

Central Florida Water Initiative



Water Conservation Potential

The Water Conservation Subgroup of the Regional Water Supply Planning Group is charged with determining the amount by which future water demand can be reduced through reasonable conservation efforts. The Subgroup consists of representatives of the three involved water management districts (St. Johns River, Southwest Florida, and South Florida), the Florida Departments of Environmental Protection and Agriculture & Consumer Services, and central Florida public water supply utilities.

The Subgroup began by deciding on methodologies to be used for estimating water conservation potential for the six water use categories for which demand projections were developed. Established procedures for estimating water conservation potential used by individual water management districts and water supply utilities for regional and local planning were selected whenever feasible. The methodologies used to estimate water conservation potential for each water use category are as follow:

Public Supply. The Conserve Florida EZ Guide¹ tool is being used to estimate conservation potential for public water supplies. The participating water supply utilities developed specifications to adapt the Conserve Florida output to the characteristics of their service areas and allow calculation of reasonable estimates of water conservation potential. These include the following:

- 1) Florida Water StarSM specifications are used for plumbing fixture best management practices (BMPs).
- 2) A cost effectiveness threshold of \$3 per 1000 gallons is used in BMP selection.
- 3) Population is adjusted proportionally to be consistent with that used in Central Florida Water Initiative (CFWI) demand projections.
- 4) EZ Guide water use is normalized to actual flows.
- 5) Participation rates based on Southwest Florida Water Management District (SWFWMD) studies of actual projects and used in the SWFWMD Regional Water Supply Plan are used.
- 6) Effects of previous water conservation efforts on current and future conservation potential are included.

Results for individual utilities will be aggregated and used in the CFWI regional water supply plan.

Domestic Self-Supply. Domestic self-supply (DSS) refers to water use by individuals not served by a public supply utility (i.e. a residence with a private well). The water conservation potential for DSS is assumed to be in direct proportion to that of the residential part of public supply and its estimate is dependent on the calculation of public supply residential water conservation potential. After the aggregate estimate of residential water conservation for public supplies has been completed, the total amount of potential public supply residential water conservation will be divided by the aggregate service area population to yield per capita water conservation potential. The public supply per capita water conservation potential then will be multiplied by the DSS population to get the DSS water conservation potential.

Commercial/Industrial/Institutional Self-Supply. The water conservation potential for Commercial/Industrial/Institutional (CII) Self-Supply is assumed to be in direct proportion to that of CII uses served by public supply systems and its estimate is dependent on the calculation of public supply CII water conservation potential, which is derived from the Conserve Florida tool. After the aggregate estimate of publicly supplied CII water conservation potential has been completed, the percentage of savings for that use type will be applied to CII Self-supply. This methodology focuses on the domestic uses associated with CII facilities and does not account for potential savings of commercial and industrial process water. The Subgroup does not have adequate knowledge of the many varied commercial and industrial processes to evaluate their conservation potential and it is assumed that the water use permitting process and business economics already drive commercial and industrial water users to minimize the use of process water.

Agriculture Self-Supply. Estimation of achievable water conservation for agriculture will be limited to crop irrigation. Estimates will be based on mobile irrigation laboratory evaluations for farms that have had follow-up evaluations after farmers have had the opportunity to implement improvements recommended in initial evaluations. Data for farms in the CFWI area will be given priority but will be augmented by data from other regions when necessary to get a more acceptable sample size. Low, medium, and high estimates of water conservation will be made by crop type. Irrigation system type will not be considered because of inadequate data. The analysis will be based on 2010 planted acres.

Recreation and Aesthetic Self-Supply. This category includes irrigation of golf courses and large landscapes, such as cemeteries, parks, and playgrounds, that obtain water directly from ground and surface sources, rather than from a public supply system. The estimate of water conservation potential for this use will be derived from the Conserve Florida residential outdoor water use module with the use of participation rates derived from SWFWMD studies of actual projects, as used in the SWFWMD Regional Water Supply Plan.

Electrical Power Generation Self-Supply. The estimate of conservation potential for Electrical Power Generation will be included in the Commercial/Industrial/Institutional Self-Supply estimate.

¹ For more information about the Conserve Florida EZ Guide tool for public supply water conservation planning, go to conservefloridawater.org.