Ames Lake
Water Association

Overview

- Ames Lake Water Association (ALWA) is a small, rural Group A water system serving a residential community east of Redmond. Unlike larger municipal utilities in the Snoqualmie Basin, ALWA relies exclusively on upland groundwater sources with virtually no hydraulic connection to the Snoqualmie River or its alluvial aquifers. ALWA's withdrawals are modest, locally recharged, and tightly managed, making the system one of the most conservative water users in the basin. ALWA's governance model prioritizes water resource stewardship.

Hydrology & Source

- Upland groundwater system with only conceptual hydraulic connection to the Snoqualmie River.
- Pumping does not measurably affect river flows, baseflow, or temperature.
- Local precipitation is the primary groundwater recharge source.

Scale of Use

- Long-term demand is stable despite normal seasonal variation.
- Very small total annual withdrawals.
- Low per-connection usage with no commercial/industrial load.
- 8 new connections total in last 5 years.

Recharge & Return Flow

- Septic systems return 70–90% of indoor water use directly to groundwater.
- Outdoor irrigation infiltrates locally due to permeable soils, heavily wooded canopies and RA-5 zoning.
- Combined effect: ALWA operates a closed hydrologic loop with a very low net consumptive use.

Conservation & Efficiency

- ALWA's conservation outcomes exceed typical rural system performance.
- Consistent usage trends over 15 year period.
- Proactive leak detection and AC main replacement keep losses well below state thresholds.

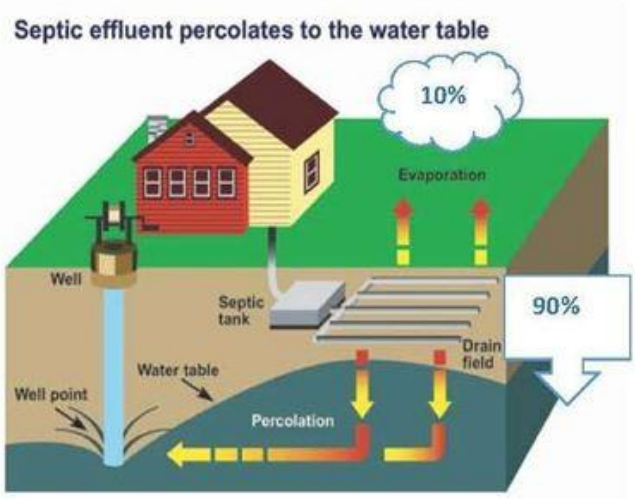
Basin-Level Impact

- ALWA is one of the least impactful water users in the Snoqualmie Basin.
- Withdrawals are small, stable, and largely returned to the same aquifer.
- ALWA should be recognized as a low-consumptive, high-recharge system.
- ALWA's groundwater use does not affect river temperature or flow.

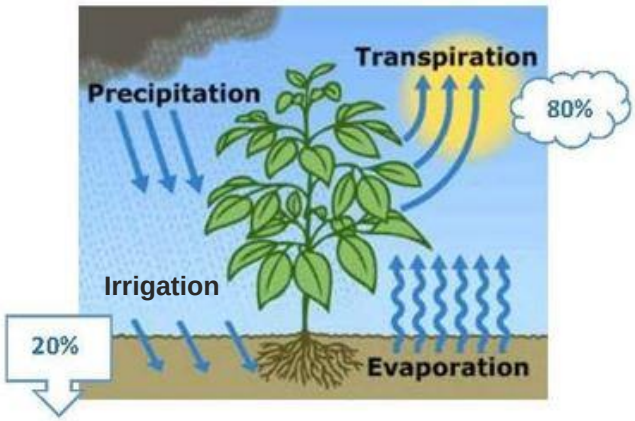
Summary

Ames Lake Water Association is one of the most conservative and least impactful water users in the Snoqualmie Basin. ALWA's hydrologic footprint is minimal, predictable, and aligned with basin-wide ecological protection goals underscoring ALWA's role as a model of rural groundwater stewardship --not a stressor.

Indoor Consumptive Use



Outdoor Consumptive Use



From the WRIA 7 consumptive-use memo:

- Indoor consumptive use = 10% for septic homes - meaning 90% of indoor water returns to groundwater**.**
- Outdoor consumptive use = 80% **-** meaning only 20% of irrigation water infiltrates back to groundwater.

ALWA

- 55 gallons per person per day
- 2.84 people per household
- Total = 156.2 gpd per household

Indoor vs outdoor split

Using the standard **70% indoor / 30% outdoor** rural pattern (consistent with WRIA 9 and WRIA 8).

Indoor use $156.2 \times 0.70 = 109.34$ gpd

Recharge: $109.34 \times 0.90 = 98.4$ gpd returned to groundwater

Outdoor use $156.2 \times 0.30 = 46.86$ gpd

Recharge: $46.86 \times 0.20 = 9.37$ gpd returned to groundwater

Total recharge $98.4 + 9.37 = 107.77$ gpd returned to groundwater

Percentage returned $\frac{107.77}{156.2} = 69\%$

Percentage consumptive $100\% - 69\% = 31\%$