



City of Battle Ground

WATER USE EFFICIENCY PROGRAM

March 2011

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OBJECTIVE

The objectives of this document are to identify the conservation and water use efficiency requirements pertaining to the City of Battle Ground, evaluate past conservation efforts, and describe the City's Water Use Efficiency program.

INTRODUCTION

In 2003, the Washington State Legislature passed Engrossed Second Substitute House Bill 1338, also known as the Municipal Water Law (MWL), to address the increasing demand on the State's water resources. The law calls for all municipal water suppliers to use water more efficiently in exchange for water right certainty in meeting future demand for the resource. The legislature directed the Washington Department of Health (WDOH) to adopt an enforceable Water Use Efficiency (WUE) program. This WDOH program and its rules, which became effective on January 22, 2007, are designed to ensure the long term supply of drinking water, promote good stewardship of the water resources and ensure efficient operation and management of water systems.

The WUE rule affects all municipal water suppliers, including all Group A community water systems like the City of Battle Ground. As required by Washington Administrative Code (WAC) 246-290, the City must provide for data collection and analysis intended to track water consumption and water loss from leaks in the system. Our WUE program must evaluate alternative rate structures and determine the feasibility of adopting a structure that will encourage water conservation. The following report describes the City of Battle Ground's Water Use Efficiency program.

MUNICIPAL WATER LAW REQUIREMENTS

SECTION 1: WATER USE EFFICIENCY PROGRAM

As part of the Planning Requirements of the WUE, municipal water suppliers are required to collect data, forecast demand, evaluate WUE measures, calculate distribution leakage and implement a WUE program to meet their goals. As of January 1, 2007, water suppliers have been obligated to collect production and consumption data on a regular basis to include in planning documents and annual performance reporting. As part of this data collection, demand forecasting is also an essential component for determining future use and potential savings through a water use efficiency program. A description of the water supplier's water source and supply characteristics must also be provided.

SECTION 2: DISTRIBUTION LEAK STANDARDS

Prior to adoption of the MWL, the Department of Health did not have a set distribution leakage standard, but encouraged a figure of 20% or less. Municipal water suppliers must now meet a 10% or less distribution system leakage rate to comply with the new state standard. Leakage must be presented both as a percentage and as leakage volume, and based on a rolling three-year average. Compliance with the distribution leakage standard must be met by July 1, 2010; if unable to meet this standard, the supplier must develop and implement a Water Loss Control Action Plan that outlines the steps and timelines to achieve the desired leakage rate. Additionally, a meter installation schedule is also required for all service connections currently not metered.

SECTION 3: GOAL SETTING AND PERFORMANCE REPORTING

The WUE requires municipal water suppliers to establish water use efficiency goals. Establishing goals demonstrates commitment and support from the utility and its water customers to use water efficiently. Goals must be established through a public process and reported on annually to customers and DOH by July 1 of each year. The WUE goals established through a public process are for a six-year period, and should be re-evaluated each cycle. Goals must be measurable, address water supply and demand forecasting, and include an implementation schedule for each goal. Performance reports are required to be made available to the public: this requirement may be fulfilled by including the performance report information in the annual Consumer Confidence Report. Annual water system production total, distribution system leakage information, and a description of the WUE goals and progress of achieving them must also be included in this publication.

2011-2017 WATER USE EFFICIENCY PROGRAM

SECTION 4: *GENERAL DESCRIPTION OF THE CITY'S WATER SYSTEM*

The City of Battle Ground is a municipal corporation, formed by a vote of the people in 1951. Our water utility provides water within the City's Urban Growth Area, which currently covers about six square miles and serves about 17,310 people. The City's water system has 5,923 connections (as reported in the 2010 Water Facilities Inventory), which service approximately 6,596 Equivalent Residential Units (ERU's). An ERU is a term used in water system planning to represent the water use of average residential home.

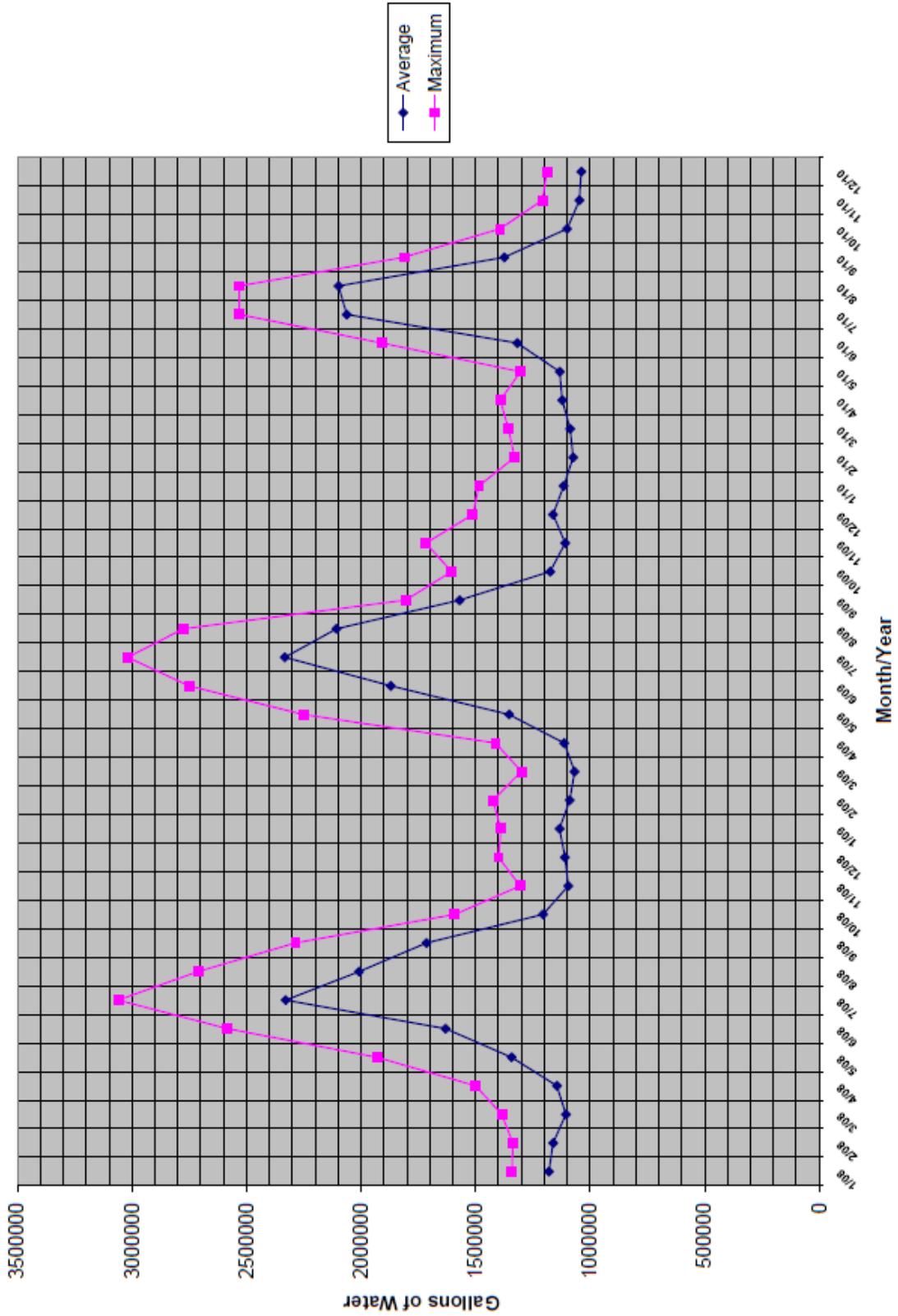
Single and multi-family residential customers total over 90% of our utilities accounts. The average residential customer consumes about 235 gallons of water per day, or about 91 gallons per person per day. This is a 26% decrease from 316 gallons/ERU as reported in our 1998 Water System Plan.

The City's water supply is produced by wells located in our regional aquifers. These wells produce an average daily flow totaling about 2.25 million gallons per day. The water is disinfected with sodium hypochlorite at each source well, and then treated with fluoride. Additional treatment measures are taken for iron removal at wells 7, 8 and 9. Our wells meet the water demand of the City, with the exception of emergency water needs. During peak usage periods, usually caused by high summer temperatures, we purchase water supplied by Clark Public Utilities (CPU). This water is supplied and metered through an existing intertie that is only opened on an emergency basis. Battle Ground's recent production history is summarized in the following chart, showing average monthly production rates and peak daily consumption for each month.

Additional information on our sources and water rights, along with future demand projections, can be found in the current City of Battle Ground Water System Plan; approved by the Washington State Department of Health.

TABLE 1:

Battle Ground Monthly Average/Peak Day Water Consumption (GPD) 2008-2010



SECTION 5: WATER CONSERVATION GOALS

The City of Battle Ground works to foster a conservation ethic among our consumers. One principal in achieving this goal is the reduction of the water demand in residential customers. Our staff has evaluated the effects of past activities aimed at water conservation and has established the following goals, to be adopted with this plan.

Supply - Conservation Goal:

Reduce annual distribution system leakage (DSL) from the current level of 12.1% to 10% or less within six years.

Demand - Conservation Goal:

Reduce the average equivalent residential unit annual water consumption by a minimum of 1% (2gpd) within six years.

SECTION 6: WATER CONSERVATION MEASURES

The City of Battle Ground is implementing water conservation measures as mandated under WAC 246-290-466. Water meters are in place at all sources and service connections. Meter data is collected and evaluated to determine trends in the consumption of water, and to generally account for the water in the system. The following is an outline of the measures that will be taken in an effort to achieve our water use efficiency goals.

Supply Side:

- 1. Leak Detection** – As leaks are discovered, they are repaired or mains are reconstructed as needed. One way we watch for system leaks is through our meter reading program. The City’s Finance Department uses software that tracks the consumption history of each meter. If a meter shows a higher than average consumption level during any given billing cycle a maintenance worker is sent to the site to verify the reading. If the reading is accurate, the location is then investigated for potential leaks to prevent further water loss.

Future work to decrease distribution system leaks will focus on service meter replacement and close monitoring of non-revenue water usage. Non-revenue water uses include, but are not limited to, water used in street sweeping, vacuum truck sewer cleaning, water line flushing and back washing at our treatment facility for wells 7, 8, and 9.

- 2. Source Metering** – The City has production meters on all water sources as well as a state of the art telemetry system to monitor these sites. The telemetry system monitors the operation of our water production system for possible pressure loss, pump function and water reservoir levels. Each component of the water supply system including the city’s meters, water mains, supply wells, reservoirs, booster stations, pressure reducing valves, and other facilities is inspected regularly and repairs are made when necessary.
- 3. Service Metering** – Industry standards for residential water meters state that these meters are expected to have a reasonable level of accuracy within their average service life of 10 to 12 years. The City’s Public Works staff has implemented a proactive meter replacement program with the goal to reduce system leakage and achieve a standard meter age of ten years or less.

A small percentage of our system’s DSL rate can be attributed to water theft related use. Historically, fire hydrants have been the primary source for water theft in our system. Our staff is diligent in identifying and discontinuing service when a violation is discovered. Violators can receive a misdemeanor charge and/or a related fine.

Demand Side –

- 1. Public Education** – The City provides informational materials aimed at water use efficiency for customers on the City’s website, www.cityofbg.org, and at several City offices. Documents like our “Every Drop Counts” brochure (*Appendix B*) and our annual water quality reports provide customers with information specific to the City’s water systems as well as tips that they can use to practice efficient water use in their daily lives. Additionally, the City utilizes the local newspaper to inform customers of the importance of water conservation (*Appendix C*) and to notify them of voluntary and/or regulatory restrictions whenever necessary.

Presumably, the most prominent component of our WUE public education efforts is our ‘Conservameter’ signs. These tools are usually implemented annually during our peak water usage months, late June through September. It allows our staff to communicate the state of the City’s water supply on a daily basis. During the drier seasons the production of water is significantly decreased, but due to the higher temperatures the demand for water increases. An assessment of the City’s water production and supply is taken daily, and staff will use these meters to express the need of conservation cooperation from our customers as necessary.



Conservameter – located on E Main Street and SW 5th Ave

2. **Building Code and Land Use Program** – The City’s building code includes several requirements for irrigation systems and low flow fixtures. Each new irrigation system requires a plumbing permit. Our inspectors make sure each system is installed correctly and is protected by a backflow device. They also make sure that each new residential and commercial development has low flow fixtures (faucets, toilets, showerheads, ect.) installed.

Additionally, the City’s land use code requires new developments to typically be denser than existing land uses resulting in decreased irrigation demands as parcels are developed. We anticipate that with continued growth the average water use by each ERU is expected to decrease as well.

3. **Customer Consumption History** - The monthly utility statements that the City sends out to its customers indicate water consumption history. By allowing customers to track and compare their usage, citizens can be informed of their own water use trends. The awareness can allow them to evaluate their individual water conservation needs and alert them of potential leaks.

4. **Irrigation Program and Watering for City Property** – During the drier months, the City may elect to suspend watering and irrigation operations at select City owned parks and facilities. Likewise, we encourage consumers to keep water conservation in mind when tending to their private landscapes by promoting the following water conservation ideas:

- Set sprinkler system timers to irrigate only when needed.
- Water lawns and plants in the early morning or late evening to limit water loss due to evaporation.
- Place a layer of mulch around plants and trees to avoid excessive evaporation.
- Monitor irrigation so to water only as rapidly as the soil can absorb the water.
- Install drip irrigation systems for a slow, steady supply of water to the plant roots.
- Position sprinklers or drip irrigation systems to water only the root areas of plants and not sidewalks, gutters, or streets.
- Consider native plants when landscaping.

5. **Inclined Block Rate Structure** – As the table below illustrates; the City’s Inclined Block Rate Structure establishes rates that will be applied to the customer based on their total usage. This rate schedule provides a financial incentive to reduce water demand, particularly during the peak summer period when the demand for water is more acute. It is estimated that our average residential customer will use no more than 3 units of water (748 gallons/unit, or CCF) per billing cycle. If that customer exceeds that estimate then the rate corresponding to their total usage in each billing cycle will be applied. (*See Table 2*)

**TABLE 2:
Historic Customer Water Rates**

Customer Class	2007	2008	2009	2010	2011
Residential - 3 units <i>(Inside City Limits)</i>	\$10.80	\$10.80	\$11.80	\$11.80	\$11.80
Residential - 4-15 units <i>(Inside City Limits)</i>	+ \$2.05/ ccf				
Residential - 16+ units <i>(Inside City Limits)</i>	+ \$3.08/ ccf	+ \$3.08/ ccf	+ \$2.56/ ccf	+ \$2.56/ ccf	+ \$2.56/ ccf
Residential - 3 units <i>(Outside City Limits)</i>	\$16.20	\$16.20	\$17.70	\$17.70	\$17.70
Residential - 4-15 units <i>(Outside City Limits)</i>	+ \$3.08/ ccf				
Residential - 16+ units <i>(Outside City Limits)</i>	+ \$3.84/ ccf				
Commercial - 5/8" meter	\$18.35*	\$18.35*	\$19.35*	\$19.35*	\$19.35*
Commercial - 3/4" meter	\$20.35*	\$20.35*	\$21.35*	\$21.35*	\$21.35*
Commercial - 1" meter	\$35.50*	\$35.50*	\$36.50*	\$36.50*	\$36.50*
Commercial - 1.5" meter	\$64.20*	\$64.20*	\$65.20*	\$65.20*	\$65.20*
Commercial - 2" meter	\$100.00*	\$100.00*	\$101.00*	\$101.00*	\$101.00*
Commercial - 3" meter	\$200.00*	\$200.00*	\$201.00*	\$201.00*	\$201.00*
Commercial - 4" meter	\$320.00*	\$320.00*	\$321.00*	\$321.00*	\$321.00*

* Plus \$2.20/ ccf

DISTRIBUTION SYSTEM LEAKAGE EVALUATION

Distribution system leakage (DSL) is defined as the difference between total water produced and all water consumed or purchased. We account for water within our system by examining supply and service meter data, and tracking water used for non-revenue producing purposes (maintenance and firefighting). Our records show that unaccounted for water losses in Battle Ground currently account for about 12.1% per year.

The 1994 *Conservation Planning Requirements* set the maximum allowable rate of lost and unaccounted for water, at 20% of total source production. We estimate our DSL rate was significantly higher in the mid 1990's, before Battle Ground experienced significant growth. Our current DSL average represents the significant improvement in our distribution system leak evaluation program. This is a direct result of continuous work to eliminate steel water mains, and directly respond to water system leaks as they are discovered.

The current WUE Rule mandates that we achieve an average DSL of 10 %, based on a three year rolling average. Table 3, below, summarizes the current three year rolling average.

TABLE 3
City of Battle Ground Historic Distribution System Leakage

Year	Metered Production	Metered Consumption	DSL		3 yr Rolling Average
			(MG)	(%)	
2007*	526 (MG)	450 (MG)	76 (MG)	14.4%*	N/A
2008	518 (MG)	448 (MG)	70 (MG)	13%	N/A
2009	520 (MG)	471 (MG)	48 (MG)	9.3%	12.1%
Average	519.6 (MG)	456.3 (MG)	63.2 (MG)	12.1%	12.1%

*Our original 2007 report was submitted with a lower value as shown in Appendix D.

WATER LOSS ACTION PLAN

Since the City does not meet the current WAC 246-290 DSL standard of 10%, we have developed a Water Loss Action Plan. This plan will be funded by the water utility and will include the following actions:

- Replace 10% of our water meters annually to eventually achieve an average water meter age of 10 years;
- Continue to perform scheduled calibration on all source flow meters;
- If DSL does not come below 10% after two years, implement system leak detection studies.

PROJECTED WATER SAVINGS

The 1994 and 1998 Water System Plan estimated consumption at 120gpcd (gallons per capita per day) or 316 gallons per ERU. Our current water system planning estimates our system demand rate at 97gpcd or 235 gallons per ERU. Therefore we estimate that the per capita use of water in Battle Ground has declined by approximately 26% since 1994. Existing and further conservation measures are expected to continue to reduce peak daily and seasonal water demands.

If our Water Use Efficiency goals are realized, the City is expected to see significant additional savings in water use and distribution system leakage (DSL). A 2% reduction in distribution system leakage combined with a 1% reduction in consumer usage over six years (2gpd per ERU) will result in an estimated savings of about 14.7 million gallons annually. This savings would allow our current system to adequately support an additional 442 people or 171 ERU's.

WATER USE EFFICIENCY PROGRAM EVALUATION

The WUE Program requires Battle Ground to set water use efficiency goals, and to evaluate each year's progress towards meeting these goals. Our goals must include a measurable outcome, address the water supply and demand characteristics, and include an implementation schedule to account of each facet of our program.

Many of the measures selected for the WUE program require little funding, such as including consumption history in bills and notifying customers of potential leaks. The City will track the finances associated with each measure and compare it to water saved to evaluate the effectiveness of each measure. If measures do not provide enough savings to meet their goals, additional or modified measures will be considered.

ANNUAL WUE REPORTING

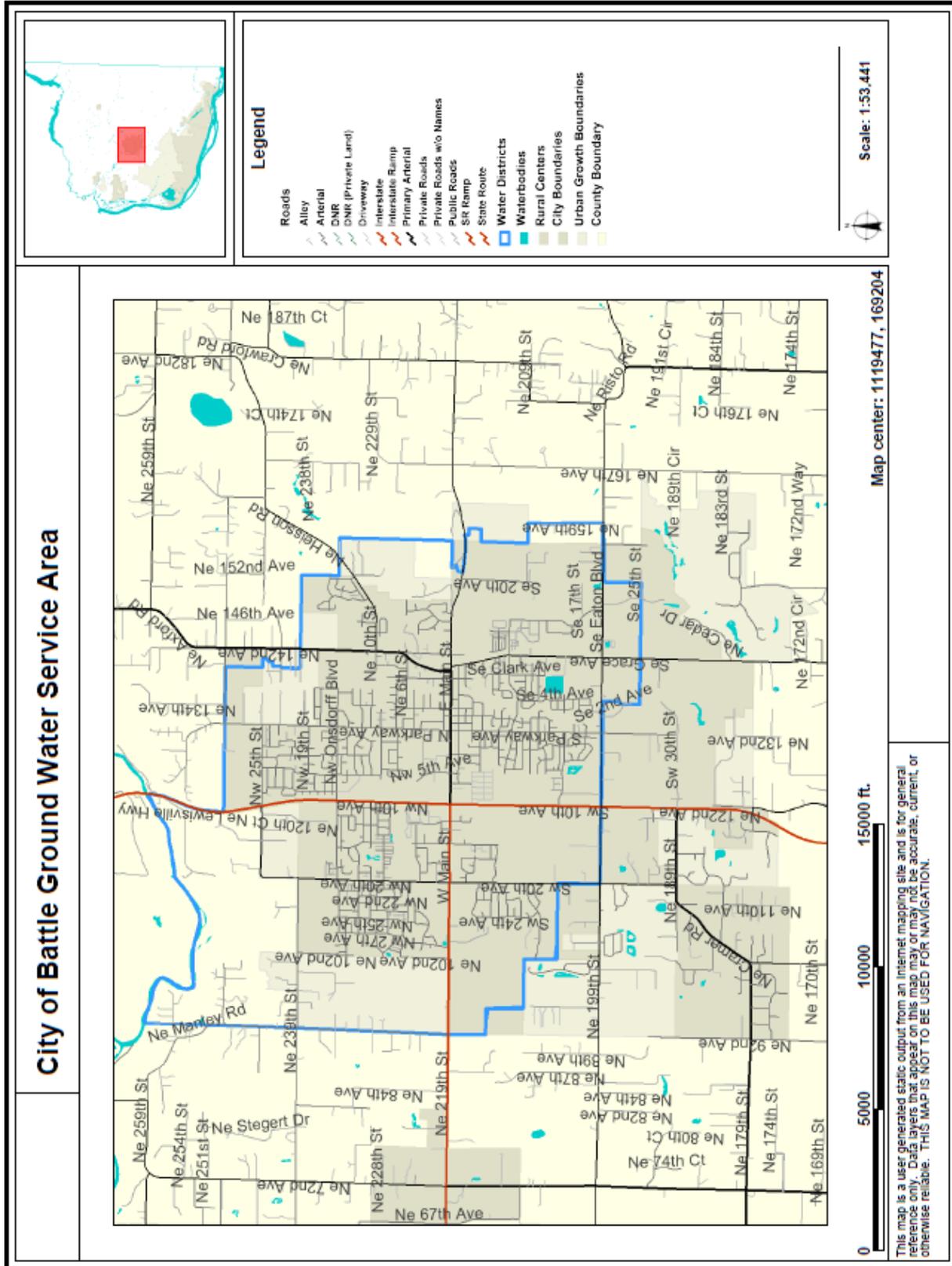
A WUE Report must be submitted to Washington Department of Health by July 1st of each year. The WDOH has developed a standard reporting form to help summarize the City's progress toward meeting their goals. The annual report must include:

- Total source production and system wide consumption
- Distribution system leakage in percentage and volume
- Goal description, schedule, and progress toward meeting goals

The City's WUE Reports for 2007, 2008 and 2009 are represented in Appendices D – F attached hereto.

APPENDICES

APPENDIX A: City of Battle Ground's Water Service Area Ma



APPENDIX B: Water Conservation Brochure “Every Drop Counts”



Landscaping and Water - Getting the Most out of Both

Sometimes it's hard to believe with our rainy weather here in the Pacific Northwest, that we need to conserve water. Water consumption skyrockets during the summer months, which in turn, depletes our water resources making water conservation a necessity.

You can help save water and your landscaping at the same time by following these practical guidelines.

1. Best time - Water in the early morning or evening. You lose a lot of water due to evaporation when watering after temperatures have reached their peak.
2. Get a timer - These \$10 items are so handy and help you to not forget that sprinkler running outside when you get busy inside.
3. Use soaker hoses when possible and drip systems in pots.
4. Make sure valves are not leaking outside. Sometimes just slightly tightening can stop the drip at your outside nozzle.
5. Adjust your sprinkler before you turn it on. The street, driveway and sidewalks get plenty of water during the winter months!
6. Use mulch around shrubs and plants to reduce evaporation and cut down on weed growth.
7. Consider installing new landscaping at the end of the season when the weather is cooler and water usage is tapering off.
8. Landscape with grasses, plants and trees that are native to the Pacific Northwest. Group plants together based on similar watering needs.



City of Battle Ground

109 S.W. 1st Street, Ste. 122
Battle Ground, WA 98604
Phone: 360-342-5070
Fax: 360-342-5057

Email: Joan.Hall@ci.battle-ground.wa.us

For More Information on
Water Conservation log onto:
www.cityofbg.org
www.bewatersmart.net
www.awwwa.org
www.h2ouse.org



**“When the well is dry,
we know the worth of water”
Benjamin Franklin**

WATER

Every Drop Counts!



Your Guide to Water Conservation



Water saving tips for you.....

In the Kitchen.

- Never run the dishwasher without a full load. This will save water, energy, detergent and money.
- Fill a pan of water or put a stopper in the sink for washing and rinsing pots, pans, dishes and cooking implements rather than turning on the water faucet each time a rinse is needed.
- Scrape the dishes clean instead of rinsing them before placing them in the dishwasher.
- Keep a container of drinking water in the refrigerator. Running water from the tap until it is cool enough to drink is wasteful.
- Use a small pan of cold water when cleaning vegetables rather than letting the water run over them. Use this to water potted plants.
- Always keep water conservation in mind. Avoid doing wasteful things like making a huge pot of coffee if you're only going to drink a cup or two.

.....In the Bathroom.

- When building a new home or remodeling a bathroom, install a new low-volume flush toilet that uses only 1.6 gallons per flush.
- You save a lot of water by installing low-flow shower heads. Using these low flow devices you can save as much as 5½ gallons of water per minute.
- Test toilets for leaks. Add a few drops of food coloring to the water in the toilet tank, but do not flush the toilet. Watch to see if the coloring appears in the bowl within a few minutes. If it does, the toilet has a leak that needs to be repaired.
- In older high-volume flush toilets use some type of toilet tank displacement device to reduce the volume of water in the tank, but still provides enough for flushing. You can find these devices at most home improvement centers.
- Check faucets for leaks. A slow drip can waste as much as 170 gallons of water each day, or 5000 gallons of water each month. This adds a lot of money to your water bill.

.....In the Laundry.

- Wash only full loads of clothes when using your washing machine. It can take as much as 59 gallons of water to wash one load of clothes.
- Pay attention to your load size. Use the lowest possible water level setting on the washing machine according to the amount of clothes being washed.
- Use cold water whenever possible. This saves energy too, and conserves the hot water for others uses. It's also better for most types of fabrics.
- When purchasing new appliances, check the requirements of various models and brands. Some use less water than others.
- If possible, replace old washer and dryers with new energy saving models. You may even be able to receive a tax credit for these purchases.

.....And your Plumbing.

- Check water line connections and faucets for leaks.
- Repair leaky faucets promptly. It is easy to do, it costs very little and can make a substantial savings in your water bills.
- Make sure that the line from the water meter to your house is free of leaks. To check, turn off all indoor and outdoor faucets and water-using appliances. The water meter should be read at 10 to 20 minute intervals. If it continues to run or turn, a leak probably exists and needs to be located and repaired.
- Some estimate that about 75% of the water used at home is used in the bathroom. Taking a shower instead of a bath will usually save water, and a low-flow shower head may well be the single most effective water conservation measure you can take.

The water we conserve today can serve us tomorrow.

APPENDIX C:
Public Information Announcement

You may be surprised how easy it is to save water. Simply use the water you need, heed the water you use. Here are a few simple ways to save water.

8 Easy Ways to Save Water

Saving Water Outdoors

Up to half of residential water use occurs outdoors. Watering wisely protects the home investment landscape lawns and landscaping and will save some folks up to **50%** of the water they use outdoors.

- 1 Water your lawn early & use time care**
Watering your lawn in the early morning or early evening reduces evaporation and waste. Lawns only need watering every three to five days in the summer. It only needs about 1/2 to 3/4 inch of water at a time. Place time care around your yard & measure the water collected in half an hour. Spread several cans around your yard to test for even distribution.
- 2 Sprinkle your yard with care**
Install soaker hoses or drip irrigation systems for planting beds with shrubs and flowers. Make sure you are watering your plants and not the street or driveway.
- 3 Organize your surroundings**
Landscape with drought-tolerant ornamental grasses, plants and trees. Group plants together based on similar water needs. Mulch to retain moisture and reduce weeds.
- 4 Buy a nozzle for the nose of your hose**
Place a shutoff nozzle on your hose to control the flow of water so you only use what you need. Remember to turn the water off at the faucet to prevent leaks.
- 5 Save time, water and money**
If you don't have an automatic timer on your sprinkler, use a kitchen timer to remind you to turn off the water. Left unattended, a garden hose can waste as much as 600 gallons of water in just one hour and cost you a lot of money.

Saving Water Indoors

Fixing leaks and replacing old plumbing fixtures with water-saving ones could save a family of four **36,000** gallons of water each year.

- 7 Help your toilet and faucet save water**
Replace any worn, corroded or bent parts in your toilet. A leaky tank can waste 200 gallons of water each day. Repair dripping faucets by replacing washers. If your faucet is dripping at the rate of one drop per second, you can waste 20 gallons of water each day.
- 6 Delay household chores**
Run automatic dishwashers only when fully loaded. Set clothes washers to the appropriate level for the size of load you are washing. If possible, replace old appliances with new energy saving ones.
- 8 Shower yourself with savings**
By keeping your showers under five minutes and installing low-flow showerheads, you can save a lot of water. Older fixtures can deliver as much as 8 gallons per minute. New showerheads deliver 2 1/2 gallons of water per minute. That adds up to a lot of water and money saved.

Remember: Always turn water off while brushing your teeth and shaving.

WATER Conserve It.

For more information on water conservation, visit our website www.cityofbg.org or contact Public Works at 342-5070. This message brought to you by the City of Battle Ground.

APPENDIX D:

City of Battle Ground's 2007 WUE Report



**Annual Water Use Efficiency
Performance Report Form**

Please refer to the *Getting Started – Water Use Efficiency Guidebook*,
DOH Pub. 331-375, http://www.doh.wa.gov/ehp/dw/municipal_water/331-375_7-24-07.pdf for help in filling out this form.

General System Information:

System Name: City of Battle Ground

System ID #: 047004

County: Clark

Your Name: Cal Newton

Your Title: Operations Foreman

Your Phone Number: (360) 342-5365

Today's Date: 09/25/08

Production and Distribution System Leakage Information:

12-Month Performance Reporting Period:

1 / 2007 to 12 / 2007 (Month/Year)

Distribution System Leakage Summary:	
Total Water Produced and Purchased – Annual Volume	526 <input checked="" type="checkbox"/> millions of gallons* <input type="checkbox"/> gallons*
Distribution System Leakage – Volume	76 <input checked="" type="checkbox"/> millions of gallons* <input type="checkbox"/> gallons*
Distribution System Leakage – Percent	8 %

**Report volume in millions of gallons or gallons: 1 cubic foot = 7.48 gallons*

<p>DSL = [(TP - AC) / TP] x 100 Percent of Distribution System Leakage (DSL) Total Water Produced and Purchased (TP) Authorized Consumption (AC)</p>
--

Goal Setting Information:

Date of Public Forum: (Month/ Date/Year)

Note: Goals must be established through a public process.

Has goal been changed since last performance report? Yes No

In the following section, provide a narrative on progress in reaching your goals. Include the following information:

1. Identify water savings goals.
 2. Identify the time schedule for achieving goals.
 3. Describe progress made toward achieving goals, such as:
 - Estimate how much water you have saved.
 - Report progress toward meeting goals within your established timeframe.
 - If you are not on track to reach your goals, identify any adjustments or changes to your WUE measures.
 - Include any other information that helps you tell your story.
1. Public education,
Informational brochures at City Hall and Public Works
Installed water conservation signs at City well sites
2. We are also keeping track of water used for flushing, street sweeping and sewer line cleaning, this will give us a better idea of actual water loss

Note: If you cannot complete electronically, attach separate pages with general system information at the top.

Meter Installation Information:

Is your system fully metered? Yes No

If yes, / (Month/Year) If no, complete the rest of this section.

Date for completing installation on all existing connections and interties:

/ (Month/Year) Due by January 22, 2017

Describe your progress in metering and any efforts taken to minimize leakage:

Note: If you cannot complete electronically, attach separate pages with general system information at the top.

Return this completed form to:

E-mail: wue@doh.wa.gov

Mail: WUE Program, Office of Drinking Water

PO Box 47822, Olympia, WA 98504-7822

FAX: (360) 236-2252

For more information, contact a regional planner:

Eastern Regional Office – Spokane – Main Office: 509-456-3115

Southwest Regional Office – Tumwater – Main Office: 360-236-3030

Northwest Regional Office – Kent – Main Office: 253-395-6750

The Department of Health is an equal opportunity agency. For persons with disabilities, this form is available on request in other formats. To submit a request, please call 1-800-525-0127 (TTY 1-800-833-6388).

APPENDIX E:
City of Battle Ground 2008 WUE Report

Annual Water Use Efficiency Performance Report Form



You must submit this report by email.
Save the completed form with your water system's name
and email it to WUE@doh.wa.gov by July 1.

General Water System Information

System Name: City Of Battle Ground

System ID #: 047005

County: Clark

Your Name: Cal Newton

Your Title: Operations Foreman

Your email address: cal.newton@ci.battle-ground.wa.us

Your Phone Number: (360) 342-5365 Enter without dashes. Example: 3601234567

Today's Date: 07/23/09 Enter as mm/dd/yy. Example: 01/01/09

Who should we contact if we have questions about this report?

Name: Elain Huber

Phone Number: (360) 342-5355 Enter without dashes. Example: 3601234567

Water Metering Information

Is your water system fully metered? Yes

If Yes, continue to next page.

If not fully metered:

Current status of meter installation:

Describe efforts to minimize leakage:

Production, Authorized Consumption, and Distribution System Leakage Information:

Reporting Year: 2008

12-Month WUE Reporting Period:

01/01/08 to 12/31/08 Enter as mm/dd/yy. Example: 07/01/08

Incomplete or missing data for the year? No

If yes, explain:

Distribution System Leakage Summary:	
Total Water Produced and Purchased (TP) – Annual Volume	518,653,306 gallons
Authorized Consumption (AC) – Annual Volume	448,286,512 gallons
Distribution System Leakage – Annual Volume TP - AC	70,366,794 gallons
Distribution System Leakage – Percent DSL = [(TP - AC) / TP] x 100	13.0 %

Goal Setting Information:

Date of Most Recent Public Forum: _____ Enter as mm/dd/yy.
Example: 10/01/08

Goals must be established through a public process.

Has goal been changed since last annual WUE report? No

Each goal must identify the measurable water savings that will be achieved at a specific time in the future. Identify all water saving goals established by elected governing board.

WUE Goals:

<p>Supply Side Goal (if applicable):</p> <p>Formal adoption still in progress</p> <p>Demand Side Goal (required):</p>
--

I don't have this information

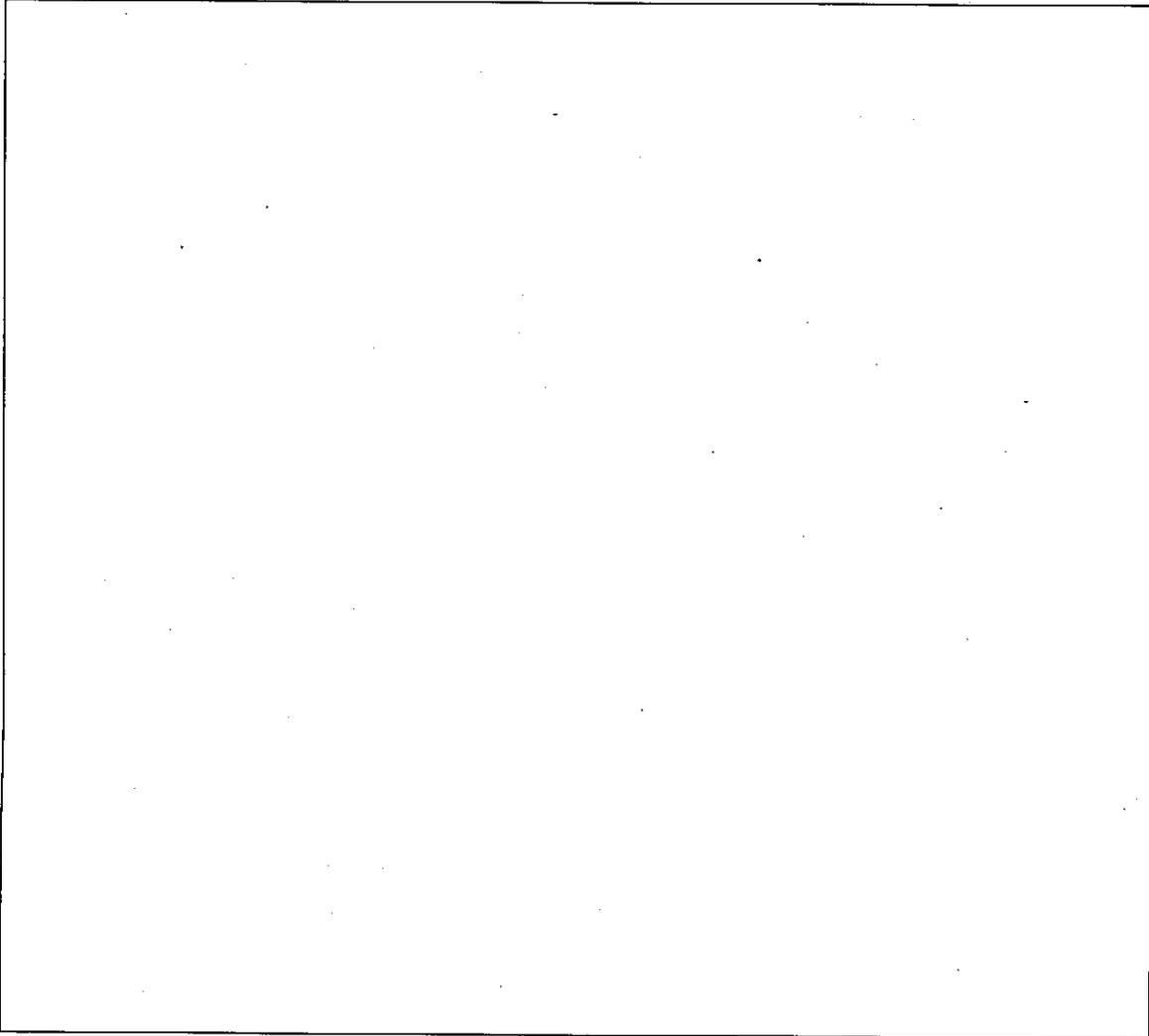
Describe Progress in Reaching Goals:

- Estimate how much water you have saved.
- Report progress toward meeting goals within your established timeframe.
- Identify any WUE measures you are currently implementing.

<p>Supply Side Goal Progress:</p> <p>consulting engineering under way for an additional 500 gpm intertie to Clark Public utilities for whole sale water supply Construction scheduled for 4th Qtr of 09</p> <p>Demand Side Goal Progress:</p> <p>Landscape management water curtailing on peak days Meter program consistently repairs and replaces leaking meters Hang door hangers for accounts that are leaking on consumer side</p>
--

Additional Information Regarding Supply and Demand Side WUE Efforts

- If you established a goal to maintain a historic level (such as maintaining daily consumption at 65 gallons per person per day), you must explain why you are unable to reduce water use below that level.
- Include any other information that describes how you and your customers use water efficiently.



For more information, visit our Web at <http://www.doh.wa.gov/ehp/dw/programs/wue.htm> or contact a regional planner:

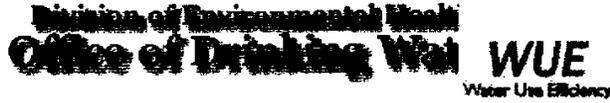
Eastern Regional Office—Spokane—Main Office: (509) 456-3115

Southwest Regional Office—Tumwater—Main Office: (360) 236-3030

Northwest Regional Office—Kent—Main Office: (253) 395-6750

The Department of Health is an equal opportunity agency. For persons with disabilities, this document is available on request in other formats. To submit a request, please call 1-800-525-0127 (TTY: 1-800-833-6388).

**APPENDIX F:
City of Battle Ground 2009 WUE Report**



You are here: [DOH Home](#) » [EH](#) » [ODW](#) » [Water System Data](#) » [Water Use Efficiency Report Form](#)

Annual Water Use Efficiency Performance Report Form

Please refer to the [Getting Started: Water Use Efficiency Guidebook](#) Today's Date: 10/4/2010

General System Information

System Name: BATTLE GROUND WATER DEPT, CITY OF
 System ID #: 04700
 County: CLARK
 Your Name: Cal Newton
 Your Title: Operations Foreman
 Your Email Address: cal.newton@ci.battle-ground.wa.us
 Your Phone Number: (360) 342-5365

Meter Installation Information

Is your water system fully metered? Yes
 Current status of meter installation: Fully metered

Production, Authorized Consumption, and Distribution System Leakage Information

Reporting Year: 2009
 12-Month WUE Reporting Period: 1/1/2009 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	520,507,310 Gallons
Authorized Consumption (AC) - Annual Volume	471,858,827 Gallons
Distribution System Leakage - Annual Volume TP - AC	48,648,483 Gallons
Distribution System Leakage - Percent DSL = [(TP - AC) / TP] x 100	9.3 %
3-Year Annual Average - Percent	-- %

Goal-Setting Information

Date of most recent public forum:
 Has goal been changed since last WUE report? No
 Demand Side Goal: Formal Adoption still in progress
 Demand Side Goal Progress: Landscape irrigation management with water curtailment on peak days; Meter program to replace meters on a set schedule; hanging of door hangers to notify customers of leaks on customer (Demand) side

Additional Information:


 Please click 'Back' if you need to make changes.
 



RESOLUTION NO. 11-07

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

WHEREAS, the Washington State Legislature adopted the Municipal Water Law (House Bill 1338) requiring that the Washington State Department of Health establish water use efficiency requirements designed to ensure efficient use of water; and

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

WHEREAS, WAC 246-290-830 institutes a process for the local water purveyor to establish Water Use Efficiency Goals including that a public forum must occur at least two weeks after a public notice and the elected governing board of the public water system shall review and consider all comments received, and that various materials be available for the public fully documenting the basis for the goal; and

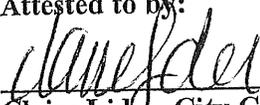
WHEREAS, the City of Battle Ground held a public forum on Monday, June 6th, 2011, for which notice was provided at least two weeks prior to the forum. The public was given an opportunity to participate and provide comment, and comments were received, reviewed and considered by the Council.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Battle Ground, of Battle Ground, Washington, hereby adopts the attached Water Use Efficiency Program.

DONE IN OPEN MEETING OF THE CITY COUNCIL OF THE CITY OF BATTLE GROUND, WASHINGTON THIS 10th DAY OF June, 2011.

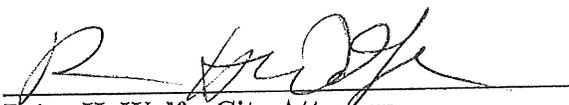

Michael J. Ciraulo, Mayor

Attested to by:



Claire Linder, City Clerk

Approved as to form:



Brian H. Wolfe, City Attorney

PUBLIC NOTICE OF PROPOSED PUBLIC FORUM
FOR THE CITY OF BATTLE GROUND'S
WATER CONSERVATION GOALS
&
"WATER USE EFFICIENCY PROGRAM"

DATE: Monday, June 6th, 2011

TIME: 7:00 p.m.

LOCATION: CITY OF BATTLE GROUND CITY COUNCIL CHAMBERS
109 S.W. 1st St.
BATTLE GROUND, WA 98604

SUBJECT: "WATER USE EFFICIENCY PROGRAM"

PURPOSE OF FORUM: The Battle Ground City Council will conduct a public forum on the proposed adoption of water conservation goals through a proposed "Water Use Efficiency Program" as required by the Washington State Dept. of Health and WAC 246-290-800(2). This program proposes water conservation goals for the City of Battle Ground community drinking water system, Wash. State ID # 47005.

HEARING DATE: The City Council will conduct the forum on Monday June 6th, 2011, during the regularly scheduled council meeting starting at 7:00 p.m. This meeting will be held in the City of Battle Ground City Council Chambers, located at 109 S.W. 1st St, Battle Ground, Washington, 98604. The public and interested parties are invited to testify orally or by written statement.

INFORMATION AVAILABLE: Information regarding the proposed water conservation goals and a copy of the proposed Water Use Efficiency Plan, are available on request at Battle Ground City Hall, 109 S.E. 1st St, Battle Ground, during normal business hours of 8:00 a.m. to 5 p.m.

CITY CONTACT PERSON: The primary contact person for this action is

Elaine Huber,
Operations Manager, Public Works Dept.
City of Battle Ground
1308 SE Grace Ave.

Battle Ground, WA 98604
360-342-5355
Elaine.huber@ci.battle-ground.wa.us

COMMENTS: Direct written comments to the City of Battle Ground City Clerk, 109
S.E. 1st St, Battle Ground, WA 98604, no later than 5:00 p.m. on June 6th, 2011.
Or submit comments into the record during the public hearing.

DATE ISSUED: May 9th, 2011

DATE PUBLISHED: May 18th, 2011



BATTLE GROUND CITY COUNCIL MEETING MINUTES
JUNE 6, 2011

The regular meeting of the Battle Ground City Council was called to order at 7:02 p.m. by Deputy Mayor Phil Haberthur in the Council Chambers of City Hall, 109 SW 1st Street, Battle Ground, Washington.

City Clerk Claire Lider called the roll. The following were:

PRESENT: Mayor Michael J. Ciraulo (arrived at 7:43 p.m.), Deputy Mayor Phil Haberthur, Councilmembers Zandamela, Reinhold, Walters, Ganley and Regan.

ABSENT: None.

ALSO PRESENT: City Manager John M. Williams, Public Works Director / City Engineer Scott Sawyer, Finance and Information Services Director Catherine Huber Nickerson, Chief of Police Bob Richardson, Community Development Director Robert Maul, Parks and Recreation Director Debbi Hanson, Executive Assistant Bonnie Gilberti, Associate Civil Engineer Ryan Jeynes, Community Development Technician Dorothy Harrington and City Clerk Claire Lider.

PRESS: Joanna Michaud, The Reflector.

Moved by Councilmember Zandamela and seconded by Councilmember Ganley to excuse Mayor Ciraulo as he is attending the Vancouver City Council meeting as part of his work responsibilities. Motion carried.

SUMMARY REPORTS

7:06:53 PM **Council Liaison Summary Reports**

Councilmember Walters stated that she had contacted Community Development Director Robert Maul with regards to a closure by Daybreak School that she felt created a traffic issue. She stated that she felt that this matter is something that the City Council should look into further.

Councilmember Reinhold stated that the Portland Rose Parade is this weekend. He added that the Battle Ground Rose Float was tested on Memorial Day and wondered if it would be possible

to have a mini-parade for the Rose Float next year on Memorial Day. He said that, during this year's test run, many people gathered to watch the Rose Float.

Councilmember Zandamela said that, on May 21, 2011, he and Mayor Ciraulo attended the Clark County Youth Achievement Awards, he noted that the Battle Ground students would be recognized at the June 20, 2011 City Council meeting.

Councilmember Ganley said that he attended Clark County's First Citizen Award Ceremony, last Wednesday, which honored Washington State University Chancellor Hal Dengerink. He noted that he felt that the close proximity of Washington State University makes Battle Ground an appealing location.

Deputy Mayor Phil Haberthur reported on the following meetings that he had attended:

- On May 23, 2011, he met with representatives with Citizens Against Bigger Trucks. He said that they would like people to write to the Congresswoman with regards to semis driving down freeways.
- On May 25, 2011, he visited the Battle Ground Rose Float.
- On May 26, 2011, he attended the Rachel's Challenge event and thanked the Battle Ground School District for putting on this event.
- On May 31, 2011, he met with a citizen with regards to the potential C-TRAN maintenance and operations ballot measure.
- On June 1, 2011, he met with a representative from Save Our Busses, which was in regards to this year's C-TRAN ballot measure.
- On June 2, 2011, he attended the North County Leadership Group meeting and the employment land survey was discussed, SR-502 access issues and economic development strategies.
- On June 3, 2011, he had a discussion with the regional sewer consultant regarding the rate findings and level of service issues. He said that there is a Regional Sewer Group meeting on July 8, 2011 and he would like Council's input prior to that meeting.

Moved by Councilmember Reinhold and seconded by Councilmember Regan to have a special meeting with regards to sewer on Monday, June 27, 2011 at 6:00 p.m.

There was discussion on the time of the meeting.

Moved by Councilmember Reinhold and seconded by Councilmember Regan to amend the original motion to have a special meeting with regards to sewer on Monday, June 27, 2011 at 7:00 p.m. instead of 6:00 p.m. Motion carried.

Mayor's Report

No report submitted.

Additional Business

No items submitted.

7:16:42 PM City Manager's Report

City Manager John Williams stated that he felt that the City Council should consider adding an agenda item with regards to the City's potential sponsorship of Harvest Days.

There was discussion on information that the City Council would like to know with regards to the City's potential sponsorship of Harvest Days:

- Staff time.
- Police pay.
- Future police staffing.

7:20:23 PM CITIZEN COMMUNICATIONS

Stephen Hee, 17714 NE Homestead Drive, Brush Prairie, Washington

Mr. Hee spoke against the proposed Cedars Annexation and provided the City Council with a document entitled, "Cedar Annexation Proposal", dated June 6, 2011, and noted that there was a revised petition included against the potential Cedars Annexation (attached). He also submitted his remarks in the document entitled, "June 6 Battle Ground City Council Meeting" (attached).

Deputy Mayor Haberthur explained the annexation process and noted what stage the proposed Cedars Annexation is in.

Councilmembers Reinhold and Walters left the meeting at 7:27 p.m.

Councilmembers Reinhold and Walters returned to the meeting at 7:29 p.m.

Mark Gawecki, 17706 NE Homestead Drive, Brush Prairie, Washington

Mr. Gawecki spoke against the proposed Cedars Annexation and submitted his remarks in a document entitled, "Citizens Communication Speech", dated June 5, 2011 (attached).

Keith Mathison, 20517 NE 182nd Avenue, Battle Ground, Washington

Mr. Mathison stated that September 17 – 23, 2011 is Constitution Week and suggested that the City Council work with the school district with regards to this. He then cited various reasons as to why he felt that the City Council should help to make sure that the school districts are held to what he believed to be a higher standard.

Norm Klamm, 11001 NE 189th Street, Battle Ground, Washington

Mr. Klamm thanked Deputy Mayor Haberthur for keeping his composure during the high-level of emotion that was heard during this evening's Citizen Communications.

With no further comments, Deputy Mayor Haberthur closed the Citizen's Communications portion of the meeting.

7:39:56 PM **CONSENT AGENDA**

All items listed below are considered to be routine and will be enacted by one motion. There will be no separate discussion of these items unless a Councilmember requests specific items to be removed from the Consent Agenda for discussion prior to the time council votes on the motion to adopt the Consent Agenda.

- A. Payroll Vouchers dated 05/20/2011, #27092 to #27106, in the amount of \$18,173.22 and Direct Deposits in the amount of \$144,643.50
- B. Claim Vouchers dated 04/22/2011, #65358 to #65411, in the amount of \$230,977.88
- C. Claim Vouchers dated 04/29/2011, #65412 to #65449, in the amount of \$356,730.42
- D. Claim Vouchers dated 05/06/2011, #65450 to #65527, in the amount of \$312,345.82
- E. Claim Vouchers dated 05/13/2011, #65528 to #65573, in the amount of \$140,458.28
- F. Minutes of the May 16, 2011 City Council Study Session
- G. Minutes of the May 16, 2011 City Council Meeting
- H. Ballot Deposit Site Lease with Clark County
- I. Interlocal Service Agreement with the City of Ridgefield for Summer Playground Program
- J. Professional Services Agreement with Recreation Instructor

Deputy Mayor Haberthur asked if there were any agenda items that the Council would like to have removed from the consent agenda.

Moved by Councilmember Reinhold and seconded by Councilmember Regan to approve the consent agenda as presented. Motion carried.

OLD BUSINESS

7:40:19 PM **Water Use Efficiency Resolution: Public Hearing / Motion**

City Manager John Williams stated that the water use efficiency resolution that is before the City Council tonight essentially memorializes the City's current practice. He said that it is before the City Council specifically due to a regulatory agency's rules that state that the Council must pass a resolution with regards to water use efficiency.

Deputy Mayor Haberthur opened the public hearing on Resolution No. 11-07, a resolution establishing water use efficiency goals for the City of Battle Ground's water system as required under the state municipal water law and regulations.

With no citizen testimony given, Deputy Mayor Haberthur closed the public hearing on Resolution No. 11-07.

Moved by Councilmember Regan and seconded by Councilmember Reinhold to approve Resolution No. 11-07 as presented. Motion carried.

7:42:06 PM Cedars Annexation AX: 01-11: Presentation

City Manager John Williams stated that, the last time that the City Council had discussed the proposed Cedars Annexation 10% Notice of Intent, the Council had decided to postpone taking action on the notice as they wanted additional information with regards to fire service for the area.

Mayor Ciraulo arrived to the meeting at 7:43 p.m.

Community Development Director Robert Maul reviewed the process, thus far. He then distributed a revised annexation map that the applicant submitted (attached). He noted that the City had created a map based on the revised map submitted that has additional detail (attached).

Mr. Williams explained that, if the Council were to move forward with the proposed Cedars Annexation 10% Notice of Intent, the petitioner would still need to achieve a petition signed by property owners that represent 60% of the annexation area's assessed value.

There was discussion on the new proposed boundaries.

Councilmember Regan noted that he would accept the original annexation proposal, but not the [updated] one with holes.

There was discussion on:

- Service continuity in the area.
- Fire services.
- Police services.

Councilmember Zandamela stated that he would vote against the annexation, as he felt that many people did not want to be included in the annexation and he did not approve of the boundaries.

Moved by Councilmember Walters and seconded by Councilmember Ganley to accept the 10% petition to annex land, with modifications, with the Cedars Annexation, illustrated in Figure 1 of the City Council Agenda memo, dated June 6, 2011; and require the simultaneous adoption of proposed zoning regulations; and require the assumption of all or any portion of existing City indebtedness by the area to be annexed. Call for the vote: Ayes; Councilmembers Walters and Ganley, Deputy Mayor Haberthur and Mayor Ciraulo. Nays; Councilmembers Zandamela, Reinhold and Regan. Motion carried.

NEW BUSINESS

7:59:01 PM Six-Year Transportation Improvement Plan: Presentation

Public Works Director / City Engineer Scott Sawyer stated that the City is required by law to annually update the City's Six-Year Transportation Improvement Plan.

Mr. Sawyer then reviewed the Six-Year Transportation Improvement Plan as presented in the City Council packet.

There was discussion on item #8, the SR 502 / SR 503 Right Turn Lanes Project, with regards to funding.

Deputy Mayor Haberthur left the meeting at 8:05 p.m.

Councilmember Reinhold noted that these projects are not listed in priority order.

There was discussion on Item #5, the SW 3rd Street Connection, with regards to adding additional access points, but not sidewalks.

Moved by Councilmember Regan and seconded by Councilmember Ganley to set a public hearing on the Six-Year Transportation Improvement Plan during the June 20, 2011 City Council meeting. Motion carried.

City Manager John Williams noted that a public hearing date would need to be set to consider the Cedars Annexation's 60% petition.

Moved by Councilmember Walters and seconded by Councilmember Ganley to hold a public hearing on the 60% petition for the Cedars Annexation on July 18, 2011. Motion carried.

Deputy Mayor Haberthur returned to the meeting at 8:09 p.m.

8:09:36 PM **ADMINISTRATIVE REPORTS**

Parks and Recreation Department

Parks and Recreation Director Debbi Hanson stated that she is working with Rock Solid Teen Center to develop an agreement for rental use of their shuttle bus and van. She then said that, at the June 20, 2011 Council meeting, staff would be presenting a Park Advisory Board recommendation regarding the youth member position.

Community Development Department

Community Development Director Robert Maul stated that Paparazzi Restaurant is under new ownership and would have a soft opening on June 14, 2011. He then spoke to the City Council with regards to the Commerce East Development Agreement.

City Manager John Williams noted that Burgerville is currently under construction.

Public Works Department

Public Works Director / City Engineer Scott Sawyer said that City Staff would be returning at an upcoming City Council meeting to request approval for the City Manager to sign a contract with the Clark County Community Development Block Grant program to accept funding to complete the construction of the SW 3rd Street Road Project.

Finance Department

Finance and Information Services Director Catherine Huber Nickerson said that, June 13, 2011, at 9:00 a.m., the State Auditor's would be presenting their Exit Conference. She invited Councilmembers to attend this meeting.

Executive Department

City Manager John Williams announced that Parks and Recreation Director Debbi Hanson had been selected as the Clark County Parks Foundation's 2011 Florence B. Wager "Tributary" Award winner. He added that the formal presentation of the award to Ms. Hanson would take place at the Foundation's Annual Lunch Meeting on June 14, 2011.

Mr. Williams added that he had spoken with the Government & Politics classes at Battle Ground High School on Friday.

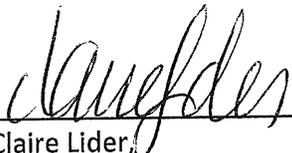
Mayor Ciraulo announced that the next meeting of the City Council would be on Monday, June 20, 2011, with a Study Session beginning at 6:00 p.m. and the Regular Meeting beginning at 7:00 p.m. at Battle Ground City Hall, 109 SW 1st Street in Battle Ground, Washington.

ADJOURNMENT

The meeting adjourned at 8:18 p.m.

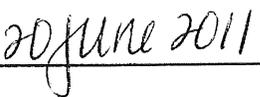


Michael J. Ciraulo,
Mayor



Claire Lider,
City Clerk

Date of Approval by the City Council:



Meetings of the Battle Ground City Council are recorded digitally. These recordings are kept on file in the office of the City Clerk for a period of six (6) years.