

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 37-21177
Exam Date: 08/08/2019

1. Current Owner:
BLAINE COUNTY SCHOOL DISTRICT #61 118 W BULLION ST HAILEY ID 83333
2. Accompanied by: Brandon Ivie, Irrigation Specialist from Clearwater Landscaping
Address: 110 Honeysuckle, Bellevue ID 83313
Relationship to permit Holder: Contractor that manages B.C.S.D. #61 lawn irrigation and maintenance

3. **SOURCE:**
GROUND WATER

Method of Determination: On-site inspection

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
37-21409	Ground Water	Irrigation	Decreed

Comments: 37-21409 has a 5 acre limit; 37-21177 has a 2 acre limit; both are combined in a 7 acre permissible place of use

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

Water Right No.	Source	Purpose of Use	Basis
37-21409	Ground Water	Irrigation	Decreed

Comments: Both water rights utilize the same point of diversion.

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

GROUND WATER SW¼ NE¼, Sec. 23, Twp 02N, Rge 18E, B.M. BLAINE County

Method of Determination: On-site inspection; 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	
02N	18E	23			7.0														7.0

Right Acre Limit: 2.0

Total Acres: 7.0

Method of Determination: On-site inspection and aerial imagery

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
D0036626		15		Berkley	6015h

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Inline Meter	Magnetic	Octave	3" AWWA C750	183017023	3"	

2. Measurements: 157.6 gpm was the high flow rate measured on the meter (see Figure 1), which is equivalent to 0.35 cfs

E. FLOW CALCULATIONS

_____ Additional Computation Sheets Attached

Measured Method: Theoretical yield:

Where $H_p = 15$

Eff = Efficiency = 70% assumed

$H = \text{total head} = 80' \text{ pumping level} + (2.31 \times 60 \text{ psi}) = 218.6$

$Q = \frac{8.8 \times 15 \times .70}{218.6} = 0.42 \text{ cfs}$ or approximately 188.5 gpm

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 2.0 \text{ acres} \times 3.5 = 7.0 \text{ af}$

$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.08 \text{ cfs} \times 184 \text{ days} \times 1.9835 = 29.2 \text{ af}$

$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 7.0 \text{ af}$

2. Volume Calculations for Other Uses: N/A

G. NARRATIVE/REMARKS/COMMENTS

On 8/8/2019 I met with Brandon Ivie at Alturas Elementary School. Brandon is an Irrigation Specialist for Clearwater Landscaping, the company that manages irrigation and landscaping for the Blaine County School District. He showed me the well location and then we walked over to a nearby sprinkler box where the flow meter is located. He activated the system with his cell phone. The system operates using a Baseline control unit that is a common type of irrigation control system used at schools, parks and other facilities with substantial lawn irrigation requirements. Once the sprinklers were running at full capacity, I took a couple pictures of the flow rate on the display of the inline meter and then told Brandon he could shut it down. The peak flow measured was 157.6 gpm which is equivalent 0.35 cfs (see Figure 1). Since there are two irrigation rights diverted out of the same well, the flow rate measured would need to equal or exceed the combined flow rate for both water rights: 37-21177 for 0.08 cfs and 37-21409 for 0.19 cfs when combined equal 0.27 cfs. Since the measured rate was 0.35 cfs, the measured flow rate exceeds what is required to license the additional 0.08 cfs this permit is seeking.

I talked with Brandon about the system and the areas around the school that are actually irrigated. He pointed out an area on the northeast side of the school where lawn seed had just been planted and I have included that as part of the place of use. I thanked Brandon and we parted ways. After that, I walked around the school grounds to verify all the lawn areas and to ensure they corresponded with the aerial imagery as there are areas with small patches of lawn spread throughout the parking lots on the south side of the school.

Recommend licensing a diversion rate 0.08 cfs and an annual irrigation volume of 7.0 acre feet with a 2 acre limit within a 7.0 acre permissible place of use.

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>Annual Volume</u>
IRRIGATION	04/15 to 10/31	0.08 CFS	7.0 AF

Totals: 0.08 CFS 7.0 AF

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

I. AUTHENTICATION

Bill Mills - Water Resource Agent, Senior

Field Examiner's Name Bill Mills Date 8-20-2019

Reviewer _____ Date _____



Figure 1: High flow rate on meter 157.6 gpm



Figure 2: Looking northwest across school playground



Figure 3: South end of school playground



Figure 4: Grass islands in parking lot, looking northeast towards school



Figure 5: Southeast end of parking area

System Diagram Water Right 37-21177



