Appendix 4-6

Description of Planning Model

The District developed a method for this current RWSP to estimate the water conservation potential for the four planning regions.

For public supply systems, the District looked at the average per capita for utilities in the District that are permitted for 100,000 gallons or greater per day. In determining the conservation potential, the District applied between 10 to 28 percent water savings from water conservation measures for each utility. Where a utility falls in the 10 to 28 percent range largely depends on the size of the utility and the average per capita. For example, a 10 percent water savings may be applied to a small utility with a per capita just above 150. In a second example, a 25 percent water savings may be applied to a utility with an average per capita of 230. In this case, the utility may need to implement additional conservation methods to reach 150 per capita, such as a water conserving rate structure, landscape/irrigation ordinance and enforcement of water restrictions. For utilities with current per capita averages below 150, the target for reductions is a reasonable, achievable amount of conservation while maintaining reasonable per capita water use. For utilities above the 150 per capita that must be met by 2019, the target reductions were focused on applying sufficient achievable conservation to assist with per capita compliance.

A number of factors were used to determine which conservation measures would be the best fit for the utility, including demographics, future water demand, and the type and number of conservation measures completed to date. The 2007 Public Supply Utility Surveys were used to determine the number of residential and non-residential accounts in each utility service area. The following assumptions were applied to the public supply accounts in determining conservation opportunities: the number of pre-1995 homes (for indoor conservation measures) were based on the “built date” from GIS parcel data, conservation measures completed to date were determined using data from District-funded projects and available information on projects not funded by the District, and less than 100 percent of potential accounts would participate in any conservation measure. Based on the assumptions provided above and other District knowledge of the utility systems, conservation measures were applied accordingly. The cost effectiveness is calculated at the county level up to the planning region level. The cost effectiveness is based on the total cost for the county and amortized at 6 percent interest over either 5 or 20 years, depending on the type of conservation measure.

For non-public supply systems, including IC/M/PG and Recreational/Aesthetic permittees, general assumptions were applied to determine the conservation potential for these categories. For both categories, the number of permittees were determined using District permit data. For the IC/M/PG category, a 30 percent participation rate was applied to all conservation measures. This is based on a percentage of top water users in a number of industrial and commercial business types, where the top users would most likely be the best candidates for water conservation measures. For the Recreational/Aesthetic category, a 30 percent participation rate was also applied to all conservation measures with one exception. The irrigation evaluation and large landscape survey measures are mutually exclusive, so a 15 percent participation rate was applied to the number of permittees to determine the potential for each of these conservation measures. The cost effectiveness is calculated at the planning region level by user category and conservation measure type. The cost effectiveness is based on the total cost for the user category and amortized at 6 percent interest over either 5 or 20 years, depending on the type of conservation measure.