

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

A. GENERAL INFORMATIONPermit No: 95-17173

Exam Date: 6/17/2019

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: David Lee and Cathy J. Keyes
Owner of Record Correct? X Y N
Address of Record Correct? Y N
If No: Address

Tax parcel data shows David L. Keyes as the owner of the place of use, and Dani R. and John Gibson as the owner of the parcel where the point of diversion is located. There is an easement provided in the water right file where Zachary and Amanda C. Gibson grant an ease to David L. and Cathy J. Keyes an easement to run a water line from the lake to the Keyes' property.

3. Beneficial Use Fees have been paid: X Y N Receipt No: C106974

4. **SOURCE** TRIBUTARY

Coeur D Alene Lake

Spokane River

Method of Determination: GIS and Tax Parcel DataChange in Source: Y X N**B. OVERLAP REVIEW**

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

Water Right No.	Source	Purpose of Use	Basis

Comments: There is no direct overlapping water right for the property being irrigated. There are 8 water rights that are in the same legal description including a domestic water right from ground water in the same 40 acre tract owned by the Keyes. The place of use for the Keyes' domestic ground water right 95-15946 is located north of the area being irrigated by this permit. The two water systems do not appear to be connected together, so there should not be any combined limitations or other issues with these two water rights.

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

Water Right No.	Source	Purpose of Use	Basis

Comments: There are several water rights with points of diversion in the same government lot, but it doesn't appear as though any of those rights use the same point of diversion as this permit. The easement agreement required that the Keyes be responsible for all transmission lines for water and electricity, and to be responsible for attaining all the permits required for the project.

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

Source	Govt. Lot	1/4	1/4	1/4	Sec.	Twp.	Rge.		County
Lake Diversion	2		SW	~~SE~~	34	48N	4W	B.M.	KOOTENAI
				NE				B.M.	
								B.M.	

Method of Determination: GIS and Tax Parcel data.Change in POD? X N Amendment Required? 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	
48N	4W	34		2	0.1														2.1
		Lot #		Lot 1	Lot 2														
Total Acres =																			2.1

Method of Determination: GIS and Tax Parce DataChange in POU? X N Amendment Required? X N Delivery System Diagram Attached (required). Indicate all major components and distances between components.

Indicate weir size/pipe as applicable.

 X 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
Lake Pump	Unknown	2			2 inch impute per application for permit

*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
NONE						

2. Measurements: No measurement is required for an in-house exam.

E. FLOW CALCULATIONSYES Additional Computation Sheets

Attached

Measured Method:

The permit provided some information that allowed me to perform an estimate of the water pumping system. I also used the standard irrigation requirements allowed for the irrigation of property less than 5 acres of 0.03 cfs per acre allowed in Processing Administrative Memorandum #17.

Theoretical Calculation 0.06 cfs**Acre Limits = 2.1 acres X 0.03 cfs per acre = 0.063 cfs****Permit allowed = 0.06 cfs**

I am recommending a diversion rate of 0.06 cfs, since that was the limit authorized by the permit and what was calculated using the theoretical calculation. There rate per acre limitation did allow a bit more water, but it would be rounded down to 0.06 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 2.1 \text{ acres} \times 3 = 6.3 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.06 \text{ cfs} \times 231 \times 1.9835 = 27.5 \text{ af}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 6.3 \text{ af}$$

2. Volume Calculations for Other Uses:

N/A

G. PURPOSE OF USEIrrigation X Y N # Stock Domestic # of Homes

Other: < >

Change in Purpose of Use? Y X NMethod of Determination: GIS Review and Application for Permit data.If Yes: From Use To Use Amount CFS AFA **H. NARRATIVE/REMARKS/COMMENTS**

This permit qualifies for an in-house examination. The application gives a good explanation on how the water will be diverted. The water will be diverted through a 2 Hp submersible pump into a 2 inch poly pipe that will be run underground through an easement on the southeast side of the Gibson property.

The actual point of diversion is the place where the pipeline leaves the lake and not the location of the pump, which is what is shown in the permit map. By moving the point of diversion to the lake shore, the point of diversion shown on the maps now matches the legal description provided in the permit. The permit locates the point of diversion as being in Government Lot 2. The point of diversion is on shoreline of the Gibson parcel also known as Block 1, Lot 1 of East Point Addition Subdivision. Please see the attached survey plat map that clearly shows that all of parcel owned by Mr. Gibson is in Government Lot 2. The place of use is not part of a subdivision, so it doesn't have a lot and block number associated with the parcel.

The place of use appears to be exactly 2.1 acres and the delivery system appears to be designed to divert the 0.06 cfs at approximately 40 psi. The system and acres seem to match was requested in the permit application.

The permit required a fish screen, and the permit holder stated on the proof of beneficial use form that they had installed the fish screen.

Conditions X15, R66, and 004 will be carried forward to licensing. The remaining conditions on the permit will be removed at licensing, which is standard. An X59 condition will also be needed to better describe the point of diversion.

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 to 10/31	0.06 CFS	6.3 AFA
<u>Totals:</u>		0.06 CFS	6.3 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 ☐ None

Other: < >

J. AUTHENTICATION – DANIEL A. NELSON – WATER RIGHT ANALYST 3

Field Examiner's Name



Date

6-17-19

Reviewer



Date

6/18/19

Permit 95-17173 – Field Exam Map

The yellow border below shows the location place of use, and the yellow dot shows the location of the point of diversion. The white lines define the Public Land Survey (PLS) lines available to the Department. I have included a surveyed plat map copied from Kootenai County Subdivision Plat records that locates all of the lots along the lake front as being in Government Lot 2 in the SWNE ¼ of Section 34, Township 48 North. It has been the practice of the Department to defer to the surveyed plat maps when determining the legal descriptions of the point of diversion and place of use. Therefore, I have moved the point of diversion inside the borders of the tax parcel owned by John Zachary and Andrea C. Gibson, who own the property where the point of diversion is located according to the Water line Easement in the application for permit file.



Permit 95-17173 - Plat Map

This plat map provides proof that the entire parcel associated with the point of diversion is totally in Government Lot 2, and should be described as such according to Department Policy.

Book E, Page 5

EAST POINT ADDITION - BLOCK 1

GOVT. LOTS 1 & 2, SEC. 34, T. 48N, R. 4W, B.M.

LAKE COEUR D'ALENE

GOVT LOT 1

GOVT LOT 2

SURVEYOR'S CERTIFICATE
I, Ray H. Kindler, a licensed land surveyor under the laws of the State of Idaho, hereby certify that in December, 1962 I surveyed the land herein described under the direction of the owners to be known as **EAST POINT ADDITION, BLOCK 1**, Kootenai County, Idaho, that metal markers were placed in the ground as shown on this plat, and that this plat is a true representation of said survey. That the land is located in Government Lots 1 and 2 of Section 34, T. 48N, R. 4W, B.M., Kootenai County, Idaho, and is described as follows: Beginning at a point which is N 58°36'W, 1257.8 feet from the Southeast corner of Section 34, thence N 46°26'W, 2000 feet, thence N 43°24'W, 2000 feet, thence N 36°08'W, 3000 feet, thence S 44°08'W, 181.62 feet to a point on the shore of Lake Coeur d'Alene, thence along the shore of Lake Coeur d'Alene S 36°08'W, 3000 feet, thence S 34°52'E, 1011.7 feet, thence S 43°24'E, 1000 feet, thence S 46°06'E, 2000 feet, thence N 44°10'E, 196.67 feet to the point of beginning and including all riparian rights.

Ray H. Kindler
Ray H. Kindler

STATE OF IDAHO
COUNTY OF KOOTENAI
On this 22 day of March, 1963, before me personally appeared Ray H. Kindler, known to me to be the person who executed the above SURVEYOR'S CERTIFICATE, and acknowledged to me that he executed the same.

Charles D. Johnson
Charles D. Johnson
Notary Public in and for the State of Idaho, residing in Coeur d'Alene
My commission expires February 2, 1974

OWNERS' CERTIFICATE
BE IT KNOWN that we, J. W. Gasser and his wife Phyllis A. Gasser, are the owners of the land described in the above SURVEYOR'S CERTIFICATE, and have caused the same to be subdivided into lots and blocks as herein pointed out and designated the same as **EAST POINT ADDITION, BLOCK 1**, Kootenai County, Idaho. Each lot shall include all riparian rights and shore lands lying between side lines extended to the shore of Lake Coeur d'Alene. Each lot is granted a right to use the Duffield Private Road Easement, shown herein and we reserve such easements as may be necessary over and along same for public utilities.

IN WITNESS WHEREOF we hereby affix our signatures this 22 day of March, 1963.

J. W. Gasser & Phyllis A. Gasser
J. W. Gasser & Phyllis A. Gasser

STATE OF IDAHO
COUNTY OF KOOTENAI
On this 22 day of March, 1963, before me personally appeared J. W. Gasser and his wife Phyllis A. Gasser, known to me to be the persons who executed the above OWNERS' CERTIFICATE, and acknowledged to me that they signed the same.

Charles D. Johnson
Charles D. Johnson
Notary Public in and for the State of Idaho, residing in Coeur d'Alene
My commission expires February 2, 1974

COUNTY SURVEYORS' APPROVAL
I hereby certify this 22 day of May, 1964, that I have examined this plat and approve same for filing.

Ray H. Kindler
Ray H. Kindler
Kootenai County Surveyor

COUNTY TREASURER
I hereby certify this 22 day of May, 1964, that the required taxes on the herein plat have been paid.

Samuel J. Schmeidler
Samuel J. Schmeidler
Kootenai County Treasurer

COUNTY COMMISSIONERS' APPROVAL
This plat approved and accepted by the Board of County Commissioners of Kootenai County, Idaho this 22 day of May, 1964.

Attest: *Philip W. Lepp*
Philip W. Lepp
Chairman, P.C.C.

COUNTY RECORDER 440875
I hereby certify that this plat was filed for record in the office of the Recorder of Kootenai County, Idaho at the request of Ray H. Kindler this 17 day of May, 1964 at 2:25 P.M. and duly recorded in Plat Book 5, page 21.

J. J. 5:00
Kootenai County Recorder

COUNTY HEALTH OFFICER'S APPROVAL
This plat approved by the County Health Officer of Kootenai County, Idaho this 22 day of May, 1964.

Russell B. Brundage
Russell B. Brundage
Kootenai County Health Officer, Deputy

* Iron Pin or Drill Steel Marker

EAST POINT ADDITION, BLOCK 1
GOVT. LOTS 1 & 2, SEC. 34, T. 48N, R. 4W, B.M.
KOOTENAI COUNTY, IDAHO

SCALE - 1" = 100 FT. 0 50 100 150 Feet	RAY H. KINDLER LICENSED LAND SURVEYOR BOX 1078 COEUR D'ALENE, IDAHO	DRAWN BY CHECKED BY
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Permit 95-17173 – Overlap Review Map

The map below shows the place of use (yellow border) and point of diversion (yellow dot) for permit 95-17173 in comparison the place of use (blue hatched area) and point of diversion (blue point) for recommendation 95-15496. Recommendation 95-15496 is a domestic water right and does not appear to be connected into the same water system as this permit.



THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 95-17173
 Reviewer: Dan Nelson
 Date of Review: 6/17/2019

P/D No.:

PUMP HORSEPOWER
 BOOSTER HORSEPOWER

PUMPING LEVEL

DISCHARGE PRESSURE

RATE OF FLOW (cfs)

Scenario 1
2
0
100
45
0.06
27

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:

This is an in-house field examination.. The application for permit file states that a 2 Hp submersible pump is used to divert the water. The contour lines in GIS suggest that there is approximately 100 feet of lift from the water level of the lake to the upper end of the property. I used a standard or 40 psi which is a reasonable standard used for irrigation systems to estimate the pressure on the system. With this criteria, it appears as though this pump will produce the 0.06 cfs requested in the permit. Therefore, I believe this is an adequate system for the amount requested.