pipe

10/18/2012

45-7746

S. Hemerway



45-7746

The entire weir for Mill CK (A0009760) up from 45-7746

S. Hermerway



POD:
 A0018552
 Mill Creek
 47" x 2"
 at time of
 field exam
 with
 historically
 47" x 4"



picture
 down the
 hill to
 where it
 connects
 with
 Spring Creek

45-7746

S. Hernerway



were
 40" x 3"
 historically 40" x 7"
 where
 well
 diverts into
 Spring Creek
 + Mill Creek
 + the
 2 creeks
 divert here
 to the
 small
 storage
 pond

45-7746

S. Hemerway



45-7746

POW:

Irrigation
from
storage

10/18/2012

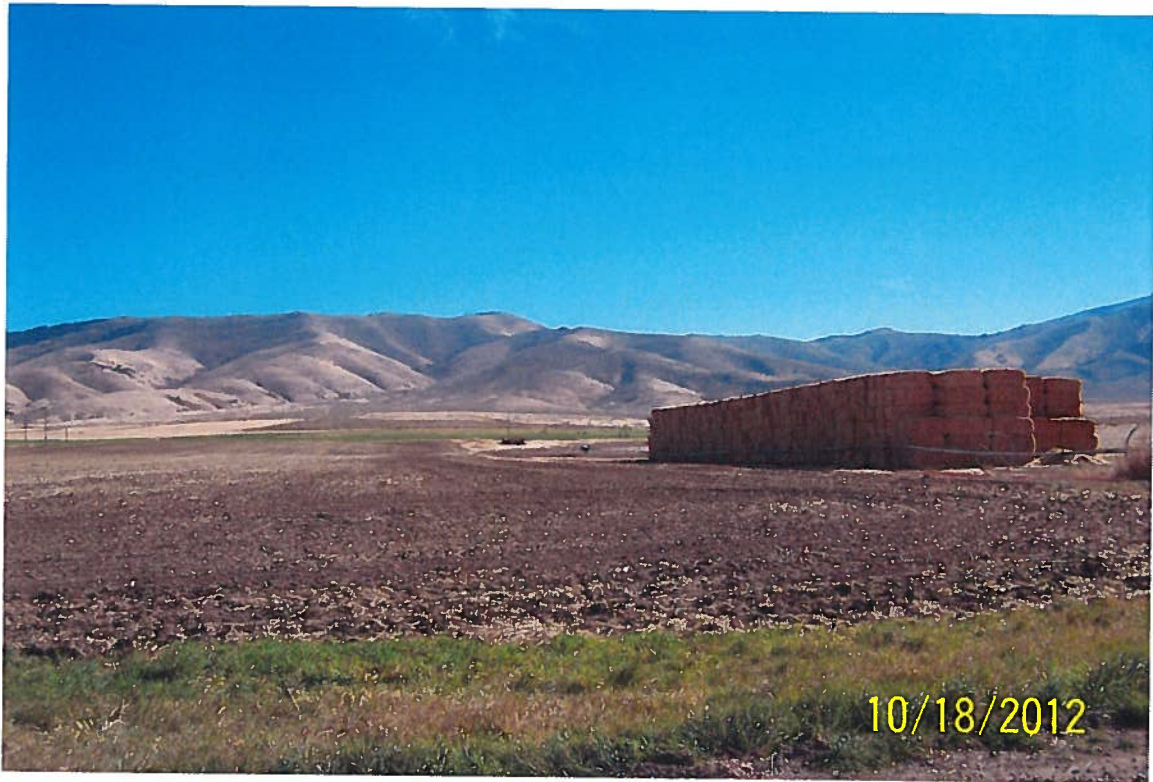


Small
Storage
Pond
8' center,
4' average
depth

10/18/2012

45-7746

S. Hemeriksen



45-7746
POU
Irrigation
from
Storage



POU:

45-7746

S. Hemenway



POU



45-7746

S. Hemerday

Small
Storage
Pond



45-7746

S. Hemerway



GE
meter
51-246-714



(2) Booster
pumps!
① Premium
Electrical
100 HP 3PH
Frame 40502
FD# 978585
20 32010
VR 060 H
② Century
50 HP
SR# 6-357278-01
6" discharge
6" from
small pond

45-7746

S. Hemerway



Intake
from
small
storage
pond
for
booster
pumps
located
directly
to the
west



PON:
with
Pivots

45-7746

S. Hemerway