

Heights Water

Water Use Efficiency Program

Established May 24, 2011

OBJECTIVE

The objectives of the Heights Water 2011 Water Use Efficiency Program are:

- Describe how Heights Water will meet the State of Washington requirements of the Water Use Efficiency Rule (WUE)
- Discuss the WUE goal established by Heights Water Board of Trustees
- Outline the WUE measures that Heights Water will implement to achieve the goal

WATER USE EFFICIENCY (CONSERVATION) PLAN HISTORY

Heights Water has always been an advocate of water conservation. A Conservation Plan was outlined in Heights Water's 2005 Water System Plan (WSP). The 2005 goals were: efficient water use, protection of water as a valuable resource, reduction in per capita consumption, financial savings through deferral of capital improvements, and sufficient water for current and future customers. All measureable goals have been accomplished.

The 2005 measures to achieve the plan's goals included the installation of source meters, conservation promotion, and non-revenue water/leak detection and repairs.

Previously taken measures include installing service meters for all members and establishing an inclining block water rate fee structure.

WUE GOALS AND MEASURES and HOW ESTABLISHED

This WUE goal and measures were reached through the following process.

1. Heights Water staff (general manager, operations manager, operator, and billing assistant) met to discuss and formulate goal(s) and draft measures to achieve the goal(s).
2. Heights Water five-member Board of Trustees revised staff suggestions
3. On May 18, 2011 a public forum was held at which time Heights Water members and the general public were give the opportunity to comment on the goal and measures. All suggestions were reviewed by staff and the Board of Trustees.
4. Finally, the Heights Water Board of Trustees resolved on May 24, 2011 to adopt the following:

Heights Water's Water Use Efficiency goal is to maintain 3-year rolling average per capita water consumption at or below the 10-year rolling average per capita water consumption. Per capita calculation will be based on the number of approved service connections for the current Washington State Department of Health Water Facilities Inventory. At present Heights Water has reliable consumption data beginning in 2005 with the purchase of CUSI billing software. The comparative 10-year rolling average will begin as a 6-year rolling average (2005-2010), becoming a 10-year rolling average in 2015.

(The 3-year rolling average consumption for 2008 through 2010 is 44,909,524 gallons. The six-year rolling average consumption is 46,473,527 gallons.)

The most recent DOH Water Facilities Inventory affirms that Heights Water has 764 total service connections. Using the current 3-year consumption rolling average of 44,909,524 gallons; then the 3-year rolling average per capita would be 58,782 gallons. The current comparative 6-year consumption rolling average of 46,473,527 gallons would yield the 6-year rolling average per capita of 60,829 gallons.)

The approved **demand side measures** to achieve this goal are:

- Promote water conservation through member newsletters, Heights Water web site, bill stuffers, etc.
- Include 1-year past usage details on bi-monthly bill (One time cost of \$900)
- Restructure usage rate fees by adding additional tiers to encourage water conservation by high end users
- Notify members/customers of detected leaks after water meter reading, including door hanger and notification on bi-monthly bill
- Because Heights Water reads meters bi-monthly, use newsletter to remind members of the importance of periodically checking the water meter's leak detector
- Grant rebates for water efficient clothes washers, toilets, and showerheads (This measures viability will be evaluated annually)

Additionally, Heights Water will implement the following **supply side measures**:

- Replace the transmission lines to reduce unaccounted for water loss during transmission
- Work toward reduction in unaccounted for water during distribution through leak detection

The WUE report, including goal and measures, will be included with the June 1, 2011 and July 1, 2011 member bi-monthly bills.

MEMBER EDUCATION

Heights Water traditionally works to educate its members of the value of water conservation. Water conservation is promoted in the Heights Water's member newsletters, the company web site (www.heightswater.org), brochures available in the business office and at member functions, informational packages sent to all new share holders and tenants, and in general conversations with members. These methods will continue to be utilized.

At the WUE public forum Heights Water's staff and Board of Trustees were present to discuss water use efficiency and other issues. Informational materials were available for attendees.

PROJECTED WATER SAVINGS

Through the established goal of maintaining 3-year rolling average per capita water consumption at or below the 10-year rolling average per capita water consumption, Heights Water expects to maintain the current average usage. Heights Water members have dramatically reduced consumption in the last several years. The exception to the reduced consumption was 2008 when the region experienced an extremely warm summer.

PROGRAM EVALUATION

On a periodic basis, at least annually, the Heights Water staff will evaluate the WUE program measures to determine if the measures are working sufficiently to achieve the stated goal. Each measure will be evaluated to determine its effectiveness and adjusted as necessary. An annual WUE report will be distributed to all Heights Water members.

DISTRIBUTION SYSTEM LEAKAGE

In the Heights Water 2005 Water System Plan it was presumed that Heights Water had 20% unaccounted for water consumption (lost water). Since then, an additional production meter was installed in 2007 and an upgraded billing system was purchased and installed in late 2004. With these improvements Heights Water has been able to provide more accurate data. In 2010 Heights Water experienced a 1.47% unaccounted water loss. The 2008-2010 three year rolling average was 8.99%. Heights Water will continue to tighten the system and repair all detected system leaks.

Additionally, the 2010 transmission line leakage was 2.45%. The 2008-2010 three year rolling average was 2.93%. In the 2011 Heights Water plans to replace the transmission lines which should eliminate unaccounted water in the transmission system. This replacement project comes after years of planning and will be funded by Heights Water's capital improvement and reserve funds.

While all other connections to the Heights Water system have been metered for decades; Vashon Island Fire and Rescue's utility building, built in 1957, is not presently metered. In the 1950's water was "given" to the fire

department facility as a gesture of goodwill. Vashon Island Fire and Rescue has been advised that a meter must be installed by August 1, 2011. With this meter installation, the Heights Water system will be 100% metered.

RATE STRUCTURE EVALUATION

In the past several years Heights Water has experienced a decline in usage revenue, in spite of the usual annual usage rate increase of 3%. For Heights Water to continue to operate successfully and remain financially prudent, Heights Water resolves to increase usage rates via a revised tier pricing structure, including additional tiers. The block rate tier adjustments will affect those members using the most water.

WATER SYSTEM CHARACTERISTICS

Heights Water's sources of water supply come from a 3-well field and 13-well point spring located in Water Resource Inventory Area, Kitsap & Duwamish Green. Legal description attached. Well #1 is 177' deep, and can pump up to 50 g.p.m.; Well #2 148' deep, 60 g.p.m.; Well #3 155' deep, 40 g.p.m. The well points provide 125 g.p.m.