

WATER TRANSFER WORKING GROUP PROJECT DESCRIPTION

APPLICATION NO./COURT CLAIM NO. Water Budget Neutral Request Nos. G4-35560, G4-35561, and G4-35561 with mitigation from Trust Water Right No. CS4-01676sb5d@2		
APPLICANT NAME Thomas & Kathleen Roth	CONTACT NAME Kurt Walker - Ecology	TELEPHONE NO. 509-454-4237
WATER RIGHT HOLDER'S NAME (if different) Mitigation with Roth Trust Water Right		EMAIL kwal461@ecy.wa.gov

DATE OF APPLICATION April 30, 2012	PRIORITY DATE New use mitigated by trust water right with priority date of June 30, 1900
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WATER SOURCE: wells	CROP: Lawn or noncommercial garden
INSTANTANEOUS QUANTITY:	ANNUAL QUANTITY: 1.176 acre-ft/yr
PERIOD OF USE: Continuous for 3 indoor domestic connection and irrigation season for lawn and garden	
PLACE OF USE: Parcel No. 954234, 954235, and 954236, located within the SE ¹ / ₄ SW ¹ / ₄ of Section 29, T. 20 N., R. 16 E.W.M.	PURPOSE OF USE: 3 domestic uses and Irrigation of 1,500 ft ² lawn or garden (500 ft ² per domestic connection).
IRRIGATION METHOD:	

<p>CONSUMPTIVE USE CALCULATION:</p> <p>Indoor use: 3 residential connection at 350 gallons per day (gpd) used continuously year round equates to 1.176 acre-feet per year (afy) of water use, or: $(350\text{gpd per connection}) \times (365 \text{ days}) \times (3 \text{ connection}) \times (1 \text{ ac-ft}/325,851\text{gal}) = 1.176 \text{ afy}$ Consistent with WAC 173-539A-050(3), 30% of domestic in-house use on a septic system is consumptively used, therefore: Indoor consumptive use = $(1.176 \text{ afy}) \times (0.30) = \mathbf{0.353 \text{ afy}}$</p> <p>Outdoor use: The requestor proposes to irrigate 1,500 ft² of lawn and garden. Using a crop irrigation requirement of 24.0 in/yr (or 2.0 ft/yr) for pasture/turf and an application efficiency of 80%, the total outdoor irrigation water use is 0.086 ac-ft/yr, or: $[(1.51 \text{ ft/yr}) \div 0.80] \times (1,500 \text{ ft}^2 \div 43560 \text{ ft}^2/\text{ac}) = 0.086 \text{ ac-ft/yr}$ Consistent with WAC 173-539A-050(3), 90% of outdoor use is consumptively used, so: Outdoor consumptive use = $(0.086 \text{ afy}) \times (0.90) = \mathbf{0.077 \text{ ac-ft/yr}}$</p> <p>As a result consumptive use (CU) for the project totals to 0.430 afy</p>
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(CU May 1 to July 31 is 0.132 ac-ft and CU August 1 to April is 0.298 ac-ft)

NARRATIVE DESCRIPTION OF PROJECT:

The requestor proposes to offset the 0.077 ac-ft/yr of consumptive use for the project (3 residential connection and 1,500 ft² of lawn and garden) with 0.077 ac-ft/yr of mitigation water acquired from Trust Water Right No. CS4-01676sb5d@2. During the irrigation season, 0.298 ac-ft is assigned to the USBR-Ecology Exchange Contract (Contract No. 09XX101700) and released between August 1 to April 30 to address out of season impacts along the Yakima River.

WTWG Project form

Consumptive Use Calculator for WBN form and Contract water: WRTS Nos. G4-35560, G4-35561, and G4-35562 (Roth)

Assumptions for Irrigation:
 Assumed efficiency 0.8
 % CU for outdoor use 0.9 per WAC
 Square feet to irrigate 1500
 Acreage 0.034

Assumptions for Domestic:
 total use per ERU 350 gpd
 total use per ERU 0.001074 af per day
 #ERU 3
 % CU 0.3
 for septic system

Irrigation portion:

	WIG (in/yr)	TIR per ac (AFY/ac)	TIR (afy)	CU (afy)	Total CU (afy)
Jan	0.00				0.0300
Feb	0.00				0.0271
Mar	0.00				0.0300
Apr	0.00				0.0290
May	0.90	0.0938	0.003	0.003	0.0329
Jun	5.07	0.5281	0.018	0.016	0.0454
Jul	7.35	0.7656	0.026	0.024	0.0537
Aug	6.46	0.6729	0.023	0.021	0.0508
Sept	4.21	0.4385	0.015	0.014	0.0426
Oct	0.00				0.0300
Nov	0.00				0.0290
Dec	0.00				0.0300
Total	24.00		0.086	0.077	0.430

Indoor Domestic portion:

	total use (AFY)	CU (AFY)	Total CU (afy)
	0.0999	0.0300	0.0300
	0.0902	0.0271	0.0271
	0.0999	0.0300	0.0300
	0.0967	0.0290	0.0290
	0.0999	0.0300	0.0329
	0.0967	0.0290	0.0454
	0.0999	0.0300	0.0537
	0.0999	0.0300	0.0508
	0.0967	0.0290	0.0426
	0.0999	0.0300	0.0300
	0.0967	0.0290	0.0290
	0.0999	0.0300	0.0300
Total	1.176	0.353	0.430

gray shaded cells= contract water

Results:

For WBN form:

Total CU	0.430 AFY
Total use	1.262 AFY

For Contract form:

CU (May 1 to July 31)	0.132 AFY
CU (Aug 1 to April 30)	0.298 AFY
Contract water	0.298 AFY

contract cost \$242.57

(\$22 per afy of assigned water for 37 years)

Assumes irrigation season starts May 1 and USBR release begins Aug 1.

1/3 of water assigned to contract.

Total to add to IF at Parker:	0.000 AFY
Total to debit from TWR:	0.430 AFY

(Total CU) + (Total to add to IF at Parker)