



Date Submitted: 6/9/2022

Water Use Efficiency Annual Performance Report - 2021

WS Name: Coyle

Water System ID# : 36711

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 01/01/2021 To 12/31/2021

Incomplete or missing data for the year? No

If yes, explain:

Total Water Produced & Purchased (TP) – Annual volume gallons	4,146,000 gallons
Authorized Consumption (AC) – Annual Volume in gallons	1,877,995 gallons
Distribution System Leakage – Annual Volume TP – AC	2,268,005 gallons
Distribution System Leakage – DSL = $[(TP - AC) / TP] \times 100 \%$	54.7 %
3-year annual average - %	54.0 % 2019, 2020, 2021

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 one Demand Side Goals established, and approved by the BOC, in the 2020-2025 Water Use Efficiency Program is: 1. Maintain gallons per day per connection at 3-year mean average.

Customer (Demand Side) Goal Progress:

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

1. Maintain gallons per day per connection at 3-year (2017 – 2019) mean average of 69 gallons/day. Goals were based on single family home use.

In 2021, Coyle customers consumed on average 63.5 gallons per day (gpd) or approximately 5.5 gpd less than the target goal of 69 gpd. In light of the record-breaking June heat wave and its aftermath, these numbers are impressive. Not only was the heatwave very early in the summer season, but the degree of heat stress was severe and, in some cases, killed vegetation outright. Many homeowners in Washington state likely watered intensively during the heat dome event, and afterwards to offset the effects. And if the vegetation was killed, people may have attempted to replant, which itself is water intensive. Not the case apparently in Coyle. Perhaps tree cover protected much of the system customers from the worst of the heat because the use numbers don't show the same response seen at other PUD water systems. Based on the 5.5 gpd less used per customer relative to the demand goal, Coyle water customers saved nearly 162,000 gallons in 2021. Well done!

Additional Information Regarding Supply and Demand Side WUE Efforts

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.

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.

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 (2017, 2018, 2019).*
- 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 2017, 2018, 2019 is 57.6%)*
- 3. Supply Side - Maintain water production at or below the 3-year mean average (2017, 2018, 2019)*

The high, long-lived distribution system leakage (DSL) problem persists. Believed to be caused by inferior and failing distribution lines from the original installation, the solution – water main replacement - will take time. The DSL value for 2021 was 54.7% and did not significantly move the 3-year average (now at 54.0%). With the 3-year average well over the state's 10% DSL standard, the PUD did not achieve its first supply side goal nor the second, at least not yet. The baseline at the start of our plan was 57.6% DSL, therefore, to get to 47.6% - or 10% less - will require significant progress to be made in 2022. PUD engineering is working to replace more of the leaking transmission line in 2022. Regardless of the leakage, supply side goal No. 3 to stay at or below the 3-year average (2017 – 2019) value of 4,165,333 gallons was achieved by 19,333 gallons. That is water saved relative to the production goal.

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			
February	02/05/2021	245.2	
March	03/05/2021	245.1	
April	04/02/2021	245.1	
May	05/07/2021	241.2	
June	06/04/2021		256.2
July	07/02/2021	244.2	
August	08/06/2021	245.4	
September	09/03/2021	245.4	
October	10/01/2021	245.4	
November	11/05/2021		254.2
December	12/27/2021	245.6	

Water level data:

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

Well tag Id number: ACQ 526

Well depth: 322.0

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 interval, no perforations

Location coordinates (latitude, longitude) and accuracy of the coordinates (< 1ft, ~1ft, >1000ft) 47.698, -122.801 (~ 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) 239.3 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	299,000
February	270,000
March	301,000
April	282,000
May	319,000
June	375,000
July	426,000
August	460,000
September	301,000
October	377,000
November	434,000
December	302,000

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