

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 95-11469

Exam Date: 07/30/2020

1. Current Owner:
KASCAK ESTATE COMMUNITY WATER SYSTEM 17634 N ADVENT LN HAUSER ID 83854
2. Accompanied by: Chris Zabriskie
Phone No: 208-262-1574
Address: 9768 N Love CT
Relationship to permit Holder: Kascak Estate Community Water System Representative

3. **SOURCE:**

GROUND WATER

Method of Determination: DRG and Arcmap.

B. OVERLAP REVIEW

1. Other water rights with the same place of use: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
MULTIPLE	GROUNDWAER	MUNICIPAL	LICENSE

Comments: Multiple rights that use groundwater for municipal purposes by Hauser Lake Water Assn overlap this right's POU, but as right 95-11469 is on a separate well system and does not use water from Hauser Lake Water Assn, there is no concern for overlap.

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

Water Right No.	Source	Purpose of Use	Basis

Comments: _____

C. DIVERSION AND DELIVERY SYSTEM

1. LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER SW¼ SE¼, Sec. 13, Twp 51N, Rge 06W, B.M. KOOTENAI County

Method of Determination: GPS. POD located at -117°01.719, 47°45.701, D0010432

PLACE OF USE: IRRIGATION

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
51N	06W	13															1.5	1.9	3.4

Total Acres: 3.4

PLACE OF USE: DOMESTIC and FIRE PROTECTION

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
51N	06W	13															X	X	

Method of Determination: Field exam and Arcmap.

3.

X Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.

X Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.

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

X 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
D0010432	UNK	5			

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
NONE						

2. Measurements: Unable to perform flow measurement due to inadequate piping requirements between well and pressure tank.

E. FLOW CALCULATIONS

X Additional Computation Sheets Attached

Measured Method: Theoretic pumping equation calculated 57.0 gpm, with a pump depth of 185 feet operating at 40 psi. Resulting in a maximum diversion rate = **0.13 cfs**, considering department significant figure rounding standards. Domestic and Fire Protection component beneficial use diversion rate = 0.13 cfs, limited by pump performance. Irrigation component beneficial use diversion rate = 0.10 cfs, based on computation of 3.4 acres irrigation x 0.03 cfs = 0.10 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 3.4 \text{ ac} \times 3.0 \text{ afa} = 10.2 \text{ af}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.10 \text{ cfs} \times 246 \times 1.9835 = 48.8$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = \mathbf{10.2 \text{ af}}$$

2. Volume Calculations for Other Uses:

$$\text{Domestic component annual volume} = (6 \text{ homes} \times 0.6 \text{ af per home}) + (3 \text{ stub-ins} \times 0.6 \text{ af per stub-in}) = \mathbf{5.4 \text{ af}}$$

Domestic and irrigation components have annual volumes applied, but due to the fire protection component as a diversion rate (cfs), there is no maximum diversion volume applied to this water right license.

G. NARRATIVE/REMARKS/COMMENTS

Field exam performed on 7/30/2020 with Kascak Estate Community Water System representative, Chris Zabriskie, showed a well servicing 9 lots for domestic and irrigation purposes. The well was situated approx. 30 feet from the pump house, with piping going directly from well to a vaulted storage tank to two 120 gal pressure tanks with inadequate pipe requirements to complete flow measurements. Theoretic pumping equation calculated 57.0 gpm, with a 5 HP pump at a depth of 185 feet, operating at 40 psi. The resulting diversion rate = **0.13 cfs**, which will be applied as the domestic component diversion rate and maximum diversion volume applied to license. Applicant was permitted for 0.14 cfs for domestic component, the department standard diversion rate for 9 home, but applicant is limited to pump performance at time of field exam. The applicant incorporated a vaulted storage tank of unknown size below pump house in order to provide storage volume to make up for the lower flow rate and to service homes during peak water usage. The diversion rate for the irrigation component equals **0.10 cfs**, which is applied on license, but not additive to the maximum diversion rate. The diversion rate for the fire protection component equals **0.13 cfs**, which is applied on the license, and is lower than the permitted for value as pump performance limits diversion rate.

At time of field exam, Mr. Zabriskie identified two parcels that are part of the Kascak Estates Community Water System, but were not included in the permitted POU, located in the SESE & SWSE ¼ ¼ of section 13. He also validated two lots that had been identified within the POU as not being associated with the Kascak Estate water system. As the two parcels requiring addition are within the same ¼ ¼ sections as permitted for, no amendment is recommended and at time of licensing. The POU boundary was updated to reflect the correct parcels serviced by Kascak Estates Community Water System.

During field exam, 9 lots were identified as being hooked up to a shared well; 6 homes were developed and 3 parcels had stub-ins qualifying them as connected for licensing purposes. Irrigation is a separate component, and as such the annual volume for domestic component equals 9 connections (6 homes & 3 stub-ins) x 0.6 af per connection = **5.4 af**. Parcel PINs and GPS coordinates for three stub-ins are listed below:

PIN 51N06W139550 gps location -117°01.628, 47°45.728 (+/- 15ft gps deviation)

PIN 51N06W139100 gps location -117°01.638, 47°45.779 (+/- 15ft gps deviation)

PIN 51N06W138550 gps location -117°01.853, 47°45.772 (+/- 15ft gps deviation)

Applicant was permitted for 5.0 acres of irrigation. During field exam, irrigation area associated with 6 developed homes were observed and sketched out. During licensing review, arcmap was used to trace out irrigated acreage equaling 3.4 acres. The irrigation annual volume equals 3.4 ac x 3.0 afa = **10.2 af**. The three parcels with stub-ins that had not been developed to date do not qualify for irrigation inclusion, and those were only licensed for the domestic 0.6 af at time of licensing. Applicant stated that Kascak Estates was currently identifying ways to more efficiently use the water from their storage cistern, as the pump used to service homes from cistern to pressure tanks was inadequate to provide consistent irrigation by all 6 homes. This was evidenced by lawns with hot spots during field exam, but aerial imagery from 2013 and 2017 clearly illustrate irrigated areas around the 6 homes was taking place.

Applicant was permitted for fire protection as a diversion rate, and due to this there is not a maximum diversion volume applied to license, only a maximum diversion rate of 0.13 cfs as listed above. The fire protection POU is established by the boundary of the 9 parcels included in the Kascak Estates Community Water System use.

Condition 046 and 26A were removed from permit at time of licensing. Condition R62 was replaced with R66 to describe small acreage irrigation providing no more than 0.03 cfs per acre nor more than 3.0 afa per acre at the field headgate. Condition 132 was adapted to more accurately describe irrigation occurring is associated with 6 homes constructed at time of license. Once developed, the 3 stub-in lots would require addition by new application for permit to add irrigation for each respective stub-in lot. Condition X04 was added to describe domestic use for 9 homes, of which 3 are stub-ins at time of licensing. All other conditions remain on license. There are multiple municipal water rights used by Hauser Lake Water Assn that overlap this rights POU, but are not associated with this right and not a concern for overlap. There are no other overlap concerns for this right.

Have conditions of permit approval been met? X Yes No

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Annual Volume</u>
IRRIGATION	03/15 to 11/15	0.10 CFS	10.2 AF
DOMESTIC	01/01 to 12/31	0.13 CFS	5.4 AF
FIRE PROTECTION	01/01 to 12/31	0.13 CFS	

Totals: 0.13 CFS

2. Recommended Amendments

____ Change P.D. as reflected above ____ Add P.D. as reflected above X None

____ Change P.U. as reflected above ____ Add P.U. as reflected above X None

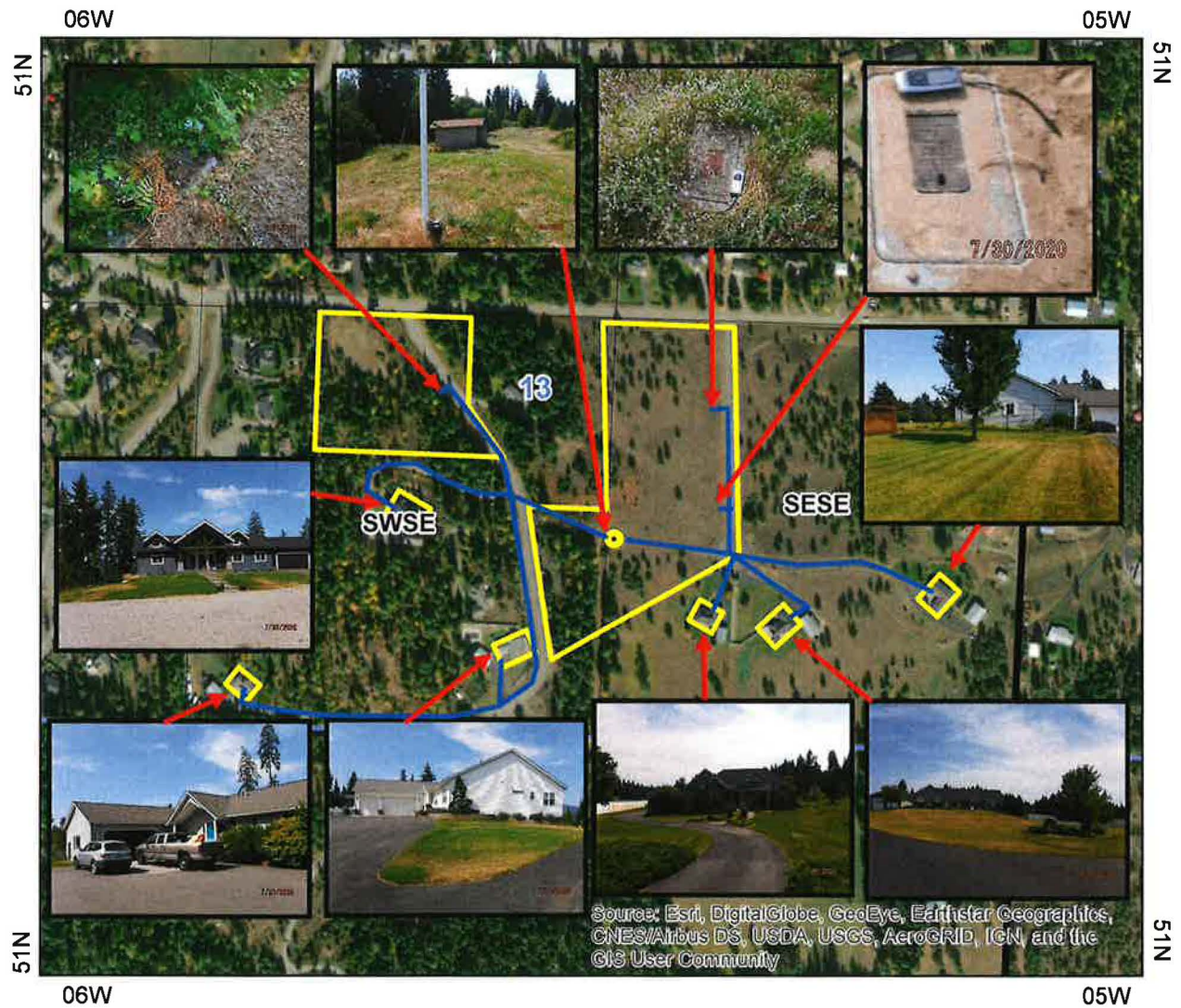
I. AUTHENTICATION Luke Bates - Water Resource Agent






Field Examiner's Name  Date 7/31/2020

Reviewer  Date 8/13/2020

State of Idaho
Department of Water Resources
Attachment to Field Exam
95-11469

DOMESTIC system diagram.



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



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IRRIGATION system diagram.

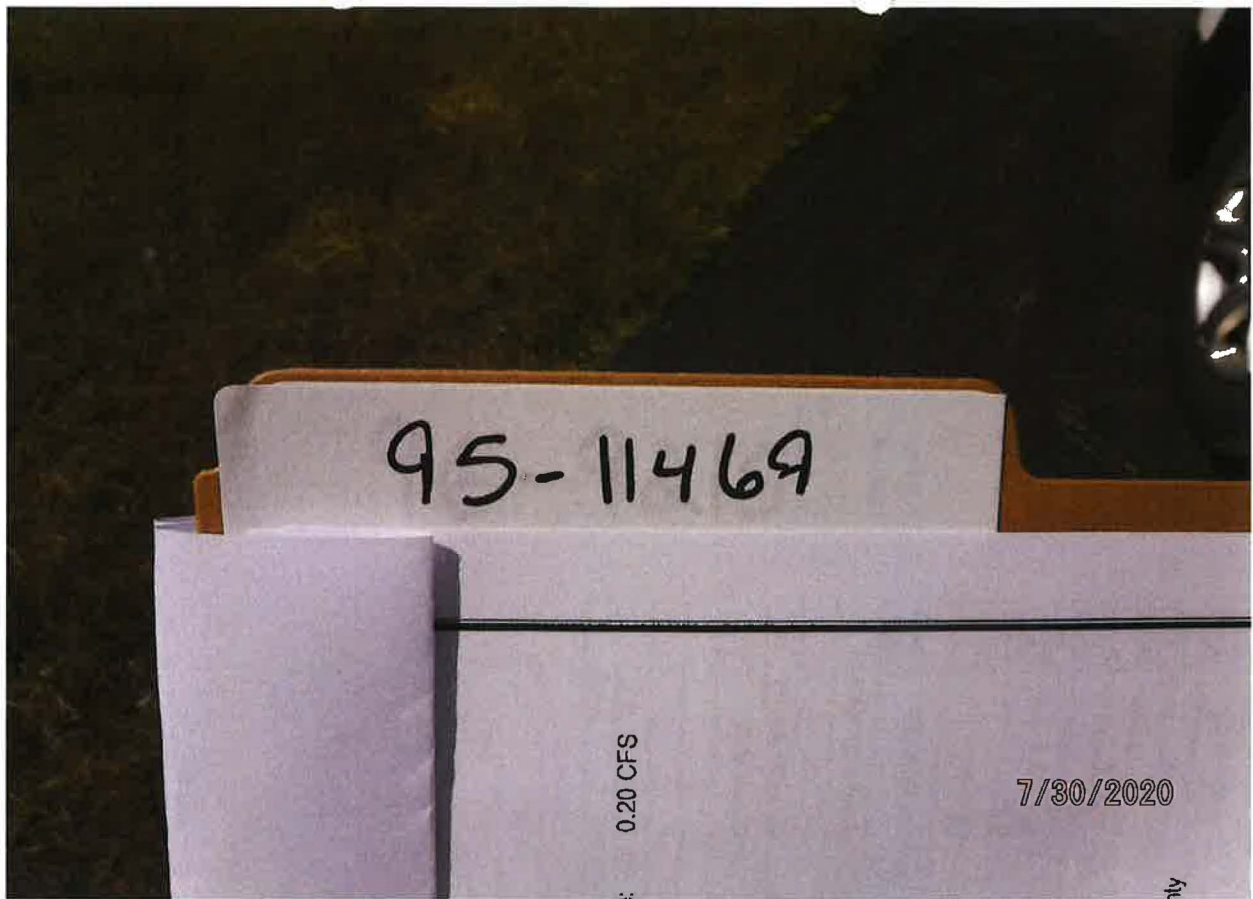


The USDA-PSA Aerial Photography Field office asks to be credited in derived products., Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

- 06W
- 51N
- 51N
- 05W
- Point of Diversion
- Place Of Use Boundary
- Townships
- PLS Sections
- Quarter Quarters

0 0.05 0.1 0.2 Miles





POD – WELL D0010432



POD – WELL D0010432



PUMP HOUSE



5 HP PUMP IN WELL



2EA 120 GAL PRESSURE TANKS



VAULTED STORAGE CISTERN



DOMESTIC & IRRIGATION POU – PIN 51N06W139800 – ADDRESS 9768 N LOVE CT



DOMESTIC & IRRIGATION POU – PIN 51N06W139700 - ADDRESS 9760 N LOVE CT



DOMESTIC & IRRIGATION POU – PIN 51N06W139600 - ADDRESS 9765 N LOVE CT



DOMESTIC POU – STUB-IN – PIN 51N06W139550



DOMESTIC POU – STUB-IN – PIN 51N06W139100



DOMESTIC POU – STUB-IN – PIN 51N06W138550



DOMESTIC & IRRIGATION POU – PIN 51N06W138600 - ADDRESS 18059 N ADVENT LN



DOMESTIC & IRRIGATION POU – PIN 51N06W138800 - ADDRESS 17635 N ADVENT LN





DOMESTIC & IRRIGATION POU – PIN 51N06W138700 - ADDRESS 17619 N ADVENT LN

