

## WATER TRANSFER WORKING GROUP PROJECT DESCRIPTION

APPLICATION NO./COURT CLAIM NO.		
Water Budget Neutral Request No. G4-35597 with mitigation from Trust Water Right No. CS4-05259CL@2sb7		
APPLICANT NAME Jim Reed	CONTACT NAME Kurt Walker - Ecology	TELEPHONE NO. 509-454-4237
WATER RIGHT HOLDER'S NAME (if different) Mitigation with Suncadia Trust Water Right		EMAIL kwal461@ecy.wa.gov

DATE OF APPLICATION January 31, 2013	PRIORITY DATE New use mitigated by trust water right with priority date of October 30, 1884
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WATER SOURCE: Well (Ecology Tag No. ALF420)	CROP: Lawn or noncommercial garden
INSTANTANEOUS QUANTITY:	ANNUAL QUANTITY: 0.414 acre-feet/year (afy)
PERIOD OF USE: Continuous for single indoor domestic connection and irrigation season for lawn and garden	
PLACE OF USE: Parcel No. 17672, located with the NW $\frac{1}{4}$ of Section 22, T. 20 N., R. 15 E.W.M.	PURPOSE OF USE: Single domestic and Irrigation of 500 ft <sup>2</sup> lawn or garden
IRRIGATION METHOD:	

<p>CONSUMPTIVE USE CALCULATION:</p> <p><b>Indoor use:</b> One residential connection at 350 gallons per day (gpd) used continuously year round equates to 0.392 afy of water use, or:  <math>(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}</math>  Consistent with WAC 173-539A-050(3), 30% of domestic in-house use on a septic system is consumptively used, therefore:  Indoor consumptive use = <math>(0.392 \text{ afy}) \times (0.30) = \mathbf{0.118 \text{ afy}}</math></p> <p><b>Outdoor use:</b> The requestor proposes to irrigate 500 ft<sup>2</sup> 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 0.022 afy, or:  <math>[(1.51 \text{ ft/yr}) \div 0.80] \times (500 \text{ ft}^2 \div 43,560 \text{ ft}^2/\text{ac}) = 0.022 \text{ afy}</math>  Consistent with WAC 173-539A-050(3), 90% of outdoor use is consumptively used, so:  Outdoor consumptive use = <math>(0.022 \text{ afy}) \times (0.90) = \mathbf{0.019 \text{ afy}}</math></p>
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**As a result consumptive use (CU) for the project totals to 0.137 afy  
(CU April 1 to Aug 31 is 0.065 ac-ft and CU Sept 1 to Mar 31 is 0.072 ac-ft)**

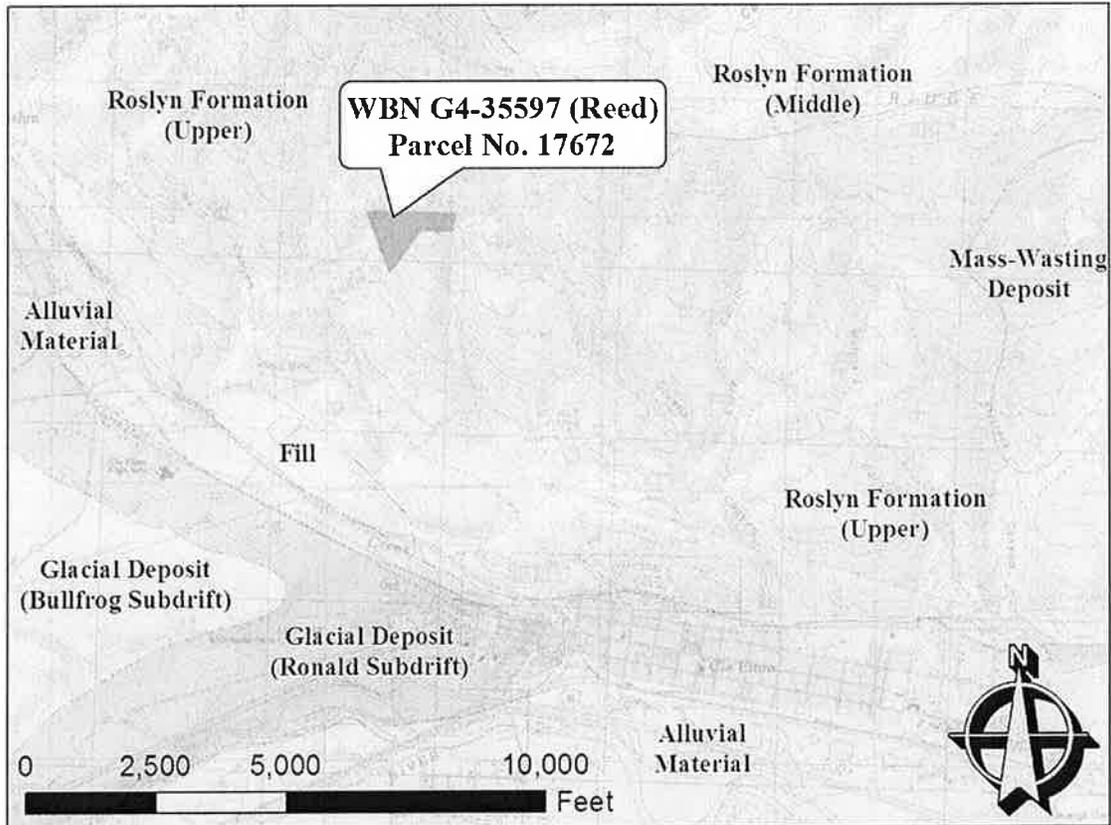
**For detailed analysis of month-to-month uses see spreadsheet below.**

**NARRATIVE DESCRIPTION OF PROJECT:**

The requestor proposes to offset the 0.137 afy of consumptive use for the project (one residential connection and 500 ft<sup>2</sup> of lawn and garden) with 0.137 afy of mitigation water acquired from Trust Water Right No. CS4-05259CL@2sb7. During the irrigation season, 0.072 ac-ft is assigned to the USBR-Ecology Exchange Contract (Contract No. 09XX101700) and released between Sept 1 and Mar 31 to address out of season impacts along the Yakima River. In addition, consistent with the Exchange Contract, Ecology plans to assign 0.024 ac-ft of the Trust Water Right to be managed within the Trust Water Right Program for instream flow purposes to benefit the Yakima River.

The proposed well for the new use is to be located in an area that needed additional information (“yellow area”) to determine the suitability of the Suncadia Trust Water Rights for use as mitigation to offset the new use. Review of the local area hydrogeology suggests that pumping from under G4-35597 would result in flow impacts to Crystal Creek and the Yakima River. Copies of the Draft Hydrogeology Memo for the subject water budget neutral request are available on request from Ecology. For a copy, please contact Kurt Walker at (509) 454-4237, kwal461@ecy.wa.gov.

**Locatoion Map for G4-35597**



**Total and Consumptive Use under G4-35597**

Consumptive Use Calculator for WBN form and Contract water form: WRTS No. G4-35597 (Read)

Assumptions for Irrigation:

Assumed efficiency   
 % CU for outdoor use   
 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:

	WIG (in/yr)	TIR per ac (AFY/ac)	TIR (afy)	CU (afy)	total use (AFY)	CU (AFY)	Total 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	0.004	0.004	0.0322	0.0097	0.0133
Jul	6.50	0.6771	0.008	0.007	0.0333	0.0100	0.0170
Aug	4.79	0.4990	0.006	0.005	0.0333	0.0100	0.0151
Sept	3.47	0.3615	0.004	0.004	0.0322	0.0097	0.0134
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
<b>Total</b>	<b>18.11</b>		<b>0.022</b>	<b>0.019</b>	<b>0.392</b>	<b>0.118</b>	<b>0.137</b>

Results:

shaded cells= contract water

For WBN form:

Total CU	0.137 AFY
Total use	0.414 AFY

For Contract form:

CU (Apr 1 to Aug 31)	0.065 AFY
CU (Sept 1 to Mar 31)	0.072 AFY
Contract water	0.072 AFY

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

Assumes flip-flop starts Sept 1 and irrigation season starts April 1

Total to add to IF at Parker:	0.024 AFY
Total to debit from TWR:	0.161 AFY

1/3 of water assigned to contract.  
 (Total CU) + (Total to add to IF at Parker)