CONSERVE FLORIDA WATER CLEARINGHOUSE
2014 FINAL REPORT

Prepared by:
Kristen Riley, Randy Switt,
James Heaney and Miguel Morales

June 30, 2014
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TASK 1: Project Management Oversight

Sub-Activity 1.1: Reporting

Deliverables:
1. Monthly Reports
2. Final Report

Actions to Complete Deliverables:
Monthly Reports were submitted to the FDEP within 10 days of the end of each month. These short summary reports included task specific data describing progress against the schedule, and changes in staffing or other items of potential concern. The Final Report was submitted to FDEP on June 30, 2014. This report includes a summary of all tasks completed under the contract, including final data needed to assess compliance with task-specific instructions.

Sub-Activity 1.2: Website Hosting

Deliverables:
1. Continuous access to the ConserveFloridaWater.org website
2. Final Report input

Actions to Complete Deliverables:
The Clearinghouse website has been maintained in a continuous and operational mode (24/7) for the purpose of providing access to the EZ Guide, and as a means for EZ Guide users to communicate with staff and receive assistance. During this contract period no system lapses were reported.

The main website (www.conservefloridawater.org) content has been continuously analyzed by Google Analytics for the past year. Google Analytics tracks a myriad of web traffic characteristics that can be of interest to web site managers and content creators. The characteristics that are most applicable to the Conserve Florida Water Clearinghouse are summarized and included in the statistical pages below. These include audience overview, visits by location (geographical), traffic sources and referring sites, pages most viewed, and behavior flow.
Audience Overview

Jul 1, 2013 - Jun 20, 2014

Overview

- Sessions
  - October 2013
  - November 2013
  - December 2013
  - January 2014
  - February 2014
  - March 2014
  - April 2014

- Users
  - October 2013
  - November 2013
  - December 2013
  - January 2014
  - February 2014
  - March 2014
  - April 2014

- Pageviews
  - October 2013
  - November 2013
  - December 2013
  - January 2014
  - February 2014
  - March 2014
  - April 2014

- Pages / Session
  - October 2013
  - November 2013
  - December 2013
  - January 2014
  - February 2014
  - March 2014
  - April 2014

- Avg. Session Duration
  - October 2013
  - November 2013
  - December 2013
  - January 2014
  - February 2014
  - March 2014
  - April 2014

- Bounce Rate
  - October 2013
  - November 2013
  - December 2013
  - January 2014
  - February 2014
  - March 2014
  - April 2014

- % New Sessions
  - October 2013
  - November 2013
  - December 2013
  - January 2014
  - February 2014
  - March 2014
  - April 2014
### Pages

**Explorer**

#### Pageviews

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<td>Unique Pageviews</td>
<td>Avg. Time on Page</td>
<td>Entrances</td>
<td>Bounce Rate</td>
<td>% Exit</td>
<td>Page Value</td>
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<td>1,192</td>
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<td>969 (60.24%)</td>
<td>56.52%</td>
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<td>(0.00%)</td>
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<td></td>
<td></td>
<td>(0.00%)</td>
</tr>
<tr>
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<tr>
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</tr>
</tbody>
</table>
TASK 2: EZ Guide

**Sub-Activity 2.1: Maintenance and Functionality**

**Deliverables:**
1. Continuous software programming expertise addressing bugs and errors to keep the EZ Guide functional
2. Final Report input

**Actions to Complete Deliverables:**
The EZ Guide was maintained, operational, and available during the entire contract period. As the interest in the EZ Guide expanded and gained users, additional bugs/errors were identified. These were captured in the Mantis software tracking program found in Appendix 2, and are categorized under “Business Logic”. Fifty-five of these items were closed, and 10 remain open.

**Sub-Activity 2.2: User Manual**

**Deliverables:**
1. Updated User Manual incorporating all new modules and features
2. Final Report input

**Actions to Complete Deliverables:**
The User Manual has been updated to include the new projections module and features completed and implemented over the past year. A complete copy of the User Manual is provided in Appendix 1.

**Sub-Activity 2.3: Priority Software Modification Tracking**

**Deliverables:**
1. Updated Mantis software tracking program showing status of work completed and in the queue to be worked
2. Final Report input

**Actions to Complete Deliverables:**
The Mantis software tracking program has been used exclusively to document software changes to the EZ Guide. This includes the addition of new capabilities, enhancements, correction of errors, etc. This program tracks not only those items completed, but also those yet to be worked. A total of 115 issues were included on the tacking list, with 65 of them closed and 50 still open.

A summary table that shows those issues addressed and completed during this contract period is provided in Appendix 2. A more detailed description of the issues is provided in Appendix 3.

**Sub-Activity 2.4: Programming Updates**

**Deliverables:**
1. Complete high priority programming items on the Mantis list.
2. Final Report input

**Actions to Complete Deliverables:**
Items designated as higher priority were aggressively pursued towards completion. The results include the following enhancements:
- Addition of Introduction pages for each module
- Addition of Projections module, and reconfiguration to include estimation of projected water use (versus direct entry of projected water use)
- Addition of ability to download comma-delimited data files for each BMP
- Added a calibration parameter for occupancy in the Water Budget module
- Added charts showing total and per-capita water use with and without conservation program into Planning module

Detailed descriptions of these items can be found in Appendix 3.

**Sub-Activity 2.5:** Data Query Services and Associated Databases

**Deliverables:**
1. Expand tools to provide access to data incorporated into the web service
2. Summation of databases being updated and utilized to support the Data Query Service and EZ Guide
3. Final Report input

**Actions to Complete Deliverables (Data Query Services):**
Access to the datasets developed and maintained by the Clearinghouse has been provided through several web based data services. A web service is a set of application programming interfaces (APIs) that are accessed using the hypertext transport protocol (HTTP). This allows direct access to functions over the Internet by programs and applications, not just web browsers. The Clearinghouse used these data services to provide direct user access (see HTML interface below), as well as programmatic access to the EZ Guide Online application.

**HTML query interface.** Web (HTML) pages were created that implemented user friendly direct access to the web services. These pages allowed usage of the Clearinghouse web services without the need to develop additional programs or interfaces. It was not necessary to use these pages to access the web services, but the Clearinghouse believed that, other than the EZ Guide, they would be the primary means of access by most users.

**Direct web service access**
Users and developers have direct access to the Clearinghouse web services that are designed to operate as an http accessible program function or subroutine via an established set of Application Programming Interfaces (APIs). Typically the service requests and responses are sent in XML (eXtensible Markup Language) format, which allows for easy development, as XML libraries are available for most modern software languages.

Using the web service directly allowed an end user to build their own robust application or interface around an internet data source. As an example, the Clearinghouse adapted the EZ Guide to obtain the underlying pre-populated data directly through the web services, rather than by manually querying and importing the information.

Web services allow data and functions to be utilized in ways not necessarily originally envisioned or implemented by the data provider. This is especially valuable for datasets with wide-ranging and diverse uses.

**HTTP (Web) query page**
People interested in using data from the Clearinghouse web services were usually not software developers. Therefore, for direct data querying and access, the Clearinghouse developed several web pages that could be used for manual access to the web services. These web pages were available at http://dataquery.conservefloridawater.org. While the queries available on these pages were not as flexible as using the web services directly, they provided the queries that the Clearinghouse envisioned as the most useful and popular. The interfaces provided the ability to query on the following parameters:
- DOR Parcel Data
  - County, City, Zip Code, DOR Land Use Code, Census Block, Sector
- Basic Facility Reports
  - County, City, Zip Code, Mailing Name, PWSID, Utility Type
- Monthly Operational Reports
  - PWSID

Examples of these query interfaces, as well as a sample download, are shown below.
As implemented, these pages allowed users to query the datasets, view a limited number of records on the pages as a preview, and download the results to their local system as a comma delimited text file (easily opened in Microsoft Excel® or other spreadsheet application).
Actions to Complete Deliverables (Associated Databases):
The following three main datasets were accessible through the Clearinghouse web services, each of which had an associated web service. The Clearinghouse data workflow for preparing and making available these datasets is illustrated in the figure below.

Web Service Data Preparation Work Flow
Florida Parcel Attributes. This dataset is largely derived from the latest processed FDOR Property Dataset, which contains numerous attributes pertaining to Florida parcel properties, such as DOR land use code, effective square footage, year built, and many more. Only those attributes that pertained to water usage were included. Several additional attributes were added or associated by the Clearinghouse, including People Per Residence (from 2010 US Census data), and Parcel Size (calculated by the Clearinghouse from FDOR GIS shapefiles). The Clearinghouse also used FGDL as a data source for the Parcel Attribute dataset, which relieved us of the need for some of the QA/QC process that we formerly had to accomplish. However, significant processing was still required, and the dataset was still imported and hosted on our own database servers.

Utility Basic Facility Reports. This dataset is derived from the Basic Facility Report spreadsheet maintained by FDEP. It contains information on potable water systems, including address, number of plants, plant capacity, water source, and others. The data is indexed by the Public Water System ID (PWSID) number, which is not always relatable to an actual utility. While utilities have merged and changed names over time, the BFR records have not been updated reliably to reflect these changes. The best data source for relating a PWSID to an actual utility are the utilities themselves. As the Clearinghouse was able to relate PWSIDs to utilities in the course of preparing EZ Guide applications, these relationships were available through the web service.

Monthly Operational Reports (MORs). This dataset is derived from a combination of the annual potable water system monthly operational report spreadsheets maintained by FDEP since 1999. To allow for extended time series analysis, the Clearinghouse combined all individual years of MORs available into a single dataset. The web service provided access to this data by PWSID, and could return data associated with multiple PWSIDs at one time.

TASK 3: Data Infrastructure

Sub-Activity 3.1: Spatial Databases

Deliverable:
Final Report input: Summation of spatial databases being developed and utilized to support the EZ Guide

Actions to Complete Deliverable:
The Clearinghouse used multiple spatial database resources to develop and refine BMP methodology, as well as to support EZ Guide preparation. Routine EZ Guide preparation required four main data sources:
- Florida Parcel attributes and boundaries
- Potable water supply basic facility reports (BFR)
- Potable water supply monthly operational reports (MOR)
- US Census population data and Census Block boundaries for the State of Florida

Parcel boundaries and Census block boundaries are spatial databases that are used in conjunction with the other data sources to produce datasets that the EZ Guide uses to estimate utility water use. The BFR and MOR datasets are non-spatial datasets that are used to develop water production estimates. A description of the additional data sources is shown in the table below.
Spatial Databases

<table>
<thead>
<tr>
<th>Name</th>
<th>Date Obtained</th>
<th>Source</th>
<th>Description</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>FGDL DOR Shape Files</td>
<td>May-13</td>
<td>Florida Geographic Data Library</td>
<td>An ArcGIS shape file with associated data that includes the annually updated parcel attributes collected and provided by the Florida Department of Revenue. FGDL has improved the FDOR data by combining the spatial and tabular information, identifying missing parcels, and adding additional attributes for census blocks.</td>
<td>This dataset is the primary parcel attribute data source for the EZ Guide (all versions), as well as Clearinghouse parcel study and development.</td>
</tr>
</tbody>
</table>

Sub-Activity 3.2: Relational Databases

Deliverable:
Final Report input: Summation of relational databases being developed and utilized to support EZ Guide

Actions to Complete Deliverable:
Relational databases (non-spatial) were developed and utilized to support EZ Guide directly and indirectly. These databases included billing and other water use datasets used to develop water use coefficients and other water conservation methodology support. The additional data sources are described in the table below.

Relational Databases

<table>
<thead>
<tr>
<th>Name</th>
<th>Date Obtained</th>
<th>Source</th>
<th>Description</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>FGDL DOR Parcel Attributes</td>
<td>May-12</td>
<td>FGDL</td>
<td>2009 FDOR Parcel attributes as processed by the Florida Geographic Data Library. FGDL has combined the FDOR data with Census data, and added several attributes developed in-house.</td>
<td>The Parcel attributes are used as one of the primary data sources for EZ Guide data analysis and water use estimation. It is also used extensively in BMP methodology development.</td>
</tr>
</tbody>
</table>

TASK 4: Technical Assistance

Sub-Activity 4.1: Help Desk

Deliverables:
1. Quarterly Report input, documentation of assistance provided.
2. Final Report input
Activities to Complete Deliverables:
Help desk support consisted of real-time telephone or email interaction with users to create accounts, resolve EZ Guide and other web-based service access issues, answer questions, and other short-term assistance in preparing goal-based water conservation plans. A summary table that combines assistance provided through the Help Desk and individual assistance for utilities is provided in Appendix 4.

Sub-Activity 4.2: Individual and Group Assistance

Deliverables:
1. Quarterly Report input, documentation of assistance provided to utilities, and number of pre-populated EZ Guides provided to utilities and Water Management Districts.
2. Final Report input

Activities to Complete Deliverables:
Individual and group assistance consisted of in-person, telephonic or other means of helping a member or members of the target client audience prepare a goal-based plan using the EZ Guide with utility-specific data. This included interpretation of EZ Guide output, calibration of initial results, and modification of results to create or evaluate a utility-specific goal-based water conservation program. A summary table that combines assistance provided through the Help Desk and individual assistance for utilities is provided in Appendix 4. The tables below display the EZ Guide utility definitions and profiles created over the past year. Please note the detailed utility profiles are not a deliverable due to privacy concerns.

In-depth group assistance was provided to the Withlacoochee Regional Water Supply Authority. The Clearinghouse staff assisted the authority and its consultant, Cardno, Inc. in using the EZ Guide model to assess the potential for utilities in the four-county region to save water through conservation best management practices. To help the authority better understand the EZ Guide, group assistance/training was provided through an on-site workshop. The Clearinghouse also provided an analysis that described how the conservation component of their Regional Water Supply Plan could be extrapolated from a preselected number (12) of utilities to an additional 36 utilities in the four county study area to obtain a reasonable estimate for overall conservation.

74 Utility Definitions (Service Area Boundary, PWSID(s), etc.) Created From 7/1/13 to 6/30/14

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<tr>
<th>Utility Name</th>
<th>Requested By</th>
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<td>CITY OF PLANT CITY</td>
<td><a href="mailto:mwoodward@plantcitygov.com">mwoodward@plantcitygov.com</a></td>
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<tr>
<td>Live Oak</td>
<td><a href="mailto:miguel22@ufl.edu">miguel22@ufl.edu</a></td>
<td>7/5/2013</td>
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<tr>
<td>City of Alachua</td>
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</tr>
<tr>
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<td>7/5/2013</td>
</tr>
<tr>
<td>Town of Archer</td>
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<td>7/5/2013</td>
</tr>
<tr>
<td>LAKE BUTLER WTP</td>
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<tr>
<td>STARKE CITY OF</td>
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<td>8/14/2013</td>
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MARY ESTHER TOWN OF  kick5@ufl.edu  5/13/2014
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NICEVILLE CITY OF  kick5@ufl.edu  5/13/2014
VALPARAISO CITY OF  kick5@ufl.edu  5/13/2014
ARGYLE WATER SYSTEM INC.  kick5@ufl.edu  5/13/2014
DEFUNIAK SPRINGS W/S CITY OF  kick5@ufl.edu  5/13/2014
FCSC of Walton Co./ regional utilities  kick5@ufl.edu  5/13/2014
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108 Profiles Created From 7/1/13 to 6/19/14

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**Total**: 108

CONSERVE FLORIDA CLEARINGHOUSE

Version 2.2.0.8

Randal S. Switt, James P. Heaney, Kenneth R. Friedman, Miguel A. Morales, Scott L. Knight
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1 Introduction

EZ Guide Online is the latest version of a water conservation tool intended for use by potable water utilities in the state of Florida. The purpose of EZ Guide Online is to identify the most cost efficient water conservation practices available to a water utility by estimating and analyzing its current water use on a parcel by parcel basis. Further information and background can be found at http://www.conservefloridawater.org.

This user’s guide is intended to serve as a step-by-step walkthrough of the operation of the EZ Guide Online. It does not describe the analytical methods and data sets used in the EZ Guide operation.

Questions regarding the EZ Guide Online should be directed to the Conserve Florida Clearinghouse, which can be contacted at support@conservefloridawater.org or 1-866-640-9732.
2 Prerequisites
To create a conservation profile in the EZ Guide Online, two prerequisites must be met: informational requirements and technical requirements. All prerequisites have been kept as simple as possible, and should be readily obtainable by any eligible utility.

2.1 Informational Requirements
EZ Guide operation requires a minimum of 2 pieces of information to be provided by the user.

1. The Utility’s current service area boundary. This is best defined in a GIS shapefile, although the Clearinghouse will work with other accurate definitions whenever possible. PDFs and other image formats (jpegs, tiffs, etc.) are not encouraged as they do not have georeferencing data, and are difficult to use to define coverage areas accurately at the parcel scale.

2. The Potable Water System IDs (PWSID) that are used by the utility to report their water production to the Florida Department of Environmental Protection (FDEP).

This information only needs to be provided once; subsequent profiles will reuse the utility data. If previously provided information becomes out of date, updated information can be provided and used to update profiles already created. The walkthrough will indicate where the above information can be provided to the Clearinghouse.

Familiarity with other aspects of the utility’s water use is highly recommended, as this will greatly help in refining the EZ Guide Online’s water use breakdown analysis. Things helpful to be familiar with include:

- Issued water permits
- Utility monthly water production
- Utility imported and exported treated water
- Results of recent utility water audits
- Outdoor irrigation characteristics (prevalence of automatic sprinkler use, prevalence of private irrigation wells)
- Commercial, Industrial, and Institutional (CII) account distribution and account numbers
- Utility projected population and water use growth

2.2 Technical Requirements
The EZ Guide Online is an online web application and requires easily obtainable computer resources.

- A computer with available Internet connection
- Active e-mail account that will accept mail from support@conservefloridawater.org (for account registration)
- A recent version web browser*

* Internet Explorer 8 and Firefox versions 3 and later have been confirmed to work. Other browsers will likely work fine as well, but have not been specifically tested.

A spreadsheet and word processing program may be useful as well for viewing detailed data and reports when available, but they are not required.
3 EZ Guide Online Universal Features

Certain features and usability aids are available throughout the EZ Guide.

- Tool tips containing definitions and explanations are available in many locations within the EZ Guide and can be viewed by holding the pointer over a term of interest for approximately 1 second.
- Sections of the EZ Guide that have been viewed and completed will be indicated by a green checkmark next to the menu item in the left navigation menu.
- Each EZ Guide Online section includes an initial “Introduction” page which briefly describes the purpose(s) of that section.
- EZ Guide Online sections cannot be completed until the previous sections are completed first. The EZ Guide will present a warning if sections are attempted out of order. Once completed, any previous section can be re-visited at any time.
- When returning to a profile in the EZ Guide Online, it will return the user to the last page edited to help the user keep track of where they were working. This position is saved once per profile, so different users will be returned to the same location.
- EZ Guide default data that is overwritten by a user is stored and can be displayed or restored at any time. Source information is indicated along with the data values.
- Some EZ Guide pages are designated as “Detail” pages and display detailed data used in the EZ Guide analysis. These pages are considered optional to typical EZ Guide use, and will only be covered in a general manner in the user’s guide.

It should also be noted, that throughout the EZ Guide Online are references to Conservation Best Management Practices (BMPs) and Measures. The Clearinghouse has defined BMPs to be conservation practices that can be analyzed for quantifiable water savings. Measures are conservation practices that are currently unquantified. Some practices that are currently classified as measures may become quantifiable and reclassified as BMPs as further analytical methods are developed.
4 EZ Guide Online Walkthrough
The EZ Guide Online is located at http://ezguide.conservefloridawater.org. The EZ Guide may be accessed at that site directly.

4.1 Creating a User Account
The first step to accessing the EZ Guide Online is to create a new user account. This is accomplished by clicking the “Register” link on the Logon screen, which is presented automatically when first accessing the website.

![Log On](image)

Figure 1- Logon screen
You are then presented with a “Create a new account screen”.

![Create a New Account](image)

Figure 2 - Creating a new user account
Fill out the requested information, and click the register button. You will then receive an e-mail to the address you provided in the account information. The e-mail will contain a confirmation link. Following that link will take you to a new web page where you will be presented with a message that your account was confirmed and is now active.

Once you have confirmed and activated your account, you can return to the log on screen and use your account e-mail address and password to log on to the EZ Guide Online. Optionally, you may select to have the EZ Guide Online remember your e-mail address so you will not need to re-enter it in the future.
The EZ Guide will only remember the username for the particular user, computer, and web browser currently being used at that time.

Your user account can be edited at any time by selecting the “Your Account” link in the upper right corner of the browser window. If you forget your password, the “Forgot your password?” link will initiate a process to reset it (you will need to utilize the EZ Guide account’s associated e-mail account to complete the password reset).

When activating an account or resetting a password, it is possible that the e-mail generated by the EZ Guide is incorrectly identified as spam or junk mail. If you are expecting an e-mail from the EZ Guide and have not received it after a short period of time, check your e-mail account’s junk mail folder. If it is not located there, contact Clearinghouse support.

4.2 Choosing a Profile

Once logged in, the EZ Guide will present you with choices to “Start a new profile”, “Edit or view an existing profile”, or “Manage utility information.”

4.2.1 Creating a New Profile

If you have not previously created a profile, there will be no available profiles if you select the “Continue with profile” option. Selecting the “Start profile” option will take you to the “Profile” EZ Guide module.

4.2.2 Choosing an Existing Profile

If you have previously created profiles, choosing the “Continue with profile” option will take you to a page listing all of the profiles you have created or have “edit” or “view” permissions.
Selecting “Continue” will take you to the last edited page in that profile. The “Export” option is not yet implemented, but will allow you to export the profile data for offline backup. You may also delete a profile of which you are identified as an “Owner” (see section 4.4.2 for description of permissions).

4.2.3 Managing Utility Information
Choosing the “Manage your utility information” option will take you to the “Utility Definition” EZ Guide module. This module is where you can view, edit, or create Utility definitions.
4.3 Utility Definition Module

The utility definition module allows you to create, view and edit utility definitions. Utility definitions include information concerning the utility contacts, address, service area boundary and PWSIDs associated with the utility. At least one utility definition is required when completing an EZ Guide profile. Once a utility has been defined and approved, it can be used in multiple profiles.

Only one utility definition may exist for any given utility. If the utility definition information is incorrect or out of date, the existing definition should be corrected and/or updated.

When arriving at the utility definition module (by choosing the “Managing Utility Information” button), you will be presented with a list of Utilities to which you have “Owner”, “Edit” or “View” permissions (the definition of those permissions will be discussed later), and a link to “Define New Utility.” For the listed utilities, you can either “Edit” the definition, or manage utility permissions via the “Manage Permissions” links.

4.3.1 Defining a New Utility

If the utility you are looking for is not in the EZ Guide Online database, then you will need to click the “Define New Utility” link. This will initiate a several page process to collect the information the Clearinghouse needs to prepare a new utility for EZ Guide analysis. The first page collects general characteristics and contact information about the utility which should be readily available to anyone working for, or on behalf of, the utility.

![Figure 5 - Defining a new utility definition](image)

After continuing, you will be presented with a page to enter the utility’s associated PWSIDs.
Figure 6 - Associating utility PWSIDs

At least one PWSID is required, but as many as needed may be entered.

Figure 7 - Entering a PWSID

The PWSID numbers must exist within the EZ Guide database, and you will be informed if it cannot be found. Once you have added all the applicable PWSIDs, clicking “continue” will take you to the next page.

The next page is where you will upload a compressed file (in zip format) containing one or more files that the Clearinghouse can use to define the utility’s service area boundary. As discussed at the beginning of this user guide, it is best if these files define a GIS shapefile.

Figure 8 - Uploading a utility service area boundary

Once this file is uploaded, the Utility definition information is forwarded to the Clearinghouse and Clearinghouse staff is notified. If the utility information is complete and consistent, then the Clearinghouse should be able to prepare and have the utility definition available for use in the EZ Guide Online within 24-48 hours depending on any utility processing backlog. If Clearinghouse staff encounters any inconsistencies or errors, they will contact you directly through the contact points identified in your user profile, initially by e-mail and then by phone if deemed necessary and
appropriate. Once the utility definition has been completed by the Clearinghouse, you will receive an e-mail notification.

After receiving the completion notification, you can return to the EZ Guide Online, and use the utility definition in an EZ Guide Profile.

4.3.2 Editing Utility Definitions
Once the utility definition has been completed by the Clearinghouse, you will see it listed on the “Managing utility information” page. Selecting the “Edit” link adjacent to the utility name, you will be taken through a series of pages nearly identical to the utility definition pages. On these pages you can edit and update any utility information that may be incorrect or out of date, including the utility service area boundary. Changes will be submitted to the Clearinghouse for consistency checking and updating as appropriate.

4.3.3 Manage Utility Permissions
Due to privacy concerns, utility definitions are only accessible to EZ Guide users that have been granted permission to use them. Three permission levels are granted to users of utility definitions:

- Owner
- Edit
- View

“Owner” permissions are granted by default to the original requestor of the utility definition.

Users with “Owner” permission may:

- Use the utility definition in EZ Guide profiles
- Submit changes to the utility definition (see “Editing Utility Definitions” above)
- Modify permission levels for other EZ Guide users

Users with “Edit” permissions may:

- Use the utility definition in EZ Guide profiles
- Submit changes to the utility definition (see “Editing Utility Definitions” above)

Users with “View” permissions may:

- Use the utility definition in EZ Guide profiles

Users with “Owner” permissions may edit the utility permissions by selecting the “Manage Permissions” link adjacent to the utility name. Permission levels are easily modified by using the “Edit” link adjacent to the user’s name on the utility permissions page.
Users may have all permissions revoked by using the “Remove” link. New users may be added by using the “Add Permission” link at the bottom. This opens a form where EZ Guide users can be searched and assigned the appropriate permission level.

Only existing EZ Guide users may be assigned permissions. If you would like to assign permissions to a person who does not yet have a user account, direct them to first create an EZ Guide user account.

**4.3.4 Requesting Permission to Use a Utility Definition**

EZ Guide users may request permission to use a utility definition in an EZ Guide profile. This is done from the “Profile” module (discussed later). Users with “Owner” permissions to the requested utility definition will receive an e-mail when permission is requested, which will include a link and sufficient information to grant the requesting user permission if the “Owner” deems the request appropriate.
4.4 Profile Module
The profile module defines the general characteristics of the profile, including what utility(ies) will be analyzed, permission levels, and any associated water use permits.

4.4.1 Introduction to Profiles
The purpose of the Profile Module is briefly described on this page.

4.4.2 Profile Page
The profile page in the profile module is where you define a profile name and associate what utility(s) the profile will be analyzing.

![Profile page](image)

Figure 11 - Profile page
The profile name can be any name of your choosing. The Clearinghouse suggests that it be something unique and descriptive that includes the name of the Utility(ies) or area being analyzed for later identification.

4.4.2.1 Adding a Utility
To add a utility for analysis, click the “Add Utility” link, which takes you to a search page.

![Adding a utility to a profile](image)

Figure 12 - Adding a utility to a profile
The “Utility Name” search field will immediately search all previously defined utilities in the EZ Guide Online database to which you have at least “View” permissions once two or more characters are entered. Matching entries are displayed in a drop down list, and once a desired utility is displayed it can be selected by clicking on it.

If a utility you are planning to analyze is not available in the dropdown list, you may click the “Available Utilities” link to view all the utilities defined within the EZ Guide online to which you do not have permissions. From this list you may request permission to use a utility definition within your profile. Your request will automatically be sent to the EZ Guide users who have the ability to add the requested permission. You will be notified if and when the Utility “Owner” grants the requested permission. Response time will depend upon the associated EZ Guide user.

At least one utility must be associated with a profile. More than one utility may be analyzed together, but there is a limit of 400,000 parcels that may be analyzed in a single profile. This limit is set to ensure reasonable performance of the EZ Guide tool. The “Define New Utility” link will take you to the new utility definition portion of the “Utility Definition Module” described previously. You should use this link if your utility has not been previously defined.

When available, each utility will have a “View Map” option in its row, which will open an additional web browser tab and display the utility’s service area boundary superimposed on a Google Maps© adjustable map view.

4.4.3 Manage Permissions
This page displays the users who have access to the current profile, and allows profile owners to alter those users’ access rights.

Only the profile owner can change profile access levels. Three types of permissions are available.

- **Owner** – can view and edit profile and alter user permissions
- **Edit** – can view and edit profile data except for user permissions
- **View** – can view but not edit profile data

Users not listed have no access to the profile. Owners can add and remove users and give them “Edit” or “View” permissions, but only EZ Guide administrators can change owner rights. If you would like to transfer owner rights, please contact Clearinghouse staff at the contact link at the bottom of the page.

Clicking the “Add Permission” button presents a search box.
After two or more characters are entered in the search box, the EZ Guide user database will automatically be searched and display the user’s names in a dropdown list. Clicking on the user account in the dropdown list will select it.

Only people who have created user accounts in the EZ Guide Online system can be granted profile level permissions. If you would like to have a person without a user account view or edit a profile, you should contact that person and request that they create their own user account first.

Once permissions have been set as desired, you can “continue” to the next page.

4.4.4 Permits
This page allows you to define the water use permits associated with the utility(ies) in the profile.

Permit information is not currently utilized in EZ Guide analysis, and is included for ease of comparison and documentation.

Selecting the “Add Permit” link will present you with a Permit form where all the relevant information can be entered.
The “Permit Website” field can be completed with a link to the appropriate e-permitting documentation at the associated permit agency, if available.

4.4.5 Profile Summary

The next page informs you that the Profile module has been completed. Each EZ Guide Online module includes a summary page that presents a summary of information entered and produced in the module. Each summary page also provides two options for saving or printing it. The “Print Report” option opens the summary page on a separate web browser tab without the EZ Guide Online left or top navigation bars, providing a “printable view” that can be neatly output to a printer. The “Output to Word Document” option will provide a word formatted document (.doc) that contains all the summary page information except for any charts present in the page. This is due to a limitation of dynamic file generation. Where feasible a table of values is provided in place of the chart. Most charts on the summary page are provided with an option to download to your computer, after which they can be pasted into the generated word document if desired.
4.5 Water Supply Analysis Module
The water supply analysis module reviews the historical water production of the profile utility(ies), facilitates correction of any errors in the reported data, identifies a representative year for water use analysis, and provides for identification of imported and/or exported water.

4.5.1 Introduction to Water Supply Analysis
The Introduction page briefly describes and overview and purpose of the Water Supply Analysis Module.

4.5.2 Water Supply Analysis
This page displays the aggregated utility water production data as reported to the Florida Department of Environmental Protections (FDEP) in the monthly operation reports, and directs you to select a calendar year on which to base the EZ Guide’s water budget analysis.

The first chart (Monthly Treated Water) displays the profile monthly water supply over the most recent 10 years available to the EZ Guide.

![Figure 17 - Monthly Treated Water chart](image)

Three things to look for on this chart are:

- Water production levels and trends over time. Are they increasing or decreasing?
- Water production seasonality. Is water production fairly even across all months, or are there repeating peaks during the winter or summer months? Repeating water production peaks can indicate a high percentage of seasonal irrigation use, or a large seasonal population.
- FDEP reporting errors. It is not unusual to find that some months are missing in the FDEP reporting data, or that they were delivered or transcribed incorrectly. Scale errors seem to be common. Such errors can be corrected on a subsequent EZ Guide page. If error corrections have already been entered, they will displayed on this chart as “User Corrected”.

The next table (Summary Monthly Treated Water from Florida DEP) contains the same data as the above chart in table form, but also adds statistical information such as annual average and seasonal water use. The table defaults to displaying only the statistical information, but clicking the “Toggle Months” link at the bottom of the table will display the individual month data as well.
Figure 18 - Summary Monthly Treated Water table

The last page section includes the data entry field for the Water Budget Analysis year.

Figure 19 - Monthly Operational Reports annual comparison chart

This is the year that the water budget analysis uses for its analysis of water end uses. To decide which year to enter for this field, several factors should be considered:

- The analysis year should be as accurate as possible (You will be given a chance to correct values on the next page).
- The analysis year should reflect water use trends, and therefore be as recent as possible.
- The analysis year should be representative of typical water use. Years that are atypical, such as years in which extreme drought or multiple hurricane events significantly affected water use, should be avoided.
The data and information displayed in the table and chart on the page above should assist in determining the best year to choose.

Selecting an analysis year, prior to clicking the “Save Analysis Year” button, will display the selected year’s monthly water use data on the “Monthly Operational Reports” chart as compared to the “average” water use as determined by averaging each month over the 10 years of FDEP data. This display should assist you as well in determining how “representative” a given year is for analysis.

4.5.3 Water Supply Data Review
This page displays the selected analysis year water production data, and allows the user to correct erroneous data reported or entered into the FDEP monthly operation report database.

The table displays the reported data for the analysis year.

<table>
<thead>
<tr>
<th>Month-Year</th>
<th>Millions Of Gallons Per Month</th>
<th>Average Gallons Per Day</th>
<th>Quartile Validity</th>
<th>Data Source</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan-2009</td>
<td>224,359</td>
<td>7,237,386</td>
<td>OK</td>
<td>DEP</td>
<td></td>
</tr>
<tr>
<td>Feb-2009</td>
<td>208,618</td>
<td>7,450,642</td>
<td>OK</td>
<td>DEP</td>
<td></td>
</tr>
<tr>
<td>Mar-2009</td>
<td>235,874</td>
<td>7,608,838</td>
<td>OK</td>
<td>DEP</td>
<td></td>
</tr>
<tr>
<td>Apr-2009</td>
<td>228,063</td>
<td>7,502,099</td>
<td>OK</td>
<td>DEP</td>
<td></td>
</tr>
<tr>
<td>May-2009</td>
<td>231,476</td>
<td>7,466,967</td>
<td>OK</td>
<td>DEP</td>
<td></td>
</tr>
<tr>
<td>Jun-2009</td>
<td>231,750</td>
<td>7,724,999</td>
<td>OK</td>
<td>DEP</td>
<td></td>
</tr>
<tr>
<td>Jul-2009</td>
<td>230,066</td>
<td>7,421,482</td>
<td>OK</td>
<td>DEP</td>
<td></td>
</tr>
<tr>
<td>Aug-2009</td>
<td>229,154</td>
<td>7,392,064</td>
<td>OK</td>
<td>DEP</td>
<td></td>
</tr>
<tr>
<td>Sep-2009</td>
<td>218,327</td>
<td>7,277,566</td>
<td>OK</td>
<td>DEP</td>
<td></td>
</tr>
<tr>
<td>Oct-2009</td>
<td>235,298</td>
<td>7,550,257</td>
<td>OK</td>
<td>DEP</td>
<td></td>
</tr>
<tr>
<td>Nov-2009</td>
<td>211,351</td>
<td>7,045,033</td>
<td>OK</td>
<td>DEP</td>
<td></td>
</tr>
<tr>
<td>Dec-2009</td>
<td>189,934</td>
<td>6,126,902</td>
<td>Highly Suspect</td>
<td>DEP</td>
<td></td>
</tr>
</tbody>
</table>

Figure 20 - DEP Monthly Operation Report Flow Data table

The “Quartile Validity” column rates the likelihood of data error for each month based on its statistical divergence from the rest of the reported data. Possible ratings are “OK”, “Suspect”, and “Highly Suspect”. If, after examination, the data is determined to be in error, you can select the row to be edited, and click the “✏” button in the lower left of the table. A data entry form will be presented where the data can be overridden.
Overridden data is indicated with a notation in the “Data Source” column, and a “Restore” action will become available in the “Action” column. Default values can be viewed after being overridden by clicking the “Toggle Defaults” link at the bottom of the table.

### 4.5.4 FDEP Basic Facility Report

This page displays the latest basic facility report (BFR) data (contained in the EZ Guide database) as reported to FDEP. The EZ Guide utilizes this information as comparison data for calibrating the end use water analysis in the Water Budget module.

The table (Basic Facility Reports) on this page displays the aggregated data from the BFR records of the associated profile utilities; along with the CFWC estimate of Utility accounts, and a preliminary estimate of the profile gross gpcd.

The CFWC estimate of total accounts is based upon the enumerated parcels contained within the utility service area boundary. This is not an exact one-to-one correspondence to the number of “billing” accounts within a utility, as a utility may have multiple accounts within a parcel, as well as other complicating factors. However, the EZ Guide on-line methodology is mostly independent of the number of accounts, and this number is provided mainly to ensure that the correspondence between CFWC total accounts and BFR reported service connections is in the same range. A larger difference may indicate an issue in the service area boundary definition.
The preliminary gpcd is estimated by using the annual water use indicated in the analysis year previously chosen and the served population indicated in the BFR. Other gross gpcd calculations may differ depending on the definition and methodology used. However, the EZ Guide uses the gross gpcd definition and method approved and agreed upon by FDEP. The gpcd calculation also adjusts for any imported or exported water entered into the following page (see 4.5.4), once that page is completed.

BFR values may be edited by selecting the table row and choosing the” link in the lower left. Edited values will update the “Data Source” indicated to “User”. Default values can be viewed by selecting the “Toggle Default” button at the bottom of the table.

The EZ Guide will use the provided BFR data even if the analysis year differs from the BFR report year unless you enter a table row with appropriate year for your analysis year (if different). You may enter a new row of data by choosing the “+” link from the lower left of the table. A form will be provided to enter the BFR information.

![Add Record](image)

Figure 23 - Adding additional basic facility report data

4.5.5 Other Water Supply Data
This page allows you to indicate whether the utility(ies) is importing or exporting any treated water, and to indicate the water production cost of water.

The top table (Treated Water Imports and Exports) displays a row of imported/exported treated water data for each BFR row on the previous page.
Figure 24 - Treated Water Imports and Exports table

Imported and exported values default to zero. If you change the analysis year then the EZ Guide will not automatically delete unused data rows, but you may manually delete them using the “삭제” icon in the lower left.

Selecting the appropriate row and clicking the “삭제” icon in the lower left of the table will present an entry form where the appropriate imported and exported values may be entered.

Figure 25 - Entering imported and exported water data

The bottom table (Cost and Planning factors) allows you to enter the average utility water production cost and the annual effective discount rate utilized in EZ Guide Online projections.

Figure 26 - Cost and Planning Factors table
This value for the water production cost defaults to $5 per kgallon, but should be modified to reflect the costs to the selected utility(s). The discount rate defaults to a 5% annual rate, but can be changed to more closely match estimated rates. The table values are edited in the same manner as previous EZ Guide tables.

4.5.6 Summary
The next page informs you that the Water Supply Analysis module has been completed. Module inputs and outputs are presented in the same manner as the Profile Summary page (see section 4.4.4), including the printable view and export to word document options.
4.6 Audit Module
The Water Audit Module is where information regarding your water audit schedule, method, and results is collected.

4.6.1 Introduction to Water Audit
The Introduction page briefly describes and overview and purpose of the Water Audit Module.

4.6.2 Water Audit Summary
This page initially presents a description of water audit terminology and a table listing five of the most commonly used audit methods in the State of Florida, a short description, and web links to supporting information. The methods listed are:

- M36 – A method detailed in Manual 36 from the American Water Works Association. A Microsoft Excel worksheet implementing the method has been developed by the Conserve Florida Clearinghouse and is available.
- AWWA 4.0 – The AWWA Water Loss Control Committee Free Water Audit Software v. 4.0.
- SWFWMD – A method documented and put forth by the Southwest Florida Water Management District
- SJRWMD – A method documented and put forth by the St. John’s River Water Management District
- Florida Rural Water Audit – A method documented and put forth by the Florida Rural Water Association

The method used should be determined by a) the requirements set by the regulatory body directly overseeing your utility, and b) the method you feel is most relevant and efficient to use.

The Water Audit information is entered in the next section. Frequency of audits and the audit method should be readily available to utility staff.

![Water Audit Summary User Inputs](image)

Figure 27 - Water Audit Summary User Inputs

The water loss percentage should be obtained from the audit performed most closely to the selected study year. The EZ Guide uses a default value of 15% to allow you to continue Profile data entry and analysis if the value is not immediately available, and should only be changed once that value is obtained.
Annual Unbilled Water Use is provided to allow utilities with significant amounts of unbilled water use to account for its contribution to the profile water budget. Examples of unbilled water use include:

- Periodic system flushing
- Emergency fire equipment use and maintenance
- Municipal and Government projects irrigation (initial irrigation for landscaping establishment for example)

The last user field is where you should provide one or more ways someone reviewing the profile could obtain detailed information about your water audit. This can be a person to contact, a link to an e-permitting document, or any other reasonable method.

4.6.3 Summary
The next page informs you that the Audit module has been completed. Module inputs and outputs are presented in the same manner as the Profile Summary page (see section 4.4.4), including the printable view and export to Word document options.
4.7 Water Budget Module

The water budget module accomplishes three main tasks:

- Identification and description of previously enacted conservation programs (both measures and BMPs)
- Presentation of the EZ Guide Online’s end use water analysis
- Calibration of the end use water analysis to reported water production values

Completion of this module will provide you with a breakdown of your estimated water use by sector (Single Family Residential, Multi-Family Residential, Commercial, Industrial, and Institutional Sectors). The water budget analysis also provides a parcel level end use water breakdown that enables the following BMP analysis module to identify and analyze specific groups of parcels for water conservation potential.

4.7.1 Introduction to Water Budget Summary

The Introduction page briefly describes and overview and purpose of the Water Budget Module.

4.7.2 Historical Conservation Programs (BMPs)

On this page, you can add conservation BMP programs that you have previously implemented. Entered programs are displayed in a table at the top of the page.

![Figure 28 - Historical Conservation Programs (BMPs) page](image)

New BMPs may be added by selecting the “Create New” link at the lower left corner of the table. This will bring up an entry form asking for needed information about the program.

![Figure 29 - Entering Historical Conservation BMP Programs](image)
Conservation programs already created may be edited or deleted by choosing the appropriate action link on the appropriate table row.

Programs that span multiple years should be entered as multiple plans, one for each year of implementation. This allows the EZ Guide analysis to adjust the water budget to reflect the water use reduction appropriately over time.

### 4.7.3 Historical Conservation Programs (Measures)

On this page, you can add conservation measure programs that you have previously implemented. Entered programs are displayed in a table at the top of the page.

**Figure 30 - Historical Conservation Programs (Measures) page**

New measures may be added by selecting the “Create New” link at the lower left corner of the table. This will bring up an entry form asking for needed information about the program.

**Figure 31 - Entering Historical Conservation Measures**

You may choose any measure identified in the drop down list, or select “Custom Measure” from the bottom of the list, and name a measure not included in the list. Conservation programs already created may be edited or removed by choosing the appropriate action link on the appropriate table row.
4.7.4 Calibration
The Calibration page allows you to:

- review the water usage breakdown estimated by the EZ Guide analysis
- compare it to the values reported to FDEP and others
- change calibration parameters to improve the match between EZ Guide estimates and reported values

4.7.4.1 Water Use by Sector
The “Calibrated Water Budget by Sector” chart is a pie graph displaying the estimated total water use of the utility(s) as partitioned into the constituent sectors.

![Calibrated Water Budget By Sector]

Hovering your pointer over any particular sector will display the percentage water use of that sector.

The adjacent table (Difference Between FDEP and CFWC Estimate) displays the values for population, total water use and gpcd from FDEP reported data and EZ Guide analysis results.

<table>
<thead>
<tr>
<th></th>
<th>FDEP Data</th>
<th>CFWC Estimate</th>
<th>% Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population Served</td>
<td>62,052</td>
<td>57,426</td>
<td>-7.46%</td>
</tr>
<tr>
<td>Total Water Use (MGY)</td>
<td>2,674.27</td>
<td>3,013.93</td>
<td>12.70%</td>
</tr>
<tr>
<td>GPCD</td>
<td>118</td>
<td>144</td>
<td>22%</td>
</tr>
</tbody>
</table>

Figure 32 - Calibrated Water Budget by Sector

Figure 33 - Difference Between FDEP and CFWC Estimate Table
It is not unexpected or unusual for one or more of these estimates to have a large percentage difference. The primary purpose of the calibration process is to improve the EZ Guide total water use estimate, so the total account or population estimates may remain significantly different without adversely affecting the EZ Guide analysis or results.

For population estimates, the EZ Guide analysis uses average household sizes from US Census Block data. We have found that estimated values from this approach seem to be very accurate, and when it diverges widely from FDEP reported values (as reported in the utility Basic Facility Report records, see the “FDEP Basic Facility Report” page in the “Water Supply Analysis Module”) the EZ Guide estimate seems to be more accurate. As the EZ Guide analysis depends upon population values at the parcel level, there are no direct calibration parameters for population, however gross and residential gpcd estimates can be calculated using both EZ Guide estimated and user supplied population values.

The next table (Water Use Summary by Sector) displays (per water use sector):

- percent of total water use
- residential gpcd (where appropriate)
- gross gpcd
- population
- % of total population
- Average water use per heated square foot

<table>
<thead>
<tr>
<th>Sector</th>
<th>% Water Use</th>
<th>Residential GPCD</th>
<th>Gross GPCD</th>
<th>Population</th>
<th>% Total Population</th>
<th>Average Gallons Per Heated Square Foot</th>
<th>Links</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Family</td>
<td>46.2%</td>
<td>97</td>
<td>51</td>
<td>91,650</td>
<td>53%</td>
<td>0.094</td>
<td></td>
</tr>
<tr>
<td>Single Family - Indoor</td>
<td>40.5%</td>
<td>85</td>
<td>45</td>
<td>--</td>
<td>--</td>
<td>0.08</td>
<td>Details</td>
</tr>
<tr>
<td>Single Family - Outdoor</td>
<td>5.7%</td>
<td>12</td>
<td>6</td>
<td>--</td>
<td>--</td>
<td>0.01</td>
<td>Details</td>
</tr>
<tr>
<td>Multi-Family</td>
<td>25.3%</td>
<td>60</td>
<td>28</td>
<td>82,092</td>
<td>47%</td>
<td>0.642</td>
<td>Details</td>
</tr>
<tr>
<td>CII</td>
<td>14.5%</td>
<td>--</td>
<td>16</td>
<td>--</td>
<td>--</td>
<td>0.112</td>
<td>Details</td>
</tr>
<tr>
<td>Commercial</td>
<td>11.5%</td>
<td>--</td>
<td>13</td>
<td>--</td>
<td>--</td>
<td>0.14</td>
<td>Details</td>
</tr>
<tr>
<td>Industrial</td>
<td>0.8%</td>
<td>--</td>
<td>1</td>
<td>--</td>
<td>--</td>
<td>0.04</td>
<td>Details</td>
</tr>
<tr>
<td>Institutional</td>
<td>2.2%</td>
<td>--</td>
<td>2</td>
<td>--</td>
<td>--</td>
<td>0.09</td>
<td>Details</td>
</tr>
<tr>
<td>Unaccounted</td>
<td>14.0%</td>
<td>--</td>
<td>18</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100.0%</td>
<td>--</td>
<td>111</td>
<td>173,742</td>
<td>100%</td>
<td>0.152</td>
<td></td>
</tr>
</tbody>
</table>

Figure 34 - Water Use Summary by Sector Table

The “detail” links available for the indicated rows lead to extensive tables detailing many of the interim values used in the EZ Guide analysis methodology. Several editable values on the detail pages should not be modified unless there is analysis and data to support the changes. Further information and discussion about parameters on these pages should be directed to the Conserve Florida Clearinghouse.
4.7.4.2 Water Budget Calibration

The goal of your calibration changes will be to bring the reported total water use and EZ Guide estimated total water use to as close agreement as possible. How close is “good enough” or “acceptable” will depend on your utility(s) characteristics and the specific purpose for which you intend to use the EZ Guide Online results. The Clearinghouse has found that calibrating the estimated and reported total water use values to within 10% is usually reasonably easy to accomplish and provides good results for use in comparing water conservation practice effectiveness (which is undertaken in the following EZ Guide Online module).

The six tables following the Water Use Summary table are where you will be calibrating the EZ Guide analysis.

The “CII Parcel Counts” table will modify the number of CII accounts estimated by the analysis.

![CII Parcel Counts Table](image)

Figure 35 - CII Parcel Counts Table

It is helpful to be familiar with the number of CII service accounts in your utility(s). The number of parcels (or accounts) can be modified in the same manner as other data tables have in the rest of the EZ Guide online, and should be changed to match your utilities values.

The “Average Household Size” table calibrates the average people per home values and vacancy rates that are estimated and used by the analysis.

![Average Household Size Table](image)

Figure 36 - Average Household Size Table

The initial default estimates are based on the latest census data for the census blocks within the identified utility service area boundary(s). Modifying these values should only be done with extensive supporting data. Modifying these values will affect both the analysis population and water use estimates.

~ 34 ~
The “Single Family Outdoor Configurables (Irrigation Application Rates)” table calibrates the amount of overall irrigation.

<table>
<thead>
<tr>
<th>Water Restrictions</th>
<th>Mean Irrigable Application Rate With Sprinkler (inches/month)</th>
<th>Mean Irrigable Application Rate Without Sprinkler (inches/month)</th>
<th>Max Irrigable Area Cutoff (acres/parcel)</th>
<th>% of Irrigable Area Irrigated</th>
<th>Data Source</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Restriction</td>
<td>2.00</td>
<td>1.25</td>
<td>1.00</td>
<td>100.00</td>
<td>CFWC</td>
<td></td>
</tr>
</tbody>
</table>

Figure 37 - Single Family Outdoor Configurables Table

For these values it will be helpful to be familiar with irrigation practices and trends in your utility area. Editing this table allows you to modify any water restrictions in effect in your area, as well as the average irrigation application rate, maximum irrigable area cutoff, and irrigated area percentage. Since the Clearinghouse has found that accounts with automatic sprinklers display distinctly different irrigation trends than accounts utilizing manual irrigation methods, two separate mean irrigation application rate values are provided. The max irrigable area cutoff allows you to set the largest parcel area considered to be irrigable. Greater parcel areas are limited to the identified cutoff amount. % of irrigable area irrigated allows you to specify a reduction of estimated irrigable area applied to all analyzed parcels. This enables you to adjust the total estimated irrigated area and outdoor water use.

The “Single Family Irrigation Configurables” table calibrates how many accounts are irrigating and the source of the irrigation water.

<table>
<thead>
<tr>
<th>Effective Home Build Date</th>
<th>Total Accounts</th>
<th>% w/ Automatic Sprinklers</th>
<th>Number of Residences w/ Automatic Sprinklers Using Potable Water</th>
<th>Number of Residences w/ Automatic Sprinklers Using Irrigated Water</th>
<th>% w/ Automatic Sprinklers Using Potable Water</th>
<th>Number of Residences w/ Sprinklers Using Irrigated Water in Excess of Theoretical Requirements</th>
<th>% w/ Automatic Sprinklers Using Irrigated Water in Excess of Theoretical Requirements</th>
<th>Data Source</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1984</td>
<td>4817</td>
<td>0</td>
<td>4817</td>
<td>0</td>
<td>100.00</td>
<td>4817</td>
<td>4817</td>
<td>CFWC</td>
<td></td>
</tr>
<tr>
<td>1985-1994</td>
<td>1914</td>
<td>25</td>
<td>490</td>
<td>96</td>
<td>250.00</td>
<td>250.00</td>
<td>250.00</td>
<td>CFWC</td>
<td></td>
</tr>
<tr>
<td>&gt;1994</td>
<td>1830</td>
<td>88</td>
<td>1,608</td>
<td>506</td>
<td>514.00</td>
<td>250.00</td>
<td>250.00</td>
<td>CFWC</td>
<td></td>
</tr>
<tr>
<td><strong>Total or Weighted Average</strong></td>
<td>7857</td>
<td>63</td>
<td>1,932</td>
<td>564</td>
<td>753.33</td>
<td>250.00</td>
<td>250.00</td>
<td>CFWC</td>
<td></td>
</tr>
</tbody>
</table>

Figure 38 - Single Family Irrigation Configurables Table

Each table row represents a range of years indicating when the affected homes were built. Values in that row will only affect homes identified as being built in the associated date range. The values represent the percentage of homes in the indicated class that have automatic sprinklers, as well as how many homes that have automatic sprinklers use utility supplied potable water for irrigation. Also, you may indicate what percentage of homes which do not have automatic sprinklers, but use utility supplied potable water for irrigation. The final two columns identify the percent of homes that are irrigating in excess of the theoretical irrigation demand for those homes with and without automatic sprinkler systems. Currently theoretical demand is set at 25” per year for the EZ Guide analysis. In the future, it is planned to add the theoretical demand amount as a user configurable value.
The final tables ("Service Life for Residential Fixtures", "Service Life for Residential Outdoor" and "Service Life for Commercial Fixtures") contain the estimated service lives for water use fixtures and BMPs considered in the EZ Guide analysis.

The EZ Guide analysis accounts for passive replacement (replacements that occur without outside assistance or encouragement) by applying a replacement cycle based on the service life. The default fixture lives applied in the EZ Guide online were obtained from Clearinghouse analysis and literature reviews. They may be updated as desired, but changes should be based on solid analysis and data as results can be significantly different.

As updating the service lives significantly affects the underlying EZ Guide analysis, any changes made to the service life values will require that the water budget analysis be redone. The EZ Guide Online will indicate when this is necessary and provide an appropriate warning.

The calibration process allows for many different inputs that have effects which may not be readily apparent. A summary of the commonly used calibration parameters is listed below, and the direction of their effect (increase or decrease) on the EZ Guide estimated total water use for the profile. The magnitude of the effect may vary widely depending of the profile characteristics.
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Effect on Total Water Use (when parameter is increased)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CII</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Parcels - Commercial</td>
<td>Increase</td>
<td></td>
</tr>
<tr>
<td>Number of Parcels - Industrial</td>
<td>Increase</td>
<td></td>
</tr>
<tr>
<td>Number of Parcels - Institutional</td>
<td>Increase</td>
<td></td>
</tr>
<tr>
<td>Average Household Size</td>
<td>Increase</td>
<td>Will also increase Population</td>
</tr>
<tr>
<td>Residential Occupancy Rate</td>
<td>Increase</td>
<td>Will also increase Population</td>
</tr>
<tr>
<td>Household Size</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Household Size</td>
<td>Increase</td>
<td></td>
</tr>
<tr>
<td>Residential Occupancy Rate</td>
<td>Increase</td>
<td></td>
</tr>
<tr>
<td>Water Restrictions</td>
<td>Decrease</td>
<td>Increase means more restrictive</td>
</tr>
<tr>
<td>Irrigable Application Rate with Sprinkler</td>
<td>Increase</td>
<td></td>
</tr>
<tr>
<td>Irrigable Application Rate w/o Sprinkler</td>
<td>Increase</td>
<td></td>
</tr>
<tr>
<td>% with Automatic Sprinklers</td>
<td>Increase</td>
<td>Applies to any time period</td>
</tr>
<tr>
<td>% with Sprinklers using Potable Water</td>
<td>Increase</td>
<td>Applies to any time period</td>
</tr>
<tr>
<td>% w/o Automatic Sprinklers using Potable Water</td>
<td>Increase</td>
<td>Applies to any time period</td>
</tr>
<tr>
<td>Number of Residences w/Sprinklers</td>
<td>Affects BMPs only</td>
<td>Applies to any time period</td>
</tr>
<tr>
<td>Using Potable Water, irrigating in excess of theoretical requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Lives</td>
<td>Increase</td>
<td>Applies to all fixtures</td>
</tr>
</tbody>
</table>

### 4.7.5 Summary

On this page you will currently find a summary of the results of your water budget calibration. The first three charts and tables (“Calibrated Water Budget by Sector”, “Difference Between FDEP and CFWC Estimate”, and “Water Use Summary By Sector”) display the calibrated results of the previous page. The remaining tables (“Initial Water Budget - Property Information” and “Initial Water Budget - Water Use”) summarize more information on the estimated water use breakdown. These tables should provide you with a better understanding of how water is used within your utility. All important Module inputs and outputs are presented in the same manner as the Profile Summary page (see section 4.4.4), including the printable view and export to Word document options.
4.8 Projections Module

The Projections module defines the conservation analysis planning period and the population and water use projections over that period. The module does not do a projection analysis as it is expected that most, if not all, utilities will perform periodic use projections that are based on much more data than is available to the module. Instead, this module allows the results of those analyses to be entered and utilized by other modules in EZ Guide Online. Specifically, the projected values are used as a baseline to demonstrate and compare the effects of a defined water conservation plan.

4.8.1 Introduction to Projections

The Introduction page briefly describes and overview and purpose of the Projections Module.

4.8.2 Planning Horizon

The Planning Horizon page defines the conservation planning period which is the period over which potential conservation practices are analyzed for efficiency and cost-effectiveness.

![Planning Horizon Page](image1)

The analysis year that was specified for the water budget calibration is provided for reference. You should provide a year for the beginning of the planning period, and a planning period duration. You may choose 5, 10, or 20 years for the duration (as these are typical permitting and planning periods).

4.8.3 Population Projection

The Population Projection page allows the utility population projections to be entered and visualized.

The “Optional Starting Values” box at the top of the page is a user aide to assist in quickly filling values if you prefer to enter the population based on a constant rate of growth.

![Population Optional Starting Values](image2)
The next table allows you to enter the population each year in the planning horizon.

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>173,742</td>
</tr>
<tr>
<td>2013</td>
<td>202,000</td>
</tr>
<tr>
<td>2014</td>
<td>204,020</td>
</tr>
<tr>
<td>2015</td>
<td>205,950</td>
</tr>
<tr>
<td>2016</td>
<td>208,121</td>
</tr>
<tr>
<td>2017</td>
<td>210,202</td>
</tr>
<tr>
<td>2018</td>
<td>212,304</td>
</tr>
<tr>
<td>2019</td>
<td>214,427</td>
</tr>
<tr>
<td>2020</td>
<td>216,571</td>
</tr>
</tbody>
</table>

Figure 43 - Population Projection Table

On the right side of the page is a chart displaying the population values in the planning horizon table.

Figure 44 - Projected Population Growth Chart

The analysis year value is displayed as well for reference. Due to a web page function limitation, if the values in the table are updated, the “Update Chart” button located under the chart must be pressed to update the displayed values.

4.8.4 Water Use Projections
The Water Use Projections page displays projected water use by sector over the planning horizon, and allows the default projection parameters to be modified to adjust the projected use to match user expected estimates.

4.8.4.1 Projected Water Use – Indoor
The Projected Water Use – Indoor section of the page displays the parameters used to estimate the projected indoor water use and a summary table of the estimated values.
The “Projected Water Use for New Construction – Indoor” table displays the distribution of population between single family and multi-family sectors and the estimated number of new households and population resulting from the estimated total population growth. Estimates of projected (to the end of the planning period) residential gpcd and residential density (average people per house) are also displayed.

<table>
<thead>
<tr>
<th>Sector Name</th>
<th>Percent Occupied Households</th>
<th>Number of Occupied Households</th>
<th>Population</th>
<th>Residential GPCD</th>
<th>Average People per House</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Family new construction built after analysis year (2011)</td>
<td>52</td>
<td>15,595</td>
<td>37,250</td>
<td>64.7</td>
<td>2.42</td>
<td>Restore CPWC</td>
</tr>
<tr>
<td>Multi-Family new construction built after analysis year (2011)</td>
<td>48</td>
<td>14,365</td>
<td>33,038</td>
<td>64.7</td>
<td>2.30</td>
<td>Restore CPWC</td>
</tr>
</tbody>
</table>

**Figure 45 - Projected Water Use for New Construction – Indoor**

The occupied household distribution, residential gpcd’s and residential density can all be edited to adjust the projected indoor water use estimates to match expected projected water use values. Initial percent values for occupied households and the average people per house are set to the existing values from the Water Budget module. Residential GPCD is initially set to the rate for households using fixtures with usage rates that meet current Florida plumbing standards. The resulting estimated projected water use rates, gpcd’s and percentages are broken down and displayed in the “Projected Water Use – Indoor” table.

**Figure 46 - Projected Water Use - Indoor Table**

### 4.8.4.2 Projected Water Use – Outdoor

The Projected Water Use – Outdoor section of the page displays the parameters used to estimate the projected outdoor water use and a summary table of the estimated values.

The “Irrigation Application Rates for Existing Single Family Homes – Outdoor” table displays the values for outdoor usage parameters set in the Water Budget module.
The values from this table are used as the default values for the “Single Family Projected Outdoor Configurables (Irrigation Application Rates)” table which specifies the values used for estimating the projected outdoor water use. If these parameters are expected to be different than the default values, they may be edited in this table.

The next table in this section, “Water Use for Existing Homes – Outdoor”, displays and summarizes the irrigation distribution values entered in the Water Budget module.

This table provides a convenient reference to use when editing the distribution values for irrigation for projected homes in the next table, “Projected Single Family Irrigation Coefficients”.

Figure 47 - Irrigation Application Rates for Existing Single Family Homes - Outdoor Table

Figure 48 - Single Family Projected Outdoor Configurables (Irrigation Application Rates) Table

Figure 49 - Water Use for Existing Homes - Outdoor Table

Figure 50 - Projected Single Family Irrigation Coefficients Table
Default values for this table are taken from the last row of the previous table (Figure 49).

The final table in the Projected Outdoor Water Use section is a summary table of projected water use and other values based on the parameters in the preceding tables.

### Summary of Projected Outdoor Water Use

<table>
<thead>
<tr>
<th>Effective Home Year Built</th>
<th>Total Occupied Households</th>
<th>Population</th>
<th>Average Irrigated Area (square feet)</th>
<th>Water Use (MGD)</th>
<th>Residential GPCD</th>
<th>Gross GPCD</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1983</td>
<td>24,592</td>
<td>59,512</td>
<td>8,551</td>
<td>0.57</td>
<td>4.4</td>
<td>2.3</td>
</tr>
<tr>
<td>1983 - 1994</td>
<td>9,956</td>
<td>24,093</td>
<td>9,868</td>
<td>0.29</td>
<td>2.2</td>
<td>1.2</td>
</tr>
<tr>
<td>1995 - 2011</td>
<td>9,180</td>
<td>22,215</td>
<td>8,375</td>
<td>0.27</td>
<td>2.1</td>
<td>1.1</td>
</tr>
<tr>
<td>2012 - 2032</td>
<td>15,705</td>
<td>37,255</td>
<td>8,375</td>
<td>1.13</td>
<td>8.0</td>
<td>4.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>59,123</strong></td>
<td><strong>143,077</strong></td>
<td><strong>-</strong></td>
<td><strong>2.26</strong></td>
<td><strong>-</strong></td>
<td><strong>9.2</strong></td>
</tr>
</tbody>
</table>

*Figure 51 - Summary of Projected Outdoor Water Use Table*

#### 4.8.4.3 Projected Water Use – CII

The only table in this section (CII) displays a summary of the estimated projected water use from existing and new commercial, industrial and institutional sectors.

### CII

<table>
<thead>
<tr>
<th>Sector</th>
<th>Heated Area (sf)</th>
<th>Water Use (MGD)</th>
<th>Gross GPCD</th>
<th>Links</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Commercial</td>
<td>16,200,096</td>
<td>2.22</td>
<td>9.1</td>
<td><a href="#">Details</a></td>
</tr>
<tr>
<td>Existing Industrial</td>
<td>4,017,310</td>
<td>0.16</td>
<td>0.6</td>
<td><a href="#">Details</a></td>
</tr>
<tr>
<td>Existing Institutional</td>
<td>4,744,376</td>
<td>0.42</td>
<td>1.7</td>
<td><a href="#">Details</a></td>
</tr>
<tr>
<td>New Commercial</td>
<td>6,554,920</td>
<td>0.89</td>
<td>3.7</td>
<td><a href="#">Details</a></td>
</tr>
<tr>
<td>New Industrial</td>
<td>1,625,321</td>
<td>0.04</td>
<td>0.2</td>
<td><a href="#">Details</a></td>
</tr>
<tr>
<td>New Institutional</td>
<td>1,919,737</td>
<td>0.18</td>
<td>0.7</td>
<td><a href="#">Details</a></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>35,061,760</strong></td>
<td><strong>3.91</strong></td>
<td><strong>16.0</strong></td>
<td></td>
</tr>
</tbody>
</table>

*Figure 52 - CII (Projected Water Use) Table*

The “details” links will open another page where all the land use codes are listed with the default values for Weighted Average Water use rates and projected total heated area for new construction. These values can be modified to more accurately represent known specific information about CII projected growth.
The final section on the Water Use Projections page allows the unaccounted water use fractions to be updated as necessary. The values shown, Existing Infrastructure Unaccounted Water Use and Projected Infrastructure Unaccounted Water Use, are used to estimate the amount of water not accounted for in direct sector water use.

As in the water audit module, these include treated water losses, infrastructure water leaks, meter calibration errors, unbilled water use, and other factors. Existing and projected unaccounted water use is separated as use rates may be different due to age and quality of the infrastructure.

The next page informs you that the Projections module has been completed. The planning period start date and duration are displayed, as well as a table summarizing the categorized (by sector) estimated projected water use for existing and new construction.
Figure 55 - Projected Water Use for <End of Plan Year> - Summary by Sector

Charts are also included which display the projected water use and projected gross gpcd values for each sector over the planning period. For display purposes, growth is assumed to be linear over that period.

Figure 56 - Projected Water Use and GPCD Charts

Sectors may be selected or de-selected in the legend for display in each chart for easier comparison between sectors.

Module outputs are presented in the same manner as the Profile Summary page (see section 4.4.4), including the printable view and export to Word document options.
4.9 BMP Analysis Module

The BMP Analysis module analyzes conservation BMP practices and provides a list of prioritized and recommended practices for implementation. It accomplishes this by utilizing the water budget analysis results from the previous module along with information regarding BMP costs and water use rates that you provide. The detailed nature of the end use water analysis utilized in the water budget analysis allows the BMP analysis to identify specific groups of accounts or parcels that are likely to be most affected by each BMP. This allows those BMPs that will affect the greatest number of accounts and have the greatest impact on overall water use to be identified and compared, and be targeted to specific groups of parcels that will have the greatest net benefit to the utility.

4.9.1 Introduction to BMP Analysis

The BMP Introduction page presents an overview of the EZ Guide Online intent and methodology for BMP analysis. It is intended to provide a sense and direction of the operation of the module while you are completing it.

4.9.2 Single Family Indoor BMPs

This page is where you will specify the Single Family Residential (SFR) Indoor BMP retrofit and rebate options that you would like to consider using.

The first table (Attributes of Single Family Residential Indoor Fixtures) allows you to specify the water use rates of three levels of conservation options (Conventional, Better, and Best) for each of the four available indoor fixtures: Toilets, Clothes Washers, Showerheads, and Faucets.

![Figure 57 - Attributes of Single Family Residential Indoor Fixtures Table](image)

Each increasing fixture level will have a lower water use rate. You should enter the options that are most readily available to your conservation program and that you would most like to compare. The EZ Guide Online defaults are based on some of the most commonly considered water conserving fixtures in previously implemented conservation programs. Editing data in this table is done as with previous data tables in the EZ Guide Online.

The second table (Total Utility Cost per Fixture) allows you to specify the per fixture cost of retrofitting or rebating each fixture type.
You should enter the entire cost incurred to your program, including any installation or administrative costs **per fixture**. Do not include any costs incurred by the customer.

The detail links presented below the tables provide detailed information regarding the BMP cost and water savings analysis for each fixture type.

Tables on these pages contain detailed information regarding estimated water savings and costs associated with different specific groups of parcels as divided up by conservation potential. These groups are considered independently when analyzing BMPs for cost effectiveness and water savings.

### 4.9.3 Single Family Outdoor BMPs
This page is where you will specify the Single Family Residential (SFR) outdoor BMP retrofit and rebate options that you would like to consider using.

The initial table “Market Potential of Single Family Outdoor BMPs” at the top of the page is a summary of the single family customer counts that are recommended for targeting by the available outdoor BMPs. This table is for informational use only.
The first user input table (Attributes of Single Family Outdoor Devices) allows you to specify the average savings rate and device cost for three outdoor BMPs (soil moisture sensors, non-potable irrigation systems, and irrigation audits) for the applicable market of SFR customers defined in the above table. Defaults from an analysis of Gainesville Regional Utilities are provided, and can be overridden with utility specific data if available. Editing data in this table is done as with previous data tables.

<table>
<thead>
<tr>
<th>Device or Practice</th>
<th>Average Savings Rate (gal/1,000 ft²/d)</th>
<th>Device Cost</th>
<th>DataSource</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soil Moisture Sensor</td>
<td>24.19</td>
<td>0.10</td>
<td>CFWC</td>
<td></td>
</tr>
<tr>
<td>Non Potable Irrigation System (eg. Reuse)</td>
<td>22.76</td>
<td>0.50</td>
<td>CFWC</td>
<td></td>
</tr>
<tr>
<td>Irrigation Audit</td>
<td>5.09</td>
<td>0.00</td>
<td>CFWC</td>
<td></td>
</tr>
</tbody>
</table>

Figure 61 - Attributes of Single Family Outdoor Devices Table

For the device cost inputs, the entire unit cost incurred to the program, including any installation or administrative costs should be entered. Do not include any costs incurred by the customer.

The third table allows specification of reuse attributes. The non-potable offset credit is a percentage (0%-100%) of irrigation water saved from switching a customer to reuse which a utility can be credited with. This value varies depending on which water management district a utility is in. The default is set at 100%, which allows full credit of reuse water savings.

<table>
<thead>
<tr>
<th>Reuse Attributes</th>
<th>Reuse Accessibility%</th>
<th>DataSource</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non Potable Offset Credit% (eg. Reuse)</td>
<td>100.00</td>
<td>5.00</td>
<td>CFWC</td>
</tr>
</tbody>
</table>

Figure 62 - Reuse Attributes Table

Reuse accessibility refers to the percentage of SFR customers within a utility who have current access to an existing reuse system but which are not yet hooked up to the system. This is typically a small percentage of customers within a utility, with 5% being the default value.

The detail links presented below the tables provide detailed information regarding the BMP cost and water savings analysis for each of the three SFR outdoor BMP options.
Tables on these pages contain detailed information regarding estimated water savings and costs associated with different specific groups of parcels as divided up by conservation potential. Parcel level water savings is estimated based on specified average savings in the Attributes of Single Family Outdoor Devices combined with an assumed distribution of savings for the potential market of eligible SFR customers. These groups are considered independently when analyzing BMPs for cost effectiveness and water savings.

4.9.4 Multi-Family Indoor BMPs

The data tables, links and instructions for completing this page are identical to those for the previous Single Family Indoor BMP page. Please refer to that page’s section (4.9.2) for explanation.

4.9.5 CII BMPs

This page is where you will specify the Commercial, Industrial, and Institutional (CII) BMP retrofit and rebate options that you would like to consider using.

The first table (Attributes of CII BMPs) allows you to specify the water consumption rates of three levels of conservation options (Conventional, Better, and Best) for each of the five available indoor fixtures: Toilets, Urinals, Faucets, Showerheads, and Pre-rinse Spray Valves. An additional CII BMP option is the Site-Specific Water Audit, with 15% (default) water savings on top of the savings from the other five BMP options.

<table>
<thead>
<tr>
<th>Fixture Level</th>
<th>Toilets (gallons/flush)</th>
<th>Urinals (gallons/flush)</th>
<th>Faucets (gallons/minute)</th>
<th>Showerheads (gallons/minute)</th>
<th>Pre-rinse Spray Valves (gallons/minute)</th>
<th>Water Audit</th>
<th>DataSource</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional</td>
<td>1.60</td>
<td>1.00</td>
<td>2.00</td>
<td>2.00</td>
<td>1.00</td>
<td>0.15</td>
<td>CFWC</td>
</tr>
<tr>
<td>Better</td>
<td>1.28</td>
<td>0.50</td>
<td>1.50</td>
<td>1.50</td>
<td>1.25</td>
<td>0.15</td>
<td>CFWC</td>
</tr>
<tr>
<td>Best</td>
<td>0.80</td>
<td>0.00</td>
<td>0.50</td>
<td>0.50</td>
<td>1.00</td>
<td>0.15</td>
<td>CFWC</td>
</tr>
</tbody>
</table>

Each increasing fixture level will have a lower water use rate. You should enter the options that are most readily available to your conservation program and that you would most like to compare. The EZ Guide Online defaults are based on some of the most commonly considered water conserving fixtures in previously implemented conservation programs. Editing data in this table is done as with previous data tables in the EZ Guide Online.
The second table (Total Utility Cost per Fixture) allows you to specify the per fixture cost of retrofitting or rebating each fixture type.

![Total Utility Cost per Fixture Table](image)

**Figure 65 - Total Utility Cost per Fixture Table**

You should enter the entire cost incurred to your program, including any installation or administrative costs per fixture. Do not include any costs incurred by the customer.

The detail links presented below the tables provide detailed information regarding the BMP cost and water savings analysis for each fixture type.

![Detail Links](image)

**Figure 66 - CII BMPs Detail Links**

Tables on these pages contain detailed information regarding estimated water savings and costs associated with different specific groups of parcels as divided up by conservation potential. These groups are considered independently when analyzing BMPs for cost effectiveness and water savings.

### 4.9.6 BMP Goals

The BMP Goals page is where you will define what conservation goal you would like to meet. After a short explanation of the optimization process, you are presented with the analysis year and projected plan end gross gpcd values, and the estimated maximum possible gpcd savings that could be attained if every highest-water saving BMP were implemented.

<table>
<thead>
<tr>
<th>Analysis Year (2012) Cross GPCD: 193</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projected Plan End (2033) Cross GPCD: 178</td>
</tr>
<tr>
<td>Max Possible BMP GPCD Savings: 38</td>
</tr>
</tbody>
</table>

**Figure 67 - BMP Goals GPCD Table**
As the maximum possible BMP gpcd savings is a complex calculation and may take a significant (up to several minutes) to complete, a small animated graphic will display in its place while it is being calculated.

![Calculating Max Possible GPCD Savings...](image)

Figure 68 - Max Possible GPCD Savings calculation graphic

The rest of the page will be displayed while it is being calculated.

Following that, you will find the entries for goal type and target.

<table>
<thead>
<tr>
<th>BMP Goal Type:</th>
<th>Target Gross GPCD ▼</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target GPCD:</td>
<td>50</td>
</tr>
<tr>
<td>Needed GPCD Savings: 28</td>
<td></td>
</tr>
</tbody>
</table>

Figure 69 - BMP Goal Type and Target

BMP goal type can be either “Target Gross gpcd” or “Program Budget”, which will optimize the BMP options for an identified gpcd goal or maximize program budget, respectively. The target type will change depending on the type of BMP goal you choose. If you choose “Target Gross gpcd”, you will see “Target gpcd”. If you choose “Program Budget”, you will see “Total Budget”.

If you would like to have a better idea of the cost and water savings of the BMP options that are available and will be considered during the optimization process, you may choose the “View all BMP options” link on this page. This will open a separate page containing two charts that display the cost effectiveness, total cost, and cumulative water savings for every BMP option. The large number of BMP options does cause this page to take a short while to load and display. These charts can provide guidance for selecting good BMP goal targets. Hovering over any individual point on either chart will identify the BMP fixture type and target characteristics of the parcel group.

Once you have specified a BMP goal type and target value, selecting “save and continue” will initiate the optimization and will take you to the next page when it completes. An indication that the optimization is taking place is displayed until it is finished.

![Please wait while the optimization algorithm executes...](image)

Figure 70 - BMP Optimization execution graphic

The process should not take more than 2-4 minutes to complete.

4.9.7 BMP Results

The BMP Results page presents a table and two charts displaying your optimized and recommended BMP options.
The first table displays a summary of the recommended BMP implementations, broken down by fixture type.

<table>
<thead>
<tr>
<th>BMP Summary Information</th>
<th>Optimum Number Of Implementations</th>
<th>Cost Of Implementation</th>
<th>Total Savings Gallons/Day</th>
<th>Total Savings Gross CPCD</th>
<th>Subgroup Detail Links</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toilet</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Residential</td>
<td>1057</td>
<td>2,114,000.00</td>
<td>479,944.20</td>
<td>6.19</td>
<td>Details</td>
</tr>
<tr>
<td>Commercial</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>Details</td>
</tr>
<tr>
<td>Urinal</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>Details</td>
</tr>
<tr>
<td>Clothes Washer</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>Details</td>
</tr>
<tr>
<td>Showerhead</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Residential</td>
<td>9697</td>
<td>193,940.00</td>
<td>1,118,556.49</td>
<td>14.43</td>
<td>Details</td>
</tr>
<tr>
<td>Commercial</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>Details</td>
</tr>
<tr>
<td>Faucet</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Residential</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>Details</td>
</tr>
<tr>
<td>Commercial</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>Details</td>
</tr>
<tr>
<td>Pre-rinse Spray Valve</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>Details</td>
</tr>
<tr>
<td>Water Audit</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>Details</td>
</tr>
<tr>
<td>Soil Moisture Sensor</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>Details</td>
</tr>
<tr>
<td>Non Potable Irrigation System (eg. Reuse)</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>Details</td>
</tr>
<tr>
<td>Irrigation Audit</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>Details</td>
</tr>
<tr>
<td>Total</td>
<td>20,267</td>
<td>2,307,940.00</td>
<td>1,596,500.70</td>
<td>20.62</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 71 - BMP Summary Information Table**

The detail links lead to pages that contain details on each individual BMP implementation for that fixture type.

**Figure 72 - BMP Summary Detail Table**

These tables detail every BMP implementation considered, which ones are recommended, and the results of the cost and water savings analysis. These tables can be sorted on any desired column by clicking the column header and selecting the “up” or “down” arrow to sort by ascending or descending values respectively.

You can use these tables to identify and quantify the BMP options that the EZ Guide Online has recommended as the optimal choices for your profile to reach the BMP goal that you specified.
The first chart displays the cost effectiveness and cumulative water savings of your recommended BMP options.

![Conservation BMP Cost Effectiveness Chart](image)

**Figure 73 - Conservation BMP Cost Effectiveness Chart**

The horizontal green line is the cost of water production that you entered in the Water Supply Analysis>Other Water Supply Data page. From this chart you can see which BMP implementations are most cost effective and save the most water.

Hovering over any point will display the identifying BMP characteristics. Clicking on any point will open a window displaying the EZ Guide analysis results and estimates for that BMP option.

![Conservation BMP Cost Effectiveness Chart Detail Window](image)

**Figure 74 - Conservation BMP Cost Effectiveness Chart Detail Window**
The second chart displays the cumulative program cost for the same BMP options.

![Conservation Program Total Savings and Total Cost Chart](image)

**Figure 75 - Conservation Program Total Savings and Total Cost Chart**

The diagonal green line displays the cost of producing the equivalent amount of water (using the same cost of water as the chart above) per day as would be saved by implementing the identified water saving practices. This chart allows you to get an idea of the estimated total cost of your recommended program implementation, and the estimated cost savings that would result.

### 4.9.8 Summary

The next page informs you that the BMP Analysis module has been completed. Module inputs and outputs are presented in the same manner as the Profile Summary page (see section 4.4.4), including the printable view and export to word document options.
4.10 Planning Module
The Planning Module is where the details of your conservation plan are defined. The plan consists of identifying all conservation BMPs that will be implemented, and the schedule of their implementation by year and quantity. Once your plan is completed, the module will display an estimate of the plan’s impact on projected water use and gpcd, as well as a compiled implementation plan of BMPs.

4.10.1 Introduction to Planning
The Introduction page briefly describes and overview and purpose of the Projections Module.

4.10.2 BMP Planning
The BMP Planning page provides two options for setting the initial plan state.

The “Delete Existing Plan” option will delete any BMPs already added to the plan. This option should be used if you would like to start your BMP plan with no previously added BMPs. This action is irreversible, so care should be taken if you have already spent time entering plan information. A warning is presented before your plan is deleted.

The “Set Plan to Optimum” option will delete any existing BMPs in the plan and add all the BMPs that were included in the “Optimum Plan” recommended by the BMP Analysis optimizer. The implementation rates are set to the total recommended in the “Optimum Plan” and evenly distributed across the conservation plan duration. For example, if 200 implementations were recommended for a 20 year plan, 10 implementations would be set each year for all 20 years. This option sets the plan initial state, and you may update and edit the plan details afterward. As this option will delete or modify any BMPs already entered in the plan, a warning is presented before it is applied.

4.10.3 Single Family BMP Plan
The Single Family BMP Plan page shows a summary of the Single Family Indoor BMPs chosen to be included in the conservation plan.

![Table of Single Family Indoor BMPs](image)

**Figure 76 - Single Family BMP Plan Table**
The total number of implementations is displayed for each BMP. To edit and view the detailed implementation schedule by year, select the “Edit” option for the desired BMP. A new page is opened where you can enter the number of implementations for each year for the first 5 years of your plan, and then for year 10 and year 20 (if your planning period is that long).

![Edit Selected BMP Page](image)

**Figure 77 - Edit Selected BMP Page**

An option is provided to evenly distribute the available BMP implementations over the plan duration. Values can be edited after they have been distributed using this method.

To remove a previously added BMP, choose the “Remove” link on the main page. You must confirm the action before it is removed.

To add a new BMP, choose the “Add BMP” link at the bottom of the page. A table of all the Single Family Indoor BMPs will be displayed along with some helpful reference information.
The table may be sorted on any column by clicking on its header. Clicking on the column header again will reverse the sort order (ascending to descending, or vice-versa). Clicking anywhere on the desired BMP will highlight the row, after which selecting the “Add Selected BMP” will open the edit page for that BMP. Once your implementation schedule is defined, it will be added to your conservation plan.

4.10.4 Multi Family BMP Plan
The Multi Family BMP Plan page is identical to the Single Family BMP Plan page except that only Multi Family BMPs are displayed and available to be added.

4.10.5 Single Family Outdoor BMP Plan
The Multi Family BMP Plan page is identical to the Single Family BMP Plan page except that only Multi Family BMPs are displayed and available to be added.

4.10.6 CII BMP Plan
The CII BMP Plan page is identical to the Single Family BMP Plan page except that only Commercial, Industrial, and Institutional BMPs are displayed and available to be added.

4.10.7 Summary
The Planning Module Summary page includes a detailed implementation plan of your conservation plan displayed in a table along with the total cost (displayed as present worth based on the beginning year of the plan) and the total water saved in million gallons over the plan period.
The table is divided into sections for each water use sector (Single Family, Single Family Outdoor, Multi Family, and CII), and has totals for cost, water savings, and gpcd savings at the bottom. The listed water saved is over the planning period only. Many BMPs will continue to provide water savings and benefits beyond the planning period.

The right-most column of the table provides links that will download a comma-delimited file which contains a list of the parcel ids and selected parcel attributes of those parcels that are included in that BMP. This file can be used to target implementations for that BMP, and can be used in ArcGIS to create a map of implementation locations. For Outdoor BMPs, this file contains all the Single Family Residential parcels as the EZ Guide cannot identify those parcels that are over-irrigating (which is critical to targeting Outdoor BMPs). Therefore, for outdoor BMPs, it is important to use this list in conjunction with Utility supplied billing information to identify those candidate accounts.

Below the implementation table two charts are displayed. The first chart displays the projected water use with and without water savings from the conservation plan.

---

### Figure 79 - BMP Summary Implementation Table

<table>
<thead>
<tr>
<th>Fixture Type</th>
<th>Effective Year Sht</th>
<th>Rainout Level</th>
<th>Fixtures Per House (or mps) or Land Use Code</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019 - 2023</th>
<th>2024 - 2033</th>
<th>Total Cost (Present Worth)</th>
<th>Water Saved (mgd Over Planning Horizon)</th>
<th>Related Parcels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Family</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toilet</td>
<td>&lt;1983</td>
<td>Better</td>
<td>1</td>
<td>19</td>
<td>19</td>
<td>19</td>
<td>19</td>
<td>95</td>
<td>185</td>
<td>$44,806.17</td>
<td>28.27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toilet</td>
<td>&lt;1983</td>
<td>Better</td>
<td>2</td>
<td>141</td>
<td>141</td>
<td>141</td>
<td>141</td>
<td>141</td>
<td>703</td>
<td>$331,672.29</td>
<td>108.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toilet</td>
<td>&lt;1983</td>
<td>Better</td>
<td>3</td>
<td>76</td>
<td>76</td>
<td>76</td>
<td>75</td>
<td>75</td>
<td>375</td>
<td>$177,668.87</td>
<td>37.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toilet</td>
<td>&lt;1982</td>
<td>Better</td>
<td>4</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>6</td>
<td>30</td>
<td>$14,802.33</td>
<td>2.24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toilet</td>
<td>1983/1994</td>
<td>Better</td>
<td>1</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>62</td>
<td>$25,830.12</td>
<td>25.44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toilet</td>
<td>1983/1994</td>
<td>Better</td>
<td>3</td>
<td>466</td>
<td>466</td>
<td>466</td>
<td>466</td>
<td>466</td>
<td>2330</td>
<td>$1,097,417.52</td>
<td>319.96</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toilet</td>
<td>&gt;1994</td>
<td>Better</td>
<td>1</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>71</td>
<td>$34,173.05</td>
<td>10.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toilet</td>
<td>&gt;1994</td>
<td>Better</td>
<td>2</td>
<td>334</td>
<td>334</td>
<td>334</td>
<td>334</td>
<td>334</td>
<td>1670</td>
<td>$786,241.52</td>
<td>121.21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Showerhead</td>
<td>&gt;1994</td>
<td>Best</td>
<td>1</td>
<td>144</td>
<td>144</td>
<td>144</td>
<td>144</td>
<td>144</td>
<td>720</td>
<td>$62,115.74</td>
<td>308.42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faucet</td>
<td>&gt;1994</td>
<td>Best</td>
<td>2</td>
<td>91</td>
<td>91</td>
<td>91</td>
<td>91</td>
<td>91</td>
<td>455</td>
<td>$83,409.44</td>
<td>229.40</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The second chart displays the projected gross gpcd with and without water savings from the conservation plan.

Below these two charts are the same two print/output options that are available to all the other module summary pages.
4.11 Summary Report Module
The Summary Report Module consists of a single page that assists in printing or saving the output of all the previous EZ Guide Online modules.

4.11.1 Introduction to Reporting
The Introduction page briefly describes and overview and purpose of the Summary Report Module.

4.11.2 Summary Report
The Summary Report page contains links to the Summary page for each of the completed EZ Guide Online modules. Links to both the print formatted view and the word formatted file are provided. These links are identical to the links available on the individual summary pages, but are located on this page as well for ease of use.
4.12 BMP Tracking
The BMP Tracking module allows you to track your conservation BMP implementation progress against the projected water use and gpcd baseline values and your conservation plan. The summary of this module can be viewed or used as a report of conservation plan progress towards your conservation goal.

4.12.1 Introduction to BMP Tracking
The Introduction page briefly describes and overview and purpose of the BMP Tracking Module.

4.12.2 BMP Tracking
The BMP Tracking page allows the actual water use and utility service area population to be reported for each year of the conservation plan, as well as the type and quantity of BMPs implemented.

At the top of the page is a brief description of the BMP Tracking module and its purpose. Immediately below the description is a dropdown box to select the year that you would like to report. Below that are places to enter the actual water use and utility service area population.

![Plan Year: 2013](image)

**Figure 82 - BMP Tracking Plan Year Selection**

All years within the conservation planning period are provided in the Plan year dropdown box. Actual water use for the chosen plan year should be entered in million gallons per day (MGD).

Below those entries is a table listing all of the BMPs included in your conservation plan.

![BMP Tracking Implementation Table](image)

**Figure 83 - BMP Tracking Implementation Table**

The table may be sorted by any column by clicking on the header of that column. The sort order may be reversed (ascending to descending or vice-versa) by clicking on the header again. The sorted column is indicated by a pair of arrows in its header.
Columns that may be edited are indicated by a light yellow background. These columns are Actual Retrofits, Actual Cost, and Actual Water Savings. The planned retrofits and planned cost from your conservation plan are displayed in the adjacent columns, as well as the projected water savings for the individual BMPs. Entering the actual water savings is not required or necessary, as it is normally very difficult to directly measure the complete water savings from an individual BMP.

If you have implemented any BMPs that were not originally in your conservation plan, you may add that BMP using the “Add BMP” link directly below the table. Any BMPs added in this manner will have zero planned retrofits and planned water savings but still may be tracked and included on the tracking summary.

The bottom of the page contains the identical two conservation plan savings charts displayed in the Planning Module, with a curve added in red for any values you have entered for the actual water use for each plan year. The first chart displays annual water use.

![Total Annual Conservation Plan Savings Chart](image)

**Figure 84 - Total Annual Conservation Plan Savings Chart**

The second chart displays gross gpcd.
Figure 85 - Per Capita Conservation Plan Savings

These charts will not automatically update as you enter and change values in the BMP Tracking table. A button is provided directly above the first chart (“Total Annual Conservation Plan Savings”) that will update and refresh the charts after changes.

Only the actual water use and actual population entered for each plan year will affect the charts, actual water savings reported for individual BMPs is not displayed or used to create the charts.

4.12.3 Summary
The next page informs you that the Projections module has been completed. It includes a detailed list of BMP implementations grouped by year, as well as the “Total Annual Conservation Plan Savings” and “Per Capital Conservation Plan Savings” charts. Module inputs and outputs are presented in the same manner as the Profile Summary page (see section 4.4.4), including the printable view and export to word document options.
5 Future Updates
Funding for the Conserve Florida Clearinghouse and the EZ Guide Online application from FDEP and associated sources was discontinued as of June 30, 2014. Public availability of the existing EZ Guide Online application was discontinued on that date. Any interest in using the EZ Guide Online should be directed to the Florida Department of Environmental Protection. It is anticipated that continued development and support of the EZ Guide application and methodology will occur through the University of Florida and other entities.

6 Contact Information
Inquiries regarding the EZ Guide Online application should be directed to the contacts below.

**Florida Department of Environmental Protection**  
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Florida Department of Environmental Protection  
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**University of Florida** (for technical and research-related inquiries)  
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(352) 392-3076 (fax)  
email: heaney@ufl.edu

7 Acknowledgements
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- Florida Department of Environmental Protection
- St. Johns River Water Management District
- South Florida Water Management District
- Southwest Florida Water Management District
- Florida Geographic Data Library
- Florida Department of Revenue
## APPENDIX 2: Mantis Summary Table (7/1/13 - 6/30/14)

<table>
<thead>
<tr>
<th>Id</th>
<th>Category</th>
<th>Date Submitted</th>
<th>Updated</th>
<th>Status</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>331</td>
<td>Feature</td>
<td>6/21/2011</td>
<td>9/26/2013</td>
<td>open</td>
<td>No indication when idle time has lapsed. Can we send user back to login after elapsed time?</td>
</tr>
<tr>
<td>481</td>
<td>Feature</td>
<td>1/9/2012</td>
<td>9/26/2013</td>
<td>open</td>
<td>When the user changes his password, have the system log him out and return to the login page</td>
</tr>
<tr>
<td>529</td>
<td>Feature</td>
<td>7/23/2012</td>
<td>9/26/2013</td>
<td>open</td>
<td>Have a summary table with all BMPs</td>
</tr>
<tr>
<td>541</td>
<td>Feature</td>
<td>9/7/2012</td>
<td>10/3/2013</td>
<td>closed</td>
<td>Have popup for important messages</td>
</tr>
<tr>
<td>551</td>
<td>Interface</td>
<td>1/10/2013</td>
<td>4/29/2014</td>
<td>closed</td>
<td>Projections chart does not display correctly in IE9</td>
</tr>
<tr>
<td>564</td>
<td>Business Logic</td>
<td>4/15/2013</td>
<td>7/24/2013</td>
<td>closed</td>
<td>Feature - display both the original and corrected values in MOR chart.</td>
</tr>
<tr>
<td>580</td>
<td>Text</td>
<td>5/3/2013</td>
<td>10/3/2013</td>
<td>closed</td>
<td>Add instructions on how to edit values in a grid</td>
</tr>
<tr>
<td>582</td>
<td>Text</td>
<td>5/3/2013</td>
<td>10/3/2013</td>
<td>open</td>
<td>Migrate links for audits</td>
</tr>
<tr>
<td>610</td>
<td>Business Logic</td>
<td>5/16/2013</td>
<td>8/27/2013</td>
<td>closed</td>
<td>Add menu option for Sample Profile</td>
</tr>
<tr>
<td>620</td>
<td>Business Logic</td>
<td>6/13/2013</td>
<td>7/15/2013</td>
<td>closed</td>
<td>Reanalyze before Utility assigned to a profile causes error</td>
</tr>
<tr>
<td>621</td>
<td>Business Logic</td>
<td>6/18/2013</td>
<td>7/15/2013</td>
<td>closed</td>
<td>Leaving profile name blank causes error</td>
</tr>
<tr>
<td>622</td>
<td>Business Logic</td>
<td>7/9/2013</td>
<td>7/15/2013</td>
<td>closed</td>
<td>Error logged when entering Projections for the first time.</td>
</tr>
<tr>
<td>624</td>
<td>Business Logic</td>
<td>7/12/2013</td>
<td>8/6/2013</td>
<td>closed</td>
<td>Need improved Error Handling</td>
</tr>
<tr>
<td>625</td>
<td>Business Logic</td>
<td>7/16/2013</td>
<td>7/16/2013</td>
<td>closed</td>
<td>BMP Summary chart - wrong GPCD</td>
</tr>
<tr>
<td>626</td>
<td>Feature</td>
<td>7/16/2013</td>
<td>8/6/2013</td>
<td>closed</td>
<td>Need admin function to set the flag indicating there is new MOR or BFR data for this profile</td>
</tr>
<tr>
<td>627</td>
<td>Business Logic</td>
<td>7/16/2013</td>
<td>7/24/2013</td>
<td>closed</td>
<td>City of Tampa profile shows two &quot;City of Tampa...&quot; utilities associated with it</td>
</tr>
<tr>
<td>629</td>
<td>Interface</td>
<td>7/24/2013</td>
<td>7/31/2013</td>
<td>closed</td>
<td>Planning: when the data source is &quot;user&quot;, display &quot;user&quot; in green</td>
</tr>
<tr>
<td>631</td>
<td>Business Logic</td>
<td>7/29/2013</td>
<td>7/30/2013</td>
<td>closed</td>
<td>Profile Admin - search by owner auto-complete does not work</td>
</tr>
<tr>
<td>632</td>
<td>Business Logic</td>
<td>7/29/2013</td>
<td>8/2/2013</td>
<td>closed</td>
<td>Unapproved users should not be able to be added to profile permission</td>
</tr>
<tr>
<td>633</td>
<td>Feature</td>
<td>7/29/2013</td>
<td>7/29/2013</td>
<td>open</td>
<td>Admin - need to be able to edit user information</td>
</tr>
<tr>
<td>634</td>
<td>Interface</td>
<td>7/29/2013</td>
<td>7/30/2013</td>
<td>closed</td>
<td>Change labels for fixture count tables</td>
</tr>
<tr>
<td>635</td>
<td>Business Logic</td>
<td>8/1/2013</td>
<td>8/1/2013</td>
<td>closed</td>
<td>Modification to outdoor configurables does not adjust the water budget</td>
</tr>
<tr>
<td>636</td>
<td>Business Logic</td>
<td>8/1/2013</td>
<td>8/1/2013</td>
<td>closed</td>
<td>Palm coast - Multi Family GPCD is unrealistically low</td>
</tr>
<tr>
<td>637</td>
<td>Business Logic</td>
<td>8/12/2013</td>
<td>8/27/2013</td>
<td>closed</td>
<td>Reanalyze - checking just DOR update does not work</td>
</tr>
<tr>
<td>ID</td>
<td>Component</td>
<td>Date</td>
<td>Date</td>
<td>Status</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
<td>-----------------</td>
<td>------------</td>
<td>------------</td>
<td>---------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>638</td>
<td>Business Logic</td>
<td>8/12/2013</td>
<td>9/3/2013</td>
<td>closed</td>
<td>BFR - the BFR data for Marion County is not correct for 2011</td>
</tr>
<tr>
<td>639</td>
<td>Interface</td>
<td>8/12/2013</td>
<td>8/13/2013</td>
<td>closed</td>
<td>Tracking chart does not start at zero</td>
</tr>
<tr>
<td>640</td>
<td>Business Logic</td>
<td>8/12/2013</td>
<td>8/28/2013</td>
<td>closed</td>
<td>BMP Analysis showing no passive savings</td>
</tr>
<tr>
<td>641</td>
<td>Interface</td>
<td>8/19/2013</td>
<td>9/13/2013</td>
<td>closed</td>
<td>Rename tables and column names in water budget details.</td>
</tr>
<tr>
<td>642</td>
<td>Business Logic</td>
<td>8/23/2013</td>
<td>8/23/2013</td>
<td>open</td>
<td>Unhandled Exception when account is locked</td>
</tr>
<tr>
<td>643</td>
<td>Business Logic</td>
<td>8/23/2013</td>
<td>8/23/2013</td>
<td>closed</td>
<td>The Villages is showing a very high average effective area for &gt;1994 time period</td>
</tr>
<tr>
<td>644</td>
<td>Business Logic</td>
<td>8/24/2013</td>
<td>8/27/2013</td>
<td>closed</td>
<td>Gross GPCD is too high</td>
</tr>
<tr>
<td>645</td>
<td>Interface</td>
<td>8/28/2013</td>
<td>9/3/2013</td>
<td>closed</td>
<td>Put warning about charts not displaying in IE9</td>
</tr>
<tr>
<td>646</td>
<td>Business Logic</td>
<td>8/28/2013</td>
<td>9/5/2013</td>
<td>open</td>
<td>BFR shows different GPCDs for 2011 and 2012 even though everything is the same.</td>
</tr>
<tr>
<td>647</td>
<td>Interface</td>
<td>8/28/2013</td>
<td>9/3/2013</td>
<td>closed</td>
<td>Average People Per House comes from US Census, not FDEP</td>
</tr>
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<td>Business Logic</td>
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<td>9/13/2013</td>
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<td>IWB Property Information table - totals and averages incorrect</td>
</tr>
<tr>
<td>649</td>
<td>Interface</td>
<td>8/28/2013</td>
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<td>open</td>
<td>Need to display the average service life remaining</td>
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<tr>
<td>650</td>
<td>Interface</td>
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<td>Include Outdoor Irrigations table in the summary and print/word report</td>
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<tr>
<td>652</td>
<td>Business Logic</td>
<td>8/30/2013</td>
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<td>closed</td>
<td>Outdoor BMP water use calculation is incorrect</td>
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<tr>
<td>653</td>
<td>Interface</td>
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<td>9/3/2013</td>
<td>closed</td>
<td>Profile Permissions - only shows edit/remove for Owner</td>
</tr>
<tr>
<td>654</td>
<td>Admin Functions</td>
<td>8/30/2013</td>
<td>9/13/2013</td>
<td>closed</td>
<td>Sample Profile - Profile Permissions Page should not show all users</td>
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<tr>
<td>656</td>
<td>Interface</td>
<td>9/2/2013</td>
<td>9/26/2013</td>
<td>closed</td>
<td>Remove the word &quot;details&quot; from the individual bmp detail links.</td>
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<td>9/4/2013</td>
<td>9/27/2013</td>
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<td>If the user has &quot;View&quot; permissions on a utility, he should be allowed to add it to a profile.</td>
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<tr>
<td>660</td>
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<td>663</td>
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</tr>
<tr>
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<td>Specify study year on Water Budget Details page.</td>
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<td>In the Data Query, add ability for admins to search on Utility</td>
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<tr>
<td>669</td>
<td>Interface</td>
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<td>9/24/2013</td>
<td>closed</td>
<td>CII - water use units incorrect</td>
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<td>End Date</td>
<td>Status</td>
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<td>9/13/2013</td>
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<td>9/13/2013</td>
<td>closed</td>
<td>For Average People per House table, change button name to 'Restore CFWC'</td>
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<tr>
<td>672</td>
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<td>9/11/2013</td>
<td>10/3/2013</td>
<td>closed</td>
<td>The link for Fixture Library Document does not work</td>
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<td>CII Water Budget - Pre-Rinse Spray Valve % water use incorrect</td>
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<td>Rename charts in Planning</td>
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<td>Goal savings was 46 but optimizer got 46.12</td>
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<td>Add column to the Utilities table to store created date</td>
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<td>Would like user specified parameter to define start year for projections graph</td>
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<td>10/30/2013</td>
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<td>Add text to planning to clarify present worth calculation</td>
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<td>689</td>
<td>Database or Web Services</td>
<td>10/17/2013</td>
<td>4/15/2014</td>
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<td>Create database entry for constant used for residential passive savings calculation</td>
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<td>10/30/2013</td>
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<td>Show more information on Passive Savings in BMP, Planning, and Tracking</td>
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<td>11/9/2013</td>
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<td>Change to only project population</td>
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<td>11/5/2013</td>
<td>11/9/2013</td>
<td>closed</td>
<td>BMP Goals - change so that it no longer displays projected GPCD</td>
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<td>11/9/2013</td>
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<td>Update Planning and Tracking charts</td>
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<td>695</td>
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<td>11/13/2013</td>
<td>11/13/2013</td>
<td>closed</td>
<td>In some cases, the Sample Profile displays the real utility names</td>
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<tr>
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<td>11/13/2013</td>
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<td>Sample profile - need better error handling if the user does not select any utilities</td>
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<td>Message about successful reanalyze is displayed several pages later</td>
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<tr>
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<td>Business Logic</td>
<td>11/19/2013</td>
<td>2/3/2014</td>
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<td>Totals Row in Irrigation Configurables should prevent editing</td>
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<td>Sub-Date</td>
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<td>Description</td>
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<td>Split Planning Summary table into three separate tables by sector</td>
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<td>2/3/2014</td>
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<td>Rename &quot;Residential Units&quot; to &quot;Households&quot;</td>
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<td>705</td>
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<td>Need more detailed information in the email sent to user regarding rejected requests</td>
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<td>Error when accessing the Water Supply Analysis Summary Page</td>
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<td>Unable to edit certain years on Population Projections page</td>
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<td>Target GPCD validation and BMP Charts should be based off of projected GPCD</td>
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<td>Interface</td>
<td>2/3/2014</td>
<td>2/3/2014</td>
<td>open</td>
<td>Need to refresh irrigation grid after change in occupancy rate</td>
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<td>2/23/2014</td>
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<tr>
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<td>Stories Distribution - indicate that we are showing a percent</td>
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<td>Error when user changes the goal type to &quot;--Select--&quot; and then clicks on Bmp Results left menu</td>
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<td>GetResidentialUnits() does not use the analysis year in query</td>
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<td>Date</td>
<td>Resolution Date</td>
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<td>Description</td>
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<td>4/30/2014</td>
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<td>Error when existing profile accesses projections before population projection is defined</td>
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<td>Print Projections - page not complete</td>
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<td>Planning and Projections charts are not consistent</td>
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## Viewing Issue Advanced Details

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<tr>
<th>ID</th>
<th>Category:</th>
<th>Severity:</th>
<th>Reproducibility:</th>
<th>Date Submitted:</th>
<th>Last Update:</th>
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<tbody>
<tr>
<td>331</td>
<td>[EZ Guide Online] Feature</td>
<td>minor</td>
<td>always</td>
<td>06-21-11 16:03</td>
<td>09-26-13 12:05</td>
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**Reporter:** rswitt  
**Assigned To:** ldpayne  
**Priority:** low  
**Status:** assigned  
**Product Build:**  
**Projection:** none  
**ETA:** none  
**Level of Effort:**  
**Summary:** No indication when idle time has lapsed. Can we send user back to login after elapsed time?  
**Description:** see subject  
**Steps To Reproduce:**  
**Additional Information:**  
**Attached Files:** There are no notes attached to this issue.

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<tr>
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<td>481</td>
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<td>01-09-12 09:08</td>
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**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** assigned  
**Product Build:**  
**Projection:** none  
**ETA:** none  
**Level of Effort:**  
**Summary:** When the user changes his password, have the system log him out and return to the login page  
**Description:** Typically, when a system allows you to change your password, it then makes you log back in with the new password. We would like ezguide to model that behavior as well.  
**Steps To Reproduce:**
**Summary:** Have a summary table with all BMPs

**Description:** Robert Wanvestraut from SFWMD would be interested in a single table which included all the BMPs ranked in the order of cost effectiveness. Basically, this would be that table which marginal cost curve is based on. As far as I can tell, there is no singular table that presents all of the optimized BMP options. Maybe such a table should be part of the summary information? Essentially all the "Detail" tables merged. His reasoning is that he would like to view all the BMP options at once so that he can compare them (e.g., see how showerheads compare to toilets).

**Steps To Reproduce:** In the totals row of the BMP Summary table, have a "View All Details" link which will open a new tab and display all bmps in a paginated grid. Separate into multiple grids by sector and order by cost effectiveness.

**Additional Information:** There are no notes attached to this issue.
Summary: Have popup for important messages

Description: When we have important messages to display to the user regarding the system, we need a popup to display these messages. This popup will open immediately after the user logs into the system.

We need a table to store the message and an expiration date.

We also need a link on the home page which allows the user to see all current messages.

Steps To Reproduce:

Additional Information: Upon further discussion, we decided to have an Introduction page. It will be the first menu option under “Home” and will be the page displayed after login. Any alerts will ve displayed on this page. There will also be a checkbox to allow the user to skip this page from now on. This can also be set in the Personal Information page for the user.

Attached Files: There are no notes attached to this issue.
### Viewing Issue Advanced Details

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<th>Category:</th>
<th>Severity:</th>
<th>Reproducibility:</th>
<th>Date Submitted:</th>
<th>Last Update:</th>
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**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** resolved  
**Product Build:**  
**Projection:** none  
**ETA:** none  
**Level of Effort:** 4 hours  

**Summary:** Feature - display both the original and corrected values in MOR chart.  
**Description:** MOR 10 yr chart shows *corrected* values from data review page. Can we display the original AND the corrected, with the corrected in a different color?  
**Steps To Reproduce:**  
**Additional Information:** Both values are shown.  
**Attached Files:** There are no notes attached to this issue.

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<tr>
<td>580</td>
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<td>always</td>
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</table>

**Reporter:** ldpayne  
**Assigned To:** rswitt  
**Priority:** high  
**Status:** resolved  
**Product Build:**  
**Resolution:** fixed
Summary: Add instructions on how to edit values in a grid

Description: The edit button on the grid is not intuitive, so we need to add some text along with the picture of the edit button. We also need more description as to how the grid edit works. Suggested text:

"Values in yellow cells can be edited by the user. To edit a value, the value or row must be selected. The value may be changed by clicking the edit (picture) icon on the grid’s toolbar."

After identifying the text to be used and the locations for this text (do you want it above or below all grids or just on the intro page and do you want it to appear only once on a page with multiple grids?), reassign to Laurel.
### Summary:
BMP Goals Page - text needs updated

### Description:
The first paragraph on the BMP Goals Page is as follows:

"The BMP goals page requires that you select the Optimization type: By Target Gross GPCD or By Program Budget (i.e. how much water do you want to save or how many dollars do you want to save). The target gross GPCD represents the GPCD to be achieved after conservation BMPs have been implemented. The target gross GPCD must be less than the current gross GPCD from the water budget but cannot exceed the maximum possible savings. Program budget represents the total budget allocated for single and multi family indoor fixture retrofit programs."

1. It says Program Budget is "how many dollars do you want to save" but it's it really how much you want to spend?
2. The last sentence should also reference outdoor and CII

### Steps To Reproduce:

### Additional Information:

### Attached Files:
There are no notes attached to this issue.

---

**Viewing Issue Advanced Details**

<table>
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<tr>
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<th>Severity:</th>
<th>Reproducibility:</th>
<th>Date Submitted:</th>
<th>Last Update:</th>
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**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** resolved  
**Product Build:**  
**Projection:** none  
**ETA:** none  
**Level of Effort:** 20 hours

**Summary:** Add menu option for Sample Profile  
**Description:** On the left Home menu, add "Sample Profile (First time users start here) to the top of the left
Steps To Reproduce: A setting was added to Site Settings to specify the sample utility id to use for sample profiles. If the user is editing or viewing a profile based on this sample utility, the name of the utility will say "Sample Utility" and the link to view the boundary map will be disabled. On the Intro page, the user can select to view a sample profile or create a new sample profile. When a sample profile is created, the system will automatically associate the sample utility with the profile. There is also an opt out checkbox on the Intro page and on the account details page so the user can bypass the intro page if desired. The code is written for this but we need to wait on approval to use utility data for our sample utility.

Additional Information: We are going to use Palm Coast and Leesburg as the sample utilities, so I need to modify to add both to the Sample Profile automatically. Also need to change our site settings. Currently you can only specify one sample utility but now we need two. And when we add the second one, need to make sure we grant permissions to all existing users and that new users automatically get the same permissions when they are created.

The decision was made to use two utilities as samples to decrease the likelihood of the user determining which utility was being represented.

Notes

(0000255) ldpayne 07-29-13 10:05

We are going to use Palm Coast and Leesburg as the sample utilities, so I need to modify to add both to the Sample Profile automatically. Also need to change our site settings. Currently you can only specify one sample utility but now we need two. And when we add the second one, need to make sure we grant permissions to all existing users and that new users automatically get the same permissions when they are created.

(0000259) ldpayne 08-19-13 08:57

The decision was made to use two utilities as samples to decrease the likelihood of the user determining which utility was being represented.

Viewing Issue Advanced Details

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<td></td>
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<tr>
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<td>ETA: none</td>
<td>Level of Effort: 1 hour</td>
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Summary: Reanalyze before Utility assigned to a profile causes error

Description: Currently if you have a profile with no associated utility and we have flagged all profiles for reanalyze, it will cause an error if you try to do so. Need better error handling so it doesn't crash.

Steps To Reproduce: Before setting reanalyze flag, verify the profile as at least 1 utility associated with it.

Attached Files: There are no notes attached to this issue.
## Viewing Issue Advanced Details

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**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** resolved  
**Product Build:**  
**Projection:** none  
**ETA:** none  
**Level of Effort:** .5 hours  

**Summary:** Leaving profile name blank causes error  
**Description:** If you start a new profile and click the `<Save Profile Name>` button before entering a profile name, you get an "object reference not set to and instance of an object" error.  
**Steps To Reproduce:** Display an error message if there is no profile name.  
**Additional Information:**  
**Attached Files:** There are no notes attached to this issue.

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**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** resolved  
**Product Build:**  
**Projection:** none  
**ETA:** none  
**Level of Effort:** 1.5 hour  

**Summary:** Error logged when entering Projections for the first time.  
**Description:** An error is generated in the log (not visible to user) when the projections module is entered for the first time.  
**Steps To
Add code to check to see if record exists before retrieving.

Additional Information:
This is because it attempts to get the planning horizon record for that profile, but there isn't one.

Steps To Reproduce:
Added test to ensure the existence of at least one utility associated with the profile before attempting to analyze parcel data.

Summary: Need improved Error Handling

Description: We need to better handle the case where a utility with no PWSIDs defined is used. Technically this "shouldn't" happen as a utility should not be enabled until PWSIDs are defined for it, but in the case of City of Leesburg utility, there was a mix-up with two utility definitions causing some confusion. There were many errors generated, when instead, the system should have checked for the existence of PWSIDs and notified the user if there were none rather than attempting to import data.

Additional Information: There are no notes attached to this issue.
**Product Build:**

- **Resolution:** fixed

- **Projection:** none

- **ETA:** none

- **Level of Effort:** 3 hours

**Summary:** BMP Summary chart - wrong GPCD

**Description:** For the Citrus County (Randy Test 2) profile, the bmp summary charts have the wrong starting GPCD value.

**Steps To Reproduce:**

**Additional Information:** The chart is using plan end gpcd to account for passive savings, but in this case, the plan end gpcd is greater than the current gross gpcd so the application needs to check for that case.

**Attached Files:**

- There are no notes attached to this issue.

---

**Viewing Issue Advanced Details**

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- **Reporter:** ldpayne
- **Platform:**
- **Assigned To:** ldpayne
- **Priority:** normal
- **OS:**
- **Status:** resolved
- **Product:**
- **OS Version:**
- **Version:**

- **Product Build:**
- **Resolution:** fixed

- **Projection:** none

- **ETA:** none

- **Level of Effort:** 4 hours

**Summary:** Need admin function to set the flag indicating there is new MOR or BFR data for this profile

**Description:** We need a mechanism whereby an admin can flag a profile as having invalid BFR/MOR data so that on the Existing Profiles page, the "Update" link will be displayed allowing the user to re-import that data.

**Steps To Reproduce:**

**Additional Information:** Added a checkbox column to the "Select Profiles to Reanalyze" page so the user can select to flag the profile for DOR update and/or reanalyze.

**Attached Files:**

- There are no notes attached to this issue.

---

**Viewing Issue Advanced Details**

|-----|----------------------------------|---------------------|----------------------|----------------------------------|-----------------------------|

- **Reporter:**
- **Platform:**
- **Assigned To:**
- **Priority:** normal
- **OS:**
- **Status:** resolved
- **Product:**
- **OS Version:**
- **Version:**

- **Product Build:**
- **Resolution:** fixed

- **Projection:** none

- **ETA:** none

- **Level of Effort:** 4 hours
Business Logic

**Reporter:** ldpayne  **Platform:**
**Assigned To:** ldpayne  **OS:**
**Priority:** normal  **OS Version:**
**Status:** resolved  **Product Version:**
**Product Build:** none  **Resolution:** fixed
**Projection:** none  **ETA:** none
**Level of Effort:** 0.5 hrs

**Summary:** City of Tampa profile shows two "City of Tampa..." utilities associated with it

**Description:** In the City of Tampa profile, on the profile utilities page, it lists City of Tampa..." two times. Each has a different status. A new shapefile for Tampa was submitted so the data request status is set to "Submitted" but it is also showing a row with data request status set to “Request Approved”.

**Steps To Reproduce:**
**Additional Information:** Deleted duplicate utility definition

**Viewing Issue Advanced Details**

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**Reporter:** ldpayne  **Platform:**
**Assigned To:** ldpayne  **OS:**
**Priority:** normal  **OS Version:**
**Status:** resolved  **Product Version:**
**Product Build:** none  **Resolution:** fixed
**Projection:** none  **ETA:** none
**Level of Effort:** 0.5 hrs

**Summary:** Planning: when the data source is "user", display "user" in green

**Description:** In effort to make it more noticeable, change the color of the word "user" in the data source column to green.

**Steps To Reproduce:**
**Additional Information:** Changed as described in summary.

**Attached Files:** There are no notes attached to this issue.
### Issue 631: Profile Admin - search by owner auto-complete does not work

**Summary:** Profile Admin - search by owner auto-complete does not work

**Description:** In Admin, the search for profiles by owner dialog box no longer shows matching names in an auto-complete drop down.

**Steps To Reproduce:**

**Additional Information:** This bug was introduced when attempting to get the cursor to start in the text box. Removed unneeded code related to that which conflicted with the auto complete.

**Attached Files:** There are no notes attached to this issue.

### Issue 632: Unapproved users should not be able to be added to profile permission

**Summary:** Unapproved users should not be able to be added to profile permission

**Description:** If a user is unapproved, he should not appear in the list of users to be granted permission to a given profile. Existing permissions granted to that user when previously approved will not be removed however.
### Viewing Issue Advanced Details

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**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** assigned  
**Product Build:**  
**Projection:** none  
**ETA:** none  

**Level of Effort:**  
**Summary:** Admin - need to be able to edit user information  
**Description:** In the admin module, add feature to allow editing of user information.

**Steps To Reproduce:**  
**Additional Information:**  
**Attached Files:** There are no notes attached to this issue.

### Viewing Issue Advanced Details

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**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** resolved  
**Product Build:**  
**Projection:** none  
**ETA:** none  

**Level of Effort:**  
**Summary:**  
**Description:**  
**Steps To Reproduce:**  
**Additional Information:**  
**Attached Files:** There are no notes attached to this issue.
**Level of Effort:** 0.5 hrs

**Summary:** Change labels for fixture count tables

**Description:** IN SF and MF Water Budget Details, Change titles for tables as follows:

- Residential Bath Counts -&gt; "Residential Units Grouped by Number of Baths"
- Effective Build Date -&gt; "Usage Rate"
- Toilet Counts - Toilets Per Residence -&gt; "Toilet Counts"

**Steps To Reproduce:**
- **Additional Information:** Changed as described in summary.

**Attached Files:**

There are no notes attached to this issue.

---

**Viewing Issue Advanced Details**

|-----|------------------------------------------|-----------------|--------------------------|---------------------------------|-------------------------------|

**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** resolved  
**Product Build:** none  
**Projection:** none  
**ETA:** none  
**Level of Effort:** 6 hours

**Summary:** Modification to outdoor configurables does not adjust the water budget

**Description:** When the max cutoff or % irrigated coefficients are changed, the water budget is not recalculated to reflect these changes

**Steps To Reproduce:**
- **Additional Information:** Have to apply the max cutoff at the parcel level (rather than applying to an average lot size value). Then apply % irrigated to that maximum average irrigable lot size.

**Attached Files:**

There are no notes attached to this issue.
Summary: Palm coast - Multi Family GPCD is unrealistically low
Description: The multi-family residential GPCD is 23 which is far below a reasonable value.
Steps To Reproduce:
Additional Information: The Residential Units calculation for population was not consistent with the calculation used for water use.
Attached Files: There are no notes attached to this issue.

Viewing Issue Advanced Details

ID: 637
Category: [EZ Guide Online] minor Business Logic
Severity: minor
Reproducibility: always
Date Submitted: 08-12-13 20:38
Last Update: 08-27-13 20:55

Summary: Reanalyze - checking just DOR update does not work
Description: In admin, if you choose to select profiles to reanalyze and select only to do a DOR update on one or more profiles, it does not flag the profile for DOR update. It only works if you select at least one profile for reanalyze as well.
Steps To Reproduce:
Additional Information: Code had to be written so calls were synchronous so needed a separate condition to handle this case.
Attached Files: There are no notes attached to this issue.
**Summary:** BFR - the BFR data for Marion County is not correct for 2011

**Description:** The BFR data for 2011 (Marion County) is not being retrieved correctly. In the case where there are multiple PSWIDs for a utility, it will return 2011 records where there is a PWSID record for 2011 but not 2012 rather than returning all records for 2011. This causes the numbers to be unrealistically low because it is not actually summing all BFR records for 2011.

**Steps To Reproduce:**

**Additional Information:** The code for this area has not changed since it's original commit to version control. The data may have changed as we are currently not seeing any records for 2009 where we previously had. Waiting on response from Randy.

**Attached Files:**

<table>
<thead>
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<th>Notes</th>
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<tbody>
<tr>
<td>Code has been in error this whole time - just didn't notice it because we were previously working with a BFR table with data for only one year - 2009. Now we have a table with 2011 and 2012 data. Code changes were made to fix the error but it has not been updated to the server yet.</td>
</tr>
</tbody>
</table>

| (0000258) |
| ldpayne |
| 08-14-13 |
| 12:52 |

| The code was changed to correctly retrieve multiple years from one table. We still need to put the 2009 data into the table currently being used. |

| (0000260) |
| ldpayne |
| 08-27-13 |
| 20:54 |

| We were not seeing records for 2009 because they are in another table and need to be moved to the currently table with 2011/2012 data. The routine appeared to work when we only had one year of data, but having two years caused problems. Fixed routine to function correctly with multiple years. |

| (0000261) |
| ldpayne |
| 09-03-13 |
| 12:10 |
### Viewing Issue Advanced Details

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<tr>
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**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** resolved  
**Product Build:**  
**Projection:** none  
**ETA:** none  
**Level of Effort:** 2 hour

**Summary:** BMP Analysis showing no passive savings  
**Description:** For Marion County, the BMP Analysis shows "0" passive savings.

**Steps To Reproduce:**  
**Additional Information:** It looks like the cause of the zero passive savings is a very large amount of outdoor water use.  
Because there is no passive replacement for outdoor, the large outdoor GPCD causes the plan end GPCD to be larger than the current GPCD.

There was also an error in calculating residential water use.

**Attached Files:**

**Notes**

(0000257) Waiting on response to verify that this is ok.
**Summary:** Rename tables and column names in water budget details.

**Description:**
- Change "Residential Bath Fixture Counts" to "Residential Fixture Counts"
- Change "Effective build Date" to "Efficiency Level" and fill with "Pre-conservation, Improved, Current"
- In Fixture counts tables, replace eff. Build date with efficiency level and keep the rate (5.0 gal/flush)
- Change title to "Toilet Counts by Number of Baths" and add "Bath x" to titles of columns (1 bath, 2 baths, etc.). Do this for all fixture tables.
- In the clothes washer table, don't need the "1" column.
- Move the Fixture Frequency of Use table up to the other tables that are constants. Do the same for the GPCD table.
- Daily Toilet Usage table (and other usage tables) – change to Efficiency level.

**Steps To Reproduce:**
- All changes are made as described.

**Additional Information:**
- There are no notes attached to this issue.
**Business Logic**

**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** assigned  
**Product Build:**  
**Projection:** none  
**ETA:** none  
**Level of Effort:**

**Summary:** Unhandled Exception when account is locked  
**Description:** Ken made several attempts to log in to his account so the account was locked. He changed his password and got to the VerifyPassword page. After entering the new password, he clicked <Continue> and the exception was thrown saying user account was locked out.

**Steps To Reproduce:**

**Additional Information:**

**Attached Files:** UnhandledException.docx (454 KB) 08-23-13 10:52

There are no notes attached to this issue.

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**Viewing Issue Advanced Details**

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**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** resolved  
**Product Build:**  
**Projection:** none  
**ETA:** none  
**Level of Effort:** 1 hour

**Summary:** The Villages is showing a very high average effective area for >1994 time period  
**Description:** The Villages is showing a very high average effective area for >1994 time period.

**Steps To Reproduce:**

**Additional Information:** Turns out the number of residential units is set to zero for many of these records. Added check so that if the number of residential units is zero, I set it to 1.

**Attached Files:**

There are no notes attached to this issue.
### Viewing Issue Advanced Details

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<th>Category: [EZ Guide Online]</th>
<th>Severity: minor Business Logic</th>
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**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** resolved  
**Product Build:**  
**Resolution:** fixed  
**Level of Effort:** 3 hours

**Summary:** Gross GPCD is too high  
**Description:** For most profiles, the Gross GPCD is higher than it should be.  
**Steps To Reproduce:** We were calculating the total population based on the average of the average people per house for single family and multi family. This resulted in a total population that was less than the single family population in some cases. Changed to have total population be the sum of the SF and MF populations.

**Additional Information:**  
There are no notes attached to this issue.

### Viewing Issue Advanced Details

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**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** resolved  
**Product Build:**  
**Resolution:** fixed  
**Level of Effort:** 5 hours

**Summary:** Put warning about charts not displaying in IE9  
**Description:** Warning should go on introduction page  
**Steps To Reproduce:** Put warning in red on login page

**Additional Information:**
### Issue 646: [EZ Guide Online] Business Logic - minor Severity

**ID:** 646  
**Category:** [EZ Guide Online] Business Logic  
**Severity:** minor  
**Reproducibility:** always  
**Date Submitted:** 08-28-13 16:05  
**Last Update:** 09-05-13 13:06

**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** assigned  
**Platform:**  
**OS:**  
**OS Version:**  
**Product:**  
**Version:**  
**Product Build:**  
**Projection:** none  
**ETA:** none  
**Resolution:** open

**Summary:** BFR shows different GPCDs for 2011 and 2012 even though everything is the same.

**Description:** WSA section, FDEP Basic Facility Report - Show different gpcd's for 2011 and 2012 even though everything else is the same.

**Steps To Reproduce:**

**Additional Information:** This is actually correct because the gpcd is calculated using the average flow per year, which differs between years. To alleviate this confusion, add a column just before the Gross GPCD column showing the total water use. Use the corrected data, if any.

### Issue 647: [EZ Guide Online] Interface - minor Severity

**ID:** 647  
**Category:** [EZ Guide Online] Interface  
**Severity:** minor  
**Reproducibility:** always  
**Date Submitted:** 08-28-13 16:06  
**Last Update:** 09-03-13 12:07

**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** resolved  
**Platform:**  
**OS:**  
**OS Version:**  
**Product:**  
**Version:**  
**Product Build:**  
**Projection:** none  
**ETA:** none  
**Resolution:** fixed

**Level of Effort:** .5 hours

**Attached Files:** There are no notes attached to this issue.
**Summary:** Average People Per House comes from US Census, not FDEP

**Description:** Whenever we reference the average people per house coming from FDEP data, change to say it comes from US Census data.

**Steps To Reproduce:**

**Additional Information:** Changed as described in Description.

**Attached Files:**
There are no notes attached to this issue.

---

**Summary:** IWB Property Information table - totals and averages incorrect

**Description:**
The sum of the populations is not correct
The average of the CII Average Effective areas is a sum rather than an average.

**Steps To Reproduce:**

**Additional Information:**
Used parcel count to weight the average effective areas.
The sum of populations is fixed. We were using the average of the average people per house which created too big of a discrepancy.

**Attached Files:**

**Notes**

(0000262) ldpayne 09-04-13 10:03  Per Miguel - I think the way to go about this is to calculate fixture counts based on the heated building area, and the functional population based on the FGDILNDSQFOOT. Parcels without any building area should not have fixtures on them and thus no water use. By using the parcel area to calculate functional population, we'll get a higher demand per fixture than we were previously.

(0000263) ldpayne 09-05-13 12:58  Parcel counts is the weighting factor.
### Viewing Issue Advanced Details

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- **Reporter:** ldpayne
- **Assigned To:** ldpayne
- **Priority:** normal
- **Status:** assigned
- **Product Build:**
- **Projection:** none
- **ETA:** none
- **Level of Effort:**

**Summary:** Need to display the average service life remaining

**Description:** In the BMP Details for Indoor, need to display average service life remaining for each group

**Steps To Reproduce:**

---

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- **Reporter:** ldpayne
- **Assigned To:** ldpayne
- **Priority:** normal
- **Status:** assigned
- **Product Build:**
- **Projection:** none
- **ETA:** none
- **Level of Effort:**

**Summary:** Include Outdoor Irrigations table in the summary and print/word report

**Description:** The table that outlines the outdoor percent irrigators is missing from the summary and print/word report.

**Steps To Reproduce:**

---

There are no notes attached to this issue.
### Viewing Issue Advanced Details

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<th>Reproducibility:</th>
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**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** resolved  
**Product Build:**  
**Projection:** none  
**ETA:** none  
**Level of Effort:** 2 hours

**Resolution:** fixed  

**Summary:** Outdoor BMP water use calculation is incorrect  
**Description:** The water use calculation is using the number of accounts rather than the chord Length (1000 sq.ft). Also the number of accounts should be divided by 3.

**Steps To Reproduce:**  
**Additional Information:** Changed to use the chordLength in the water use calculation and modified the number of accounts to divide by 3.

**Attached Files:**

- There are no notes attached to this issue.

**Platform:** OS:  
**OS Version:** Product Version:  

**Priority:** normal  
**Status:** resolved  
**Product Build:**  
**Resolution:** fixed  
**Level of Effort:** .5 hours
**Summary:** Profile Permissions - only shows edit/remove for Owner

**Description:** In Profile Permissions, it's only showing edit/remove options for the Owner.

**Steps To Reproduce:**
Additional Information: Fixed to show edit/remove for all but Owner

**Attached Files:**

There are no notes attached to this issue.

**Viewing Issue Advanced Details**

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**Reported By:** ldpayne
**Platform:**
**Assigned To:** ldpayne
**Priority:** normal
**Status:** resolved
**Product Build:**
**Resolution:** fixed
**Level of Effort:** 1 hour

**Summary:** Sample Profile - Profile Permissions Page should not show all users

**Description:** For a sample profile, do not display the full list of users. Perhaps create a "dummy" user. Also, need to change so View users cannot edit permissions.

**Steps To Reproduce:**
Additional Information: Changed to display Dr. Heaney as the owner and no other users.

**Attached Files:**

There are no notes attached to this issue.

**Viewing Issue Advanced Details**

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**Reported By:** ldpayne
**Platform:**
**Assigned To:** ldpayne
**Priority:** normal
**Status:** resolved

**Viewing Issue Advanced Details**
**Summary:** Remove the word "details" from the individual bmp detail links.

**Description:** The titles under Detail Links should delete the word Benefits since the tables show other information including savings rates, costs, and benefits.

**Steps To Reproduce:**

**Additional Information:** Changed as described

**Attached Files:**

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**Viewing Issue Advanced Details**

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**Reporter:** ldpayne

**Assigned To:** ldpayne

**Priority:** normal

**Status:** resolved

**Product Build:**

**Resolution:** fixed

**Platform:**

**OS:**

**OS Version:**

**Product Version:**

**Product:**

---

**Summary:** BMP Charts - missing y-axis label and change title.

**Description:** The y axis label is missing in the total cost and benefit curves. It should be Total $ per Day.

The title of the second graph should be: Conservation Program Total Savings and Total Costs

**Steps To Reproduce:**

**Additional Information:** Changed the title

Unable to recreate problem where y-axis label is missing - emailed Dr. Heaney to see if he still sees the problem

**Attached Files:**

---

There are no notes attached to this issue.
**Summary:** If the user has "View" permissions on a utility, he should be allowed to add it to a profile.

**Description:** Currently "owner" permissions is required to add a utility to a profile. Need to change this to "View" permissions.

**Steps To Reproduce:**

**Additional Information:** Changed as described.

**Attached Files:**

There are no notes attached to this issue.

**Summary:** Need a link to display PWSIDs on the Profile Utilities page.

**Description:** Have a link to view utility info in the table. Link will open a view only page (pop-up) with all utility information and a link to "edit" which will take you to the utility information page (if you have owner/edit permissions)

**Steps To Reproduce:**

**Additional Information:**

**Attached Files:**
### Viewing Issue Advanced Details

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- **Reporter:** ldpayne
- **Assigned To:** ldpayne
- **Platform:**
- **OS:**
- **Priority:** normal
- **OS Version:**
- **Status:** resolved
- **Product Version:**
- **Product Build:**
- **Resolution:** fixed
- **Projection:** none
- **ETA:** none
- **Level of Effort:** .5 hours

**Summary:** On Profile Summary page, the first sentence references the Water Supply Analysis.

**Description:** This sentence should say the user has completed the "Profile Module".

**Steps To Reproduce:**

**Additional Information:** Changed as described.

**Attached Files:**

There are no notes attached to this issue.

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### Viewing Issue Advanced Details

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- **Reporter:** ldpayne
- **Assigned To:** ldpayne
- **Platform:**
- **OS:**
- **Priority:** normal
- **OS Version:**
- **Status:** resolved
- **Product Version:**
- **Product Build:**
- **Resolution:** fixed
- **Projection:** none
- **ETA:** none
- **Level of Effort:** 1 hour

**Summary:** Historical - change validation on implementation year

**Description:** Make validation check for between 1970 - current year. Change to be a text box.
Steps To Reproduce:

Additional Information: Changed as described.

Attached Files:

There are no notes attached to this issue.

**Viewing Issue Advanced Details**

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**Reporter:** ldpayne

**Assigned To:** ldpayne

**Priority:** normal

**Status:** assigned

**Product Build:**

**Projection:** none

**ETA:** none

**Level of Effort:**

**Summary:** MOR chart - just show corrected values

**Description:** The MOR chart shows all FDEP reported values and all CFWC values. The CFWC values are the same as FDEP reported until someone modifies them. So rather than showing all CFWC values, only show those edited by the user.

**Steps To Reproduce:**

**Additional Information:**

**Attached Files:**

There are no notes attached to this issue.

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**Viewing Issue Advanced Details**

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**Reporter:** ldpayne

**Assigned To:** ldpayne

**Priority:** normal

**Status:** resolved

**Product Build:**

**Resolution:** fixed
**Summary:** Irrigation Calibration - change "Total Accounts" to "Total Parcels"

**Description:** See summary.

**Steps To Reproduce:**

**Additional Information:** changed as described

**Attached Files:**
There are no notes attached to this issue.

### Viewing Issue Advanced Details

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**Reporter:** ldpayne

**Assigned To:** ldpayne

**Priority:** normal

**Status:** resolved

**Product Build:** none

**Projection:** none

**ETA:** none

**Level of Effort:** 1.5 hrs

**Summary:** CII fixture counts incorrect for DOR 82, 76, and 97

**Description:** We are currently using LND_SQ_FT to calculate both the functional population and the fixture counts. Change to only use parcel size to calculate the functional population.

**Steps To Reproduce:**

**Additional Information:** Changed as described.

**Attached Files:**
There are no notes attached to this issue.

### Viewing Issue Advanced Details

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<td>666</td>
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**Reporter:** ldpayne

**Platform:**
Summary: Specify study year on Water Budget Details page.

Description: For each of the Water Budget detail pages, add the text "...for the study year xxxx" to the titles.

Steps To Reproduce:

Additional Information:

Attached Files: There are no notes attached to this issue.
### Issue 668

**ID:** 668  
**Category:** [EZ Guide Online] feature  
**Severity:** N/A  
**Reproducibility:**  
**Date Submitted:** 09-05-13 13:04  
**Last Update:** 09-05-13 13:04  

**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** assigned  
**Product Build:** none  
**Resolution:** open  

**Summary:** In the Data Query, add ability for admins to search on Utility  
**Description:** Add the ability for admin users to query data on UtilityId.  
**Steps To Reproduce:**  
**Additional Information:**  
**Attached Files:** There are no notes attached to this issue.

---

### Issue 669

**ID:** 669  
**Category:** [EZ Guide Online] Interface  
**Severity:** minor  
**Reproducibility:** always  
**Date Submitted:** 09-05-13 13:09  
**Last Update:** 09-24-13 13:11  

**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** resolved  
**Product Build:** none  
**Resolution:** fixed  

**Summary:** CII - water use units incorrect  
**Description:** On the CII Individual Details pages, change water use title to "Total Water Use(MGD) and change calculation to report MGD. Verify on the main CII details page that the sector water use values are MGD  
**Steps To Reproduce:**  
**Additional Information:** This is updated to the server. Need Miguel to test  
**Attached Files:**
## View Issue Advanced Details

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**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** resolved  
**Product Build:**  
**Projection:** none  
**ETA:** none  
**Level of Effort:** 1.5 hrs  

**Summary:** Showerhead Units wrong  
**Description:** In the "Showerhead Counts by Number of Baths" table, the row headers list the wrong values for gal/min. It is instead showing gal/use. This values need to be changed and it was recommended that the title change to "...by fixtures per home" instead of "...by number of baths".  
**Steps To Reproduce:**  
**Additional Information:** Changed to show gal/min rather than gal/use  

## Attached Files:

- There are no notes attached to this issue.

---

## View Issue Advanced Details

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<tr>
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**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** resolved  
**Product Build:**  
**Projection:** none  
**ETA:** none  

**Summary:** For Average People per House table, change button name to 'Restore CFWC'  

---

There are no notes attached to this issue.
**Description:** Since Average People per House data is based on U.S. Census block data, restoring the default should not read "Restore DEP" but rather "Restore CFWC"

**Steps To Reproduce:**

**Additional Information:** Changed as described.

**Attached Files:**

There are no notes attached to this issue.

---

**Summary:** The link for Fixture Library Document does not work

**Description:** This is the path that the link is currently pointed to:


In addition, the M36 link in water audits is not working and the AWAA link goes to the appropriate web site but the document is not found.

**Steps To Reproduce:**

**Additional Information:**

**Attached Files:**

There are no notes attached to this issue.
Passive Water Conservation Projections module

A key calculation we make is our passive savings estimate for SFR indoor, SFR outdoor, and CII which is currently buried in code, and not displayed. I propose (as a long term goal) that we add in a "passive water conservation projections" section within the projections module. This section would show on the main page a chart and/or table with the user entered w/o conservation projections and then our projections incorporating passive conservation. It would be useful to break it out by each major sector. We could then have a details page per sector with our key assumptions outlined. In the details page, we would show how we calculate the "end of horizon" gpcd’s and then we could assume linear interpolation between the analysis year and plan end or something similar.

Also, we may want to revisit our BMP goals page. I know we discussed it before, but there is no display of passive savings on the goals page. I know we agreed to only display "needed gpcd savings" but perhaps we should break that out into "projected passive gpcd change" and "needed utility incentivized gpcd savings." I think we should also revisit our decision to cutoff passive savings at 0 if we projected "passive gpcd" to be higher than analysis year gpcd.

We should consider this after we implement our selected parcel output feature.
Summary: CII Water Budget - Pre-Rinse Spray Valve % water use incorrect

Description: In the "Commercial" details, the "Total Pre-Rinse Spray Valve % of Total Water Use(MG)" which reports 0%. From the data on the page, it should = 0.22/8.61 = 3%.

Steps To Reproduce:  
Additional Information: Was displaying showerhead water use rather than pre-rinse - changed to correct value.

Attached Files: There are no notes attached to this issue.

---

Summary: CII Water Budget - remove columns

Description: In the "Industrial" details, in the second table (summary), remove the "Average Monthly Water Use (MG)" column.

In the "Institutional" details, in the second table (summary), remove the "% of Total Peak Water Use in Sector" column.

Steps To Reproduce:  
Additional Information: Columns removed

Attached Files: There are no notes attached to this issue.

---

Summary: CII Water Budget - remove columns

Description: In the "Commercial" details, the "Total Pre-Rinse Spray Valve % of Total Water Use(MG)" which reports 0%. From the data on the page, it should = 0.22/8.61 = 3%.

Steps To Reproduce:  
Additional Information: Was displaying showerhead water use rather than pre-rinse - changed to correct value.

Attached Files: There are no notes attached to this issue.
Priority: normal  
Status: resolved  
OS Version:  
Product Version:  
Product Build:  
Resolution: fixed  
Projection: none  
ETA: none  
Level of Effort: .5 hours  

Summary: CII Water Budget - change header titles on fixture tables  
Description: Remove the "(MG)" from all of the fixture % total water use headers, since the true unit is "%."  
Steps To Reproduce:  
Additional Information: Changed as described  
Attached Files: There are no notes attached to this issue.

Viewing Issue Advanced Details

ID: 677  
Category: [EZ Guide Online]  
Severity: minor  
Business Logic  
Reproducibility: always  
Date Submitted: 09-18-13 10:28  
Last Update: 09-24-13 12:33  

Reporter: ldpayne  
Assigned To: ldpayne  
Priority: normal  
Status: resolved  
OS:  
Product Version:  
Product Build:  
Resolution: fixed  

Level of Effort: 1.5 hour  

Summary: CII Water Budget - % Sector Water Use incorrect  
Description: In the "Destin Water Users" profile, in the "CII" details page in the Water Budget the "% of Sector Water Use" is wrong. From the top of the page, we know C, I, and I account for a total 1.15, 0.03, and 0.07 MGD. Thus the values for "% of Sector Water Use" should read about 38%, 33%, and 14%, respectively.

Steps To Reproduce:  
Additional Information: Changed to use the calibrated total water use rather than the un-calibrated.

Attached Files: There are no notes attached to this issue.
### Issue 678

**Reporter:** ldpayne  
**Platform:**  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** resolved  
**Product Build:**  
**Projection:** none  
**ETA:** none  
**Level of Effort:** .5 hour

**Category:** [EZ Guide Online] minor  
**Severity:** minor  
**Reproducibility:** always  
**Date Submitted:** 09-18-13 10:29  
**Last Update:** 09-24-13 10:15

**Summary:** Rename charts in Planning  
**Description:** The new titles for the charts in Planning are:  
- Projected Water Use With and Without the Conservation Plan  
- Projected Gross GPCD With and Without the Conservation Plan  
**Steps To Reproduce:**  
**Additional Information:**  
**Attached Files:** There are no notes attached to this issue.

### Issue 679

**Reporter:** ldpayne  
**Platform:**  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** assigned  
**Product Build:**  
**Projection:** none  
**ETA:** none  
**Level of Effort:**

**Category:** [EZ Guide Online] minor  
**Severity:** minor  
**Reproducibility:** always  
**Date Submitted:** 09-18-13 21:45  
**Last Update:** 10-10-13 09:47

**Summary:** Expand the title of the figures to BMP Summary Charts  
**Description:** It would be good to expand the title of the figures to BMP Summary Charts for Unit Costs <= $25/kgal. Then, we can state that 37/55% of the unit costs are <= $25/k gal.  
**Steps To Reproduce:**  
**Additional Information:** Put * on title and then note under the chart saying includes only BMPs with Unit Costs <= $25/kgal.
### Viewing Issue Advanced Details

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**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** resolved  
**Product Build:**  
**Projection:** none  
**ETA:** none  
**Level of Effort:** 1 hour  

**Summary:** Outdoor plan end GPCD calculation incorrect  
**Description:** We are using average irrigable area rather than average irrigated area.  
**Steps To Reproduce:**  
**Additional Information:** Changed to use irrigable area.  
**Attached Files:** There are no notes attached to this issue.

### Viewing Issue Advanced Details

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**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** resolved  
**Product Build:**  
**Projection:** none  
**ETA:** none  
**Level of Effort:** 1 hour  

**Summary:** Max savings not filled in on the BMP Summary Page  
**Description:** The max savings is set to 0 on the BMP Summary Page. Check print out put also  

**Attached Files:** There are no notes attached to this issue.
Steps To Reproduce:
Filled the max savings on both Summary and Print pages.

Additional Information:

Attached Files:
There are no notes attached to this issue.

Viewing Issue Advanced Details

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Summary: Goal savings was 46 but optimizer got 46.12
Description: The Target GPCD goal was 46 but the optimizer got actual savings of 25.10 and passive savings of 21.02
Steps To Reproduce:
This was caused by a rounding issue. Changed to round to the nearest integer.

Attached Files:
There are no notes attached to this issue.

Viewing Issue Advanced Details

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ETA: none
Level of Effort:

Summary: Add column to the Utilities table to store created date
Description: Add a column that records when a new utility record is created to the database (so we can easily see when the utility was created). This doesn’t need to be displayed online (at least for now)

Also add a similar column for when the utility was initially (or last?) activated (allowed to be used)

Steps To Reproduce:

Additional Information:

Attached Files:

There are no notes attached to this issue.

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<table>
<thead>
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<th>Level of Effort:</th>
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<td>6 hours</td>
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Summary: Plan End GPCD calculation incorrect for Residential
Description: The calculation is attempting to duplicate the same algorithm as the water budget, but we are not getting the same results. The algorithm can be replaced with the following:

SFR future gross gpcd= 64.7*percent SFR population
MFR future gross gpcd= 64.7* percent MFR population

The total SFR future gross gpcd + future MFR gross gpcd should sum to 64.7.

Steps To Reproduce:

Additional Information:

Fixed several problems in residential and outdoor future GPCD calculations.

Attached Files:

There are no notes attached to this issue.
### Issue 685

**ID:** 685  
**Category:** [EZ Guide Online] minor Business Logic  
**Severity:** minor  
**Reproducibility:** always  
**Date Submitted:** 10-17-13 13:21  
**Last Update:** 10-30-13 10:49

**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** resolved  
**Product Build:** none  
**Resolution:** reopened

**Steps To Reproduce:**

**Additional Information:** Changed as described.

**Attached Files:** There are no notes attached to this issue.

**Summary:** CII passive savings methodology change

**Description:** I think the CII projection methodology should probably be changed. The problem lies in the state of Florida default sf/pop coefficients which are based on the entire state of Florida. If you compute Crystal River specific CII sf/pop coefficients you get some significant differences, as is shown in the attached SS. For example, for the state we get 21 sf/pop for one-story stores, compared to 62 sf/pop for Crystal River. Hence, it looks like these coefficients are best computed for each utility instead of using statewide defaults. The change in EZ Guide would be to compute for each utility the sf/pop coefficients from the CII subsector Total Heated Area and current utility population.

**Level of Effort:** 2 hours

---

### Issue 686

**ID:** 686  
**Category:** [EZ Guide Online] minor Business Logic  
**Severity:** minor  
**Reproducibility:** always  
**Date Submitted:** 10-17-13 15:41  
**Last Update:** 10-17-13 15:41

**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** assigned  
**Product Build:** none  
**Resolution:** open

**Steps To Reproduce:**

**Summary:** Planning options should be flagged as invalid after a BMP optimization takes place

**Description:** If the user changes the BMP optimization goal and generates new BMPs, the planning data is invalid and should be flagged as such.
### Viewing Issue Advanced Details

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- **Reporter:** ldpayne
- **Platform:**
- **Assigned To:** ldpayne
- **Priority:** normal
- **Status:** assigned
- **Product Build:**
- **Resolution:** open
- **Level of Effort:**

**Summary:** Would like user specified parameter to define start year for projections graph

**Description:** Would like to have a user specified option to either show or hide the analysis year on the projections graph.

**Steps To Reproduce:**

**Additional Information:**

**Attached Files:**

- There are no notes attached to this issue.

---

<table>
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- **Reporter:** ldpayne
- **Platform:**
- **Assigned To:** ldpayne
- **Priority:** normal
- **Status:** assigned
- **Product Build:**
- **Resolution:** open
- **Level of Effort:**

- **Steps To Reproduce:**

- **Additional Information:**

- **Attached Files:**

- There are no notes attached to this issue.
**Level of Effort:**

**Summary:** Add text to planning to clarify present worth calculation

**Description:** Add the following text: "Expenditures are treated as if spend on the first day of the plan year."

**Steps To Reproduce:**

**Additional Information:**

**Attached Files:**

There are no notes attached to this issue.

---

**Viewing Issue Advanced Details**

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**Reporter:** ldpayne  
**Assigned To:** rswitt  
**Priority:** normal  
**Status:** assigned  
**Product Build:** none  
**Projection:** none  
**ETA:** none

---

**Summary:** Create database entry for constant used for residential passive savings calculation

**Description:** The constant 64.7 is currently hard coded when getting passive savings data. This should be stored in a table so it can be changed easily in the future if needed.

**Steps To Reproduce:**

**Additional Information:**

**Attached Files:**

There are no notes attached to this issue.

---

**Viewing Issue Advanced Details**

<table>
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<th>Severity: minor</th>
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<td>690</td>
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**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**OS:**

---
Summary: Tracking Summary - repeat header information

Description: Because the tracking summary table can be very long, it would be good to repeat the header information for each year.

Steps To Reproduce:

Additional Information:

Attached Files: There are no notes attached to this issue.

Viewing Issue Advanced Details

ID: 691
Category: [EZ Guide Online] minor Interface
Severity: minor
Reproducibility: always
Date Submitted: 10-30-13 11:06
Last Update: 10-30-13 11:06

Reporter: ldpayne
Platform:
Assigned To: ldpayne
OS:
Priority: normal
OS Version:
Status: resolved
Product
Version:
Product Build:
Resolution: fixed
Projection: none
ETA: none
Level of Effort: 10 hours

Summary: Show more information on Passive Savings in BMP, Planning, and Tracking

Description: Changes on the BMP Goals Page

- Add/change fields as follows:
  Analysis Year (2010) Gross GPCD: 206
  Projected 2034 (Plan End) Gross GPCD: 119
  Projected 2034 (Plan End) Gross GPCD Including Passive Water Use Trends: 87

- The needed savings calculation will be changed to be based off of the projected GPCD with passive (in this example, 87).

- The “Max Possible Identified GPCD Savings” will change to read “Max Possible BMP GPCD Savings” and the calculation will be changed so that we are basing it on the plan end population rather than the current population.

Changes to BMP Optimization

The BMP Optimization algorithm will have to be changed so that we are considering plan end population rather than current population when determining when the goal has been reached. We are currently using the water use numbers calculated in the water budget, so rather than creating a new water budget based on the plan end population, we will just scale the current
Changes to Planning
Add a third line to both graphs representing Projected Water Use (or GPCD) with Passive Water Use Trends
Distribute passive savings evenly over planning horizon so
Changes to Tracking
Remove the line for Projected Gross GPCD (without passive savings) and replace with a line representing Projected Gross GPCD with Passive Savings. Do the same for the Water Use chart.

Steps To Reproduce:

Additional Information: Changed as described

Attached Files: There are no notes attached to this issue.
Summary: BMP Goals - change so that it no longer displays projected GPCD

Description: Currently we are displaying the value the user entered in Projections as the Projected GPCD (without passive). Remove that and also change to base passive savings on the analysis year GPCD:

passive savings = analysis year GPCD - calculated projected GPCD with passive

Steps To Reproduce:
Additional Information: Changed as described.

Attached Files: There are no notes attached to this issue.
### Viewing Issue Advanced Details

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- **Reporter:** ldpayne
- **Assigned To:** ldpayne
- **Priority:** normal
- **Status:** resolved
- **Product Build:**
- **Resolution:** fixed
- **Project:** none
- **ETA:** none
- **Level of Effort:** .5 hours

**Summary:** In some cases, the Sample Profile displays the real utility names.

**Description:** When "Sample Profile" was selected, on the Profile Utilities page, it displayed the actual utility names rather than 'Sample Utility'. This is because the profile stats was being changed somewhere along the way. Need to put in a check to make sure we don't change the status if it is the EZGuide sample profile.

**Steps To Reproduce:**

**Additional Information:** Put a check in the function that changes the status to ensure it is not ever changed if it is the EZGuide Sample Profile.

**Attached Files:**

There are no notes attached to this issue.

### Viewing Issue Advanced Details

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- **Reporter:** ldpayne
- **Assigned To:** ldpayne
- **Priority:** normal
- **Status:** resolved
- **Product Build:**
- **Resolution:** fixed
- **Project:** none
- **ETA:** none
- **Level of Effort:** .5 hour
### Summary:
Sample profile - need better error handling if the user does not select any utilities

### Description:
When creating a sample profile, after you name the profile, you are prompted to add utilities to the profile. If the user does not add any utilities and presses <Continue>, an error message is displayed but it returns you to the wrong page.

### Steps To Reproduce:

### Additional Information:
The profile status was being changed which prevented the correct redirection. Changed to stay on the current page. Also fixed <Previous> button to go to the Introduction page.

### Attached Files:
- There are no notes attached to this issue.

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### Viewing Issue Advanced Details

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**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** assigned  
**Product Build:**  
**Projection:** none  
**ETA:** none  
**Level of Effort:**

### Description:
I was prompted to reanalyze (correctly), and then I was redirected back to the BMP page (correctly). When I went back to the beginning profile page, and then continued to the profile page, there was red text saying that I was updated an could continue. Seems odd to see that after several pages have been viewed.

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### Viewing Issue Advanced Details

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**Reporter:** ldpayne  
**Platform:**
Assigned To: ldpayne

OS:

Priority: normal

OS Version:

Status: resolved

Product

Version:

Product Build:

Resolution: fixed

Projection: none

ETA: none

Level of Effort: 1 hour

Summary: Totals Row in Irrigation Configurables should prevent editing

Description: If the user selects to edit the Totals row in the Irrigation Configurables grid (Calibration page) an error occurs. The system should display a message saying this row cannot be edited.

Steps To Reproduce:

Additional Information: A message will appear stating that the totals row cannot be edited.

Attached Files: There are no notes attached to this issue.

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Viewing Issue Advanced Details

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Reporter: ldpayne

Assigned To: ldpayne

Priority: normal

Status: assigned

Product Build:

Resolution: open

Projection: none

ETA: none

Level of Effort:

Summary: Change summary information on BMP Results page

Description: - On the BMP Results page, we still have the "Passive Replacement GPCD Savings:" listed. Since we no longer use the "passive savings" wording we either need to get rid of that, or rename it. This section probably needs to be redone (just the text and what numbers are listed), as I think we should emphasize the GPCD target, not the target savings (like we do on the Goal page). Maybe something like (this would apply to the summary page GPCD goals section as well):
  o BMP Optimization is based on: Target Gross GPCD
  o Analysis Year (2010) GPCD: 206
  o Projected Plan End (2034) GPCD: 195
  o Projected GPCD Change: -11.00
  o Target GPCD Goal: 160
  o Needed GPCD Savings: 35.00
  o Realized GPCD Savings: 35.00
### Viewing Issue Advanced Details

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<tr>
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<td>Summary:</td>
<td>Split Planning Summary table into three separate tables by sector</td>
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<tr>
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<td>On the Planning summary page, split the sectors into 3 separate tables</td>
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<tr>
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<td>Summary:</td>
<td>Get error if no analysis year and attempt DOR Import</td>
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<tr>
<td></td>
<td>Description:</td>
<td>If you reanalyze a profile via the DOR Import page, it does not check to make sure an analysis</td>
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</table>
The Industrial parcel count is incorrect.

In the Crystal River profiles, the parcel count for Industrial is including parcels with DOR_UC = 86 and 89. We are excluding those parcels throughout EZGuide, so they need to be suppressed when doing the parcel counts as well.

Steps To Reproduce: 
- Additional Information: fixed as described

Attached Files: There are no notes attached to this issue.
**Summary:** Rearrange Multi-Family Water budget Details Tables

**Description:** The Single Family water budget details tables were rearranged into a more logical sequence, so the same should be done for multi-family details.

**Steps To Reproduce:**

**Additional Information:**

**Attached Files:**

There are no notes attached to this issue.

---

**Viewing Issue Advanced Details**

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**Reporter:** ldpayne  
**Platform:**  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** resolved  
**Product Build:** none  
**Resolution:** fixed  
**ETA:** none  
**Level of Effort:** 0.5 hour

**Summary:** Rename "Residential Units" to "Households"

**Description:** Replace all instances of "Residential Units" with "Households"

**Steps To Reproduce:**

**Additional Information:**

Changes have been made throughout the application as described.

**Attached Files:**

There are no notes attached to this issue.

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**Viewing Issue Advanced Details**

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<th>Reproducibility:</th>
<th>Date Submitted:</th>
<th>Last Update:</th>
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</table>
Summary: Need more detailed information in the email sent to user regarding rejected requests

Description: When there is a problem with a utility data request, the system simply emails the user "utility request for utility 'UTILITY' was rejected." The user needs more information than this so he can rectify whatever the problem was.

Steps To Reproduce:

Additional Information: 

Attached Files: There are no notes attached to this issue.
## Viewing Issue Advanced Details

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**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** resolved  
**Product Build:**  
**Projection:** none  
**ETA:** none  
**Level of Effort:** .5 hours

**Summary:** Unable to edit certain years on Population Projections page  
**Description:** User was unable to edit certain years in the Population Projections table. Those years which were located near the “Update Chart” button are for some reason inaccessible.

**Steps To Reproduce:**  
**Additional Information:** I am not sure why this happened, but to fix it, I just put the Update Chart button in its own div.

**Attached Files:** There are no notes attached to this issue.

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## Viewing Issue Advanced Details

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**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** resolved  
**Product Build:**  
**Projection:** none  
**ETA:** none  
**Level of Effort:** .5 hours

**Summary:** Get divide by zero error when there is no MOR data  
**Description:** Using the Panama City profile, if you go to the water analysis page, errors are generated due to the fact that there is no MOR data for this utility.

**Steps To**
### Viewing Issue Advanced Details

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**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** resolved  
**Product Build:** none  
**Projection:** none  
**Level of Effort:** 1 hour  
**OS:**  
**Platform:**  
**OS Version:**  
**Product Version:**  
**Resolution:** fixed  

**Summary:** Target GPCD validation and BMP Charts should be based off of projected GPCD  
**Description:** In the “BMP Goals” section, the “Target GPCD” is being validated using the “Max Possible BMP GPCD Savings” to the “Analysis Year (2010) Gross GPCD,” where it should be using the “Projected Plan End (2034) Gross GPCD,” This validation simply needs to be corrected. Also, within the “BMP Goals” section, if you click on the link at the bottom “View all BMP Options,” the charts start with analysis year GPCD when it should start with the projected gpcd.

**Steps To Reproduce:**  
**Additional Information:** Changed the validation check for Target GPCD to use Plan End Gross GPCD and changed chart to graph starting with the projected GPCD.  
**Attached Files:** There are no notes attached to this issue.

### Viewing Issue Advanced Details

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<th>Reproducibility:</th>
<th>Date Submitted:</th>
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<tbody>
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<td>always</td>
<td>02-03-14 19:44</td>
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**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**OS:**  
**Platform:**  
**OS Version:**
### Issue Details 1

**Summary:** Need to refresh irrigation grid after change in occupancy rate

**Description:** If you change the occupancy rate, the Single Family Irrigation Configurables grid needs to be refreshed (after the reanalyze) to reflect the new parcel counts as this grid shows occupied parcels.

**Steps To Reproduce:**

**Additional Information:**

**Attached Files:**

There are no notes attached to this issue.

---

### Issue Details 2

**Summary:** Need to filter out parcels built after the analysis year when calculating residential units.

**Description:** When calculating number of residential units, we are not currently filtering out those parcels that were built after the analysis year.

**Steps To Reproduce:**

**Additional Information:** Changed as described

**Attached Files:**

There are no notes attached to this issue.

---

### Issue Details 3

**Summary:**

**Description:**

**Steps To Reproduce:**

**Additional Information:**

**Attached Files:**

There are no notes attached to this issue.
### Issue 712

**Submitted:** 02-05-14 10:39  02-23-14 15:17

<table>
<thead>
<tr>
<th><strong>Reporter:</strong> ldpayne</th>
<th><strong>Platform:</strong></th>
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<tbody>
<tr>
<td><strong>Assigned To:</strong> ldpayne</td>
<td><strong>OS:</strong></td>
</tr>
<tr>
<td><strong>Priority:</strong> normal</td>
<td><strong>OS Version:</strong></td>
</tr>
<tr>
<td><strong>Status:</strong> resolved</td>
<td><strong>Product Version:</strong></td>
</tr>
<tr>
<td><strong>Product Build:</strong></td>
<td><strong>Resolution:</strong> fixed</td>
</tr>
<tr>
<td><strong>Projection:</strong> none</td>
<td><strong>ETA:</strong> none</td>
</tr>
<tr>
<td><strong>Level of Effort:</strong> 0.5 hour</td>
<td></td>
</tr>
</tbody>
</table>

**Summary:** Stories Distribution - indicate that we are showing a percent

**Description:** We need some sort of indication either in the column headings or a % next to the value so that it is clear that the numbers represent percents.

**Steps To Reproduce:**

**Additional Information:** Changed title to indicate that we are showing percentages

**Attached Files:**

There are no notes attached to this issue.

---

### Issue 713

**Submitted:** 02-05-14 10:42  02-05-14 10:42

<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>Assigned To:</strong> ldpayne</td>
<td><strong>OS:</strong></td>
</tr>
<tr>
<td><strong>Priority:</strong> normal</td>
<td><strong>OS Version:</strong></td>
</tr>
<tr>
<td><strong>Status:</strong> assigned</td>
<td><strong>Product Version:</strong></td>
</tr>
<tr>
<td><strong>Product Build:</strong></td>
<td><strong>Resolution:</strong> open</td>
</tr>
<tr>
<td><strong>Projection:</strong> none</td>
<td><strong>ETA:</strong> none</td>
</tr>
<tr>
<td><strong>Level of Effort:</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Summary:** Errors when reanalyzing The Villages profile on first try

**Description:** Reanalyze threw several errors when trying to reanalyze The Villages profile (245) on the first attempt. The second attempt was successful:

There are no notes attached to this issue.
### Issue 714

**Description:** If you type more than 100 characters for the profile name, get an error when trying to save to the database. Need to limit the text box field in the UI so it will not allow more than 100 characters to be typed.

**Steps To Reproduce:**

**Additional Information:**

**Attached Files:**

There are no notes attached to this issue.

### Issue 715

**Description:** If you create a new measure but do not specify a measure type, an error will occur. The message just tells the user that there was an error creating the measure.

**Steps To Reproduce:**

**Additional Information:**
### Viewing Issue Advanced Details

<table>
<thead>
<tr>
<th>ID:</th>
<th>Category:</th>
<th>Severity:</th>
<th>Reproducibility:</th>
<th>Date Submitted:</th>
<th>Last Update:</th>
</tr>
</thead>
<tbody>
<tr>
<td>716</td>
<td>[EZ Guide Online] minor Interface</td>
<td>always</td>
<td></td>
<td>02-06-14 09:58</td>
<td>02-06-14 09:58</td>
</tr>
</tbody>
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- **Reporter:** ldpayne
- **Assigned To:** ldpayne
- **Priority:** normal
- **Status:** assigned
- **Resolution:** open
- **Platform:**
- **OS:**
- **OS Version:**
- **Product Version:**

**Summary:** Error when user changes the goal type to "--Select--" and then clicks on Bmp Results left menu.

**Description:** If you are on the BMP Goals page and the user has not specified a goal type, the `<continue> button is grayed out but there is no way to disable the left menu options at this point because the user has in the past generated a bmp summary. So the user can still click on the "BMP Summary" left menu option. This will result in an unhandled exception.

The only way this can happen is if the user has a goal type specified and has previously generated a bmp summary and then goes back to the goals page and deliberately changes the goal type to "--Select--" and then attempts to go to generate a new BMP Summary.

**Steps To Reproduce:**

**Additional Information:**

**Attached Files:**

There are no notes attached to this issue.

---

<table>
<thead>
<tr>
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<th>Category:</th>
<th>Severity:</th>
<th>Reproducibility:</th>
<th>Date Submitted:</th>
<th>Last Update:</th>
</tr>
</thead>
<tbody>
<tr>
<td>717</td>
<td>[EZ Guide Online] minor Interface</td>
<td>always</td>
<td></td>
<td>02-07-14 15:43</td>
<td>02-07-14 15:43</td>
</tr>
</tbody>
</table>

- **Reporter:** ldpayne
- **Assigned To:** ldpayne
- **Priority:** normal
- **Status:** assigned
- **Platform:**
- **OS:**
- **OS Version:**
- **Product Version:**

**Summary:**

**Description:**

**Steps To Reproduce:**

**Additional Information:**

**Attached Files:**

There are no notes attached to this issue.
Summary: On Water Supply Analysis Summary, include BFR data used for analysis

Description: In the event that we don't have any BFR data for the analysis year, we display nothing on the summary as far as BFR data goes. Instead, we should show the data for the year of BFR data that we use in the analysis and identify which year that is.

Steps To Reproduce:

Additional Information:

There are no notes attached to this issue.
### Viewing Issue Advanced Details

<table>
<thead>
<tr>
<th>ID</th>
<th>Category</th>
<th>Severity</th>
<th>Reproducibility</th>
<th>Date Submitted</th>
<th>Last Update</th>
</tr>
</thead>
</table>

- **Reporter:** ldpayne
- **Assign To:** ldpayne
- **Platform:**
- **OS:**
- **Priority:** normal  
- **OS Version:**
- **Status:** resolved  
- **Product Version:**
- **Product Build:**
- **Resolution:** fixed
- **Projection:** none
- **ETA:** none
- **Level of Effort:** 10 hours

**Summary:** Upgrade to new version of MVC

**Description:** In order to run the new version of Visual Studio, we need to upgrade the MVC libraries.

**Steps To Reproduce:**

**Additional Information:** Upgraded all libraries

**Attached Files:**

There are no notes attached to this issue.

---

<table>
<thead>
<tr>
<th>ID</th>
<th>Category</th>
<th>Severity</th>
<th>Reproducibility</th>
<th>Date Submitted</th>
<th>Last Update</th>
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</thead>
</table>

- **Reporter:** ldpayne
- **Assign To:** ldpayne
- **Platform:**
- **OS:**
- **Priority:** normal  
- **OS Version:**
- **Status:** assigned  
- **Product Version:**
- **Product Build:**
- **Resolution:** open
- **Projection:** none
- **ETA:** none

**Level of Effort:**

**Summary:** When there is no MOR data, it only displays two months in the MOR grid

**Description:** In the case of Palmetto, there is no MOR data associated with it's PWSID, so the MOR grid should just list 12 months with 0 water flow.

**Steps To Reproduce:**

**Additional Information:**

**Attached Files:**

There are no notes attached to this issue.
### Viewing Issue Advanced Details

<table>
<thead>
<tr>
<th>ID:</th>
<th>Category:</th>
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<th>Reproducibility:</th>
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<tbody>
<tr>
<td>721</td>
<td>[EZ Guide Online]</td>
<td>minor</td>
<td>always</td>
<td>03-26-14 17:29</td>
<td>03-26-14 17:30</td>
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**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** resolved  

**Product Build:**  
- **Projection:** none  
- **ETA:** none  
- **Level of Effort:** .5 hours

**Product Version:** fixed

**Summary:** Update FDOR links for 2013  
**Description:** Currently all links to the FDOR Documentation point to 2009. Change to the new 2013 location.  
**Steps To Reproduce:** Changed as described above. A total of 10 links were changed to point to:  
- ftp://sdrftp03.dor.state.fl.us/Tax%20Roll%20Data%20Files/About%20NAL_SDF_TPP%20Files/2013%20NAL_SDF_NAP_UserGuide%20wo%20TOC.pdf [^]

**Attached Files:** There are no notes attached to this issue.

### Viewing Issue Advanced Details

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**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** resolved  
**Product Build:**  
- **Projection:** none  
- **ETA:** none  
- **Level of Effort:** 1 hour

**Product Version:** fixed

**Summary:** Population Projections - analysis year population not updated  
**Description:** If the population in the water budget is modified, it does not currently update the value in the population projections table.
**Additional Information:**
Analysis year is now updated each time the water budget population changes.

**Attached Files:**
There are no notes attached to this issue.

### Viewing Issue Advanced Details

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<tbody>
<tr>
<td>723</td>
<td>Business Logic</td>
<td></td>
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**Reporter:** ldpayne  
**Assign To:** ldpayne  
**Priority:** normal  
**Status:** resolved  
**Product Build:**  
**Projection:** none  
**ETA:** none  
**Level of Effort:** .5 hours

**Summary:** Erroneous numbers in water budget for Four Lakes

**Description:** The Four Lakes utility has only multi-family and outdoor, so there are some places where we are not checking for divide by zero and consequently get the wrong value in the water budget summary.

**Steps To Reproduce:**

**Additional Information:** check for zero when calculating residential GPCD.

**Attached Files:**
There are no notes attached to this issue.

### Viewing Issue Advanced Details

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<tr>
<td>724</td>
<td>Business Logic</td>
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**Reporter:** ldpayne  
**Assign To:** ldpayne  
**Priority:** normal  
**Status:** resolved  
**Product Build:**  
**Projection:** none  
**ETA:** none
**Level of Effort:** 3 hours

**Summary:** Reanalyze fails for two utilities - Tampa and Stuart

**Description:** The reanalyze fails for Stuart and Tampa. It fails in the server routine to get residential bath counts based on service life. I have not been able to recreate this for other utilities.

**Steps To Reproduce:**

**Additional Information:** The source of the problem is when the effective year built is greater than the analysis year. That makes the last replacement year greater than the analysis year and therefore unable to fit into any of the defined time period categories. The solution was to set the effective year built = actual year built in this case.

**Attached Files:**

There are no notes attached to this issue.

---

**Viewing Issue Advanced Details**

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<th>Product Build:</th>
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**Viewing Issue Advanced Details**

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<table>
<thead>
<tr>
<th>Steps To Reproduce:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Additional Information:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add call to CII Projections function in Reanalyze and flag all profiles for reanalyze.</td>
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</table>

**Viewing Issue Advanced Details**

<table>
<thead>
<tr>
<th>ID</th>
<th>Category:</th>
<th>Severity:</th>
<th>Reproducibility:</th>
<th>Date Submitted:</th>
<th>Last Update:</th>
</tr>
</thead>
</table>

| Steps To Reproduce: |

<table>
<thead>
<tr>
<th>Additional Information:</th>
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</thead>
<tbody>
<tr>
<td>The source of the problem is when the effective year built is greater than the analysis year. That makes the last replacement year greater than the analysis year and therefore unable to fit into any of the defined time period categories. The solution was to set the effective year built = actual year built in this case.</td>
</tr>
</tbody>
</table>
**Summary:** BMP Fixture counts incorrect  
**Description:** We ran across a case where the optimal fixtures to retrofit was greater than the existing fixture count. This was caused by a profile being reanalyzed, resulting in different fixture counts and then going directly to the BMP Results page without first regenerating the BMP's.

**Steps To Reproduce:**

**Additional Information:** Need to flag the BMPs to be regenerated any time something affects the existing fixture counts.

**Attached Files:**  
There are no notes attached to this issue.

---

**Summary:** Error when existing profile accesses projections before population projection is defined  
**Description:** For an existing profile that has not gone through the updated projection module, it is possible that they can bypass the population projection definition and go straight to the projected water use page which causes the following error:  
Original Error:RefreshIndoorPlanEndGPCD: ProfileId:109; Exception on server: The incoming tabular data stream (TDS) remote procedure call (RPC) protocol stream is incorrect. Parameter 6 ("@p3"): The supplied value is not a valid instance of data type float. Check the source data for invalid values. An example of an invalid value is data of numeric type with scale greater than precision.; 
StackTrace: at System.Data.SqlClient.SqlConnection.OnError(SqlException exception, Boolean breakConnection)  
at System.Data.SqlClient.SqlInternalConnection.OnError(SqlException exception, Boolean breakConnection)  
at System.Data.SqlClient.TdsParser.ThrowExceptionAndWarning()  
at System.Data.SqlClient.TdsParser.Run(RunBehavior runBehavior, SqlCommand cmdHandler, SqlDataReader dataStream, BulkCopySimpleResultSet bulkCopyHandler, TdsParserStateObject stateObj)  
at System.Data.SqlClient.SqlDataReader.ConsumeMetaData()  
at System.Data.SqlClient.SqlDataReader.get_MetaData()  
at System.Data.SqlClient.SqlCommand.FinishExecuteReader(SqlDataReader ds, RunBehavior runBehavior, String backupConnectionNullIfClosed, string backupConnectionInitialString, Boolean returnData)  
at System.Data.SqlClient.SqlCommand.RunCommand(SqlDataReader ds, RunBehavior runBehavior, String backupConnectionNullIfClosed, String backupConnectionInitialString)  
### Viewing Issue Advanced Details

<table>
<thead>
<tr>
<th>ID</th>
<th>Category</th>
<th>Severity</th>
<th>Reproducibility</th>
<th>Date Submitted:</th>
<th>Last Update:</th>
</tr>
</thead>
<tbody>
<tr>
<td>728</td>
<td>[EZ Guide Online] Business Logic</td>
<td>minor</td>
<td>always</td>
<td>05-10-14 19:01</td>
<td>05-10-14 20:23</td>
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</tbody>
</table>

- **Reporter:** ldpayne  
- **Assigned To:** ldpayne  
- **Priority:** normal  
- **Status:** resolved  
- **Product Build:**  
- **Projection:** none  
- **ETA:** none  
- **Level of Effort:** 1.5 hrs  
- **Summary:** Print Projections - page not complete  
- **Description:** The newly added summary table and GPCD and Water Use charts do not appear on the print summary page.  
- **Steps To Reproduce:** Added projection information to the print and print to word pages  
- **Platform:**  
- **OS:**  
- **OS Version:**  
- **Product Version:**  
- **Resolution:** fixed  
- **Parameter 6 ("@p3"): The supplied value is not a valid instance of data type float. Check the source data for invalid values. An example of an invalid value is data of numeric type with scale greater than precision.
### Viewing Issue Advanced Details

<table>
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<tr>
<th>ID:</th>
<th>Category:</th>
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<th>Reproducibility:</th>
<th>Date Submitted:</th>
<th>Last Update:</th>
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</thead>
</table>

**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** assigned  
**Product Build:**  
**Projection:** none  
**ETA:** none  
**Level of Effort:**  
**Summary:** Planning - GPCD Savings in details is NaN in some, but not all, cases  
**Description:** To recreate, use "Citrus Test - Randy" profile and select the Irrigation Audit BMP.  
**Steps To Reproduce:**  
**Additional Information:**  
**Attached Files:** There are no notes attached to this issue.

### Viewing Issue Advanced Details

<table>
<thead>
<tr>
<th>ID:</th>
<th>Category:</th>
<th>Severity:</th>
<th>Reproducibility:</th>
<th>Date Submitted:</th>
<th>Last Update:</th>
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</thead>
</table>

**Reporter:** ldpayne  
**Assigned To:** ldpayne  
**Priority:** normal  
**Status:** resolved  
**Product Build:**  
**Resolution:** fixed  
**Level of Effort:** 4 hours  
**Summary:** Planning and Projections charts are not consistent  
**Description:** The water use starting values and gpcd starting values are not the same when looking at the
projections chart versus the planning chart.

**Steps To Reproduce:**

**Additional Information:** One of the charts was using the study year GPCD as a starting point rather than the study year GPCD assuming passive replacement of all indoor fixtures.

**Attached Files:**

There are no notes attached to this issue.
### Appendix 4: Technical Assistance Summary Table

<table>
<thead>
<tr>
<th>Issue ID</th>
<th>Submitter</th>
<th>Title</th>
<th>Issue Status</th>
<th>Category</th>
<th>Contact Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>389</td>
<td>Thomas Kiger</td>
<td>SRWMD Lower Santa Fe Basin Water Conservation Analysis</td>
<td>Resolved</td>
<td>Technical Assistance</td>
<td>7/1/2013</td>
<td>District inquired about running EZ Guides for all the utilities within the Lower Santa Fe River Basin (~40) for a water supply and conservation potential analysis.</td>
</tr>
<tr>
<td>390</td>
<td>Debra Burden</td>
<td>Citrus County Utility and Profile Permissions</td>
<td>Resolved</td>
<td>Informational</td>
<td>7/9/2013</td>
<td>Guided user in creating account in EZ Guide Online. Granted Citrus County Utility ownership to Debra Burden, and existing Citrus County profile permissions to Mrs. Burden and consultant Brandon Ashby.</td>
</tr>
<tr>
<td>391</td>
<td>Robert Wanvestraut</td>
<td>Permission for SFWMD to analyze FKAA utility</td>
<td>Resolved</td>
<td>Technical Assistance</td>
<td>7/10/2013</td>
<td>Robert Wanvestraut requested permission to analyze the FKAA utility. He was directed to the appropriate FKAA contact to request permission. This was granted on 7/19/2013.</td>
</tr>
<tr>
<td>392</td>
<td>Ida Roberts</td>
<td>Inquiry as to materials required for analysis permission from Utility</td>
<td>Resolved</td>
<td>Informational</td>
<td>7/10/2013</td>
<td>Provided user with information concerning the permission/approval process to access utility data for analysis purposes.</td>
</tr>
<tr>
<td>393</td>
<td>Joshua Behr</td>
<td>Eagle Lake EZ Guide Setup and Permission</td>
<td>Closed</td>
<td>Technical Assistance - Mtg Related</td>
<td>8/7/2013</td>
<td>Assisted Mr. Behr, a consultant to the City of Eagle Lake, in defining Eagle Lake as a utility in EZ Guide and obtaining permission from the City Manager.</td>
</tr>
<tr>
<td>394</td>
<td>Leigh Brooks</td>
<td>Irrigable area methodology question</td>
<td>Resolved</td>
<td>Technical Assistance</td>
<td>8/9/2013</td>
<td>Leigh Brooks of NWFWM wanted more info regarding how we calculate irrigable area in EZG upon analyzing the sample profile. Relevant documentation was sent.</td>
</tr>
<tr>
<td>No.</td>
<td>Name</td>
<td>Description</td>
<td>Status</td>
<td>Assistance Type</td>
<td>Date</td>
<td></td>
</tr>
<tr>
<td>-----</td>
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<td>--------------------------------------</td>
<td>------------</td>
<td>-----------------</td>
<td>----------</td>
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</tr>
<tr>
<td>395</td>
<td>Leigh Brooks</td>
<td>NWFWMD Regional Analysis</td>
<td>Active</td>
<td>Technical Assistance</td>
<td>8/13/2013</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>NWFWMD has requested assistance in generating conservation potential analysis for their 7 planning regions. They would like to know where conservation can be targeted in a cost effective manor.</td>
<td></td>
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<tr>
<td>396</td>
<td>Philip Griffith</td>
<td>Bay County analysis help</td>
<td>Active</td>
<td>Technical Assistance</td>
<td>11/13/2013</td>
<td></td>
</tr>
<tr>
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<tr>
<td></td>
<td></td>
<td>Mr. Griffith is interested in EZ Guide options to perform a regional/county analysis versus an individual utility. He was provided the following: (1) Create a new profile which evaluates the entire county as a whole. This can simply be done by adding in all relevant utilities when prompted as you create the new profile. The downside to this is the output will not have utility by utility specific recommendations, but rather just the region as a whole. (2) Perform EZ Guide analyses on all utilities and then extract relevant data from the aggregated tables which you may find useful and roll it up into a spreadsheet as needed. The tool was originally designed for an individual utility to analyze their conservation options in detail, but we are now moving toward providing meaningful templates for regional analyses which require more aggregate results.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>397</td>
<td>Javier Vargas</td>
<td>Password Reset for City of Palmetto</td>
<td>Closed</td>
<td>Technical Assistance</td>
<td>2/17/2014</td>
<td></td>
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<td>Mr. Javier Vargas from the City of Palmetto had trouble logging on. I approved his account, reset his password, and showed him how to change his password.</td>
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<tr>
<td>ID</td>
<td>Name</td>
<td>Issue Description</td>
<td>Resolution Type</td>
<td>Resolution Date</td>
<td>Notes</td>
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<td>399</td>
<td>Javier Vargas</td>
<td>Assistance for utility with no MOR data</td>
<td>Resolved</td>
<td>Technical Assistance</td>
<td>2/24/2014</td>
<td>City of Palmetto has no MOR data because they import all of their water. Showed the utility where to input imported water and pointed to the User's Guide for further instruction.</td>
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<td>400</td>
<td>Javier Vargas</td>
<td>Utility Assistance with Projections and Calibration</td>
<td>Resolved</td>
<td>Technical Assistance</td>
<td>3/7/2014</td>
<td>Assisted utility personnel with the projections and water budget calibration sections of the EZ Guide.</td>
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<td>401</td>
<td>Robert Wanvestraut</td>
<td>Status of Passive Savings Calculation Now and at Time of CFWI Analysis</td>
<td>Resolved</td>
<td>Informational</td>
<td>6/11/2014</td>
<td>Inquiry of status of passive savings calculation when CFWI analysis was carried out, approx. Feb. 2012. Replied that most likely passive savings were not included in the CFWI conservation analysis carried out by Roberto Dennis though it is difficult for us to tell because we do not know precisely when his analysis was performed. Also informed Robert with regards to the current state of how passive savings is dealt with in the EZ Guide.</td>
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<td>402</td>
<td>Ken Friedman</td>
<td>EZ Guide Online options after end of contract</td>
<td>Resolved</td>
<td>Informational</td>
<td>6/16/2014</td>
<td>Ken Friedman (who is now working for NWFWMD) was inquiring as to options for running EZ Guide Online analyses after the end of the contract. We discussed what would be needed to install and operate the EZ Guide application locally, and options for working with us in the future.</td>
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</table>
Bill had questions regarding future work with UF absent the Clearinghouse.

Resolved

Informational

5/20/2014

Bill, Our response to your question re how our past contract would have been approached in the new setup is shown below. - The Sanford project involved a lot of research involving billing records, water loss analysis and developing new methodologies. Some analysis was done using the EZ Guide Online. However the size and scope of this project would still have been best fit as a UF centered research project. In the future, we expect that project requirements will vary greatly, and they would be best addressed on a case by case basis. Regards, Jim
Appendix 5: Related Clearinghouse Publications

Related Clearinghouse Publications


