



Date Submitted: 6/25/2019

## Water Use Efficiency Annual Performance Report - 2018

WS Name: GRAHAM HILL MUTUAL WATER CO INC

Water System ID# : 28650                      WS County: PIERCE

Report submitted by: *Nick Nelson*

### 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 01/01/2018 To 12/31/2018

Incomplete or missing data for the year? No

If yes, explain:

<b>Total Water Produced &amp; Purchased (TP)</b> – Annual volume gallons	31,172,684 gallons
<b>Authorized Consumption (AC)</b> – Annual Volume in gallons	27,394,971 gallons
Distribution System Leakage – Annual Volume TP – AC	3,777,713 gallons
Distribution System Leakage – DSL = $[(TP - AC) / TP] \times 100 \%$	12.1 %
3-year annual average - %	7.9 %                      2016, 2017, 2018

### Goal-Setting Information:

Enter the date of most recent public forum to establish WUE goal: 09/27/2014

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):

*To maintain per capita daily use at 20% or better below the National average.*

## Customer (Demand Side) Goal Progress:

In addition to member education, GHMWCI has for years had a bar graph on the member billing that details usage for the past year by month. Graham Hill has for years utilized a 4 tier rate structure that charges for the commodity from the first gallon, and strongly discourages high water use. The rate structure is also broken into a "commodity" portion and a "base" rate to ensure the financial health of the company.

Since the implementation of these policies Graham Hill has seen a dramatic decrease in consumption per ERU. We are on the low side of consumption numbers across the nation. Historical annual average usage per ERU since implementation of tiered rate structure - - Assuming 2.91 family members

2009 205.64 GPD 70.7 G/person/day  
2010 173.58 GPD 59.6 G/person/day  
2011 177.21 GPD 60.9 G/person/day  
2012 162.09 GPD 55.7 G/person/day  
2013 160.92 GPD 55.3 G/person/day  
2014 173.54 GPD 59.6 G/person/day  
2015 178.12 GPD 61.2 G/person/day  
2016 190.03 GPD 65.3 G/person/day  
2017 190.52 GPD 65.5 G/person/day  
2018 191.92 GPD 66.1 G/person/day

Graham Hill Mutual Water Company Inc (GHMWCI) has less than 420 connections and therefore must evaluate or implement one supplementary water use efficiency measure in addition to the mandatory measures. The following sections describe the mandatory measures and the supplemental measures GHMWCI has in force.

Mandatory Measures:

1. Source and Service Metering and Meter Calibration

GHMWCI currently, and has for years, metered all customers and sources. Large meters are calibrated IAW AWWA and/or manufacturer standards. GHMWCI pursues an aggressive meter replacement program - 10% per year. GHMWCI is already in compliance with this requirement.

2. Leak Detection and Water Accounting

Graham Hill has maintained a low Distribution System Leakage (DSL) for over 2 decades. The three-year rolling average is 3.5 percent and is in compliance with this requirement.

## Additional Information Regarding Supply and Demand Side WUE Efforts

*3. Customer Education GHMWCI sends out monthly water conservation tips to their customers in the monthly newsletter and on the monthly billing. In addition, GHMWCI has sections of the company web site dedicated to customer education. Supply side: Flow demand is constantly monitored by SCADA and reviewed to identify leaks. As a member of ERWA, leak detection services are readily available. GHMWCI has a leak finder reward program for our members.*

*System Leakage - historical 2009 5.52%*

*2010 6.10%*

*2011 6.70%*

*2012 5.73%*

*2013 3.42%*

*2014 2.25%*

*2015 0.81%*

*2016 9.37%*

*2017 2.40%*

*2018 12.1% 3 yr. rolling average 7.9%*

## 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 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			
March			
April			
May			
June			
July			
August			
September			
October			
November			
December			

**Water level data:**

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

Well tag Id number:

Well depth:

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

Completion type (e.g., cased open interval, cased open-ended, cased open-ended with perforations, etc...)

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

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

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

**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	
February	
March	
April	
May	
June	
July	
August	
September	
October	
November	
December	

**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**