

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
IN-OFFICE REVIEW/BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 75-14702

Exam Date: 07/21/14

1. Does this qualify for an in-office field exam (IDAPA 035.02.r)? X Y N
- a. Irrigation of 5 acres or less
 - b. Storage of up to 14.6 AF for stockwater purposes only
 - c. Any use other than irrigation or storage, if the combined diversion rate is 0.24 cfs or less
 - d. Other < >

2. Current Owner: Name: Duncan
 Owner of Record Correct? X Y N
 Address of Record Correct? X Y N
 If No: Address

3. Beneficial Use Fees have been paid: X Y N Receipt No: C096205

4. SOURCE	TRIBUTARY
1.0000	1.0000
0.9999	0.9999
0.9998	0.9998
0.9997	0.9997
0.9996	0.9996
0.9995	0.9995
0.9994	0.9994
0.9993	0.9993
0.9992	0.9992
0.9991	0.9991
0.9990	0.9990
0.9989	0.9989
0.9988	0.9988
0.9987	0.9987
0.9986	0.9986
0.9985	0.9985
0.9984	0.9984
0.9983	0.9983
0.9982	0.9982
0.9981	0.9981
0.9980	0.9980
0.9979	0.9979
0.9978	0.9978
0.9977	0.9977
0.9976	0.9976
0.9975	0.9975
0.9974	0.9974
0.9973	0.9973
0.9972	0.9972
0.9971	0.9971
0.9970	0.9970
0.9969	0.9969
0.9968	0.9968
0.9967	0.9967
0.9966	0.9966
0.9965	0.9965
0.9964	0.9964
0.9963	0.9963
0.9962	0.9962
0.9961	0.9961
0.9960	0.9960
0.9959	0.9959
0.9958	0.9958
0.9957	0.9957
0.9956	0.9956
0.9955	0.9955
0.9954	0.9954
0.9953	0.9953
0.9952	0.9952
0.9951	0.9951
0.9950	0.9950
0.9949	0.9949
0.9948	0.9948
0.9947	0.9947
0.9946	0.9946
0.9945	0.9945
0.9944	0.9944
0.9943	0.9943
0.9942	0.9942
0.9941	0.9941
0.9940	0.9940
0.9939	0.9939
0.9938	0.9938
0.9937	0.9937
0.9936	0.9936
0.9935	0.9935
0.9934	0.9934
0.9933	0.9933
0.9932	0.9932
0.9931	0.9931
0.9930	0.9930
0.9929	0.9929
0.9928	0.9928
0.9927	0.9927
0.9926	0.9926
0.9925	0.9925
0.9924	0.9924
0.9923	0.9923
0.9922	0.9922
0.9921	0.9921
0.9920	0.9920
0.9919	0.9919
0.9918	0.9918
0.9917	0.9917
0.9916	0.9916
0.9915	0.9915
0.9914	0.9914
0.9913	0.9913
0.9912	0.9912
0.9911	0.9911
0.9910	0.9910
0.9909	0.9909
0.9908	0.9908
0.9907	0.9907
0.9906	0.9906
0.9905	0.9905
0.9904	0.9904
0.9903	0.9903
0.9902	0.9902
0.9901	0.9901
0.9900	0.9900
0.9899	0.9899
0.9898	0.9898
0.9897	0.9897
0.9896	0.9896
0.9895	0.9895
0.9894	0.9894
0.9893	0.9893
0.9892	0.9892
0.9891	0.9891
0.9890	0.9890
0.9889	0.9889
0.9888	0.9888
0.9887	0.9887
0.9886	0.9886
0.9885	0.9885
0.9884	0.9884
0.9883	0.9883
0.9882	0.9882
0.9881	0.9881
0.9880	0.9880
0.9879	0.9879
0.9878	0.9878
0.9877	0.9877
0.9876	0.9876
0.9875	0.9875
0.9874	0.9874
0.9873	0.9873
0.9872	0.9872
0.9871	0.9871
0.9870	0.9870

Garden Creek

Panther Creek

Method of Determination: Info. from permit holder.

Change in Source:	Y	X	N
-------------------	---	---	---

B. OVERLAP REVIEW

1. Other water rights with the same place of use: X NO Overlap

Water Right No.	Source	Purpose of Use	Basis

Comments: 75-4349 is for Bookers Retreat, LLC which is taxlot directly south of POU (RP99000014002A). POU PIN is RP99000014002B.

2. Other water rights with the same point of diversion: NO Overlap

Water Right No.	Source	Purpose of Use	Basis	cfs
75-4349	Garden Creek	Irr/stock/dom	Decreed	0.38

Comments: Extension of Bookers Retreat LLC system. Line attached under road. In letter dated March 3, 2011, Bookers Retreat representative confirmed POD same as 75-4349. 75-14186 – IDFG for Panther Creek

C. DIVERSION AND DELIVERY SYSTEM

1. LOCATION OF POINT(S) OF DIVERSION:

[illegible]

Method of Determination: DRG analysis and information provided by permit holder.

Change in POD? Y X N Amendment Required? Y X N

2. **PLACE OF USE:** 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	
26N	17E	24	0.6																
		Lot #																	
23N	18E	19						0.3											
		Lot #																	
																Total Acres =		0.9	

Method of Determination: GIS Imagery. Total property is 3.1 acres. Significant amount of paved area.

Change in POU? ___Y___X___N Amendment Required? ___Y___X___N

___ Delivery System Diagram Attached (required). Indicate all major components and distances between components.

Indicate weir size/pipe as applicable.

___ 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

2. Measurements: < _____ >

E. FLOW CALCULATIONS

___Additional Computation Sheets Attached

Measured Method:

Irrigation:

Per App. Processing Memo #17, up to 0.03 cfs/acre for irrigation up to 5 acres acceptable. 0.7 acres(0.03 cfs) = 0.027 cfs

Measurement = 0.03 for irrigation cfs
Permit allowed = 0.06 cfs for irrigation

License recommend for 0.03 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.9 \times 3.5 = 3.15$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.03 \times 214 \times 1.9835 = 12.73$$

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

2. Volume Calculations for Other Uses:

G. PURPOSE OF USE

Irrigation ___X___Y___N # Stock_____ Domestic # of Homes _____

Other:

Change in Purpose of Use? ___Y___N

Method of Determination: Information provided by permit holder.

If Yes: From Use _____To Use _____Amount _____CFS _____AFA_____

H. NARRATIVE/REMARKS/COMMENTS

- In Wild and Scenic Watershed: Salmon River Excluding Middle Fork
Season of Use: 04/01-10/31 (214 days)

Headgate: 3.5
Cons. Use: 2.5

Not in a water district at this time.

Conditions

- Prior to diversion of water under this right, the right holder shall install a lockable device, subject to the approval of the Department, in a manner that will provide the watermaster suitable control of the diversion.
 - o After discussions with Shelly Keen and Dan Nelson, Pictures provide evidence where spigot type handles can be locked down with chain and padlock.
- The right holder shall install or construct a straight length of conduit or ditch suitable for installing a device for measuring the entire flow of water being diverted in connection with this right. If the right holder uses conduit, the straight length of conduit shall be at least ten times the diameter of the conduit and shall be above ground or otherwise easily accessible
 - o Photos provided by permit holder. Many places where measurement can be taken by bucket and stopwatch.
- Prior to the diversion and use of water under this approval, the right holder shall comply with all fish screening and/or fish passage requirements of the Idaho Department of Fish and Game.
 - o Photos provided by permit holder.

In letter dated March 3, 2011, Bookers Retreat representative confirmed POD same as 75-4349.

Have conditions of permit approval been met? ☒ Yes ☐ No

I. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
Irrigation	04/01 to 10/31	0.03 CFS	N/A AF
<u>Totals:</u>		0.03 CFS	N/A AF
Exempt: 37.03.02 J viii			

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 ☒ None

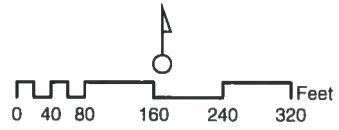
Other: < >

J. AUTHENTICATION

Field Examiner's Name Danelli Lamm Date 09/25/14

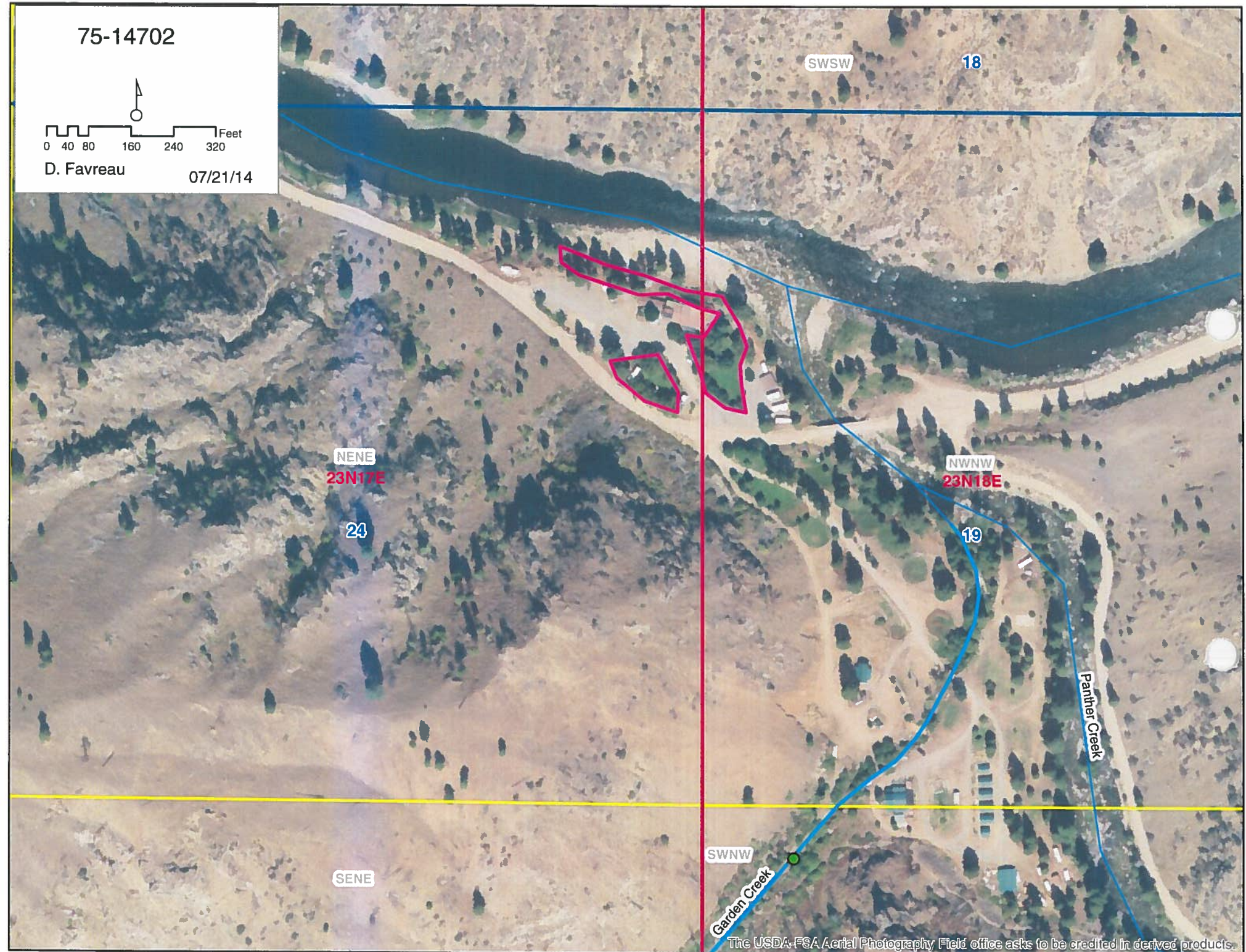
Reviewer Daniel A. Nelson Date 9-29-14

75-14702



D. Favreau

07/21/14



[illegible]

MEMORANDUM

TO: FILE 75-14702
FROM: DANIELLE FAVREAU
SUBJECT: MANNINGS FLOW CALCULATION
DATE: SEPTEMBER 25, 2014
CC:

Both 75-4349 and 75-14702 are diverted from the same point of diversion. We are uncertain as to what the line size is from the diversion point to where the line is connected for 75-14072 at the Salmon River Road. According to the permit holder, there is a 4" pipe from the POD which would supply 0.9 cfs per a Mannings Flow Calculation. The pipe size per information provided by the permit holder (letter dated 08/01/2014) under the Salmon River Road to the POU is 1.5 inch. The Mannings Flow Calculation is based on the pipe size to the POU and the elevation change from the POD to the POU. There is insufficient information regarding the pipe leaving the POD to determine a system capacity for both 75-4349 and 75-14702.

A combined diversion rate limit for 75-4349 and 75-14702 is not reasonable without an actual measurement at the head of the system since there is a possibility of a 0.9 cfs at the POD.

Manning's Equation Calculator for Flow Rate in a Circular Conduit Flowing Full

S = 0.1091 ft/ft
n = 0.009 manning's coefficient
d = 1.5 pipe diameter (inches)
D = 0.13 pipe diameter (feet)
r = 0.06 pipe radius (feet)
A = 0.01 area (ft²)
WP = 0.39 wetted perimeter (ft)
R = 0.03 hydraulic radius (ft)

Q = 0.07 flow rate (CFS)

Channel Slope

Slope Options

☐ Manual Entry
☒ Slope Calculator

Slope Calculator

Rise = 120 feet

Run = 1100 feet

Slope, S = 0.1091 ft/ft

Pipe Material, (n):

plastic (pvc, abs)

Pipe Diameter (Inches)

1.5 Inches

READ ME

Manning's Equation (1), is an empirical formula that solves for velocity (v) in a open channel under uniform flow. The continuity equation (2) when combined with equation (1) allows for the computation of the flow rate (Q) in an open channel under uniform flow.

In equations (1) and (3), η refers to Manning's Coefficient of Roughness and can be found in tabulated form for many open channel types. R is the hydraulic radius of the open channel and is equal to the area of the open channel divided by the wetted perimeter, $R = A/P$. S is the slope of the energy grade line which is often assumed to be equal to the slope of the channel .

Because Manning's Equation is empirical the units are not arbitrary. To obtain a velocity in ft/s and a flow rate in ft³/s, area must be reported in ft², hydraulic radius must be reported in ft, and S must be reported in ft/ft. Manning's Coefficient of Roughness is a unitless constant.

$$(1) \quad v = 1.49 \left(\frac{1}{\eta} \right) \left(R^{\frac{2}{3}} \right) \sqrt{S}$$

$$(2) \quad Q = vA$$

$$(3) \quad Q = 1.49 \left(\frac{1}{\eta} \right) (A) \left(R^{\frac{2}{3}} \right) \sqrt{S}$$

Manning's Equation Calculator for Flow Rate in a Circular Conduit Flowing Full

S = 0.1091 ft/ft
 n = 0.009 manning's coefficient
 d = 4.0 pipe diameter (inches)
 D = 0.33 pipe diameter (feet)
 r = 0.17 pipe radius (feet)
 A = 0.09 area (ft²)
 WP = 1.05 wetted perimeter (ft)
 R = 0.08 hydraulic radius (ft)

Q = 0.90 flow rate (CFS)

READ ME

Manning's Equation (1) is used to compute velocity (v) in a circular conduit. The hydraulic radius (R) is computed from the area (A) and the wetted perimeter (WP) using equation (2) where computation of the hydraulic radius (R) is often assumed to be equal to the area (A) divided by the wetted perimeter (WP).

In equations (1) and (2), the roughness coefficient (n) is a unitless constant that varies with channel types. For a circular conduit, n is often assumed to be 0.009.

Because Manning's Equation (1) is used to compute velocity (v) in a circular conduit, the velocity (v) reported in ft²/s, hydraulic radius (R) is reported in ft/ft, which is a unitless constant.

$$(1) \quad v = 1.49 \frac{R^{2/3} S^{1/2}}{n}$$

$$(2) \quad Q = v A$$

$$(3) \quad Q = 1.49 \frac{A R^{2/3} S^{1/2}}{n}$$

Channel Slope

Slope Options

☐ Manual Entry
 ☒ Slope Calculator

Slope Calculator

Rise = 120 feet

Run = 1100 feet

Slope, S = 0.1091 ft/ft

Pipe Material, (n):

plastic (pvc, abs)

Pipe Diameter (inches)

4.0 inches

Favreau, Danielle

From: Cefalo, James
Sent: Sunday, August 24, 2014 5:58 PM
To: Favreau, Danielle
Subject: RE: re: Permit 75-14702

Sorry, Danielle. They never came into the office. So I don't have any more information than you do.

From: Favreau, Danielle
Sent: Friday, August 22, 2014 4:15 PM
To: Cefalo, James
Subject: RE: re: Permit 75-14702

Hi James,

I received the information from Eastern regarding permit number 75-14702. The lockable device condition still seems unclear. There is a note on a letter from the permit holder "PS water valves can be locked if needed" but there are no photos of where or how they can be locked. Did you by chance speak to the permit holder regarding the condition?

Thanks,

Danielle

From: Cefalo, James
Sent: Wednesday, August 13, 2014 2:18 PM
To: Favreau, Danielle
Subject: RE: re: Permit 75-14702

Thanks for the heads up. The lockable device condition is usually easily satisfied. I will be in the office and will speak to them about the permit conditions.

James

From: Favreau, Danielle
Sent: Wednesday, August 13, 2014 2:09 PM
To: Cefalo, James
Cc: Nelson, Dan
Subject: re: Permit 75-14702

Hello James,

I received a phone call from Faith M. (?) regarding permit 75-14702, Grant Duncan. Faith and Mr. Duncan will be visiting the IDWR Eastern Office either Monday or Tuesday of next week to drop off photos and other information I requested in order to complete the in-house licensing review of permit 75-14702

(\\a012\DocsData\$\WATERRIGHTS\75\DBLOCK\lx4k01 .pdf). The permit holder has some questions regarding condition #3, "Prior to diversion of water under this right, the right holder shall install a lockable device, subject to the approval of the Department, in a manner that will provide the Watermaster suitable control of the diversion. " Without being able to see the photographs of the diversion or other information that she will be providing, I was unable to

adequately address her concerns. I asked her to please speak to a representative at the Eastern Office regarding her concerns.

Please have the agent whom speaks to Mr. Duncan or his representative write a communication memo regarding how the permit holder's concern about the condition is addressed. In addition, please send or email the memo to me with the provided information so that I may complete the in-house licensing exam. If you would like to have the file transferred to Eastern for processing instead, please contact Dan Nelson.

Thank you,

Danielle

Danielle Bruno-Favreau, GISP
GIS Analyst
Idaho Dept. of Water Resources
322 East Front St.
PO Box 83720
Boise, ID 83720-0098

RECEIVED

AUG 18 2014

Department of Water Resources
Eastern Region

Department of Water Resources

Attn: Blake Jordan

900 N. Skyline Drive Suite A

Idaho Falls, ID. 83402

August 1 2014

Mr. Jordan

As requested by Danielle Favreau, in the Boise Office, I have photographed the point of diversion from the pre-existing reservoir showing the 8 foot by 4 inch pipe with Micro grooves and fish screen. The four inch pipe is reduced to 2 inch black pipe with shut off valves. Mr. Rufe and I have separate shut off but no one else has access to them. I have 1 ½ inch black pipe down to my property then reduced to ½ inch faucets with 5/8 inch hose with four lawn (Hunter brand) sprinklers.

When I was issued my permit I was told that I wouldn't need the measuring device or locking system as no one else has access or use of the water. I don't know the name of the person I talked to but we have no watermaster. When purchasing my land and using the water prior to Mr. Booker cutting the line there was no lock or measuring device and all the years since Mr. Rufe purchased the land from Mr. Booker there has not been a locking or measuring device.

If you have further questions please call me.

Sincerely

Grant D. Duncan

Grant D. Duncan

208-394-2190

PS. Water Valve can be Lock if needed





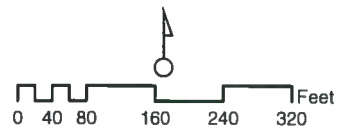






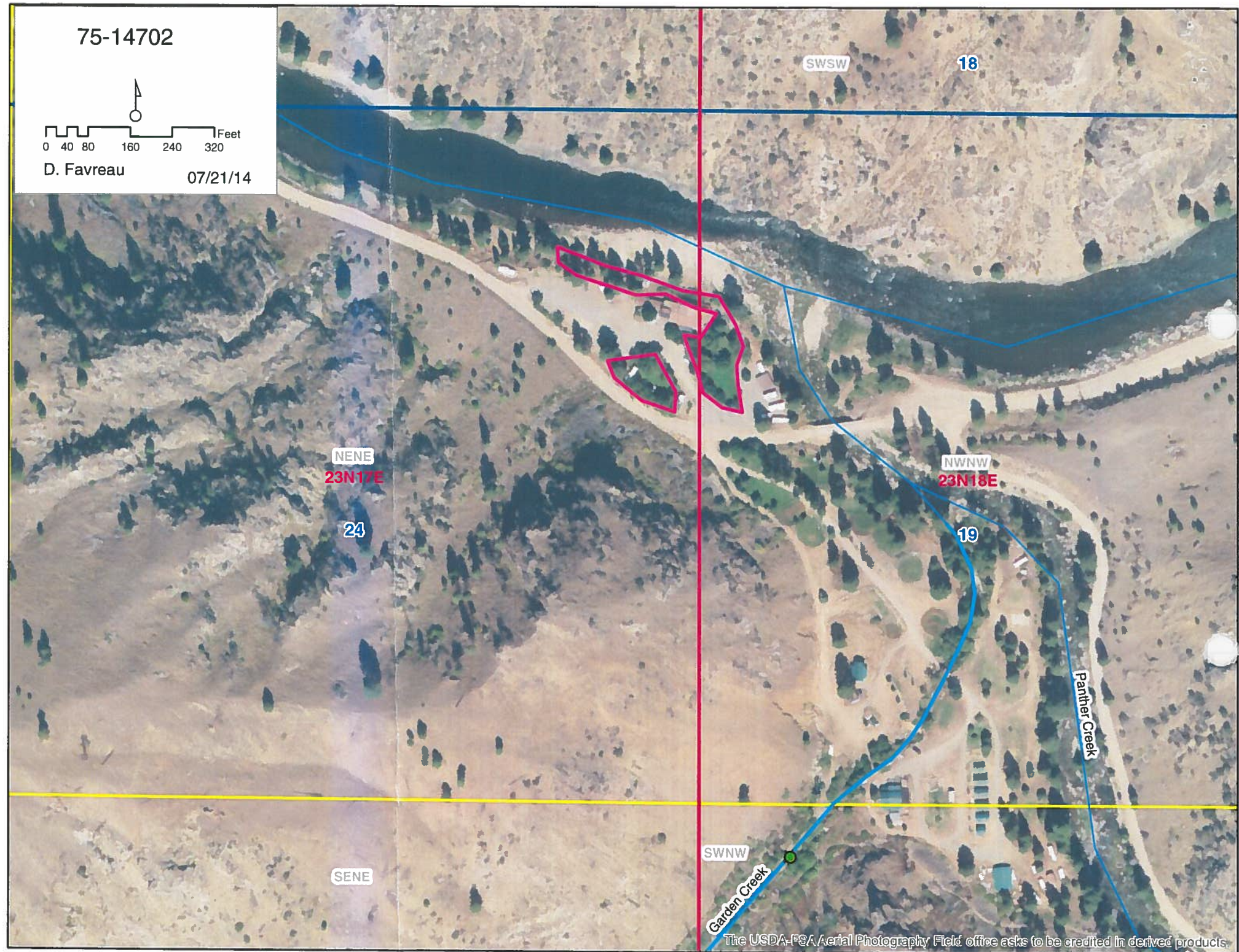


75-14702



D. Favreau

07/21/14



The USDA-FSA Aerial Photography Field office asks to be credited in derived products.