

MEMO

To: 96-8686 Taylor

From: Sandy Hemenway

Date: 5/4/2011

REF: Review for Licensing

A **Permit to Appropriate** was approved on 6/10/1992, with proof due on 7/1/2002 (after approval of two extensions of time). **Proof of Beneficial Use** was received on 7/1/2002, receipt No. C063030, for \$50.

A **field exam was conducted on 9/1/2005**, with both 96-8686, and 96-8685 water systems included on one exam form. Per management, the systems were split back up and will be licensed individually. Water Right 96-8685 involves the spring sources, and Water Right 96-8686 involves the Hellroaring Creek source. The system consists of a 5 Hp Baldor (JML4092) pump, 5 ft lift, 3 inch discharge, reducing to a 1.5 inch collapsible pipe, then reducing to 300 ft of 1.25 inch hose that a wheel-type propelled sprinkler is put on and follows the hose to locations where the hose is placed. The system runs at 40 thru 70 psi. **Uses found were:** Domestic (a camper and a shop, with no irrigation), Stockwater (20 Llamas drink from the, which is the same as irrigation), and Irrigation of 6.3 acres. **No POD/POU Overlaps** were found. Some information above was obtained from Mr. Taylor on 2/25/2011, and 4/19/2011.

Ownership was confirmed via the Tax Lot Information which was updated on 4/15/2010, showing Thomas P. and Gale E. Taylor 1901 W Bowie Rd., Medical Lake, WA 99022 as the current owners (same information as on the water right). Mr. Taylor stated in his 4/25/2011 letter, that he had sold the property north of the Hellroaring Creek, but had retained the water right. Tax Lot Information shows the property sold as being owned by Hellroaring Creek LLC.

On 2/25/2011, Mr. Taylor confirmed the location of the Hellroaring Creek POD for 96-8686; the 2 spring locations for 96-8685; and the diversion to storage POD from Hellroaring Creek with buried pipe going to the recreation storage (pond) in 96-8685. On 4/19/2011, during a phone conversation with Thomas Taylor, he clarified some information about the water system. Mr. Taylor indicated that he would cease use of the diversion to storage POD immediately, since it is not included on either water right 96-8685 or 96-8686. He stated he had no desire to apply for another permit (**POD confirmation map is located in file 96-8685**).

The **shapefile** for irrigation and stockwater was taken off 1992 ArcMap Imagery, since it was more defined.

Season of Use

The Season of Use was changed to 4/1 - 10/31 (IDWR Standard).

CFS

Domestic: 0.02 cfs (irrigation contained under irrigation component)

Stockwater (20 Llamas): 0.02 cfs

Irrigation: $0.02 \text{ cfs} \times 6.3 \text{ acres} = 0.126 = 0.13 \text{ cfs}$

Theoretical: (field exam stated 40 - 70 psi)

$[(8.8 \times 5.0 \text{ Hp} \times 0.70 \text{ eff})] / [15 \text{ ft} + (2.31 \times 40 \text{ psi})] = 30.8 / 107.4 = 0.2867 = 0.29 \text{ cfs}$

Irrigation information from manufacture manual: 9mm nozzle @ 60 psi = 25 gpm X
 $0.00223 = 0.0557 = 0.06 \text{ cfs}$

Pipe conversion:

For 1.25 inch hose:

$Q = 5 (3.1416) \times [(1.25/12)/2]^2 = 0.0426 = 0.04 \text{ cfs}$ for wheel sprinkler to travel on

For 1.5 inch collapsible pipe:

$Q = 5(3.1416) \times [1.5/12/2]^2 = 0.0613 = 0.06 \text{ cfs}$

RECOMMEND:

Domestic 0.02 cfs

Stockwater 0.02 cfs

Irrigation 0.06 cfs

Total Diversion Rate 0.06 cfs

Volume

Domestic: 0.6 af (no irrigation)

Stockwater:

$V_{ir} = (20 \text{ head} \times 12 \text{ gpd} \times 365 \text{ days}) / 325,850 = 0.3 \text{ af}$

$V_{dr} = 0.02 \text{ cfs} \times 365 \times 1.9835 = 14.5 \text{ af}$

$V = 0.3 \text{ af}$

Irrigation:

$V_{ir} = 6.3 \text{ acres} \times 3.0 = 18.9 \text{ af}$

$V_{dr} = 0.06 \text{ cfs} \times 214 \text{ days} \times 1.9835 = 25.5 \text{ af}$

$V = 18.9 \text{ af}$

RECOMMEND TOTAL MAXIMUM DIVERSION VOLUME:

Domestic 0.6 + Stockwater 0.3 + Irrigation 18.9 = 19.8 af



Check Administrative Area Results



Click On Item For More Information

Season Of Use 4/1 - 10/31
Headgate Requirement 3
Consumptive Use 2
msf_upstream Pack River (96-08717)
Source Water Plumes PRIEST RIVER CITY OF
Source Water Plumes LACLEDE WATER DIST
Administrative Basin 96

