

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-31811
Exam Date: 04/05/2018

1. Current Owner:
RIVERVINE HOME OWNERS ASSOC 7135 W PLANTERRA LN EAGLE ID 83616-6876
2. Accompanied by: GRANT LEE
Phone No:
Address:
Relationship to permit Holder: Secretary

3. **SOURCE:**
GROUND WATER

Tributary
BOISE RIVER

Method of Determination: Photos of ponds in file

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
63-125G	Boise River	Aesthetic Storage	Decree

Comments: 63-125G is the evaporation loss from the pond

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

Comments: _____

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

GROUND WATER SW¼ NE¼, Sec. 15, Twp 04N, Rge 01W, B.M. ADA County

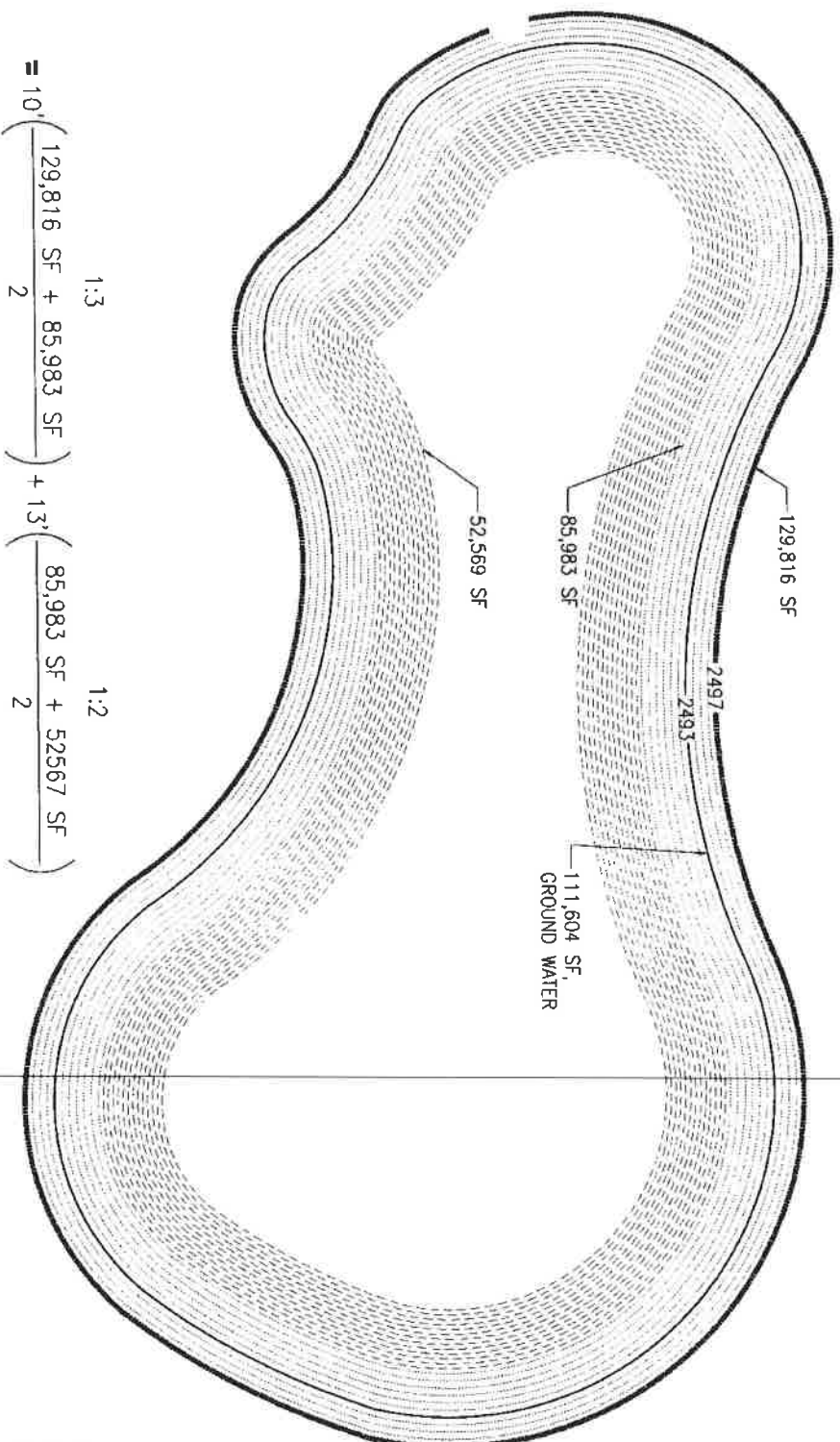
Method of Determination: Aerial imagery (pond centroid), digital PLS map

PLACE OF USE: AESTHETIC STORAGE

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	01W	15			X														

Method of Determination: Aerial imagery, digital PLS map

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



POND 1
 SURFACE AREA: 129,816 SF
 VOLUME: 14.81 MILLION GALLONS
 DEPTH: 23'

$$V_1 = 1,979,570 \text{ CF} = 14.81 \text{ MGAL}$$

$$V_{GW1} = 1,979,570 \text{ CF} - 4' \left(\frac{129,816 \text{ SF} + 111,604 \text{ SF}}{2} \right)$$

$$V_{GW1} = 1,496,730 \text{ CF} \approx 11.20 \text{ MGAL}$$

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
None					

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
N/A						

2. Measurements:
None

E. FLOW CALCULATIONS

_____ Additional Computation Sheets Attached

Measured Method:

None

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

No Irrigation

2. Volume Calculations for Other Uses:

2.6 acre pond, 23 ft max depth

Side Slopes:

1:3 slope for top 10 ft of water column

1:2 slope for bottom 13 ft of water column

See attachment in field report for calculation

Total Pond Capacity = 34.4 acre-feet

Evap = 5.9 afa (covered by 63-125G)

Vs. 2.6 acres x 23 ft max depth x 0.4 = 23.9 afa (Not recommended)

G. NARRATIVE/REMARKS/COMMENTS

This permit was approved on June 28, 2007 authorizing the storage of 34.4 afa of shallow groundwater within an excavated pond. Proof of beneficial use was submitted on August 4, 2017. I completed this field exam on April 5, 2018.

The point of diversion is the centroid for the pond. The pond was excavated to below the water table and captures shallow groundwater tributary to the Boise River. This permit covers only the capacity of the pond. There is no seepage loss because the pond is filled with shallow groundwater. Evaporation from the pond is covered by the aesthetic storage component of water right 63-125G (a Middleton Mill water right). Middleton mill water is diverted into the pond authorized by permit 63-31812. That pond is connected to the pond covered under this right by a buried 24-inch polyethylene pipe.

The permit holder could not be contacted for the field exam. I was accompanied during the exam by Grant Lee, secretary for the new landowners (Rivervine HOA). He did not know much about the dimensions of the pond. I determined the dimensions of the pond and the capacity from information in the backfile. The pond already existed at the time of the application and the imagery shows that it has not changed since. Therefore, I have taken the dimensions in the backfile to be representative of the pond as-built.

The amount of water allotted for evaporation volume under 63-125G was determined based on a 1 to 1 swap of acres from irrigation to pond surface area. Originally, the intention was to develop a total of 16.93 acres of ponds between 63-31811, 63-31812, 63-31813, 63-31974, 63-31975, and 63-31814. I measured 11.6 acres of ponds from aerial imagery. However, our current understanding of mitigation would require roughly 29 acres of irrigation to be given up to offset the July evaporation rate from the pond (when the mitigation irrigation right is cut to 60% of its value). Therefore, I propose reducing the number of acres surface area on the mitigation condition of the permit while keeping the volume. I will make a comment to that effect on 63-125G so that it can be evaluated and updated on that right at a later date.

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>
AESTHETIC STORAGE	01/01 to 12/31		34.4 AF

Totals:

34.4 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

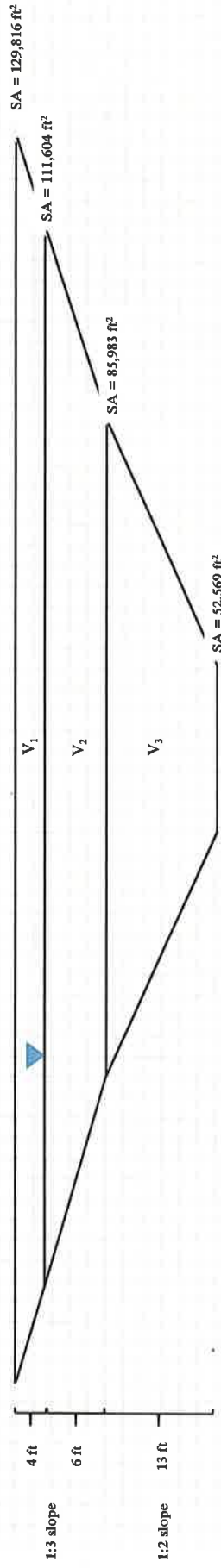
Cody Parker - Water Resource Agent, Senior

Field Examiner's Name Cody Parker Date _____

Reviewer Patricia Wiley Date 8-27-2019

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT
Section G. Volume Calculations

1



$$V_1 = 4' \left(\frac{129,816 + 111,604}{2} \right) = 482,840 \text{ ft}^3$$

$$V_2 = 6' \left(\frac{111,604 + 85,983}{2} \right) = 592,761 \text{ ft}^3$$

$$V_3 = 13' \left(\frac{85,983 + 52,569}{2} \right) = 900,588 \text{ ft}^3$$

$$V_2 + V_3 = 1,493,349 \text{ ft}^3 = 34.3 \text{ afa}$$

Beneficial Use Field Report

System Diagram



LEGEND

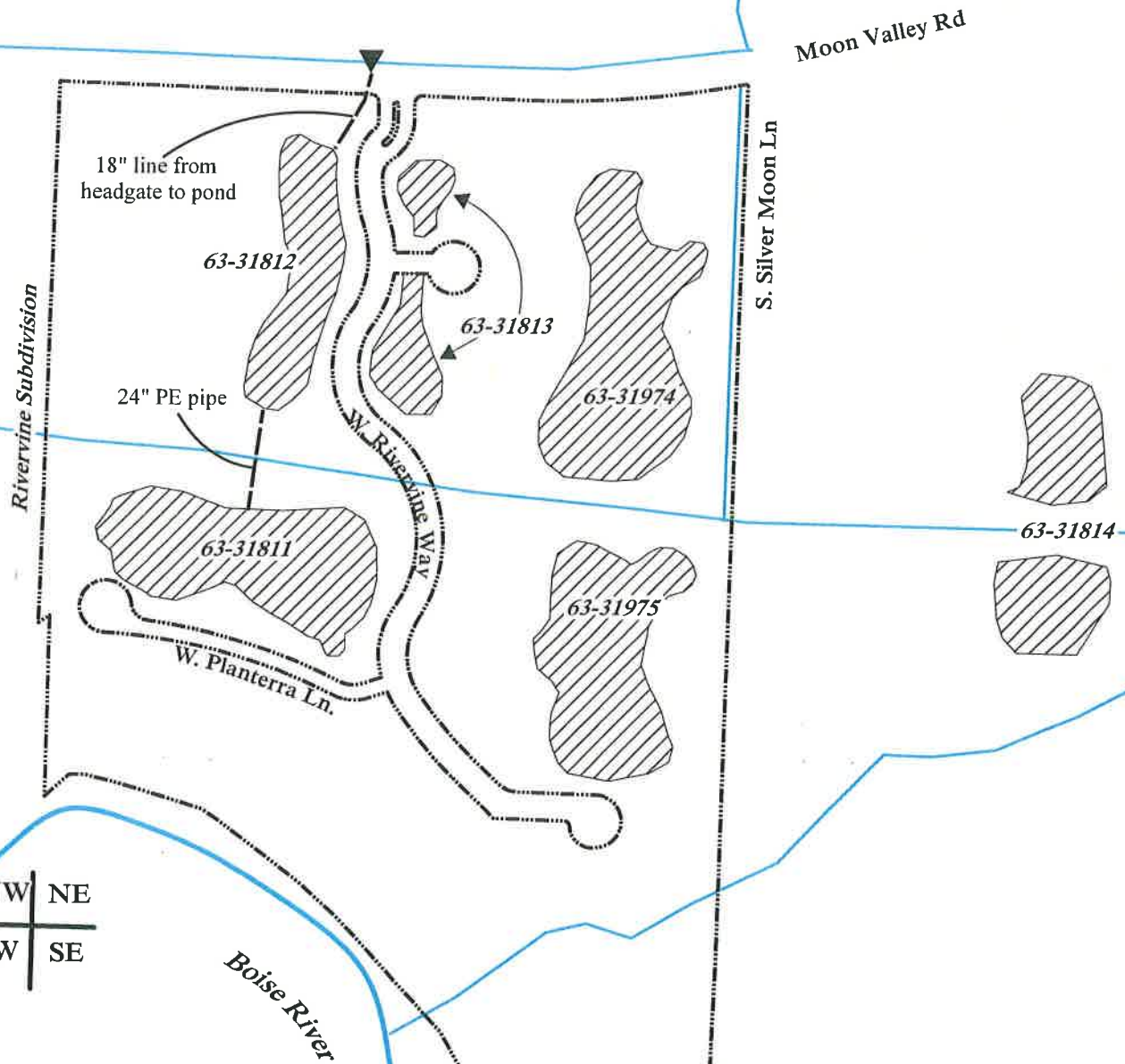
- ▼ Ditch headgate
- - - Subdivision boundary
- - - Buried line/pipe
- ▨ Pond surface area



0 0.05 0.1 Miles

Beneficial Use Field Report

System Diagram



LEGEND

▼ Ditch headgate

--- Subdivision boundary

--- Buried line/pipe

▨ Pond surface area



0 0.05 0.1 Miles

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	63-31811
REVIEWER	Cody Parker
DATE	4/5/2018

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.

$$[(798.77 \text{ mm/yr}) \div (\text{convert to feet})] \times (\text{Surface area of pond, in acres}) = \text{Evaporation Loss in Acre Feet}$$

(798.77 ÷ 304.8) X 2.60 = 6.8 AFA

BENEFICIAL USE FIELD REPORT

04N01W15

Basin/Seq Owner Source Use

	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE	Total Acres
63-31811 CASTLE GROUND AESTHETIC STORAGE		X	X														
63-31812 CASTLE F GROUND AESTHETIC STORAGE		X	X														
63-31813 CASTLE F GROUND AESTHETIC STORAGE		X	X														
63-31814 CASTLE F GROUND AESTHETIC STORAGE				X													
63-31858 CITY OF F GROUND MUNICIPAL			X						X		X			X	X	X	
63-31974 CASTLE F GROUND AESTHETIC STORAGE		X	X														
63-31975 CASTLE F GROUND AESTHETIC STORAGE			X														
63-32083 CITY OF F GROUND MUNICIPAL		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-32089 CITY OF F GROUND MUNICIPAL			X			X											
63-32644 KELLER F GROUND MUNICIPAL						X											
63-33876 CITY OF F GROUND MUNICIPAL		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-10105 CITY OF F GROUND MUNICIPAL			X														
63-10840 CITY OF F GROUND MUNICIPAL			X														
63-11413 CITY OF F GROUND MUNICIPAL				X	X	X	X	X	X	X	X	X	X	X	X	X	
63-11737 CITY OF F GROUND MUNICIPAL	X	X	X	X													
63-11922 CITY OF F GROUND MUNICIPAL			X														
63-12039 CITY OF F GROUND MUNICIPAL			X														
63-12162 CITY OF F GROUND MUNICIPAL			X														
63-12173 CITY OF F GROUND MUNICIPAL			X														
63-12181 CITY OF F GROUND MUNICIPAL			X														
63-12295 CITY OF F GROUND MUNICIPAL			X														
63-12346 CALDWE GROUND DOMESTIC					X												
63-12378 CITY OF F GROUND MUNICIPAL			X						X	X	X	X	X	X	X	X	
63-12416 CITY OF F GROUND MUNICIPAL			X						X	X	X	X	X	X	X	X	
63-12444 EAGLE C GROUND DOMESTIC						X											
63-12448 CITY OF F GROUND MUNICIPAL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-124N FARRIS, F BOISE R F IRRIGATION	X	X	X	X													
63-12560 CITY OF F GROUND MUNICIPAL			X						X	X	X	X	X	X	X	X	
63-1256G FARRIS, F BOISE R F AESTHETIC STORAGE	X	X	X	X													
63-125G FARRIS, F BOISE R F IRRIGATION	X	X	X	X									X	X			
63-126E FARRIS, F BOISE R F IRRIGATION	X	X	X	X									X	X			
63-145 EUREKA BOISE R F IRRIGATION																	
63-15578 BYARD, F GROUND DOMESTIC					X												
63-15693 GRIFFITH GROUND DOMESTIC		X															
63-15693 GRIFFITH GROUND IRRIGATION	2																
63-15693 GRIFFITH GROUND STOCKWATER	X	X															2
63-161X CONSUM BOISE R F IRRIGATION	X	X	X	X													
63-16383 EUREKA PHYLLIS IRRIGATION													X	X	X	X	
63-16383 EUREKA PHYLLIS STOCKWATER												X					
63-168B BORTLE, BOISE R F IRRIGATION	X	X	X	X									X	X	X	X	
63-168D FARRIS, F BOISE R F IRRIGATION	X	X	X	X									X	X	X	X	
63-173 FARRIS, F BOISE R F IRRIGATION	X	X	X	X									X	X	X	X	
63-17994 CALDWE GROUND DOMESTIC					X												
63-183 PIONEER BOISE R F IRRIGATION	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-19513 KILBURN GROUND DOMESTIC						X											
63-19513 KILBURN GROUND STOCKWATER						X											
63-198AC FARRIS, F BOISE R F IRRIGATION	X	X	X	X									X	X			
63-21921 KILBURN GROUND DOMESTIC	X																
63-21923 KILBURN GROUND DOMESTIC	X																
63-22557 ROBELL C GROUND DOMESTIC																	
63-23136 YELTON, GROUND DOMESTIC					X												
63-23865 HERRIDG GROUND DOMESTIC					X												
63-23865 HERRIDG GROUND STOCKWATER					X												
63-254 FARRIS, F BOISE R F IRRIGATION	X	X	X	X									X	X			
63-255 COUZEN, BOISE R F IRRIGATION	X	X	X	X									X	X			
63-28665 ARANA, F GROUND DOMESTIC																	
63-28665 ARANA, F GROUND IRRIGATION													1	3	24	36	64
63-28773 COLEMA, F GROUND STOCKWATER													X	X	X	X	
63-2893 CITY OF F GROUND MUNICIPAL			X						X		X	X	X	X	X	X	
63-30403 HARDY, F GROUND DOMESTIC					X												

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

Basin/Seq	Owner	Source	Use	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE	Total Acres
63-31138	CITY OF GROUND MUNICIPAL					X						X		X	X	X	X	X		
63-31281	CITY OF GROUND MUNICIPAL					X						X		X	X	X	X	X		
63-31318	CITY OF GROUND MUNICIPAL					X						X		X	X	X	X	X		
63-31606	CASTLE F GROUND DOMESTIC				X	X						X		X	X	X	X	X		
63-31630	CITY OF GROUND MUNICIPAL					X						X		X	X	X	X	X		
63-31677	CITY OF GROUND MUNICIPAL					X						X		X	X	X	X	X		
63-31969	STAR SEY GROUND FIRE PROTECTION								X											
63-31969	STAR SEY GROUND MUNICIPAL								X											
63-32480	DRAINAGE UNNAME IRRIGATION				X	X	X									X	X			
63-32518	FARRIS, FUNNAME IRRIGATION				X	X	X									X	X			
63-32519	FARRIS, FUNNAME IRRIGATION				X	X	X									X	X			
63-3252	CITY OF GROUND MUNICIPAL					X						X		X	X	X	X	X		
63-32520	FARRIS, FUNNAME IRRIGATION				X	X	X									X	X			
63-32521	FARRIS, I WASTE W IRRIGATION				X	X	X									X	X			
63-32522	FARRIS, I WASTE W IRRIGATION				X	X	X									X	X			
63-32567	CITY OF GROUND MUNICIPAL					X						X		X	X	X	X	X		
63-32568	CITY OF GROUND MUNICIPAL					X						X		X	X	X	X	X		
63-33031	STEPHEN GROUND AESTHETIC STORAGE								X											
63-370	FARRIS, I BOISE R IRRIGATION				X	X	X									X	X			
63-4960	FARRIS, I BOISE R IRRIGATION				X	X	X									X	X			
63-7105	CITY OF GROUND MUNICIPAL					X						X		X	X	X	X	X		
63-7978	CITY OF GROUND MUNICIPAL					X						X		X	X	X	X	X		
63-8331	CITY OF GROUND MUNICIPAL					X						X		X	X	X	X	X		
63-8332	CITY OF GROUND MUNICIPAL					X						X		X	X	X	X	X		
63-9849	CITY OF GROUND MUNICIPAL					X						X		X	X	X	X	X		

Rights for separate ponds within the subdivision

Mitigating right to cover evaporation

Different uses





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

March 15, 2018

RIVERVINE SUBDIVISION HOA
7135 W PLANTERRA LN
EAGLE ID 83616

RE: Water Right Permits 63-31811, 63-31812, 63-31813, 63-31814, 63-31974, & 63-31975

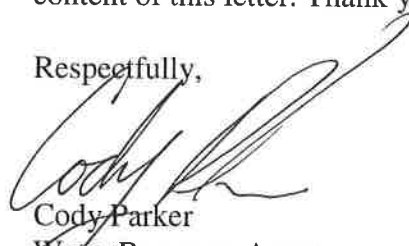
Dear landowners,

I am writing today in regard to the six water right permits referenced above, which are in the name of Castle Rock Development Inc. It is my understanding that you may be the current owner of the land to which these permits were applied. The permits authorize the storage of groundwater for six or more ponds.

My purpose for writing today is to schedule a time to meet with you to complete a field examination for these permits. The field exam is the final step in the water right licensing process and is required for a water right license to be issued. The field exam verifies the extent to which water use was developed under the permits.

Please contact me within thirty (30) days to schedule a field examination. If you do not contact me within that time, I will assume that you do not have any further interest in pursuing a water right license and I will take action to void the permits. Please let me know if you have any questions regarding the content of this letter. Thank you in advance for your help.

Respectfully,



Cody Parker
Water Resource Agent,
IDWR Western Region
208-334-2190
cody.parker@idwr.idaho.gov



State of Idaho

DEPARTMENT OF WATER RESOURCES

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

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C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

December 15, 2017

CASTLE ROCK DEVELOPMENT INC
1017 S ARBOR ISLAND WAY
EAGLE ID 83616

RE: Water Right Permits 63-31811, 63-31812, 63-31813, 63-31814, 63-31974, & 63-31975

Dear Permit Holders,

I am writing today in regard to the six water right permits referenced above. This is a follow up to my previous letter dated November 5, 2017. In that letter, I requested to schedule a field exam for the water right permits referenced above. The letter had a deadline for reply which, if not met, would result in the permits becoming void. However, I wanted to re-send this information before taking any action to void the permits in case my last letter was not delivered.

The permits referenced above require field examinations to confirm and document the extent to which water use has been developed. The field exam may be the last step required before final water right licenses can be issued. If you have developed a beneficial use of water according to these permits, please contact me to schedule an examination. If you did not develop a beneficial use of water, a water right license cannot be issued, and you may relinquish the permits by returning the enclosed Relinquishment of Permit form.

Please feel free to contact me with any questions concerning the content of this letter. I look forward to your reply within thirty (30) days of the date of this letter. If you do not make a timely response, I will assume that you do not have any further interest in pursuing a water right license, and I will take action to void the permit.

Thank you for your attention to these matters. I look forward to hearing from you.

Respectfully,

Cody Parker
Water Resource Agent
IDWR Western Region
208-334-2190
cody.parker@idwr.idaho.gov

Enclosed: WR Reports, WR Maps, Relinquishment Form



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

November 5, 2017

CASTLE ROCK DEVELOPMENT INC
1017 S ARBOR ISLAND WAY
EAGLE ID 83616

RE: Water Right Permit Nos 63-31811, 63-31812, 63-31813, 63-31814, 63-31974, & 63-31975

Dear Permit Holders,

I am writing today in regard to the six water right permits referenced above. These permits authorize the diversion of groundwater for aesthetic storage use in Ada County. The Idaho Department of Water Resources is planning to conduct water right examinations in that area this winter season. The permits referenced above all require examinations to verify that beneficial use of water has been developed. The examination must be completed before a final water right license can be issued.

If you have developed a beneficial use of water according to these permits, please contact me at your earliest convenience to schedule an examination. If you developed a use of water but no longer own the place of use, please use the enclosed Assignment of Permit form (\$25 fee). This will allow IDWR to contact the new permit owner for the license process.

A license cannot be issued if beneficial use of water was not developed. If the use authorized by these permits was not developed, please relinquish the permit by returning the enclosed Relinquishment of Permit form.

Please feel free to contact me with any questions concerning the content of this letter. I look forward to your reply within thirty (30) days of the date of this letter. If I do not hear from you within that time, I will assume that you do not have any further interest in pursuing a water right, and I will take action to void the permit.

Thank you for your time and for your attention to these matters. I look forward to working with you.

Respectfully,

Cody Parker
Water Resource Agent
IDWR Western Region
208-334-2190
cody.parker@idwr.idaho.gov

Enclosure: Water Right report(s), Water Right maps, Assignment of Permit form, Relinquishment form