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

A. GENERAL INFORMATION

Permit No: 97-8150
Exam Date: 3/29/24

1. Does this qualify for an in-office field exam (IDAPA 37.03.02.035.01.r)? __X__Y ____N
   a. __X__ Irrigation of 5 acres or less
   b. __N/A__ Storage of up to 14.6 AF for stockwater purposes only
   c. __N/A__ Any use other than irrigation or storage, if the combined diversion rate is 0.24 cfs or less.
   d. __N/A__ Other < >

2. Current Owner: LARRY L GEROW and/or MAUREEN C GEROW

   Owner of Record Correct? __X__ Y _____N
   Address of Record Correct? __X__ Y _____N
   If No Explain:

   - Bonner County Tax Parcel information shows Gerow, Larry L & Maureen C as the owners of the property RP56N05W123500A. I don't see any issues with the ownership of this permit or proposed license.

3. Beneficial Use Fees have been paid: __X__Y ____N Receipt No: C117500

4. **SOURCE:** Ground water **TRIBUTARY**: N/A

   Method of Determination: ArcMap GIS and Tax Parcel Data.
   Change in Source: ____Y ___X__N

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
97-8151	Priest River	Irrigation of 1.4 acres	Active Permit in process licensing review
97-8163	Groundwater	Domestic	Beneficial Use Claim filed in the CFPRBA
97-4056	Priest River	Irrigation	Statutory Claim

Comments: Active Permit 97-8151 with Priest River as the source of irrigation for 1.4 acres overlaps the irrigation use of this water right. These water rights are being reviewed for licensing concurrently by the Department. I have added condition X35 to this Permit describing combined use limitations between 97-8150 & 97-8151 for 1.4 acres irrigation annually.

The applicant filed a Notice of Claim 97-8163 for Domestic use with irrigation for ½ acre in the Clark Fork-Pend Oreille River Basin Adjudication but it has not been decreed. The irrigation use overlaps 97-8150 and 97-8163 (claim) groundwater. 97-8151 is the same POU but it is a different source, Priest River. I have added condition 928 to this Permit describing combined use limitations between 97-8150 & 97-8163 if the Claim is decreed.

I reviewed Statutory Claim 97-4056 during licensing review for this Permit and while the backfile indicates all or a portion of the 3 acres designated under 97-4056 is for the applicant's parcel, no claim was pursued in the CFPRBA by the applicant. 2nd round service letters have been sent out which includes Mr. Gerow, but based on the permit filed for surface water as well as a second permit (97-8150) for groundwater to irrigate the property indicates Mr. Gerow was unable to provide proof of irrigation pre-dating 5/20/1971 to make a claim eligible to be pursued in the CFPRBA. I don't recommend any overlap concern based on my analysis for the statutory claim.

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

Water Right No.	Source	Purpose of Use	Basis
97-8163	Groundwater	Domestic	Beneficial Use Claim filed in the CFPRBA

Comments: As stated above in the POU, the Notice of Claim and this water right share a POD. The uses are somewhat different between Domestic Use and Irrigation Use but the Domestic claim did include a ½ acre of irrigation which would directly overlap with this water right.

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**
GROUND WATER NW¼ NW¼, Sec. 12, Twp 56N, Rge 05W, B.M. BONNER County

Method of Determination: GIS and Tax Parcel Data.

Change in POD? ___Y __X__N Amendment Required? ____Y __X__N

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	
56N	05W	12					0.7	0.7											1.4

Total Acres: 1.4

Method of Determination: GIS and Tax Parcel Data.

Change in POU? __X__N Amendment Required? __X__N

3. Diversion System Information:

Description: Well with 1 HP submersible pump to hose and sprinkler(s).

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

__X__ Aerial Photo Attached (required)

___ Photo of Diversion and System Attached

3. Diversion Id No.*	Motor Make	HP	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Submersible Pump	Unknown	1			

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
UNKNOWN					

D. FLOW MEASUREMENTS

1.

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

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

E. FLOW CALCULATIONS

Measurement = 1.4 ac x 0.03 cfs = 0.042 or 0.04 cfs based on department rounding standards.
Permit allowed = 0.05 cfs

Comments: The permit identified use of a well with a 1 hp pump on the Statement of Completion conveyed by pipeline to the irrigation POU with an automatic sprinkler system. Due to flow measurements not being required, I did a Theoretic Pump Equation which is attached and I'm recommending a diversion rate of 0.04 cfs. This equates to our Administrative Memo – Application Processing No. 17, which authorizes up to 0.03 cfs per acre for small acreage irrigation. 1.4 acres irrigation designated during licensing review multiplied by 0.03 cfs per acre = **0.04 cfs** or 19 gpm, which is what the T.P.E. agrees with. Although the permit authorized 0.05 cfs, the applicant is limited to the Department standard diversion rate associated with 1.4 acres irrigation recommended for licensing.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

   $V_{I.R.}$ = (Acres Irrigated) x (Irrigation Requirement) = 1.4 ac x 3.0 afa = 4.2 af

   $V_{D.R.}$ = [Diversion Rate (cfs)] x (Days in Irrigation season) x 1.9835 = 0.04cfs x 214 days x 1.9835 = 17.0

   V = Smaller of $V_{I.R.}$ and $V_{D.R.}$ = **4.2 af**

2. Volume Calculations for Other Uses: N/A

G. PURPOSE OF USE

Irrigation ____**Y**____N # Stock____N/A_____ Domestic # of Homes __N/A____

Other: < >

Change in Purpose of Use? ____**X**____N

Method of Determination: Tax lot data and information assessed on the Statement of Completion form.

H. NARRATIVE/REMARKS/COMMENTS

This permit qualifies for an in-house examination.

All overlapping water right concerns have been described on PG 1 of this report and condition X35 was added to mitigate concerns between the applicant's surface water & groundwater irrigation uses. Review of aerial imagery from Bonner County GIS maps, Google Earth, and ArcMap software illustrates the irrigated area; I spoke with Mr. Gerow on 3/29/2024 to discuss the irrigation practices, which are by hose and sprinkler rotated throughout the season of use. Mr. Gerow asserts there is a treed section along the driveway and highway that he waters and mows around for fire prevention throughout the summer. The remaining portions of the irrigation POU are illustrated by aerial equating to 1.4 acres total recommended for licensing.

There is an apparent shift/drift in aerial imagery which I've considered when designating the irrigation POU shape in AdHoc. The applicant submitted a land survey stamped parcel boundary map with legal descriptions in both his application for permit packet and with the statement of completion submission. This shows an apron of land east of the residence that ArcMap and Bonner County GIS map(s) show to cut through the residence. The survey plat map holds greater accuracy than the Department's Arcmap imagery, but I recommend condition 004 remain on the license following my analysis of the property boundary.

Irrigation is for lawn, trees, & landscape plants on the property. I spoke with Larry Gerow by phone on 3/29/2024; Mr. Gerow confirmed a 1 hp submersible pump in the well to an irrigation sprinkler system but has no records of the make/model of the pump or the well information other than it was installed in 1979 or 1980 by Carl Pitts Well Drilling.

I removed condition 046. I added condition X35 to the permit during licensing review that describes combined irrigation acreage between WRs 97-8150 and 97-8151 which irrigate the same 1.4-acre POU from two different sources & water systems. I added condition 928 which if 97-8163 is decreed as claimed, this right shall not be diminished by the amount necessary to avoid any redundancy of the water rights. All other conditions on the permit shall be carried forward to licensing.

Have conditions of permit approval been met? _X_ Yes ____ No

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use	Rate of Diversion	
IRRIGATION	04/01 to 10/31	0.04 CFS	
	Totals:	0.04 CFS	4.2 AF

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

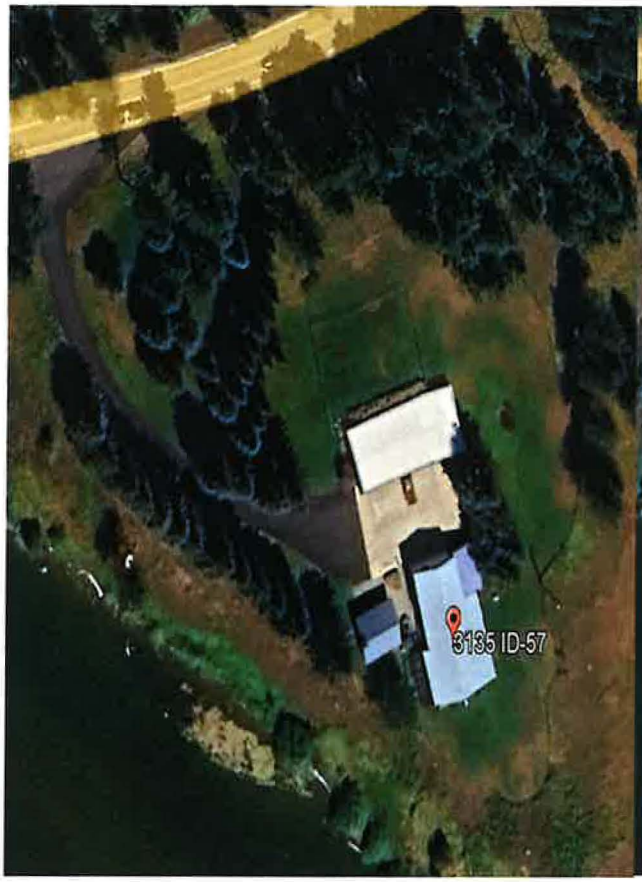
I. AUTHENTICATION Tammy Alleman -

Field Examiner's Name Tammy Alle Date 3/29/2024

Reviewer _____ Date _____

Field Exam Map(s): 3135 HWY 57, Priest River ID.

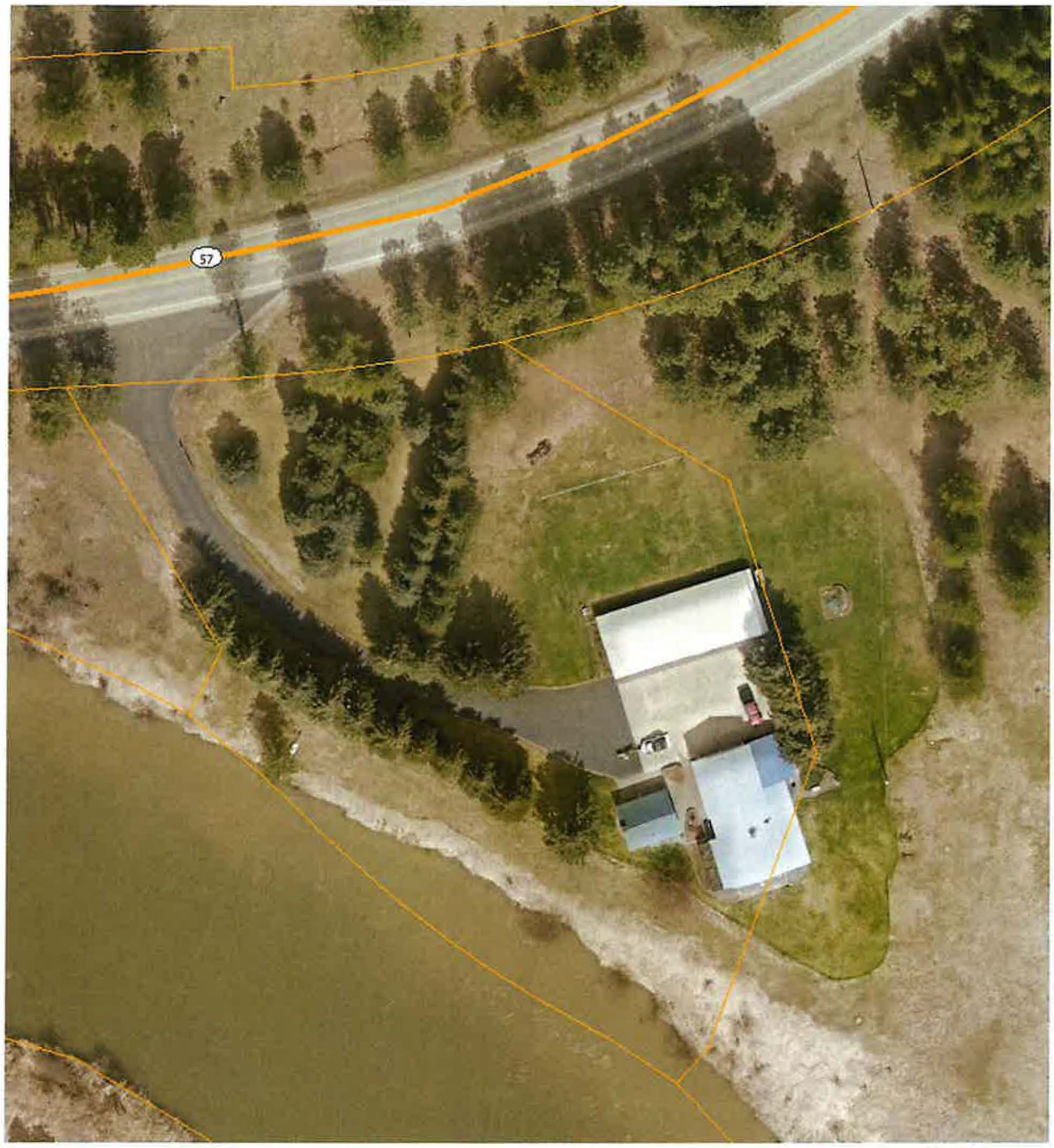
7/2023 Google Earth imagery of property.



8/2019 Google Earth imagery of property.

Imagery retrieved from Google Earth on 3/29/2024

Bonner County Tax Parcel map retrieved from www.bonnercountyid.gov on 3/29/2024



- Blue border illustrates irrigation POU.

Note: apparent aerial imagery drift/shift as property lines intersect houses in frame. Surveyor stamped property line support documentation supplied by Permit Holder in both application for permit backfile and statement of completion submission support the imagery drift/shift observed in aerial imagery.

THEORETICAL PUMPING EQUATION(S) FOR WR# 97-8150

Theoretical Pumping Equation is estimated to lift 60 ft, and running at 45 psi.

PUMP EQUATION

WATER RIGHT No. 97-8150

Pump in River		HP	H in feet	Efficiency as a decimal	Pumping lift in feet	System pressure in PSI
Q =	HP*8.8*Eff/H	1	164.0816	0.8	60	45

Q = **0.043 cfs** **19.3 gpm**