

# 1.0 Introduction

Water consumption by water utilities serving municipal water customers is driven by a wide variety of domestic, commercial, industrial and institutional needs. BMPs have been developed for utilities to both improve water use efficiency of their own operations and for programs to improve the efficiency of their customers.

It is important that water utilities focus on the efficiency of their supply operations while promoting water efficiency to their customers. A utility can reduce water loss through careful and regular monitoring of its water delivery systems through the System Water Audit and Water Loss BMP. In addition, the Water Conservation Pricing BMP can provide an effective method of encouraging water efficiency by the customer through feedback from the cost of the water to the user. The Prohibition on Water Wasting BMP can help send a message to users about the value of water as well as educate the general populace about simple steps to save water.

Despite the variety of water uses and numbers of water users, many patterns of water use, especially in domestic water use are common. As a result a number of conservation measures have been developed in municipal settings over the past several decades to reduce the total gallons consumed for daily activities without reducing the benefit of the water used. The Showerheads, Faucet Aerators and Toilet Flapper Retrofit BMP and the Residential Toilet Replacement Programs BMP focus on indoor water use. The Residential Clothes Washer Incentive Program BMP encourages the installation of water efficient clothes washers.

The School Education BMP affects water consumption through changes in behavior as students learn about water resources and the wise use of water. The Water Survey for Single-Family and Multi-Family Customers BMP educates customers about specific water saving opportunities as well as water wasting practices which may be present in their home or business.

Outdoor water uses driven by climatic differences, and water needs of different plants, and used for diverse purposes result in BMPs which are focused on good landscape management principles. The Landscape Irrigation Conservation and Incentives BMP focuses on water savings that can be obtained through efficient operation of automatic irrigation systems, while the Water Wise Landscape Design and Conversion Programs BMP focuses on landscape materials.

A utility can reduce water loss through careful and regular metering of water delivered to billed as well as unbilled water uses and through proper maintenance of meters as through the Metering of All New Connections and Retrofit of Existing Connections BMP. For agencies or utilities offering water to wholesale customers who in turn serve retail customers, the Wholesale Agency Assistance Programs BMP offers methods for promoting water conservation among the retail water utilities. In addition, the Conservation Coordinator BMP can provide an effective method of ensuring that the utility's conservation programs are well administered and

effective. The Reuse BMP outlines how utilities can make more efficient reuse of their existing supplies.

The Public Information BMP can affect water consumption through changes in behavior as customers learn about water resources, the wise use of water and the utility's conservation program. The Rainwater Harvesting/Condensate Reuse BMP focuses on water savings that can be obtained through capturing rainwater or the condensate from large cooling systems while the New Construction Graywater BMP focuses on reuse of water which has been used in washing clothes.

Commercial water uses also have a variety of practices and equipment that can benefit from efficiency measures. The Municipal BMPs also include those focused on good water use practices for Park Conservation and for Conservation Programs for Industrial, Commercial, and Institutional Accounts.

Best-management practices contained in the BMP Guide are voluntary efficiency measures that save a quantifiable amount of water, either directly or indirectly, and can be implemented within a specified timeframe. The BMPs are not exclusive of other meaningful conservation techniques that an entity might use in formulating a state-required water conservation plan. At the discretion of each user, BMPs may be implemented individually, in whole or in part, or be combined with other BMPs or other water conservation techniques to form a comprehensive water conservation program. The adoption of any BMP is entirely voluntary, although it is recognized that once adopted, certain BMPs may have some regulatory aspects to them (e.g. implementation of a local city ordinance).