

# CFWI Data Hub

The Central Florida Water Initiative (CFWI) has determined water conservation by all water use categories will continue to be a priority to meet the region's future water needs. While significant conservation efforts have been implemented in the CFWI Planning Area, additional conservation is critical. During the Solutions Strategies phase, potential water savings through the implementation of public supply and agricultural best management practices was further evaluated; the water savings estimate was revised to meet or exceed 37 mgd in order to reflect current levels of agricultural conservation. Of this, approximately 76 percent could be conserved by public supply utilities, 12 percent by other self-supplied users, and 12 percent by agricultural operations. Additional savings could be possible through higher participation rates of best management practices or the implementation of other conservation measures. The CFWI has identified several steps that can be taken in order to achieve this goal. These include:

- Assessing current Best Management Practices (BMPs)
- Identify and/or create effective conservation programs
- Identify target areas with the greatest potential for savings

Historically, there has been a reference source of scientifically based BMPs that provided guidelines useful for developing conservation programs and their associated savings estimates. In recent years many utilities, municipalities and other government offices have implemented programs based on these estimates. In order to understand which programs provide the greatest impact, it is necessary to assess each of these programs for their costs and reduction results and to share this information among all members. This step will provide solid information based on actual activities (actual consumption, actual costs, actual labor, etc.) so that conservation goals in the coming years can be achieved in the most effective way possible.

The Program for Resource Efficient Communities (PREC) has long been a supporter of both water and energy conservation efforts. PREC works with municipalities, utilities, developers, government offices and others to assess, design, implement, and evaluate resource consumption and conservation activities. Our projects include working with developers to re-design developments that result in reduced consumption of resources, providing visibility of consumption activities in communities in a way that allows utilities and municipalities to identify high resource users ideal for conservation programs, and measurement and verification of implemented programs.

## Solution

PREC proposes to support the CFWI's goal of improving the effectiveness of water conservation programs by developing and managing an interactive data hub that will allow dynamic evaluation of the program impacts. Enhanced water conservation will be assisted through information sharing, benchmarking and process improvement. The data hub will help users create conservation programs based on resources such as the CFWI Regional Water Supply Plan, Conserve Florida Water Clearinghouse EZ Guide, other technical references, previous programs and custom variables specific to their territory.

The tools in the data hub will help inform development decisions by local governments in the CFWI area. By estimating future water use for development, water savings strategies could be incorporated in the

design phase. Information on previous programs coupled with the tools will also help identify consumption reduction programs that may be implemented in existing areas. Tools in the data hub will be empowered with theoretical community characteristics based on previous work done by the PREC.

These framework and tools will be incorporated into the My Florida Home Energy platform to create a new 'My Florida Water Programs' (or similar) platform to provide users with a suite of water saving strategies that can provide ongoing information from estimate to completion.

## Hub

The CFWI data hub will be an online portal that houses an inventory of data from past and current water conservation programs including location, number of participants, cost, estimated savings and any other relevant metrics. Data collected from water management districts and individual utilities will create a robust catalog of conservation measures that have been implemented across the CFWI area.

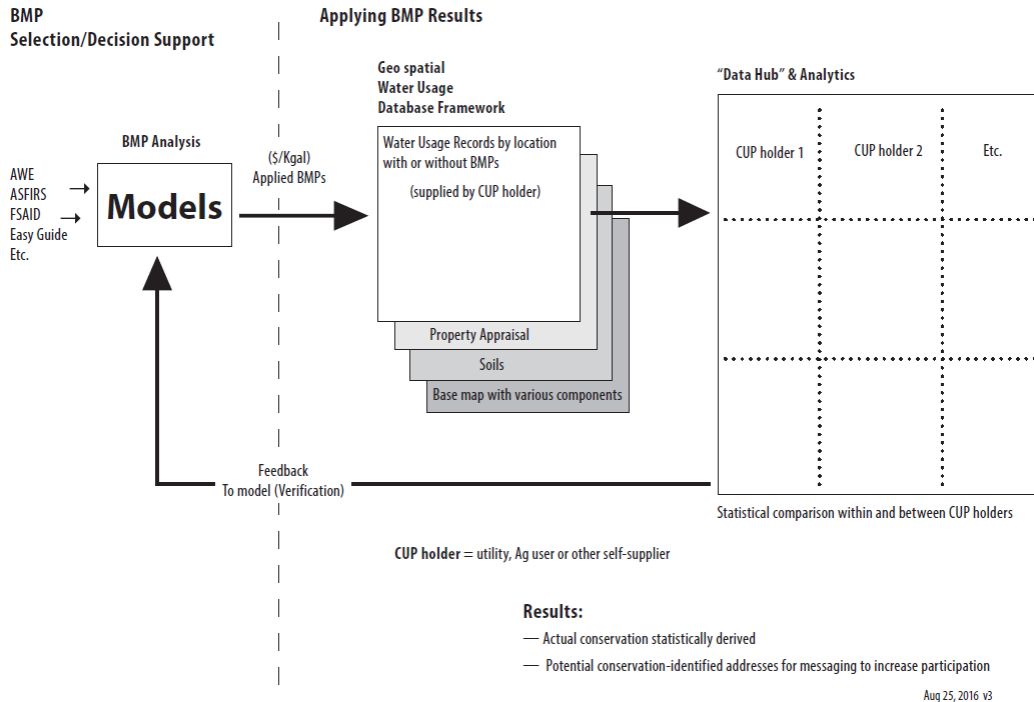
Conservation program metrics can be represented geographically, summarized, or tabulated by region, end use sector, program or conservation measure. Summaries, listing and reports for each conservation program can be generated on demand. Finally, participating groups can update their own data and set access permissions using the administrative portal.

## Iterative Improvement

The CFWI Data Hub will be designed to incorporate the best available data in an ongoing and iterative process. We will:

- Identify conservation programs that are likely to result in the greatest savings for each utility.
- Inventory past and current conservation programs
- Measure savings from past programs
- Target utility customers that are likely to achieve the greatest saving
- Share results, best management practices, and lessons learned between utilities

# Water Conservation Clearinghouse (proposed)



## Components

### Identify

Water conservation programs and estimate formulas, based on those referenced in the CFWI Regional Water Supply Plan will be used to write programming language for customizable estimates for conservation programs estimates. At present, the CFWI Regional Water Supply Plan has identified twelve BMPs that it uses for indoor and outdoor public water supply estimates. These models are based on the EZ Guide Tool and the FAWCET (SJRWMD Water Conservation Method). These twelve BMPs will form the basis of the data hub and will be reviewed periodically for potential adjustments.

### Inventory

Data can be collected from water management district grant programs and from individual utilities to create a robust listing of conservation measures implemented across the CFWI area. Experience and resources gained in development of the My Florida Energy Projects website for the Florida Department of Agriculture and Consumer services will provide a framework for data collection for the CFWI Data Hub.

## Measure

PREC's experience and analytical techniques for measurement and verification of utility conservation programs can reliably track water savings over time. The data collected from water management district programs and individual utilities can be paired with other data that incorporate unique property characteristics. These data can then be used in a variety of analytical applications that may identify sources of potential conservation and/or verification of achieved conservation. These savings can be expressed in both dollars and consumption units which can motivate consumers to pursue savings and also provide measured results for utilities and/or local governments when pursuing additional conservation programs.

## Target

In addition to measurement and verification of water savings, PREC can help utilities target customers and programs which are likely to achieve the greatest savings. Customers identified as having conservation potential can be selected for a variety of communication mediums (email, post cards, face-to-face programs, etc.) to encourage their participation in conservation programs. Additionally, programs which have proven effective for conservation can be sustained while programs not proven effective can be modified or considered for elimination. Customer and program targeting can significantly increase water savings and improve cost-benefit ratios for both the utility and program participants.

## Share

The CFWI Data Hub will ultimately allow utilities to share conservation results, best management practices and lessons learned from conservation programs. Utilities would be able to share program details, including labor and fiscal investments. This could be represented with the resulting savings and an 'ROI' so that utilities, municipalities, and water management districts could readily identify effective programs and recreate them in their own territory. Interaction between utilities is a key component for helping CFWI to reach its combined water savings goals.

## Tasks

Task 1: Build 'My Central Florida Water Initiative Conservation Projects' website platform based on the 'My Florida Energy Projects' website. The site will be a central data hub that shares water conservation project estimates, actuals, and program details in a database format that provides search, sort, and reporting capabilities. Users (utility providers, municipalities, water management districts) will be able to add water conservation projects to the database directly either through a direct add or by entering project specific variables into formulas for the twelve base BMPs. Users would then be able to enter yearly actual consumption values and create a variety of reports that calculate savings (in dollars and units). Users will also be able to select projects from all projects in the CFWI data hub and compare details, savings, investments, and ROI values. Users who enter information in the database will be able to choose which information is displayed to other users.

Task 2: Perform additional Measurement and Verification (M&V) projects. Additional M&V projects are essential to improving the way conservation projects are estimated. As the Program for Resource Efficient Communities (PREC) continues to complete M&V projects, the findings can be used to improve the way conservation estimates are calculated. M&V projects are completed at the request of utilities, municipalities, and/or water management districts through separate project proposals.

Task 3: Develop Mapping and Targeting functions. PREC will integrate our geo-visualization tool into the 'My Florida Water Projects' site to enable users to visually identify high water users, understand their consumption characteristics, and develop communication programs that encourage them to pursue conservation measures.

Task 4: Update BMP assumptions from Conserve Florida Water Clearinghouse EZ Guide or other relevant modeling program (s). This task addresses updating the previously published BMPs. During the fifth year of the project, all findings to date can be summarized and used to update, write new, and delete no longer relevant BMPs for water conservation programs available to utility providers, municipalities, and water management districts.

Project Timeline

Year	1	2	3	4	5
Task 1					
Task 2					
Task 3					
Task 4					

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