

SECTION 4.0 WATER USE EFFICIENCY

4.1 Introduction

Water use efficiency is a critical element of a well-run water system as it has implications for revenue management, source expansion, capital improvements, and environmental stewardship. While the promotion of efficient water use does influence revenues, the lost revenue is offset by reducing the need for capital improvements and conserves a resource that can be used to meet economic and population growth. This section reviews the District's water use efficiency (WUE) efforts and requirement compliance. The District's Water Use Efficiency Annual Reports (2012 through 2016) are included as Appendix 4A

4.2 Metering Program

The District is a 100 percent metered system. All source water is metered entering the service area at six locations, including Williams-Finney and Cowlitz Gardens. Within the system, there are 13 service meters greater than 3 inches up to 7 inches. The District conducts an ongoing maintenance program for all water service meters. The District has a formal maintenance policy regarding meter calibration and replacement that conforms to industry standards. Under that program, service master meters and large-diameter meters are tested and repaired/replaced every two years. Meters less than 2 inches are tested and rotated out of the system on a 10-year cycle.

4.3 Customer Education

The District provides WUE educational information annually in conjunction with the Water Quality Report distributed to all customers.

4.4 Conservation Promoting Rate Structure

The District system serves primarily a residential community. There are small commercial, multifamily and school customers, but there is no rate distinction between these customer classes in the billing system.

The District uses a mild block rate approach to rates. Under the current structure, charges to customers include a base rate corresponding to meter size. Single-family residential customers are charged a non-escalating rate for every hundred cubic feet (ccf) of consumption. In 2015, the District eliminated the 500 ccf base rate allowance so customers now pay for all water used. All other customer classes are charged the same rate as residential customers for the first 16 ccf. For each ccf over 16 nonresidential customers are charged a premium rate approximately 1.5 times the base rate. The current water rate schedule is included as Appendix 4B.

4.5 Unaccounted-for-Water

For the reporting period of 2012-2016, the District reported unaccounted-for-water to be between 4.8 and 8.5 percent of total purchased water. The three-year annual average ranged between 5.5 and 7.2 percent. This is addressed in this WSP as unaccounted-for water as it is assumed to be a combination of real, unauthorized, and apparent losses.

The reported figures are slightly different than the annual percentages calculated from raw data based on demands reported in Section 2.2. Despite the type of loss, the District's losses are below the 10 percent benchmark considered acceptable within the industry. When losses are below 10 percent, attempting to reduce losses further tends to be ineffective from a cost standpoint unless substantial point-source losses are known.

4.6 Supply- and Demand-side Water Use Efficiency Goals

Based on a variety of sources including American Water Works Association (AWWA), The Pacific Institute, and U.S. Geologic Survey total (indoor and outdoor) per-capita water demand averages about 165 to 185 gpcd. For indoor per-capita demand alone, the average is 85 to 100 gpcd. The calculated total per-capita demand for the District is 69.5 gpcd, less than half of the national average.

Because demand is so low, the focus of the District's Water Use Efficiency efforts has been, and will continue to be, awareness and education to maintain the level of demand. The 2015 elimination of the 500 ccf base rate allowance is expected to encourage additional efficiency by customers.

On the supply side, the District plans to continue maintaining the system through repair and replacement of pipe in order to minimize leakage and keep water loss below 10 percent. The installation of SCADA capabilities at all pump stations has increased the staff's ability to identify and respond to leaks in a timely manner.

4.7 Reclaimed Water

The District is a member of the Three Rivers Regional Wastewater Authority, the regional authority responsible for wastewater treatment and discharge. As such, the District collects municipal sanitary wastewater; however, it is not involved in the treatment and discharge or their potential as a resource or use. The production and use of reclaimed water is a regional decision beyond the District. The District continuously evaluates opportunities to reduce demand through use of reclaimed water for non-potable uses. Cost-effective uses remain unavailable. As the District continues to mature and other demands present themselves, reclaimed water will be evaluated for addressing that non-potable need.