

WATER TRANSFER WORKING GROUP PROJECT DESCRIPTION

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| APPLICATION NO./COURT CLAIM NO. KITT-18-01/CS4-01676sb5@7 Court Claim 02222 & 01676 (S4-83347-J) | | |
| APPLICANT NAME Brian Patton | CONTACT NAME Meghan O'Brien | TELEPHONE NO. (509) 895-5261 |
| WATER RIGHT HOLDER'S NAME (if different) Brian & Alison Patton | | EMAIL |

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| DATE OF APPLICATION: February 27, 2018 | PRIORITY DATE June 30, 1900 |
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| WATER SOURCE: Yakima River | CROP: Grass Hay |
| INSTANTANEOUS QUANTITY: 0.64 | ANNUAL QUANTITY: 173.64 |
| PERIOD OF USE: May 1 – September 15 | |
| PLACE OF USE: Parcel B and C of that certain Survey as recorded June 12, 1998 in Book 23 of Surveys, Page 153, under Auditor's File No. 19980612001, records of Kittitas County, Washington; being a portion of the SW $\frac{1}{4}$ of Section 29, T. 20 N., R. 16 E.W.M., in said County and State; AND that portion of said SW $\frac{1}{4}$ which is described as follows: a 30.0 foot strip of land lying easterly of, adjacent to, and abutting the east boundary line of said Parcel C, and which lies south of the projected north boundary line of said Parcel C. | PURPOSE OF USE: Irrigation of 27.03 Acres |
| IRRIGATION METHOD: Hand/Wheel Lines | |

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| <p>CONSUMPTIVE USE CALCULATION:</p> <p>To calculate total and consumptive water use, the Penman-Monteith methodology was used to find the crop irrigation requirement (CIR). This is recognized as a more accurate model in Ecology's Guide 1210 because it takes multiple variables into consideration in determining crop water needs, such as temperature, wind, relative humidity, and solar radiation. The Blanney-Criddle, which is the basis for the Washington Irrigation Guild consumptive use estimates, is based solely on temperature.</p> <p>Table 1 in Ecology's Guide 1210 was used to determine the application efficiency.</p> <p>Subbasin No. 5 (Elk Heights) adjudicated water rights were confirmed for a period of use from May 1 through September 15. However, the Penman-Monteith method indicated irrigation requirements from April through October for grass hay. In situations such as these, additional water is generally applied once irrigation is authorized to make up for the deficient that occur earlier in the season (if irrigation does not actually start before the irrigation season). And, at the end of the irrigation season, the fields are generally "put to bed wet", meaning excess water is applied to account of consumptive losses that occur after the end of the irrigation season. In both instances, the use of water is considered beneficial. These quantities are therefore accounted for during the months of May or September, depending on early or late-season beneficial use.</p> |
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Total Irrigation Requirement (Primary Reach)

Conveyance: 1.16 cfs loss over 3-mile long ditch;
 1.16/3= 0.39 cfs/mile;
 2.5 miles x 0.39 cfs/mile = 0.97 cfs
 Total authorization for Court Claim Nos. 02222 and 01676 =5.8 cfs
 0.97 cfs/5.8 cfs = 16.7%
 0.64 cfs * .016 = 0.107 cfs of conveyance loss * 1.9835*138 days = 29.29

On-farm:

Acreage: 27.03
 CU: 85%
 Ea: 75%
 CIR: 2.067 feet/acre

On-farm TIR = 74.49 ac-ft

| | Unit | May | Jun | Jul | Aug | Sep | Total |
|-------------------|----------|-------|-------|-------|-------|-------|--------|
| Conveyance | acre ft. | 6.58 | 6.37 | 6.58 | 6.58 | 3.18 | 29.29 |
| | cfs | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | |
| On-Farm | acre ft. | 14.42 | 16.52 | 19.22 | 14.72 | 9.61 | 74.49 |
| | cfs | 0.24 | 0.28 | 0.32 | 0.24 | 0.33 | -- |
| Total | acre ft. | 21.00 | 22.89 | 25.80 | 21.30 | 12.79 | 103.78 |
| | cfs | 0.35 | 0.39 | 0.43 | 0.35 | 0.44 | -- |

Consumptive Use (Secondary Reach)

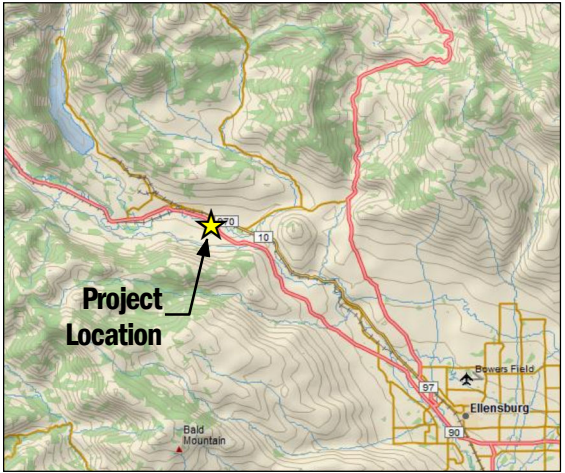
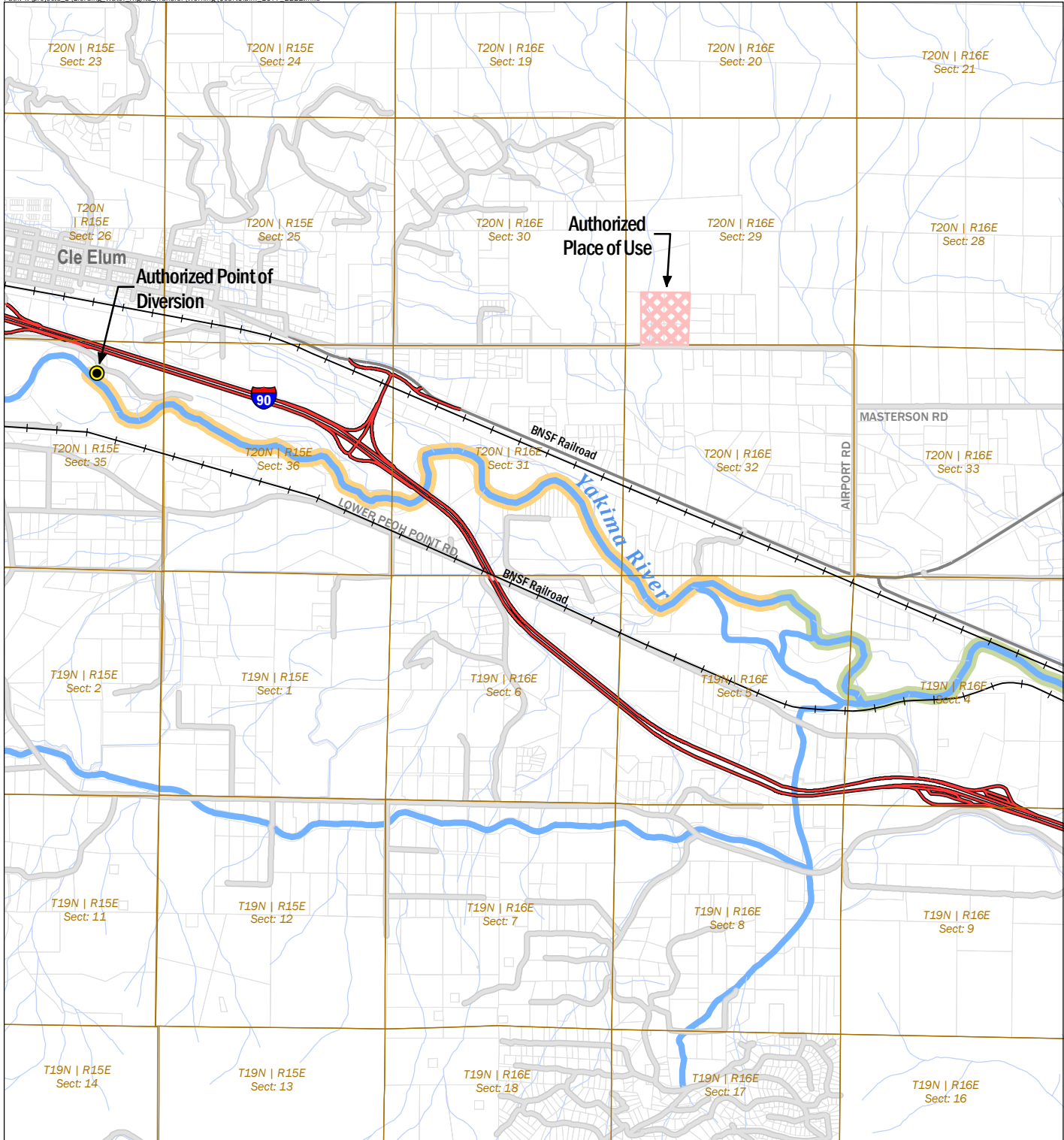
On-farm
 CU af = TIR af * CU percentage
 74.49*0.85 = 63.31 ac-ft

| | Unit | May | Jun | Jul | Aug | Sep | Total |
|------------------------|----------|-------|-------|-------|-------|------|-------|
| Secondary Reach | acre ft. | 12.25 | 14.04 | 16.34 | 12.51 | 8.17 | 63.31 |
| | cfs | 0.20 | 0.24 | 0.27 | 0.20 | 0.27 | -- |










NARRATIVE DESCRIPTION OF PROJECT:

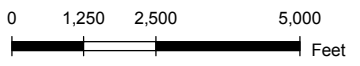
The applicant has proposed changing the purpose of use of this water right to instream flow and mitigation and the place of use to the Yakima River. The water right will be permanently enrolled in the TWRP. The water right has been donated to the TWRP since 2010. Prior to being donated to the TWRP, this water right was used to irrigate 27.03 acres of hay with hand and wheel line sprinklers. Currently there is no planned future use of the resulting trust water right. When a new use is identified, it will be subject to additional permitting requirements and WTWG consideration.

It is recognized that although the subject water right is senior to the May 10, 1905 priority date, it is provisioned on local water availability in the Teanaway River to fulfill the Class 16 water rights with a priority date of June 30, 1900. Ecology has previously determined that Teanaway River Class 16 water rights are reliable from May 1 to about July 23, but subject to curtailment beyond July 23 through the end of the irrigation season in the Teanaway subbasin. The July 23 curtailment date is based on the 2015 drought, which is regarded as the worst-case scenario. If used to mitigate for out of priority water use, any new authorization(s) will determine suitability of mitigation, including geographic and temporal suitability based on reliability.



Comments: Place of use and point of diversion are defined on the cover sheet under the heading "LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED."

-  Authorized Point of Diversion
-  Authorized Place of Use
-  Primary Reach (from RM 181.5 to RM 178.0)
-  Secondary Reach (from RM 178.0 to RM 55.0)
-  Local Road
-  Highway
-  Interstate
-  Railroad
-  Sections (TRS)



Court Claim Nos. 1676 and 2222
Patton
 WRIA 39
 Kittitas County, Washington

CLAIMANT NAME: **Brian Frederick
& Elizabeth Frederick**

COURT CLAIM NO. 02222
COURT CLAIM NO. 01676

Certificate Number: S4-83347-J

Subbasin: 05 Elk Heights

Source: Yakima River

Use: Irrigation of 27.3 acres and stock water

Period of Use: May 1 through September 15

Quantity: .64 cubic foot per second, 173.2 acre-feet per year of irrigation water; .44 acre-foot per year of stock water

Priority Date: **June 30, 1900**

Point of Diversion: 750 feet south and 1150 feet east of the north quarter corner of Section 35, being within the SE¹/₄NW¹/₄NE¹/₄ of Section 35, T. 20 N., R. 15 E.W.M.

Place of Use: Parcels B and C of that certain Survey as recorded June 12, 1998 in Book 23 of Surveys, Page 153, under Auditor's File No. 199806120001, records of Kittitas County, Washington; being a portion of the SW¹/₄ of Section 29, T. 20 N., R. 16 E.W.M., in said County and State; AND that portion of said SW¹/₄ which is described as follows: a 30.0 foot strip of land lying easterly of, adjacent to, and abutting the east boundary line of said Parcel C, and which lies south of the projected north boundary line of said Parcel C.

Limitations Of Use: This water right authorizes diversion of Yakima River water for periods only during the irrigation season when water is available in the Teanaway River to fulfill the Class 16 right (June 30, 1900).