

WATER TRANSFER WORKING GROUP PROJECT DESCRIPTION

APPLICATION NO./COURT CLAIM NO. CS4-00176sb2 (KITT-14-02)		
APPLICANT NAME Brian Pat King	CONTACT NAME Jessica Kuchin	TELEPHONE NO. 206.838.7653
WATER RIGHT HOLDER'S NAME (if different)		EMAIL

DATE OF APPLICATION January 17, 2014	PRIORITY DATE 06/30/1887
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WATER SOURCE: Big Creek	CROP: Hay and pasture is current crop (Post change: In-stream flow for water banking)
INSTANTANEOUS QUANTITY: 0.01	ANNUAL QUANTITY: 2.4 afy for irrigation and 0.0067 afy for stock water (Post change: 0.8767 afy total consumptive use)
PERIOD OF USE: May 1 to September 1	
PLACE OF USE: 0.5 acres within lot 5 and parcel H of surveys, Kittitas Co. Rec. 201004130016, lying within SE1/4 of Section 20, T. 20 N., R. 14 E.W.M. (Post change: In-stream Big Creek downstream from current POD to confluence with Yakima River and downstream to confluence with Columbia River.	PURPOSE OF USE: Irrigation and stock water (Post change: In-stream flow for water banking purposes)
IRRIGATION METHOD: Surface/flood	
NARRATIVE DESCRIPTION OF PROJECT: Fallow 0.5 acres of grass and change water right to in-stream flow for the purpose of water banking.	

CONSUMPTIVE USE CALCULATION: 2.4 afy for irrigation and 0.0067 afy for stock water = 0.8767 afy total consumptive use; see excerpt from ROE below:
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Continued

Acres Irrigated Under King's Portion of Court Claim 00176: 0.5 acres

Mr. King's water right is to irrigate 0.5 acres, or 2.4 acre-feet per acre. The WIG estimates that the crop irrigation requirement for pasture grass is 18.11 inches per year (1985 WIG version) (1.51 acre-feet per acre).

The CIR of 0.76 acre-feet per year indicates an irrigation efficiency of 31.66 percent ($31.66\% \times 2.4 = 0.76$) which is close to the typical irrigation efficiency range for surface flow irrigation as described in Ecology GUID 1210 (estimated by Ecology to be 35% to 65%). Ecology GUID 1210 also indicates that surface/flood irrigation methods have an additional evaporation consumptive loss of 5 percent. Therefore, the total consumptive loss for the irrigation of 0.5 acres of pasture grass with an annual water right of 2.4 acre-feet is 0.87 acre-feet per year ($36.66\% \times 2.4 = 0.87$ acre-feet per year).

Mr. King's portion of Court Claim 00176 also allocates 0.0067 acre-feet (approximately 6 gallons per day) of water for consumptive use by stock. The Report of Referee for Subbasin No. 2, acknowledged that Mr. Darling maintained 45 head of cattle. According to Mr. King's testimony 52 cattle were on the property up until December 2008 and 35 cattle until Mr. Darling's death in May 2009. Report of Referee, Subbasin No. 2, pg. 42, confirmed by *Ecology v. Acquavella*, Conditional Final Order for Subbasin No. 2 (Feb. 13, 1997). The United States Environmental Protection Agency Manual of Individual and Non-Public Water Supply Systems (US EPA, May 1991) indicates that horses, mules, cattle and steers typically consume approximately 12 gallons per day of water. This is also consistent with the testimony accepted by the Referee for Court Claim 00176. *Ecology v. Acquavella*, Yakima County Superior Court Cause No. 77-2-01484-5, Report of Referee Subbasin No. 2, at page 42.

The total water right of 2.4 acre feet for irrigation and 0.0067 acre-feet for stock water, as allocated under Court Claim 00176, can be divided into 0.76 acre-feet used consumptively by the crop, 0.11 acre-feet consumptively lost as evaporation during irrigation, 1.53 acre-feet of non-consumptive irrigation return flow, and 0.0067 acre-feet consumptively used by livestock. Total consumptive water use allocated for Mr. King's portion of Court Claim 00176 is 0.8767 acre-feet.

In order to calculate the instantaneous volume and the total volume per month the WIG crop demand timing table was reviewed. The water right only authorizes use until September 1st, so in order to quantify the annual volume, the WIG timing quantities were adjusted to reflect a shorter irrigation season for Court Claim 00176. Specifically, the WIG quantity for September was redistributed to June, July, August and September 1st. Thus under the Board's consumptive use estimate, in order to ensure the use of the subject water right is not enlarged, the quantity left instream is as follows:

	Qa (acre-feet)	Qi (cfs)
Non-irrigation season (Sept 2nd – April)	0.000558 (per month)	0.00001
May	0.000558	0.00001
June	0.200660	0.00337
July	0.383360	0.00624
August	0.278960	0.00454
September 1st	0.00870	0.000440
Total	0.8767	

The information or conclusions in this section were authored and/or developed by Jessica Kuchan, WSBA No. 38304, attorney for the applicant.

CONCLUSIONS [See WAC 173-153-130(6)(d)]

Tentative determination (validity and extent of the right)

Mr. King's portion of Court Claim 00176 is appurtenant to property Mr. King owns (Kittitas County Parcel No. 957094). The evidence shows that water was beneficially used on Mr. King's property for the maintenance of pasture grass for cows and stock water. In accordance with Chapter 90.38 RCW, the Board makes a tentative determination that Mr. King's portion of Court Claim is a valid water right authorized to withdraw up to 0.01 cfs, 2.4067 acre feet per year. The actual quantity that is transferrable is described above.

Approval of this change of purpose and place of use to instream flow will not impair existing water rights so long as the requirement to fallow as described above is imposed. Thus, the Board has required a condition to fallow parcel 957094.

Creating an instream flow right allowed under Chapter 90.38 RCW is not contrary to the public interest.

Relinquishment or abandonment concerns

The Board has determined that no part of the water right has been relinquished or abandoned.

Hydraulic analysis

See above.

Consideration of comments and protests

No comments or protests were received.

Impairment



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  0.5 Acres to be followed
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