

WATER TRANSFER WORKING GROUP PROJECT DESCRIPTION

APPLICATION NO./COURT CLAIM NO. CS4-00497sb9 (S4-84250-J, "84250"), CS4-00497sb9@1 (S4-84251-J, "84251")		
APPLICANT NAME Trust for Public Land / Trout Unlimited	CONTACT NAME Justin Bezold (TU)	TELEPHONE NO. 509-881-5464
WATER RIGHT HOLDER'S NAME (if different) Robert G. Stewart & Shirley D. Stewart		EMAIL justin.bezold@tu.org

DATE OF APPLICATION April 15, 2019	PRIORITY DATE June 30, 1889 (84250) August 15, 1895 (84251)
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WATER SOURCE: Yakima River	CROP: Pasture grass
INSTANTANEOUS QUANTITY: 3.0 cfs (84250) 0.27 cfs (84251)	ANNUAL QUANTITY: 975 acre-feet (84250) 88 acre-feet (84251)
PERIOD OF USE: April 1 through October 15 (both)	
PLACE OF USE: 84250 = The E½NW¼ of Section 24, T. 17 N., R. 18 E.W.M. 84251 = That portion of the W½NW¼ of Section 24, T. 17 N., R. 18 E.W.M., lying east of the Yakima River.	PURPOSE OF USE: Irrigation of 80 acres and stockwater (84250) Irrigation of 8 acres and stockwater (84251)
IRRIGATION METHOD: Gated pipe flood irrigation (84251) Gated pipe flood irrigation, wheel-lines, and handlines (84250)	

CONSUMPTIVE USE CALCULATION: Based on Ecology's Guidance Document, GUID-1210, Determining Irrigation Efficiency and Consumptive Use, application efficiencies (Ea) for the flood irrigated portion were calculated at 20.5% (S4-84251) and 14.4% (S4-84250). These estimates result from a calculation of the annual CIR (31.45 inches, or 2.62 acre-feet/acre) divided by the Court confirmed or directly calculated water duty for each right—11 ac-ft/ac (S4-84251) and 15.87 ac-ft/ac (S4-84250, flood). Ea for the sprinkler irrigated portion was estimated at 75% based on direct values from GUID-1210. We used the Washington Irrigation Guide's estimates of crop irrigation requirement of 31.45 inches, annually, for pasture grass in Ellensburg, WA. Where necessary, WIG values were prorated for days with demonstrable beneficial water use.

As described in the relevant adjudication documents (Report of Referee and Supplemental Report of Referee for Subbasin 9) the Court awarded duties reflect the porous nature of Yakima River floodplain soils for these rights. Ditch loss is assumed zero in these calculations because (1) the Court reported no ditch loss prior to water entering the irrigation system for these rights, and (2) a more recent pipeline installation removed any potential ditch loss from the point of metering to the place of use. Meter records support the water duties as awarded by the Court for these rights.

October flood irrigation quantities are not included due to insufficient evidence to demonstrate the quantity used. Furthermore, September flood irrigation water quantities are reduced to that amount delivered and beneficially used.

Relying on this basis, the Irrigation Requirements are as follows:

Flood irrigation of 8 acres under S4-84251-J

	Apr	May	Jun	Jul	Aug	Sep	Oct	totals
TIR	0.00	9.99	22.13	30.33	24.18	1.42	0.00	88.0
CU cfs	0.00	0.04	0.09	0.13	0.10	0.15	0.00	
CU acre-feet	0.00	2.55	5.64	7.73	6.68	1.37	0.00	23.97

Flood irrigation of 36.66 acres under S4-84250-J

	Apr	May	Jun	Jul	Aug	Sep	Oct	totals
TIR	0.00	65.28	144.60	198.19	158.00	6.26	0.00	572.33
CU cfs	0.00	0.21	0.47	0.62	0.50	1.05	0.00	
CU acre-feet	0.00	12.64	28.00	38.38	30.60	6.26	0.00	115.88

Sprinkler irrigation of 43.34 acres under S4-84250-J

	Apr	May	Jun	Jul	Aug	Sep	Oct	totals
TIR	0	14.78	32.75	44.88	35.78	20.37	2.89	151.45
CU cfs	0	0.21	0.47	0.62	0.49	0.29	0.04	
CU acre-feet	0	12.57	27.83	38.15	30.41	17.31	2.46	128.73

Total calculated irrigation consumptive use is 268.58 *acre-feet/year*. This value is supported by a reduced consumptive use quantity for September when meter records support 7.63 ac-ft of water applied during September for flood irrigation areas. Given that the calculated consumptive use requirement is significantly higher than the actually delivered water quantity, we reduce the September consumptive use to a maximum of 7.63 ac-ft to achieve the final value. Similarly, for S4-84250's flood irrigation, the actual water delivery was approximately approximately 573 ac-ft.

Additionally, stockwater was consumptively used on the land. An estimated 49 cow-calf pairs and 1 bull (50 adults, 49 juveniles) were on the property for 114 days from mid-June to mid-October. This amounts to approximately 0.53 ac-ft/yr of consumptively used water. Total consumptive use acre-feet is **269.11 ac-ft/yr**.

Secondary reach trust water schedule for irrigation water is below. Please note, the September amounts will change part-way through the month.

	Apr	May	Jun	Jul	Aug	Sep	Oct	totals
CU cfs	0	0.46	1.03	1.37	1.09	1.49	0.04	
CU acre-feet	0	27.76	61.47	84.26	67.69	24.94	2.46	268.58

The stockwater component amounts to approximately 0.0023 cfs, daily for 114 days beginning in mid-June.

NARRATIVE DESCRIPTION OF PROJECT:

Trout Unlimited, working with The Trust for Public Land, submitted change applications for Yakima River water rights S4-84251-J and S4-84250-J. Both applications propose to change the purpose and place of use to instream flow and mitigation to be managed by the Trust Water Right Program. The resulting trust water rights may be made available for back and future mitigation of out-of-priority uses, pending application specific analyses and necessary permitting/trust water right agreements.

