



**STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Southwest Region Office**

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August 22, 2023

Department of Health – Office of Drinking Water

Attn: Phyo Kyaw

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Olympia WA 98504

phyo.kyaw@doh.wa.gov

Timberline Village Water System

Attn: Kim Gubbe

1230 Ruddell Rd SE

Lacey WA 98503

kgubbe@thurstonpud.org

Re: Timberline Village Water System, ID #88388 #, Lewis County; Review Request for Water System Plan, ODW Project #23-0706

Dear Kim Gubbe:

Thank you for the opportunity to review the Timberline Village Water System Water System Plan (WSP), dated July 2023, and received on July 25, 2023. Consistent with the Memorandum of Understanding between the Department of Health (DOH) and Department of Ecology (Ecology), regarding joint review and approval of WSPs, this letter is being sent to your office with Ecology's comments. Specific elements of the WSP review included the Water Rights Self-Assessment as well as additional water rights documentation, including Ecology's water right files and previous Timberline Village Water System WSPs and project reports, as applicable.

Ecology identified several issues during review of the WSP and supplemental documentation.

The issues identified are listed below and discussed in the Advisory Comments. Please address the following items prior to finalizing the WSP.

- Expected Future Demand to Exceed Current Water Right Allocation(s)
- Excessive Leakage of System and Overuse of Current Water Right Allocation(s)

1. Advisory Comments

Expected Future Demand to Exceed Current Water Right Allocation(s)

In the water rights documentation presented in the Water Rights Self-Assessment (Appendix 10.6), and in Section 1 and 2 of the WSP, dated July 2023, it appears that estimated future demand is in excess of the existing Timberline Village Water System portfolio of water rights. As authorized under water right G2-00887C, G2-22984C and G2-25619C, Timberline Village Water System current capacity has a

maximum annual quantity of 58 acre-feet per year (ac-ft/yr) and a maximum instantaneous rate of 400 gallons per minute (GPM) from two wells (wells S01 and S02) which appears insufficient for full buildout of the water system. See Table 1. Existing Water Rights below:

Excessive Leakage of System and Overuse of Current Water Right Allocation(s)

In the water rights documentation presented in the Water Rights Self-Assessment (Appendix 10.6), and in the Water Use Efficiency Report of the WSP, dated July 2023, it appears that Timberline Village reports excessive leakage. The average distribution system leakage (DSL) for the past 3 years is over 54%. DSL under the Water Use Efficiency Rule establishes a standard of 10 percent or less on a rolling 3-year average.

Timberline Village reports water use 2022 was 116% of the water right allocation but for 2020 and 2021 has been reduced to 98% and 69%, respectively. Although the leakage rate for those years is still considered to be exceptionally high at 60.1%, 62.9%, and 40.3% respectively. RCW 90.44.110 states no public groundwaters that have been withdrawn shall be wasted without economical beneficial use. As stated in the previous letter by ecology dated September 2022, leakage is not considered a beneficial use of water and Ecology cannot support additional connections to the system until the leakage rate is reduced.

2. General Information

Water Right Summary

In preparing this comment letter, Ecology reviewed specific elements of Timberline Village Water System WSP, including the Water Right Self-Assessment (Appendix 10.6), as well as additional water rights documentation.

Please see Table 1 below for a comprehensive list of Timberline Village Water System water rights and their respective relationships and limitations as understood by Ecology. Please note that the water rights summarized here DO AGREE with the Timberline Village Water System Water Right Self-Assessment (Appendix 10.6), and in Section 1 and 2 of the WSP, dated July 2023.

Table 1. Existing Water Rights

Water Right	Priority Date	Source Name	Instantaneous Rate (GPM)		Annual Quantity (ac-ft/yr)	
			Additive	Non-Additive	Additive	Non-Additive
G2-00887C	11/19/1968	S01, AFM952	160		39	
G2-22984C	7/15/1974	S02 AFM953	160		19	
G2-25619C	6/13/1980	S01 & S02	80	320		58
TOTALS:			400		58	

gpm = Gallons per Minute; ac-ft/yr = Acre-feet per Year

Future Demand

The Timberline Village Water System WSP presents use and production data between 2009 and 2027. As of 2023, the approximate number of connections served by Timberline Village Water System totaled 286. Each connection was estimated to serve, on average, approximately 286 equivalent residential units or ERUs. Therefore, Timberline Village Water System is believed to serve a total of 286 ERUs. Average daily demand of Timberline Village Water System was calculated by dividing the average total



gallons per day (85) of water delivered by the total ERUs (286). The per-ERU water use presented in the Timberline Village Water System WSP for 2022 was 3.36 gallons per day.

Projected future demand for Timberline Village Water System was estimated to be 58 ac-ft/yr at “full buildout” by multiplying the current per-ERU water use (85 GPD) of water delivered by the projected future total ERUs (286). According to the WSP, full buildout is expected in 2023. Future demand projections were provided in the Water Rights Self-Assessment (Appendix 10.6) of the WSP.

Based on the information provided in the Water Rights Self-Assessment (Appendix 10.6), and in Section 1 and 2 of the WSP, dated July 2023, the 10/20-year forecasted water use is deficient with the authorized water right Qa of 58 afy.

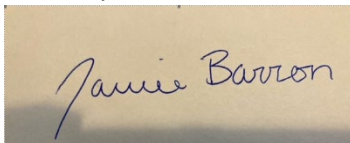
The Timberline Village Water System does have a new application (G2-29150) for a water right to expand the system with more connections and add Qa. However, there is an extremely high leakage rate for the system Ecology’s recommendation is that the leakage is the higher priority. The new water right application can be processed once data can be provided to show that the issues with the current system have been addressed.

Service Area

RCW 90.03.386(2) requires that water systems be in compliance with the terms of their WSP and that any alteration of the place of use not be inconsistent with any comprehensive plans or development regulations. An evaluation of any such change should be undertaken if a future expansion of the Timberline Village Water System service area is planned.

Please contact me with any questions you may have at 360-791-6877 or Jamie.Barron@ecy.wa.gov.

Sincerely,

A rectangular image showing a handwritten signature in blue ink on a light-colored background. The signature reads "Jamie Barron".

Jamie Barron
Environmental Specialist-Permit Writer
Water Resources Program

ecc: Phyto Kyaw E.I.T., Department of Health
Doug Piehl, Thurston County PUD, Lewis County Public Health & Social Services

