

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-32084
Exam Date: 06/22/2023

1. Current Owner:
EAGLE PRECAST CO 20059 SIMPLOT BLVD CALDWELL ID 83607
2. Accompanied by: Josh Cardone,
Phone No: 208-455-2997
Address: 20059 Simplot Blvd, Caldwell, ID
Relationship to permit Holder: Plant Manager

3. **SOURCE:**
GROUND WATER

Method of Determination: Site visits, well log

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
Pioneer Irr. Dist. WR's	Multiple	Irrigation	Decreed

Comments: Pioneer Irrigation District irrigation water rights overlap the place of use for this permit. No concerns with these overlapping rights.

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

Water Right No.	Source	Purpose of Use	Basis

Comments: No overlap present.

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER NW¼ SW¼, Sec. 23, Twp 04N, Rge 04W, B.M. CANYON County

Method of Determination: Well GPS at 43° 40' 5" N, 116° 47' 27" W (from 2021 beneficial use report).

PLACE OF USE: INDUSTRIAL

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	04W	22													X				
04N	04W	23										X							

PLACE OF USE: COMMERCIAL

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	04W	22													X				
04N	04W	23																	

Method of Determination: Site visits, GIS.

- 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.

Exam. Date	Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
05/03/2021	401651	Unknown	5	Unknown	Grundfos	0003
06/22/2023	401651	Unknown	2	Unknown	Unknown	Unknown

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Ultrasonic Flowmeter	Clamp-on Closed conduit flowmeter	General Electric-Panametric	PT878	09044	n/a	04/19/2023

2. Measurements: Fifteen one-minute measurements were taken with an Ultrasonic flowmeter at the 2" water line to the storage tanks during the 2nd examination on June 22nd, 2023. The average measured rate of flow was found to be approximately 0.075cfs (see attached table 1). However, the plant manager noted that the original 5 Hp pump has been replaced with a 2.5 Hp pump within the last 2 years. I am recommending a combined rate of 0.11cfs on the license, based on the theoretical calculation for industrial use and a calculated conservative 0.04cfs for commercial use, based on the Field Examiners Handbook reference materials.

E. FLOW CALCULATIONS

Additional Computation Sheets Attached

Measured Method: Theoretical by Tyler Smith, 05/03/202, beneficial use report.

$$Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}} = \frac{8.8 * .7 * 5}{140 * 2.31 * (61)} = 0.11 \text{ cfs}$$

Measured Method: 2023 field measurements using an ultrasonic flowmeter at Industrial plant (table 1) and Field Examiner's Handbook reference for Commercial use (figure 1).

63-32084 Beneficial Use Field Exam, 06/22/2023- Panametric PT878 Data Spreadsheet

Log01 Pump to Storage Tanks (2 x 1000 gal)			
Time	Volume (ft³/Sec)	Velocity (ft/sec)	Volume (Gal/min)
14:48	0.074758	5.84	No Data
14:49	0.074758	5.84	No Data
14:50	0.074758	5.84	No Data
14:51	0.074758	5.84	No Data
14:52	0.074758	5.84	No Data
14:53	0.074758	5.84	No Data
14:54	0.074758	5.84	No Data
14:55	0.074758	5.84	No Data
14:56	0.074758	5.84	No Data
14:57	0.074758	5.84	No Data
14:58	0.074758	5.84	No Data
14:59	0.074758	5.84	No Data
15:00	0.074758	5.84	No Data
15:01	0.074758	5.84	No Data
15:02	0.074758	5.84	No Data

Table 1- Ultrasonic Flowmeter velocity measurements, June 22, 2023.

By Fixtures:

Shower.....	4 to 6 gpm
Bathtub.....	4 to 8 gpm
Toilet.....	4 to 5 gpm
Lavatory.....	1 to 4 gpm
Kitchen sink.....	2 to 5 gpm

Figure 1- Field Examiners Handbook- Reference for Commercial Use.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: N/A

2. Volume Calculations for Other Uses:

Volume Calculations estimates were provided by SPF Water Engineering LLC, in a March 17th, 2005, letter and confirmed correct by Plant Manager Josh Cardona during the field examination on June 22nd, 2023. The volume is based on a reported 260 days per year of operations.

Volume Use:

Industrial 4.25 AF annually

Commercial 0.6 AF annually

G. NARRATIVE/REMARKS/COMMENTS

This permit authorizes 0.20cfs of groundwater for industrial and commercial purposes at a pre-cast concrete manufacturing plant in Canyon County. Proof of beneficial use was submitted on June 1, 2010. A field exam was conducted by WRA Tyler Smith on May 3, 2021, accompanied by Josh Cardona, Plant Manager. However, no measurements were taken at the time of the examination, and no pump curve or details beyond the make and horsepower were on the report. A pipeline visible in a photo from the 2021 field examination appeared to be the water supply line entering through the floor of the batch plant (photo 4). A conversation with the plant manager on June 2nd, 2023, confirmed that the steel lines visible in the photo taken during the 2021 examination was the water supply line from the wellhead to the storage tanks in the batch plant. It was determined that the exposed length of pipe was adequate for a field measurement using a clamp-on closed conduit flowmeter. A second examination was conducted by WRA Bob Howe accompanied by Cory Parker and Plant Manager, Josh Cardona on June 22nd, 2023, to collect measurements for the beneficial use report. Details of the system developed on the original 2021 beneficial use report were confirmed during the 2023 examination.

Groundwater for this permit is diverted via a 6" casing well drilled to 184 ft below surface level (photo 1). The well was originally pumped with a 5-hp Grundfos pump which draws water from the well to 2" steel lines. However, the pump burned up almost 2 years ago and was replaced with a 2 ½ Hp pump before the 2023 examination. Water is diverted from the well head in two directions, to the office building, where it is used for the commercial purposes, and to the industrial plant, where it is stored in two (2) 1,000 gallon holding tanks before being used in the concrete mixing process (see figure 2). Pressure was observed between 61 and 74 PSI during the 2021 exam and was within that range at the time of the 2023 examination. A theoretical rate diversion rate of 0.11cfs was calculated for this well, at 61 PSI and a head of 140 ft for the 2021 beneficial use report. During the 2023 examination an ultrasonic flowmeter was used to take 15 one-minute interval measurements while attached to the 2" steel water supply line in the batch plant (photo 6). The measured average rate of flow was 0.08cfs.

The commercial use includes an office building for 5 people that includes water use from 2 toilets, 2 bathroom sinks and 1 kitchen sink. The plant manager confirmed that all drinking water is bottled, and there are porta-johns in the industrial yard for bathroom use for workers in this area.

Industrial use is initially stored in two, 1,000 gal holding tanks (photo 3), and then distributed to the plant with a 20-hp booster pump (photos 5 & 7). Water for industrial use is mostly used for cleaning the facility and for the mixing of the concrete. I was able to confirm with the plant manager, Josh, during the 2023 examination that the gallons/day and days/year that is highlighted in SPF letter dated March 17, 2005, is an accurate account of the water use for the facilities.

When the application was submitted, it included a 1.5-acre portion of water right 63-7194 as mitigation for this new use. This portion of 63-7194 was split in 2010 into water right 63-32401 which is a mitigation right for 0.03cfs and 6.75 AF. This mitigation right covers the volume authorized by the license, and therefore no additional mitigation is required. Condition 4 on the permit (170) was updated to reflect water right 63-32401 rather than 63-4179 when it was added to the license.

I am recommending that the license be issued with a rate of 0.11cfs, an annual volume of 4.9 AF, and conditions X06, X05, 170, and 01M. I have removed condition 930 at licensing as the use is not in an area tributary to the Boise River, upstream of the Star Bridge. I have also removed conditions 26A and 046 at licensing as the well is properly permitted and site visits and aerial imagery confirmed the use has been developed.

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>
INDUSTRIAL	01/01 to 12/31	0.11 CFS	4.3 AF
COMMERCIAL	01/01 to 12/31	0.04 CFS	0.6 AF
<u>Totals:</u>		0.11 CFS	4.9 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 Bob Howe – Water Resource Agent

Field Examiner's Name _____ Date _____

Reviewer plamm Date 12/12/25

63-32084 Delivery System Diagram



Figure 2- System Diagram- from the 2021 beneficial use report, by Tyler Smith.



Photo 1 (2021)– Well tag ID
#D0038424 GPS at

43° 40' 5" N

116° 47' 27" W

Has a 6" casing from +2-
174' below surface level.
Water is piped to holding
tanks housed in the
building in the background.

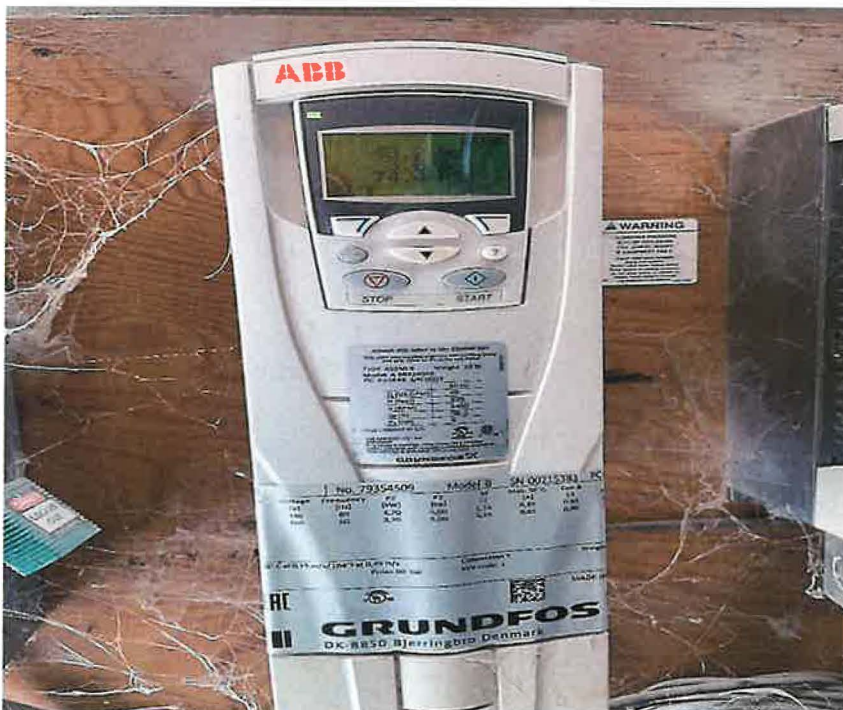


Photo 2 (2021)–
Control box for
Grundfos well pump.

GPM: 45

HP: 5

H_z: 60

Model: A 98924049



Photo 3 (2021)– Two, 1000 gallon holding tanks for industrial use from the well. Tanks are used to create pressure and decrease demand on well pump.

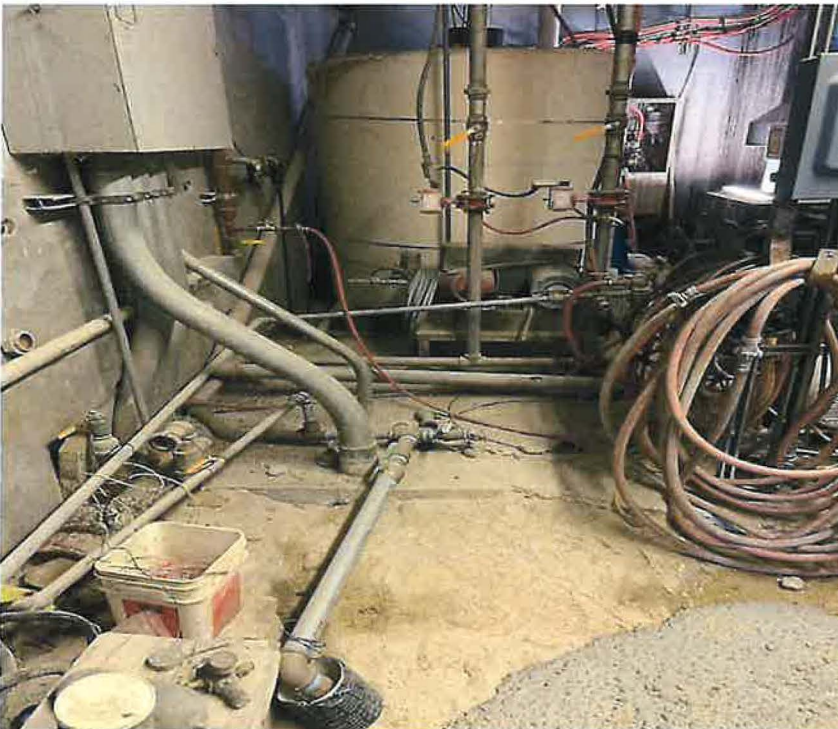


Photo 4 (2021)– Water line from well head surfaces through floor to the holding tanks, which supply the concrete plant with a 20-hp booster pump.



Photo 5 (2021) –
Baldor booster pump
specs:

HP: 20

H₇: 60



Photo 6 (2023)–
PT878 Panametric –
recording the rate of
flow on the 2" steel
water supply line to
the water storage tank
manifold.



Photo 7 (2023)–
Manifold distributing
water from the
booster pump
throughout the mixing
plant.