

2022-03

WATER TRANSFER WORKING GROUP PROJECT DESCRIPTION

APPLICATION NO./COURT CLAIM NO. KITT-20-06 / S4-84238-J		
APPLICANT NAME David & Michelle Coburn, Aaron & Stephanie Royer	CONTACT NAME Erin Eaton, Trout Unlimited	TELEPHONE NO. 509-607-4354
WATER RIGHT HOLDER'S NAME (if different) Brian Norelius (certificate name)		EMAIL Erin.eaton@tu.org

DATE OF APPLICATION December 2020	PRIORITY DATE June 30, 1889
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WATER SOURCE: Yakima River	CROP: Hay/pasture
INSTANTANEOUS QUANTITY: 1.0 cfs	ANNUAL QUANTITY: 54 acre-feet
PERIOD OF USE: April 15 through October 15	
PLACE OF USE: The south 495 feet of the NW1/4SE1/4 of Section 13, T. 17 N., R. 18 E.W.M., lying east of Bull Road and north of Tjossem Road, EXCEPT that portion described as follows: Beginning at a point on the east boundary line of said quarter/quarter section which is 30 feet north of the center of the SE1/4 of said section and on the north boundary line of the right of way of the Tjossem County Road; thence N 0° 45' W along the east boundary of said quarter/quarter section 455 feet; thence N 88° 35' W 287 feet; thence S 0° 45' E 355 feet; thence S 88° 33' E 117 feet; thence S 0° 45' E 100 feet; thence S 88° 33' E along the north boundary of said Tjossem Road 170 feet to the point of beginning.	PURPOSE OF USE: Irrigation of 9 acres, stockwater
IRRIGATION METHOD: Flood, sprinkler	

<p>CONSUMPTIVE USE CALCULATION:</p> <p>In recent years only 1.9 acres have been irrigated out of the 9 acres historically irrigated. The 1.9 acres corresponds to 11.4 ac-ft/yr and 0.211 cfs of the original water. These amounts are available for transfer to groundwater points of withdraw. Additionally, water use related to this transfer is being mitigated as part of the Tjossem Ditch headworks removal project supported by the Yakima Basin Integrated Plan (see more details below). Therefore 42.6 ac-ft/yr and approx. 0.789 cfs currently held in trust for the purpose of mitigating this project are allotted to the other 7.1 acres historically irrigated. The consumptive use calculations for 7.1 acres of irrigation are as follows:</p> <p>Crop - cherry trees with cover CIR – 39.66 inches (3.315 ac-ft/yr) based on an Ellensburg, WA location. Ea – 70% w/ an additional percent total evaporated of 15%. These values correspond to a overtree set sprinkler system.</p>

Total consumptive acre-feet needed (see explanation below) is **28.49 ac-ft/yr.**

	Apr	May	Jun	Jul	Aug	Sep	Oct	Totals
Inches/Acre (WIG)	0.09	4.78	7.89	11.74	9.43	5.17	0.56	39.66
CIR feet	0.05	2.83	4.67	6.95	5.58	3.06	0.33	23.47
Duty	0.08	4.04	6.67	9.92	7.97	4.37	0.47	33.52
Evap loss	0.01	0.61	1.00	1.49	1.20	0.66	0.07	5.03
CIR ft + Evap losses	0.06	3.43	5.67	8.43	6.78	3.71	0.40	28.49
Consumptive CFS	0.00	0.06	0.10	0.14	0.11	0.06	0.01	0.13

NARRATIVE DESCRIPTION OF PROJECT:

The Tjossem Ditch headworks are located in a side-channel of the Yakima River near river mile 150.5. These headworks have been the authorized point of diversion (POD) for at least 7 different water users with numerous water rights. Historically, the headworks diverted 10 cubic-feet-per-second (cfs) or more into a two-plus mile-long earthen ditch network that conveyed water for irrigation and stockwatering across Yakima River floodplain to reach all of the authorized places of use (POU) for Tjossem Ditch water users. Due to a minimally functional fish screen and bypass, fish that entered the Tjossem Ditch have been likely to become trapped and cut-off from an easy return to the river. The lack of a functioning fish bypass at the fish screen, which is located nearly a mile from the headworks, compounds the situation and effectively sentences fish that enter the Tjossem Ditch to death. Given that the proposed water right change helps further the closing of Tjossem Ditch as a diversion point, it also advances USBOR's Schaake property restoration objectives and the goals of the Yakima Basin Integrated Plan. Once it is closed to irrigation diversions, all fish, resident and anadromous salmonids and non-salmonids, will no longer be subject to mortality associated with the Tjossem Ditch.

During the 2015 drought Trout Unlimited was able to initiate conversations with key Tjossem Ditch water right owners about the future of the Ditch. Since then, TU has been implementing an approach of either an acquisition of water rights (with the purchase resulting in transfer to the Trust Water Right Program) or a conversion from a surface water diversion to a groundwater withdrawal, depending on each water right holder's situation and preference. To date, six Tjossem Ditch water rights have been acquired and transferred to the Trust Water Rights Program, removing them permanently from the Ditch.

The proposed change is another part of a larger effort to retire the Tjossem Ditch and seeks to change the point of diversion for S4-84238-J from the Tjossem Ditch to two wells to be located within the existing place of use (the water right is currently split between two landowners and each landowner will have their own separate well as part of this point of diversion change). The proposed wells will draw from groundwater that is hydraulically connected to the Yakima River, which is the source for the surface water right.

As part of implementing the change in point of diversion, the proposed wells will allow for a single connection at each well head for water use for irrigation of respective acreage. TU is working with the landowners to design groundwater withdrawal and pressurized irrigation systems to ensure the wells will meet the demand. The system design is ongoing with an expected completion by mid-2022.

The water quantities to be authorized under this change will be limited to the maximum valid instantaneous (Qi) and annual (Qa) quantities from either well. As a failsafe, the landowner's relative Qi will be available from each well to allow each landowner the ability to flood irrigate if the sprinkler system fails but the well still functions.

The purpose of use will continue to be 9 acres of irrigation as authorized under S4-84238-J. Irrigation on both parcels is planned to be sprinklers, but the specific irrigation methods will be determined individually by each water right owner. The total acreage is split proportionally between the two landowners within the place of use, Royer (5.5 acres) and Coburn (3.5 acres). The water quantities withdrawn under this right will be limited to the maximum valid instantaneous (Qi) and annual (Qa) quantities from either well, with a single, metered connection at each well head. The system design is ongoing with mid-2022 expected

completion.

However, since a review of the recent beneficial use only appears to support 1.9 acres of total irrigation within the place of use (approximately 11.4 ac-ft/yr and 0.211 cfs), mitigation water of 42.6 ac-ft/yr and approx. 0.789 cfs to will be needed to maintain the full amount of use under S4-84238-J. Given the importance of the larger Tjossem Ditch project, Ecology is authorizing the use of 42.6 ac-ft/yr from S4-84250-J (CS4-00497sb9) to be allocated as mitigation to allow a total amount of 9 acres of irrigation under the place of use to continue. The Coburn parcel will receive 18.067 ac-ft/yr (12.083 ac-ft/yr consumptive) and the Royer parcel will receive 24.533 ac-ft/yr (16.407 ac-ft/yr consumptive). These quantities were calculated from the total consumptive and non-consumptive values associated with the relative acreage percentages of the total 7.1 acres of mitigation water needed, (Royer, 57.59% or 4.089 acres) and Coburn, 42.41% or 3.011 acres).

This change will not impact on any Yakima Basin surface water rights. Additionally, there is no net detrimental change to streamflow expected. This project is not detrimental to the public interest.

Existing and Proposed POD/POW and POU for KITT-20-06 (re: S4-84238-J)



0 0.175 0.35 0.7 Miles

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