

Appendix T

Water Use Efficiency Annual Performance Reports





Date Submitted: 6/30/2010

Water Use Efficiency Annual Performance Report - 2009

WS Name: CHENEY, CITY OF

Water System ID# : 12400

WS County: SPOKANE

Report submitted by: Vic Anderson

Meter Installation Information:

Is your water system fully metered? Yes

If not fully metered - Current status of meter installation:

Production, Authorized Consumption, and Distribution System Leakage Information:

12-Month WUE Reporting Period: 01/01/2009 To 12/31/2009

Incomplete or missing data for the year? No

If yes, explain:

Distribution System Leakage Summary:

Total Water Produced and Purchased (TP) – Annual Volume	620,597,900 gallons
Authorized Consumption (AC) – Annual Volume	557,883,533 gallons
Distribution System Leakage – Annual Volume TP – AC	62,714,367 gallons
Distribution System Leakage – Percent DSL = [(TP – AC) / TP] x 100	10.1 %
3-year annual average	17.0 %

Goal-Setting Information:

Date of Most Recent Public Forum: 10/11/2007 Has goal been changed since last performance report? Yes

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

WUE Goals:

Customer Goal (Demand Side):

-To reduce peak outdoor single-family residential water use by 5-10% by December 31, 2015. -To reduce indoor single-family residential water use by 5-10% by December 31, 2015.

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

The City of Cheney included water conservation tips in the alongside a WUE Annual Summary in the 2008 & 2009 Consumer Confidence Reports. Our digital meter reader alerts us to abnormal meter readings so often times we are able to detect a hidden leak on a customer's property. In addition, we include the previous cycle's use alongside the current cycle's usage on water bills to alert customers about rising or decreasing consumption. Our local building code requires low flow water fixtures in new construction. In May of this year, our Public Works Director gave a presentation to the City Council about the importance of water conservation, and we will continue to encourage all Cheney residents to conserve water conservation in the future. We plan to increase the level of WUE public education this year.

Additional Information Regarding Supply and Demand Side WUE Efforts

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

The City aims to reduce our DSL to or below the 10% standard as directed by the DOH. We had a 10.1% DSL in 2009, our lowest in 3 years. We attribute our success to our annual leak detection survey. We are around 65% completed with our radio-read meter replacement program and will be finished in a couple of years. As the process of reading meters becomes more timely, our ability to get better production vs consumption numbers is improving, and it will continue to do so. The time between collecting consumption data and reading well meters has been reduced to 7-10 days, and it will decrease with every radio-read meter we install. We expect our DSL to drop when we can compare real-time readings. In 2009, we updated our Water System Plan to include a section about our WUE Program. The DOH is currently reviewing the WSP.

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



Date Submitted: 6/16/2011

Water Use Efficiency Annual Performance Report - 2010

WS Name: CHENEY, CITY OF

Water System ID# : 12400

WS County: SPOKANE

Report submitted by: Vic Anderson

Meter Installation Information:

Is your water system fully metered? Yes

If not fully metered - Current status of meter installation:

n/a

Production, Authorized Consumption, and Distribution System Leakage Information:

12-Month WUE Reporting Period: 01/01/2010 To 12/31/2010

Incomplete or missing data for the year? No

If yes, explain:

n/a

Distribution System Leakage Summary:

Total Water Produced and Purchased (TP) – Annual Volume	568,121,200 gallons
Authorized Consumption (AC) – Annual Volume	543,867,527 gallons
Distribution System Leakage – Annual Volume TP – AC	24,253,673 gallons
Distribution System Leakage – Percent DSL = [(TP – AC) / TP] x 100	4.3 %
3-year annual average	11.0 %

Goal-Setting Information:

Date of Most Recent Public Forum: _____ 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):

To reduce peak outdoor single-family residential water use by 5-10% by December 31, 2015. To reduce indoor single-family residential water use by 5-10% by December 31, 2015.

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

The City of Cheney included water conservation tips in its 2010 Consumer Confidence Reports. Previous billing cycle's water use is included in customer water bills alongside the current billing cycle's usage in order to alert customers to increasing or decreasing consumption. The City continued its successful meter replacement program. Digital meter readers alert staff to abnormal meter readings which allow hidden leaks to be detected on customer's properties. To enhance conservation, the City is implementing a tier rate structure for billing. The local building code requires low flow water fixtures in all new construction.

Additional Information Regarding Supply and Demand Side WUE Efforts

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

The City of Cheney has reduced its DSL to 6% in 2010 which is below the 10% standard as directed by the DOH. The City attributes its continuing success in part to its active leak detection program. Leaks were identified and repaired, including a major leak in a 4" steel main that ran under a set of railroad tracks. Source meters were calibrated in 2010. A reclaimed water study was completed and the estimate was more than 10 million dollars which the City deemed unaffordable. The radio-read meter replacement program has almost been completed. As the process of reading meters becomes timelier, the City's ability to get better production vs. consumption numbers is improving, and will continue to do so. The time between collecting consumption data and reading well meters has been reduced to seven to ten days, and this time will decrease with every radio-meter the City installs. The DSL is expected to drop when the City can compare real-time readings.

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



Date Submitted: 6/28/2012

Water Use Efficiency Annual Performance Report - 2011

WS Name: CHENEY, CITY OF

Water System ID# : 12400

WS County: SPOKANE

Report submitted by: *Mary L Howell*

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: *01/01/2011 To 12/31/2011*

Incomplete or missing data for the year? *No*

If yes, explain:

Distribution System Leakage Summary:

Total Water Produced and Purchased (TP) – Annual Volume	<i>551,608,400</i> gallons
Authorized Consumption (AC) – Annual Volume	<i>504,228,576</i> gallons
Distribution System Leakage – Annual Volume TP – AC	<i>47,379,824</i> gallons
Distribution System Leakage – Percent DSL = [(TP – AC) / TP] x 100	<i>8.6 %</i>
3-year annual average	<i>7.7 %</i>

Goal-Setting Information:

Date of Most Recent Public Forum: *10/11/2007* Has goal been changed since last performance report? *Yes*

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

WUE Goals:

Customer Goal (Demand Side):

Goal #1: To reduce peak outdoor single-family residential water use by 5-10% by Decemebr 31, 2015. Goal #2: To reduce indoor single-family residential water use by 5-10% by December 31, 2015.

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

The City included outdoor water conservation tips and a WUE Update in the 2011 Consumer Confidence Report. Customer's awareness of consumption was increased by the inclusion of previous cycle's water use alongside the current cycle's usage on water bills. The City is still working on implementing a tier rate structure for billing. Digital meter readers continue to identify hidden leaks and/or other abnormal activity on customer's properties. The City's local building code requires low flow water fixtures in all new construction.

Additional Information Regarding Supply and Demand Side WUE Efforts

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

The City has maintained its goal of a DSL of 10% or lower. This success is attributed to several ongoing measures: The annual leak detection survey which identified a leak in Fall 2011; the radio-read meter replacement program which nears completion with only 400 meters to go; and the inclusion of a WUE section in the City's Water System Plan. The City plans to maintain or lower its DSL by continuing these measures. The City also plans on installing a new meter on county fire hydrants for better accuracy, as the Fire Department did fight fires and conduct trainings using these hydrants in 2011.

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



Date Submitted: 6/12/2013

Water Use Efficiency Annual Performance Report - 2012

WS Name: CHENEY, CITY OF

Water System ID# : 12400

WS County: SPOKANE

Report submitted by: Vic Anderson

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: 01/01/2012 To 12/31/2012

Incomplete or missing data for the year? No

If yes, explain:

Distribution System Leakage Summary:

Total Water Produced and Purchased (TP) – Annual Volume	590,194,800 gallons
Authorized Consumption (AC) – Annual Volume	478,588,749 gallons
Distribution System Leakage – Annual Volume TP – AC	111,606,051 gallons
Distribution System Leakage – Percent DSL = [(TP – AC) / TP] x 100	18.9 %
3-year annual average	10.6 %

Goal-Setting Information:

Date of Most Recent Public Forum: 10/11/2007 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):

Goal #1: To reduce peak outdoor single-family residential water use by 5-10% by Decemebr 31, 2015. Goal #2: To reduce indoor single-family residential water use by 5-10% by December 31, 2015.

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

The City included a WUE update and conservation reminder in the 2012 Consumer Confidence Report. Customer awareness of consumption was increased by the inclusion of previous cycle's water use alongside the current cycle's usage on water bills. The City is implementing a tier rate structure for billing. Digital meter readers continue to identify hidden leaks and/or other atypical activity on customer's properties. The City's local building code requires low flow water fixtures in all new construction.

Additional Information Regarding Supply and Demand Side WUE Efforts

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

The City has maintained its goal of a DSL of 10% or lower in 2012. This success is attributed to several ongoing measures: The annual leak detection survey; the radio-read meter replacement program; and the inclusion of a WUE section in the City's Water System Plan. The City will maintain or lower its DSL by continuing these measures. The City is also installing a new meter on county fire hydrants for better accuracy.

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



Date Submitted: 6/24/2014

Water Use Efficiency Annual Performance Report - 2013

WS Name: CHENEY, CITY OF

Water System ID# : 12400

WS County: SPOKANE

Report submitted by: MARY L. HOWELL

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: 01/01/2013 To 12/31/2013

Incomplete or missing data for the year? No

If yes, explain:

Distribution System Leakage Summary:

Total Water Produced and Purchased (TP) – Annual Volume	613,468,900 gallons
Authorized Consumption (AC) – Annual Volume	553,275,172 gallons
Distribution System Leakage – Annual Volume TP – AC	60,193,728 gallons
Distribution System Leakage – Percent DSL = $[(TP - AC) / TP] \times 100$	9.8 %
3-year annual average	12.4 %

Goal-Setting Information:

Date of Most Recent Public Forum: 10/11/2007 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):

Goal #1: To reduce peak outdoor single-family residential water use by 5-10% by Decemebr 31, 2015. Goal #2: To reduce indoor single-family residential water use by 5-10% by December 31, 2015.

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

The City included a WUE update and conservation reminder in the 2013 Consumer Confidence Report. Customer awareness of consumption continued to increase due to the inclusion of previous cycle's water use alongside the current cycle's usage on water bills. The City has implemented a tier rate structure for billing. Digital meter readers continue to identify hidden leaks and/or other atypical activity on customer's premises. The City's local building code requires low-flow water fixtures in all new construction.

Additional Information Regarding Supply and Demand Side WUE Efforts

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

The City maintained the goal of a DSL of 10% or lower in 2013. This success is attributed to several ongoing measures: The annual leak detection survey; the radio-read meter replacement program; installing new meters on county fire hydrants; and the inclusion of a WUE section in the City's Water System Plan. The City will maintain or lower its DSL by continuing these measures.

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



Date Submitted: 7/1/2015

Water Use Efficiency Annual Performance Report - 2014

WS Name: CHENEY, CITY OF

Water System ID# : 12400

WS County: SPOKANE

Report submitted by: MARY L. HOWELL

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: 01/01/2014 To 12/31/2014

Incomplete or missing data for the year? No

If yes, explain:

Distribution System Leakage Summary:

Total Water Produced and Purchased (TP) – Annual Volume	639,051,800 gallons
Authorized Consumption (AC) – Annual Volume	508,894,477 gallons
Distribution System Leakage – Annual Volume TP – AC	130,157,323 gallons
Distribution System Leakage – Percent DSL = [(TP – AC) / TP] x 100	20.4 %
3-year annual average	16.4 %

Goal-Setting Information:

Date of Most Recent Public Forum: 10/11/2007 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):

Goal #1: To reduce peak outdoor single-family residential water use by 5-10% by Decemebr 31, 2015. Goal #2: To reduce indoor single-family residential water use by 5-10% by December 31, 2015.

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

The City included a WUE update and conservation reminder in the 2014 Consumer Confidence Report. Customer awareness of consumption continued to increase due to the inclusion of previous cycle's water use alongside the current cycle's usage on water bills. The City has implemented a tier rate structure for billing. Digital meter readers continue to identify hidden leaks and/or other atypical activity on customer's premises. The City's local building code requires low-flow water fixtures in all new construction.

The City plans to hold a new WUE public forum in the Summer of 2015.

Additional Information Regarding Supply and Demand Side WUE Efforts

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

When accounting for their water in previous years, Cheney's unaccounted-for water numbers were inaccurate. In 2014, the City has implemented an aggressive leak detection program and is changing out meters so they are more accurate. Also, the City now has a more accurate method of determining authorized and unauthorized consumption.

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



Date Submitted: 8/1/2017

Water Use Efficiency Annual Performance Report - 2015

WS Name: CHENEY, CITY OF

Water System ID# : 12400

WS County: SPOKANE

Report submitted by:

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: _____ To _____

Incomplete or missing data for the year? No

If yes, explain:

Distribution System Leakage Summary:

Total Water Produced and Purchased (TP) – Annual Volume	654,477,276 gallons
Authorized Consumption (AC) – Annual Volume	577,229,081 gallons
Distribution System Leakage – Annual Volume TP – AC	77,248,195 gallons
Distribution System Leakage – Percent DSL = $[(TP - AC) / TP] \times 100$	11.8 %
3-year annual average	14.0 %

Goal-Setting Information:

Date of Most Recent Public Forum: 10/11/2007 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):

Goal #1: To reduce peak outdoor single-family residential water use by 5-10% by Decemebr 31, 2015. Goal #2: To reduce indoor single-family residential water use by 5-10% by December 31, 2015.

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

Additional Information Regarding Supply and Demand Side WUE Efforts

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

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



Date Submitted: 8/1/2017

Water Use Efficiency Annual Performance Report - 2016

WS Name: CHENEY, CITY OF

Water System ID# : 12400

WS County: SPOKANE

Report submitted by:

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	609,198,500 gallons
Authorized Consumption (AC) – Annual Volume	503,862,816 gallons
Distribution System Leakage – Annual Volume TP – AC	105,335,684 gallons
Distribution System Leakage – Percent DSL = $[(TP - AC) / TP] \times 100$	17.3 %
3-year annual average	16.5 %

Goal-Setting Information:

Date of Most Recent Public Forum: 05/02/2017 Has goal been changed since last performance report? Yes

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

WUE Goals:

Customer Goal (Demand Side):

Maintain City park annual water consumption at or below 20 million gallons per year through 2028.

Reduce single-family residential outdoor water consumption by 20 gallons per day (GPD) per home by 2028.

Reduce consumption per Equivalent Residential Unit from 339 GPD to 332 GPD by 2028.

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

Financial Incentives: Low-cost devices/fixtures provided to customers. Rebate program for low-flow toilets, clothes washers, etc. Inclining water rate structure to encourage water conservation.

Public Education: School/youth outreach. Conservation information posted on City website. Educate public on "wise-scaping" with native vegetation.

Additional Information Regarding Supply and Demand Side WUE Efforts

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

To achieve system-wide average water use reduction of 2% by 2023 (from 2016 levels), and 5% by 2028 (from 2016 levels).

While meeting the DSL standard of 10% or less based on a 3-year rolling average, maintain 7%-9% or lower DSL in the water system on an annual basis.

Other measures the City is utilizing and working towards:

- Leak detection for the distribution system and repairing known leaks*
- Irrigation schedules for large users (schools, parks)*
- Correcting large meter installations*
- Water audits for large users*
- Reclaimed water use*

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



Date Submitted: 6/28/2018

Water Use Efficiency Annual Performance Report - 2017

WS Name: CHENEY CITY OF

Water System ID# : 12400

WS County: SPOKANE

Report submitted by: *Mary Howell*

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	568,787,100 gallons
Authorized Consumption (AC) – Annual Volume	473,580,043 gallons
Distribution System Leakage – Annual Volume TP – AC	95,207,057 gallons
Distribution System Leakage – Percent DSL = [(TP – AC) / TP] x 100	16.7 %
3-year annual average	15.3 %

Goal-Setting Information:

Date of Most Recent Public Forum: 05/02/2017 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):

*Maintain City park annual water consumption at or below 20 million gallons per year through 2028.
Reduce single-family residential outdoor water consumption by 20 gallons per day (GPD) per home
by 2028. Reduce consumption per Equivalent Residential Unit from 339 GPD to 332 GPD by 2028.*

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

Additional Information Regarding Supply and Demand Side WUE Efforts

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

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

To achieve system-wide average water use reduction of 2% by 2023 (from 2016 levels), and 5% by 2028 (from 2016 levels).

While meeting the DSL standard of 10% or less based on a 3-year rolling average, maintain 7-9% or lower DSL in the water system on an annual basis.

Other measures the City is utilizing and working towards:

- Leak detection for the distribution system and repairing known leaks*
- Irrigation schedules for large users (schools, parks)*
- Correcting large meter installations*
- Water audits for large users*
- Reclaimed water use*

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



Date Submitted: 5/7/2019

Water Use Efficiency Annual Performance Report - 2018

WS Name: CHENEY CITY OF

Water System ID# : 12400

WS County: SPOKANE

Report submitted by: *Dan Ferguson*

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	600,985,600 gallons
Authorized Consumption (AC) – Annual Volume	519,207,743 gallons
Distribution System Leakage – Annual Volume TP – AC	81,777,857 gallons
Distribution System Leakage – Percent DSL = $[(TP - AC) / TP] \times 100$	13.6 %
3-year annual average	15.9 %

Goal-Setting Information:

Date of Most Recent Public Forum: 05/02/2017 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):

*Maintain City park annual water consumption at or below 20 million gallons per year through 2028.
Reduce single-family residential outdoor water consumption by 20 gallons per day (GPD) per home
by 2028. Reduce consumption per Equivalent Residential Unit from 339 GPD to 332 GPD by 2028.*

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

Efforts continue to reduce excessive park watering use and work with public to lower water demand during the peak irrigation season.

Additional Information Regarding Supply and Demand Side WUE Efforts

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

In December of 2018 the city requested RFP's for an engineering firm to perform a water system study for the purpose of determining future needs and goals for the City's water system. The city has contracted with Varela & Associates to establish a technical advisory committee made up of stake holders, city staff and Varela engineers to establish short and long term strategies to present to the City Council for adoption and implementation. The bulk of this work is to be performed in 2019.

The city contracted with a leak detection company and identified up to 8 substantial leaks in the fall of 2018. These leaks were not addressed until after the start of 2019 due to budgets and staffing issues. It was determined that at the peak loss there was a combined 390 gpm of water loss in the 8 associated leaks.

The city continues to work with the School District to reduce irrigation of unused play fields in the summer months. By cooperative efforts we have managed to maintain green play fields where desired and reduce water consumption at the same time.

The city continues to investigate water reuse as a potential supplement for green space irrigation.

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

City of Cheney Water Loss Control Action Plan (WLCAP)

The City of Cheney maintains its commitment to reduce Distribution System Leakage (DSL) to below 10% per Department of Health Requirements as established in the 2010 Water System Plan. The City showed a 3-year (2016-2018) annual average of 15.9% DSL in 2018, thus requiring an affirmation of the City's commitment to reduce DSL.

Throughout the year, the City monitors and locates system leaks annually using standard leak detection systems. The City also works towards reducing DSL through meter calibration and customer meter reading audits. Once a water main leak has been located, City crews expose and repair the water main leaks. The City uses the annual water main repair budget to pay for waterline repairs. The budget for these repairs is based off the depreciation for the system capital.

The City goal is to have its DSL below the prescribed 10% maximum within 3-years. To achieve this goal, the City will continue its current operations to detect, locate and repair system leaks. The funding for the repairs will continue to come from the City's yearly water division budget.