

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-34586
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: 22756 Riley Ct
Relationship to permit Holder: HOA President

3. **SOURCE:**
GROUND WATER

Method of Determination: GIS, field exam (Garmin GPS), 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

Comments: Each individual parcel has a shallow well to provide groundwater to their irrigation systems, though they do share a headgate point of diversion for surface water. This headgate does not supply water to and permits or licenses that do not belong to parcels in Linfield Estates HOA.

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER NE¼ NE¼, Sec. 10, Twp 04N, Rge 02W, B.M. CANYON County

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

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	1.0																1.0

Total Acres: 1.0

3.

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

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

☒ 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
D0087811		5			

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

Irrigation BU Standard: $0.03 \text{ cfs} \times 0.95 \text{ acre} = 0.03 \text{ cfs}$

Permit allowed: 0.03 cfs

*CP *per stipulated withdrawal of protest the WR can't exceed 0.02 cfs/ac recommend 0.02 cfs*

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

CP 1ac x 3.5 afa/ac = 3.5 afa
 $V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.95 \text{ acres} \times 3.5 \text{ AF} = 3.33 \text{ AFA}$
 $V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.03 \text{ cfs} \times 259 \text{ days} \times 1.9835 = 15.41 \text{ AFA}$
 $V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 3.33 \text{ AFA}$

3.5 CP

2. Volume Calculations for Other Uses: NA

This permit was obtained for one of thirteen lots by Linfield Estates HOA to supply groundwater for irrigation to each lot to supplement Linfield Estates subdivision's share to a water right owned by Middleton Mill Irrigation Association. The primary water right utilizes surface water from the Boise River while water is available in the ditch. The shallow (18ft) well associated with water right 63-34586 is for irrigation use only. The permitted use of these wells is compliant with condition 943 and will be kept on the license.

The above listed water rights and permits and many others identical to the listed licenses cover large areas 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 supplies supplemental ground water for irrigation. A measurement is not required for irrigation of less than five acres and a theoretical flow measurement was provided using the horsepower and PSI provided by water user. This calculation proves the system capability to provide the permitted 0.03 cfs. After developing a domestic household and some hardscaping, 1.0 acre is left to be irrigated on this lot. I recommend that this license is issued with a rate of 0.02cfs, with consideration to a stipulation to withdrawal of protest at permitting.

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>Volume</u>
IRRIGATION	03/01 to 11/15	0.02 CFS	

Totals: 0.02 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

Kate Englund - Water Resource Agent

Field Examiner's Name Kate Englund Date 11/25/2024

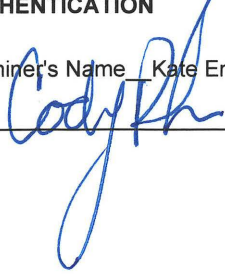
Reviewer  Date 01/08/25



Figure 1 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.

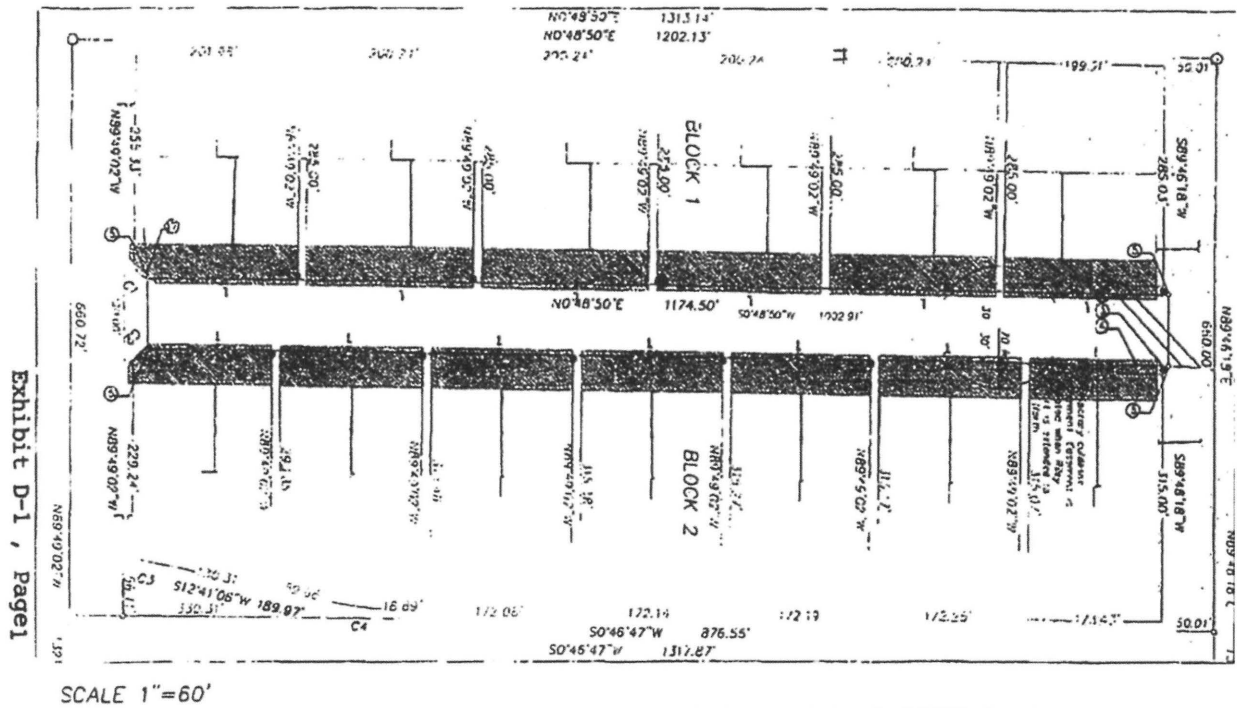


Figure 2 As-built drawing submitted with original application for permit.



Figure 3 Aerial map including the place of use and point of diversion (well) of the license 63-34586.

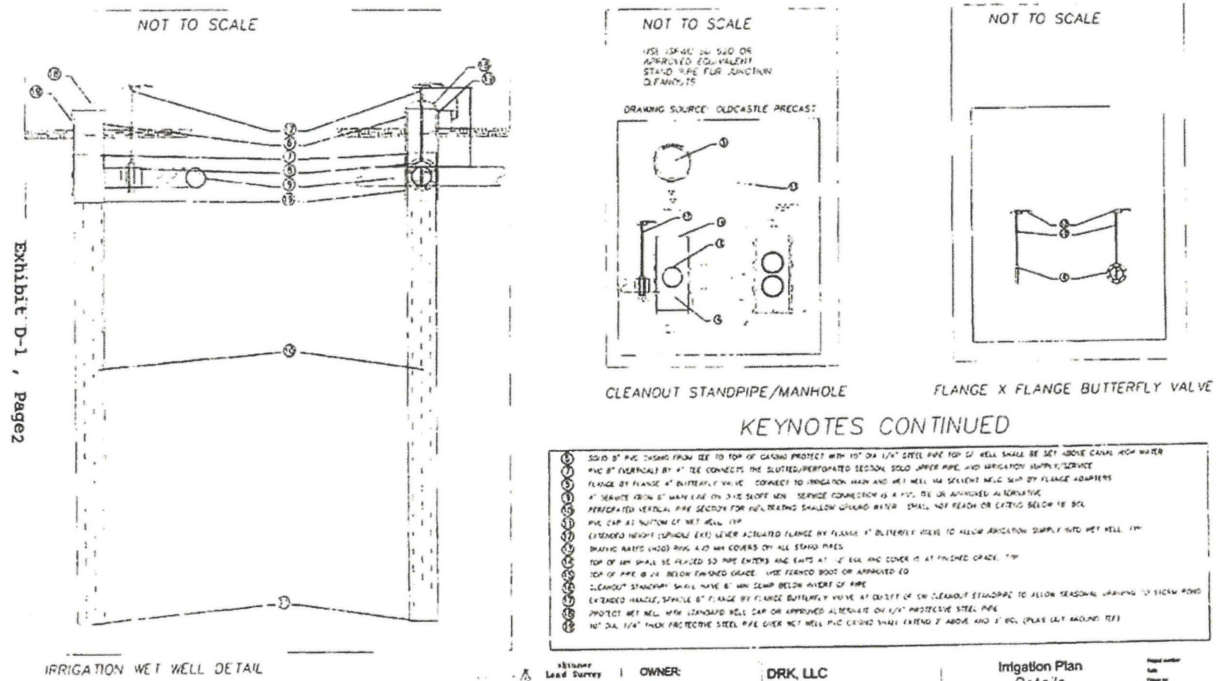


Figure 4 As-built drawing submitted with original application for permit. This shows the irrigation well details and delivery system from headgate to individual wells and butterfly valve which serves as a shutoff from surface water to each parcel.



Figure 5 Aerial image from 2022 imagery representing the irrigated lot, outlined in blue. The total irrigated area is 0.9 acres.



Figure 6 Headgate diversion associated with irrigation from Middleton Mill Irrigation Company. Headgate is located on north end of subdivision.



Figure 7 Aerial photograph representing the place of use, outlined in blue. The total irrigated area is 0.95 acre.



Figure 8 PGP Ultra sprinkler head located throughout the parcel.



Figure 9 Rain Bird 1800 sprinkler head with H series nozzle.



Figure 10 Rain bird 5000 sprinkler head used throughout the subdivision.



Figure 11 Southeast facing photo representing the irrigated area on the North side of the parcel. Well head also included in the photo.



Figure 12 Southeast facing photo representing the irrigated area on the North side of the parcel. Well head also included in the photo.



Figure 13 Photo facing south, featuring the well head for this water delivery system.



Figure 14 Close up photo of pressure gage, showing that the system is set to about 50 PSI.

