

CITY OF OROVILLE  
**DRAFT**  
 GOALS AND OBJECTIVES  
 for  
 WATER USE EFFICIENCY PROGRAM

I. BACKGROUND

In 2003, the Washington State Legislature passed Engrossed Second Substitute House Bill 1338, better known as the Municipal Water Law, to address the increasing demand on our state’s water resources. The law established that all municipal water suppliers must use water more efficiently in the exchange for water right certainty and flexibility to help them meet future demand. The Legislature directed the Department of Health (DOH) to adopt an enforceable Water Use Efficiency (WUE) program, which became effective on January 22, 2007.

The requirements of the program are summarized in Table 1, below.

<b>Table 1 Summary of Water Use Efficiency (WUE) Program Requirements</b>		
<b>Requirement</b>	<b>Deadline for municipal water suppliers with 1,000 or more connections</b>	<b>Comments</b>
Begin collecting production and consumption data	January 1, 2007	Program in place, being monitored and improved.
Include WUE program in planning documents	January 22, 2008	Needs to be included in the Water System Plan Update, 2008.
Set your own WUE goals	January 22, 2008	Completed and intended for final review and adoption at Feb. 5, 2008 Council Meeting.
Submit service meter installation schedule	July 1, 2008	To be submitted by deadline
Submit first annual performance report	July 1, 2008	To be submitted by deadline
Meet distribution leakage standard (based on 3-year rolling average)	July 1, 2010	To be established as one of the WUE goals
Complete installation of all service meters	January 22, 2017	To be completed by deadline

## II. EXISTING CONSERVATION MEASURES

### A. EXISTING GOALS

Chapter 4, of the City of Oroville Water System Plan (WSP) prepared in 2003 outlines a conservation plan but does not specifically state goals; however, it identifies a number of water conservation measures, and a number of policies. These provisions are included in the WSP as follows and their current status is noted after each measure:

***Program Promotion*** – *The City currently advises customers of the importance of conservation on an on-going basis. This is accomplished by conservation flyers distributed with the annual consumer confidence reports. While the flyers have been distributed, the City has not been consistent with this program.*

***Source Metering*** – *The City meters all four well sources. In place and still being implemented.*

***Service Metering*** - *All customer service connections are metered. In place and still being implemented.*

***Conservation Pricing*** – *Oroville has implemented a rate structure in which charges increase as more water is consumed. This structure promotes conservation. Chapter 9 details the rates. Still being implemented but needs review.*

***The previous water system plan identified the following conservation measures the City intended to consider, and is now considering for its new Water Use Efficiency Program.***

#### A. PUBLIC EDUCATION

1. ***School Outreach:*** *Make available educational programs targeted to increase awareness of local water resources and encourage water conservation practices. Activities include school presentations, preparation of curriculum material, and tours of water system facilities.*
2. ***Speakers Bureau:*** *Responding to speaking requests and making speakers available to a wide cross-section of service, community, and other groups. Focus on increasing public awareness of water resource and conservation issues.*

3. Program Promotion: Publicize the need for water conservation through public service announcements, news articles, and public water systems bill inserts, **and postings on the City's new website.**

B. TECHNICAL AND ADMINISTRATIVE PROGRAM

1. Single-Family/Multi-Family Kits: Make available kits containing inexpensive, easily installed, water-saving devices to single-family residential homes and the owners and managers of apartment buildings and condominiums. Devices in the kits include shower flow restrictors, toilet tank water displacement bags, leak detection dye tablets, and an informational brochure.
2. Purveyor Assistance/Customer Assistance: Regional assistance to aid purveyors in developing and implementing conservation programs tailored to their needs. Similar response by purveyors to customers who request assistance in implementing water conservation practices. Technical Studies: Studies would be designed and conducted by the public water system and/or regional organization. Study objectives would be to collect data and research new technology to develop programs which would produce measurable water savings. Study areas might include residential flow metering, lawn watering practices, and commercial/industrial water use patterns
3. Unaccounted Water/Leak Detection: Conduct a regular and systematic program of finding and repairing leaks in system mains and laterals. This includes on-site tests using computer-assisted leak detection equipment on water distribution mains, valves, services, and meters.
4. Irrigation/Agriculture: Work toward applying current and new technology to water use practices of large agriculture/irrigation operations such as park department facilities. Moisture sensors, flow timers, low volume sprinklers, drip irrigation, and other practices to increase irrigation efficiency may be implemented.
5. Bill Showing Consumption History: An extension of the electric energy conservation program. Billings would show percentage increase/decrease in water use over the same period in the previous year.
6. High Technology Water Tracking: Utilize concepts of telemetry and exception reporting to detect and investigate instances of abnormal water usage.

The following are water conservancy policies from the 2003 Water Plan that are currently in effect, with assessment comments about each:

C. POLICY

1. Require Meters: *Require the installation of individual service and master source meters for all water use, including public facilities. Maintain periodic meter testing and repair program.* **Program is in place and being implemented.**
2. Plumbing Code: *Develop recommendations for code revisions to require water efficient fixtures for new construction and extensively remodeled buildings. Work with State officials for adoption.* **These standards have been effect for a number of years.**
3. Landscape Management/Playfields: *Promote low water demand landscaping in all retail customer classes (private, public, commercial, industrial, etc.). Work with local nurseries to ensure the availability of plants that achieve this objective.* **Needs program development and implementation.**
4. Seasonal Pricing: *Implement rate design techniques to provide economic incentives to conserve water. Under seasonal pricing, the unit price of water would be increased during a high seasonal use period. Rate setting is the responsibility of the public water system.* **Needs program development and implementation.**
5. Irrigation/Private Wells: *Identification of location, aquifer source, average annual and peak month usage to analyze impact on supply and evaluate availability for public water system use where land use changes occur. General purpose government would be encouraged to monitor use and consider land use and building code conditions that would promote efficient use of water from these sources. All wells above a specified capacity should be required to be metered with use records available for resource management.* **Needs review with Okanogan County and Watershed Planning Unit.**
6. System Financed Retrofit: *Under a program similar to that used in the electrical energy program, installation of water efficient fixtures in existing residences and commercial/industrial*

*facilities would be promoted by the system by: (a) providing fixtures at no cost, (b) giving a rebate for consumer purchased fixtures, and (c) arranging for suppliers to provide fixtures at the system's cost. **Needs feasibility study including cost/benefit analysis.***

7. Master Source Meters: *Require a master source meter, at a minimum, for Base Program systems. **In Place.***
8. Recycling/Reuse: *Examine opportunities for water reuse and recycling as an approach to providing additional water. Oroville has identified the following potential sources of reclaimed water:*

*City Sewage Treatment Plant*

*Golddigger Fruit*

*Zosel Lumber*

*Potential uses for recycled/reclaimed water from these sources include irrigation of City parks and flushing of sanitary sewers. **This is under current study with Ecology.***

## **B.SUMMARY AND ASSESSMENT OF EXISTING GOALS/MEASURES**

The City has generally adhered to some of its water conservation policies while several need to be reviewed for feasibility. It is expected that this WUE Program will serve to further these tasks according to the new Water Use Efficiency rules.

In terms of success of measures taken, based on pumping records it appears that the city may be using significantly less water over a five-year period while connections have increased by around 100 units. However, the City's water metering and accounting system is not currently adequate to accurately identify water conservation measure success. A new conservation goal will be to develop a system that can readily and more accurately identify conservation successes on an annual basis.

### III. Basic Planning and Water Demand Forecasting Data

Basic Planning Data and Water Demand Forecasting from the Chapter 2 of the 2003 WSP is attached as Appendix A.

### IV. WATER USE EFFICIENCY GOALS

A. The regulation (WAC 246-290-830) requires the governing body of the municipal water system to develop the water use efficiency goals through a public process. While the deadline for this task is January 22, 2008 to have these goals established, the City has decided to post proposed goals on the City website, make them available to the public for review prior to their regularly scheduled February 5, 2008 Council hearing when they will be considered with the invited public. The purpose of the hearing will be to allow for public input on the proposed goals.

#### **B. Proposed Water Use Efficiency Goals**

##### **GOAL 1**

SUPPLY GOAL - REDUCE DISTRIBUTION SUPPLY LEAKAGE TO 10% OVER THE EFFECTIVE PERIOD OF THE 2008 WATER PLAN (I.E., BY 2014)

**Rationale:** *Identifying and fixing our leaks will help us provide better service, save money on pumping costs, and may allow us to add more connections for future growth.*

##### **GOAL 2**

DEMAND GOAL - REDUCE DAILY HOUSEHOLD CONSUMPTION TO AN AVERAGE OF 250 GALS PER DAY OVER THE EFFECTIVE PERIOD OF THE 2008 WATER PLAN (I.E., BY 2014).

**Rationale:** *Using less water saves the customer money and may allow us to add more connections for future growth which helps to spread the costs of operating the system to more uses (i.e., develop better economy of scale).*

##### **GOAL 3**

MONITORING GOAL – IMPLEMENT MEASURES THAT IMPROVE THE CITY’S ABILITY TO ACCURATELY MONITOR WATER LOSS AND USE DATA IN ORDER TO IMPROVE THE WATER USE EFFICIENCY PROGRAM.

### C. Recommended Water Use Efficiency Measures

As part of a water system plan, DOH regulation requires you to evaluate or implement a specified number of measures. Oroville is a water system within the range of service connections which systems are required to implement at least five WUE measures. The evaluation and selection of measures should be related to the cost effectiveness of the measures. The City's next Comprehensive Water Plan (CWP) update is due this year, 2009. The evaluation of the WUE goals and measures will be included in the CWP update planning process. Additionally, Annual Performance Reports are required with the fires being due July, 2008. However, a preliminary evaluation of possible measures indicates those likely to be cost effective are listed in Table 2.

<b>Table 2 Recommended Water Use Efficiency Measures (5 Measures Required)</b>		
<b>Indoor Residential</b>	<b>Outdoor</b>	<b>Industrial/Commercial/ Institutional</b>
Water bill showing consumption history	Water bill showing consumption history	Water bill showing consumption history
Customer leak detection education	Customer leak detection education	Customer leak detection education
Evaluate Conservation Rates	Evaluate Conservation Rates	Evaluate Conservation Rates
Educate Customers (City newsletter / bill stuffers)	Educate Customers (City newsletter / bill stuffers)	Educate Customers (City newsletter / bill stuffers)
Improved monitoring of non-metered uses. (e.g., breaks, leaks, flushing, fires suppression, etc)		

### II. Basic Planning and Water Demand Forecasting Data

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