

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 25-14281
Exam Date: 5/18/2016

1. Current Owner:
JEFFERSON COUNTY PARKS & RECREATION 210 COURTHOUSE WAY STE 130 RIGBY ID 83442
(208)745-0868
2. Accompanied by: Rebecca Squires
Phone No: 208 360 9046
Relationship to Permit Holder: County Coordinator for Jefferson County, as well as the Parks and Recreation Director

3. SOURCE: GROUND WATER**B. OVERLAP REVIEW**

1. Other water rights with the same place of use: None for the same purposes. Rights 25-14382, 25-14398 and 25-14399 supply the common areas with irrigation, and 25-13985 covers the lake itself. The picnic tables in the NENE of Section 7 are within the City of Rigby's Municipal service boundary, but the city does not supply any water to the facility.
2. Other water rights with the same points-of-diversion: 25-14382, 25-14398, and 25-14399

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER NE¼NE¼ Sec. 7, Twp 04N, Rge 39E, B.M. JEFFERSON County
GROUND WATER NE¼NE¼ Sec. 7, Twp 04N, Rge 39E, B.M. JEFFERSON County

Method of Determination: GPS and ArcMap

2.

PLACE OF USE: COMMERCIAL

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
04N	39E	5											X	X					
04N	39E	6																X	
04N	39E	7	X																
04N	39E	8						X											

Method of Determination: Aerial photography and ArcMap

3.

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

X Indicate weir size/pipe as applicable.

X 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

4. WELL INFORMATION

Two submersed pumps, one 7.5 hp and another 15 hp.

D. FLOW MEASUREMENTS

There is a working Macrometer flow meter inside of the well house. At the time of the visit (early in the Lake's season) it only showed usage of between five and ten gpm.

Because of the dispersed nature of water use developed under the permit, it was not reasonable to run the system at full capacity. Instead, the measurements used were supplied by Rocky Mountain Engineering and Surveying, who installed the

pumps.

Well one (western well): 192 gpm

Well two (eastern well): 100 gpm

E. FLOW CALCULATIONS

$100 \text{ gpm} + 192 \text{ gpm} = 292 \text{ gpm} / 448.84 \text{ gpm/cfs} = 0.65 \text{ cfs}$ produced by the system

F. VOLUME CALCULATIONS

There are three primary uses for the Jefferson County Lake facilities: overnight camping at 50 sites, picnicking at three large shelters, and hosting swimmers. In 2015 the facilities hosted approximately 126,000 people, including both camping and day use.

Expanded upon below, for this calculation the number of campers was 27,800, the number of picnickers was 45,900, and the number of swimmers was 52,300. The amount of water used by each visitor was derived from the attached document, "Non Irrigation Water Requirements, Table 3."

There are 50 overnight camping sites at the Lake. It is assumed for this calculation that each campsite is occupied by an average of four people, and that each of the 50 sites is full for the entire 139 operational season (May 15 – Sept 30). Each camper staying overnight in a park with flush toilet facilities uses 25 gallons/day.

$25 \text{ gpd/camper} * 4 \text{ campers} * 50 \text{ sites} * 139 \text{ days/season} = 695,000 \text{ gallons/season} / 325,850 \text{ gallons/AF} = 2.13 \text{ AF/Season}$

Each picnic shelter at the Jefferson County Lake is approximately 1635 square feet, which could comfortably shelter 100 people. For the purposes of this calculation, it is assumed that 100 people occupy each of the three shelters once per day, every day during the facility's open season, May 1 – September 30 (14 days longer than the camping season). Each picnicker at a facility with toilet facilities uses 10 gallons per day.

$100 \text{ people/day/shelter} * 3 \text{ shelters} * 10 \text{ gallons/person/day} * 153 \text{ days/season} = 459,000 \text{ gallons/season} / 325,850 \text{ gallons/AF} = 1.41 \text{ AF/season}$

The remainder of visitors to the Lake, 52,300, are presumed to be swimmers. Each swimmer at a pool uses 10 gallons/day. Although the lake isn't a pool in the traditional sense, 10 gallons/day seems to be a fair volume given that each has access to flush toilet facilities, drinking water supply, and the shower.

$52,300 \text{ swimmers/season} * 10 \text{ gal/swimmer} = 523,000 \text{ gallons/season} / 325,850 \text{ gallons/AF} = 1.61 \text{ AF/season}$

$2.13 \text{ AF} + 1.41 \text{ AF} + 1.61 \text{ AF} = 5.15 \text{ AF}$

G. NARRATIVE/REMARKS/COMMENTS

Two wells, Macrometer flow meter, 50 campsites, 3 picnic shelters, a shower to wash sand off, flush toilets to a septic drainfield, two vault toilets serviced by Valley Rooter Drain and Sewer Service. Rinse-off shower drains back into ground through a dirt pad and surrounding grass. The facility hosts roughly 125,000 people/year. Operations are May 1 - Sept 30.

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

H. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
COMMERCIAL	05/01 to 9/30	0.65 CFS	5.20 AF
<u>Totals:</u>		0.650 CFS	5.20 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

Field Examiner's Name _____ Cooper Fritz _____ Date _____ 7/18/2016 _____

Reviewer _____ Date _____

25-14281 Place of Use and Points of Diversion at Licensing



2015 Imagery

Legend

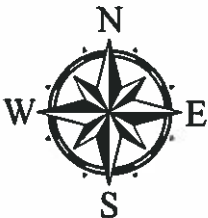
Water Right POD

Water Right POU

Township/Range

Sections

QQ





"Well one" Western well



"Well Two" Eastern well



Typical Large Picnic Shelter



Typical Campsite



Rinse off shower

RECORD DRAWING MAY 2013

PUMP TABLE

PUMP MODEL	PUMP TYPE	FLOW CAPACITY (gpm)	PRESSURE HEAD TDH (ft)	MOTOR	INSTALLATION
BOULDS 80GS75	SUBMERSIBLE	100	190	7.5 hp, 3 PHASE, 230 V	CURRENT
BOULDS 250L15	SUBMERSIBLE	192	210	15 hp, 3 PHASE, 230 V	CURRENT
BOULDS 320L25	SUBMERSIBLE	292	210	25 hp, 3 PHASE, 230 V	FUTURE

USE**

DESCRIPTION	
ITEM	SIZE
①	2"
②	2"
③	3"

2" STEEL PIPE

2 PIECE, STANDARD PORT, BRONZE BALL VALVE

ULTRA-MAG FLOW METER (5-1080 GPM)

**IDAHO STANDARDS FOR
PUBLIC WORKS CONSTRUCTION**
S.P.W.C. CURRENT EDITION

CONSTRUCTION ON THIS PROJECT SHALL CONFORM TO THE I.P.W.C. STANDARDS AND DETAILED PROJECT SPECIFICATIONS. A COPY OF THE STANDARDS IS BEING MADE TO KEEP A COPY ON SITE AT ALL TIMES.

10

Table 3

NON-IRRIGATION WATER REQUIREMENTS

Types of Establishments	<u>Gallons/day</u>
Airports (per passenger)	3-5
Apartments, multiple family (per resident)	60
Bathhouses (per bather)	10
Camps:	
Construction, semi-permanent (per worker)	50
Day with no meals served (per camper)	15
Luxury (per camper)	100-150
Resorts, day & night, limited plumbing (per camper)	50
Tourist, central bath & toilet facilities (per person)	35
Cottages with seasonal occupancy (per resident)	50
Courts, tourist with individual bath units (per person)	50
Clubs:	
Country (per resident member)	100
Country (per non-resident member)	25
Dwellings:	
Boardinghouses (per boarder)	50
Kitchen requirements (per boarder)	10
Multiple family apartments (per resident)	40
Roominghouses (per resident)	60
Single family (per resident)	50-75
Estates (per resident)	100-150
Hotels:	
With private baths (2 persons/room)	60
Without private baths (per person)	50
Hospitals (per bed)	250-400
Institutions other than hospitals (per person)	75-125
Laundries (per washing/customer)	50

Livestock (per animal):	
Cattle (range)	12
Cattle (dairy)	35
Goat	2
Hog	4
Horse	12
Mule	12
Sheep	2
Chickens (per 100)	5-10
Turkeys (per 100)	10-18
Motels:	
With bath, toilet & kitchen facilities (per bed)	50
With bed & toilet (per bed)	40
Parks:	
Overnight with flush toilets (per camper)	25
Trailers with individual bath units (per camper)	50
Picnic:	
With bathhouses, showers & flush toilets (per picnicker)	20
With toilet facilities only (per picnicker)	10
Restaurants:	
With toilet facilities (per patron)	7-10
Without toilet facilities (per patron)	3
With bars & cocktail lounge (additional per patron)	2
Schools:	
Boarding (per pupil)	75-100
Day with cafeteria, gyms & showers (per pupil)	25
Day with cafeteria, no gyms or showers (per pupil)	20
Day without cafeteria, gym or showers (per pupil)	15
Service stations (per vehicle)	10
Stores (per toilet room)	400
Swimming pools (per swimmer)	10
Theaters:	
Drive-in (per car space)	5
Movie (per auditorium seat)	5
Workers:	
Construction (per person/shift)	50
Day (per person/shift)	15