

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. 63-32125

1. Owner Westover Lakes Owners Assoc Phone No. _____
Current address C/O Association Management Inc, 1310 N Main St., Meridian, ID 83642
2. Examiner's name Cody Parker EXAM DATE 07/13/17
3. Accompanied by Annette Asche & Alex German Email aasche@amihome.net
Address Same as above
Relationship to permit holder Property manager, Irrigation Tech Phone No. 208-781-8706
4. Source Groundwater tributary to Boise River

B. OVERLAP REVIEW

1. Other water rights with the same place of use 63-32917 (Mitigation)
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
	1		NE	NE	20	04N	01E	Ada	GPS, Digital PLS Map, BLM Survey

2. Place(s) of Use: Method of determination Aerial Imagery, confirmed during site visit by irrigation tech

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	20	7.0	0.3	0.3	2.0													9.6
			L1	L2	L2	L1													

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
Tag No. D0038575	Franklin Electric	7.5	2366019020		

*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:** _____
 Theoretical Only _____

SEE ATTACHED

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.[illegible]

F. FLOW CALCULATIONS☐ Additional computation sheets attached

Measured Method:

From the HP Equation:

$$Q = (8.8 \cdot hp \cdot E) / (DL + 2.31P)$$

Where

HP = 7.5, E = 0.7, P = 60, and $20 \leq DL \leq 40$ (estimated from well driller's report)

So, Q = 0.26 to 0.29 cfs

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 9.6 \text{ acres} \times 4.5 \text{ afa/acre} = 43.2 \text{ afa}$$

$$V_{D.R} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = 0.19 \text{ cfs} \times 260 \text{ days} \times 1.9835 = 98.0 \text{ afa}$$

$$V = \text{Smaller of } V_{I.R} \text{ and } V_{D.R} = 43.2 \text{ afa}$$

2. Volume Calculations for Other Uses:

No other uses

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
Irrigation	03/01	11/15	0.19	43.2
Totals:			0.19 cfs	43.2 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

7-14-17

Reviewer

Date

9-20-17

SEAL

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NARRATIVE

Permit No. 63-32125 was approved on June 30, 2005, authorizing the use of 0.23 cfs from groundwater for irrigation of 11.7 acres on Eagle Island just south of Eagle Idaho. Proof of Beneficial Use was submitted on May 13, 2015. On July 13, 2017 I (WRA Cody Parker) visited the site for a field exam, and was accompanied by Annette Asche, the property manager, and Alex German an irrigation technician.

This permit and permit No. 63-32126 are mitigated by leaving water for right No. 63-32917 in the Boise River. 63-32917 was one part of an older Stuart-Decree irrigation right. The irrigated area covered the land which is now the subdivision. Essentially, the applicants broke up this existing right (through mitigation rather than transfer) into the two new permits, using water that could not be used to irrigate due to development as mitigation water for the consumptive use of the ponds for permit No. 63-32126.

The irrigation system for the subdivision was developed as follows. A well located on Lot 1 Blk 2 of the subdivision provides water for irrigation of roughly 9.6 acres of turf grass and landscaping within the POU. Water is diverted from the 8" diameter well into a 4" mainline using a 7.5 hp Franklin Electric submersible motor and pump. The motor is controlled by a digital control box located in a pumphouse ~130' southeast of the well head. System pressure at the time of the exam was held at around 60 psi. Once water enters the mainline it passes through what appears to be a propeller or turbine-type water meter. Irrigation of common areas is controlled by three Rain Bird control boxes located at the east and west entrances of the subdivision and in the pumphouse. Each of the homes in the subdivision has their own control box to water private lawns and landscaping.

The location of the well was determined by GPS. It is located at N 43 40' 28.4" by W 116 21' 24.1", which puts it in Lot 1 (NENE) of Section 20, T04N, R01E, B.M. The metal tag from the well was missing, but the Proof shows that the well was drilled in 2005 by Treasure Valley Drilling. There is only one well in the Section that matches the information on the Proof and the well dimensions observed in the field. The well Tag No. is D0038575; it is an 8" domestic well with a water bearing zone from ~ 8-52'. The water is tributary to the Boise River, but the use has been mitigated.

The irrigated acreage was determined using aerial imagery. I prepared a map of the estimated area prior to the field exam and had Mr. German, the irrigation tech., confirm which areas were irrigated during the site visit. The description on the permit lists only the NENE of Section 20, Twp 04N, Rge 01E, B.M. However, the digital PLS layer shows that the irrigated area is more accurately described as Gov Lot Nos. 1 & 2 of the same township, range, and section. The original BLM survey shows Gov Lots 1 & 2 located north of the south channel of the Boise River, while the subdivision is south of the south channel. However, the survey was completed in 1868. It is possible that lateral migration of the south channel through these alluvial gravels over the past ~150 years has been significant enough that these parts of Gov Lots 1 & 2 are now located to the south of the channel. For that reason, I have described the POU as these 2

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government lots. I also checked with the description for the right 63-32917, which applied to this land and was given up as mitigation, and found that it too lists Gov Lot No. 1. The area now described as Gov Lot No. 2 is not within the subdivision itself but rather is the lawn separating subdivisions and is tied in to the same irrigation system.

I determined a theoretical diversion rate for the system based on the parameters observed during the site visit and the equation:

$$Q = \frac{8.8 * hp * E}{DL + 2.31(P)}$$

Where,

hp = 7.5 => horsepower of submersible motor

E = 0.7 => pump efficiency (assumed per Admin PP Memo No. 16)

DL = 20 – 40 (range) => dynamic pumping level (feet below ground surface)

P = 60 (psi) => pressure of the system

I calculated the diversion rate for a range of values for DL that seemed reasonable based on the well test information from the well driller's report. The corresponding Q values ranged from 0.26 to 0.29 cfs. The minimum value for this range is higher than the permitted value of 0.23 cfs. In addition, the number of irrigated acres developed is slightly less than the permitted acreage. The BU standard rate for 9.6 acres is 0.19 cfs, which is the most limiting rate of these three. Therefore, I have recommended that the license be written for 0.19 cfs.

I determined the annual volume based on the headgate requirement (4.5 afa/acre) and the number of irrigated acres developed (9.6). The annual volume recommended for the license is 43.2 afa.

The permit carries the condition 01J, which requires the permit holder to install a measuring device and lockable controlling works prior to diversion. The permit holder states in their proof that both requirements have been satisfied. As I mention above, there appears to be a propeller or turbine-type measuring device installed at the start of the mainline (see photo). There is also a wheel that opens a valve between the pump and the mainline which could be closed and locked to prevent diversions. Therefore, the permit holder seems to have satisfied the conditions of the permit.

There is no overlap for the point of diversion. There is a slight overlap for the irrigation place of use for the 0.3 acres of irrigation in Lot 2 (NWNE) according to the shapefiles in ArcMap.

However, Mr. German confirmed that the Westover irrigation system is the only irrigation on that acreage. Therefore, I have concluded that no overlap exists. However, a combined use limit restricting irrigation to 0.02 cfs per acre and 4.5 afa per acre will be included on the license to ensure that the potential overlap is addressed.

Right 63-32917 appears to provide sufficient mitigation to cover the use by this right. However, the mitigating values should be updated to reflect the actual development. Right 63-32917 is an older Stewart-Decree right which may be reduced to 60% of its decreed value annually. The updated mitigating diversion rate takes into account reduction. The mitigating right needs to give

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up 0.32 cfs so that, when reduced to 60%, it can still provide 0.19 cfs. The mitigating right appropriates 0.0308 cfs/acre for irrigation. So, 0.32 cfs is equivalent to 10.4 acres irrigation. At 4.5 afa/acre the mitigating volume is 46.8 afa. Condition 170 will be updated on this right and the mitigation values will be updated on right 63-32917.

MEMORANDUM

Date: July 14, 2017
To: Water Right File 63-32125
From: Cody Parker
Re: Water District and Measurement/Locking Conditions

The right was permitted with conditions stating that the diversion is subject to control of the WD 63 watermaster, and requiring the permit holder to install and maintain lockable works and a measurement device. However, the source is groundwater which is not under control of the watermaster. So, condition R05 has been dropped at licensing. A site visit did confirm that the measuring device and lockable works were implemented but, the condition will be dropped from the license and the owner will not be required to maintain these.



Figure 1 The 8" well head located within Lot 1 Blk 2, Westover Lakes Subdivision.

Metal Tag No. D0038575



Figure 2 A view of the vault where water from the pump enters the mainline. The wheel opening the valve to the mainline can be chained in the closed position if necessary. The measuring device appears to be a propeller or turbine-type water meter.



Figure 3 The weld holding the metal tag was visible, but the metal tag itself is missing from the well head.



Figure 4 The control box for the 7.5 HP Franklin Electric submersible motor. The digital readout on the face showed that pressure in the lines was held at around 60 psi.



Figure 5 A closer look at the digital readout on the face of the control box.

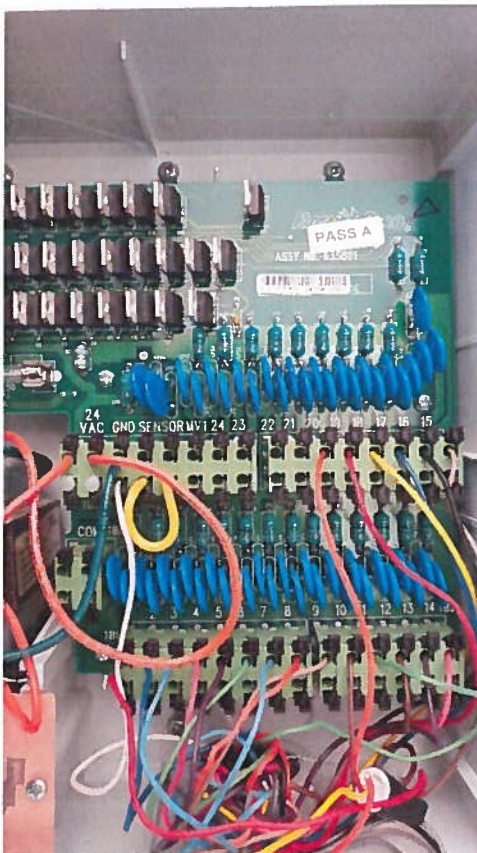


Figure 6 A look into one of the main Rain Bird control boxes which controls the timing and duration of irrigation for several zones throughout the subdivision. There are three such boxes that cover irrigation for all common areas. Each homeowner has a separate control box to control irrigation of their individual lawns.

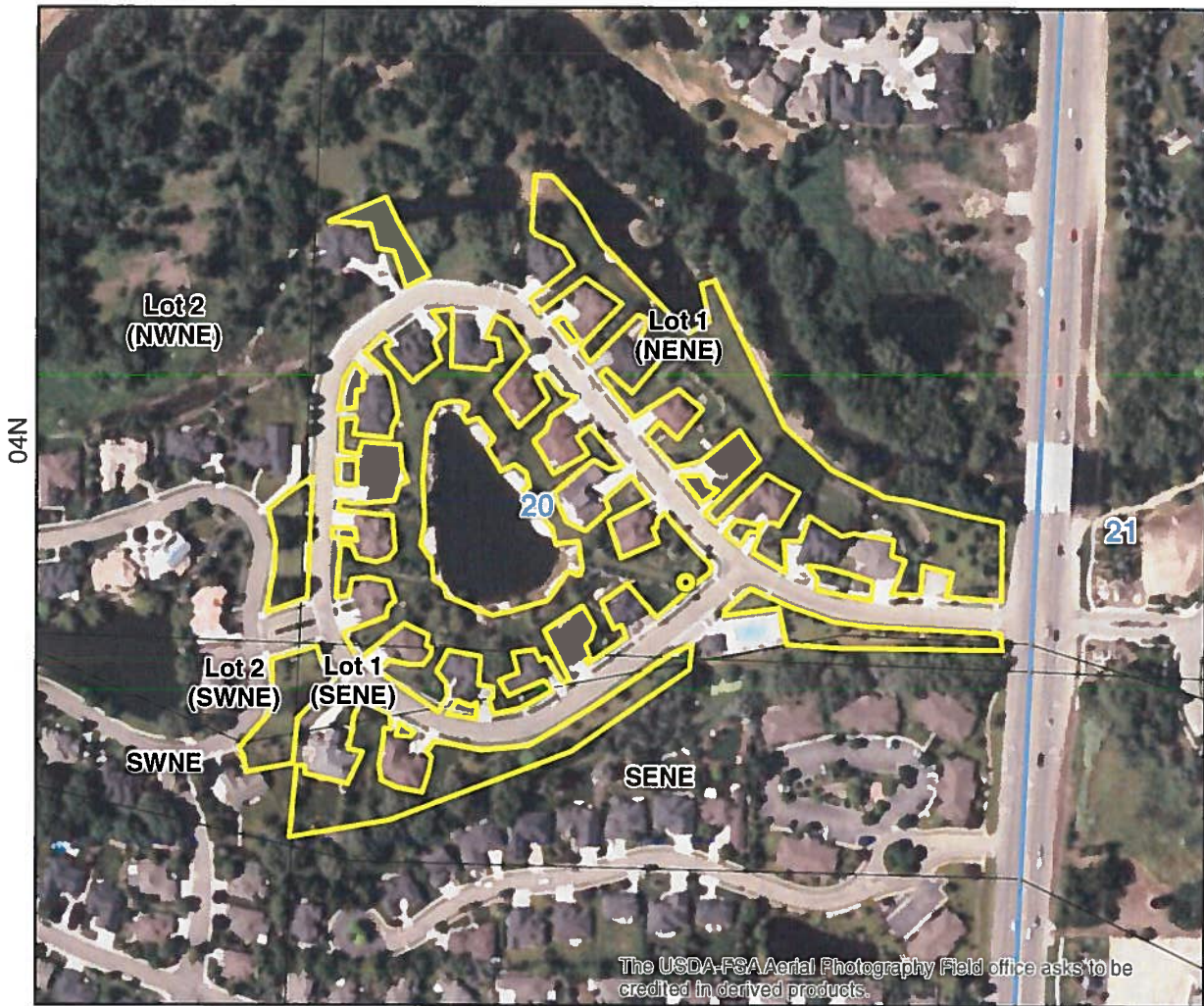
State of Idaho
Department of Water Resources

Attachment to Water Right License

63-32125

This map depicts the IRRIGATION place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.

01E

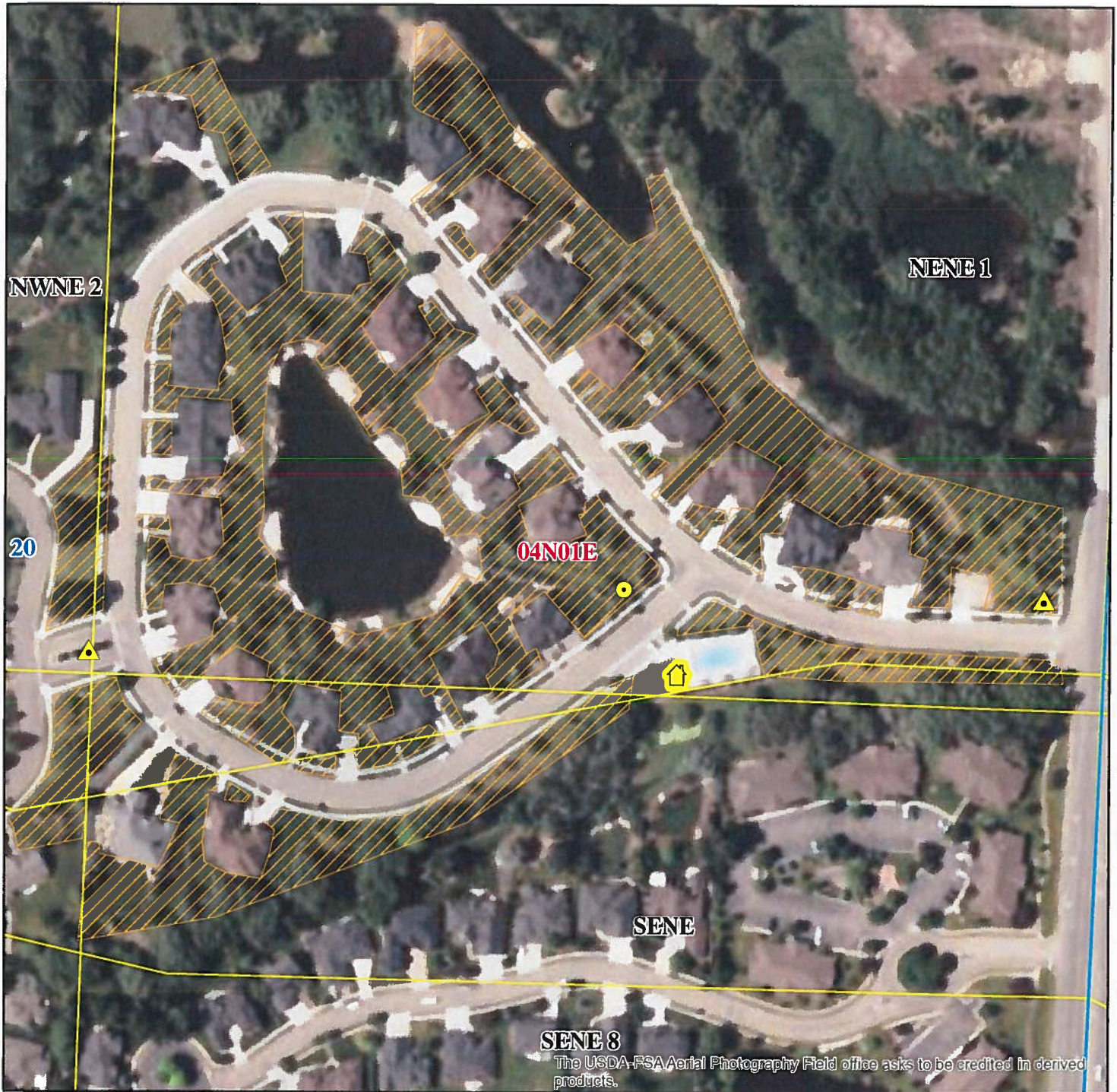


-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections

0 0.04 0.08 0.16 Miles



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SYSTEM DIAGRAM



Irrigation Place of Use



Point of Diversion



Main Sprinkler Control Boxes



Pump House



Township/Range



Sections



QQ

0 0.05 0.1 Miles



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CHANGE IN ADDRESS

This form can be used to notify the Department of a change in
address of the owners of record for the listed water rights.
(Please print or type)

Water Right Number(s): 63-32125 & 63-32126Name(s): Westover Lakes
AmiOld Mailing Address: 1310 N. Main St.
Meredian, Id 83642New Mailing Address: 3140 W. Belltower Dr. #105
Meredian, Id. 83646Telephone Number: 208-385-9650 x-218Email: aasche@amihome.netSignature(s) of Owner(s) Annette Asche on behalf of
Westover Lakes
Ami - Neighborhood managers
(Include your title if on behalf of company or organization.)Date: 9/27/17

Send a signed original to your closest regional office:

IDWR Northern Region
7600 N. Mineral Dr., Suite 100
Coeur d'Alene, ID 83815-7763
(208) 762-2800IDWR Western Region
2735 Airport Way
Boise, ID 83705-5082
(208) 334-2190IDWR Eastern Region
900 N. Skyline Dr., Suite A
Idaho Falls, ID 83402-1718
(208) 525-7161IDWR Southern Region
650 Addison Ave W, Suite 500
Twin Falls, ID 83301-5858
(208) 736-3033

