

RECEIVED

RECEIVED

NOV 28 2018

NOV 26 2018

IDWR/NORTH

DEPARTMENT OF WATER RESOURCES

STATE OF IDAHO

STATEMENT OF COMPLETION

FOR SUBMITTING PROOF OF BENEFICIAL USE

FOR OFFICE USE ONLY	
Amt. of Fee	\$336.00
Receipt No.	N033924
Received By	JA
Date Received	11-26-18

The Idaho Department of Water Resources considers this form a statement by the permit holder(s) that development of a water right has been **completed** and that water has been applied to beneficial use to the extent described below. **This form must be accompanied by an examination fee, when necessary, or by a completed Beneficial Use Field Report prepared by a certified water right examiner.** Please refer to the instructions and fee schedule for this form. If ownership of the permit has changed, contact any Department office or visit the Department's website at idwr.idaho.gov for an *Assignment of Permit* form. If you wish to relinquish your permit because you have not established the authorized use of the water and are not applying for an extension, please notify the Department in writing.

- Permit No. 95-16850 116580 Telephone No. (208)769-2210
- Name of Permit Holder(s) City of Coeur d'Alene Water Department
- Mailing Address 3820 Ramsey Rd. City Coeur d'Alene
State ID Zip 83815 Email tpickel@cdaid.org
- Source of Water Ground If **GROUND WATER** (well), Date Drilled mo. Januar / yr. 2014
Well Driller Holt Drilling Inc. Drilling Permit Number 869660

- Extent of use(s) completed as authorized by the water right permit:
Domestic (No. of households) _____ Stockwater (No. and type of stock) _____
Irrigation (No. of acres) _____ Other Diversion of ground water
- Total rate of diversion or storage volume for which proof is submitted 9.0 cfs OR _____ acre-feet.

- Compliance with a measuring device requirement, lockable controlling device requirement, and/or other conditions of permit:
Refer to the approval conditions on your permit and respond accordingly.
The Department will not issue a license if permit conditions are not met.

Measuring Device	Is a measuring device required?	Yes ☒	No ☐
	If yes, has the measuring device been installed?	Yes ☒	No ☐
Lockable Controlling Device	Is a lockable device required to control the diversion?	Yes ☐	No ☒
	If yes, has the lockable device been installed?	Yes ☐	No ☐
Fish Screen	Is a fish screen required?	Yes ☐	No ☒
	If yes, has the fish screen been installed?	Yes ☐	No ☐

Other Conditions of Permit

Do the approval conditions on your permit require you to submit additional information in connection with your proof of beneficial use? If yes, list the conditions below and attach documents with the required information.

Proof of instantaneous, maximum day and annual use. _____ Completed? Yes ☒ No ☐

- Fee Enclosed \$ 325.00 or not applicable ☐. See fee schedule on page 2 of the instructions.
Proof statements filed without an appropriate fee, will be considered incomplete.
- Person to contact to accompany the Department representative during field examination of the water system.

Name Terry Pickel Telephone Number (208)769-2210
Mailing Address 3820 Ramsey Rd. City Coeur d'Alene
State ID Zip 83815 Email tpickel@cdaid.org

The information given on this form is my true statement of the extent to which the above numbered permit has been developed and water has been diverted and applied to a beneficial use. I understand that any undeveloped portion of the permit is relinquished to the State of Idaho.

Signature of Permit Holder *Terry Pickel, Water Superintendent* Date November 26, 2018
(Include your title, if on behalf of company or organization)

Mail to: Idaho Department of Water Resources, PO Box 83720, Boise, ID 83720-0098

Statement of Completion

CDA Ralph Capaul (RC) Well

Permit # 95-16580

Proof of Beneficial Use

Brief History: The 2012 Water Comprehensive Plan Update is used as an indicator of when new sources are anticipated to be required to accommodate new growth. The first new source was anticipated to be required by 2014. The City conducted a nearly three year search, drilling three (3) test wells in the process, looking for a suitable location with sufficient water quality/quantity for the first of the three anticipated new production wells. The Ralph Capaul (RC) Well is the City's tenth production well in service. The City currently has eleven wells with one being out of service due to unexpectedly high Arsenic levels discovered at well development, rendering it unusable per Safe Drinking Water Act guidelines. Prior to commissioning of the RC Well, the City could not meet the DEQ Drinking Water Rule requirement of meeting peak day demands with the system's largest pump out of service. The system also experienced rapid storage level fluctuations during peak hourly demand during the summer irrigation season.

Project Description: The RC Well, located just east of Atlas Rd. and north of Hanley Ave., was drilled in 2014. The well consists of a twenty four (24") inch diameter casing and screens set approximately three hundred eighty three (383') feet deep in sand, cobble and gravel soil conditions. The static water level is at approximately two hundred sixty (260') feet. The contractor installed sixty (60') feet of stainless steel screen from three hundred seventeen (317') feet to three hundred seventy seven (377') feet with the expectation of approximately one hundred (100) gallons per minute (GPM) per foot capacity. The new well was test pumped up to four thousand two hundred (4200) GPM (maximum capacity of the test pump), with two point five (2.5') feet of operational drawdown. Water quality tests showed the well to be very clean and of excellent quality water.

The vertical lineshaft turbine pump, motor and infrastructure were designed, purchased and installed in FY 2014. The pump is a five stage sixteen (16") inch diameter set of Flosolve bowls set to three hundred and five (305') feet and capable of just over four thousand (4000) GPM. The bowls are connected to twelve (12") inch diameter column pipe with two and five sixteenths (2 5/16") inch stainless steel lineshaft supported with brass spider bearings at ten (10') foot intervals and powered by a six hundred (600) Hp US motor. The pump components are operated via a duty rated Allen Bradley Softstart Motor Control Center (MCC). Auxiliary switchgear was included in the MCC to allow connection to an outside power source should electrical service fail. The entire operation is monitored remotely via an integrated SCADA system.

A concrete block building was constructed around the well housing the integrated pump and electrical components. Disinfection is provided via an onsite hypochlorite generation system

housed in a separate room to provide protection from the rest of the components. This is the only treatment system required to maintain water quality. The auxiliary power source previously mentioned is provided by an onsite CAT six hundred (600) kilowatt (kW) standby generator connected to the manual switchgear. A six (6') feet high chain link fence with gates provides limited access to the site per Homeland Security Act requirements.

Project total expenditures:

Property Acquisition	= \$56,832.00
Test Well(s) / Water Quality Test Pump	= \$70,971.00
Production Well	= \$223,760.00
Pump, Motor and Infrastructure	= \$889,325.00
Misc. Equipment, Materials and Testing	= \$255,928.19
Portable Standby 600 kW Generator	= \$87,141.00
Engineering Services Rendered	= \$172,580.34
Total Project Investment as of FY 2016	= <u>\$1,756,537.53</u>

Beneficial use: The RC Well is one of the primary wells operated throughout the year due to its efficiency. The cost of kilowatt hour per thousand gallons makes it the most economic source to provide high quality water to our customers at an affordable rate. The RC Well was brought online in mid-January of 2015. The pump produces an average of four thousand (4,000) GPM over a twenty four hour period during the peak irrigation season, meeting the permitted nine (9) CFS. The addition of the RC Well to the CDA water system allows the City to meet not only the DEQ pump operability requirements, but also has helped to nearly stabilize the peak hourly demand deficit the system was experiencing prior to construction. While the system does still experience declining storage levels at peak hourly use, they are consistently more gradual and manageable. The 2012 Water Comprehensive Plan Update was utilized to forecast anticipated average and peak day demands over a twenty year period in five year increments. The average day and peak day demands for FY 2018 have already exceeded what had been forecast to be reached in plan year 2021. As a result, a schedule adjustment will be necessary to phase in the next anticipated well.

A breakdown of the various types of use and the overall increases we have experienced since addition of the well, due to steady growth, are as follows;

Domestic use – From FY 2014, prior to the RC Well being brought online, to the end of FY 2018, the city has experienced an overall increase of twelve (12%) percent in residential demand for single family dwellings (SFD) and multifamily (MF) housing units. This type of use includes personal consumption for daily requirements such as bathing, cooking, cleaning, wastewater disposal, drinking, laundry and routine home maintenance as well as residential irrigation and personal recreation. Actual growth has exceeded previously forecast growth in regards to construction of single family residences and especially the multifamily residential units.

Commercial/Industrial use – The City has experienced moderate commercial property growth since 2014. From the end of FY 2014 to the end of FY 2018 we have experienced a ten (10%) percent growth in commercial demand. Water consumption under this category covers limited personal use as well as public restroom facilities and drinking water as well as food retailers, restaurants and light industrial production and manufacturing facilities. Many of the commercial and industrial facilities have separate irrigation services so there is only modest irrigation usage included in this category.

Irrigation use – Irrigation usage throughout the City has been increasing exponentially with the inception of separate irrigation services and continuing requirements for new green space for subdivisions and developments. Per City planning requirements, all new subdivisions are required to provide an established percentage of green space for public use. New commercial facilities are also required to provide trees, irrigated swales and parking lot green space as well. This has significantly added irrigation demand. The overall demand has increased by approximately thirteen (13%) percent since FY 2014. However, in FY 2015 we saw a staggering nineteen (19%) percent short term increase in irrigation consumption in that particular year, mainly attributed to the unusually hot dry conditions. Since, irrigation demand has settled into a relatively steady increase. As the summers become drier and warmer, it is anticipated that irrigation demands will continue to increase.

Overall increase in production – Since FY 2014, the City has realized an aggregate increase of thirty five (35%) percent in average day and peak day demand. This has far exceeded the water system's previous maximum capacity of thirty seven (37) MGD. Had it not been for the addition of the RC Well and the additional withdrawal permit as well as upgrades to other wells to increase to a maximum capacity of just under forty four (44) MGD, the water system customers would likely have experienced mandatory watering restrictions during the summer irrigation season. There would also likely have been restrictions on new growth, the lifeblood of rate and property tax stabilization for the City in order to meet its annual operational funding requirements as well as promote a healthy economy.

Fire flow capacity – As the City provides system fire flow, the addition of the RC Well has increased overall capacity for new growth such as multifamily and commercial facilities requiring individual fire services. Also commercial and industrial fire flow requirements can easily be met for a longer period of time. The commercial fire flow requirement, per fire code, is three thousand five hundred (3,500) gpm for a minimum of two hours. The additional source, at four thousand (4,000) gpm will provide an additional one point two five (1.25) hours of sustained fire flow in an emergency of this magnitude. It will also provide an additional three point two five (3.25) hours of sustained residential fire flow at one thousand five hundred (1,500) gpm.

Water Rights Currently Permitted: The city of Coeur d'Alene currently has sixty one point four (61.4) CFS permitted ground water rights. This equates to approximately twenty seven

thousand five hundred sixty nine (27, 569) gallons per minute (GPM) of instantaneous withdrawal and thirty nine point seven (39.7) million gallons per day (MGD) maximum daily withdrawal. At current flow rates for the existing wells, we have an instantaneous capacity of thirty one thousand, four hundred twenty five (31,425) GPM and a maximum day capacity of just under forty four (44) MGD. On several days over the peak summer use season, the peak hourly demand reached the instantaneous capacity for several hours of the day, typically in the early mornings during prime irrigation usage. For fiscal year 2018 (October to September), we have recorded a maximum day demand of forty point six (40.6) MGD on August 5th 2018.

Diversion Rates:

Ralph Capaul (RC) Well - The maximum pumping rate for the Ralph Capaul (RC) Well depends largely on the total dynamic head during different periods of the day and fluctuation of the reservoir levels. When the reservoirs are at their lowest levels during the early morning irrigation usage, usually between 4:00 am and 8:00 am, the maximum instantaneous pumping rate we have recorded on the flowmeter to date is four thousand two hundred forty three (4,243) gallons per minute (GPM). As mentioned this will decrease as the reservoirs fill. The maximum day production on record occurred on July 28th, 2017 when the well produced a total of six million, seven hundred forty six thousand, and three hundred seventy (6,746,370) gallons in a twenty six point five (26.5) hour logged period. Averaging the production for the total hours of runtime would result in an estimated maximum production for a twenty four (24) hour period of six million, one hundred nine thousand, nine hundred twenty (6,109,920) gallons. The FY 2018 annual recorded volume pumped from the RC Well, (October to September), was five hundred fifty million, eight hundred fifteen thousand, four hundred ten (550,815,410) gallons.

FY 2018 Maximum Instantaneous Rate - To date, the recorded maximum instantaneous withdrawal rate with all pumps in operation was thirty one thousand, four hundred twenty five (31,425) gallons per minute (gpm). However this only occurs for a few hours a day during the peak summer use season, typically mid-July through the end of September.

ELECTRIC MOTOR MANAGEMENT

RALPH CAPAUL WELL

6570 ATLAS RD.

5%

DATE	BASE CHG	FRANCHISE FEE	KWH USAGE	COST \$/KWH	DEMAND	COST \$/KW	AVG DLY	GALLONS	TTL COST \$	RATE	Cost/1K gal Amps
12/10/2014	\$ 8.00	\$ 30.28	6160	\$ 597.52	294	\$ -	\$ 21.19		\$ 635.80	0.09700	
1/12/2015	\$ 8.00	\$ 312.51	67920	\$ 6,242.16	467	\$ -	\$ 198.87		\$ 6,562.67	0.09190	
2/10/2015	\$ 8.00	\$ 443.38	99200	\$ 8,859.51	124.8	\$ -	\$ 321.07		\$ 9,310.89	0.08931	
3/11/2015	\$ 8.00	\$ 436.59	97760	\$ 8,723.73	464	\$ -	\$ 316.15		\$ 9,168.32	0.08924	
4/9/2015	\$ 8.00	\$ 443.54	99440	\$ 8,862.70	463.2	\$ -	\$ 321.18		\$ 9,314.24	0.08913	
5/11/2015	\$ 8.00	\$ 749.63	172960	\$ 14,984.52	462.4	\$ -	\$ 491.94		\$ 15,742.15	0.08664	
6/10/2015	\$ 8.00	\$ 1,085.64	253600	\$ 21,704.89	466.4	\$ -	\$ 759.95		\$ 22,798.53	0.08559	
7/10/2015	\$ 8.00	\$ 1,294.22	303680	\$ 25,876.48	467.2	\$ -	\$ 905.96		\$ 27,178.70	0.08521	
8/10/2015	\$ 8.00	\$ 1,447.75	340560	\$ 28,946.91	466.4	\$ -	\$ 980.73		\$ 30,402.66	0.08500	
9/10/2015	\$ 8.00	\$ 1,373.46	322720	\$ 27,461.20	466.4	\$ -	\$ 930.41		\$ 28,842.66	0.08509	
10/9/2015	\$ 8.00	\$ 700.00	162720	\$ 13,992.05	465.6	\$ -	\$ 506.90	48513900	\$ 14,700.05	0.08599	\$ 0.30
11/9/2015	\$ 8.00	\$ 576.51	136000	\$ 11,522.12	464	\$ -	\$ 390.54		\$ 12,106.63	0.08472	#DIV/0!
12/10/2015	\$ 8.00	\$ 38.44	8080	\$ 760.81	464	\$ -	\$ 26.04	1896000	\$ 807.25	0.09416	\$ 0.43
1/12/2016	\$ 8.00	\$ 57.80	12160	\$ 1,147.91	465.6	\$ -	\$ 36.78		\$ 1,213.71	0.09440	#DIV/0!
2/10/2016	\$ 8.00	\$ 47.81	10000	\$ 948.20	464.8	\$ -	\$ 34.62		\$ 1,004.01	0.09482	#DIV/0!
3/10/2016	\$ 8.00	\$ 42.88	8960	\$ 849.59	462.4	\$ -	\$ 31.05		\$ 900.47	0.09482	#DIV/0!
4/8/2016	\$ 8.00	\$ 40.22	8400	\$ 796.49	456	\$ -	\$ 29.13		\$ 844.71	0.09482	#DIV/0!
5/10/2016	\$ 8.00	\$ 722.35	170960	\$ 14,438.98	468	\$ -	\$ 474.04		\$ 15,169.33	0.08446	#DIV/0!
6/9/2016	\$ 8.00	\$ 1,020.11	244480	\$ 20,394.10	468	\$ -	\$ 714.07	121692468	\$ 21,422.21	0.08342	\$ 0.18
7/11/2016	\$ 8.00	\$ 1,227.47	295680	\$ 24,541.30	468	\$ -	\$ 805.52		\$ 25,776.77	0.08300	#DIV/0!
8/9/2016	\$ 8.00	\$ 1,294.86	312320	\$ 25,889.14	468	\$ -	\$ 937.66		\$ 27,192.00	0.08289	#DIV/0!
9/9/2016	\$ 8.00	\$ 1,300.37	313680	\$ 25,999.30	468	\$ -	\$ 880.89		\$ 27,307.67	0.08288	#DIV/0!
10/10/2016	\$ 8.00	\$ 891.20	212560	\$ 17,816.05	465.6	\$ -	\$ 603.72		\$ 18,715.25	0.08382	#DIV/0!
11/8/2016	\$ 8.00	\$ 119.30	25040	\$ 2,378.05	461.6	\$ -	\$ 86.39		\$ 2,505.35	0.09497	#DIV/0!
12/9/2016	\$ 8.00	\$ 58.14	12160	\$ 1,154.84	462.4	\$ -	\$ 39.39	912000	\$ 1,220.98	0.09497	\$ 1.34
1/11/2017	\$ 8.66	\$ 84.71	17600	\$ 1,685.55	472	\$ -	\$ 53.91		\$ 1,778.92	0.09577	#DIV/0!
2/9/2017	\$ 10.00	\$ 60.48	12320	\$ 1,199.60	463.2	\$ -	\$ 43.80		\$ 1,270.08	0.09737	#DIV/0!
3/10/2017	\$ 10.00	\$ 103.71	21200	\$ 2,064.24	465.6	\$ -	\$ 75.10	2176200	\$ 2,177.95	0.09737	\$ 1.00
4/10/2017	\$ 10.00	\$ 57.75	11760	\$ 1,145.07	459.2	\$ -	\$ 39.12	7255073	\$ 1,212.82	0.09737	\$ 0.17
5/10/2017	\$ 10.00	\$ 116.18	23760	\$ 2,313.51	462.4	\$ -	\$ 81.32	4053091	\$ 2,439.69	0.09737	\$ 0.60
6/9/2017	\$ 10.00	\$ 809.87	187280	\$ 16,187.41	468.8	\$ -	\$ 566.91	63114048	\$ 17,007.28	0.08643	\$ 0.27
7/11/2017	\$ 10.00	\$ 1,369.52	321840	\$ 27,380.49	468	\$ -	\$ 898.75	148762842	\$ 28,760.01	0.08507	\$ 0.19
8/9/2017	\$ 10.00	\$ 1,335.30	313600	\$ 26,695.97	468.8	\$ -	\$ 966.94	177042954	\$ 28,041.27	0.08513	\$ 0.16
9/8/2017	\$ 10.00	\$ 1,303.02	305840	\$ 26,050.41	468.8	\$ -	\$ 912.11	167764434	\$ 27,363.43	0.08518	\$ 0.16
10/13/2017	\$ 10.00	\$ 850.77	195600	\$ 17,005.38	468.32	\$ -	\$ 510.46	112565682	\$ 17,866.15	0.08694	\$ 0.16
11/10/2017	\$ 10.00	\$ 108.33	21760	\$ 2,156.63	471.92	\$ -	\$ 81.25	33362922	\$ 2,274.96	0.09911	\$ 0.07
12/13/2017	\$ 10.00	\$ 168.99	34000	\$ 3,369.74	468.72	\$ -	\$ 107.54	8394344	\$ 3,548.73	0.09911	\$ 0.42
1/12/2018	\$ 10.40	\$ 314.60	64960	\$ 6,281.62	476.4	\$ -	\$ 220.22	14640000	\$ 6,606.62	0.09670	\$ 0.45
2/9/2018	\$ 11.00	\$ 173.71	32960	\$ 3,463.11	470	\$ -	\$ 130.28	27122358	\$ 3,647.82	0.10507	\$ 0.13
3/12/2018	\$ 11.00	\$ 192.62	36560	\$ 3,841.36	477.2	\$ -	\$ 130.48	12264000	\$ 4,044.98	0.10507	\$ 0.33
4/10/2018	\$ 11.00	\$ 170.34	32320	\$ 3,395.86	478.8	\$ -	\$ 123.35	14088000	\$ 3,577.20	0.10507	\$ 0.25
5/10/2018	\$ 11.00	\$ 403.78	82400	\$ 8,064.59	468.88	\$ -	\$ 282.65	20487480	\$ 8,479.37	0.09787	\$ 0.41
6/11/2018	\$ 11.00	\$ 502.86	106480	\$ 10,046.50	468.64	\$ -	\$ 330.01	67569108	\$ 10,560.36	0.09435	\$ 0.16
7/11/2018	\$ 11.00	\$ 630.48	140720	\$ 12,598.58	467.92	\$ -	\$ 441.34	55327782	\$ 13,240.06	0.08953	\$ 0.24
8/10/2018	\$ 11.00	\$ 1,080.09	264480	\$ 21,590.72	472.4	\$ -	\$ 756.06	119158176	\$ 22,681.81	0.08163	\$ 0.19
9/11/2018	\$ 11.00	\$ 921.26	209120	\$ 18,414.20	470.8	\$ -	\$ 604.58	117467364	\$ 19,346.46	0.08806	\$ 0.16
	\$ 11.00						\$ 0.34	60933876	\$ 11.00	#DIV/0!	\$ 0.00
	\$ 11.00						\$ 0.34		\$ 11.00	#DIV/0!	#DIV/0!
	\$ 11.00						\$ 0.34		\$ 11.00	#DIV/0!	#DIV/0!
	\$ 11.00						\$ 0.34		\$ 11.00	#DIV/0!	#DIV/0!
	\$ 11.00						\$ 0.34		\$ 11.00	#DIV/0!	#DIV/0!
	\$ 11.00						\$ 0.34		\$ 11.00	#DIV/0!	#DIV/0!
	\$ 11.00						\$ 0.34		\$ 11.00	#DIV/0!	#DIV/0!
	\$ 11.00						\$ 0.34		\$ 11.00	#DIV/0!	#DIV/0!
	\$ 11.00						\$ 0.34		\$ 11.00	#DIV/0!	#DIV/0!
	\$ 11.00						\$ 0.34		\$ 11.00	#DIV/0!	#DIV/0!

Franchise Fees \$ 8,317.00 kWh used 1926720 Cost \$ 166,251.67 kW Demand 4607.4 Demand Charges \$ - Total \$ 174,656.67 AVG/MO \$ 14,554.72

Franchise Fees \$ 7,260.02 kWh used 1733280 Cost \$ 145,103.99 kW Demand 6048 Demand Charges \$ - Total \$ 152,460.01 AVG/MO \$ 12,705.00

683646324

Franchise Fees \$ 6,268.75 kWh used 1448000 Cost \$ 125,260.52 kW Demand 6054.72 Demand Charges \$ - Total \$ 131,643.93 AVG/MO \$ 10,970.33

550815410 yellow

Franchise Fees \$ 4,667.06 kWh used 1025760 Cost \$ 93,222.91 kW Demand 5660 Demand Charges \$ - Total \$ 98,019.37 AVG/MO \$ 8,168.28

CITY WATER DEPARTMENT
CITY OF COEUR D' ALENE
MONTHLY PRODUCTION AND CHEMICAL SUMMARY

Date August-18

TOTAL MONTHLY PRODUCTION

SCREEN WELL	(1010 S 10th Street)	0	Gallon
LINDEN WELL	(1418 1st Street)	106,306,494	Gallon
LOCUST WELL	(114 Locust Ave.)	70,937,466	Gallon
4TH STREET WELL	(2611 4th Street)	44,542,440	Gallon
HONEYSUCKLE WELL	(685 Kathleen Ave.)	73,877,376	Gallon
HANLEY WELL	(1306 Hanley Ave.)	63,187,050	Gallon
PRAIRIE WELL	(710 Wilber)	136,457,790	Gallon
ATLAS WELL	(3809 Atlas Rd.)	53,179,062	Gallon
RALPH CAPAUL WELL		117,467,364	Gallon
ANNIE WELL	(212 Annie Ave.)	42,809,778	Gallon
LANDING WELL	(4199 Atlas Rd)	160,688,934	Gallon
TOTAL MONTHLY PRODUCTION		869,453,754	Gallon
TOTAL MONTHLY PRODUCTION		869,453,754	Gallon
		(Company to Customer)	

ELM STREET BOOSTER	(1900 Elm Street)	18,029,664	Gallon
GRAYSTONE BOOSTER		1,062	Gallon
PINE HILL BOOSTER		181	Gallon
ARMSTRONG BOOSTER		2,227,810	Gallon
BLACKWELL BOOSTER (Lower)		1,578	Gallon
BLACKWELL BOOSTER (Upper)		447	Gallon

AVERAGE DAY 28,046,895 Gallon

MAXIMUM DAY 40,613,184 Gallon

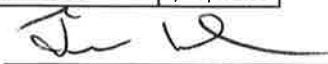
DATE 8/5/18

MINIMUM DAY 18,003,828 Gallon

DATE 08/31/18

TOTAL LBS. SALT USED 9950

TOTAL SALT COST \$ 1,492.50

WATER PLANT OPERATOR 

Form 238-7
6/07IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT1. WELL TAG NO. D 0061673Drilling Permit No. 869660

Water right or injection well # _____

2. OWNER: COEUR D'ALENE

Name _____

Address 710 E. MULLANCity COEUR D'ALENE State IDAH Zip 83816

3. WELL LOCATION:

Twp. 51 North ☒ or South ☐ Rge. 4 East ☐ or West ☒Sec. 27 SW 1/4 SW 1/4 1/4Gov't Lot _____ County KOOTENAILat. 47 ° 43.908 (Deg. and Decimal minutes)Long. 116 ° 49.73 (Deg. and Decimal minutes)Address of Well Site ATLAS ROADCity COEUR D'ALENE

Lot _____ Blk. _____ Sub. Name _____

4. USE:

☐ Domestic ☒ Municipal ☐ Monitor ☐ Irrigation ☐ T-arrail ☐ Injection
☐ Other _____

5. TYPE OF WORK:

☒ New well ☐ Replacement well ☐ Modify existing well
☐ Abandonment ☐ Other _____

6. DRILL METHOD:

☐ Air Rotary ☐ Mud Rotary ☒ Cable ☐ Other _____

7. SEALING PROCEDURES:

Seal material	From (ft)	To (ft)	Quantity (lbs or ft)	Placement method/procedure
BENTONITE CHIPS	0	60	7600 LBS.	PAIR

8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing Liner	Threaded	Welded
24"	316'-9"	316'-9"	.375	STEEL	☒	☐	☒

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 316'-9"

9. PERFORATIONS/SCREENS:

Perforations ☐ Y ☒ N Method _____Manufactured screen ☒ Y ☐ N Type JOHNSONMethod of installation LOWERED WITH NOOK ON DRILL STEM

From (ft)	To (ft)	Slot size	Number	Diameter (nominal)	Material	Gauge or Schedule
316'-9"	357'-5"	.120	40'-3"	22"	304 STAINLESS	.5
357'-5"	377'-9"	.130	20'-4"	22"	304 STAINLESS	.5

Length of Headpipe 5'-6" Length of Tailpipe 5'Packer ☒ Y ☐ N Type RUBBER

10. FILTER PACK:

Filter Material	From (ft)	To (ft)	Quantity (lbs or ft)	Placement method
-----------------	-----------	---------	----------------------	------------------

11. FLOWING ARTESIAN:

Flowing Artesian? ☐ Y ☒ N Artesian Pressure (PSIG) _____

Describe control device _____

12. STATIC WATER LEVEL and WELL TESTS:

Depth first water encountered (ft) 260 Static water level (ft) 260Water temp. (°F) 56° Bottom hole temp. (°F) 56°Describe access port 2" COUPLING WITH PLUG

Well test:

Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)
2.33	4000	200

Test method:

Pump	Bailer	Air	Flowing artesian
☒	☐	☐	☐

Water quality test or comments: _____

13. LITHOLOGIC LOG and/or repairs or abandonment:

Bore Dia. (in)	From (ft)	To (ft)	Remarks, lithology or description of repairs or abandonment, water temp.	Water	
				Y	N
30"	0	15	BROWN SAND + GRAVELS		☒
30"	15	60	BROWN SAND, GRAVELS, COBBLES + Boulders		☒
24"	60	149	BLACK/GRAY FINE-MED SAND, GRAVELS + COBBLES		☒
24"	149	260	BROWN SILTY BOUND SAND + GRAVELS		☒
24"	260	285	BROWN SILTY SAND + GRAVELS		☒
24"	285	360	GRAY FINE-COARSE SAND + GRAVELS		☒
24"	360	383	BROWN FINE-COARSE SAND + GRAVELS		☒

Completed Depth (Measurable): 382'-9" FROM GROUNDDate Started: 8-7-14Date Completed: 1-4-14

14. DRILLER'S CERTIFICATION:

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Company Name HOLT SERVICES INC.Co. No. 596Principal Driller R. R. R. R.Date 1-17-14Driller R. R. R. R.Date 1-17-14

Operator II _____

Date _____

Operator I _____

Date _____

* Signature of Principal Driller and rig operator are required.

RALPH CAPAUL WELL

Date July-17

PRODUCTION - COEUR D'LENE WATER DEPARTMENT

00PLNA002462 GTNW - 012

Date	Flow GPM Max	Flow Total In Gallons	PSI Max	Drawdown Max	Pump #1 Run Time	LBS of salt added to Brine Tank	Salt Used	CL2 Feed Rate in GPH	CL2 Res.	Comments
1	4,034	5,954,184	67	257.9	3069.3	0	0	10	0.2	
2	4,004	5,525,520	68	257.9	3093.9	0	400	10	0.2	
3	3,985	5,331,930	69	257.9	3116.9	400	0	0	0	
4	4,000	4,824,000	63	257.9	3139.2	0	0	0	0	
5	4,017	5,495,256	66	257.9	3159.3	0	0	10	0.25	
6	3,980	5,731,200	68	257.9	3182.1	0	0	10	0.25	
7	4,092	5,867,928	62	257.9	3206.1	0	0	10	0.32	
8	4,060	5,870,760	66	257.9	3230.0	0	0	10	0.34	
9	4,036	5,884,488	65	257.9	3254.1	0	350	10	0.3	
10	4,043	5,555,082	66	258.1	3278.4	350	0	10	0.32	
11	4,058	6,330,480	65	258.0	3301.3	0	0	10	0.3	
12	3,856	5,321,280	74	257.9	3327.3	0	0	10	0.3	
13	4,045	6,188,850	66	258.0	3350.3	0	300	10	0.3	
14	4,034	6,389,856	67	258.1	3375.8	300	0	10	0.3	
15	4,011	6,184,962	67	258.1	3402.2	0	0	10	0.3	
16	4,013	4,839,678	67	258.0	3427.9	0	0	10	0.3	
17	4,000	5,328,000	67	258.1	3448.0	0	0	10	0.3	
18	4,047	5,803,398	65	258.2	3470.2	0	300	10	0.32	
19	4,150	5,776,800	59	258.3	3494.1	300	0	10	0.3	
20	4,109	5,966,268	63	258.2	3517.3	0	0	10	0.28	
21	4,163	4,396,128	59	258.3	3541.5	0	0	10	0.28	
22	4,146	6,791,148	61	258.3	3559.1	0	0	10	0.3	
23	4,011	5,150,124	66	258.2	3586.4	0	0	10	0.28	
24	4,146	5,074,704	61	258.4	3607.8	0	0	10	0.3	
25	4,120	5,982,240	62	258.4	3628.2	0	300	10	0.3	
26	4,159	5,914,098	59	258.4	3652.4	300	0	10	0.3	
27	4,153	5,930,484	60	258.4	3676.1	0	0	10	0.3	
28	4,243	6,746,370	55	258.5	3699.9	0	0	10	0.3	
29	4,028	5,727,816	66	258.4	3726.4	0	0	10	0.3	
30	3,869	5,176,722	72	258.4	3750.1	0	300	10	0.3	
31	4,155	5,983,200	59	258.6	3772.4	300	0	10	0.3	
1	4,150	0	60	258.6	3796.4	0	0	10	0.3	

CL2 USED

total 177,042,954 Gallons al Run Time: 727.1 Hrs.

1950

daily

avg: 5,702,959 Gallons

$9.47 \text{ ft}^3 \times 2.2 \text{ lbs/gal} \times 60 \text{ sec/min} = 4029 \text{ gpm}$
 $1 \text{ CB} = @4449 \text{ gallons per minute (gpm)}$
 $9 \text{ CBs} = 4041 \text{ gpm}$

RALPH CAPAUL WELL

Date 8/2015
PRODUCTION - COEUR D'LENE WATER DEPARTMENT

00PLNA002462 GTNW - 012

Date	Flow GPM	Flow Total in Gallons	PSI Max	Drawdown Max	Pump #1 Amps	Pump #1 Run Time	Pump #1 Starts	LBS of salt added to Brine Tank	Salt Used	CL2 Feed Rate in GPH	CL2 Res.	Comments
1	4,095	5,520,000	60	268	578	23.0		0	0	10	0.25	
2	3,900	6,720,000	67	268	577	28.0		0	300	10	0.25	
3	4,012	5,280,000	63	268	583	22.0		300	0	10	0.27	
4	4,077	6,240,000	59	268	578	26.0		0	0	10	0.3	
5	3,817	5,280,000	71	268	566	22.0		0	0	10	0.3	
6	4,092	6,000,000	58	268	578	25.0		0	200	10	0.3	
7	4,103	5,280,000	58	268	585	22.0		200	0	10	0.35	
8	3,084	5,520,000	67	268	590	23.0		0	0	10	0.3	
9	3,873	6,480,000	69	268	590	27.0		0	0	10	0.3	
10	3,899	5,280,000	67	268	583	22.0		0	0	10	0.3	
11	4,092	6,000,000	59	268	578	25.0		0	0	10	0.3	
12	4,064	6,240,000	60	268	576	26.0		0	0	10	0.3	
13	3,884	6,000,000	67	268	577	25.0		0	200	10	0.3	
14	3,874	5,280,000	66	268	577	22.0		200	0	10	0.32	
15	3,722	6,960,000	74	268	577	29.0		0	0	10	0.32	
16	3,985	4,080,000	63	268	577	17.0		0	0	10	0.32	
17	4,131	5,760,000	56	268	571	24.0		0	0	10	0.3	
18	4,161	5,760,000	55	269	570	24.0		0	0	10	0.3	
19	4,103	6,000,000	59	269	577	25.0		0	0	10	0.28	
20	4,019	7,200,000	61	269	566	30.0		0	300	10	0.28	
21	4,004	4,320,000	58	269	567	18.0		300	0	10	0.28	
22	4,000	5,760,000	66	269	566	24.0		0	0	10	0.28	
23	4,000	5,760,000	66	269	578	24.0		0	0	10	0.3	
24	4,000	5,760,000	61	269	585	24.0		0	0	10	0.3	
25	4,000	5,760,000	59	269	590	24.0		0	0	10	0.2	
26	4,000	5,760,000	66	269	583	24.0		0	0	10	0.2	
27	4,000	5,760,000	58	269	578	24.0		0	0	10	0.28	
28	4,000	7,200,000	57	269	576	30.0		0	0	10	0.28	
29	4,000	4,320,000	60	269	577	18.0		0	0	10	0.39	
30	4,000	5,760,000	62	269	590	24.0		0	0	10	0.35	
31	4,000	5,760,000	60	269	580	24.0		0	400	10	0.3	
1								400		10	0.25	

Total 178,800,000 Gallons Total Run Time: 745.0 Hrs. CL2 USED 1400

Daily
 Avg: 5,776,000 Gallons

NOTE

1. SCREEN CALCULATIONS:

120 SLOT SCREEN
LENGTH = 40.67 FT.
OPEN AREA = 2.374 FT²/FT

130 SLOT SCREEN
LENGTH = 20.33 FT
OPEN AREA = 2.491 FT²/FT

TOTAL AREA = 147.2 FT²

SCREEN CAPACITY = 6,594 GPM*

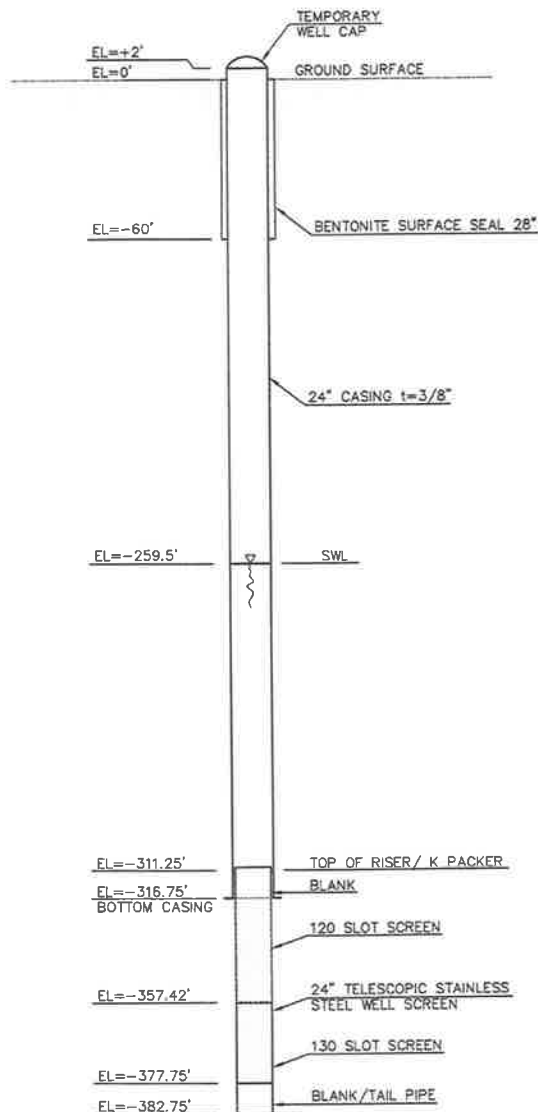
* AT 0.1 FT/S ENTRANCE VELOCITY

2. DRAWDOWN INFORMATION:

WELL WAS TEST PUMPED ON 2013. STATIC WATER LEVEL WAS 259.5' BELOW GROUND SURFACE.

DRAWDOWN WAS 2.3' AT A PUMPING RATE OF 4,000 GPM AND STABILIZED ALMOST IMMEDIATELY.

WELL WAS TEST PUMPED FOR 3 HOURS 45 MINUTES AT THE CONCLUSION OF THE TEST THE WELL FULLY RECOVERED WITHIN 1 MINUTE.



WELL DETAIL

NO SCALE

RECORD DRAWING 1/14/14

COPYRIGHT 2014
Welch-Corner & Associates, Inc.
This document, and plans and designs incorporated herein, are an instrument of professional service, and the property of Welch-Corner & Associates, Inc., and is not to be used in whole or in part for any other project without the written authorization of Welch-Corner & Associates, Inc.



WELCH-CORNER
ENGINEERS & SURVEYORS

208-684-0382
350 E. Kallitree Ave.
Coeur d'Alene, ID 83815
www.welchcorner.com
(cell) 877-877-5572
(fax) 208-684-5946

DATE	BY	DESCRIPTION
01-16-14	J.A.L.	TELLING: BUILD INFORMATION

CITY OF COEUR D'ALENE
ATLAS WELL NO. 2
BUILDING

DETAILS

PROJECT NO.	41121
DESIGNED BY:	N.M.M.
DRAWN BY:	J.A.L.
CHECKED BY:	
DWG NAME	41121DT04.DWG
DATE	12-30-13
SHEET NO:	

DT7

AQUIFER / WELL TEST DATA SHEET

Project Name: <u>Atlas well #2</u>		Date: <u>11-15-13</u>		Well I.D.:		Project No.:			
KJ Personnel:		Totalizer (initial): <u>14112700</u>							
Contractor / Personnel: <u>Robert O Chipman</u>		Totalizer (final): <u>14967000</u>							
Well Depth:	Well Dia.: <u>24"</u>	Static Water Level (Initial): <u>262.47</u>	Screen Interval:	Ref. Point: <u>37"</u>	Above Ground				
Pump Type: <u>line shaft</u>	Pump Size (hp): <u>450</u>	Static Water Level (final): <u>262.47</u>	Pump intake: <u>292' Below Ground</u>	Max. GPM:					
Field Instruments / Remarks: <u>Slope Indicator Sounder</u>									
Time	Discharge (Q) (gpm)	Water Level (bgs / toe)	Drawdown (ft)	Specific Capacity (gpm / ft dd)	Sand Reading	Turbidity (NTUs)	Totalizer Reading	Water Quality	Comments / Remarks
10:10 AM	0	262.47							
10:24	4000	264.80							5 min Readings
10:25	4000	264.82							
10:30	4000	264.81							
10:35	4000	264.80							
10:40	4000	264.79							
10:45	4000	264.79							
10:50	4000	264.79							go to 10 min Readings
11:00	4000	264.78							
11:10	4000	264.79							
11:20	4000	264.80							
11:30	4000	264.79							
11:40	4000	264.80							
11:50	4000	264.79							
12:00	4000	264.79							
12:10	4000	264.79							
12:20	4200	265.00							Motor RPM picked up
12:30	4200	265.00							
12:40	4000	264.79							adjust Down
12:50	4000	264.78							
13:00	4000	264.78							
13:10	4000	264.79							

AQUIFER / WELL TEST DATA SHEET

Project Name:				Date:		Well I.D.:		Project No.	
KJ Personnel:				Totalizer (initial): 14112700					
Contractor / Personnel: Robert O Chipman				Totalizer (final): 14967000					
Well Depth:		Well Dia.:		Static Water Level (initial): 262.47		Screen Interval:		Ref. Point: 37' Above Ground	
Pump Type: line shaft		Pump Size (hp): 450		Static Water Level (final): 262.47		Pump Intake: 292' Below Ground		Max. GPM:	
Field Instruments / Remarks: Slope Indicator Sounder									
Time	Discharge (Q) (gpm)	Water Level (bgs / toe)	Drawdown (ft)	Specific Capacity (gpm / ft dd)	Sand Reading	Turbidity (NTUs)	Totalizer Reading	Water Quality	Comments / Remarks
13:20	4000	264.79							
13:30	4000	264.80							
13:40	4000	264.79							
13:44	1300	263.17							Cut Flow Rate Back For Sampling To 1300 gpm
13:45	1300	263.15							
13:46	1300	263.14							
13:47	1300	263.14							
13:48	1300	263.14							
13:49	1300	263.14							
13:50	1300	263.14							
13:51	1300	263.14							
13:52	1300	263.14							
13:53	1300	263.14							
13:55	0	262.59							13:54 shut pump OFF
13:56	0	262.47							
13:57	0	262.47							
13:58	0	262.47							
13:59	0	262.47							
14:00	0	262.47							

State of Idaho
Department of Water Resources**Permit to Appropriate Water**

NO. 95-16580

Priority: May 14, 2013

Maximum Diversion Rate: 9.00 CFS

This is to certify, that CITY OF COEUR D ALENE
3820 RAMSEY RD
COEUR D ALENE ID 83815

has applied for a permit to appropriate water from:

Source: GROUND WATER

and a permit is APPROVED for development of water as follows:

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>RATE OF DIVERSION</u>
MUNICIPAL	01/01 to 12/31	9.00 CFS

LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER, SW1/4SW1/4, Sec. 27, Twp 51N, Rge 04W, B.M., KOOTENAI County

GROUND WATER, L9 (SW1/4SW1/4), Sec. 1, Twp 50N, Rge 04W, B.M., KOOTENAI County

GROUND WATER, L1 (NE1/4NE1/4), Sec. 4, Twp 50N, Rge 04W, B.M., KOOTENAI County

GROUND WATER, L6 (SW1/4NW1/4), Sec. 12, Twp 50N, Rge 04W, B.M., KOOTENAI County

GROUND WATER, L5 (NW1/4SW1/4), Sec. 12, Twp 50N, Rge 04W, B.M., KOOTENAI County

GROUND WATER, L4 (SW1/4SW1/4), Sec. 12, Twp 50N, Rge 04W, B.M., KOOTENAI County

GROUND WATER, SW1/4NE1/4, Sec. 26, Twp 51N, Rge 04W, B.M., KOOTENAI County

GROUND WATER, NE1/4NE1/4, Sec. 28, Twp 51N, Rge 04W, B.M., KOOTENAI County

GROUND WATER, NE1/4NW1/4NW1/4, Sec. 35, Twp 51N, Rge 04W, B.M., KOOTENAI County

GROUND WATER, SE1/4SW1/4, Sec. 36, Twp 51N, Rge 04W, B.M., KOOTENAI County

State of Idaho
Department of Water Resources
Permit to Appropriate Water
NO. 95-16580

CONDITIONS OF APPROVAL

1. Proof of application of water to beneficial use shall be submitted on or before **August 01, 2016**.
2. Subject to all prior water rights.
3. This right does not grant any right-of-way or easement across the land of another.
4. Right holder shall comply with the drilling permit requirements of Section 42-235, Idaho Code and applicable Well Construction Rules of the Department.
5. When notified by the Department, the right holder shall install and maintain a measuring device of a type acceptable to the Department as part of the diverting works.
6. This right authorizes the diversion of ground water within the Rathdrum Prairie Ground Water Management Area (RPGWMA). Use of water under this right shall be subject to the provisions of the management plan approved by the director for the RPGWMA.
7. When notified by the Department, the right holder shall record the quantity of water diverted and annually report diversions of water and/or other pertinent hydrologic and system information as required by Section 42-701, Idaho Code, and/or the management plan for the Rathdrum Prairie Ground Water Management Area.
8. This water right is issued subject to the continuing requirements for the water right holder to develop and implement a conservation plan under Section 3.2.1.3 of the Management Plan for the Rathdrum Prairie Ground Water Management Area (September 15, 2005).
9. Place of use is within the service area of the City of Coeur d'Alene as provided for under Idaho law.
10. A map depicting the place of use boundary for this water right at the time of this approval is attached to this document for illustrative purposes.
11. Rights 95-2111, 95-7142, 95-7181, 95-8565, 95-2133, 95-8647, 95-8672, 95-8938, 95-2198, 95-9007, 95-2164 and 95-16580 when combined shall not exceed a total diversion rate of 61.4 cfs.
12. In connection with the proof of beneficial use submitted for this permit, the permit holder shall also submit a report showing the total annual volume, the maximum daily volume, and the maximum instantaneous rate of flow diverted from the point of diversion authorized for this permit during the development period. The report shall also show the maximum instantaneous rate of diversion, either measured or reasonably estimated by a qualified professional engineer, geologist, or certified water rights examiner, for the entire City of Coeur d'Alene municipal water system. The report shall also describe and explain how water diverted under this permit provides an additional increment of beneficial use of water for the City of Coeur d'Alene municipal water system as opposed to an alternative point of diversion for prior water rights already held and used by the City of Coeur d'Alene for its municipal water system.

This permit is issued pursuant to the provisions of Section 42-204, Idaho Code. Witness the signature of the Director, affixed at Coeur d'Alene, this 1 day of August, 2013.


For, GARY SPACKMAN, Director



State of Idaho

DEPARTMENT OF WATER RESOURCES

322 E Front Street, Suite 648 • PO Box 83720 • Boise ID 83720-0098

Phone: (208) 287-4800 • Fax: (208) 287-6700

Website: idwr.idaho.gov • Email: idwrinfo@idwr.idaho.gov

BRAD LITTLE
Governor

GARY SPACKMAN
Director

January 10, 2018

CITY OF COEUR D ALENE
3820 RAMSEY RD
COEUR D ALENE ID 83815

PROOF ACKNOWLEDGEMENT LETTER

RE: Permit No. 95-16580

Dear Permit Holder(s):

The department acknowledges receipt of the Proof of Beneficial Use ("proof") form and license examination fee submitted for the above referenced permit, but is requesting additional information:

Condition no. 12 of this permit states:

"In connection with the proof of beneficial use submitted for this permit, the permit holder shall also submit a report showing the total annual volume, the maximum daily volume, and the maximum instantaneous rate of flow diverted from the point of diversion authorized for this permit during the development period. The report shall also show the maximum instantaneous rate of diversion, either measured or reasonably estimated by a qualified professional engineer, geologist, or certified water rights examiner, for the entire City of Coeur d'Alene municipal water system (emphasis added). The report shall also describe and explain how water diverted under this permit provides an additional increment of beneficial use of water for the City of Coeur d'Alene municipal water system as opposed to an alternative point of diversion for prior water rights already held and used by the City of Coeur d'Alene for its municipal water system."

During review of your proof report and the permit listed above, it is stated that the maximum instantaneous withdrawal rate for all wells operating within the City of Coeur d'Alene's municipal water system for FY 2018 is 31,425 GPM. The department is requesting that you include reference of the certified professional engineer or geologist who measured or reasonably estimated the maximum instantaneous rate of diversion and provide supporting documentation how this rate was established.

A \$325.00 license examination fee was also submitted with the beneficial use form. This permit authorizes a diversion rate of 9.00 cfs (cubic feet per second) requiring a license examination fee of \$300.00. The \$25.00 portion of the submitted fee in excess of the required amount will be returned to you in a separate mailing.

The next step in the process of developing a water right is for the department to conduct a field examination to determine and confirm the use being made of the water.

Please be advised that Section 42-248, Idaho Code, requires you or the owner of this water right to maintain current ownership and address records on file with the department. Forms to file a change of ownership of a water right and/or a change in the address of the water right owner are available from any department office or at the department's website at www.idwr.idaho.gov.

If you have any questions about the additional information requested in this letter please contact Ashley Ritter at 208-287-4907. If you have any questions concerning the field examination, please contact the Northern Region Office of the Department located in Coeur d'Alene at (208) 762-2800.

Sincerely,

A handwritten signature in cursive script that reads "Ashley Ritter".

Ashley Ritter
Associate Engineer

Block, Darla

From: Block, Darla
Sent: Wednesday, January 09, 2019 3:59 PM
To: Marston, Sascha
Subject: Partial Refund Needing Issued:

January 9, 2018

Re: Issuance of a refund under Receipt ID **N033924**
Water Right Permit No. 95-16580

Dear Sascha,

Please issue a refund in the amount of \$25.00 from Receipt ID **N033924**. The license examination fee required for this permit is only \$300.00 based on a maximum diversion rate of 9.00 cfs.

Please send the \$25.00 refund to the following:

CITY OF COEUR D'ALENE
3820 RAMSEY RD
COEUR D ALENE ID 83815

Thank You,
Darla Block

MEMORANDUM

To: Water Right File No 95-16580
From: Ashley Ritter
Date: December 21, 2018
Re: Reporting Requirements Review

Intro

On November 26, 2018 City of Coeur d'Alene (City) Water Department submitted Proof of Beneficial Use Form for Permit 95-16850 and a Proof of Beneficial Use Report. Permit 95-16580 requires proof of application of water to beneficial use to be submitted on or before August 1, 2021.

Permit 95-16580 Condition of Approval twelve (12) states:

"In connection with the proof of beneficial use submitted for this permit, the permit holder shall also submit a report showing the total annual volume, the maximum daily volume, and the maximum instantaneous rate of flow diverted from the point of diversion authorized for this permit during the development period. The report shall also show the maximum instantaneous rate of diversion, either measured or reasonably estimated by a qualified professional engineer, geologist, or certified water rights examiner, for the entire City of Coeur d'Alene municipal water system. The report shall also describe and explain how water diverted under this permit provides an additional increment of beneficial use of water for the City of Coeur d'Alene municipal water system as opposed to an alternative point of diversion for prior water rights already held and used by the City of Coeur d'Alene for its municipal water system."

Review of report

Permit 95-16580 allows for the development of water for municipal purposes up to 9.00 CFS through the use of the City's existing nine (9) wells and the addition of a new production well, the Ralph Capaul (RC) Well.

The purpose of permit 95-16580 is to help the City meet demand, storage requirements and to accommodate for anticipated new growth. The City reports that since FY 2014, a cumulative increase of 35% in average day and peak day demands has been observed, and that without the addition of the RC Well the water system customers would likely have experienced mandatory watering restrictions during the summer irrigation season.

The FY 2018 annual recorded volume pumped from the RC Well was reported at 550,815,410 gallons. The maximum day production from the RC Well on record occurred on July 28th, 2017 at 6,746,370 gallons over a 26.5 hour period. The maximum instantaneous flow rate recorded from the RC Well's installed flowmeter is 4,243 gallons per minute (GPM).

Permit 95-16580 Condition of Approval eleven (11) states, "Rights 95-2111, 95-7142, 95-7181, 95-8565, 95-2133, 95-8647, 95-8672, 95-8938, 95-2198, 95-9007, 95-2164, and 95-16580 when combined shall not exceed a total diversion rate of 61.4 CFS."

The report states that the recorded maximum instantaneous withdrawal rate for all wells operating within the City's municipal water system for FY 2018 is 31,425 GPM (70.0 CFS). The reported maximum instantaneous withdrawal rate for the City's system exceeds the combined total diversion rate of 61.74 CFS permissible under permit 95-16580 condition 11. It is unclear if a qualified professional engineer, geologist, or certified water rights examiner measured or reasonably estimated this value, as required by condition 12. There are no supporting documents to demonstrate a record of this value or how this value was calculated.

Conclusions

The reported maximum instantaneous withdrawal rate (70.0 CFS) for the City's system exceeds the combined total diversion rate of 61.74 CFS permissible for permit 95-16580.

The reporting requirements for the above permit have been mostly satisfied. The following items need to be addressed by the City:

- Include reference of the certified PE or PG who measured or reasonably estimated the maximum instantaneous rate of diversion and provide supporting documentation how this rate was established.