

WATER TRANSFER WORKING GROUP PROJECT DESCRIPTION

APPLICATION NO./COURT CLAIM NO. G4-33218		
APPLICANT NAME Kodiak, LLC/Lynn Barnett	CONTACT NAME Tyson Carlson, Aspect Consulting	TELEPHONE NO. 509-895-5923
WATER RIGHT HOLDER'S NAME (if different) Same		EMAIL tcarlson@aspectconsulting.com

DATE OF APPLICATION(S) November 7, 2018	PRIORITY DATE 11/07/2018, mitigated by a pre-1905 water right (No. CS4-02136sb9@1(B))
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WATER SOURCE: Groundwater – up to three wells completed in Upper Undifferentiated Ellensburg Formation	CROP: Indoor Use and Turf and general landscaping
INSTANTANEOUS QUANTITY: 200 gpm	ANNUAL QUANTITY: Not to exceed 36 ac-ft/yr (CU)
PERIOD OF USE: Year round, as needed	
PLACE OF USE: SE ¹ / ₄ NW ¹ / ₄ , NE ¹ / ₄ NW ¹ / ₄ , NE ¹ / ₄ , and NE ¹ / ₄ SE ¹ / ₄ of S35, T15N/R17E.W.M.	PURPOSE OF USE: Municipal
IRRIGATION METHOD:	

<p>CONSUMPTIVE USE CALCULATION:</p> <p>The new water budget water right would authorize Kodiak, LLC to withdraw groundwater not to exceed 36 acre-feet (consumptive use) from up to three wells completed in the Upper Undifferentiated Ellensburg formation for municipal water supply.</p> <p>Per Department of Health Water System Design Manual (Table 5-2), indoor use is estimated to be 50 gallons per day per camper. Based on full buildout (including amenities building) and expected occupancy rate, a total indoor use of 36.33 ac-ft/yr is expected. Assuming the same consumptive use defined by rule (WAC 173-539(A)-050(3)) in upper Kittitas County as 30 percent of total use, implies 10.9 acre-feet/yr (CU) will satisfy the project.</p> <p>Outdoor use is conservatively estimated using the Washington Irrigation Guide (WIG) for pasture/turf grass, showing a Crop Irrigation Requirement (CIR) of 3.11 ft/ac. Assuming 75% Ea, Total Irrigation Requirement (TIR) equals 4.14 ft/ac. Up to about 7.1 acres of landscaping may be planted implying a TIR of 29.4 ac-ft/yr. Assuming 85% consumptive use, outdoor irrigation is estimated at 25.1 ac-ft/yr (CU).</p>

During phased buildout of the project, meter data will be used to inform indoor water use requirements. Outdoor water use (i.e., landscaping, open space) will be planted accordingly, not to exceed 36 acre-feet (CU). A detailed planting plan by phase will be submitted to Ecology in support of permitting.

NARRATIVE DESCRIPTION OF PROJECT:

Kodiak, LLC has a purchase pending of a senior (pre-1905) water right from Archie and Marie den Hoed (formally Flying M Ranch) that is currently in instream flow and mitigation. The water right will enable Kodiak to develop a 241-unit RV Resort (Resort) northeast of Naches. The project proposes to receive a new mitigated water right using consumptive use mitigation credits from Washington State's Trust Water Right Program.

IMPAIRMENT ANALYSIS

To facilitate the transfer, Aspect completed a site-specific hydrogeologic investigation (available upon request) using a multiple line of evidence approach that used the best available data describing the hydrogeology surrounding the Resort wells. The objective of the investigation was to determine if water is physically available, if the proposed points of withdrawal are in hydraulic continuity with the adjacent reach of the Naches River, and whether local impairment of senior water rights would occur.

Based on review of the available information and understanding of the site-specific hydrogeologic conceptual model presented below, Aspect observed the following:

- The proposed points of withdrawal (wells) are completed in the Upper Undifferentiated Ellensburg Formation.
- The water-bearing Ellensburg formation consists of sandstone and clast-supported conglomerates with a hydraulic conductivity estimated at around 0.6 feet/day. Assuming a saturated aquifer thickness of 600 feet, the transmissivity of the Ellensburg aquifer is estimated at approximately 360 feet²/day.
- The Resort is located in the Wenas Sector 2 Subdivision D area (Wenas 2D) as defined by Yakima County. The Wenas 2D area is defined as being suitable for mitigation with mainstem Yakima River water rights with minimum well depths. All wells will be provisioned to be completed below 600 feet below ground surface.
- Regional groundwater elevation trends in the Ellensburg aquifer are characterized by the United States Geological Survey (USGS) as stable. In addition, long-term water level monitoring by Ecology indicates no local declines in Upper Undifferentiated Ellensburg aquifer water levels in the Selah Basin.
- Interference drawdown from continuously pumping a proposed well at a continuous average withdrawal rate (35 gallons per minute [gpm]) for one year is estimated to be less than 6 feet. Peak pumping (withdrawal of 200 gpm for 30 continuous days) results in less than 15 feet of drawdown. Both estimates conservatively are a small percentage of the estimated 600 feet of total available drawdown locally available in the aquifer.

The proposed water right transfer is water budget neutral with respect to Total Water Supply Available (TWSA) in the Yakima River Basin as measured at the Parker gage. Month by month mitigation is offered to account for the project's indoor and outdoor water use during the irrigation season, and the Water Storage and Exchange Contract No.

09XX101700 is available to mitigate impacts to Naches River baseflow conditions, or out-of-season impacts to instream flows, as required. The proposed water right transfer will not affect System Operation Advisory Committee (SOAC) recommended reach-specific target flows. All return flows will be infiltrated through on-site septic drain fields.

No perennial surface water body is mapped within 5,000 feet of the applicant's property, and the closest surface water body listed by Washington State Department of Fish and Wildlife (WDFW) database to have Endangered Species Act (ESA)-listed species is the Naches River, located about 1.8 miles southwest of the property.

CONCLUSION

Based on review of the site-specific information, Aspect concluded that groundwater in the Upper Undifferentiated Ellensburg aquifer is physically available for appropriation; groundwater withdrawals in the Upper Undifferentiated Ellensburg aquifer are in hydraulic continuity with the Naches River; and authorization of the proposed well will not impair nearby groundwater users, surface water, or ESA-listed species.