

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-34585
Exam Date: 08/19/2024

1. Current Owner:
LINFIELD ESTATES HOA PO BOX 795 MIDDLETON ID 83644-0795
2. Accompanied by: Gordon Brown
Phone No: (208) 573-8507
Address: 22765 Riley Ct
Relationship to permit Holder: HOA President

3. **SOURCE:**
GROUND WATER

Method of Determination: GIS, field exam, Proof of BU

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
63-32480	Unnamed Drain	Irrigation	Decreed
63-21741	Groundwater	Domestic	Decreed
63-124N	Boise River	Irrigation	Decreed

Comments: The listed water rights and many identical water rights or permits cover large areas for irrigation from Middleton Mill Irrigation Company, which Linfield Estates HOA has a share to their water right to deliver irrigation water to the thirteen lots belonging to Linfield Estates Subdivision. The domestic water right 63-21741 place of use covers the entire NENE ¼ ¼ and utilizes ground water.

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

Water Right No.	Source	Purpose of Use	Basis
NA	NA	NA	NA

Comments: There are no overlapping points of diversion with this permit. Each parcel within the HOA has an eighteen foot well to supply ground water to the irrigation system when surface water is not available.

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**
GROUND WATER NE¼ NE¼, Sec. 10, Twp 04N, Rge 02W, B.M. CANYON County
GPS: 43°42.252 116°33.395

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	
04N	02W	10	0.7																0.7

Total Acres: 0.7

Method of Determination: Canyon County tax lot data, ArcMap, Garmin GPS

2

3.

Delivery System Diagram Attached (required). Indicate all major components and distances between components.

X Indicate weir size/pipe as applicable.

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

X

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Shallow Well	Unknown	5	Unknown	Unknown	Unknown

D. FLOW MEASUREMENTS

1. No flow measurements taken

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
NA	NA	NA	NA	NA	NA	NA

2. Measurements: No measurement was taken. Review is consistent with IDAPA 37.03.02.035.01, irrigation of less than 5 acres is not required. Motor horsepower and PSI were obtained from water users while conducting a field exam and are used to calculate a theoretical flow measurement.

E. FLOW CALCULATIONS

_____ Additional Computation Sheets Attached

Measured Method:

Theoretical calculation: $(8.8)(5\text{hp})(0.7) / [18\text{ft lift} + (50\text{ psi} \times 2.31)] = 30.8 / 133.5 = 0.23\text{ cfs}$

Beneficial Use: $0.02\text{ cfs} \times 0.7\text{ acre} = 0.01\text{ cfs}$

Max. sprinkler output: 0.06 cfs

Permit allowed: 0.03 cfs

Recommendation: 0.01 cfs

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.7\text{-acre} \times 4.5\text{ AF} = 3.15\text{ AFA}$

$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.02\text{ cfs} \times 259\text{ days} \times 1.9835 = 10.27\text{ AF}$

$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 3.15\text{ AFA}$

2. Volume Calculations for Other Uses: NA

G. NARRATIVE/REMARKS/COMMENTS

This permit was obtained for one of thirteen lots by Linfield Estates HOA to supply groundwater for irrigation to each lot. This permit is not the primary water source as Linfield Estates subdivision also has a share to a water right owned by Middleton Mill Irrigation Association to use surface water from the Boise River while water is available in the ditch. A shallow (18ft) well is located on each parcel for irrigation use only. The permitted use of these wells is compliant with condition 943, stating that the primary source of this water right is surface water from a lateral ditch located on the north end of the subdivision. The representative of Linfield Estates HOA, Gordon Smith, verbally confirmed that the subdivision utilizes water from the ditch each season until surface water is no longer available and the subdivision continues to irrigate from their ground water irrigation systems. Condition 943 will be kept on the license. This condition states that the primary irrigation water for the place of use is surface water delivered by Middleton Irrigation Association.

The above listed licenses or permits that share a place of use cover large areas have identical licenses for irrigation from Middleton Mill Irrigation Company. The domestic water right 63-21741 place of use covers the entire NENE $\frac{1}{4}$ $\frac{1}{4}$ and utilizes ground water but does not interfere with the Linfield Estates permits. A shallow (18ft) well was drilled on the lot to supply ground water for irrigation when surface water is not available, as well as a domestic well for each house.

While a measurement is not required for irrigation of less than five acres, a theoretical flow measurement was provided using the horsepower provided by the HOA president and PSI from pressure gage. This calculation proves the system capability to provide the permitted 0.03 cfs with ease. The stipulation to withdraw a protest to the permit placed a condition that the water right does not irrigate more than 0.02cfs per irrigated acre. The recommended flow for this license is 0.01cfs (calculation shown in item E). After developing a domestic household and some hardscaping, 0.7 acre is left to be irrigated on this lot. My recommendation is to license 0.02cfs for irrigation use to the 0.7 acres.

Have conditions of permit approval been met? ☒ Yes ☐ No

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Volume</u>
IRRIGATION	03/01 to 11/15	0.01 CFS	

Totals: 0.01 CFS

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

I. AUTHENTICATION

Field Examiner's Name Kate Englund Date 9/3/2024

Reviewer ADY Date 12/18/2024

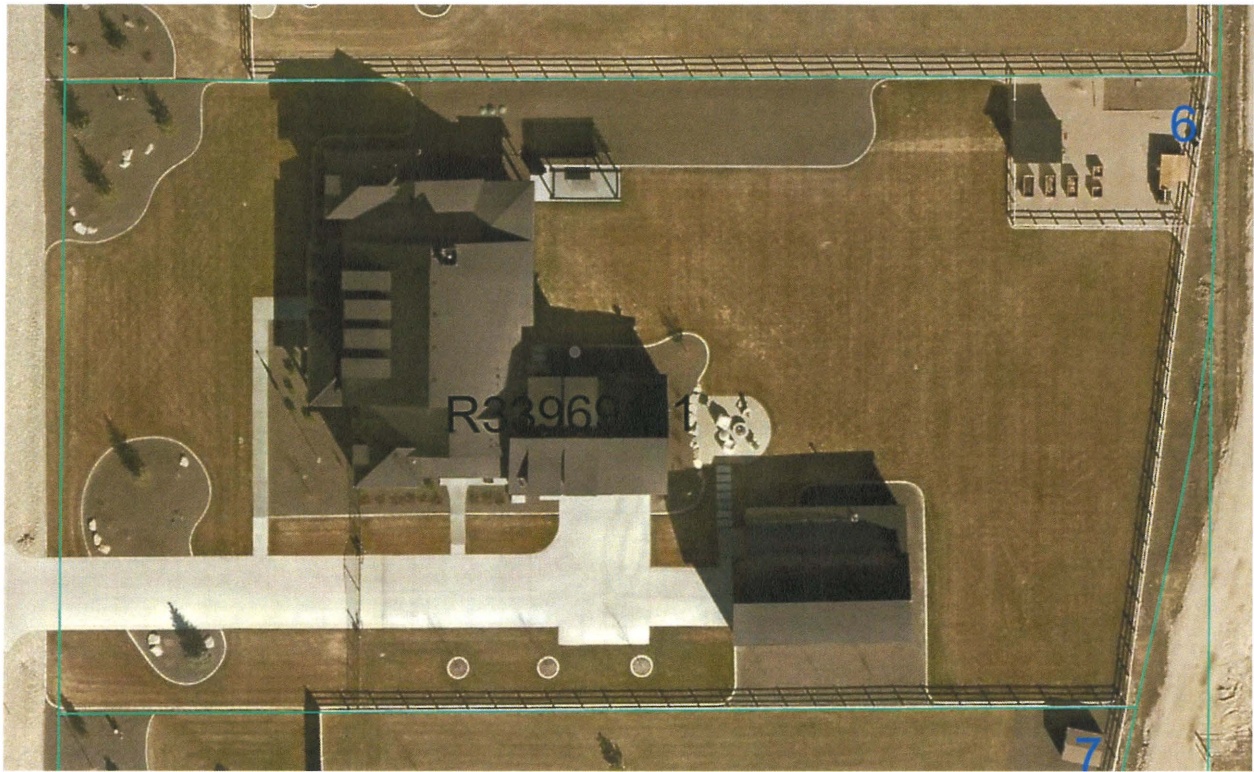


Figure 1 Aerial image representing the irrigated lot, outlined in blue. The total irrigated area is 0.7 acre.



0 0.035 0.07 0.14 Miles

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



Figure 2 Aerial map including the place of use and point of diversion (well) of the license 63-34585.



Figure 3 Photo facing south, featuring the well head and pressure gage for this water delivery system.

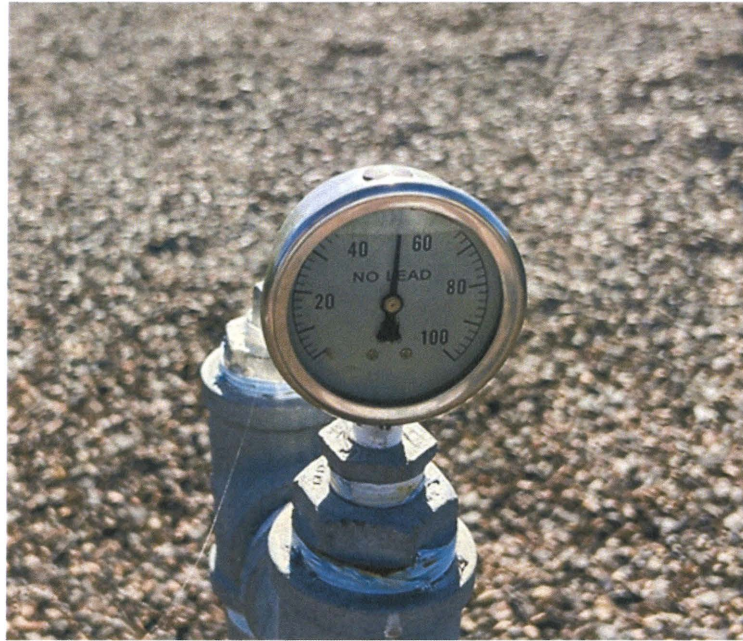


Figure 3 Close up photo of pressure gage, showing that the system is set to about 52 PSI.



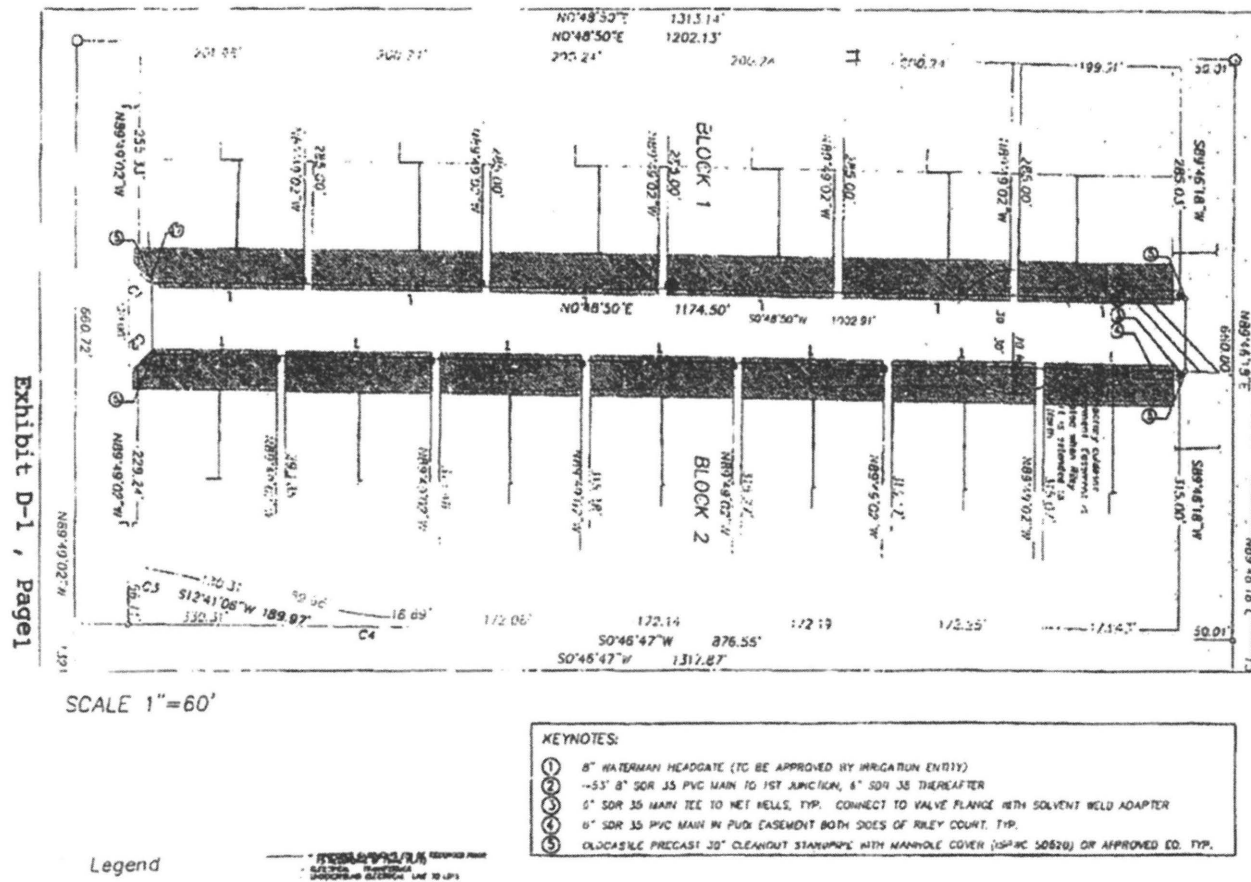
Figure 4 East facing photo showing irrigated and hardscaped areas on the north side of the property. The area behind the fence in this photo is considered hardscaped and was not included in the irrigated area.



Figure 5 East facing photo representing the irrigated area on the south side of the parcel.



Figure 6 System diagram including surface water delivery system from lateral ditch, as well as shallow wells located on each parcel of subdivision to provide irrigation to individual parcels.



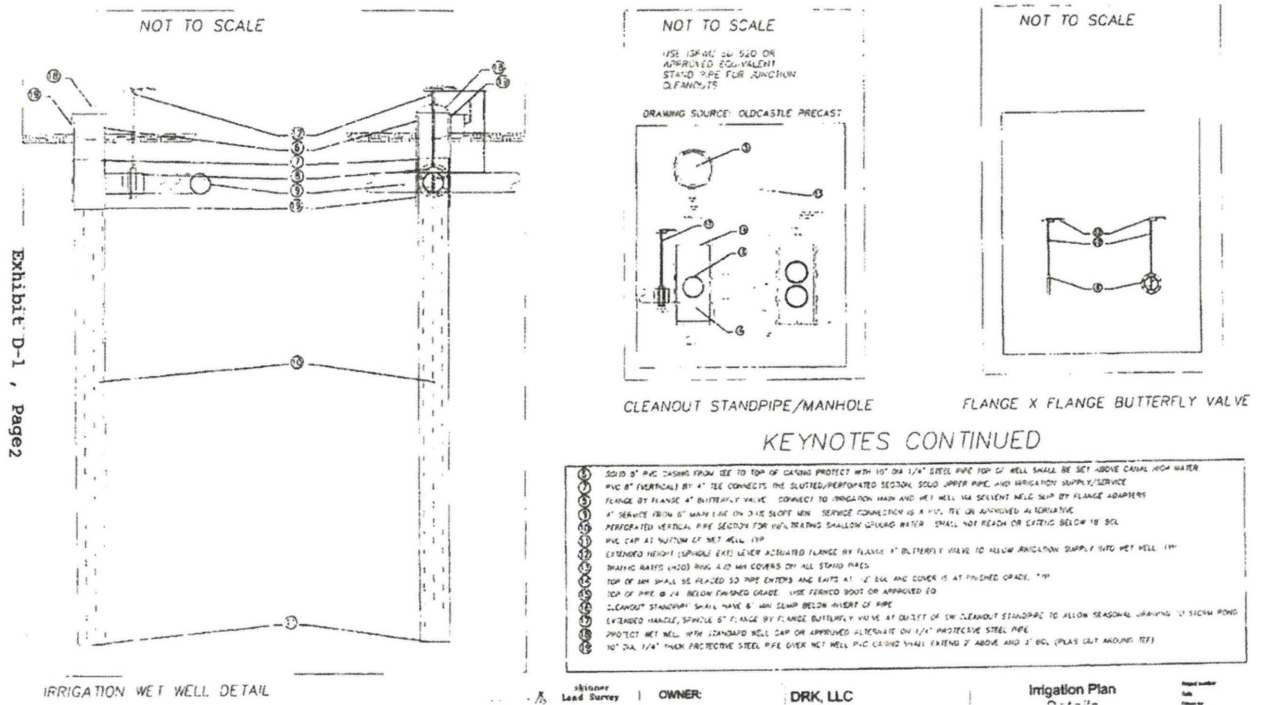


Figure 8 As-built drawing submitted with original application for permit. This shows the irrigation well details and delivery system from headgate to individual wells and butterfly valve which serves as a shutoff from surface water to each parcel.



Figure 9 Headgate diversion associated with irrigation from Middleton Mill Irrigation Company. Headgate is located on north end of subdivision.



Figure 10 PGP Ultra sprinkler head located throughout the parcel.



Figure 11 Rain Bird 1800 sprinkler head with H series nozzle.



Figure 12 Rain bird 5000 sprinkler head used throughout the subdivision.