

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

A. GENERAL INFORMATION

Permit No: 78-12416

Exam Date: 8/28/2014

1. Does this qualify for an in-office field exam (IDAPA 035.02.r)? ☒ Yes ☐ No
- 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: David Perkins, Kristin Perkins
Owner of Record Correct? ☒ Yes ☐ No
Address of Record Correct? ☒ Yes ☐ No
If No: Address

3. Beneficial Use Fees have been paid: ☒ Yes ☐ No Receipt No: CO99297

4. **SOURCE** **TRIBUTARY**

Groundwater

Method of Determination: Applicant submitted an aerial photo map that outlined POD & POU.

Change in Source: ☐ Yes ☒ No**B. OVERLAP REVIEW**

1. Other water rights with the same place of use: Overlap? ☐ Yes ☒ No

Water Right No.	Source	Purpose of Use	Basis
78-12415	Elk Creek	Irrigation	

Comments: 78-12415 is a water permit that has been submitted with 78-12416 which serves the same parcel of land but from a different point of diversion

2. Other water rights with the same point of diversion: Overlap? ☐ Yes ☒ No

Water Right No.	Source	Purpose of Use	Basis

Comments: No POD overlap.

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

Source	Govt. Lot	¼	¼	¼	Sec.	Twp.	Rge.		County
Groundwater			NE	NW	26	22N	01E		Idaho

Method of Determination: Legal Description in permit validated by PLS data and mapping.

Change in POD? ☐ Yes ☒ NoAmendment Required? ☐ Yes ☒ No

2. **PLACE OF USE:** Use: Domestic & 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	
22N	01E	26					1.3	2.0											3.3
22N	01E	26						D											

Method of Determination: Map of property submitted by land owner identifies POU clearly. PLSS data through ArcMap match.

Change in POU? ☐ Yes ☒ No Amendment Required? ☐ Yes ☒ No

☒ 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
D0029324	Unk	Unk	Unk	Unk	Unk

*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: In-office field exam so flow measurements not taken.

E. FLOW CALCULATIONS

☒ Additional Computation Sheets Attached

Measured Method:

$$Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}}$$

Efficiency = 0.70

Depth to water = 10 ft.

psi = 40-60

hp= Range

See attached theoretical sheet.

Average flow rate is 0.06 cfs

Measurement = 0.06cfs

Permit allowed = 0.04 cfs

License recommend for 0.04 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 3.3 * 3.0 = 9.9 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.04 * 214 * 1.9835 = 17.0 \text{ af}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 9.9 \text{ af}$$

2. Volume Calculations for Other Uses:

Administrator memo #22 suggests a volume of 0.6 af per household when irrigation is separately identified in the water right.

G. PURPOSE OF USE

Irrigation ☒ Yes ☐ No # Stock 0 Domestic # of Homes 1

Other: < >

Change in Purpose of Use? ☐ Yes ☒ No

Method of Determination: Information in the water right file is consistent with aerial photography of the property.

If Yes: From Use _____ To Use _____ Amount _____ CFS _____ AFA _____

H. NARRATIVE/REMARKS/COMMENTS

Permit 78-12416 authorized the diversion of 0.04 cfs from a well (permit # D0029324) for irrigation and domestic purposes. Based on the permitted diversion rate and small POU, this qualifies for an in-office field exam. The exam was completed on Aug, 28, 2014 by WRA Patrick Kelly.

Legal description of POU & POD were used to locate the property in the name of David Perkins. 3.3 acres of land were found able to be irrigated from the well. I was able to confirm that the property has been developed and a structure exists on the land. A map outlining the POU and POD was submitted and I found no errors in the information that was presented.

Application 78-12415 was submitted contemporaneously with application 78-12416. Applicant stated that 78-12415 would substitute water that was being used from the domestic well under application 78-12416 to irrigate the property.

Overlap review showed statutory claim 78-4002 is an irrigation and stock water right that covers a number of QQ in the area. The NW ¼ NW ¼ of section 26 T22N R01E included. This right was superseded by decree and divided into parts A and B, neither of them are associated with the Perkins property

A range of small horsepower was used on the theoretical flow calculation sheet since there was no hp data provided in the file. A static water level was recorded on the well drillers log of 10 feet. 10 feet was added to this level following the recommendation of the theoretical dynamic pumping level diagram for wells, statement C. Discharge pressure range of 50 psi accounts for an average pressure of domestic tanks and systems. Theoretical average flow rate of 0.06 cfs exceeds the permitted diversion rate of 0.04 cfs.

I found no evidence to suggest a lesser diversion rate be placed on the license.

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	04/01-10/31	0.04 cfs	9.9 af
Domestic	01/01-12/31	0.02 cfs	0.6 af
	<u>Totals</u>	0.04 cfs	10.5 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

Other: < >

J. AUTHENTICATION

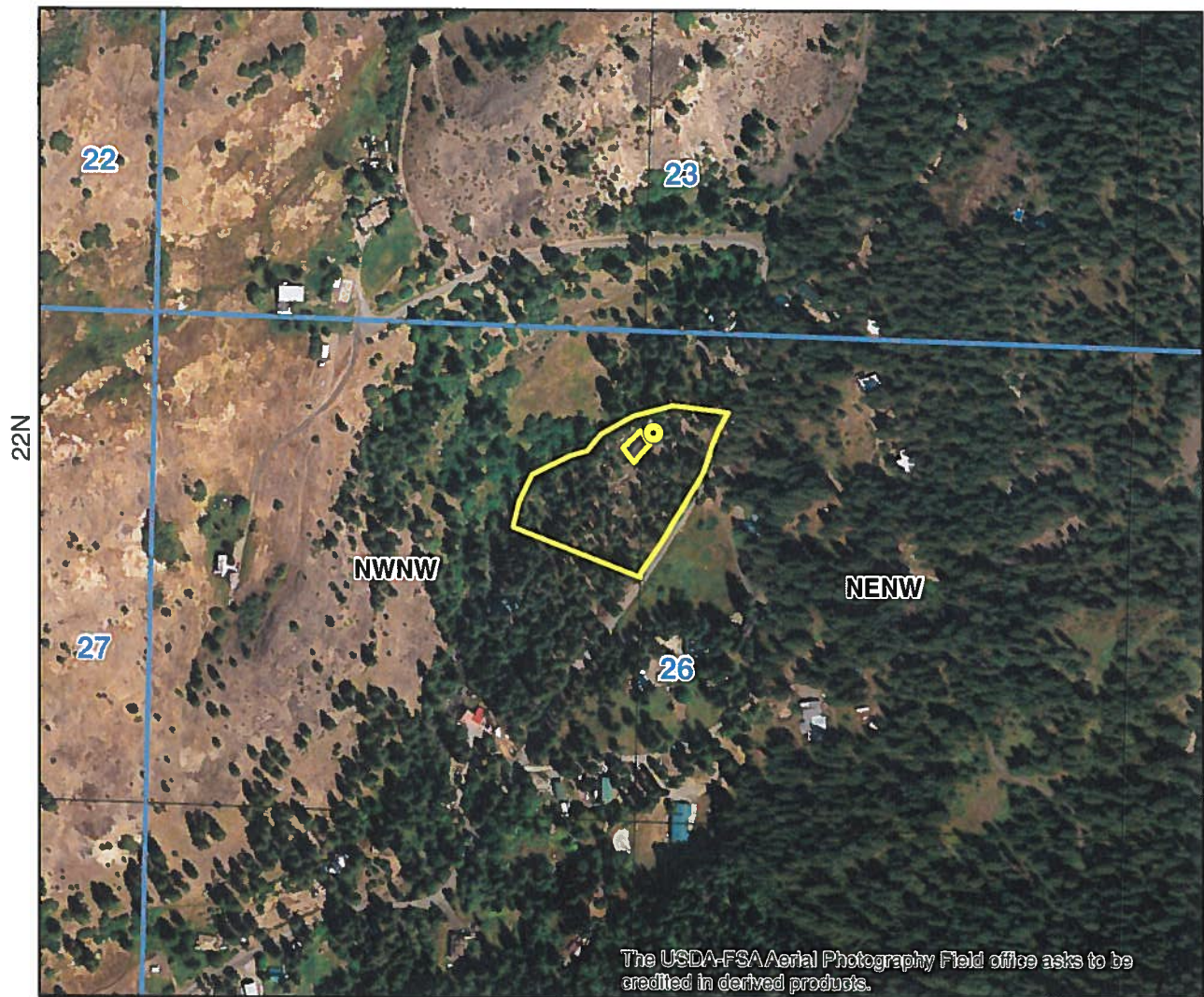
Field Examiner's Name Patricia Wiley Date 8/28/2014

Reviewer Camille S. Skaggs Date 9/8/2014

State of Idaho
Department of Water Resources
Field Exam Map
78-12416

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.

01E



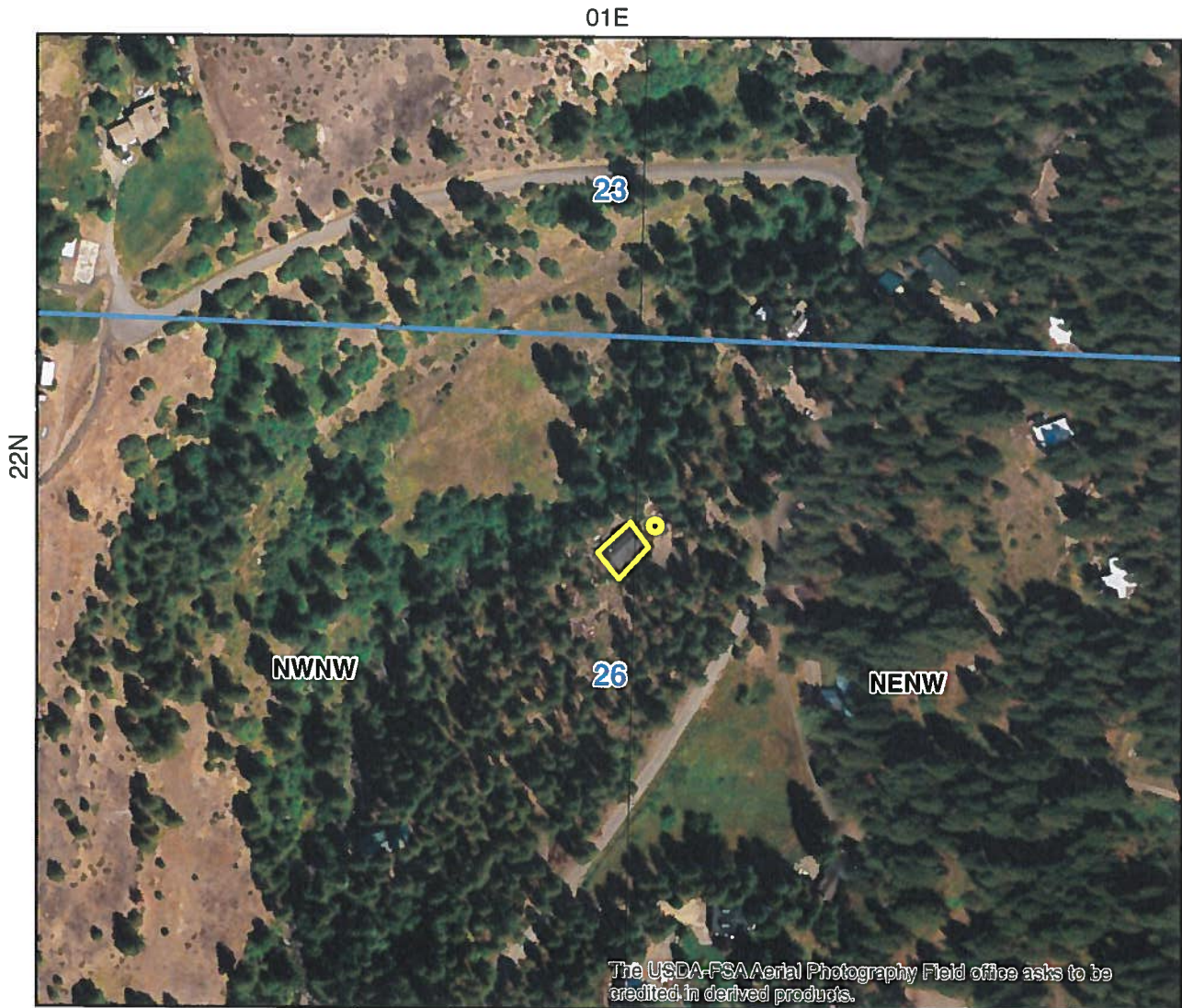
- Point of Diversion
- Place Of Use Boundary
- Townships
- PLS Sections
- Quarter Quarters

0 0.05 0.1 0.2 Miles



State of Idaho
Department of Water Resources
Field Exam Map
78-12416

This map depicts the DOMESTIC 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 0.03 0.06 0.12 Miles



78-12416 System Diagram

-  Well
-  Place of Use



78-12416 is a ground water irrigation water right diverted from a well on the property (Drillers report #0029324). Permit owner is wanting to use well primarily for in home domestic use. The irrigation component is used to irrigate oaks and various tree and shrub on the property.

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 78-12416
 Reviewer: Patrick Kelly
 Date of Review: 8/28/2014

P/D No.:	Senerio 1	Senerio 2	Senerio 3
PUMP HORSEPOWER	0.75	1	2
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	20	20	20
DISCHARGE PRESSURE	50	50	50
RATE OF FLOW (cfs)	0.03	0.05	0.09 0.06

The above calculates the formula =
$$Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}}$$

Assumptions: %70 efficiency.
 No Friction

Examiners Notes:

Horsepower is assumed given the small electrical pump that would be expected to be in place. The permitted rate of 0.04 cfs can be theoretically achieved using a one hp pump. Lift was taken from the well drillers report. Static water recorded 10 feet. A pumping level of 20 feet was used in calculations to account for drawdown. Discharge pressure of 50 psi is a reasonable average pressure for domestic water tanks and irrigation systems. Theoretical average flow rate is 0.06 cfs.

Process	Basin Sequence	Draft	Owner	Source	POD/POU	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE	Total Acres
Water Right	78-10029	N	HOTZ, DON; HOTZ, GEANIE	GROUND WATER	POD					X												0
Water Right	78-10029	N	HOTZ, DON; HOTZ, GEANIE	GROUND WATER	POU					X												0
Water Right	78-10151	N	FORSETH, MARY ARLENE	ELK CREEK	POD						X	X										0
Water Right	78-10151	N	FORSETH, MARY ARLENE	ELK CREEK	POU							1.0										1
Water Right	78-10151	N	FORSETH, MARY ARLENE	ELK CREEK	POU							X										0
Water Right	78-10206	N	GIVENS, ALBERT; GIVENS, MURIEL R	GROUND WATER	POD		X															0
Water Right	78-10206	N	GIVENS, ALBERT; GIVENS, MURIEL R	GROUND WATER	POU		X															0
Water Right	78-10221	N	FUNK, CHARLES E; FUNK,	SPRINGS	POD											X						0
Water Right	78-10264	N	KYRK, ROBERT J	GROUND WATER	POD							X										0
Water Right	78-10264	N	KYRK, ROBERT J	GROUND WATER	POU							X										0
Water Right	78-10297	N	WEISZ, JODY	GROUND WATER	POD					X												0
Water Right	78-10297	N	WEISZ, JODY	GROUND WATER	POU					X												0
Water Right	78-10324	N	WILLIS, WILLIAM H	GROUND WATER	POD					X												0
Water Right	78-10324	N	WILLIS, WILLIAM H	GROUND WATER	POU					X												0
Water Right	78-10329	N	TOWNSEND, LINDA M; TOWNSEND, PAUL D	SPRING	POD							X										0
Water Right	78-10329	N	TOWNSEND, LINDA M; TOWNSEND, PAUL D	SPRING	POU							X										0
Water Right	78-10343	N	MORTENSON, GLORIA K	SPRING	POD								X									0
Water Right	78-10343	N	MORTENSON, GLORIA K	SPRING	POU					X												0
Water Permit	78-12414	N	STUBBS, RICHARD; STUBBS, TYRA	GROUND WATER	POU					1.0												1
Water Permit	78-12415	N	PERKINS, DAVID S; PERKINS,	ELK CREEK	POD						X											0
Water Permit	78-12415	N	PERKINS, DAVID S; PERKINS,	ELK CREEK	POU					1.5	2.0											3.5
Water Permit	78-12416	N	PERKINS, DAVID S; PERKINS,	GROUND WATER	POD					X												0
Water Permit	78-12416	N	PERKINS, DAVID S; PERKINS,	GROUND WATER	POU					1.5	2.0											3.5
Water Permit	78-12416	N	PERKINS, DAVID S; PERKINS,	GROUND WATER	POU					X	X											0
Water Right	78-2072	N	GIVENS, ALBERT; GIVENS, MURIEL R	UNNAMED STREAMS	POU		X															0
Water Right	78-2072	N	GIVENS, ALBERT; GIVENS, MURIEL R	UNNAMED STREAMS	POU	14.0	13.5	11.0	28.5				8.5	34.0								109.5
Water Right	78-4000	N	VICTOR LOWELL SHELINE & HELANE JO SHELINE REVOCABLE	LITTLE ELK CREEK	POU					2.5												2.5
Water Right	78-4002A	N	BROTHERS, ELGIE; GIZINSKI, MICHAEL; GIZINSKI, SHERRIL; SPENCE, BARBARA;	BIG ELK CREEK	POU						9.0											9
Water Right	78-4002A	N	BROTHERS, ELGIE; GIZINSKI, MICHAEL; GIZINSKI, SHERRIL; SPENCE, BARBARA;	BIG ELK CREEK	POU						X											0
Water Right	78-4002B	N	J W WHITMAN INC	ELK CREEK	POD						X											0
Water Right	78-4002B	N	J W WHITMAN INC	ELK CREEK	POU						2.0											2
Water Right	78-4002B	N	J W WHITMAN INC	ELK CREEK	POU						X											0
Water Right	78-4003	N	CHAMBLISS, JOEL L; CHAMBLISS, MARGARET J	LITTLE ELK CREEK	POU					3.0	1.0											4

overlap
Pod.

Water Right	78-4003	N	CHAMBLISS, JOEL L; CHAMBLISS, MARGARET J	LITTLE ELK CREEK	POU					X									0
Water Right	78-4005	N	HOTZ, DON; HOTZ, GEANIE	LITTLE ELK CREEK	POU					2.5									2.5
Water Right	78-4007A	N	KNIGHT, ALAN H, KNIGHT,	LITTLE ELK CREEK	POU					X									0
Water Right	78-4135	N	BEMIS, LEWIS A, BEMIS, NINA	SPRINGS	POD							X							0
Water Right	78-4135	N	BEMIS, LEWIS A, BEMIS, NINA	SPRINGS	POU							X							0
Water Right	78-4160	N	KING-CORNIA, CYNTHIA	ELK CREEK	POU					1.5									1.5
Water Right	78-7006	N	MC MORRIS, BRIAN SCOTT	ELK CREEK	POD							X							0
Water Right	78-7006	N	MC MORRIS, BRIAN SCOTT	ELK CREEK	POU							2.0							2
Water Right	78-7014	N	ULSTAD, EVE	ELK CREEK	POD						X								0
Water Right	78-7014	N	ULSTAD, EVE	ELK CREEK	POU							X							0
Water Right	78-7067A	N	PAYNE, EMMA C, PAYNE, MILTON C	LITTLE ELK CREEK	POD					X									0
Water Right	78-7067A	N	PAYNE, EMMA C, PAYNE, MILTON C	LITTLE ELK CREEK	POU					X									0
Water Right	78-7067B	N	NEVILL, DEBRA A	LITTLE ELK CREEK	POU					X									0
Water Right	78-7107	N	WARREN, LEAH E; WARREN,	GROUND WATER	POD		X												0
Water Right	78-7107	N	WARREN, LEAH E; WARREN,	GROUND WATER	POU		X												0
Water Right	78-7108	N	WARREN, RAYMOND L	SPRINGS	POU		1.0												1
Water Right	78-7109	N	MORTENSON, GLORIA K	SPRING	POD								X						0
Water Right	78-7109	N	MORTENSON, GLORIA K	SPRING	POU					1.0		0.2	0.8						2
Water Right	78-7113	N	WARREN, RAYMOND L	SPRINGS	POU		1.0												1
Water Right	78-7113	N	WARREN, RAYMOND L	SPRINGS	POU		X												0
Water Right	78-7265	N	BAUM, GLENN E, BAUM, NETTA, WEST, FLORENCE; WEST, FLOYD	SPRING	POD								X						0
Water Right	78-7265	N	BAUM, GLENN E, BAUM, NETTA, WEST, FLORENCE; WEST, FLOYD	SPRING	POU							X							0
Water Right	78-7301	N	TOWNSEND, LINDA M; TOWNSEND, PAUL D	ELK CREEK	POD					X									0
Water Right	78-7301	N	TOWNSEND, LINDA M; TOWNSEND, PAUL D	ELK CREEK	POU					0.8		0.4							1.2
Water Right	78-7301	N	TOWNSEND, LINDA M; TOWNSEND, PAUL D	ELK CREEK	POU					X		X							0
Water Right	78-7304	N	MC NULTY, HELEN M; MC NULTY, RICHARD M	SPRING	POD							X							0
Water Right	78-7304	N	MC NULTY, HELEN M; MC NULTY, RICHARD M	SPRING	POU							X							0
Water Right	78-7324	N	MORTENSON, GLORIA K	SPRING, UNNAMED STREAM	POD					X			X						0
Water Right	78-7324	N	MORTENSON, GLORIA K	SPRING, UNNAMED STREAM	POU							X							0
Water Right	78-7328	N	MC NULTY, HELEN M; MC NULTY, RICHARD M	ELK CREEK	POD							X							0
Water Right	78-7328	N	MC NULTY, HELEN M; MC NULTY, RICHARD M	ELK CREEK	POU							0.5							0.5
Water Right	78-7328	N	MC NULTY, HELEN M; MC NULTY, RICHARD M	ELK CREEK	POU							X							0
Water Right	78-7333	N	ROSE, PAUL F; ROSE, UNA L	SPRINGS	POD							X							0
Water Right	78-7333	N	ROSE, PAUL F; ROSE, UNA L	SPRINGS	POU							3.0							3
Water Right	78-7343	N	ENGLAND, MIKE; HARTUNG,	ELK CREEK	POU							X							0
Water Right	78-7360	N	ZUBER, SHANNON R; ZUBER, SILVIA	UNNAMED STREAM	POD					X									0
Water Right	78-7360	N	ZUBER, SHANNON R; ZUBER, SILVIA	UNNAMED STREAM	POU					X									0

TOWNSEND PROP. to the SW.

overlap