

A. GENERAL INFORMATION

Exam Date: 6/27/2012

- ANDREW P JOHNSTON
PO BOX 38
CARMEN ID 83462-0038
(208)756-2852

- EAST FORK TOWER CREEK

PLACE OF USE:															DOMESTIC														
Twp Rge Sec			NE				NW				SW				SE														
			<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	Totals										
23N	22E	10												X															

<u>PLACE OF USE:</u>		RECREATION															
<u>Twp</u>	<u>Rge Sec</u>	NE				NW				SW				SE			
		<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>
23N	22E 10								X								<u>Totals</u>

<u>PLACE OF USE:</u>		STOCKWATER															
<u>Twp</u>	<u>Rge Sec</u>	NE				NW				SW				SE			
		<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>
23N	22E 10							X	X					X			<u>Totals</u>

Method of Determination: Site Visit GPS

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.

<u>Well or Diversion</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge Size</u>
<u>ID No.*</u>					

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

D. FLOW MEASUREMENTS

1.

<u>Measurement</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
<u>Equipment</u>						

2. Measurements:

E. FLOW CALCULATIONS☒ Additional Computation Sheets Attached

Measured Method:

POD Elevation 4819 ft – return flow elevation 4571 ft = 248 ft

Pipeline length = .6 mile or 3126.3 ft

*Theoretical rate = 0.06 cfs***F. VOLUME CALCULATIONS**

1. Volume Calculations for Irrigation:

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

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

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

2. Volume Calculations for Other Uses:

POND: See attached calculation sheet

RECREATION: $.06 \times 365 \times 1.9835 = 43.43$ afSTOCKWATER: $205 \text{ head} \times 12 \text{ gpd/h} = 2460 \text{ gpd} \times 365 = 897900 \text{ gal} / 325850 = 2.75$ afaDOMESTOC = $2 \text{ homes} \times 1.2 = 2.4$ afa

G. NARRATIVE/REMARKS/COMMENTS

Field Exam June 27, 2012 - there is a small instream pond at the POD, a small 4" polypipe runs from the pond west to an 8" aluminum pipe, approximately 1/2 to the POU the pipeline is reduced to a 4" aluminum pipe. Approximately 200 feet from the place of use the pipeline is connected to a 4" polypipe, the pipe continues through the property with control valves for metal sprinklers, the entire system is gravity fed. There are no control structures at the POD, as much flow as possible is directed through the pipeline. Irrigation of lawn is approximately .6 acre surrounding the recreational pond. The pipeline continues to the natural channel where overflow is directed back into the channel above the recreational pond. Per Mrs. Johnston the homes are not connected to the springs they have groundwater from a well.

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>
RECREATION STORAGE	01/01 to 12/31		0.20 AF
DOMESTIC	01/01 to 12/31	0.060 CFS	2.40 AF
RECREATION	01/01 to 12/31	0.060 CFS	
STOCKWATER	01/01 to 12/31	0.050 CFS	2.80 AF
<u>Totals:</u>		0.060 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 Kevin Mathews Date 6-27-2012

Reviewer _____ Date _____

★ For additional information, see field report for water right 75-7553.

[List of Calculators](#)[Hydraulics](#)[Language](#)

Manning Formula Uniform Pipe Flow at Given Slope and Depth

[Can you help me translate this calculator to your language or host this calculator at your web site?](#)

$8" = .3702 \text{ cfs}$		Results:	
Pipe diameter, d_0	4 inches	Flow, q	0.0583 cfs
Manning roughness, n	.12	Velocity, v	0.6682 ft/sec
Pressure slope (possibly equal to pipe slope), S_0	.08 rise/run	Velocity head, h_v	0.0069 ft
Percent of (or ratio to) full depth (100% or 1 if flowing full)	1 fraction	Flow area	0.0873 ft ²
		Wetted perimeter	1.0472 ft
		Hydraulic radius	0.0833 ft
		Top width, T	0.0000 ft
		Froude number, F	0.00
		Shear stress (tractive force), τ	1.6650 psf

[Please give us your valued words of suggestion or praise. Did this free calculator exceed your expectations in every way?](#)

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Last Modified 12/04/2012 08:09:13

mm/foot
0.00328084

acres
needed
Evap

Acres
0.10

0.41

Actual

	30 June	31 Nov
28 Feb	31 July	31 Dec
31 March	31 August	
30 April	30 Sept	
31 May	31 Oct	

CIR AF/ACRE	2.15
-------------	------

AVERAGE depth in FEET 2.4

AF NEEDED TO FILL POND 0.24

Data Entry in Green

PRECIPITATION DEFICIT CALCULATION FOR PONDS

	MM/DAY												mm/foot			
	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL MM	TOTAL FEET	Pond Size	AF needed
MONTHLY	0	0.1	0.99	1.83	2.08	2.64	3.55	3.14	1.72	0.71	0.21	0.5				
	0	2.8	30.69	54.9	64.48	79.2	110.1	97.34	51.6	22	6.51	14	533.08	1.7	0.05	0.087448
Surface Area in ACRES	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05		Total evaporate AF		
MM/Day	0	0.14	1.5345	2.745	3.224	3.96	5.503	4.867	2.58	1.1	0.33	0.7	26.654	0.087447507		

acres
needed
Evap

0.04

Pond size W in ft L in ft sq ft

Acres
0.05

Total AF for Pond 0.21 w/evap.

Based on permitted

DAYS		30 June	31 Nov
	28 Feb	31 July	31 Dec
	31 March	31 August	
	30 April	30 Sept	
	31 May	31 Oct	

Crop Type = Grass Pasture (low management)
CIR AF/ACRE 2.15

Pond Size ACRES 0.05
AVERAGE depth in FEET 2.4
AF NEEDED TO FILL POND 0.12

Data Entry in Green

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.

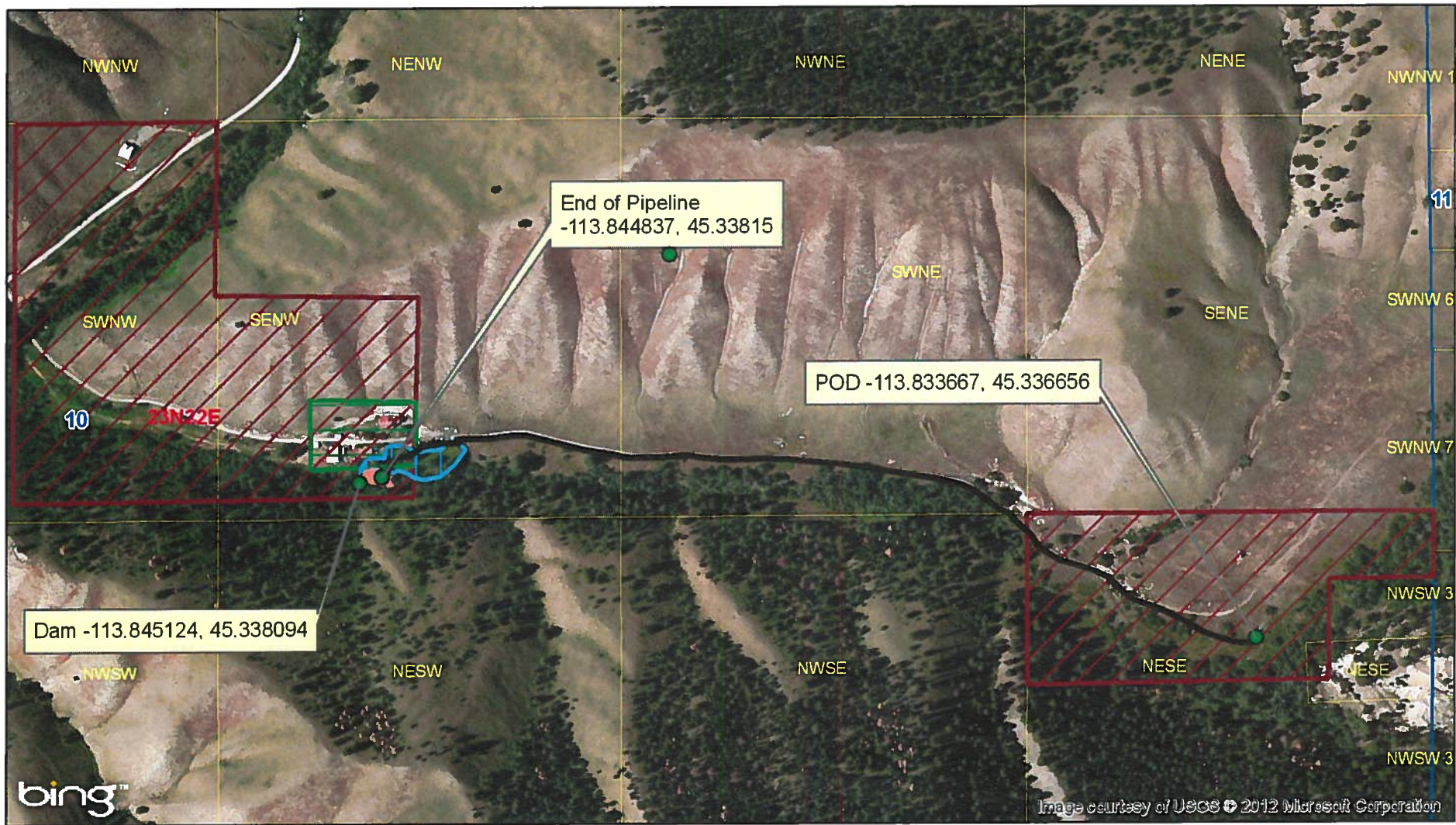
Salmon (NWS -- 108076)

Statistics based on thirty year normal spans 1979 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 - shallow systems (ponds, streams)															
Precipitation Deficit (Click here for a graph)															
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Growing Season ^a	Non Growing Season ^b	Annual
Mean ^j	mm/day												mm		
Monthly ^c	0.34	0.10	0.99	1.83	2.08	2.64	3.55	3.14	1.72	0.71	0.21	0.45	483	0	483
15-Day Moving Average ^d	0.34	0.02	1.02	1.83	2.10	2.57	3.62	3.14	1.72	0.74	0.20	0.40			
7-Day Moving Average ^e	0.34	0.05	0.99	1.82	2.06	2.60	3.59	3.14	1.69	0.73	0.23	0.42			
3-Day Moving Average ^f	0.34	0.09	0.98	1.83	2.07	2.62	3.56	3.15	1.71	0.71	0.23	0.44			
Standard Deviation ^k	mm/day												mm		
Monthly ^c	0.39	0.34	0.48	0.61	1.23	1.02	1.12	0.95	0.72	0.75	0.44	0.56	76	0	76
15-Day Moving Average ^d	0.43	0.46	0.44	0.82	1.28	1.26	1.06	0.92	1.02	0.66	0.56	0.45			
7-Day Moving Average ^e	0.65	0.61	0.65	1.14	1.76	1.74	1.40	1.19	1.37	1.00	0.80	0.65			
3-Day Moving Average ^f	0.90	0.81	0.98	1.64	2.34	2.37	2.05	1.62	1.87	1.41	1.15	0.97			
20% Exceedance ^l	mm/day												mm		
Monthly ^c	0.07	0.37	1.33	2.31	2.86	3.63	4.21	3.66	2.28	1.14	0.15	0.06	540	0	540
15-Day Moving Average ^d	0.15	0.48	1.78	2.95	3.88	4.40	4.70	4.17	2.87	1.65	0.44	0.11			
7-Day Moving Average ^e	0.23	0.70	2.12	3.52	4.44	4.84	4.97	4.44	3.10	2.02	0.69	0.18			
3-Day Moving	0.29	0.93	2.64	4.10	4.85	5.20	5.31	4.79	3.48	2.10	0.79	0.26			

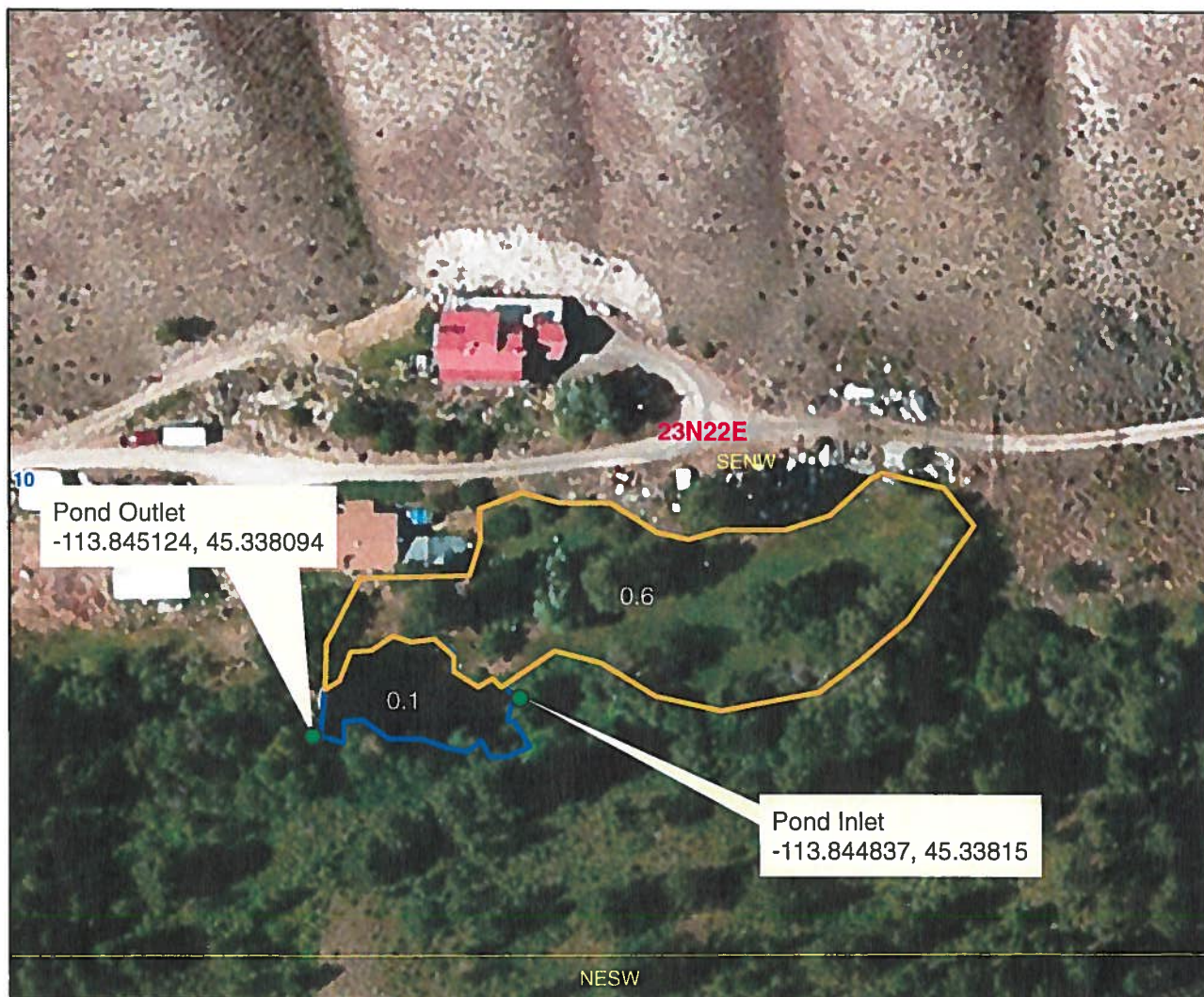


- Pipeline
- Pond
- Irrigation
- Domestic
- ▨ Stockwater
- Township/Range
- Sections
- QQ



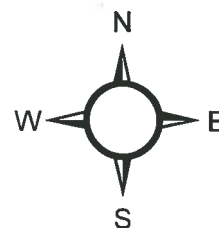
Field Exam - 75-7648





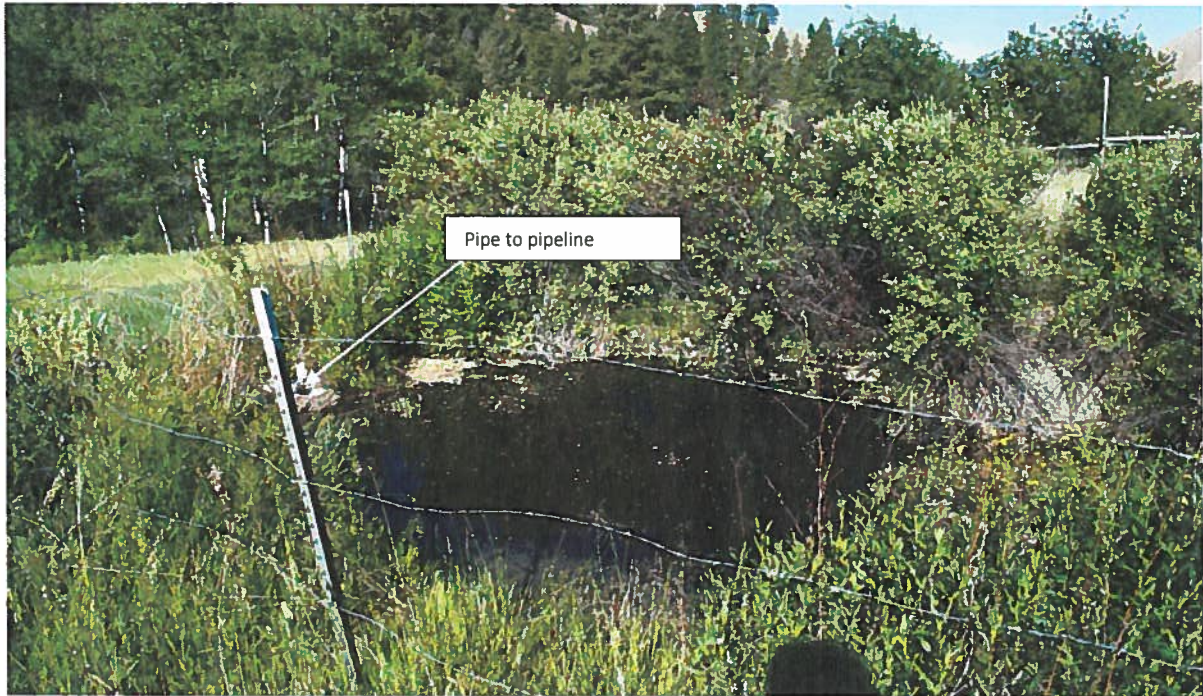
Johnston - 75-7648 - Field Inspection June 27, 2012

-  Irrigation
-  Pond
-  Sections
-  QQ



0 0.01 0.02 0.04 Miles

Field Inspection – 75-7648 – June 27, 2012



Point of Diversion, ponded in stream, no control, 8" metal pipe, reducing to a 4" metal pipe, then a 4" black plastic pipe with control valves attached to sprinklers.



Creek above ponded POD, substantial flow



Creek below ponded diversion, substantially less flow



Pipe back into creek, just above the recreation storage pond



Pond, standing near inlet



Outlet of pond

IDAHO DEPARTMENT OF WATER RESOURCES

Water Right Report 75-7553

WATER RIGHT NUMBER: 75-7553

<u>Owner Type</u>	<u>Name and Address</u>
Current Owner	F MAXINE JOHNSTON PO BOX 38 CARMEN, ID 83462-0038 (208)756-2852
Current Owner	ANDREW P JOHNSTON PO BOX 38 CARMEN, ID 83462-0038 (208)756-2852
Current Owner	CARTER R JOHNSTON PO BOX 38 CARMEN, ID 83462-0038 (208)756-2852

Priority Date: 05/28/1990

Basis: License

Status: Active

<u>Source</u>	<u>Tributary</u>
UNNAMED STREAM	EAST FORK TOWER CREEK

<u>Beneficial Use</u>	<u>From</u> <u>To</u>	<u>Diversion Rate</u>	<u>Annual Volume</u>
IRRIGATION	4/15 to 10/15	0.380 CFS	66.50 AF
	<u>Total Diversion:</u>	0.380 CFS	66.50 AF

Location of Point(s) of Diversion

UNNAMED STREAM	L2 (SW1/4NW1/4)	Sec. 11, Twp 23N, Rge 22E, B.M.
LEMHI County		
UNNAMED STREAM	NE1/4SE1/4	Sec. 10, Twp 23N, Rge 22E, B.M.
LEMHI County		

Place of Use

IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
23N	22E	10				10.0			3.0						6.0				19.0

Total Acres: 19

Conditions of Approval:

1. R30 This right when combined with all other rights shall provide no more than .02 cfs per acre nor more than 3.5 afa per acre for irrigation of the lands above.

IDAHO DEPARTMENT OF WATER RESOURCES

Water Right Report 75-7553

2. 029 The right holder shall comply with all fish screening requirements of the Idaho Department of Fish and Game.
3. Source flows in Gold Star Gulch.

Remarks:Comments:

1. VAULT 2/3/1992 Proof of Beneficial Use Rcvd
 Comment: Proof of Beneficial Use Rcvd

2. VAULT 2/26/1992 Proof of Beneficial Use Rcvd
 Comment: Proof of Beneficial Use Rcvd

Dates and Other Information:

Licensed Date: 8/27/1997
 Decreed Date:
 Enlargement Use Priority Date:
 Enlargement Statute Priority Date:
 State or Federal:
 Owner Name Connector:
 Water District Number:
 Generic Max Rate Per Acre:
 Generic Max Volume Per Acre:
 Decree Defendant:
 Decree Plaintiff:
 Civil Case Number:
 Judicial District:
 Swan Falls Trust or Nontrust:
 Swan Falls Dismissed:
 DLE Act Number:
 Carey Act Number:
 Mitigation Plan: False

Combined Use Limits:Element Reviewed/Verified Dates:

<u>Element</u>	<u>Last Reviewed Date</u>	<u>Reviewer</u>	<u>Last Verified Date</u>	<u>Verifier</u>	<u>Status</u>
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Verification Log:

<u>Element</u>	<u>Date Time Stamp</u>	<u>Reviewer</u>	<u>Log text</u>
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Water Supply Bank:

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

RECEIVED

MAY 5 - 1997

Department of Water Resources

A. GENERAL INFORMATION

CARTEL R. JOHNSTON
Permit No. 75-07553
1. Owner: ANDREW P. JOHNSTON Phone No. (208) 756-2852
F. MAXINE JOHNSTON
Current Address: P.O. BOX 38, CARMEN, ID 83462
2. Accompanied by: CARTEL JOHNSTON EXAM DATE: 7/1/96
Address: _____ Phone No. _____
Relationship to Permit Holder: OWNER
3. Source: UNNAMED STREAM tributary to EAST FORK TOWEL CREEK

B. OVERLAP REVIEW

1. Other water rights with the same place of use: NONE
2. Other water rights with the same point of diversion: NONE

C. DIVERSION AND DELIVERY SYSTEM

1. Point(s) of Diversion:

Ident No.	Gov't Lot	1/4	1/4	1/4	Sec.	Twp.	Rge.	County	Method of Determination/Remarks
#1	L-2		SW	NW	11	23N	22E	LEHHI	U.S.G.S. TOPO MAP/NAPP PHOTO
#2		NE	NE	SE	10	23N	22E	"	" " "

2. Place(s) of Use:

Indicate Method of Determination ON SITE INSPECTION

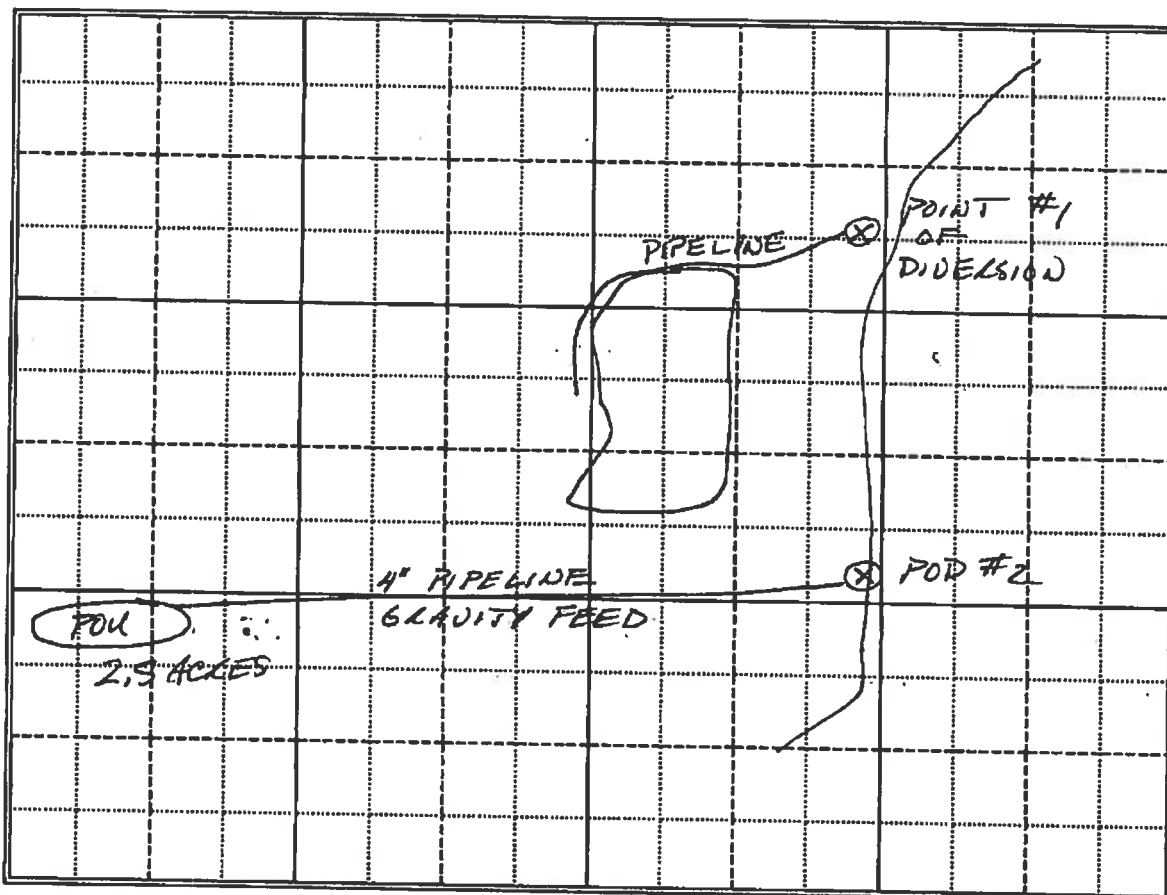
TWP	RGE	SEC	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
23N	22E	10				10			2 1/2						6				18.5
																			18.5

FILMED

TOTAL

MAY 16 1997

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate well size/ditch size/pipe I.d. as applicable.



Scale: 1" = _____

____ Copy of USGS Quadrangle Attached Showing location(s) of point(s) of diversion and place(s) of use (required).

____ Aerial Photo Attached (required for irrigation of 10+ acres)

____ 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

*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
FLOW METER	PORTABLE AT METER			171 090135		

2. Measurements: SEE DISCHARGE NOTES - ATTACHED

MICROFILMED

SEP 16 1997

E. NARRATIVE/REMARKS/COMMENTS

POD #1 WATER FOR THIS PERMIT IS USED FOR IRRIGATION.
WATER IS DIVERTED BELOW A SPRING IN GOLD STAR
GULCH AND VIA A 6" ALUMINUM PIPELINE AND
REDISTRIBUTED AT VARIOUS POINTS AT TOP OF UPPER
PASTURE (FLOOD IRRIGATION).

POD #2 WATER IS PICKED UP BY A SCREENED PIPE PLACED
IN CREEK AND DIVERTED VIA A PIPELINE DOWN HILL
TO THE SECOND PLACE OF USE (2 1/2 ACRES). THIS IS
A SPRINKLER SYSTEM USING 2 TO 4 RAINBIRDS.

PLACE OF SPRING FLOW MEASUREMENT IS ABOVE
SECOND POINT OF DIVERSION.

* SPRING FLOW DURING EARLY SPRING IS SEVERAL
TIMES THE FLOW MEASURED AT TIME OF INSPECTION.

Have conditions of permit approval been met? ☒ yes ☐ no

MICROFILMED
SEP 16 1997

F. FLOW CALCULATIONS

☒ Additional Computation Sheets Attached

Measured Method:

MEASURED FLOW ~~Q = 0.34 cfs~~

Q = 0.453 cfs

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 18.5 \text{ ac} \times 3.5 = 64.8 \text{ AF}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = 0.37 \text{ cfs} \times 183 \times 1.9835 = 134.3 \text{ AF}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 64.8 \text{ AFA}$$

2. Volume Calculations for Other Uses:

H. RECOMMENDATIONS

~~Q = 0.37 cfs~~ SEE REMARKS.
Q = 0.37 cfs

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
IRRIGATION	4/15	10/15	0.37	64.8 AFA
Totals:			0.37 cfs	64.8 AFA

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 SIMPKINS Date 12/1/97

Reviewer _____ Date _____

SEAL

MICROFILMED

SEP 1 1997

75-07553

PY6HY METEX #

UNNAMED STREAM Thru to GOLD STAR GULCH

No. 1 of 1 Sheets. Comp. by SIMPKINS Chk. by _____

REC'D - 1111
SEP 16 1937

75-07553

723N, R22E

UPPER ILL.
PIPELINE

POINT
OF
DIVERSION
#1

#2 POINT OF
DIVERSION
INTO PIPELINE
GRAVITY FEED
TO LOWER
PLACE OF USE

75-07553

POU

X HS

X HS

↑
N

CALTER JOHNSTON

IRRIGATION

1/84



VIEW OF
POINT OF
MEASUREMENT
AND FLOW.



DIFW
POINT OF
DIVERSION
PIPE DELIVERS
WATER ACROSS
SLOPE

PERMIT
NUMBER

75-07553

SEP 16 1997

CHARTER JOHNSTON

IRRIGATION

2084



VIEW FROM
TOP OF
PLACE OF
USE
LEFT SIDE



PLACE OF
USE
CENTER
VIEW

PERMIT
NKMBEA
SEP 16 1986

75-07553

CARTER JOHNSTON

IRRIGATION

3.184



VIEW OF
RIGHT SIDE
PLACE OF
USE

PERMIT
NUMBER

75-07553

1/10/96
SEE 1/10/96

CARTER JOHNSTON

IRRIGATION

414

VIEW OF
DELIVERY
SYSTEM

PASTURE
IRRIGATION



170804000
SEP 16 1972

PERMIT
NUMBER

75-07553