

## WATER TRANSFER WORKING GROUP PROJECT DESCRIPTION

APPLICATION NO./COURT CLAIM NO.		
Water Budget Neutral Request No. G4-35571 with mitigation from Trust Water Right No. S4-02255(A)CTCL@2		
APPLICANT NAME	CONTACT NAME	TELEPHONE NO.
Rob & Diane Hill	Kurt Walker - Ecology	509-454-4237
WATER RIGHT HOLDER'S NAME (if different)		EMAIL
Mitigation with SwiftWater Ranch LLC Trust Water Right		Kwal461@ecy.wa.gov

DATE OF APPLICATION	PRIORITY DATE
July 11, 2012	New use mitigated by trust water right with priority date of June 30, 1890

WATER SOURCE:	CROP:
well	Lawn or noncommercial garden
INSTANTANEOUS QUANTITY:	ANNUAL QUANTITY:
	0.827 acre-ft/yr
PERIOD OF USE:	
Continuous for single indoor domestic connection and irrigation season for lawn and garden	
PLACE OF USE:	PURPOSE OF USE:
Parcel Nos. 17792 and 314136, located within the SW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 26, T. 20 N., R. 16 E.W.M.	Domestic use and Irrigation of 1,000 ft <sup>2</sup> lawn or garden
IRRIGATION METHOD:	

<p>CONSUMPTIVE USE CALCULATION:</p> <p><b>Indoor use:</b> Two residential connections at 350 gallons per day (gpd) used continuously year round equates to 0.784 ac-ft/yr of water use, or:  <math>(350\text{gpd per connection}) \times (365\text{ days}) \times (\text{two connections}) \times (1\text{ac-ft}/325,851\text{gal}) = 0.784\text{ afy}</math>.</p> <p>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>(0.784\text{ afy}) \times (0.30) = \mathbf{0.235\text{ ac-ft/yr}}</math></p> <p><b>Outdoor use:</b> The requestor proposes to irrigate 1,000 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 0.043 ac-ft/yr, or:  <math>[(1.51\text{ ft/yr}) \div 0.80] \times (1,000\text{ ft}^2 \div 43560\text{ ft}^2/\text{ac}) = 0.043\text{ ac-ft/yr}</math>  Consistent with WAC 173-539A-050(3), 90% of outdoor use is consumptively used, so:  Outdoor consumptive use = <math>(0.043\text{ ac-ft/yr}) \times (0.90) = \mathbf{0.039\text{ ac-ft/yr}}</math></p>
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**As a result consumptive use (CU) for the project totals to 0.274 ac-ft/yr (CU April 1 to Aug 31 is 0.130 ac-ft and CU Sept 1 to Mar 31 is 0.144 ac-ft)**

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

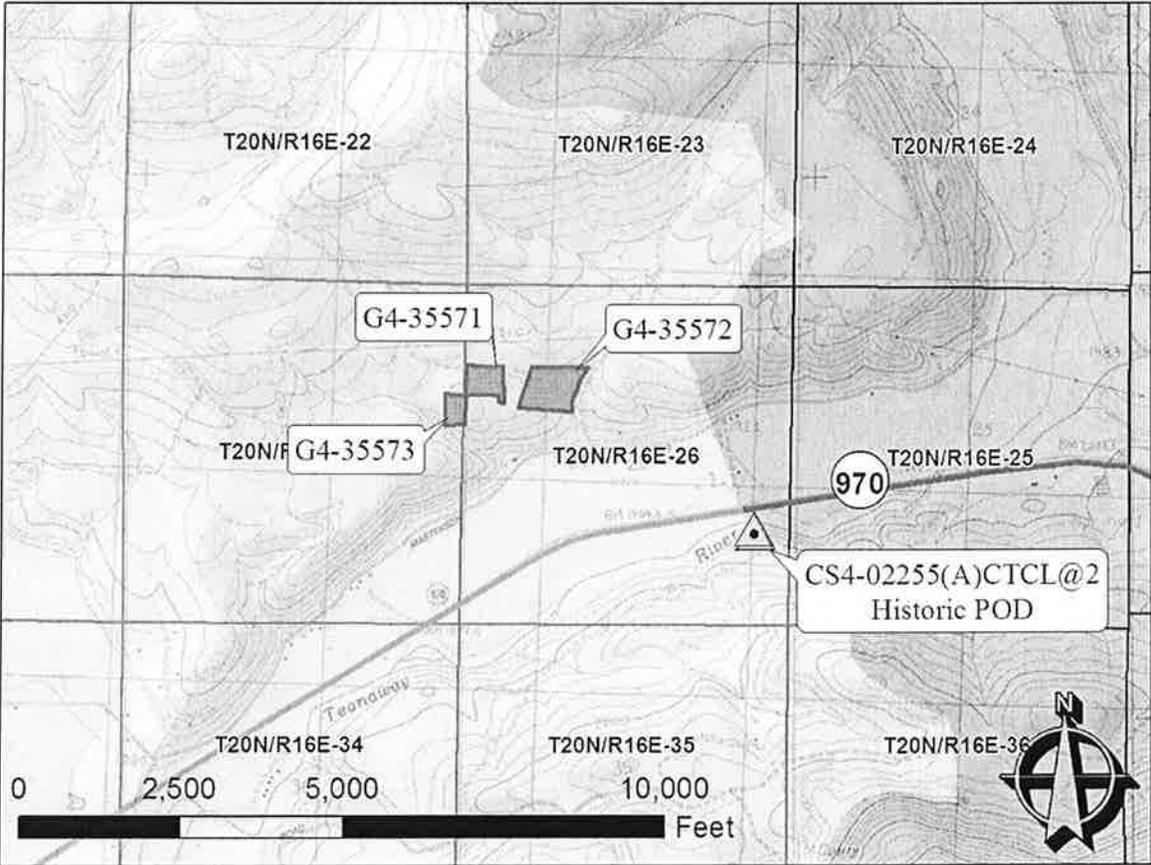
NARRATIVE DESCRIPTION OF PROJECT:

The requestor proposes to offset the 0.274 ac-ft/yr of consumptive use for the project (two residential connections and 1,000 ft<sup>2</sup> of lawn and garden) with 0.274 ac-ft/yr of mitigation water acquired from Trust Water Right No. S4-02255(A)CTCL@2. During the irrigation season, 0.033 ac-ft is assigned to the USBR-Ecology Exchange Contract (Contract No. 09XX101700) and released between September 15 and October 31 to address out of season impacts along the Yakima River.

The proposed well for the new use is to be located in an "green" area as noted on the SwiftWater Ranch LLC suitability map. Review of the local area hydrogeology suggests that the proposed groundwater withdrawals will impact the Teanaway River. For questions regarding the project area hydrogeology with respect to G4-35572, please contact Kurt Walker at (509) 454-4237, kwal461@ecy.wa.gov.

WTWG Project form

Project Location with Topographic Map and Mititation Suitability Overlay



## Monthly Total Use, Consumptive Use, and Exchange Contract Assigenment

SwiftWater In-basin Mitigation: Consumptive Use Calculator for WBN form and Contract water form: WRTS No. G4-35571 (Hill)

Use for calculation for late season (9-15 to 10-31) Exchange Contract assignment

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:

	WIG (in/yr)	TIR per ac (AFY/ac)	TIR (afy)	CU (afy)	total use (AFY)	CU (AFY)	Total CU (afy)
Jan	0.00				0.0666	0.0200	0.0200
Feb	0.00				0.0602	0.0180	0.0180
Mar	0.00				0.0666	0.0200	0.0200
Apr	0.00				0.0644	0.0193	0.0193
May	0.00				0.0666	0.0200	0.0200
Jun	3.34	0.3479	0.008	0.007	0.0644	0.0193	0.0265
Jul	6.50	0.6771	0.016	0.014	0.0666	0.0200	0.0340
Aug	4.79	0.4990	0.011	0.010	0.0666	0.0200	0.0303
Sept	3.47	0.3615	0.008	0.007	0.0644	0.0193	0.0268
Oct	0.00				0.0666	0.0200	0.0200
Nov	0.00				0.0644	0.0193	0.0193
Dec	0.00				0.0666	0.0200	0.0200
<b>Total</b>	<b>18.11</b>		<b>0.043</b>	<b>0.039</b>	<b>0.784</b>	<b>0.235</b>	<b>0.274</b>

9/16-9/30: Contract

Results:

shaded cells= contract water

For WBN form:

Total CU	0.274 AFY
Total use	0.827 AFY

For Contract form:

CU (Nov 1 to Sept 15)	0.241 AFY
CU (Sept 16 to Oct 31)	0.033 AFY
Contract water	0.033 AFY

contract cost

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

Assumes end of TWR IR season is 9/15 and latest diversionary needs downstream on Yakima are Oct 31

Total to add to IF at Parker:	0.000 AFY
Total to debit from TWR:	0.274 AFY

Tributary TWR; see Exchange Contract Section 14(c)(1)

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