



Date Submitted: 6/16/2023

Water Use Efficiency Annual Performance Report - 2022

WS Name: QUIMPER

Water System ID# : 05783

WS County: JEFFERSON

Report submitted by: *William Graham*

Meter Installation Information:

Estimate the percentage of metered connections: 100%

If not 100% metered – Did you submit a meter installation plan to DOH? No

Within your meter installation plan, what date did you commit to completing meter installation?

Current status of meter installation:

Production, Authorized Consumption, and Distribution System Leakage Information:

12-Month WUE Reporting Period 01/01/2022 To 12/31/2022

Incomplete or missing data for the year? No

If yes, explain:

Total Water Produced & Purchased (TP) – Annual volume gallons 270,930,000 gallons

Authorized Consumption (AC) – Annual Volume in gallons 238,652,373 gallons

Distribution System Leakage – Annual Volume TP – AC 32,277,627 gallons

Distribution System Leakage – DSL = $[(TP - AC) / TP] \times 100 \%$ 11.9 %

3-year annual average - % 9.2 % 2020, 2021, 2022

Goal-Setting Information:

Enter the date of most recent public forum to establish WUE goal: 09/23/2020

Has goal been changed since last performance report? No

Note: Customer goal must be re-established every 6 years through a public process.

Customer WUE Goal (Demand Side):

The Demand Side Goal approved by the PUD Board of Commissioners in the 2020-2025 Water Use Efficiency Program is:

1. Maintain gallons per day per day (GPD) per connection at 3-year (2017 – 2019) mean average (see GOALS below).

ROUTE	DESCRIPTION	GOALS (GPD)	2022 USE (GPD)
216	FOUR CORNERS AREA	132	159.9
218	N. HADLOCK/CHIMACUM	166	241.7
220	E. HADLOCK/OAK BAY RD	154	195.4
222	W. HADLOCK/S. IRONDALE	129	*121.8
223	IRONDALE	154	*152.1
228	MARROWSTONE ISLAND	120	174.3
300	LUD #3	123	*114.9
400	GLEN COVE SOUTH	171	* 168.0
450	KALA POINT	153	*144.2

* Achieved goal in 2022

To see what route you are in, go to <https://www.jeffpud.org/wp-content/uploads/2022/05/Water-Read-Routes-Quimper.pdf> For further information, contact Bill Graham at bgraham@jeffpud.org.

Customer (Demand Side) Goal Progress:

Gallon per day (GPD) goals were met at Routes 222, 223, 300, 400 and 450 representing 49.5% of the system's customers. This is a significant improvement over 2021 where just 2 routes met their goals. This was likely because there was not another historic "heat dome" event like there was in 2021. What also stands out in 2022 as a difference is how much above goals some areas were. Much of the Four Corners/West Hadlock, South Irondale were over as well as Marrowstone Island. One possible explanation is heat stressed vegetation watering or replacement. New landscaping requires watering to take root and heat stressed vegetation needing water is often over-watered to compensate. Regardless, I don't think its unusual to see this disparity in high use due to the conditions.

The four-tier water conservation rate structure remains in place as an incentive for customers to conserve water. Billing statements graph annual usage by month allowing the customer to track and compare monthly usage throughout the year including the same period the previous year. Rebates for water and electric efficient clothes washers are available to customers (9 of these rebates were awarded to Quimper customers this year). Customers receive a water newsletter each year that contains links to indoor and outdoor conservation tips on the utility's website at jeffpud.org.

Overall Quimper water customers used 225,772,373 gallons in 2022 or 29,917,070 gallons LESS than the 255,689,443 gallons used in 2021. That amount of water saved is enough to fill 45 Olympic Sized swimming pools.

Additional Information Regarding Supply and Demand Side WUE Efforts

The three Supply Side Goals approved by the BOC in the 2020-2025 Water Use Efficiency Program are:

- 1. Supply Side - Maintain distribution systems leak (DSL) percentage at or below 10-percent of system production as calculated on a 3-year average.*
- 2. Supply Side - Water systems not at or below DSL of 10-percent, reduce DSL by 10-percent in the next 3-years (Note: Baseline 3-year average from 2019, 2018 & 2017)*
- 3. Supply Side - Maintain water production at or below the 3-year mean average of 258,567,100 gallons.*

In 2022, Quimper distribution system leakage (DSL) rose to 11.9% for the year and to a 9.2% 3 year average meeting both the 1 and 2 water supply goals, but getting closer to 10%.

The 3-year DSL average, mandated at 10% or under by Washington State law, had been rising (5.9% in 2018; 7.3% in 2019; 8.2% in 2020). The trend broke in 2021 but has since returned. The cause of the improvement was likely upgraded communications controls installed in 2021. Several water line breaks likely contributed to the losses in 2022 and better numbers are expected in 2023.

Describe Progress in Reaching Goals:

- Estimate how much water you saved.
- Report progress toward meeting goals within your established timeframe.
- Identify any WUE measures you are currently implementing.
- If you established a goal to maintain a historic level (such as maintaining daily consumption at 65 gallons per person per day for the next two years) you must explain why you are unable to reduce water use below that level.

Quimper water system wells in 2022 produced gallons or 29,749,900 gallons more than the 258,567,100-gallon goal. The higher-than-normal production was likely in response to increased demand due to the lingering aftereffects of heat-stress or heat-killed landscapes that required additional water or replacement. Landscaping by far is the highest water use by homeowners and watering likely was an even higher proportion of Quimper water use in 2021 and in 2022.

Monthly/Seasonal Water Usage:

What was your maximum daily water demand for the previous year (in gallons per day)?

Month	Volume of Water Produced in gallons
January	14,681,462
February	12,144,660
March	11,865,705
April	15,309,167
May	14,134,944
June	14,071,608
July	21,550,216
August	32,236,291
September	36,324,687
October	26,030,035
November	19,224,406
December	14,273,404

Water shortage response:

Did you activate any level of water shortage response plan the previous year?

- Yes No There was no need to

If you activated a water shortage response plan the previous year, what level did you activate? (Check all that apply)

- Advisory Conservation Voluntary Conservation
 Mandatory Conservation Rationing Other

What factors caused your water shortage the previous year?

- Drought Fire Landslides Earthquakes
 Flooding Water Supply Limitations Other

Do not mail, fax, or email this report to DOH