CITY OF BATTLE GROUND
RESOLUTION NO. 21-12

A RESOLUTION ESTABLISHING WATER USE EFFICIENCY GOALS FOR THE CITY OF BATTLE GROUND WATER SYSTEM AS REQUIRED UNDER THE STATE MUINICPAL WATER LAW AND REGULATIONS.

WHEREAS, the in 2003 Washington State Legislature adopted the Municipal Water Law (House Bill 1338) that was largely codified as Chapter 90.03 RCW, which in part required the Washington State Department of Health to establish water use efficiency requirements designed to ensure certainty and flexibility of municipal water rights in addition to efficient use of water; and

WHEREAS, the Washington State Department of Health developed Water Use Efficiency Requirements that are now codified with WAC Chapter 246-290; and

WHEREAS, WAC 246-290-830 requires municipal water suppliers to be able to provide documentation to the Washington State Department of Health that a Water Use Efficiency Program has been developed per the requirements of RCW 246-290-810 and that said Program demonstrates the required Water Use Efficiency Goals as outlined by WAC 246-290-830; and

WHEREAS, WAC 246-290-830 provides a process for municipal water suppliers to establish Water Use Efficiency Goals, which includes a requirement to hold a public forum at least two weeks after a public notice of said forum is provided and after said public forum the elected governing board of the municipal water system shall review and consider all comments received in adopting the Water Use Efficiency Goals and the various materials relied upon shall be available for the public fully documenting the basis for the goals adopted; and

WHEREAS, the City Council of the City of Battle Ground held a public forum on Monday, November 15, 2021, for which notice was provided at least two weeks prior to the forum. The public was given an opportunity to participate and provide comment, and comments were received, reviewed, and considered by the Council; and

NOW, THEREFORE, be it resolved by the City Council of the City of Battle Ground, hereby adopts the attached Water Use Efficiency Program.

PASSED BY THE COUNCIL AND APPROVED BY THE MAYOR OF THE CITY OF BATTLE GROUND IN OPEN MEETING THIS 6TH DAY OF DECEMBER, 2021.

CITY OF BATTLE GROUND, WASHINGTON

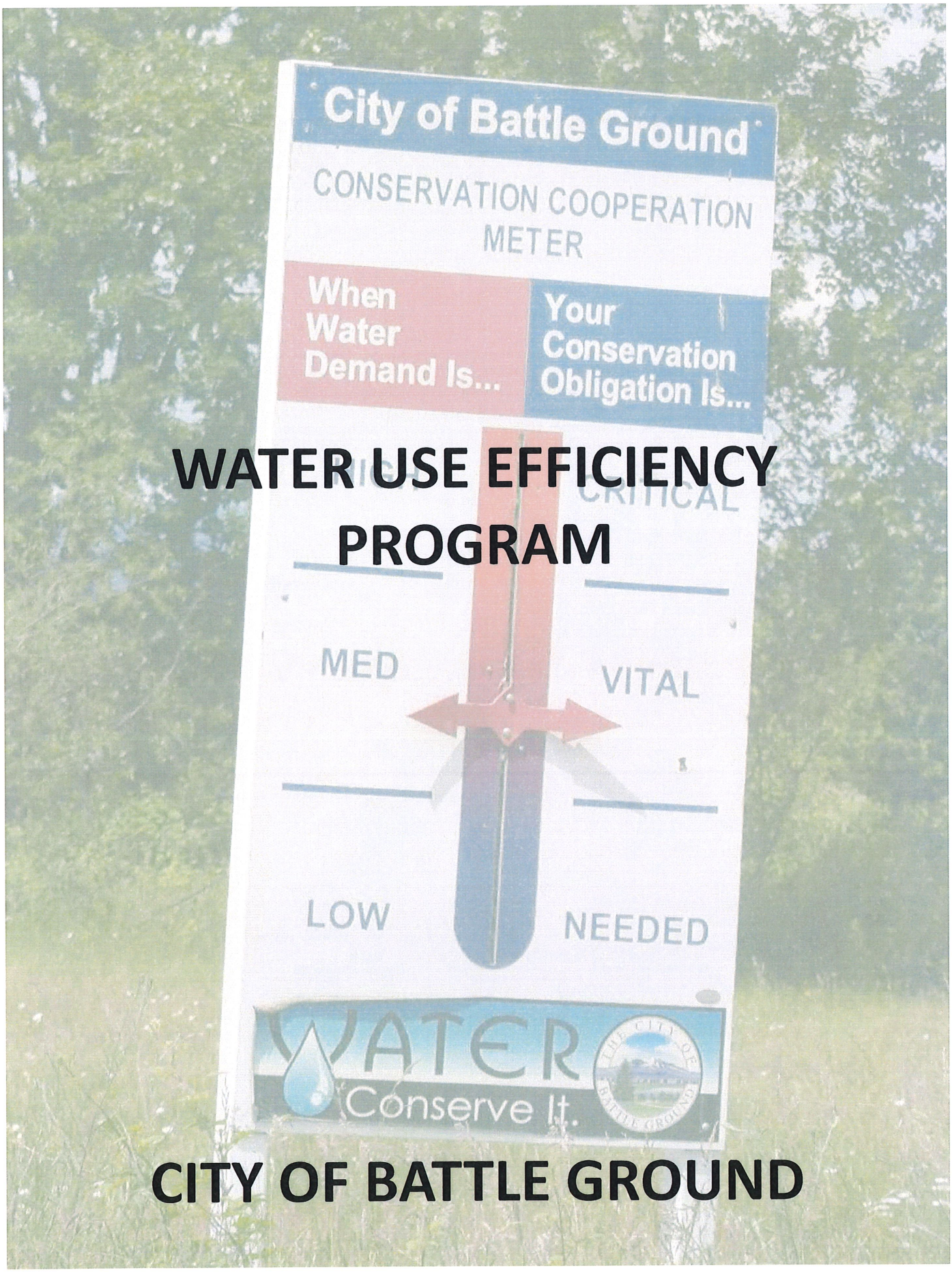
By: _____
Adrian Cortes, Mayor

Attest:

By: Kay Kammer
Kay Kammer, City Clerk

Approved as to form:

By: _____
Christine Hayes, City Attorney



WATER USE EFFICIENCY PROGRAM

CITY OF BATTLE GROUND

WATER USE EFFICIENCY PROGRAM

Introduction

The City of Battle Ground (City) recognizes that water is a valuable and essential natural resource that needs to be used wisely. This Water Use Efficiency (WUE) Program provides an approach to increase water use efficiency within the City's water service area.

Background

The Water Use Efficiency Rule

The Washington State Department of Health (DOH) implemented the WUE Rule, effective on January 22, 2007, as required by the Municipal Water Supply – Efficiency Requirements Act, also known as the Municipal Water Law (MWL), passed by the Washington State Legislature in September 2003. The MWL requires the state to implement the WUE Rule. The intent of the rule is to help reduce the demand that growing communities, agriculture, and industry have placed on the state's water resources, and to better manage these resources for fish and other wildlife. Municipal water suppliers are obligated under the WUE Rule to enhance the efficient use of water by the system and/or its consumers. The requirements of the WUE Rule are set forth in Chapter 246-290, Part 8, Washington Administrative Code (WAC).

Water Use Efficiency Requirements

DOH has provided guidance for municipal water suppliers on how to prepare and implement a WUE program that complies with the WUE Rule. The Water Use Efficiency Guidebook, published by DOH, was most recently revised and updated in 2017. The guidebook identifies the water use reporting, forecasting, and efficiency program requirements for public water systems. A WUE program meeting these requirements is a necessary element of a water system plan as required by the DOH and is necessary to obtain water right permits from the Washington State Department of Ecology (Ecology). The Water Use Efficiency Guidebook defines the necessary components of a WUE program as four fundamental elements.

1. Planning requirements, which include collecting data, forecasting demand, evaluating WUE measures, calculating distribution system leakage, and implementing a WUE program to meet goals.
2. A distribution system leakage (DSL) standard of 10 percent or less based on a 3-year rolling average.
3. Goal setting to provide a benchmark for achievement and to help define the success of the WUE program.
4. Annual performance reporting on progress towards meeting WUE goals.

Water Use Efficiency Program

The City's current WUE Program elements are summarized in this section.

Planning Requirements And WUE Program Activities

The City's water use data, demand forecasts, supply characteristics, and other planning requirements are contained throughout this Water System Plan (WSP). The City is committed to continue collecting water use data beyond that presented in **Chapter 4** for evaluation of its WUE Program and water use patterns, and for forecasting demands for future facilities. Consistent with WAC 246-290-810, the WUE program effectiveness will continue to be evaluated within each WSP update.

Recent WUE program activities are presented in the Selected Measures section.

Water Use Efficiency Goals And The Public Process

Per WAC 246-290-830, WUE goals must be set through a public process and shall be evaluated and reestablished as part of a WSP update. The City formally adopted water use efficiency goals in 2011 via its City Council and last updated its WUE Program as part of its 2014 WSP. The goals and objectives of the City's previous WUE Program are as follows:

- Reduce the average equivalent residential unit annual water consumption by a minimum of 1% (2 gpd) within six years.
- Reduce annual distribution system leakage (DSL) to 10% or less within six years.

In analyzing the first goal the 2014 WSP (Table 2-5) indicated that water consumption per ERU was 195 gpd. As shown in Table 4-8 of this WSP water consumption for all uses based an average between 2016 and 2019 is now at 178 gpd. This is a reduction of 8.7% well exceeding the City's goal of 1%.

System-wide DSL is discussed in **Chapter 4** and has been less than 10% each year since 2017, and the City's 3-year rolling average between 2017 and 2019 is 7.9%. The proposed WUE goals for the 2021 to 2031 water system planning cycle are as follows.

- Reduce the average equivalent residential unit annual water consumption by an additional 1% (2 gpd) within ten years.
- Maintain system-wide DSL at less than 10% per year and based on a 3-year rolling average.

In compliance with the WUE Rule, a public hearing will be held at a City Council meeting to present and discuss the new goals. The City Council will affirm the new goals at the meeting.

Water Use Efficiency Program Evaluation And Performance Reporting

The City will continue to evaluate overall demand, per capita water use, and the amount of DSL on an annual basis (coinciding with the production of the Consumer Confidence Report (CCR)). The City will also evaluate the performance of its WUE Program and implemented measures at this time by analyzing demand data and determining the long-term trend towards reducing water usage and meeting WUE goals. If the WUE Program monitoring shows that progress towards meeting the WUE goals is not being accomplished, more rigorous WUE Program implementation or additional WUE Program items will be considered, along with a cost-effective evaluation of measures.

The City will continue to provide annual WUE performance reports to its consumers in the CCR and detail the results of water use monitoring and progress towards achieving the system's WUE goals. The City will comply with DOH Annual WUE Performance report requirements, due to DOH by July 1st of each year.

Evaluation And Selection Of Water Use Efficiency Measures

The City's evaluation of WUE measures and selected levels of implementation are presented within this section. The measures fall within three categories of implementation: 1) mandatory measures that must be implemented; 2) measures that must be evaluated; and 3) measures selected by the City that either must be evaluated or implemented.

The City served 5,905 water service connections as of the end of 2019, which is the base year of the City's WSP. Based on the number of connections, at least six WUE measures must be evaluated or implemented. Measures that are mandatory cannot be credited towards the system's WUE measures. Since the City implements or plans on implementing all the evaluated measures presented here, a cost-effective evaluation is not required.

Mandatory Measures

Source Meters

The volume of water produced by the system's sources must be measured using a source meter or other meter installed upstream of the distribution system. Source meters currently are installed and operating at each of the City's sources. If any new sources are installed in the future, they will be equipped with a source meter. Meter testing and repairs are ongoing as-needed as part of the City's preventive maintenance program.

Service Meters

All public water systems that supply water for municipal purposes must install individual service meters for all water users. Service meters currently are installed and operating at all connections throughout the distribution system. All future connections that are installed or activated will be equipped with a service meter.

Meter Calibration

The City must calibrate and maintain meters based on generally accepted industry standards and manufacturer information. Compliance will be maintained by the City by performing maintenance on the source and service meters every 5 to 10 years at a minimum. Meter calibration verification testing is performed on an as-needed basis, typically annually.

Water Loss Control Action Plan

To control leakage, systems that do not meet the DSL standard must implement a Water Loss Control Action Plan (WLCAP). The City's rolling 3-year average DSL is below 10% based on the information presented in **Chapter 4** of the WSP. Therefore, a WLCAP is not required to be implemented.

Customer Education

Annual customer education regarding the importance of using water efficiently is a required element of all WUE programs. Customer education is provided in the City's annual CCR to customers and includes information on the system's DSL, progress towards meeting WUE goals, and tips for customers on using water more efficiently. Additional customer education and outreach measures are identified in the Selected Measures section.

Measures That Must Be Evaluated

Rate Structure

Evaluation of rate structures to increase water demand efficiency is required (WAC 246-290-100(4)(j)(iv)), and actual implementation of a conservation rate structure counts as a WUE measure (WAC 246-290-810(4)(d)). The City implements an inclining block rate structure, which is a conservation rate structure. The City charges a flat monthly meter access fee (based on meter size) and a water usage fee (increasing with the amount of water consumed) in each billing period. The City previously previous included 3 ccf of usage in the base rate, but eliminated that practice to further encourage conservation. The 2021 residential rate structure is shown in **Table 1**, and the 2021 rate structure for non-single-family residential customers is shown in **Table 2**.

Table 1
2021 Single-Family Residential Rate Structure

Monthly Meter Fees	
Meter Size	**Base Rate**
5/8"	$11.20
3/4"	$33.04
1"	$49.59
1-1/2"	$87.24
2"	$139.03

Water Usage Fee (Per 100 Cubic Feet)	
Consumption	**Rate**
0-6 ccf	$1.80
7-12 ccf	$2.57
Over 12 ccf	$4.12

Table 2
2021 Commercial/Multi-Family Residential Rate Structure

Monthly Meter Fees	
Meter Size	**Base Rate**
5/8"	$24.50
3/4"	$32.00
1"	$48.03
1-1/2"	$84.49
2"	$134.65
3"	$321.85
4"	$469.23

Water Usage Fee (Per 100 Cubic Feet)	
Consumption	**Rate**
All Usage	$3.33

Reclamation Opportunities

Reclaimed water is treated effluent from a wastewater treatment system that is suitable for a direct beneficial use or a controlled use that would not otherwise occur. The use of reclaimed water is regulated under Chapter 90.46 of the Revised Code of Washington (RCW). Water systems with 1,000 or more connections must evaluate reclamation opportunities (WAC 246-290-100(4)(f)(vii)), but only actual use of reclaimed water counts as a WUE measure (WAC 246-290-810(4)(d)) or multiple WUE measures if the reclaimed water is used for multiple purposes.

The City's wastewater is conveyed to the Salmon Creek Treatment Plant in Vancouver for treatment and disposal. The Discover Clean Water Alliance operates the plant and there are currently no opportunities for reclaimed water at this plant.

The City investigated a Water Reclamation Facility in the mid-2000s, but it ultimately was not approved by the Department of Ecology.

The City will continue to evaluate the feasibility of using reclaimed water in the future as conditions change.

Selected Measures

The City has chosen to implement five different WUE measures in addition to those that are mandatory or required to be evaluated. Because several of these WUE measures affect multiple customer classes, the City's WUE program counts as nine WUE measures (**Table 3**), which is greater than the requirement of six WUE measures based on the number of service connections.

Water Bill Showing Consumption History

The City presents consumption history charts and information on water bills for all customer classes and plans to continue to do so in the future.

Water Use Ordinances

The City passed Ordinance #10-09, which was codified in BGMC 13.113, which allows the Public Works Director to promote the conservation of the City's water supply in order to protect the health, welfare, and safety of water users.

Conservation Rates

The City's billing structure is set up to reward those who conserve water.

Advertising

The City advertises water conservation through its water conservameter signs (shown below). The City has two signs, which are placed in prominent locations in the City during the dry seasons. City staff adjusts the signs depending on water demand and conservation needs.



Battle Ground Conservameter Sign

Targeted Marketing

The City provides water conservation information on its website (https://www.cityofbg.org/239/Water-Conservation). This information is available year round, but the City sends out marketing (Facebook, Press Releases) in early summer.

Table 3
Selected WUE Measures

Mandatory WUE Measures	
Measures	**Implementation Status**
Source Meters Installed	x
Service Meters Installed	x
Meter Calibration Compliance	x
Water Loss Control Action Plan	Not Applicable
Customer Education	x

WUE Measures That Must Be Evaluated	
Measures	**Implementation Status**
Rate Structure	x
Reclamation Opportunities	x

Selected WUE Measures		
	Implementation Status	
Measure	**Single-Family Residential**	**Multi-Family Residential/ Commercial**
Water Bill Showing Consumption History	x	x
Water Use Ordinances	x	x
Conservation Rates	x	
Advertising	x	x
Targeted Marketing	x	x

Water Use Efficiency Program Schedule And Budget

The WUE measures described above and selected for implementation by the City are summarized in **Table 4** with their corresponding schedule and budget. The successful implementation of this program is expected to:

- Reduce the average equivalent residential unit annual water consumption by an additional 1% (2 gpd) within ten years.
- Maintain system-wide DSL at less than 10% per year and based on a 3-year rolling average.

Accomplishing these goals is expected to reduce the system-wide average daily demand by approximately 1% by 2031.

Table 4
Selected WUE Measures

Mandatory WUE Measures

Measure	Schedule	Budget
Source Meters Installed	Ongoing	O&M Funded
Service Meters Installed	Ongoing	O&M Funded
Meter Calibration Compliance	Ongoing	O&M Funded
Water Loss Control Action Plan	Not Applicable	Not Applicable
Customer Education	Ongoing	O&M Funded

WUE Measures That Must Be Evaluated

Measure	Schedule	Budget
Rate Structure	Ongoing	Not Applicable
Reclamation Opportunities	Ongoing	Not Applicable

Selected WUE Measures

Measure	Schedule	Budget
Water Bill Showing Consumption History	Ongoing	Not Applicable
Water Use Ordinances	Ongoing	Not Applicable
Conservation Rates	Ongoing	Not Applicable
Advertising	Ongoing	$1,000 Per Year
Targeted Marketing	Ongoing	$1,000 Per Year

Attachment A
Authorizing Resolution