

MEMORANDUM

Date: October 24, 2008
To: Water Right File 37-8165
From: Aaron Marshall
Re: Licensing Review

Permit 37-8165 authorized the use of 3.00 cfs of water from White Arrow Hot Springs for domestic, fish propagation, heating, irrigation, and recreation purposes. The field examiner found 1.93 cfs of water from White Arrow Hot Springs used for commercial, domestic, fish propagation, fish propagation storage, heating, irrigation, and recreation purposes. In addition, after consulting with the examiner, water is also used for aesthetic purposes in a moat surrounding a home on the property.

The on-stream pond for fish propagation storage is 1.0 af in size. Based on information available from the ET-Idaho web site, an additional 0.9 af is used on average to replace annual evaporation losses. A point of rediversion should be identified on the license at the location of the dam for this pond. Since the pond is on-stream, this point of rediversion is necessary to clarify that the source of water being stored is from White Arrow Hot Springs, not from an unnamed stream.

A licensing amendment will be necessary to change and add points of diversion, change and add places of use, and change the nature of use.

Marshall, Aaron

From: Marshall, Aaron
Sent: Tuesday, September 23, 2008 3:29 PM
To: Skinner, Corey
Subject: Permit 37-8165, Erkins - White Arrow Ranch

Corey,

I'm reviewing permit 37-8165 and preparing a license. I have some questions regarding the field report.

- $\sim 0.8 \text{ ac} \sim 4-5 \text{ ft deep} \sim 3.6 \text{ AF} \text{ --- } 1.93 \text{ cfs} \times 1.9835 = 3.83 \text{ AF}$
- ✓ 1. What is the size (surface area and volume) of the southernmost pond, the off-stream pond, used for fish propagation? It seems like this pond may require a storage component. No.
 - ✓ 2. Does the use of the two ponds appear to be consistent with commercial fish production or would the use be more accurately described as recreation or aesthetic storage? OK
 - ✓ 3. a. What are the sizes of the pool and moat? 52' x 38' x 4' shallow & 7' deep
b. What is the flow rate into each? Vol. = 2.4 AF $\sim 300 \text{ ft long} \times \text{avg. } 70 \text{ ft} \times 5 \text{ ft deep}$
c. Does the use of water in the pool and moat require a storage component? No.
d. Should the moat be described as an aesthetic use because of the ornamental fish or did some type of recreation occur there? Yes

Feel free to send a reply via email, call, or we can discuss this during the teleconference tomorrow morning.
Thanks.

Aaron Marshall
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Aesthetic 1.93 cfs for moat
same location as recreation around small house

* notes resulting from telephone conversation
with Corey Skinner. Aaron Marshall

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Change in Nature of Use from Permit

Permit

Irrigation - 190 acres	3.00 cfs
Fish Prop.	3.00 cfs
Heating	3.00 cfs
Domestic - 2 homes	0.06 cfs
Recreation	0.30 cfs
	<u>3.00 cfs</u>

License (if developed as permitted)

Irrigation - 190 acres $\times 4.0 \text{ AF/ac} = 760 \text{ AF}$ ^(570 AF consump.)	3.00 cfs
Fish Prop. - $3.00 \text{ cfs} \times 1.9835 \times 365 \text{ days} = 2,172 \text{ AF}$	3.00 cfs
Heating - $3.00 \text{ cfs} \times 1.9835 \times 365 \text{ days} = 2,172 \text{ AF}$	3.00 cfs
Domestic - 2 homes $\times 0.6 \text{ AF/home-indoor} = \del{1.2} 1.2 \text{ AF}$	0.06 cfs
Recreation - $0.30 \text{ cfs} \times 1.9835 \times 365 \text{ days} = 217.2 \text{ AF}$	0.30 cfs
	<u>2,172 AF</u> <u>3.00 cfs</u>

Field Report Findings/Recommendation

Irrigation - 133 acres $\times 4.0 \text{ AF/ac} = 532 \text{ AF}$ ^(399 AF consump.)	1.93 cfs
Fish Prop. - $1.93 \text{ cfs} \times 1.9835 \times 365 \text{ days} = 1,397 \text{ AF}$	1.93 cfs
Heating - $0.50 \text{ cfs} \times \text{use est. calc.} = \sim 68.4 \text{ AF}$	0.50 cfs
Domestic - 3 homes $\times 0.6 \text{ AF/home-indoor} = 1.8 \text{ AF}$	0.06 cfs
Recreation - 1 pool $\times 0.30 \text{ cfs} \times 1.9835 \times 365 \text{ days} = 217.2 \text{ AF}$	0.30 cfs
Fish Prop. Storage - 1.0 AF on-stream pond + $\sim 0.9 \text{ AF evap} = 1.9 \text{ AF}$	
Aesthetic - 1 moat $\times 1.93 \text{ cfs continuous flow through} \times 1.9835 \times 365 \text{ days} = 1,397 \text{ AF}$	<u>1.93 cfs</u>
	~~1,397 AF~~ ~~1.93 cfs~~
Commercial - greenhouse uses	<u>106.3 AF</u> <u>0.25 cfs</u>
	<u>1,397 AF</u> <u>1.93 cfs</u>

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SCHEMATIC BASED ON FIELD REPORT

