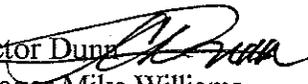


**SULTAN CITY COUNCIL
AGENDA ITEM COVER SHEET**

DATE: January 10, 2008

AGENDA ITEM: Public Hearing

SUBJECT: Water Use Efficiency Rule (WUE)

CONTACT PERSON: Public Works Director 
Water System Manager Mike Williams

ISSUE:

1. Conduct the Public Hearing requesting the public for input on goals the City is considering adopting to meet the Water Use Efficiency (WUE) Ruling mandates.
2. Adopting the City of Sultan Water Use Efficiency Goal:
“The City of Sultan will allocate the necessary resources to reduce average water consumption from 130 gallons per day (GPD) per capita in 2007 to 125 GPD per capita in 2013. This represents a 4% reduction in daily consumption per capita by 2013.”

RECOMMENDED ACTION:

1. Present the following goals for the Sultan Water System to be consistent with “The Water Use Efficiency Rule” from the 2005 Department of Health approved Water System Plan:
 - a. Complete the installation of Electronic Water Meters to reduce average day demand per capita by capturing all usage. Reducing usage from 130 gallons per day per capita to 125 gallons per day per capita would meet water efficiency requirements.
 - b. Maintain and calibrate the source production meters.
 - c. Distribute conservation brochures provided by the Department of Health and Ecology to customers.
 - d. Continue annual water main replacement of older distribution piping.
 - e. Develop a leak detection program.
 - f. Continue to explore future use of reclaimed wastewater as the irrigation source for parks and landscaping.

The WUE Rule requires the Municipality to set a minimum of five (5) goals for a system of Sultan’s size (number of connections), Chapter 4 of the 2005 Water System Plan list six (6) goals for water conservation/efficient use. Sultan Water System has 1,000 or more connections.

2. During the Public Hearing, receive comments from the Public regarding concerns and attainability of reaching the goals the Council will adopt at the January 24, 2008 Council meeting.

BACKGROUND:

To help meet the growing needs, the Washington State Legislature passed the Municipal Water Supply – Efficiency Water Requirements Act of 2003, better known as the Municipal Water Law. The law gives municipal water suppliers certain benefits and obligations. One obligation is to comply with the Water Use Efficiency Rule.

The increasing demand on our state’s water resources are:

1. Growing communities,
2. agriculture,
3. industry, and
4. the importance of conserving water for fish.

The water use efficiency rule affects all municipal water supplies, which includes all Group A community water systems with 15 or more residential connections and some non-community water systems that use water in a residential manner (RCW 90.03.015).

SULTAN WATER UTILITY GOAL STATUS:

Rule Requirement	Deadline for water systems w/1,000 or more connections	Sultan Goals Status
Install production meter(s)	January 22, 2007	Completed 1979
Collect consumption and production data	Now	Currently Underway
Include WUE program in planning documents	January 22, 2008	2005 Water System Plan
Set your own WUE goals	January 22, 2008	Currently Underway
Submit service meter installation schedule	July 1, 2008	Start 1989 Complete 1992
Submit first annual performance report	July 1, 2008	June 30, 2008
Install service meters	January 22, 2017	Completed
Meet 10% leakage standard (based on 3-year average)	Three years after installing all service meters	2005 – 22% 2006 – 10% Oct 2007 – 4.8%

SUMMARY:

At the Governmental Service and Public Safety Committee meeting and during Council Discussion on December 13, 2007, the question was how much water is lost through a leak. Attachment D explains the water stream through 1/32 to 1/4 inch holes then converting that loss to gallons and cubic feet.

The proposed goals are a subset of the water conservation goals (Attachment B) adopted in the 2005 Water System Plan. The City of Sultan conducted the public hearing process during the adoption process on the 2005 Water System Plan approved by the Washington Department of Health on August 23, 2006. Chapter 4 of the 2005 Water System Plan addresses the issue of water conservation, encouraging water use efficiency by the consumers, and identifying several water use efficiency goals.

The WUE Rule impact on the Sultan Water System is:

1. A more active role with water conservation and customer efficiency reduces the demand on our system:
 - a. Benefit from lower operating costs
 - b. Lower energy bills
 - c. Lengthen the life of the Water Treatment Plant
2. It will enhance public health by improving water system efficiency and reliability.

All municipal bodies governing water suppliers must set their own goals for efficiently using water through a public process. This process assures that water customers and the public have an opportunity to participate and provide comments on the goals set by the City Council to use water efficiently.

FISCAL IMPACT:

The City's compliance with WAC 246-290-800 as outlined in Department of Health's Water Use Efficiency Guidebook (DOH pub. #331-175).

Meet the goals set in the 2005 Water System Plan through:

- a. public process,
- b. documentation, and
- c. reporting to Department of Health.

The City Staff has contracted with PACE Engineering to help with the required reporting and management of the WUE Rule and the effects the Water Law have on Sultan's Water System. We have completed portions of each task(s) outlined below:

Task 1:

The information gathered by staff will minimize work needed to complete the WUE goals. The information gathered for the WUE Rule will help in the water rate study proposed in the 2008 Budget.

Task 2:

PACE will confirm the City's stated goals from the Water System Plan as staff has identified, helping navigate the public input and the reporting process.

Task 3:

Help to measure the goals the City set and the ability to accomplish the goals based on:

- a. Staff
- b. Cost
- c. Operations and Maintenance
- d. Grants and Loan available

ALTERNATIVES:

- A. Direct staff to return at the January 24, 2008 Council meeting with an Ordinance adopting the goals that the Water System Plan contain in Chapter 4 Conservation Program, Water Right Analysis, System Reliability and Interties.
- B. Direct staff to return with an Ordinance on January 24, 2008 with the goals the Public, Staff and Council had discussed and agreed on tonight
- C. Do nothing; the City will be non-compliant with Department of Health (DOH). This would create issues between the City and DOH that would affect funding, compliance with state law and the continuation of our Public Water Utility.

Either Alternatives A or B would place the City of Sultan Water Utility in compliance with WAC 246-290 and DOH publication 331-175. A goal of Staff is to maintain consistency between the 2005 Water System Plan and the WUE goals and actions approved by ordinance.

RECOMMENDED ACTION:

Discuss the impact of the Water Use Efficiency Rule with a recommendation to continue planning and setting goals for our Water System. The cost related to the WUE Goals and Rules are included in the 2008 Budget. Set the Public Hearing for January 10, 2008 at 6:00 pm.

COUNCIL ACTION:

DATE:

ATTACHMENTS:

- | | |
|---|--|
| A | Fact Sheet: Summary of the Water Use Efficiency Rule |
| B | Water System Plan Goals, Chapter 4 |
| C | Water System Manager Williams response to goals |
| D | Water Use Efficiency Program Powerpoint |
| E | Water Use Efficiency- Setting the City's Conservation Goal |



WATER USE EFFICIENCY
PROGRAM

1

Municipal Water Law

- Effective Jan. 22, 2007
- Water suppliers must use water efficiently to preserve resources
- Directs Department of Health (DOH) to adopt enforceable water use efficiency (WUE) program

2

Seven WUE Elements

1. **Conservation Goal by Jan. 22, 2008**
2. Metering
3. Data Collection
4. Distribution System Leakage < 10%
5. **WUE Program: 1-12 Measures**
(5 Measures required for City of Sultan)
6. Water Demand Forecasting
7. Annual Performance Reports

3

Conservation Goal Requirements

- Determined by the Water Supplier (not DOH)
- Established by January 22, 2008
- Measurable in terms of reduced or maintained water production or usage
- Schedule for implementing measures and achieving goals
- Report annually to DOH and customers by July 1

4

WUE Program Development

- Looked at Historical Water Use
- Examined past Conservation Program
- 10 measures evaluated (Rule requires a minimum of 5 be evaluated).
- For each measure, savings potential and cost per CCF was determined.
 - Cost to produce 1 ccf (748 gallons): \$.30
- Measures must support the adopted Goal.

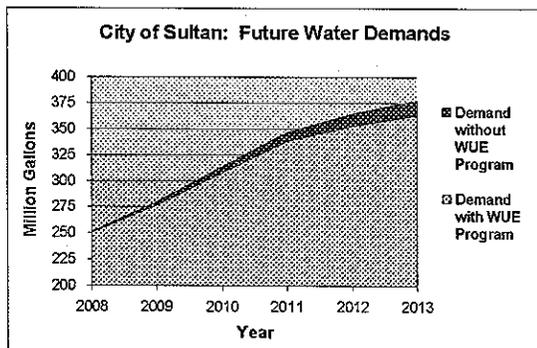
5

The Goal:

"The City of Sultan will allocate the necessary resources to reduce average water consumption from 130 gallons per day (GPD) per capita in 2007 to 125 GPD per capita in 2013. This represents a 4% reduction in daily consumption per capita by 2013."

6

WUE Program - Projected Savings



7

Proposed WUE Program: 5 Cost-Effective Measures

1. Public Education Program
 - School Curriculum Outreach
 - Informational brochures in public places
2. Conservation Pricing*
 - Every 100 cubic feet of water over
3. Home Indoor Conservation Kits
 - Low-flow showerheads, faucet aerators
4. Residential Leak Detection Program
5. Consumption History on Bills

* Current Program

8

Closing Comments

- City of Sultan remains committed to being a good steward of its water resources
- WUE Program ensures sustainability of City facilities
- Annual evaluation will determine the effectiveness of the program

9

Public Comment and Action

- Public Comment and Suggestions?
- Public comment period on WUE Goal and Program will remain open until January 21st, 2008. Comments can be submitted to City Hall in person, by email (cityhall@ci.sultan.wa.us), or by calling _____ at City Hall (360) 793-2231.

10



WATER USE EFFICIENCY

SETTING THE CITY'S CONSERVATION GOAL

Before January 22, 2008, the City of Sultan, along with all other public water providers in the State of Washington, will be required to set a goal for Water Use Efficiency, as required by the Municipal Water Law enacted in 2003. A Water Use Efficiency (WUE) Program will reduce average household or business water use in the City, in order to prolong the availability of water resources. The City has developed an attainable goal for water savings that will need to be reached collectively by city residents, employers, and City staff.

Background Information on Setting the Goal:

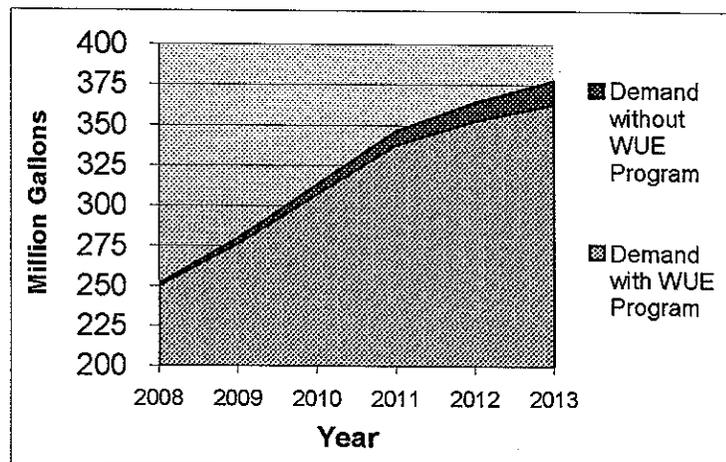
To calculate a reasonable savings in water usage, the City first looked at customer consumption over the past three years. Figure 1 below shows the City's water use from 2005-2007, and Figure 2 below displays current and projected water use. There are two scenarios listed in the graph: the darker blue area in the rear shows projected water demands if no conservation goal and program is developed, and the lighter green area in front shows projected water use if the Goal and Program is adopted as proposed. These demands were taken from the 2005 Water System Plan.

Figure 1: Historical Consumption

Year	Total Water Use (Million Gallons)	Estimated Consumption by Customer Class* (Million Gallons)		
		Single Family	Multi-Use	Commercial
2005	198.56	141.05*	4.84*	52.66*
2006	213.53	151.68*	5.21*	56.63*
2007	227.76	161.79*	5.56*	60.41*
Average	213.28	151.51	5.20	56.57
Average % of Total Use		71%	2%	27%

* Estimated data based on 2006-2007 billing data.

Figure 2: Future Water Demands



The historic and projected customer consumption data displayed in Figures 1 and 2 includes non-revenue water, such as excess water used at the Water Treatment Plant, testing fire hydrants, and flushing water mains to improve water quality, as well as system leakage, which is water lost in the system due to leaks and/or illegal connections. In addition to the savings projected from participants in the WUE program, City staff will strive to minimize the amount of water used in day-to-day operations.

As discussed in the City's adopted 2005 Water System Plan, Sultan is a wholesale customer of the City of Everett, but the amount of water regularly purchased from Everett in 2007 was approximately 5% of total water use. The City has a contract to purchase up to 60% of its total required supply, or 2.59 million gallons per day (MGD). As such, Sultan may partner with Everett to acquire and purchase indoor residential conservation and leak detection kits at a lower cost.



THE GOAL
THE GOAL

"The City of Sultan will allocate the necessary resources to reduce average water consumption from 130 gallons per day (GPD) per capita in 2007 to 125 GPD per capita in 2013. This represents a 4% reduction in daily consumption per capita by 2013."

The table on the back of this page lists the proposed measures for the City of Sultan's 2008-2013 Water Use Efficiency Program.

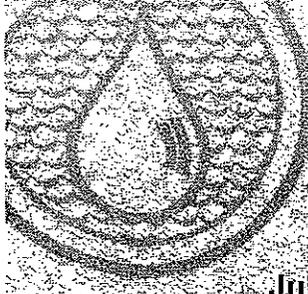
City of Sultan's Proposed WUE Program

Measure	Description	Cost per Unit	Water Savings Per Unit
1. Public Education	School curriculum outreach and informational brochures placed in City Hall and the Post Office that advertise water saving behavioral tips.	Minimal Labor Costs	Unknown
2. Indoor Residential Conservation Kits	The City will sell or distribute kits containing low-flow showerheads, bathroom aerators, and kitchen aerators.	\$6	9 GPD
3. Conservation Pricing	The District's rate structure encourages water savings by charging additional fees for use over 600 cubic feet per month.	None	Savings vary by customer
4. Leak Detection Program	Distributing detection tablets to targeted customers where leak detection is flagged during meter reading.	\$1	2 GPD
5. Show Consumption History on Bills	By showing historic consumption, customers can compare usage in the past and track their own progress on conservation efforts they have made.	None	Savings vary by customer

The savings are based on expected participation from the City's customers. The expected savings from the Public Education Program is unknown at this time, but are proven measures that will continue to exist as part of the District's comprehensive WUE Program.

Each year, the City will evaluate progress towards meeting the previously stated WUE Conservation goal, and will notify the Department of Health and the general public of their progress. If it is determined that the goal is not being met, the City will need to adjust its program or set a new goal with the help of further input from the public.

The City looks forward to hearing your comments at the public meeting scheduled for January 10th, 2008 at 7 pm at City Hall. If you cannot attend the meeting and wish to comment on the Goal or Program, please contact the City before January 21st, so your comments may be reviewed before official adoption at the January 24th City Council meeting.



Fact Sheet

Water Use Efficiency Rule

Summary of the Water Use Efficiency Rule

July 2007

DOH PUB. #331-302
(Update)

Background

Growing communities, agriculture, industry, and the importance of conserving water for fish have placed an increasing demand on our state's water resources. To help meet these growing needs, the Washington State Legislature passed the Municipal Water Supply - Efficiency Requirements Act of 2003, better known as the Municipal Water Law. The law gives municipal water suppliers certain benefits and obligations. One of their obligations is to comply with the water use efficiency rule.

Now available online!

Getting Started
Water Use Efficiency
Guidebook

The water use efficiency rule affects all municipal water suppliers, which includes all Group A community water systems with 15 or more residential connections and some non-community water systems that use water in a residential manner (RCW 90.03.015).

Water Use Efficiency Rule – Key Elements

- Water Use Efficiency Planning Requirements – As part of a water system plan or small water system management program, municipal water suppliers must collect data, forecast demand, evaluate leakage, evaluate rate structures that encourage water use efficiency, and evaluate or implement water use efficiency measures. For more information about this part of the rule, please see the Fact Sheet, *Planning Requirements* (DOH Pub. #331-303).
- Distribution Leakage Standard – Municipal water suppliers must meet a state distribution system leakage standard in order to minimize water loss in the distribution system. For more information about this part of the rule, please see the Fact Sheet, *Distribution Leakage Standard* (DOH Pub. #331-304).
- Water Use Efficiency Goal Setting and Performance Reporting – Municipal water suppliers must set water use efficiency goals through a public process and report annually on their performance to customers, Department of Health, and also make the information available to the public. For more information about this part of the rule, please see the Fact Sheet, *Goal Setting and Performance Reporting* (DOH Pub. #331-305).



HELPING TO ENSURE SAFE AND RELIABLE DRINKING WATER

Attachment A-1

Requirements and Deadlines

The rule requirements and compliance deadlines are shown in the table below. The requirements are listed in order, by the date they are due.

Rule Requirement	Deadline for water systems under 1,000 connections	Deadline for water systems w/ 1,000 or more connections
Install production meter(s)	January 22, 2007	January 22, 2007
Collect consumption & production data	January 1, 2008	Now
Include WUE program in planning documents	January 22, 2008	January 22, 2008
Set your own WUE goals	January 22, 2009	January 22, 2008
Submit service meter installation schedule	July 1, 2009	July 1, 2008
Submit first annual performance report	July 1, 2009	July 1, 2008
Install service meters	January 22, 2017	January 22, 2017
Meet 10% leakage standard (based on 3-year average)	Three years after installing all service meters	Three years after installing all service meters

For More Information

If you have any questions about the water use efficiency rule, please contact:

Michael Dexel
 Water Resources Policy Lead
 Office of Drinking Water
 Department of Health
 PO Box 47822
 Olympia, Washington 98504-7822
 Phone: 360-236-3154
 Fax: 360-236-2252
 E-mail: michael.dexel@doh.wa.gov

Additional information can be found on the Web at:
http://www.doh.wa.gov/ehp/dw/municipal_water/water_use_efficiency_rule.htm



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). For additional copies of this publication, call 1-800-521-0323. This and other publications are available at <http://www.doh.wa.gov/ehp/dw>

Questions & Answers

Water Use Efficiency Rule

July 2007

DOH PUB. #331-361

(Update)

Why was the Water Use Efficiency Rule passed?

In 2003 the State Legislature passed the Municipal Water Law, which directed the Department of Health (DOH) to adopt a rule that establishes water use efficiency (WUE) requirements for all municipal water suppliers. The water use efficiency rule will help conserve water for the environment and future generations. It will also enhance public health by improving water system efficiency and reliability.

Is my water system affected by this rule?

All municipal water suppliers are affected by the rule requirements; this includes most Group A community water systems with 15 or more residential connections and some non-community water systems that serve water in a residential manner. The Department of Ecology can help you figure out whether these rules apply to your water system. See Ecology contacts below or view Ecology's policy on municipal water suppliers at www.ecy.wa.gov/programs/wr/rules/images/pdf/pol2030.pdf

Central Regional Office (Yakima):	Scott Turner	(509) 457-7106
Eastern Regional Office (Spokane):	Dan Tolleson	(509) 329-3526
Northwest Regional Office (Bellevue):	Paul Fabiniak	(425) 649-4342
Southwest Regional Office (Lacey):	Phil Crane	(360) 407-0238

What do we need to do, and by when?

The rule requirements and compliance deadlines are shown in the table below. The requirements are listed in order, by the date they are due.

Rule Requirement	Deadline for water systems under 1,000 connections	Deadline for water systems w/ 1,000 or more connections
Install production meter(s)	January 22, 2007	January 22, 2007
Collect consumption & production data	January 1, 2008	Now
Include WUE program in planning documents	January 22, 2008	January 22, 2008
Set your own WUE goals	January 22, 2009	January 22, 2008
Submit service meter installation schedule	July 1, 2009	July 1, 2008
Submit first annual performance report	July 1, 2009	July 1, 2008
Install service meters	January 22, 2017	January 22, 2017
Meet 10% leakage standard (based on 3-year average)	Three years after installing all service meters	Three years after installing all service meters



What are some examples of water use efficiency measures?

There are hundreds of water use efficiency measures from which a water system may choose, including: landscape efficiency ordinance, low-flow showerheads, rebates to customers for installing water efficient appliances, using weather-based irrigation systems, and other measures appropriate for your system. Additional guidance on water use efficiency measures is located in the *Getting Started: Water Use Efficiency Guidebook*, DOH Pub. #331-375.

How do I set my water system's goals?

All municipal water suppliers must set their own goals for efficiently using water through a public process. This process assures that water customers and the general public have an opportunity to participate and provide comments on the goals set by the water system to use water efficiently.

What costs are involved in meeting the rule requirements?

The range of costs will vary, depending on system size and other factors such as installing service meters on existing connections, costs involved in water system planning, and costs of implementing a Water Loss Control Action Plan. Detailed cost analysis is available in the document, "Final Significant Analysis and Small Business Economic Impact Statement," which is available on the Office of Drinking Water Web site listed below.

How will this affect my customers' rates?

Although the new rule requires municipal water suppliers to pay more attention to conservation and rate structures, it is the responsibility of each water system to determine which conservation measures best apply to their system and whether rates need to change.

Is there any funding assistance for my water system?

Although we have no current source of funding for water use efficiency activities, DOH is working to identify funding opportunities to assist municipal water suppliers in complying with the rule.

When will guidance documents be available, and what topics will they cover?

Getting Started: Water Use Efficiency Guidebook, DOH Pub. #331-375, is now available online. The guidebook explains how the rule affects water systems, and how it will change the way they do business by requiring them to involve the public in the decision making process. It includes an appendix full of examples, worksheets, and an annual reporting form to help systems comply. If you would like to suggest a topic for additional guidance, contact Mike Dexel at (360) 236-3154.

When will water systems be trained on the new requirements?

DOH will be working with many of our partners to help water systems understand the rule requirements. Training is one of our top priorities. As training opportunities become available, we will post them on the Office of Drinking Water Web site (below) and include them in our quarterly Water Tap newsletter.

Where can I find more information to help me comply with this rule?

You can find additional information on these Web sites:

Office of Drinking Water: http://www.doh.wa.gov/ehp/dw/municipal_water/water_use_efficiency_rule.htm

American Water Works Association: <http://awwa.org/waterwiser/>

Partnership for Water Conservation: <http://www.partners4water.org/>

Evergreen Rural Water of Washington: <http://www.erwow.org/>

U.S. Environmental Protection Agency: <http://www.epa.gov/watersense/index.htm>

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). For additional copies of this publication, call 1-800-521-0323. This and other publications are available at <http://www.doh.wa.gov/ehp/dw>

Fact Sheet

Water Use Efficiency Rule

Planning Requirements

July 2007

DOH PUB. #331-303

(Update)

Background

One of the three elements of the water use efficiency rule is water use efficiency planning. Water use efficiency has been an important component of water system planning for over 10 years and assists water systems in developing drinking water supply strategies. The Washington State Legislature recognized this in the Municipal Water Law and required the Department of Health (DOH) to use its existing guidance as a starting point. DOH now incorporates the new water use efficiency planning requirements into its planning program.

Now available online!

Getting Started
Water Use Efficiency
Guidebook

The new water use efficiency planning requirements focus on:

- Data collection and reporting.
- Demand forecasting.
- Evaluation of leakage, rates, and water use efficiency measures.

Data Collection and Reporting

Understanding a municipal water supplier's impact on the water supply is important for making informed water resource decisions. The new rule requires municipal water suppliers to describe their water source and supply characteristics (such as instream flows, salt water intrusion, and aquifer depletion).

Municipal water suppliers need data to develop a successful water use efficiency program. By understanding how much water is used, where it goes, and who is served, a municipal water supplier can make educated choices about how best to conserve water. Under the new rule, municipal water suppliers need to collect production and consumption data on a regular basis and report that information in their planning document and annual performance report (see Fact Sheet, *Goal-Setting and Performance Reporting*, DOH Pub. #331-305).

Demand Forecasting

Demand forecasting is important because it identifies how much water will be needed in the future. Municipal water suppliers must forecast their projected water demand as part of their planning documents. In preparing the forecast, municipal water suppliers must determine future use with and without savings expected from their water use efficiency program.



Evaluation and Selection of Water Use Efficiency Measures

The new rule gives municipal water suppliers flexibility in selecting or implementing measures that achieve their water use efficiency goals.

Municipal water suppliers need to evaluate or implement a specified number of water use efficiency measures based on water system size. There are six different size categories; the larger the water system, the more measures they must evaluate. An evaluation is not required for any measure the municipal water supplier will implement. Municipal water suppliers with fewer than 1,000 connections must describe how they evaluated their water use efficiency measures. Municipal water suppliers with 1,000 or more connections must complete their evaluation following criteria described in the rule.

Additional Evaluation Requirements

All municipal water suppliers must evaluate the feasibility of implementing rates that encourage water use efficiency and educate customers about water use efficiency practices. Water systems with 1,000 or more connections must also evaluate water reclamation opportunities.

For More Information

If you have any questions about the water use efficiency rule, please contact:

Michael Dixel
Water Resources Policy Lead
Office of Drinking Water
Department of Health
PO Box 47822
Olympia, Washington 98504-7822
Phone: 360-236-3154
Fax: 360-236-2252
E-mail: michael.dixel@doh.wa.gov

Additional information can be found on the Web at:
http://www.doh.wa.gov/ehp/dw/municipal_water/water_use_efficiency_rule.htm

**It's Worth
Saving** 
Drinking Water



Fact Sheet

Water Use Efficiency Rule

Distribution Leakage Standard

July 2007

DOH PUB. #331-304

(Update)

Background

One of the three elements of the water use efficiency rule is a statewide distribution system leakage standard. Since the late 1980s, the Department of Health (DOH) has encouraged water systems to reduce unaccounted-for water to 20 percent or less. Municipal water suppliers must now meet a state standard that minimizes water loss from their distribution system.

Now available online!

**Getting Started
Water Use Efficiency
Guidebook**

Minimizing leakage in water systems has many benefits for water systems and their customers. These benefits include:

- Improved operational efficiency.
- Lowered water system operational costs.
- Reduced potential for contamination.
- Extended life of facilities.
- Reduced potential property damage and water system liability.
- Reduced water outage events.
- Improved public relations.

Distribution System Leakage Standard

The rule requires all municipal water suppliers to maintain their distribution system leakage at or below 10 percent of their production. Municipal water suppliers need to report their leakage as a percentage and as leakage volume. DOH will allow alternative methodologies for determining leakage if specific criteria are followed.

Having a fully metered water system is the best way for a municipal water supplier to accurately determine its leakage. Under existing law, municipal water suppliers are required to have source meters and service meters must be installed within 10 years of the effective date of the rule (See Fact Sheet, *Metering Requirements*, DOH Pub. #331-306).

The distribution system leakage standard applies to the distribution grid of the water system and includes reservoirs located within the distribution system. Municipal water suppliers may exclude transmission lines and raw water reservoirs from the leakage calculation, although this



type of water loss must be described in the planning document. All water that is not metered and tracked will be considered leakage. Municipal water suppliers must account for uses such as fire protection, flushing, construction, and other non-revenue water by metering or by estimating, using credible means.

Leakage Reporting and Compliance

The rule requires municipal water suppliers to report leakage information in planning documents and annually in performance reports. Compliance with the leakage standard is based on a rolling three-year average. Municipal water suppliers not meeting the distribution system leakage standard must develop and implement a Water Loss Control Action Plan, which identifies the steps and timelines for reducing leakage. In the Water Loss Control Action Plan, municipal water suppliers may address technical or economic concerns which affect their ability to comply with the standard. If municipal water suppliers are not fully metered, they need to report annually on their progress toward installing meters on all service connections.

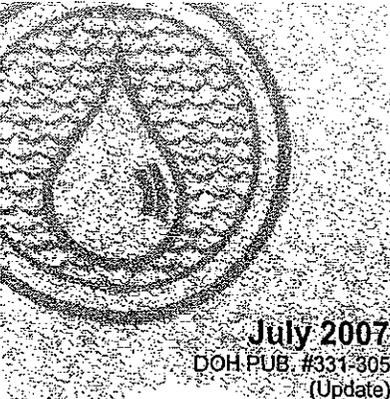
For More Information

If you have any questions about the water use efficiency rule, please contact:

Michael Dixel
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Department of Health
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Phone: 360-236-3154
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Additional information can be found on the Web at:
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**It's Worth
Saving 
Drinking Water**



Fact Sheet

Water Use Efficiency Rule

Goal Setting and Performance Reporting Requirements

July 2007
DOH PUB. #331-305
(Update)

Background

One of the three elements of the water use efficiency rule is water use efficiency goal setting and performance reporting. Municipal water suppliers must set water use efficiency goals through a public process and report annually on their performance to customers and the Department of Health (DOH), and also make this information available to the public.

Now available online!

**Getting Started
Water Use Efficiency
Guidebook**

Water Use Efficiency Goal Setting

All municipal water suppliers with 1,000 or more connections must set their initial water use efficiency goals by January 22, 2008, or by January 22, 2009 for water systems with fewer than 1,000 connections. These water use efficiency goals must be set through a public process and re-evaluated at least every six years. Municipal water suppliers may use their existing public processes as long as they meet the requirements of the rule.

All municipal water suppliers need to set water use efficiency goals and record these goals in planning documents and performance reports. When setting water use efficiency goals, the municipal water supplier must:

- Include a measurable outcome in terms of water production or consumption (for example: reduce peak production volumes by five percent, maintain current single family residential use, and reduce leakage from 30 percent to 10 percent).
- Address water supply and forecasted demand characteristics.
- Include an implementation schedule for meeting the goals.

Performance Report

All municipal water suppliers must report annually (by July 1) on their water use efficiency performance to customers and DOH, and also make this information available to the public. Municipal water suppliers may fulfill the reporting requirement to their customers and the public by including performance information in their consumer confidence report (an annual water quality report mailed to customers).

When reporting annually to DOH, municipal water suppliers must use the *Annual Water Use Efficiency Performance Report Form*, DOH Form #331-376.



HELPING TO ENSURE SAFE AND RELIABLE DRINKING WATER

Attachment A-9

Performance reports need to include the following elements:

- Annual water system production total.
- Annual distribution system leakage information. If a municipal water supplier is not fully metered, then it needs to report annually on its progress toward installing meters on all service connections (see Fact Sheet *Distribution Leakage Standard*, DOH Pub. #331-304 for more details).
- A description of the water system's water use efficiency goals and progress toward achieving those goals.

Performance Reporting Schedule

For municipal water suppliers with 1,000 or more connections, the initial performance report is due July 1, 2008.

For municipal water suppliers with fewer than 1,000 connections, the initial performance report is due July 1, 2009.

For More Information

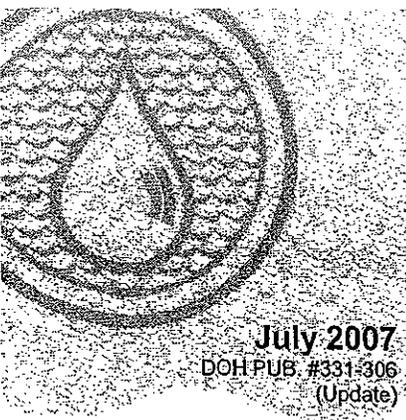
If you have any questions about the water use efficiency rule, please contact:

Michael Dexel
Water Resources Policy Lead
Office of Drinking Water
Department of Health
PO Box 47822
Olympia, Washington 98504-7822
Phone: 360-236-3154
Fax: 360-236-2252
E-mail: michael.dexel@doh.wa.gov

Additional information can be found on the Web at:

http://www.doh.wa.gov/ehp/dw/municipal_water/water_use_efficiency_rule.htm

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Fact Sheet

Water Use Efficiency Rule

Metering Requirements

July 2007

DOH PUB. #331-306

(Update)

Background

Source and service metering are key to a successful water use efficiency program. Source and service meters provide the data necessary to determine leakage, assist in managing an important resource, and enhance planning activities. The water use efficiency rule requires installation of service meters. The Department of Health's (DOH) new metering requirement and the benefits of metering are summarized below.

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Getting Started
Water Use Efficiency
Guidebook

Source Meters

Source meters are required on all existing and new water sources. Source meters assist water systems in tracking production and seasonal variations and account for the use of the resource.

Service Meters

All municipal water suppliers must meter their existing and new service connections. The rule allows for the volume of water to be measured through a single meter for the following clustered entities: campgrounds, RV parks, designated mobile home parks, a building with multiple units, and complexes with multiple buildings served as a single connection. Municipal water suppliers have 10 years to phase in meter installation for existing connections. Installing service meters at new connections is required immediately.

Here are some of the benefits of installing service meters:

- Provides the most accurate method to determine distribution system leakage standard (see Fact Sheet, *Distribution Leakage Standard*, DOH Pub. #331-304).
- Assists in determining trends and variations in water usage.
- Identifies how much water customers use.
- Provides a tool to educate customers about their water use.
- Aids in the creation of customer-specific water use efficiency programs.
- Allows municipal water suppliers to begin to charge equitably based on usage.
- Increases efficiency which can expand water system capacity. This is especially true when combined with leak detection, leak repair, and a consumption-based rate structure.



Meter Selection, Installation, Operation, and Maintenance

In order to ensure water is being accounted for accurately, meters must be selected, installed, operated, and maintained using generally accepted industry standards and as required by the manufacturer.

Meter Installation Schedule

For municipal water suppliers with 1,000 or more connections, include a meter installation schedule with the initial performance report by July 1, 2008.

For municipal water suppliers with fewer than 1,000 connections, include a meter installation schedule with the initial performance report by July 1, 2009.

For More Information

If you have any questions about the water use efficiency rule, please contact:

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Chapter 4 – Conservation Program, Water Right Analysis, System Reliability and Interties

4.1 CONSERVATION PROGRAM DEVELOPMENT AND IMPLEMENTATION

4.1.1 Background

A drought in 1987, over-allocation of water rights in several regions of Washington, and continued growth in the Puget Sound metropolitan area resulted in adoption of the Water Use Efficiency Act of 1989. Over the years the requirements of this act have been refined into the Conservation Planning Requirements, which include a series of checklists for water systems of varying size.

The Sultan system falls within the 1,000 to 25,000 service connections category, and qualifies for a moderate program. All conservation programs must address three components: data collection, demand forecasts, and conservation elements. A common misconception is that water conservation programs focus only on reducing residential consumption through low-flush toilets and shower restrictors. In practice, an effective program relies on sound management of the utility and efficient use of existing resources. Such a program will bring the public into awareness of various aspects of conservation, including more than just low use fixtures. At the other extreme, should water supplies become severely limited, mandatory water use restrictions can be imposed.

4.1.2 Water Use Data Collection Requirements

The City is complying with all of the requirements listed in the DOH Checklist for water use data collection. Source meters record daily flows. Residential service meters are read bi-monthly. Annual records of source production are presented in Table 2-3. The City has reduced the unmetered accounts from ten to only three: the US Post Office, Snohomish County Fire District No. 5, and one residence.

Year	Average Production in GPD	Served Population	Gallons Per Capita
1990	359,000	2236	161
1991	362,000	2241	162
1992	402,000	2293	175
1993	396,000	2407	165
1994	459,000	2562	179
Average			168
1999	415,000	3067	135
2000	476,000	3297	144
2001	465,000	3775	123
2002	473,000	3910	121
Average			131

Conservation data presented in Table 4-1 shows that a substantial reduction in water produced per capita has been achieved since the early 1990's.

4.1.3 Demand Forecasting Requirements

Water demand forecasts as required by the DOH Checklist are presented in Chapter 2 based on population projections from Snohomish County using data provided by the Office of Financial Management. This

Chapter 4 – Conservation Program, Water Right Analysis, System Reliability and Interties

information is combined with water use data to show per capita consumption as presented in Table 2-3, which documents a general decline in water use per capita.

Conservation savings are described in Section 2.2.5. Implementation of Everett Pipeline No. 5 could potentially reduce per capita water demand from about 150 GPD down to 130 GPD using 2002 data by eliminating backwash and related operational water demands at the Sultan water treatment plant. However, because operation of the Lake 16 source and the Sultan water treatment plant is more cost-effective, this implementation will not occur in the immediate future.

Further conservation measures within the existing system are anticipated to reduce average day demand by about 5 GPD per capita by the year 2025. These will include installation of more, low-water-use fixtures and the continued replacement of older pipe.

4.1.4 Water Conservation Program Requirements

Two conservation measures are required by the DOH Checklist, and both have been implemented by the City:

- Program promotional efforts include periodic inserts to the water bills and distribution of conservation brochures provided by the Departments of Health and Ecology.
- Source meters have been in place for years and data is regularly recorded.

4.1.5 Water Conservation Program

Conservation Objectives will focus on reducing per capita water use. Unaccounted water is about 15 percent of production; and attention will be directed towards reducing that level. Annual water demand billed per capita now averages about 130 GPD, which is over 20 percent lower than in the early 1990's.

Evaluation of Recommended Conservation Measures identified several that have already been implemented including customer assistance, consumption history billing, service meters, unaccounted water, and conservation pricing.

Selected Conservation Activities for implementation by the City include the following:

- Eventual transfer of water source to Everett Pipeline No. 5 will eliminate the need for backwashing and associated cleaning of the existing water treatment plant, which uses about 79,000 gallons daily.
- Replacement of several older sections of distribution piping as outlined in Section 3.5.4 will reduce unaccounted water losses.
- Improved servicing of water service meters is anticipated to improve the accuracy of the bi-monthly billing and will likely result in slight increases in the quantities of water billed, which will reduce the amount of unaccounted water.

Targeted Water Savings Projections due to conservation efforts to be implemented over the next six years are reflected in the demand forecasts presented in Table 2-9. These savings are anticipated to reduce the water demand from about 130 GPD per capita down to about 125 GPD.

Table 1-1: Summary of WUE Requirements

Requirement	Deadline for municipal water suppliers under 1,000 connections	Deadline for municipal water suppliers with 1,000 or more connections
1 Begin collecting production and consumption data	January 1, 2008	January 1, 2007
2 Include WUE program in planning documents	January 22, 2008	January 22, 2008
3 Set your own WUE goals	January 22, 2009	January 22, 2008
4 Submit service meter installation schedule	July 1, 2009	July 1, 2008
5 Submit first annual performance report	July 1, 2009	July 1, 2008
6 Meet distribution leakage standard (based on 3-year rolling average)	July 1, 2011, or three years after installing all service meters	July 1, 2010, or three years after installing all service meters
7 Complete installation of all service meters	January 22, 2017	January 22, 2017



1.5 Who is Affected by Water Use Efficiency Requirements

Disclaimer: This section is an attempt by the Department of Health to simplify the definition of a municipal water supplier. If you require further assistance with a legal determination, please contact the Department of Ecology.

The Municipal Water Law directed that the WUE requirements apply to water systems defined as municipal water suppliers. A MWS is “an entity that supplies water for municipal water supply purposes.” [RCW 90.03.015(3)]

Your water system is most likely a MWS if you can answer “yes” to any of the following:

1. My system has 15 or more residential service connections *or* provides water in a residential manner to a non-residential population that averages at least 25 people for at least 60 days a year.
2. My system provides water to a city, town, public utility district, sewer district or water district.
3. My system provides water indirectly for purposes listed in 1 or 2, through the delivery of water to another water system.

WATER USE Efficiency

1. We have been collecting this data for years, we just have to put it in the order the STATE WANTS.
2. We have some CONSERVATION PLANNING in our COMP. PLAN 2005, more for the WUE will have to be added as a Amendment or something.
3. Set goals you can achieve, not too hard so you can show progress. Demonstrate a need for the goal - what's important - Avoid high cost, propose a solution to a problem
4. we already have meters in -
5. First report to customers can go with CCR, AOH. report must go to A.O.H., this report has to be available to public.
6. Our 3 year average is not until July 1 2010, but we are going over the last few years to see if we are losing much water, if we are losing water we will find out where, and how, and fix the problem.
7. we have all meters in