

## WATER TRANSFER WORKING GROUP PROJECT DESCRIPTION

<b>APPLICATION NO./COURT CLAIM NO.</b>		
Acquavella Court Claim No. 01724		
<b>APPLICANT NAME</b>	<b>CONTACT NAME</b>	<b>TELEPHONE NO.</b>
S.C. Aggregate Co., Inc.	Jeff Slothower	(509) 925-6916
<b>WATER RIGHT HOLDER'S NAME (if different)</b>		<b>EMAIL</b>
		jslothower@lwhsd.com

<b>DATE OF APPLICATION</b>	<b>PRIORITY DATE</b>
4/21/09	10/30/1884

<b>WATER SOURCE:</b>	<b>CROP:</b>
Yakima River	Turf
<b>INSTANTANEOUS QUANTITY:</b>	<b>ANNUAL QUANTITY:</b>
4.91 cfs – irrigation .2 cfs - stock water	1199 - irrigation 5.12 - stock water
<b>PERIOD OF USE:</b>	
April 1 to October 15	
<b>PLACE OF USE:</b>	<b>PURPOSE OF USE:</b>
S 1/2 SE 1/4 of S.3, T. 17 N. R. 18 EWM, lying Southwest of boundary of Interstate 90 and East of Dike Road and North of Damman Road, except the I-90 right of way and that portion of the NE 1/4 of S 10, T 17 N 18 lying east of Dike Road and north of Damman Road except the I-90 right-of-way.	Irrigation of 50 acres and stock water
<b>IRRIGATION METHOD:</b>	
Sprinkler	

<b>CONSUMPTIVE USE CALCULATION:</b>		
Consumptive use is based on a technical memo prepared by Randy Asplund of RH2 Engineering in East Wenatchee. Consumptive use is based on the Washington Irrigation Guide Crop Irrigation requirement for commercial turf grass in Ellensburg from May to November. The cu is calculated as follows:		
<b>Calculation of Existing Crop Irrigation Requirement (CIR)</b>		
The CIR presented here is based on the <i>Washington Irrigation Guide</i> for a pasture/turf grass crop located in the vicinity of Ellensburg Washington (Appendix B-49a)		
<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px;">CIR = 2.7 AFY</td> <td style="padding: 2px 10px;">AFY = acre-feet of water per acre for the growing season</td> </tr> </table>	CIR = 2.7 AFY	AFY = acre-feet of water per acre for the growing season
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(continued below. . .)		

(continued from above. . . .)

#### Calculation of Existing Irrigation Efficiency

Irrigation efficiency is calculated based on DOE Guidance Document 1210 using the following equation:

$$Ea = CIR / \text{Total Historical Usage}$$

where:

	Total Historical Usage
Ea (2006) = 57.4%	2006 4.7 AFY
Ea (2007) = 60.1%	2007 4.5 AFY

Ea Avg = 58.8%
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 This value was used to calculate the TIR

#### Calculation of Existing Total Irrigation Requirement

$$TIR = CIR/Ea$$
 From DOE Guidance Document 1210

where: Ea (%) = 58.8%

TIR = 4.6 AFY
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#### Determination of the Consumptive / Non-Consumptive Balance of Total Water Use

Consumptive and Non-Consumptive use based on DOE GUID-1210 and Table 1 for evaporation percentage.

$$CU = TIR \times (\%Ea + \% \text{ Total Evap}) \quad \% \text{ Evap} = 15\%$$

CU = 3.4 AFY
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$$RF = TIR \times \%RF \quad \% RF = (100 - \%CU)$$

$$\% RF = 26\%$$

RF = 1.2 AFY
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(For a complete copy of the technical memo, contact Jeff Slothower @ [jslothower@lwbsd.com](mailto:jslothower@lwbsd.com))

The technical memo calculated the evaporative issues at the existing place of use are higher and more representative of the conditions found in a solid set over tree sprinkler systems (15 percent) than what is standard for the current pop-up type sprinkler systems. The specific factors are: 1) the existing place of use is located in the Kittitas Valley and is exposed to the persistent down valley winds deny the irrigation system; and ii) the Kittitas Valley historically has relatively low humidity and high temperatures; and iii) the older gear-driven roto sprinkler leads with their small nozzle sizes and higher operating pressure creates a spray with a smaller average droplet size leading to misting conditions.

#### NARRATIVE DESCRIPTION OF PROJECT:

S.C. Aggregate purchased the water right from G&J Enterprises. G&J Enterprises retained the real property. A golf course was on the property. The golf course is closed and there are no other water rights on the property; thus, the existing place of use will be followed. The applicant desires to permanently change the purpose of use to instream flow and the place of use to the Yakima River. The primary reach is described as follows:

Within the Yakima River from the existing point of diversion downstream to the next authorized point of diversion which is legally described as a point on the mainstream of the Yakima River as 1340 feet south and 1760 feet west from the northeast corner of Section 10, being within the SW 1/4 of the NE 1/4 of S. 10, T. 17 N. R. 18, E.W.M.

The secondary reach is described as within the Yakima River from the end of the primary reach to the confluence of the Yakima and Columbia Rivers.

Once the transfer is complete, the applicant intends to enter into a Trust Water Right Agreement with Ecology.