

WATER TRANSFER WORKING GROUP PROJECT DESCRIPTION

APPLICATION NO./COURT CLAIM NO. Claim 01467(A)03296		
APPLICANT NAME Kathleen Masterson	CONTACT NAME Kelly McCaffrey, Washington Water Trust	TELEPHONE NO. (206) 675-1585 x103 (206) 755-9146
WATER RIGHT HOLDER'S NAME (if different) Harry James Masterson & Mary Lou Masterson (Kathleen Masterson, Personal Representative of Harry Masterson)		
DATE OF APPLICATION March 1, 2010		PRIORITY DATE June 30, 1883
WATER SOURCE: Teanaway River	CROP: Mixed hay, timothy	
INSTANTANEOUS QUANTITY: 4.8 cfs	ANNUAL QUANTITY: 1527.5 af/y	
PERIOD OF USE: May 1 – September 15		
PLACE OF USE: Those portions of S½SW¼, SW¼SE¼ of Section 28, and N½NW¼, NW¼NE¼ of Section 33 lying southerly and westerly of Masterson Ditch, ALL being within T. 20 N., R. 16 E.W.M.	PURPOSE OF USE: Irrigation on 235 acres	
IRRIGATION METHOD: Wheellines		

Consumptive Use Calculation – page 2

CONSUMPTIVE USE CALCULATION:

From May 1 through September 15, Masterson will not be irrigating 235 acres.

By month, AF and CFS calculations in Consumptive Use:

May: 0

June: 79.99 af / 1.34 cfs

July: 154.56 af / 2.51 cfs

August: 114.34 af / 1.86 cfs

September: 82.93 af / 1.39 cfs

65 % efficiency with wheellines. 10% for evaporative loss. 15 days of irrigation appropriated in September. See page 3 for full spreadsheet.

NARRATIVE DESCRIPTION OF PROJECT:

Masterson was confirmed an 1883 priority date water right under court Claim 01467(A)03296 in Subbasin No. 3 (Teaaway). WWT is proposing a temporary transfer of the irrigation portion of the water right. The water is to be placed into the state Trust Water Rights Program for one year. Our transfer application, on behalf of Masterson, proposes to change the purpose of use from irrigation to instream flow from May 1 to September 15 in 2010 only and change the place of use for use as instream flow in the Teaaway and Yakima Rivers to the confluence with the Columbia River.

WTWG "Box" Checklist	YES	NO
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March 1, 2010: WWT_ Masterson

1. Validity

Is there continued beneficial use history sufficient to ensure that the right has not been relinquished or abandoned?	y	
Is it free of any "cloud" or claim on the title of the water right?	y	

2. Water Budget Neutrality

Is the transfer water budget neutral?	y	
Is the transfer TWSA (Total Water Supply Available) neutral?	y	
Does the transfer of the right result in equal or less consumptive use?	y	
Can the transfer be made without detriment or injury to existing rights? (RCW 90.03.380(1))	y	

3. Timing and Availability

Temporary Transfers: If a seasonal transfer, can the transfer be implemented in the time remaining in the season?	y	
Permanent Transfers: Is there a map of the fallowed land or discontinued use and can it be confirmed?	y	

4. Impairment of instream flow

Does the transfer cause no adverse change to instream flows?	y	
Is all the water accounted for at Parker and Prosser (if applicable)?	y	

5. Operational Considerations

If the transfer relies on space in existing Reclamation storage, is storage capacity available?	Na	
Can the transfer be "bucketed", with different rate and timing, without adverse impacts on other users and fish and other aquatic life?	Na	
Does the transfer have no impermissible impact on Yakima Project operations?	Y	

6. For Transfers Between Surface Water and Ground Water

Can the hydrologic impacts of the transfer be accurately evaluated?	Y	
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7. Other considerations

Is the transfer in agreement with public policy?	Y	
Is the transfer free of unacceptable secondary effects – economic, environmental, or cultural?	Y	
Does the transfer not rely on return flow?	y	

ACQ (CU) Calculations_ WWT-Mastersons 1yr lease (only) 2010

NIR and CIR only (not yet including Ea or Evap properties)
 Cle Elum clover is considered the accepted WIG figures for Teanaway Timothy Hay.

TERMS: NIR (net irrig requirement), CIR (consumptive irrig require), TIR (total irrig requirement, or QA)

WaterRight for lease	Month	NIR per WIG	# acres	AF in 2ndry (CU)	2ndry Galls	Both calc methods	
						CU cfs/mo	CU cfs/mo
235 acres AF(water duty*pou) 1527.5	may	0	235				
	jun	3.54	235	69.33	522.91	1.17	1.17
	july	6.84	235	133.95	977.77	2.18	2.18
	aug	5.06	235	99.09	747.43	1.67	1.67
	15-Sep	3.67	235	71.87	1084.22	2.42	2.42
	oct						
	SubTotal of Consumptive use				374.24		

TIR: Incorporating efficiency into NIR and adding evaporative loss:

Ea (application efficiency) estimated: 65% (NRCS: 65% standard for wheelines, (Table WA684.20.4, Red Manual))

Began using wheellines in 1999 or 2000

Evap (evaporative loss) estimated: 10% (DOE: 10% for wheelines)

Estimate Efficiency % = (NIR CUft/acre) / (6.5duty)

***In THIS instance, cannot use, because carriage water from ditch makes up a portion of that CFO appointed duty*

* Evap is taken from Table 1, Column 4, Consumptive Use Guidelines

Soil attributes, USDA Web Soil Survey: Teanaway loam, 0-3% slope, 19.5% clay, 40.4% sand, 40% silt. Available water capacity rating 0.17in/in. Low AWC rating: 0-3in/in. Soils classified as "Group C" - slow infiltration rate when thoroughly wet; soils w/ layer that impedes downward movement of water or moderately fine texture or fine texture. Soils have a slow rate of water transmission. Material described as "Loess over glacial till or outwash with an influence of volcanic ash in the surface."

WR	Month	NIR: Af-CU/yr	%Ea	%Evap	Total duty	Evap loss	QA or TIR	cfs/month
	jun	69.33	65%	10%	106.65	10.67	79.99	1.34
	jul	133.95	65%	10%	206.08	20.61	154.56	2.51
	aug	99.09	65%	10%	152.45	15.24	114.34	1.86
	15-Sep	71.87	65%	10%	110.57	11.06	82.93	1.39
						57.58	431.81	
		((Af-CU/yr) / (%Ea))		(Total duty * %Evap)	(NIR + Evap loss)	(AF/(days * 1.985))		