

**WATER TRANSFER WORKING GROUP PROJECT DESCRIPTION**

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| APPLICATION NO./COURT CLAIM NO.<br>G4-36034        |  |  |
| APPLICANT NAME<br>Snoqualmie Pass Utility District | CONTACT NAME<br>Tyson Carlson, Aspect Consulting | TELEPHONE NO.<br>509-895-5923          |
| WATER RIGHT HOLDER'S NAME (if different)<br>Same   |  | EMAIL<br>tcarlson@aspectconsulting.com |

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| DATE OF APPLICATION(S)<br>January 28, 2019 | PRIORITY DATE<br>January 28, 2019, mitigated by foreign return flows originating from its WRIA 7 groundwater rights. |
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| WATER SOURCE:<br>Groundwater – up to 4 wells | CROP:<br>N/A   |
| INSTANTANEOUS QUANTITY:<br>800 gpm           | ANNUAL QUANTITY:<br>246 ac-ft/yr; not to exceed 49.2 ac-ft/yr (CU) |
| PERIOD OF USE:<br>Year-round                 |  |
| PLACE OF USE:<br>Approved Water Service Area | PURPOSE OF USE:<br>Municipal Supply                                |
| IRRIGATION METHOD:<br>N/A                    |  |

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| CONSUMPTIVE USE CALCULATION:<br>The Snoqualmie Pass Utility District's (District) Water System Planning efforts indicate a total demand of about 414 afy projected for 2038. To meet this demand, the District requires about 246 afy in additional water rights. Based on projected water use and assuming 20 percent consumptive use (CU) per WAC 173-539A, the mitigation requirement is equal to 49.2 (246 afy * 0.2) afy (CU). This demand represents just over one third of the total mitigated annual water quantities available relying on mitigation from foreign water return flows. |
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| NARRATIVE DESCRIPTION OF PROJECT:<br>The District was recently under a self-imposed temporary building moratorium due to limited annual quantity available under its existing water rights and corresponding water supply wells. As the result a recent well consolidation effort allowing flexibility in withdrawals from the WRIA 7 water rights, the District was able to temporarily suspend the moratorium in September 2019. To permanently address the moratorium and to provide for future water supply, the District proposes to apply for a new mitigated water right to withdraw groundwater from well(s) sited in Kittitas County. To offset consumptive use impacts, the District proposes to mitigate with discharge of foreign return flow water to lower Coal Creek. |
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The foreign water originates from the District's existing municipal groundwater rights in the Snoqualmie River Basin (WRIA 7). Discharge of the return flow water results in a net positive gain to Total Water Supply Available (TWSA) in the Yakima River Basin.

#### IMPAIRMENT ANALYSIS

To support permitting, 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 near the Snoqualmie Pass area. The objective of the investigation was to determine if water is legally available, if the proposed points of withdrawal are in hydraulic continuity with the adjacent reach of Coal Creek and the Yakima River, and whether local impairment of Endangered Species Act (ESA)-listed species would occur.

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

- The District currently withdraws groundwater from five wells that are in continuity with the South Fork of the Snoqualmie River and can divert water from one surface diversion as needed from the South Fork Snoqualmie River, all located in WRIA 7.
- The District has four groundwater right certificates and one surface water certificate authorizing up to 168 acre-feet per year (afy). Groundwater is withdrawn from the wells, then conveyed through District infrastructure to connections for general municipal use. A surface water diversion on the South Fork Snoqualmie River serves as an alternate supply when needed. Waste water is then collected and delivered through the District's sewage system to ponds east of Hyak, treated, then disposed via spray field application.
- The District is now evaluating a Membrane Bioreactor (MBR) for enhanced wastewater treatment to address water quality issues prior to direct discharge to Coal Creek. Direct discharge coupled with the MBR eliminates consumptive use associated with the spray field, thus maximizing the volume of return flow water returning to the Yakima River Basin.
- The District's return flows are foreign water to the Yakima River Basin and are water budget positive to TWSA. The District's foreign return flows are legally available and will not impair senior water rights when used as mitigation in the Yakima River Basin.
- Based on projected water use and assuming 20 percent consumptive use (CU) per WAC 173-539A, up to 134.4 afy (CU) would be available for mitigation. To meet projected demand, the District requires 414 afy total, or about 246 afy (49.2 afy CU) in additional water rights by 2038.
- The proposed point(s) of withdrawal would be completed in WRIA 39 along the I-90 corridor, within the Guye Peak Sedimentary Member of the Naches Formation.
- Coal Creek and the lower reach of Gold Creek would be affected by the proposed withdrawals. Gold Creek is documented as spawning habitat for ESA-listed Bull Trout.

#### MITIGATION PLAN

To mitigate for the consumptive use impacts proposed under Application No. G4-36034, the District proposes to rely on the discharge of foreign return flow from its WRIA 7 water rights. The total annual quantity authorized under those rights is 168 afy. As a result, the total volume of foreign return flow available for mitigation is estimated to be 134.4 afy (168 afy x 0.80). This quantity will be added to the TWSA in the Yakima River Basin and can be used

to offset new uses. However, only the consumptive portion of the new uses needs to be mitigated because the wastewater discharge for the new uses will return to the Yakima River Basin through treatment and discharge from the MBR. Using the same conservative assumption for consumptive use for new District connections (20 percent consumptive use; 80 percent return flow), results in foreign return flow mitigation available to offset up to a total of 134.4 afy (CU).

Consultation and field visits have been completed with WDFW staff in further development of a mitigation plan to address any concerns with impacts to local surface water and ESA-listed Bull Trout. Based on this consultation, mitigation will include the following:

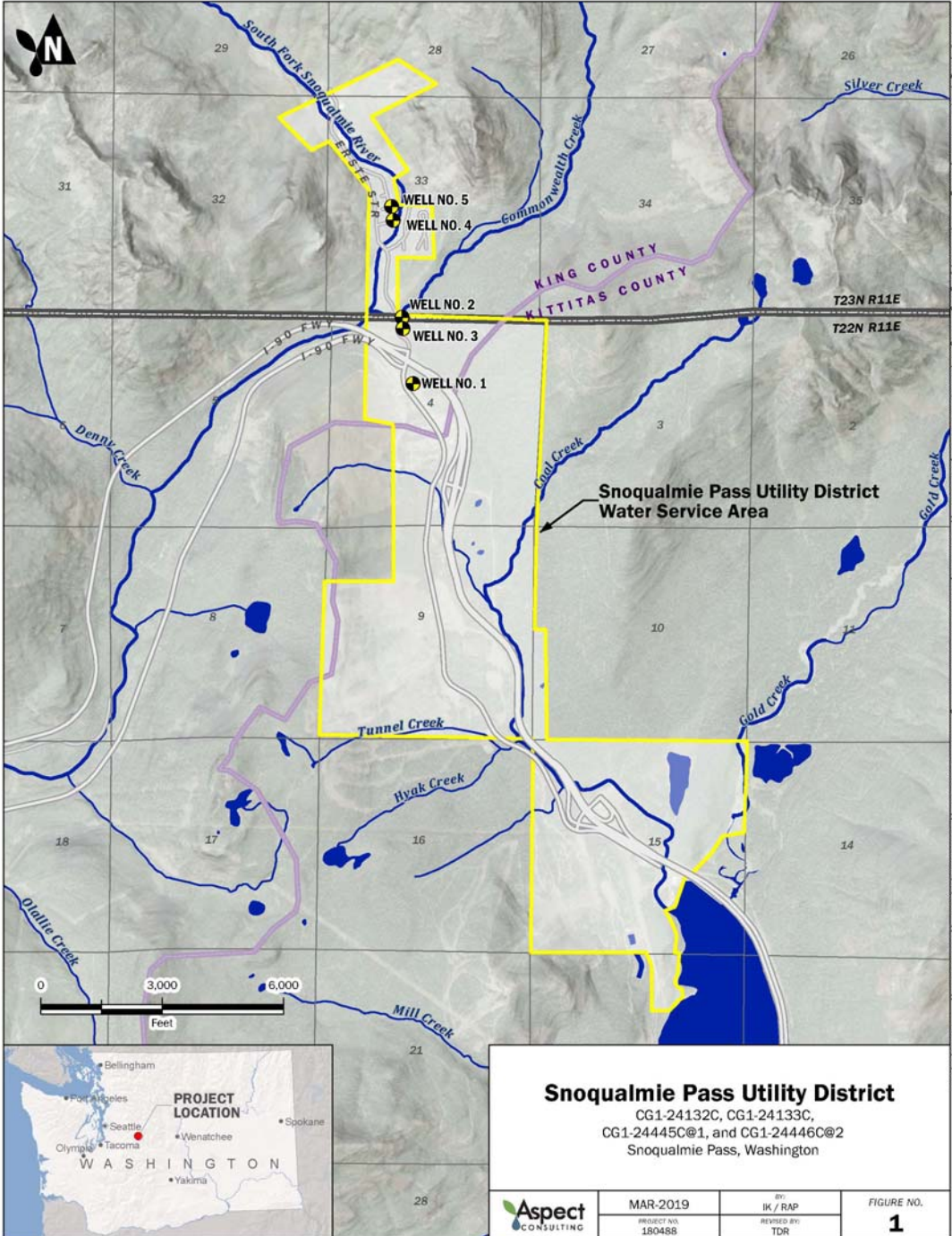
- Consumptive use under No. G4-36034 may not exceed 49.2 (246 \* 0.20) acre-feet/year (CU). The District will allocate 49.2 afy of the total 89.6 afy of foreign return flow quantities available under SWC 10318 (89.6 afy = 112 afy annual quantity x 0.8 return flow) to mitigate for new uses under NO. G4-36034.
- The District will prioritize use of water authorized under SWC 10318 and the associated non-additive groundwater certificates. All groundwater and/or surface water use will be metered.
- The new MBR facility will be permitted through Ecology's Water Quality program. The facility will discharge treated foreign return flow at the District's historical outfall on Coal Creek located near the WSDOT facility. All discharge will be metered.

These mitigation requirements will be captured via provision on the new water right permit. In addition, all water use and discharge data will be reported annually to Ecology.


The District will also retain the ability to store up to about 40 acre-feet of treated effluent in the existing lagoon (No. 2). The District will coordinate annually with WDFW (by April 1) on the seasonal storage and release of water to maximize benefit to late season flows in both Coal Creek and Gold Creek.

#### CONCLUSION

Based on review of the site-specific information, Aspect concluded that a new source of water supply may be developed in Kittitas County, mitigated by the foreign flow (minus consumptive use) from the Snoqualmie River basin. Impacts to local groundwater and surface water from the proposed Kittitas County well(s) will be limited to the local bedrock aquifer and Coal Creek above the WSDOT facility (located approximately 0.5 miles southeast of the Hyak I-90 interchange). These local impacts will be mitigated by discharge of foreign flow effluent from the proposed MBR. All impacts to the lower reach of Coal Creek, Gold Creek, and TWSA will be mitigated in-time, in-place, and in-kind.



**Snoqualmie Pass Utility District**  
 CG1-24132C, CG1-24133C,  
 CG1-24445C@1, and CG1-24446C@2  
 Snoqualmie Pass, Washington

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|---|-----------------------|-------------------|------------------------|
|  | MAR-2019              | BY<br>BK / RAP    | FIGURE NO.<br><b>1</b> |
|   | PROJECT NO.<br>180488 | REVISED BY<br>TDR |                        |

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