



Date Submitted: 6/15/2023

Water Use Efficiency Annual Performance Report - 2022

WS Name: BYWATER BAY

Water System ID# : 02043

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 02/07/2022 To 01/06/2023

Incomplete or missing data for the year? No

If yes, explain:

Total Water Produced & Purchased (TP) – Annual volume gallons	16,533,300 gallons
Authorized Consumption (AC) – Annual Volume in gallons	16,462,748 gallons
Distribution System Leakage – Annual Volume TP – AC	70,552 gallons
Distribution System Leakage – DSL = $[(TP - AC) / TP] \times 100 \%$	0.4 %
3-year annual average - %	3.3 % 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 connection at 3-year (2017 – 2019) mean average of 199 gallons/day

Customer (Demand Side) Goal Progress:

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 as well as the same billing period the previous year. Rebates for water and energy efficient clothes washers are available to customers. Each year, water customers receive a water newsletter that includes links to indoor and outdoor water customers on its website.

In 2022, Bywater Bay water customers used on average approximately 179 gals/per day, 20 gallons per day less than the demand side goal of 199 gals per day, meeting the customer side goal again in 2022 comfortably. This after several years of seasonal heat stress to landscapes, lawns and gardens and an urgent PUD source pump replacement. Your cooperation during that trying time was and still is very much appreciated. That being said, the goal is still a high per day volume of water and there is still room for improvement.

Additional Information Regarding Supply and Demand Side WUE Efforts

The 3 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.*

Bywater Bay DSL in 2022 was very low at 0.4% and the 3-year average is now 3.3%, well below the state mandate 10% DSL standard. This trend started 2 years ago and is among the lowest in our constellation of systems. Supply side goals 1 and 2 were both met in 2022, just as they were the year before.

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.

In 2022, there were no disruptive events like in 2021 other than a later, dry, warm summer. The result was a largely normal year of production that was dialed down to 16,533,300 or about 1,966,700 gallons under the set 3 year average production goal of 18,500,000 gallons. This kept nearly 2 million gallons in the aquifers, which is important in an area prone to seawater intrusion.

On the demand side, the reduction from 17,009,510 gallons used by Bywater Bay customers in 2021 to 6,107,748 gallons in 2022 represents almost 2 million gallons saved. Another great savings year from Bywater Bay water customers! Thank you!

The following questions will help DOH better understand water usage, water resources management and drought response. The data will be used to provide technical assistance, not for regulatory purposes.

All questions are voluntary

Month	Date of Measurement	Static Water Level (feet below measuring point)	Dynamic Water Level (feet below measuring point)
January	01/07/2022	175.2	
February	02/05/2022	174.8	
March	03/05/2022	176.4	
April	04/09/2022	177.2	
May	05/07/2022	176.4	
June	06/04/2022	170.6	
July	07/09/2022	180.0	
August	08/06/2022	189.5	
September	09/10/2022	186.6	
October	10/08/2022	188.1	
November	11/05/2022	175.8	
December	12/03/2022	1232022.0	

Water level data:

Please provide the following information (if known) to help us better utilize the water level data.

Well tag Id number: AAB869

Well depth: 295.0

Water level accuracy (within 0.01 ft < 1 ft ~ 1 ft) 1 ft

Completion type (e.g., cased open interval, cased open-ended, cased open-ended with perforations, etc...) cased, open-ended, screened interval, no perforations

Location coordinates (latitude, longitude) and accuracy of the coordinates (< 1ft, ~1ft, >1000ft) 47.876, -122.665 (10 ft)

Water level parameter name (e.g. depth below measuring point, depth below top of casing, depth below ground surface) Depth below measuring point

Elevation of top of casing OR elevation of measuring point if different than top of casing (as specified in question 7) 222.5 ft

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	813,347
February	836,631
March	683,083
April	829,708
May	834,630
June	985,222
July	1,500,106
August	2,886,356
September	2,675,964
October	2,198,863
November	1,131,336
December	725,860

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