

Appendix C
Water Use Efficiency Program

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Date Submitted: 10/9/2017

Water Use Efficiency Annual Performance Report - 2016

WS Name: BONNEY LAKE WATER DEPARTMENT, Water System ID# : 07650 WS County: PIERCE

Report submitted by: *David Cihak*

Meter Installation Information:

Estimate the percentage of metered connections: 100%

If not fully metered - Current status of meter installation:

Production, Authorized Consumption, and Distribution System Leakage Information:

12-Month WUE Reporting Period: 01/01/2016 To 12/31/2016

Incomplete or missing data for the year? No

If yes, explain:

Distribution System Leakage Summary:

Total Water Produced and Purchased (TP) – Annual Volume	1,302,437,000 gallons
Authorized Consumption (AC) – Annual Volume	1,183,719,706 gallons
Distribution System Leakage – Annual Volume TP – AC	118,717,294 gallons
Distribution System Leakage – Percent DSL = $[(TP - AC) / TP] \times 100$	9.1 %
3-year annual average	10.8 %

Goal-Setting Information:

Date of Most Recent Public Forum: 01/22/2008 Has goal been changed since last performance report? No

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

WUE Goals:

Customer Goal (Demand Side):

Achieve additional system wide average water use reduction of 5% by the year 2010 and 10% by the year 2024 with 2004 as the base year. Increase awareness among all water users of the value and importance of conserving water and all of the methods available to achieve reductions in water use.

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

The initial baseline per capita consumption in 2004 was 100 gpd. In 2016 the per capita consumption was 96 gpd. The 5 year average per capita consumption is 87 gpd. The City continues to educate customers, and encourage conservation through the annual Consumer Confidence Report, utility bill stuffers, social media outlets such as the City website and Facebook, and printed news sources. The City continues to provide customers with their water consumption history on utility bills, and notifies the customers during the read cycle when higher than normal consumption or leaks are noted during the monthly read cycles. The City also continues to use a four tier rate structure during the Summer months, and a two tiered system during the Winter months. With the continued implementation of an AMR system, staff are able to provide customers with detailed consumption history to help educate customers of how and when their water is used. The City also alerts customers to service line leaks identified in the annual leak detection survey as soon as they are detected.

Additional Information Regarding Supply and Demand Side WUE Efforts

Include any other information that describes how you and your customers use water efficiently:

In 2016 the City was able to bring DSL below 10%. The City continues to allocate \$200-250,000 per year for water meter replacements with newer AMR meters. The budgeted amount allows for replacement of approximately 10% of the meters each year. The City also aggressively follows up on 'zero read' meters and replaces these on a monthly basis. The City also continues budgeting \$25,000 per year for leak detection surveys. The annual goal is to survey 20-25% of the entire system each year, as well as surveying older sections of the system annually. The annual survey is a 'point to point' survey that listens for leaks at all appurtenances including service lines. In older areas of the City, the Water Division works closely with the Street Division to identify areas where roadway resurfacing projects are planned. The Water Division replaces all service lines and appurtenances in these areas prior to the resurfacing project.

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Date Submitted: 10/19/2018

Water Use Efficiency Annual Performance Report - 2017

WS Name: BONNEY LAKE WATER DEPARTMENT, Water System ID# : 07650 WS County: PIERCE

Report submitted by: David Cihak

Meter Installation Information:

Estimate the percentage of metered connections: 100%

If not fully metered - Current status of meter installation:

Production, Authorized Consumption, and Distribution System Leakage Information:

12-Month WUE Reporting Period: 01/01/2017 To 12/31/2017

Incomplete or missing data for the year? No

If yes, explain:

Distribution System Leakage Summary:

Total Water Produced and Purchased (TP) – Annual Volume	1,327,824,000 gallons
Authorized Consumption (AC) – Annual Volume	1,217,208,402 gallons
Distribution System Leakage – Annual Volume TP – AC	110,615,598 gallons
Distribution System Leakage – Percent DSL = $[(TP - AC) / TP] \times 100$	8.3 %
3-year annual average	10.1 %

Goal-Setting Information:

Date of Most Recent Public Forum: 03/03/2018 Has goal been changed since last performance report? No

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

WUE Goals:

Customer Goal (Demand Side):

Achieve additional system wide average water use reduction of 5% by the year 2010 and 10% by the year 2024 with 2004 as the base year. Increase awareness among all water users of the value and importance of conserving water and all of the methods available to achieve reductions in water use.

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

The initial baseline per capita consumption in 2004 was 100 gpd. In 2017 the per capita consumption was 88 gpd. The 5 year average per capita consumption is 85 gpd. The City continues to educate customers, and encourage conservation through the annual Consumer Confidence Report, utility bill stuffers, social media outlets such as the City website, Facebook account, and printed news sources. The City continues to provide customers with water consumption history on their utility bills, and notifies customers of higher than normal consumption during monthly reading and billing cycles. The City continues to use a four tier rate structure during Summer months, and a two tiered rate structure during the Winter months. With the City's continued efforts to implement an AMR metering system, the City is able to provide customers with detailed account information and educate them on how and when their water is used. The City also conducts an annual leak detection survey and alerts customers of service line leaks detected during this survey.

Additional Information Regarding Supply and Demand Side WUE Efforts

Include any other information that describes how you and your customers use water efficiently:

In 2017, the City was able to lower the DSL to 8.33% from 9.12% in 2016. The City continues to allocate \$200-275,000 annually to replace water meters with newer AMR meters. The budgeted amount allows for the replacement of approximately 10% of the total meters annually. The City continues to aggressively follow up on 'zero consumption' meters identified during monthly read cycles, and replaces any meter found to be faulty. The City also continues to conduct annual leak detection surveys covering 20-25% of the total distribution system. The survey conducted is a 'point to point' survey that listens to all appurtenances including individual service lines and meters. In older areas of the City, the Water division works closely with the Street division to replace aging infrastructure prior to street improvement projects.

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Date Submitted: 7/10/2019

Water Use Efficiency Annual Performance Report - 2018

WS Name: BONNEY LAKE WATER DEPARTMENT Water System ID# : 07650 WS County: PIERCE

Report submitted by: *David Cihak*

Meter Installation Information:

Estimate the percentage of metered connections: 100%

If not fully metered - 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:

Distribution System Leakage Summary:

Total Water Produced and Purchased (TP) – Annual Volume	1,307,096,000 gallons
Authorized Consumption (AC) – Annual Volume	1,195,196,057 gallons
Distribution System Leakage – Annual Volume TP – AC	111,899,943 gallons
Distribution System Leakage – Percent DSL = $[(TP - AC) / TP] \times 100$	8.6 %
3-year annual average	8.7 %

Goal-Setting Information:

Date of Most Recent Public Forum: 03/03/2018 Has goal been changed since last performance report? No

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

WUE Goals:

Customer Goal (Demand Side):

Achieve additional system wide average water use reduction of 5% by the year 2010 and 10% by the year 2024 with 2004 as the base year. Increase awareness among all water users of the value and importance of conserving water and all of the methods available to achieve reductions in water use.

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

The initial baseline per capita consumption in 2004 was 100 gpd. In 2018 the per capita consumption was 86 gpd. The five year average per capita consumption is 86 gpd. The City continues to educate customers , and encourage conservation through the annual Consumer Confidence Report, utility bill stuffers, printed news sources, and social media outlets including the City website, Facebook page, and City blog. The City continues to provide customers with water consumption history on their utility bills, and notifies customers of higher than normal consumption during monthly reading and billing cycles. The City continues to use a four tier rate structure during high demand summer months, and a two tier rate structure during the winter months. With the City's continued efforts to implement an AMR/AMI metering system, the City is able to provide customers with detailed account information and educate them on how and when their water is used. The City also conducts an annual leak detection survey and alerts customers of service line leaks detected during the survey.

Additional Information Regarding Supply and Demand Side WUE Efforts

Include any other information that describes how you and your customers use water efficiently:

In 2018 the City saw a slight increase in the DSL from 8.33% in 2017 up to 8.56% in 2018. The City continues to budget \$200-275,000 annually to replace water meters with newer AMR meters. The budgeted amount allows for the replacement of approximately 10% of the total meters annually. The City continues to aggressively follow up on 'zero consumption' meters identified during monthly read cycles, and replaces any meter found to be faulty. The City also continues to conduct an annual leak detection survey covering approximately 20-25% of the total distribution system. This survey is a 'point to point' survey that listens to all appurtenances including individual service lines, meters, fire hydrants, valves, blow offs, and air vacs. City staff immediately perform repairs as leaks are identified. The City continues to analyze data related to water main failures and is scheduling these for replacements based on these results, as budgetary limitations allow.

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