

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. 63-32235

1. Owner Shores Homeowners Association Inc Phone No. 208-388-4932
Current address PO Box 57, Eagle, ID 83616
2. Examiner's name Cody Parker EXAM DATE July 6, 2017
3. Accompanied by Steve Holt, Rick Smith, and HOA President(?) Email rsmith@hawleytroxell.com
Address same as above
- Relationship to permit holder Engineer, Attorney, and HOA President Phone No. 208-388-4932
4. Source Groundwater tributary to Boise River

B. OVERLAP REVIEW

1. Other water rights with the same place of use None
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
			SW	SW	17	04N	01E	Ada	x3 => pond centroids
			SE	SW	17	04N	01E	Ada	x4 => pond centroids

2. Place(s) of Use: Method of determination Aerial Imagery, Digital PLS Map

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	01E	17											X	X			X		
04N	01E	20		L2			L3	L4											

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
N/A					

*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
N/A						

2. Measurements: _____

NONE

E. NARRATIVE/REMARKS/COMMENTS

See Attached

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?

F. FLOW CALCULATIONS☐ Additional computation sheets attachedMeasured Method:
N/A**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:

Pond Capacity = 215 afa. The depth and surface area were developed as proposed in the application. The ponds were developed with specific slopes for areas above and below the high water mark. Therefore the simplified equation for volume $\sim 0.4(\text{Depth}) \times \text{SA}$ is likely less accurate than the volume provided by the project engineer. So, I decided to use the volume estimated in the application. (Aesthetic Storage)

Upper 4 ft of water in ponds re-circulated $\Rightarrow$ 4 ft x 14.3 acres $\sim$ 60 afa (Aesthetic from Storage)

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
Aesthetic Storage	01/01	12/31		215 afa
Aesthetic from Storage	01/01	12/31		60 afa
Totals:				215 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

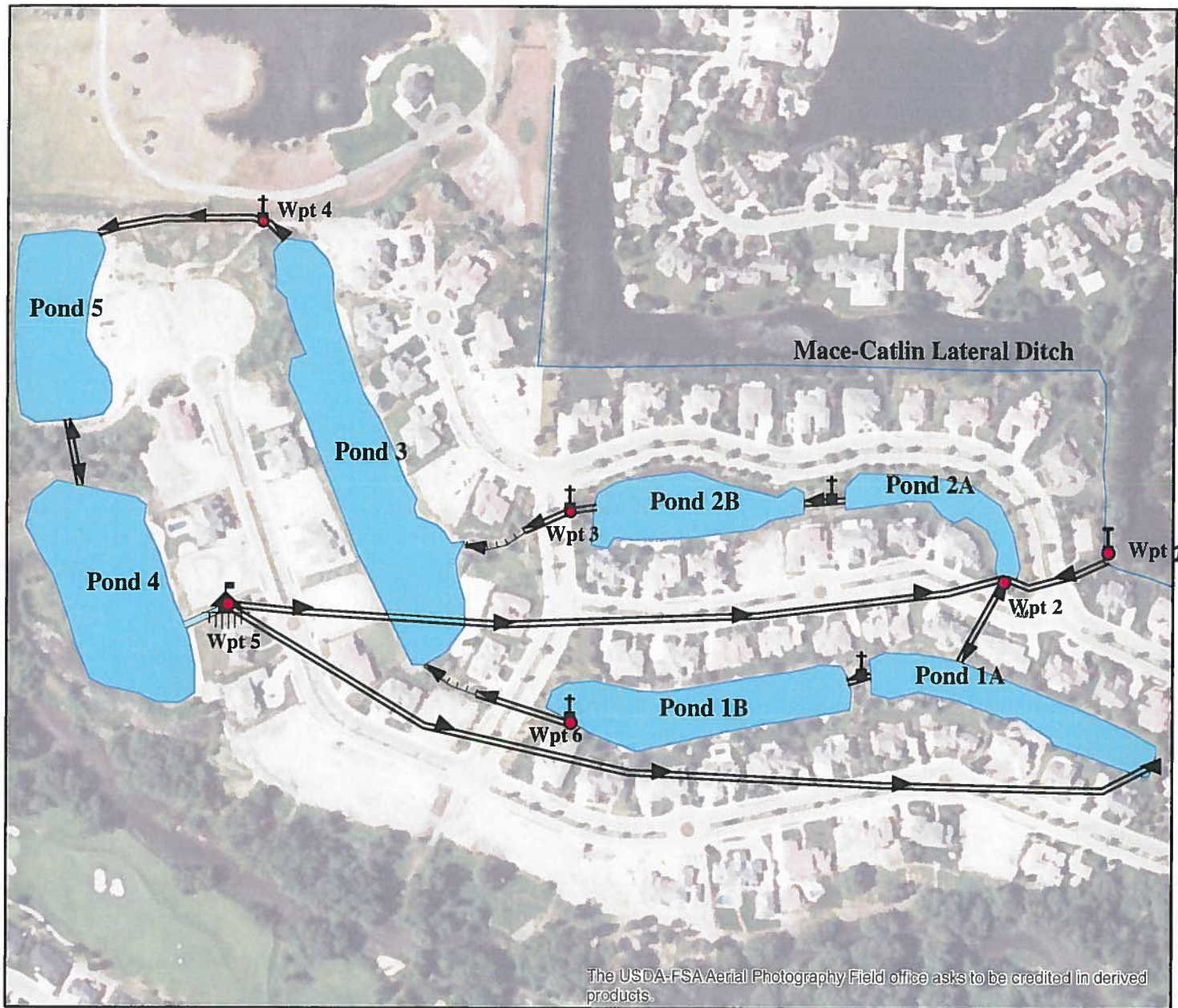
Date 07/06/17

SEAL

Reviewer

Date

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT
SYSTEM DIAGRAM



0 0.1 0.2 Miles

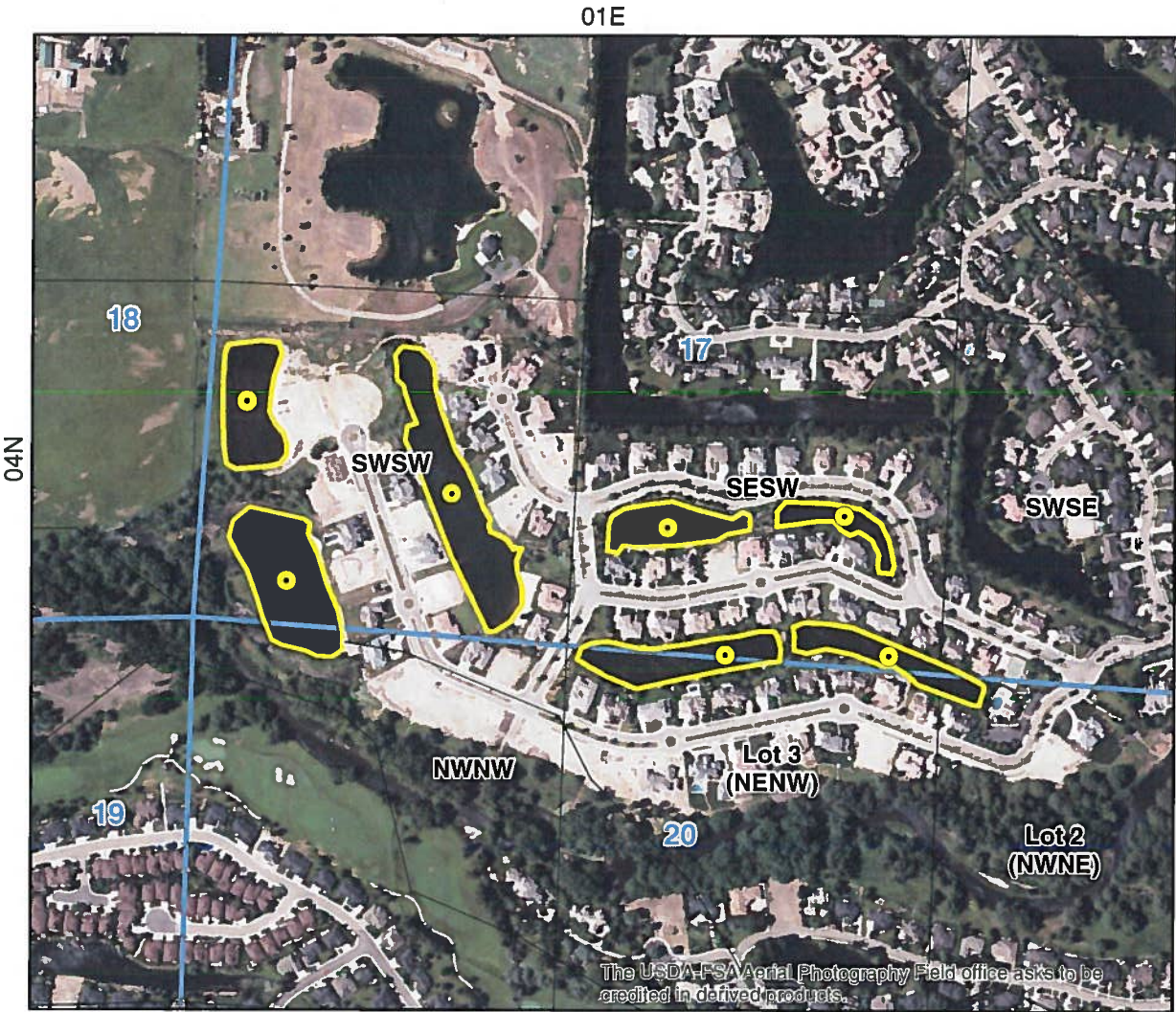


- | | |
|-------------------------|---------------------------------|
| Pond area | Control valve operated by wheel |
| Open vault to pumphouse | Headgate on irrigation ditch |
| Buried pipe | Pumphouse |
| Open conveyance ditch | GPS waypoint |

Waypoints

Wpt 1: 43.67896 -116.36426
 Wpt 2: 43.67875 -116.36517
 Wpt 3: 43.67912 -116.36910
 Wpt 4: 43.68093 -116.37197
 Wpt 5: 43.67843 -116.37218
 Wpt 6: 43.67774 -116.36905

State of Idaho
Department of Water Resources
Attachment to Water Right License
63-32235



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

0 0.075 0.15 0.3 Miles



STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
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NARRATIVE:

Permit No. 63-32235 was approved on July 26, 2007, and authorized the diversion of 215 afa from groundwater tributary to the Boise River for aesthetic storage and aesthetic from storage purposes. Proof of beneficial use was submitted on June 12, 2015. On July 6, 2017 I (WRA Cody Parker) completed the field exam for this permit.

The total system was developed as follows: There are seven ponds which combine for a total surface area of ~14.3 acres and a volume of 215 acre-feet. The ponds were excavated to a depth below the water table and are filled by intercepting groundwater. According to the project engineer, Steve Holt, there is close to an 8-ft drop in the hydraulic gradient of the groundwater from the eastern most pond to the pond furthest west. Water is recirculated by pumping water from pond 4 (see system diagram) up-gradient to ponds 1A and 2A. The water then runs down-gradient through the system of ponds back to pond 4. Water movement between ponds is controlled by a system of valves.

To mitigate the consumptive use due to evaporation in the ponds, the owners divert water historically used for irrigation into the ponds to evaporate. The mitigation was approved through transfer No. 72596. The evaporation water is diverted from the Boise River, through a Mace Catlin ditch to a headgate directly east of pond 2A (Waypoint 1). The rate of diversion through the headgate is controlled using a calibrated valve that has been approved by the Mace Catlin ditch rider. The water runs through the system in the same way that recirculated water does. Irrigation water is also conveyed through the ponds to the pump station just east of pond 4 before being pumped into pressurized irrigation lines. The irrigation is covered by separate water rights.

The pond surface area I measured from aerial imagery was 14.3 acres, which matches the surface area proposed in the application. Mr. Holt confirmed that the pond depths were developed as they had been proposed in the application. The total capacity of the pond system is 215 afa.

The Aesthetic from Storage component is meant to represent the water that is recirculated through the system. This use from storage does not remove water from the system. Thus the volume for this use does not affect the overall volume on the right. The aesthetic from storage volume on the permit is 60 afa. The project engineer describes the basis for this estimate in the application narrative. In short, 60 afa is based on the conclusion that the system can re-circulate the upper 4 feet of water in the pond system (4 ft x 14.3 acre SA ≈ 60 afa). I did observe the pumphouse (Waypoint 5) and recirculation system during the field exam, but I was not able to take any quantitative measurements of the recirculation. The system in all other aspects was developed as proposed. Therefore, I have assumed in my recommendation that 60 af is an accurate estimate of the volume of water recirculated annually.

I determined the description for the POD's and POU using aerial imagery and digital PLS mapping in ArcMap. The POU includes some land area in Section 20 which was not described on the permit. The license will therefore require an amendment. The PODs are points located within the pond boundaries (typically centroids). The descriptions for the PODs are all the same as on the permit. I have placed the POD shapefile for pond 1B slightly northeast of the centroid

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to keep the description the same; the placement of the PODs within the pond boundaries seems to be an arbitrary matter.

At this time, there are no other licensed or permitted uses for the ponds. Therefore, there is no POD or POU overlap, though the irrigation water is conveyed through the ponds before being pumped into the pressurized irrigation system.

The license will include standard pond storage conditions including volume and surface area limitations. I have suggested retaining condition 004 on the license because ponds 4 and 5 are apparently on land owned by Magellan Development LLC, rather than the HOA, according to the digital taxlot layer and the Ada county assessor's website. I have considered the existing mitigation conditions to be sufficient, though condition 937 *should* be included. However, I could not determine from the backfile for Transfer No. 72596 how many shares were involved in the transfer.

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	63-32235
REVIEWER	Cody Parker
DATE	7/6/2017

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: Boise 7 N (NWS -- 101017)

Month	mm/day ¹	Days per month	mm/Month
Jan	-1.28	31	0.00
Feb	-0.58	28	0.00
March	-0.01	31	0.00
April	1.55	30	46.50
May	2.38	31	73.78
June	4.06	30	121.80
July	5.21	31	161.51
August	4.49	31	139.19
September	2.79	30	83.70
October	1.21	31	37.51
November	-1.15	30	0.00
December	-1.70	31	0.00

Total mm/year = 663.99

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.

$$\left(\frac{663.99}{304.8} \right) \times 14.30 = 31.2 \text{ AFA}$$



Point of Diversion from the Boise River. Water entering the system here is used for consumptive losses associated to the right.



Boise River discharge pipe into Pond 2A.



Discharge from Pond 1A into Pond 2A. Looking south from the Boise River discharge pipe at Pond 2A.



Corrugated pipe that recirculates water from the water fall at the intersection of Watersford Drive and W. Sherason Drive.



Pond 2A looking northwest from the Boise River discharge point into the pond.



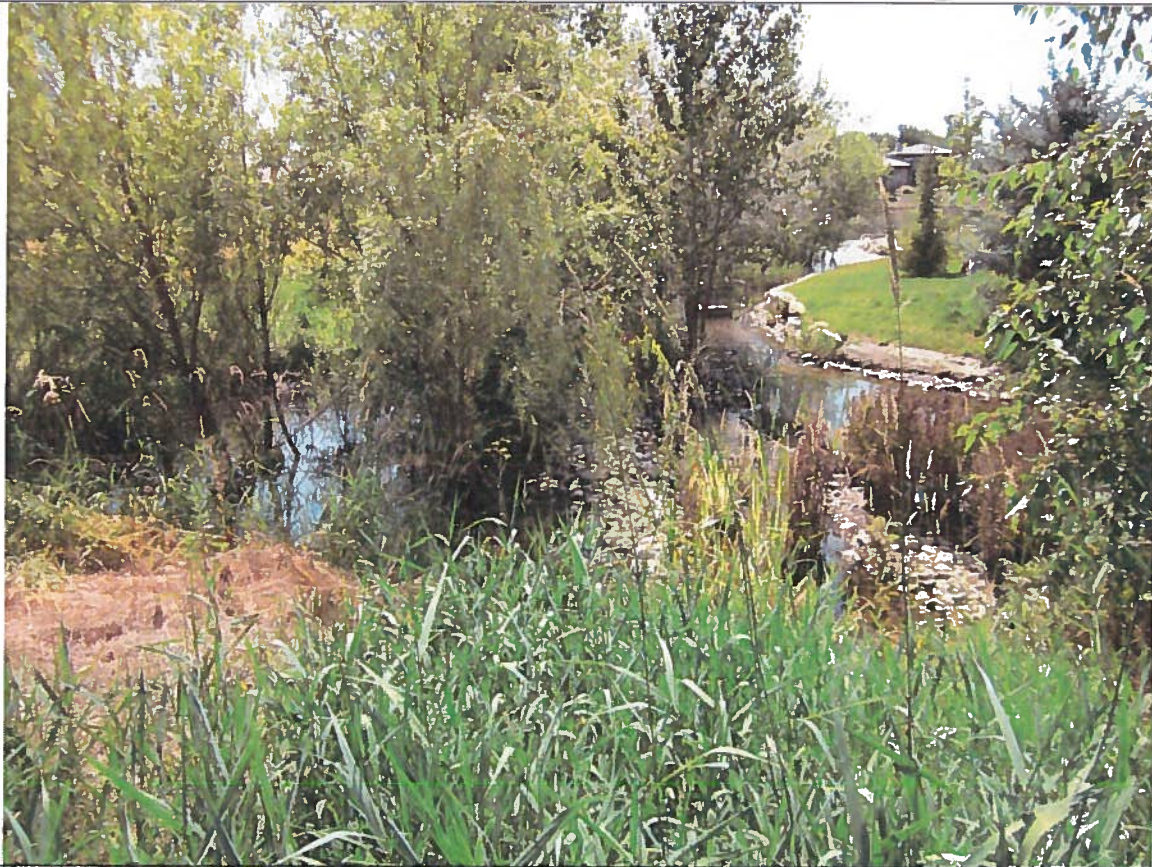
Control gate for Pond 2B. East side of S. Bellemonte Way; in between Watersford Drive and Sherington Drive.



Pond 2B looking East from the control valve.



Creek that connects Pond 2B and Pond 3. Looking east from S. Bellemonte Way; in between Watersford Drive and Sherington Drive.



Looking west from S. Bellemonte Way; in between Watersford Drive and Sherington Drive. This connects Ponds 2B and 3.



Water feature at the corner of W. Sherason Court and S. Bellemonte Way. Water is recirculated through the water feature and back to Pond 3.



Creak that returns water back to Pond 3 from the water feature on the corner of W. Sherason Court and S. Bellemonte Way.



Pond 1B looking east from S. Bellemonte Way.



Control valve for Pond 1B. Located on the east side of S. Bellemonte Way.



Looking east from the control valve for Pond 1B that connects Ponds 1B and Pond 3.



Creek that runs parallel with the east side of S. Bellemonte Way. Water is piped under the road to Pond 3.



Creek that runs into Pond 3 from Pond 1B.



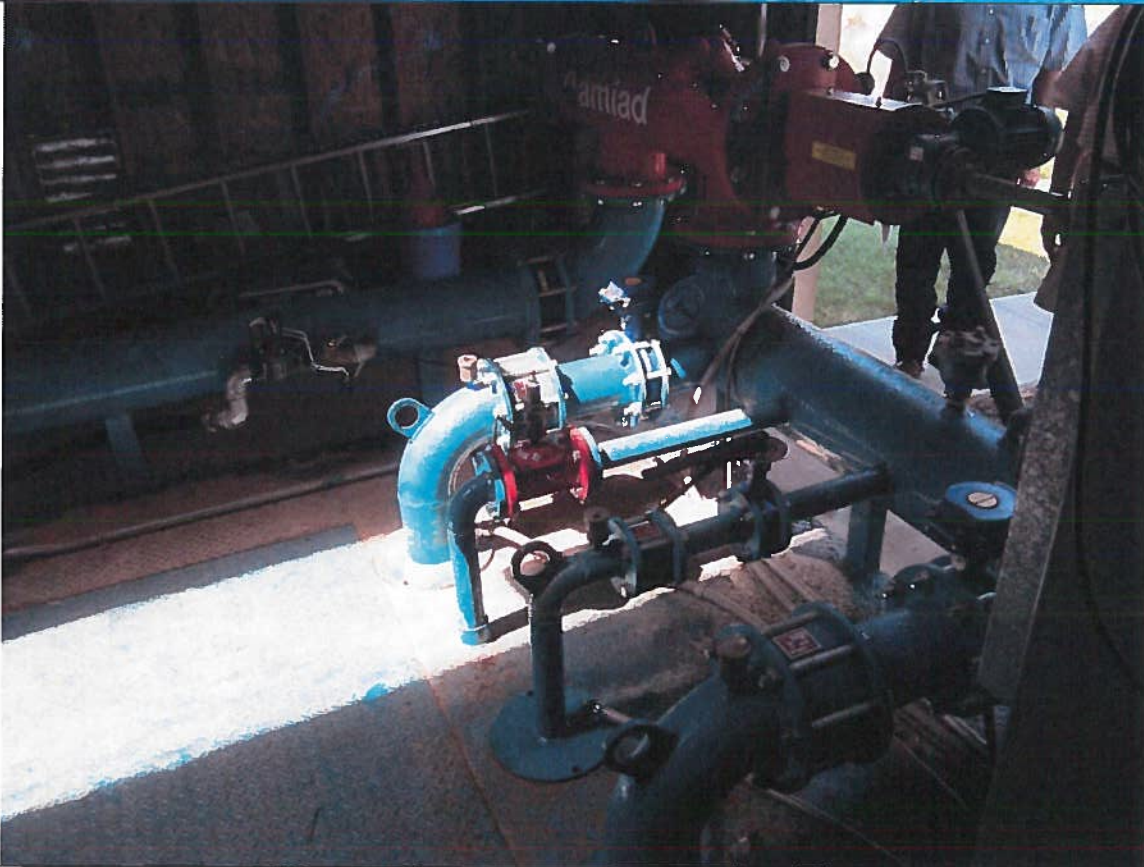
Pump station on the south side of the round a bout on W. Sherington Court.



Recirculation pumps inside the pump station.



Typically run system about 40 psi. The system runs in 8 hour increments throughout the season.



Irrigation system located in the pump station.



Control panel for the recirculation and irrigation system.



Pond 4 looking southwest. The water is about 4 feet higher than what is normally is due to the high water year. This is a common area behind the pump station.



North end of Pond 5. The area the picture was taken from was completely underwater a week before the exam due to the high water.



Control Valve located on the north end of Pond 5.



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

September 20, 2017

HOLT
Received 10/17/17
SEH

SHORES HOMEOWNERS ASSOCIATION INC
PO BOX 57
EAGLE ID 83616

RECEIVED

NOV 16 2017

DEPARTMENT OF
WATER RESOURCES

RECEIVED

NOV 20 2017

WATER RESOURCES
WESTERN REGION

RE: Water Right Permit No. 63-32235

Dear Permit Holders,

The Department of Water Resources is reviewing the permit referenced above prior to issuing a water right license. By issuing a license, the Department confirms the extent of development that has been established in compliance with the terms of the permit. The examiner who verified your water use reported that certain elements of the permit have been developed differently than described on your permit. Changes that do not increase the authorized use of water under the permit can be requested and approved in accordance with Section 42-211, Idaho Code. Before a license can be issued, your permit must be amended to depict your water use as it was actually developed.

Based on the examiner's report, the following elements were developed differently than described on your permit:

____ Point(s) of Diversion

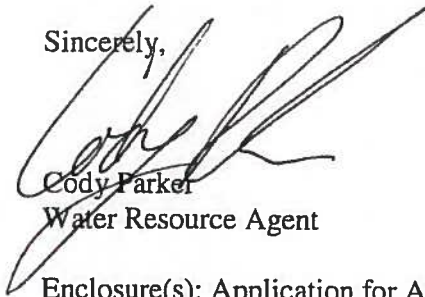
____ Place(s) of Use

____ Other

The enclosed Application for Amendment form depicts the elements of the water right as they will appear on the license when issued. Please review the amendment form(s) carefully. If you concur with the information presented, please sign and return the form(s) with the \$100.00 filing fee within 30 days.

If you have any questions, please call me at 208-334-2190.

Sincerely,


Cody Parker
Water Resource Agent

Enclosure(s): Application for Amendment
cc: TOOTHMAN ORTON ENGINEERING CO



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

May 8, 2017

SHORES HOMEOWNERS ASSOCIATION INC.
PO BOX 57
EAGLE ID 83616

RE: Scheduling Field Exam for Water Right Permit No. 63-32235

Dear Permit Holder:

We are planning to conduct water right examinations in the vicinity of the above-referenced permit **this season**. An examination is needed to verify the water use in order to issue a water right license.

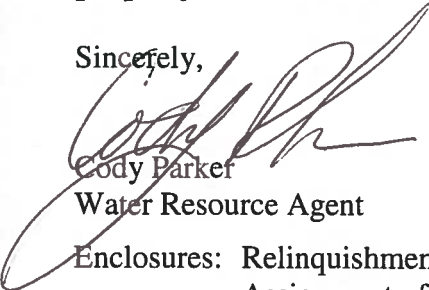
The above-referenced permit authorizes **215.0 afa** diversion of **GROUND WATER** for **aesthetic storage** and **aesthetic from storage** use(s). **If you have developed a beneficial use and still own the place of use property, please contact me at your earliest convenience to schedule an examination.**

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

If you did develop a beneficial use of water under the permit, but you no longer own the place of use property identified in the permit, please submit the enclosed Assignment of Permit form with the applicable \$25 processing fee.

Please contact me within the next thirty (30) days at (208) 334-2190 to either schedule an examination or submit a relinquishment or assignment form. If you no longer own the place of use property and/or do not respond to this letter, the department will work with the current property owner to issue a license or void the permit.

Sincerely,



Cody Parker

Water Resource Agent

Enclosures: Relinquishment of Permit form
Assignment of Permit form
Water Permit Report and Map