

WATER TRANSFER WORKING GROUP PROJECT DESCRIPTION

APPLICATION NO./COURT CLAIM NO.		
Water Budget Neutral Request No. G4-35591 with mitigation from Trust Water Right No. CS4-01467@11sb3a(A)		
APPLICANT NAME	CONTACT NAME	TELEPHONE NO.
Roy and Mary Grinnell	Kurt Walker - Ecology	509-454-4237
WATER RIGHT HOLDER'S NAME (if different)		EMAIL
Mitigation with Washington Water Trust (Masterson) Trust Water Right		kwal461@ecy.wa.gov

DATE OF APPLICATION November 14, 2012	PRIORITY DATE New use mitigated by trust water right with priority date of June 30, 1883
--	---

WATER SOURCE: Groundwater well	CROP: Lawn or noncommercial garden
INSTANTANEOUS QUANTITY:	ANNUAL QUANTITY: 0.435 acre-ft/yr (afy)
PERIOD OF USE: Continuous for single indoor domestic connection and irrigation season for lawn and garden	
PLACE OF USE: Parcel No. 108136, located within Section 26, T. 20 N., R. 16 E.W.M.	PURPOSE OF USE: Single domestic and Irrigation of 1,000 ft ² lawn or garden
IRRIGATION METHOD:	

<p>CONSUMPTIVE USE CALCULATION:</p> <p>Indoor use: One residential connection at 350 gallons per day (gpd) used continuously year round equates to 0.392 ac-ft/yr of water use, or: $(350 \text{ gpd per connection}) \times (365 \text{ days}) \times (\text{one connection}) \times (1.0 \text{ ac-ft}/325,851 \text{ gal}) = 0.392 \text{ afy}$ Consistent with WAC 173-539A-050(3), 30% of domestic in-house use on a septic system is consumptively used, therefore: Indoor consumptive use = $(0.392 \text{ afy}) \times (0.30) = \mathbf{0.118 \text{ afy}}$</p> <p>Outdoor use: The requestor proposes to irrigate 1,000 ft² of lawn and garden. Using a crop irrigation requirement of 18.11 in/yr (or 1.51 ft/yr) for pasture/turf near Cle Elum from the Washington Irrigation Guide and an application efficiency of 80%, the total outdoor irrigation water use is 0.043 afy, or: $[(1.51 \text{ ft/yr}) \div 0.80] \times (1,000 \text{ ft}^2 \div 43,560 \text{ ft}^2/\text{ac}) = 0.043 \text{ afy}$ Consistent with WAC 173-539A-050(3), 90% of outdoor use is consumptively used, so: Outdoor consumptive use = $(0.043 \text{ ac-ft/yr}) \times (0.90) = \mathbf{0.039 \text{ afy}}$</p>
--

**As a result consumptive use (CU) for the project totals to 0.157 afy
(CU April 1 1 to Sept 15 is 0.089 ac-ft and CU Sept 15 to April 30 is 0.067 ac-ft)**

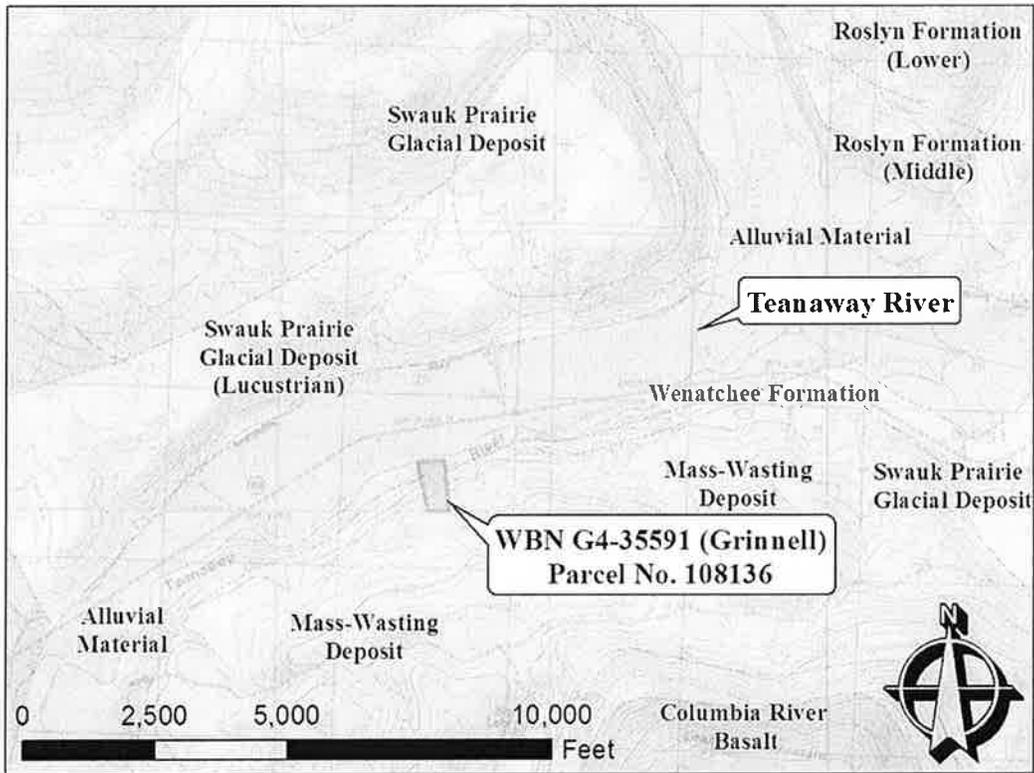
For detailed analysis of month-to-month uses see spreadsheet below.

NARRATIVE DESCRIPTION OF PROJECT:

The requestor proposes to offset the 0.157 afy of consumptive use for the project (one residential connection and 1,000 ft² of lawn and garden) with 0.157 afy of mitigation water acquired from Trust Water Right No. CS4-01467@11sb3a(A). During the irrigation season, 0.067 ac-ft is assigned to the USBR-Ecology Exchange Contract (Contract No. 09XX101700) and released between September 15 and March 31 to address out-of-season flow impacts to the Yakima River. Additionally, to address out-of-season flow impacts to the Teanaway River, \$500 will be placed into an account to be used for one or more upstream or headwater riparian cooridor projects.

The proposed well for the new use is to be located in a “green” area as noted in the current Washington Water Trust (Masterson) Trust Water Right suitability map. Review of the local area hydrogeology suggests that the proposed withdrawals would, more likely than not, result in flow impacts to the Teanaway River. Copies of the Draft Hydrogeology Memo for the subject water budget neutral request is available on request from Ecology. For a copy, please contact Kurt Walker at (509) 454-4237, kwal461@ecy.wa.gov.

Locatin Map for G4-35591



Total and Consumptive Use under G4-35591

Consumptive Use Calculator for WBN form and Contract water form: WRTS No. G4-35591 (Grinnell)

WWT - Masterson CS4-01467@11sb3a(A)

Assumptions for Irrigation:

Assumed efficiency
 % CU for outdoor use per WAC
 Square feet to irrigate
 Acreage

Assumptions for Domestic:

total use per ERU gpd
 total use per ERU af per day
 #ERU
 % CU for septic system

	Irrigation portion:				Indoor Domestic portion:		Total CU (afy)
	WIG (in/yr)	TIR per ac (AFY/ac)	TIR (afy)	CU (afy)	total use (AFY)	CU (AFY)	
Jan	0.00				0.0333	0.0100	0.0100
Feb	0.00				0.0301	0.0090	0.0090
Mar	0.00				0.0333	0.0100	0.0100
Apr	0.00				0.0322	0.0097	0.0097
May	0.00				0.0333	0.0100	0.0100
Jun	3.34	0.3479	0.008	0.007	0.0322	0.0097	0.0169
Jul	6.50	0.6771	0.016	0.014	0.0333	0.0100	0.0240
Aug	4.79	0.4990	0.011	0.010	0.0333	0.0100	0.0203
Sept	3.47	0.3615	0.008	0.007	0.0322	0.0097	0.0171
Oct	0.00				0.0333	0.0100	0.0100
Nov	0.00				0.0322	0.0097	0.0097
Dec	0.00				0.0333	0.0100	0.0100
Total	18.11		0.043	0.039	0.392	0.118	0.157

Results:

shaded cells= contract water

For WBN form:

Total CU	0.157 AFY
Total use	0.435 AFY

For Contract form:

CU (April 1 to Sept 15)	0.089 AFY
CU (Sept 15 to March 31)	0.067 AFY
Contract water	0.067 AFY

contract cost

(\$22 per afy of assigned water for 36 years)

Contract period from September 15 - March 31

Total to add to IF at Parker:	0.000 AFY
Total to debit from TWR:	0.157 AFY (Total CU)