

WATER TRANSFER WORKING GROUP PROJECT DESCRIPTION

APPLICATION NO./COURT CLAIM NO.		
CS4-00535sb9 (Court Claim No. 00535)		
APPLICANT NAME Kittitas County	CONTACT NAME Meghan O'Brien	TELEPHONE NO. (509) 607-0059
WATER RIGHT HOLDER'S NAME (if different) David Papineau		EMAIL mobrien@aspectconsulting.com

DATE OF APPLICATION March 5, 2018	PRIORITY DATE 6/30/1901
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WATER SOURCE: Spring Creek	CROP: alfalfa
INSTANTANEOUS QUANTITY: 2.175 cfs (0.88 cfs recommended in ROE)	ANNUAL QUANTITY: 706.061 afy (181.41 afy recommended in ROE)
PERIOD OF USE: 4/1 through 10/15	
PLACE OF USE: Lot 2 of the PAPINEAU SHORT PLAT, SP-17-00001, records of Kittitas County; being a portion of Government Lots 2, 3 and 4 and of the W½E¼SW¼, of Section 30, T. 17.N., R. 19 E.W.M. lying northerly of Ringer Road and southwesterly of the Northern Pacific Railway Company right of way.	PURPOSE OF USE: Irrigation of 39.87 acres
IRRIGATION METHOD: Wheellines	

<p>CONSUMPTIVE USE CALCULATION:</p> <p>The Crop Irrigation Requirement (CIR) prescribed in the WIG for alfalfa in the Ellensburg area is 2.48 feet of water, whereas the authorized per-acre water duty for this water right is 17.71 feet (706.061 AF / 39.87 acres). The Memorandum Opinion and Order RE:Subbasin 9 Exceptions noted that the annual quantity of water use by Papineau was high giving the porous nature of his soils and proximity to the Yakima River. Ecology guidance GUID 1210 notes that the highest year of consumptive use should be used for trust consumptive use calculations¹. GUID 1210 also refers to Irrigation Requirements for Washington-Estimates and Methodology (XB0925, reprinted in 2001 as EB1513), which presents tables of consumptive use based on consideration of precipitation and drought recurrence intervals. For the 2-year return interval, the WIG and EB1513 are aligned with the WIG reporting a CIR of 29.76 inches and EB1513 reporting 30 inches. The WIG does not include data on increased ET relative to droughts, but EB1513 does. The annual crop irrigation requirement for Ellensburg increases to 33 inches for the 20-year recurrence interval. Droughts frequently occur in the Yakima Valley, including significant droughts every five years, including in 2015. The Water Transfer Working Group has recognized an additional 2 to 4 inches of water duty above WIG-cited values in past transfers. Based on consideration to drought years and the high water duty authorized by the adjudication, we have assumed an annual water duty using the WIG value of 29.76 inches of water plus an additional 3 inches, for a total duty of 32.76 inches (2.73 feet).</p>

¹ A footnote in GUID 1210 states: "While an ACQ change requires averaging of the two highest years of consumptive use, consumptive increases that could lead to impairment may be evaluated using the highest year of consumptive use."

The application efficiency for this water right was determined by considering the Court awarded water duty (acre-feet authorized/acres authorized) and the criteria and values in GUID 1210. Table 1 in Ecology's GUID 1210 provides a range of application efficiency for both wheellines and handlines as between 60 and 85 percent. Based on the reference to the high annual water use by Papineau in the Memorandum Opinion and Order RE:Subbasin 9 Exceptions, the small farm size, presence of tenant relationships, and lack of irrigation scheduling, the low end of the GUID 1210 application efficiency for wheellines and handlines, 60%, was used in the calculations of water use. To determine the total consumptive use ratio, the average evaporative loss listed in GUID 1210 Table 1 (10%) was added to the calculated application efficiency. This results in a consumptive use ratio of 70 percent.

TIR = 2.73 ft x 39.87 acres/60 percent = 181.41 acre-feet

CU= 181.41 acre-feet x 70 percent = 126.99 acre-feet

NARRATIVE DESCRIPTION OF PROJECT:

Kittitas County acquired this water right through a property transfer. Kittitas County intends to use this water right as part of their back mitigation obligation. The quantity required for the County's back mitigation program is 800 consumptive acre feet. It is the intent of the County to acquire water rights deemed adequate for this purpose, place them in the TWRP for instream flows, and to hold them in perpetuity. Kittitas County has an existing Master Trust Water Right Agreement previously negotiated with Ecology for back mitigation. This water right will be managed in accordance with the existing agreement. The County's use of this water for back mitigation is water budget neutral to the Total Water Supply Available (TWSA) and consistent with the Settlement Agreement executed by Ecology and the County.