

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A Beneficial Use Field Report is prepared by a water right examiner as the result of an examination to clearly confirm and establish the extent of the beneficial use of water established in connection with a permit during the development period authorized by the permit and any extensions of time previously approved.

A. GENERAL INFORMATIONPermit No. 63-336741. Owner Zoroco Investments LLC

Phone No. _____

Current address 20148 Monte Way, Caldwell, Idaho 836072. Examiner's name Cody ParkerEXAM DATE Feb 8, 20183. Accompanied by Kim Rost

Email _____

Address sameRelationship to permit holder Company OwnerPhone No. 208-889-35474. Source Groundwater

tributary to _____

B. OVERLAP REVIEW1. Other water rights with the same place of use 63-34238 (permit)2. Other water rights with the same source and point of diversion none**C. DIVERSION AND DELIVERY SYSTEM**

1. Point(s) of Diversion:

Ident. No.	Gov't Lot	¼	¼	¼	Sec	Twp	Rge	County	Method of Determination/Remarks
			SE	NE	22	04N	04W	Canyon	Aerial imagery, digital PLS

2. Place(s) of Use:

Method of determination Aerial imagery, digital PLS

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	04W	22				S													
						FS													

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe diameter (inside), as applicable. Use the space provided or ☒ see attached.

Scale: 1" = _____

- ☒ Copy of USGS Quadrangle attached showing location(s) of point(s) of diversion and place(s) of use (required)
☒ Aerial photo attached (required for irrigation of 10+ acres)
☒ Photo of diversion and system attached

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
NA					

*Code to correspond with no. on map and aerial photo

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
NA						

2. **Measurements:** _____
 Volume only _____

E. NARRATIVE/REMARKS/COMMENTS

This permit authorizes the storage of 10.0 af groundwater for fire protection. Proof of beneficial use was submitted on November 29, 2017. I completed the field exam on February 8, 2018.

A 0.4-acre pond located in the SENE of Sec. 22, T04N, R04W, B.M. was excavated to a depth below the water table and captures shallow groundwater. There is no other point where water is diverted into the pond. The pond is a maximum of 17 ft deep. The total capacity of the pond is 2.8 acre-feet.

In the event of a fire, water can be diverted from the pond through a pump house to the east and distributed to a fire hydrant and to the internal sprinkler system inside the warehouse. Water could also be pumped directly from the pond if needed to fight fire throughout the place of use which is the same as shown on the permit.

The permit allowed up to 9 af storage and accounted for an additional 1 af for evaporation. Evaporation was determined by multiplying the surface area of the pond by the headgate requirement for irrigation (not the consumptive use volume). Condition 220 of the permit limited the pond to 0.21 acres surface area.

The pond obviously exceeds the surface area limitation. However, that limit is included to ensure that the right owner does not exceed the allotted amount of evaporation. Using precip deficit data from the Caldwell (NWS -- 101380) station, I determined that the actual evaporation of the pond is 1.0 afa. The actual evaporation does not exceed the permitted volume, so the increase in surface area should be allowable.

The volume I recommended for the storage component is the capacity plus the evaporation which equals 3.8 afa. I limited the from-storage use to the capacity of the pond because, in the event of a fire, it is the only volume available for fire protection use.

Has the permit holder met all conditions of permit approval, including any mitigation requirements and/or measuring device installation requirements? ☒ Yes ☐ No If no, what must be done to meet the permit requirements?

Add 219

Update 220

121 => 103

Drop 004 and condition 7

F. FLOW CALCULATIONS☐ Additional computation sheets attachedMeasured Method:
Volume only**G. VOLUME CALCULATIONS**

1. Volume Calculations for Irrigation:

$$V_{I,R} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \underline{\text{NA}}$$

$$V_{D,R} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = \underline{\text{NA}}$$

$$V = \text{Smaller of } V_{I,R} \text{ and } V_{D,R} = \underline{\text{NA}}$$

2. Volume Calculations for Other Uses:

$$\text{Capacity} = 0.41 \text{ acres} \times 17 \text{ ft max depth} \times 0.4 = 2.8 \text{ af}$$

$$\text{Evaporation} = 1.0 \text{ afa}$$

$$\text{Fire protection storage is capacity} + \text{evap} = 3.8 \text{ afa}$$

$$\text{Fire protection from storage is capacity only} = 2.8 \text{ afa}$$

H. RECOMMENDATIONS

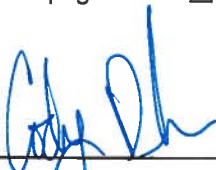
1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
Fire Protection Storage	01/01	12/31		3.8 afa
Fire Protection from Storage	01/01	12/31		2.8 afa
Totals:				3.8 afa

2. Recommended Amendments

☐ Change P.D. as reflected on page 1☐ Add P.D. as reflected on page 1☒ None☐ Change P.U. as reflected on page 1☐ Add P.U. as reflected on page 1☐ Other**I. AUTHENTICATION**

Field Examiner's Signature



Date

2/28/18

Reviewer



Date

2/28/18

SEAL

State of Idaho
Department of Water Resources
Beneficial Use Field Report
63-33674

FIRE PROTECTION STORAGE

04W



0 0.035 0.07 0.14 Miles

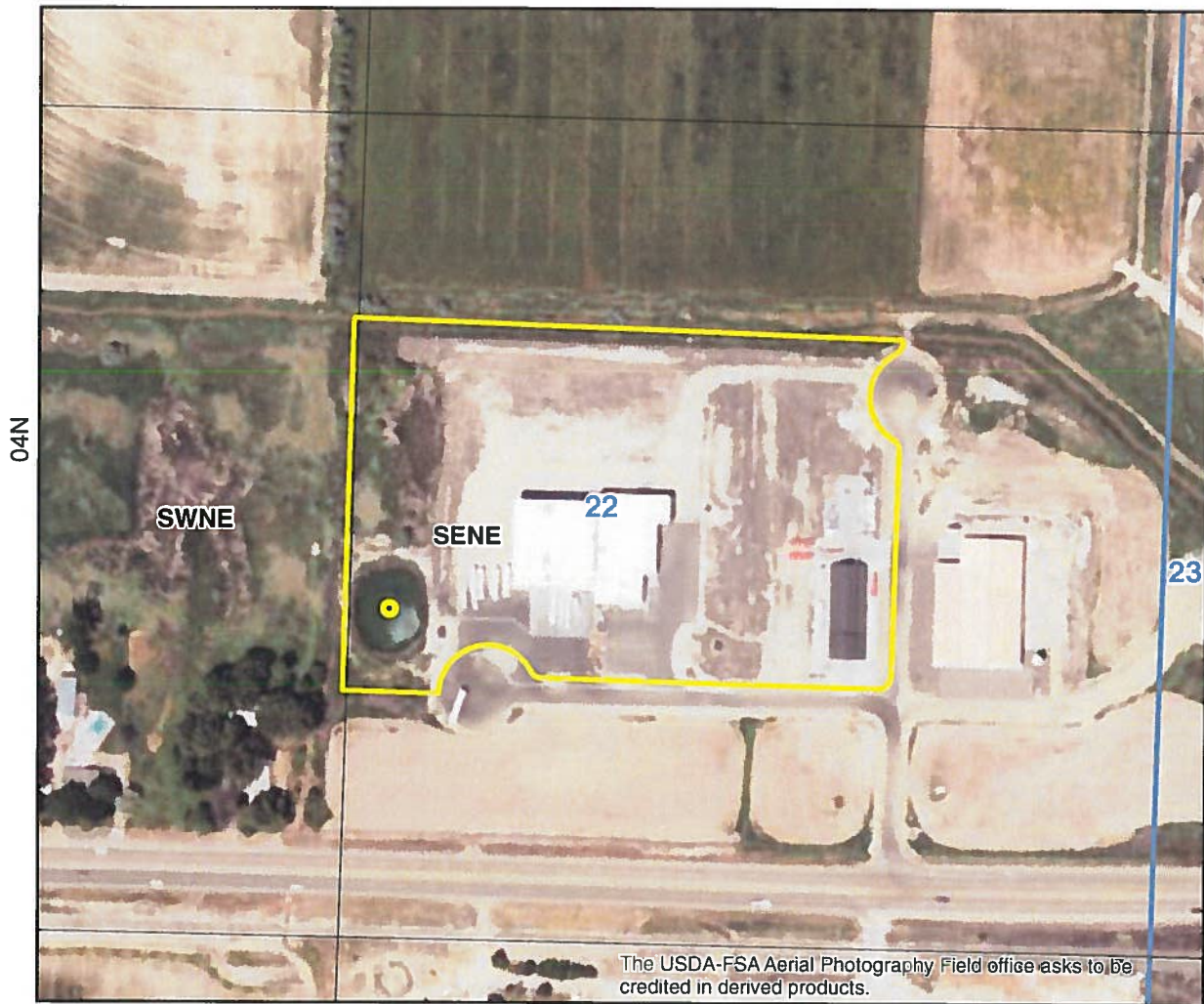
-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections



State of Idaho
Department of Water Resources
Beneficial Use Field Report
63-33674

FIRE PROTECTION FROM STORAGE

04W



0 0.035 0.07 0.14 Miles

-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections



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Picture Attachment



Figure 1 Fire protection storage pond in the SENE QQ. The pond is around 0.41 acres at the surface with a maximum depth of 17 ft.



Figure 2 Inside the pumphouse just east of the pond. Water is pumped from the pond to a nearby hydrant and to charge the internal sprinkler system for the warehouse.

STATE OF IDAHO
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Picture Attachment

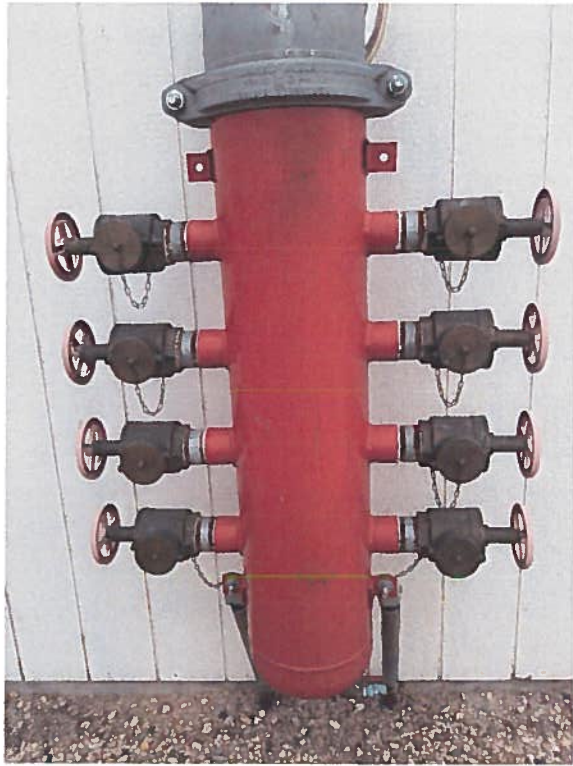


Figure 3 At the front of the pumphouse there are several valves for the fire department to hook hoses up to when fighting fire.



Figure 4 A hydrant located to the north of the pond. This is the only hydrant connected to this pond.

Evaporation Loss Calculations

This spreadsheet has been designed by Idaho Department of Water Resources to estimate the annual evaporation losses from a pond.

FILE NUMBER	63-33674
REVIEWER	Cody Parker
DATE	2/9/2018

User Input
Calculated value
Formula Explanations

The acronyms used on the Kimberly Research Center website are defined below:
P = Precipitation
ET= Evapotranspiration
P _d = Precipitation deficit
P _d =ET-P

USING THIS SPREADSHEET

Use the link below to access the Kimberly Research Center website. This website provides the Precipitation Deficit for a station most representative of the pond under examination. The Precipitation Deficit is the total amount of free water surface evaporation minus the precipitation for a given area, which gives the total amount of evaporative losses incurred by the pond. There are several weather sites that are used throughout the state. IDWR staff can find the nearest site using Arc Map. The shape file containing the sites can be found at <X:/Spatial/Climate/ETIdahostations.shp>.

Instructions:

1. Use the link below to navigate to ET Idaho 2012.
2. Select the station which is most representative to your pond location.
3. Click Submit Query.
4. Under "Land Covers with Evapotranspiration Estimates," select "Open Water - Shallow Systems (ponds, streams)" or "Open Water - small stock ponds" depending on the pond size.
5. Click the link to "Precipitation Deficit."
6. Reference and copy (ctrl + C) the first subheading "Mean" values.
7. Click the "Paste Values from ET Idaho" button. The table will automatically enter a zero (0) for any negative precipitation deficit values.

Found at: <http://data.kimberly.uidaho.edu/ETIdaho/>

Precipitation Deficit

Station: Caldwell (NWS -- 101380)

Month	mm/day ¹	Days per month	mm/Month
Jan	-0.83	31	0.00
Feb	0.18	28	5.04
March	1.22	31	37.82
April	2.51	30	75.30
May	3.74	31	115.94
June	4.22	30	126.60
July	5.01	31	155.31
August	4.27	31	132.37
September	3.06	30	91.80
October	1.89	31	58.59
November	-0.12	30	0.00
December	-0.78	31	0.00

Total mm/year = 798.77

PLEASE NOTE: The seasonal average for precipitation deficit should not be used for calculations because precipitation often exceeds evaporation during wetter months of the year. If the pond is kept full, excess precipitation during wetter months does not serve to refill the pond during drier months.

For example, see Sandpoint KSPT (NWS -- 108137), the annual precipitation deficit is -106 mm. However, April through September have positive precipitation deficit values. To properly estimate the annual volume of water necessary to refill a pond due to evaporation losses, the table will automatically enter a zero (0) for each month that the precipitation value is reported as a negative value.

As described above, precipitation offsets evaporation in winter months, so the net effect is that wintertime precipitation deficit is usually zero.

$$\left(\frac{798.77}{304.8} \right) \times 0.40 = 1.0 \text{ AFA}$$

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

04N04W22

Basin/req Owner	Source	Use	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SESW	NESE	NWSE	SWSE	SESE	Total Acres
63-32084	EAGLE PRECAS GROUND V COMMERCIAL										X				
63-32084	EAGLE PRECAS GROUND V INDUSTRIAL										X				
63-33674	ZOROCO INVES GROUND V FIRE PROTECTION FRO					X									
63-33674	ZOROCO INVES GROUND V FIRE PROTECTION STO					X									
63-34238	MUNN DEVEL GROUND V FIRE PROTECTION FRO					X									
63-34238	MUNN DEVEL GROUND V FIRE PROTECTION STO					X									
63-1618U	JOHNSON, RICI BOISE RIVE IRRIGATION						X		X						
63-20639	SMITH, GAYLEI GROUND V DOMESTIC														
63-20924	SCOTT, ANDRE GROUND V DOMESTIC														
63-20924	SCOTT, ANDRE GROUND V STOCKWATER														
63-21114	APPPERSON, E CINDIAN CRUIRRIGATION														
63-21145	GIBSON, CRAIG GROUND V DOMESTIC					X		X							
63-21145	GIBSON, CRAIG GROUND V STOCKWATER					X		X							
63-21146	GIBSON, CRAIG GROUND V DOMESTIC					X									
63-21146	GIBSON, CRAIG GROUND V STOCKWATER					X									
63-21488	GIBSON, CRAIG UNNAMED IRRIGATION														59
63-21489	DJK LLC, MUNN UNNAMED IRRIGATION														20
63-21706	PIONEER IRRIG BOISE RIVE IRRIGATION					X		X							
63-21713	PIONEER IRRIG PIPE GULCI IRRIGATION					X		X							
63-21731	PIONEER IRRIG FIVEMILE C IRRIGATION					X		X							
63-21739	PIONEER IRRIG ELIJAH DRG IRRIGATION					X		X							
63-224	PIONEER IRRIG BOISE RIVE IRRIGATION					X		X							
63-225	PIONEER IRRIG BOISE RIVE IRRIGATION					X		X							
63-2275	PIONEER IRRIG WILSON D IRRIGATION					X		X							
63-2276	PIONEER IRRIG MASON CR IRRIGATION					X		X							
63-2294	PIONEER IRRIG FIVEMILE C IRRIGATION					X		X							
63-23635	MC INDOO, BE GROUND V DOMESTIC														
63-23636	MC INDOO, BE GROUND V DOMESTIC														
63-23636	MC INDOO, BE GROUND V STOCKWATER														
63-24030	WINSLOW, ELT GROUND V DOMESTIC														
63-24030	WINSLOW, ELT GROUND V STOCKWATER														
63-2529A	PIONEER IRRIG GROUND V IRRIGATION					X		X							
63-2529B	PIONEER IRRIG INDIAN CRUIRRIGATION					X		X							
63-25866	TUNING, MERL GROUND V DOMESTIC														
63-26022	TUCKER, L LOU GROUND V DOMESTIC														
63-26212	PETERSEN, DAI GROUND V DOMESTIC														
63-26212	PETERSEN, DAI GROUND V STOCKWATER														
63-26503	MC INDOO, DE GROUND V DOMESTIC														
63-26754	SZAFRAIDA, DZ GROUND V DOMESTIC														
63-27398	MURRAY, LIND GROUND V DOMESTIC														
63-27398	MURRAY, LIND GROUND V STOCKWATER														
63-27400	MURRAY JR, W GROUND V DOMESTIC														
63-27400	MURRAY JR, W GROUND V STOCKWATER														
63-27753	DEAN, JOHN P, GROUND V DOMESTIC														
63-28835	NICHOLS, GEOI GROUND V DOMESTIC														
63-28835	NICHOLS, GEOI GROUND V STOCKWATER														
63-2891	PIONEER IRRIG WILSON D IRRIGATION					X		X							
63-294	PIONEER IRRIG BOISE RIVE IRRIGATION					X		X							
63-295	PIONEER IRRIG BOISE RIVE IRRIGATION					X		X							
63-31787	CITY OF GREEN GROUND V MUNICIPAL														
63-32514	PIONEER IRRIG FIVE MILE IRRIGATION					X		X							
63-32514	PIONEER IRRIG MASON CR IRRIGATION					X		X							
63-32584	PIONEER IRRIG INDIAN CRUIRRIGATION					X		X							
63-33712	ZOROCO INVES GROUND V COMMERCIAL					X		X							
63-371	PIONEER IRRIG BOISE RIVE IRRIGATION														
63-4117	CITY OF GREEN GROUND V MUNICIPAL														
63-5104	MILLS, ANNA L GROUND V DOMESTIC														
63-5104	MILLS, ANNA L GROUND V STOCKWATER														
63-5199	PIONEER IRRIG GROUND V IRRIGATION					X		X							
63-5200	PIONEER IRRIG GROUND V IRRIGATION					X		X							

STATE OF IDAHO
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Basin/Seq	Owner	Source	Use	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE	Total Acres
63-5219	PIONEER IRRIG	INDIAN CRI	IRRIGATION		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-5237	PIONEER IRRIG	INDIAN CRI	IRRIGATION		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-5255	PIONEER IRRIG	INDIAN CRI	IRRIGATION		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-7094	CITY OF GREEN	GROUND V	MUNICIPAL							X										
63-8640	COMFORT, DO	GROUND V	IRRIGATION																	
63-9109	PIONEER IRRIG	GROUND V	IRRIGATION		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	4

Overlapping use with active permit, separate storage pond
Same QQ different use

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

1

04N04W22

Basin/Seq#	Owner	Source	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE
63-32084	EAGLE PRE	GROUND WATER													X			
63-33674	ZOROCO IN	GROUND WATER				X												
63-34238	MUNN DE	GROUND WATER				X												
63-20639	SMITH, GA	GROUND WATER											X					
63-20924	SCOTT, ANI	GROUND WATER										X						
63-21145	GIBSON, CI	GROUND WATER				X												
63-21146	GIBSON, CI	GROUND WATER				X												
63-21489	DIK LLC; M	UNNAMED DRAIN			X													
63-23635	MC INDOO	GROUND WATER						X										
63-23636	MC INDOO	GROUND WATER						X										
63-24030	WINSLOW, G	ROUND WATER														X		
63-2529A	PIONEER IF	GROUND WATER																X
63-25866	TUNING, M	GROUND WATER										X						
63-26022	TUCKER, L	GROUND WATER											X					
63-26212	PETERSEN, G	ROUND WATER											X					
63-26503	MC INDOO	GROUND WATER			X				X									
63-26754	SZAFRAJDA	GROUND WATER																
63-27398	MURRAY, I	GROUND WATER					X											
63-27400	MURRAY JI	GROUND WATER					X											
63-27753	DEAN, JOH	GROUND WATER												X				
63-28835	NICHOLS, C	GROUND WATER										X						
63-33712	ZOROCO IN	GROUND WATER				X												
63-5104	MILLS, ANI	GROUND WATER										X						

Separate Groundwater ponds in QQ
Diversions from wells



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region • 2735 Airport Way • Boise, Idaho 83705-5082

Phone: (208) 334-2190 • Fax: (208) 334-2348 • Website: www.idwr.idaho.gov

C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

January 22, 2018

ZOROCO INVESTMENTS LLC
20148 MONTE WAY
CALDWELL ID 83607

RE: Water Right Permit No. 63-33647

Dear Permit Holders,

I am writing today in regard to the water right permit referenced above which authorizes the diversion of 10 acre-feet groundwater for fire protection use. On November 29, 2017, you submitted Proof of Beneficial Use for this permit stating that your project is fully developed. The next step in the water appropriation process is to complete a Beneficial Use Field Examination to determine the extent to which water use was developed under the permit. The field examination is the final step before the Department can issue a water right license.

If you did not develop a beneficial use of water during the development period, a license cannot be issued and the permit should be relinquished. If the use *was* developed, but you have ceased using the water and have no further interest in pursuing a water right license, please relinquish the permit by submitting the enclosed Relinquishment of Permit form (no fee required).

Please contact me within the next thirty (30) days to schedule a field examination for your water right permit. You can reach me by phone at 208-334-2190 or by email at cody.parker@idwr.idaho.gov. If you no longer own the place of use, the Department will work with the current property owner to issue a license or void the permit. If you still own the property, but do not make a timely response in this regard, the permit will be voided.

Please let me know if you have any questions regarding the content of this letter. I appreciate your attention to this matter, and I look forward to hearing from you.

Respectfully,

Cody Parker
Water Resource Agent
IDWR Western Region

Enclosed: WR Report, WR Map, Relinquishment of Permit