

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

A. GENERAL INFORMATION

Permit No: 95-13857

Exam Date: 3/17/2014

1. Does this qualify for an in-office field exam (IDAPA 035.02.r)? ☒ Yes ☐ No
- Irrigation of 5 acres or less
 - Storage of up to 14.6 AF for stockwater purposes only
 - Any use other than irrigation or storage, if the combined diversion rate is 0.24 cfs or less
 - Other < >

2. Current Owner: Name: Thomas & Catherine Cutting
- 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: CO98309

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

Hayden Lake

Sinks

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
North Kootenai Water District	Ground water	Municipal	License

Comments: No other water rights that share the POU. Rights 95-26 & 95-79 are domestic water rights with priority dates of 3/23/1973, before the Cutting property was developed in 1987. North Kootenai Water District water rights are used for in-house use.

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

Water Right No.	Source	Purpose of Use	Basis

Comments: No other water rights that share the POD.

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

Source	Govt. Lot	¼	¼	¼	Sec.	Twp.	Rge.		County
Hayden Lake	4		SW	NW	17	51N	03W		Kootenai

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

TWP	RGE	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
51N	03W	17							1.0										1.0
									L4										

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
Hayden Lake	Unk	1	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 theoretical not applicable.

E. FLOW CALCULATIONS

☒ Additional Computation Sheets Attached

Measured Method:

Theoretical flow calculation completed. See attached sheet. Administrator Memo #17 allows for 0.03 cfs for irrigation less than 5.0 acres.

Measurement = 0.03 cfs

Permit allowed = 0.03 cfs

License recommend for 0.03 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 1.0 \times 3.0 = 3.0$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.03 \times 246 \times 1.9835 = 14.6$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 3.0$$

2. Volume Calculations for Other Uses: None.

G. PURPOSE OF USEIrrigation ☐ Yes ☒ No # Stock 0 Domestic # of Homes 0

Other: < >

Change in Purpose of Use? ☐ Yes ☒ No

Method of Determination: Information submitted in beneficial use report is supported by aerial photography.

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

H. NARRATIVE/REMARKS/COMMENTS

Permit 95-13857 authorized the use of 0.03 cfs from Hayden Lake for irrigation water purposes. Based on the information provided in the water right file, this qualifies for an in-office field exam.

The application stated that the irrigation use was for a property along Hayden Lake shore. From the aerial photo of land provided in the application and recent aerial imagery, I was able to confirm that yard irrigation was being used on the property. It is difficult to say how much is being irrigated due to heavy vegetation and trees on the property. However, I do believe that irrigation is in excess of half an acre thus requiring the irrigation water right.

Rights 95-26 & 95-79 are domestic water rights with priority dates of 3/23/1973, before the Cutting property was developed in 1987. This suggests that these water rights were in use before the Cutting property was developed and are not a POU overlap. North Kootenai Water District water rights are municipal water rights that are used for in-house use only. Contact was made by phone with Mr. Cutting when he confirmed that city water is used inside the home, and that water authorized under this permit is strictly used for yard irrigation. He also confirmed that the water pulled from the lake was the only water being used to irrigate. Conditions will be recommended on license to combine use limits.

The beneficial use report claims that the system has a 1 hp pump installed which carries water roughly 150 feet to supply 10-15 gallons of water per minute. This would require a flow rate of 0.02 to 0.03 cfs. Upon further investigation of the property, using topographic mapping I am able to suggest a rise of 130 feet to the property use. This helps the theoretical calculation recommend a flow rate of 0.03 cfs, which was permitted.

There were no concerns or reasons to request further information.

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	03/15 – 11/15	0.03	3.0
	<u>Totals</u>	0.03 CFS	3.0 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 ☒ None

Other: < >

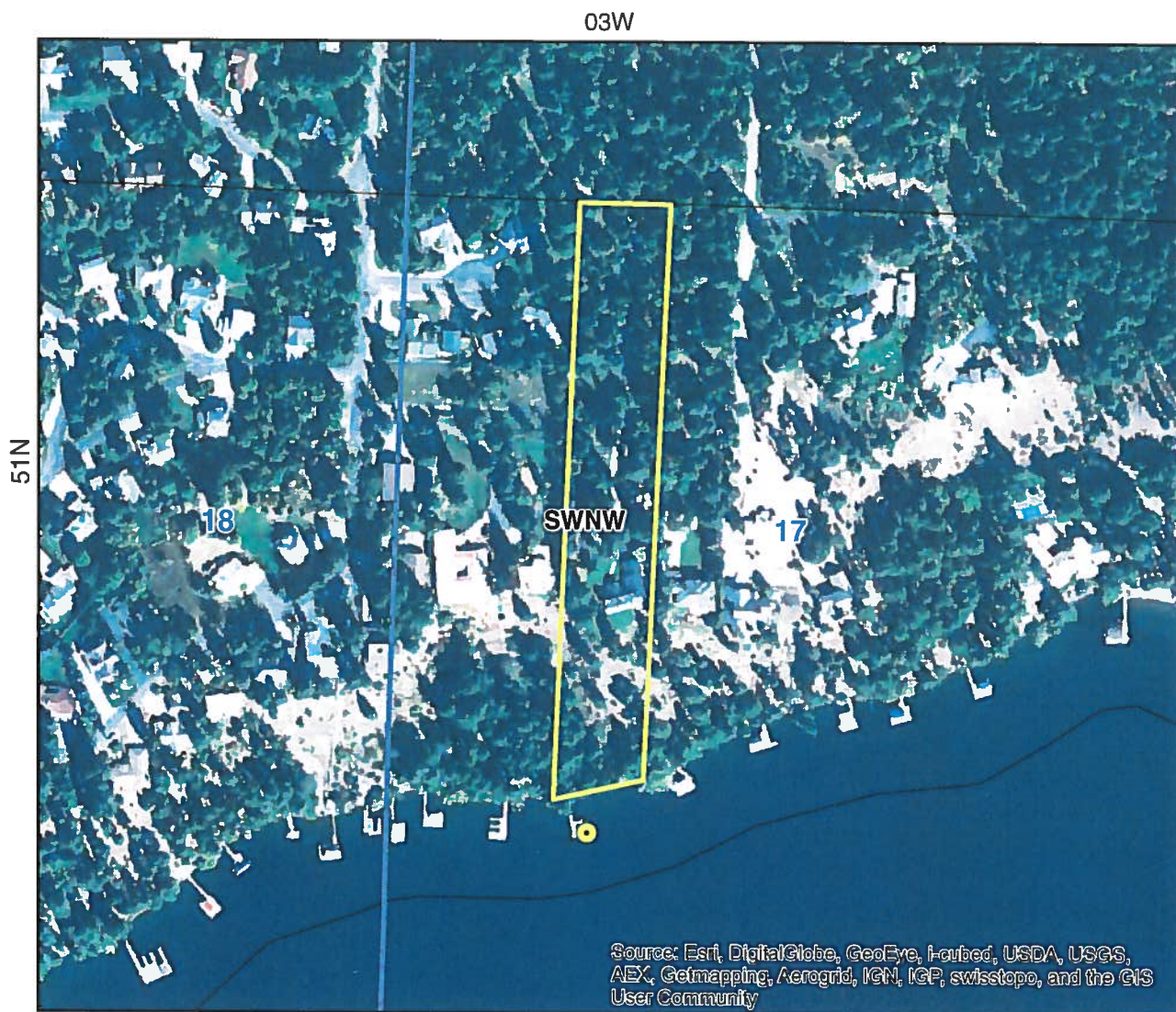
J. AUTHENTICATION

Field Examiner's Name Patricia M. King Date 03/26/2014

Reviewer _____ Date _____

State of Idaho
Department of Water Resources
Field Exam Map
95-13857

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.



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

0 0.035 0.07 0.14 Miles



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THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 95-13857
 Reviewer: Patrick Kelly
 Date of Review: 3/21/2014

P/D No.:	Senerio 1	Senerio 2	Senerio 3
PUMP HORSEPOWER	1	1	1
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	130	130	130
DISCHARGE PRESSURE	40	50	60
RATE OF FLOW (cfs)	0.03	0.03	0.02 0.03

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:

Lift was taken from DRG topo map to measure the point of diversion to the place of use or storage tank. Used 40-60 pressure using standard sprinkler pressures. Average rate of flow is 0.03 cfs which represents the permitted 0.03 cfs is capable of being supplied to the home.

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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 Permit	95-10019	N	NORTH KOOTENAI WATER DISTRICT	GROUND WATER	POU		X			X	X	X	X									0
Water Right	95-10019	Y	NORTH KOOTENAI WATER DISTRICT	GROUND WATER	POU		X			X	X	X	X									0
Water Right	95-10907	N	THE TEETS FAMILY TRUST	HAYDEN LAKE	POD		X															0
Water Right	95-10907	N	THE TEETS FAMILY TRUST	HAYDEN LAKE	POU		X															0
Water Right	95-11251	N	FANDEL, TERESE; PENNINGS, JOHN	HAYDEN LAKE	POD		X															0
Water Right	95-11251	N	FANDEL, TERESE; PENNINGS, JOHN	HAYDEN LAKE	POU		X															0
Water Permit	95-12599	N	NORTH KOOTENAI WATER DISTRICT	GROUND WATER	POU		X			X	X	X	X									0
Water Right	95-12599	Y	NORTH KOOTENAI WATER DISTRICT	GROUND WATER	POU		X			X	X	X	X									0
Water Permit	95-13374	N	FALLS AT HAYDEN LAKE HOMEOWNER S ASSN	HAYDEN LAKE	POD								X									0
Water Permit	95-13374	N	FALLS AT HAYDEN LAKE HOMEOWNER S ASSN	HAYDEN LAKE	POU								1.0									1
Water Permit	95-13374	N	FALLS AT HAYDEN LAKE HOMEOWNER S ASSN	HAYDEN LAKE	POU								X									0
Water Permit	95-13857	N	CUTTING, CATHERINE A; CUTTING, THOMAS M	HAYDEN LAKE	POD							X										0
Water Permit	95-13857	N	CUTTING, CATHERINE A; CUTTING, THOMAS M	HAYDEN LAKE	POU							1.0										1
Water Right	95-142	N	GENTRY, ARNOLD	HAYDEN LAKE	POD																	0
Water Right	95-142	N	GENTRY, ARNOLD	HAYDEN LAKE	POU																	0
Water Right	95-204	N	KELLEY, JAMES M	HAYDEN LAKE	POD																	0
Water Right	95-204	N	KELLEY, JAMES M	HAYDEN LAKE	POU																	0
Water Right	95-2194	N	NORTH IDAHO PROPERTIES INC	HAYDEN LAKE	POD							X										0
Water Right	95-232	N	LUTHER, RALPH DEAN	HAYDEN LAKE	POD	X			X													0
Water Right	95-232	N	LUTHER, RALPH DEAN	HAYDEN LAKE	POU	X			X													0
Water Right	95-26	N	BEEBE, STEWART R	HAYDEN LAKE	POD																	0
Water Right	95-26	N	BEEBE, STEWART R	HAYDEN LAKE	POU																	0
Water Right	95-291	N	HATHAWAY, J	HAYDEN LAKE	POD																	0
Water Right	95-291	N	HATHAWAY, J	HAYDEN LAKE	POU																	0
Water Right	95-313	N	PURVIS, JAMES P	HAYDEN LAKE	POD																	0
Water Right	95-313	N	PURVIS, JAMES P	HAYDEN LAKE	POU																	0
Water Right	95-331	N	SCHUSTER, JANE ALLISON	HAYDEN LAKE	POD																	0
Water Right	95-331	N	SCHUSTER, JANE ALLISON	HAYDEN LAKE	POU																	0
Water Right	95-333	N	SCOLES, EDNA M	HAYDEN LAKE	POD																	0
Water Right	95-333	N	SCOLES, EDNA M	HAYDEN LAKE	POU																	0
Water Right	95-406	N	WOODRUFF, WILLIAM	HAYDEN LAKE	POD																	0
Water Right	95-406	N	WOODRUFF, WILLIAM	HAYDEN LAKE	POU																	0
Water Right	95-460	N	MC CALL, DELORES W	HAYDEN LAKE	POD																	0
Water Right	95-460	N	MC CALL, DELORES W	HAYDEN LAKE	POU																	0
Water Right	95-638	N	MC CALL,	HAYDEN LAKE	POD																	0
Water Right	95-638	N	MC CALL,	HAYDEN LAKE	POU																	0
Water Right	95-7120	N	CAREY, CLAUDE E; CAREY, MRS	HAYDEN LAKE	POD		X															0
Water Right	95-7120	N	CAREY, CLAUDE E; CAREY, MRS	HAYDEN LAKE	POU		X															0
Water Right	95-7138	N	NORTH KOOTENAI WATER DISTRICT	GROUND WATER	POU		X			X	X	X	X									0

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Water Right	95-7180	N	GISH, MRS TIMOTHY P; GISH, TIMOTHY P	HAYDEN LAKE	POD	X													0
Water Right	95-7180	N	GISH, MRS TIMOTHY P; GISH, TIMOTHY P	HAYDEN LAKE	POU	X													0
Water Right	95-73	N	CLINTON, FLORENCE C	HAYDEN LAKE	POD														0
Water Right	95-73	N	CLINTON, FLORENCE C	HAYDEN LAKE	POU														0
Water Right	95-7395	N	JOHNSON, WALTER D	HAYDEN LAKE	POD	X													0
Water Right	95-7395	N	JOHNSON, WALTER D	HAYDEN LAKE	POU	X													0
Water Right	95-7713	N	NORTH KOOTENAI WATER DISTRICT	GROUND WATER	POU	X			X	X	X	X							0
Water Right	95-7827	N	NORTH KOOTENAI WATER DISTRICT	GROUND WATER	POU	X			X	X	X	X							0
Water Right	95-79	N	COOPER, H H	HAYDEN LAKE	POD														0
Water Right	95-79	N	COOPER, H H	HAYDEN LAKE	POU														0
Water Right	95-8032	N	BROWN, R ROMER	HAYDEN LAKE	POD	X													0
Water Right	95-8032	N	BROWN, R ROMER	HAYDEN LAKE	POU	X													0
Water Right	95-8119	N	PREMO, FRANK W	HAYDEN LAKE	POD	X													0
Water Right	95-8119	N	PREMO, FRANK W	HAYDEN LAKE	POU	X													0
Water Right	95-8150	N	MC CALL,	HAYDEN LAKE	POD								X						0
Water Right	95-8150	N	MC CALL,	HAYDEN LAKE	POU								X						0
Water Right	95-8276	N	DAVIS,	HAYDEN LAKE	POD	X													0
Water Right	95-8276	N	DAVIS,	HAYDEN LAKE	POU				X										0
Water Right	95-8522	N	NORTH KOOTENAI WATER DISTRICT	GROUND WATER	POU	X			X	X	X	X							0
Water Right	95-8536	N	WORTHINGTO N, J DEAN; WORTHINGTO N, JO ANN	HAYDEN LAKE	POD	X													0
Water Right	95-8536	N	WORTHINGTO N, J DEAN; WORTHINGTO N, JO ANN	HAYDEN LAKE	POU	X													0
Water Right	95-8543	N	STONE,	HAYDEN LAKE	POD				X										0
Water Right	95-8543	N	STONE,	HAYDEN LAKE	POU				X										0
Water Right	95-8578	N	PALMER,	HAYDEN LAKE	POD	X													0
Water Right	95-8578	N	PALMER,	HAYDEN LAKE	POU	X													0
Water Right	95-8639	N	NORTH KOOTENAI WATER DISTRICT	GROUND WATER	POU	X			X	X	X	X							0
Water Right	95-8721	N	FAIRCLOTH, KENNETH F	HAYDEN LAKE	POD	X													0
Water Right	95-8721	N	FAIRCLOTH, KENNETH F	HAYDEN LAKE	POU	X													0
Water Right	95-88	N	CROWE, JAMES B	HAYDEN LAKE	POD														0
Water Right	95-88	N	CROWE, JAMES B	HAYDEN LAKE	POU														0
Water Right	95-9127	N	HEMMINGS, WILLIAM H	HAYDEN LAKE	POD	X													0
Water Right	95-9127	N	HEMMINGS, WILLIAM H	HAYDEN LAKE	POU	X													0
Water Permit	95-9129	N	NORTH KOOTENAI WATER DISTRICT	GROUND WATER	POU	X			X	X	X	X							0
Water Right	95-9199	N	NORTH KOOTENAI WATER DISTRICT	GROUND WATER	POU	X			X	X	X	X							0
Water Right	95-9217	N	NORTH KOOTENAI WATER DISTRICT	GROUND WATER	POU	X			X	X	X	X							0
Water Permit	95-9244	N	NORTH KOOTENAI WATER DISTRICT	GROUND WATER	POU	X			X	X	X	X							0
Water Right	95-9244	Y	NORTH KOOTENAI WATER DISTRICT	GROUND WATER	POU	X			X	X	X	X							0
Water Right	95-9417	N	BROWN , TIIA; BROWN, ARTHUR	HAYDEN LAKE	POD			X											0
Water Right	95-9417	N	BROWN , TIIA; BROWN, ARTHUR	HAYDEN LAKE	POU		0.5	0.5											1
Water Right	95-9417	N	BROWN , TIIA; BROWN, ARTHUR	HAYDEN LAKE	POU	X	X												0

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