

# CUPSS Training

Part 3 of 3 Sessions

[www.epa.gov/cupss](http://www.epa.gov/cupss)  
[cupss@epa.gov](mailto:cupss@epa.gov)



# Helpful Tips for Today's Session

- **To Ask a Question** – Type your question in the Q&A panel on the right side of your screen. If the panel is hidden, click on the control panel at the top to open Q&A.
- **To Answer a Poll Question** – Choices will be in the poll panel on the right side of the screen. If the panel is hidden, click on the control panel at the top to open the poll.



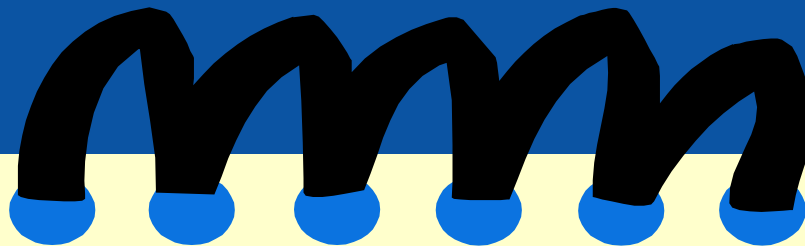
# Today's Panel

Susanna Bains, ORISE Fellow, USEPA

Adrienne Harris, USEPA



# Today's Agenda

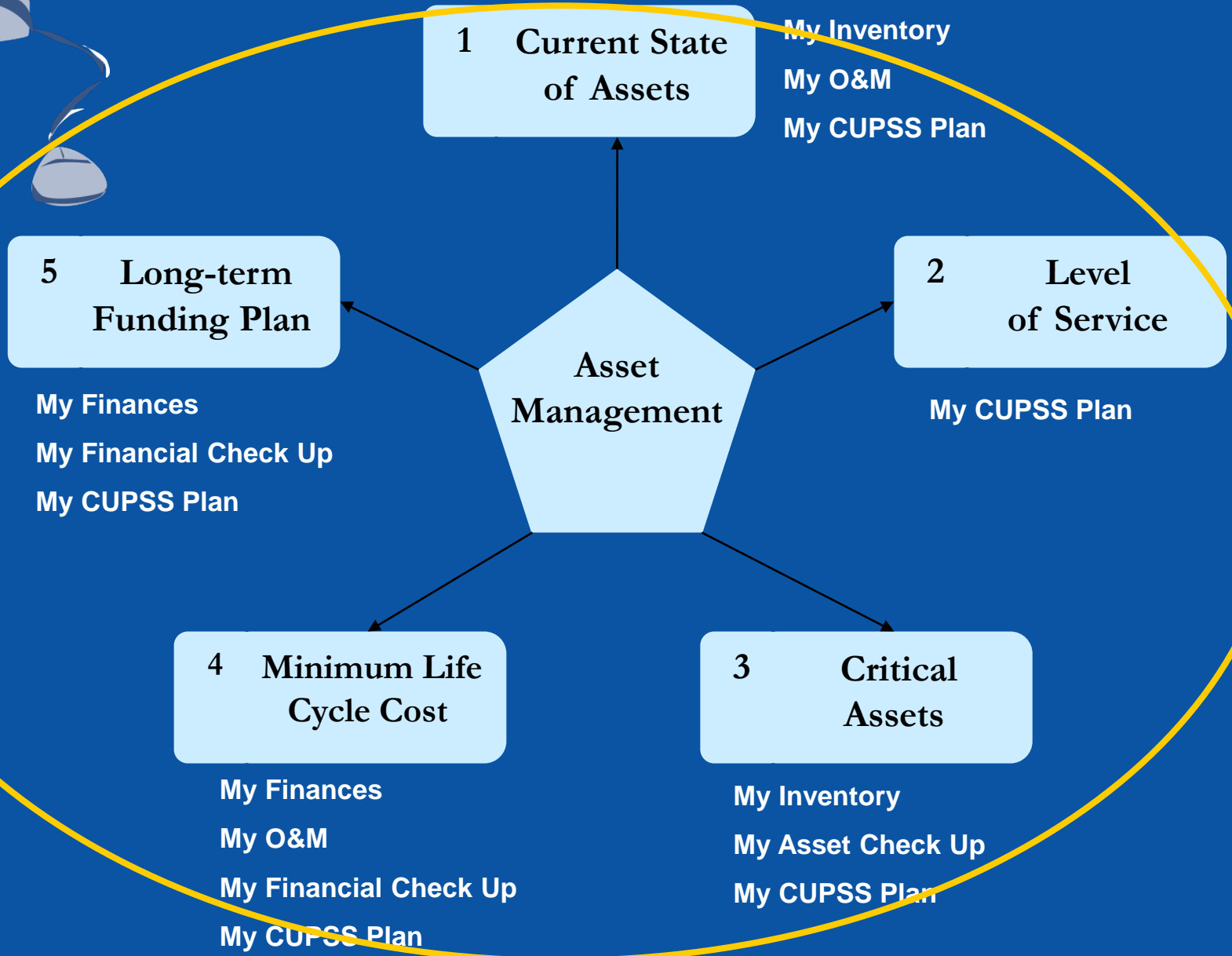


- Session 2 Summary
- Session 2 Your CUPSS
- Session 2 Quiz
- Session 3
  - My CUPSS Plan
  - Tips and Tricks for Trainers
    - Troubleshooting
    - Advanced Features
- Final Test of Knowledge
- Session 3 Your CUPSS



# Asset Management Core Questions

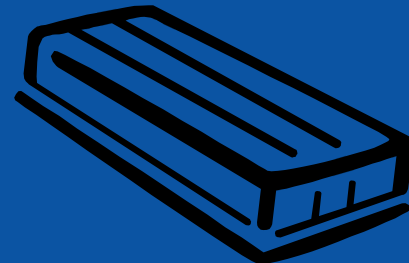
## CUPSS Modules





# Session 2 Summary

- My O&M
  - Search/Print
- My Finances
- My Financial Check Up Report





# Your CUPSS - Review

## 1) My O&M

1.1) Add a task for an existing asset

1.2) Change an existing daily task to be a weekly task

## 2) My Finances

2.1) Enter a new Type of Cost line item for the year 2008, "Revenue from loans/bonds" for a Budgeted Amount of \$5,000 ("5000") and an Inflation Rate of 10% (".10")

## 3) My Financial Check Up Report

3.1) In Page 1, make sure the starting point is on the default year 2008.

3.2) In Page 2, change numbers as indicated in the table on the next page (of handout).

3.3) Click "Generate Report" to print a report of what is now entered into CUPSS.



# Session 2 Quiz

1. A task is always associated with an asset.
  - A. True
  - B. False





# Session 2 Quiz

1. A task is always associated with an asset.

A. True

B. False



# Session 2 Quiz

2. Once tasks are entered, where are they shown?
- A. Asset Risk Matrix
  - B. Schematic
  - C. Calendar



# Session 2 Quiz

2. Once tasks are entered, where are they shown?

- A. Asset Risk Matrix
- B. Schematic
- C. Calendar



## Session 2 Quiz

3. What type of information can you generate a report for on the Search and Report page?

- A. Assets
- B. Tasks
- C. Both Assets and Tasks



## Session 2 Quiz

3. What type of information can you generate a report for on the Search and Report page?

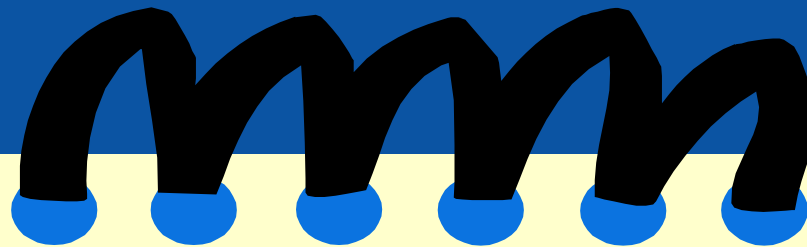
A. Assets

B. Tasks

C. Both Assets and Tasks



# Today's Agenda



- Session 2 Summary
- Session 2 Your CUPSS
- Session 2 Quiz
- Session 3
  - My CUPSS Plan
  - Tips and Tricks for Trainers
    - Troubleshooting
    - Advanced Features
- Final Test of Knowledge
- Session 3 Your CUPSS



# Goals of Session 3



1

**Become familiar with the steps in developing an asset management plan**

2

**Generate a custom asset management plan**

3

**Learn about different troubleshooting tips to help you along the way**

4

**Get the most out of CUPSS with advanced features**



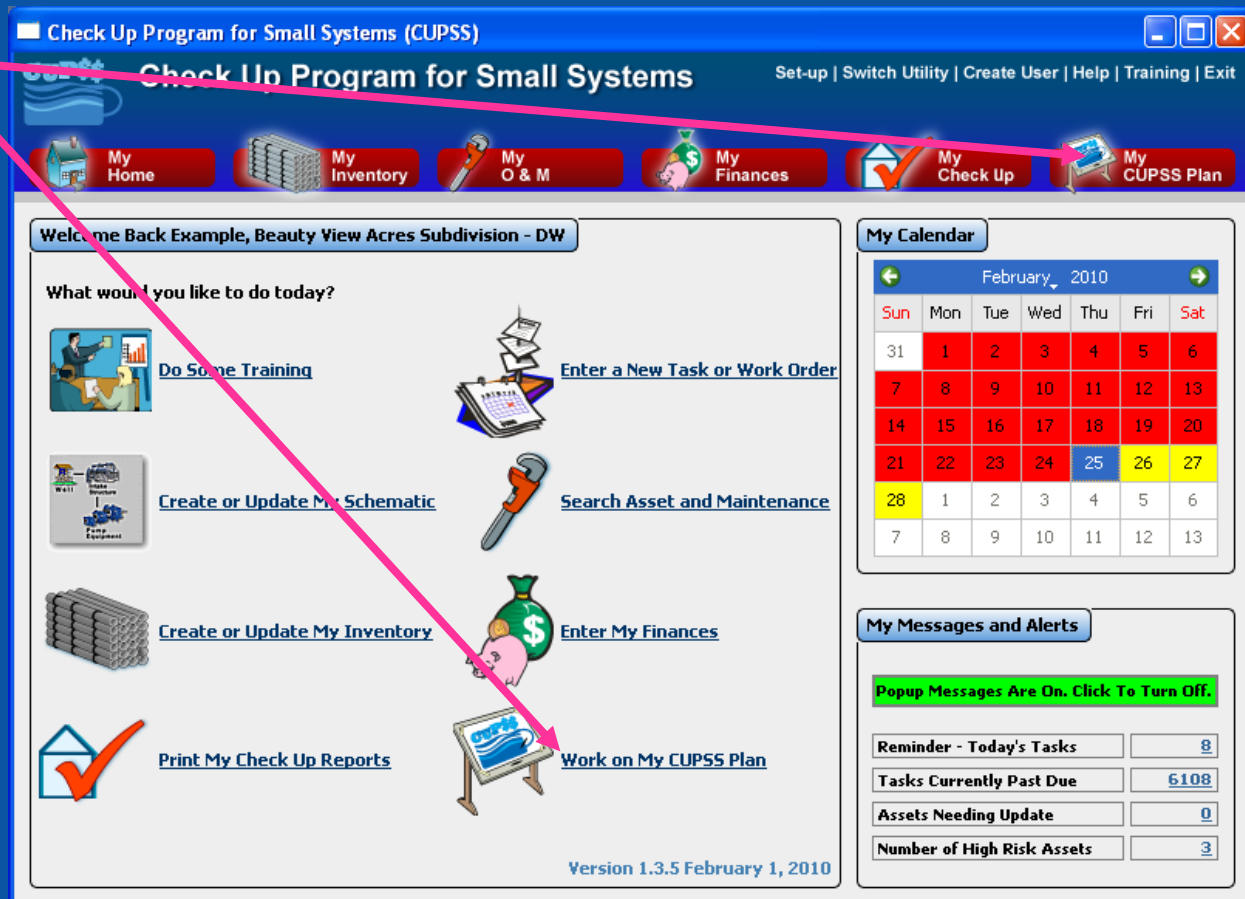
# MY CUPSS PLAN

## **Benefits to My Utility**

CUPSS provides you with the ability to create a single asset management plan for up to two utilities. CUPSS step by step wizard provides boiler plate text to help develop the Asset Management Plan saving you time while providing you with the flexibility to create a customized plan. All of the information previously entered in CUPSS is referenced in the plan.



# Navigate to My CUPSS Plan







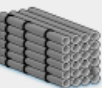



**Check Up Program for Small Systems (CUPSS)**

Check Up Program for Small Systems    Set-up | Switch Utility | Create User | Help | Training | Exit

**My Home**    **My Inventory**    **My O & M**    **My Finances**    **My Check Up**    **My CUPSS Plan**

Welcome Back Example, Beauty View Acres Subdivision - DW

What would you like to do today?

-  [Do Some Training](#)
-  [Enter a New Task or Work Order](#)
-  [Create or Update My Schematic](#)
-  [Search Asset and Maintenance](#)
-  [Create or Update My Inventory](#)
-  [Enter My Finances](#)
-  [Print My Check Up Reports](#)
-  [Work on My CUPSS Plan](#)

Version 1.3.5 February 1, 2010

**My Calendar**

February, 2010

Sun	Mon	Tue	Wed	Thu	Fri	Sat
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	1	2	3	4	5	6
7	8	9	10	11	12	13

**My Messages and Alerts**

**Popup Messages Are On. Click To Turn Off.**

Reminder - Today's Tasks	8
Tasks Currently Past Due	6108
Assets Needing Update	0
Number of High Risk Assets	3



# My CUPSS Plan

## Beauty View Acres Subdivision - DW CUPSS Plan

Click on the "Begin a New My CUPSS Plan" button to start a new plan. To view or edit a previous version, right click on the entry in the table below and select "Edit Row". If you would like to delete a previous version, select "Delete Row".

[Begin a New My CUPSS Plan](#)

### Recent Version Changes

Person	Title	Version	Notes	Date Added
BDUNLEVY	Bob	1		4/3/2008
BDUNLEVY	bdunlevy	1		4/9/2008



# Plan Information

Check Up Program for Small Systems (CUPSS) Set-up | Switch Utility | Create User | Help | Training | Exit

**CUPSS** Check Up Program for Small Systems

[My Home](#) [My Inventory](#) [My O & M](#) [My Finances](#) [My Check Up](#) [My CUPSS Plan](#)

**Beauty View Acres Subdivision - DW Plan Information**

(\*) Indicates required fields

**Enter Plan Information**

\* **Select Utility(ies) you would like to generate the plan for**

\* **Name**

\* **Version Number**

**Notes**

**Date** 2/25/10 9:30 AM

[Begin a New My CUPSS Plan](#)



# My CUPSS Plan Wizard

Check Up Program for Small Systems (CUPSS) Set-up | Switch Utility | Create User | Help | Training | Exit

**CUPSS** Check Up Program for Small Systems

My Home My Inventory My O & M My Finances My Check Up My CUPSS Plan

Beauty View Acres Subdivision - DW - Executive Summary

EXECUTIVE SUMMARY 1. INTRODUCTION 2. UTILITY OVERVIEW 3. LOS 4. CRITICAL ASSETS 5. O&M STRATEGY 6. WATER QUALITY & ENERGY EFFICIENCY 7. CIP 8. FINANCES 9. FINALIZE PLAN

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# Executive Summary

## Tab 0. Executive Summary

**Beauty View Acres Subdivision - DW - Executive Summary**

EXECUTIVE SUMMARY | 1. INTRODUCTION | 2. UTILITY OVERVIEW | 3. LOS | 4. CRITICAL ASSETS | 5. O&M STRATEGY | 6. WATER QUALITY & ENERGY EFFICIENCY | 7. CIP | 8. FINANCES | 9. FINALIZE PLAN

**Executive Summary** ⓘ

This Asset Management Plan is for the Beauty View Acres Subdivision - DW and describes how the utility(ies) will manage the infrastructure assets. The Beauty View Acres Subdivision - DW has a staff of [ENTER STAFF NUMBER] full-time equivalents (FTEs) who perform day-to-day functions to keep the utility functioning properly. The utility delivers [XXX] gallons per day of water to 33 of connections. Maps of the utility are maintained by the utility at [insert location].

The Beauty View Acres Subdivision - DW has considered a range of service levels the utility could establish. These include the following:

**Table E-1. Levels of Service**

Levels of Service	Achieved
Goal	Performance Targets
* Will be Populated by Tables from other sections of the Asset Management Plan	

To support the above Level of Service goals the utility has identified the following costs to help improve overall service to the community:

- Implementing the O&M will require an additional \$[Enter Amount] annually with a total cost of \$[Enter Amount] annually and \$[Enter Amount] full time employees.
- It is estimated that the utility will spend a total of \$[Enter Amount] on various water system improvement projects over the next 10 years. A detailed financial summary is presented in Table 8-1.
- Costs for water are funded through general rates (xx%), targeted rates (xx%) and fees and charges (xx%).
- External financing for capital expenses exceeding [\$:xx] will be financed through [how will the utility finance capital expenses loans, rates, grants].
- The average annual surplus/deficit over the next 10 years will be \$[Enter Amount]

The utility's action plan for improving the overall management of this utility and supporting the above Level of Service goals (including addressing the financial management, environmental management and specific issues) is shown in Table E-2.

**Table E-2. Action Plan**

Urgency	Service (All, W, WW)	Issue	Corrective Action Plan	Target Date for Completion
The five most important actions				
* Will be Populated by Tables from other sections of the Asset Management Plan				

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Executive Summary



Levels of Service



Action Plan





# Tab 1. Introduction

## Tab 1. Introduction

**Beauty View Acres Subdivision - DW - Introduction**

EXECUTIVE SUMMARY | **1. INTRODUCTION** | 2. UTILITY OVERVIEW | 3. LOS | 4. CRITICAL ASSETS | 5. O&M STRATEGY | 6. WATER QUALITY & ENERGY EFFICIENCY | 7. CIP | 8. FINANCES | 9. FINALIZE PLAN

**1.0 Introduction** ⓘ

This Asset Management Plan is for the Beauty View Acres Subdivision - DW and describes how the utility(ies) will manage the infrastructure assets. Customer service demands and regulations require utilities to actively manage drinking water and wastewater assets through careful maintenance, repair and replacement decisions. This plan is an effective tool for combining technical, management and financial practices to ensure that the level of service required by the community is provided at the appropriate cost. The plan has the following purposes:

1. To demonstrate responsible management of the drinking water and wastewater assets
2. To communicate and justify funding requirements indicated by the plan
3. To provide a management roadmap for the utility
4. To serve as a link between the Beauty View Acres Subdivision - DW and its customers

**1.1 Mission Statement** ⓘ

The mission statement defines the goals of the Beauty View Acres Subdivision - DW and is the guide for level of service agreements discussed in the section 3. The Beauty View Acres Subdivision - DW mission statement is as follows:

We commit to improving and maintaining the public health protection and performance of our drinking water/wastewater plant and distribution/collecton utility assets, while minimizing the long-term cost of operating those assets. We strive to make the most cost-effective renewal and replacement investments and provide the highest-quality customer service possible.

**1.2 Asset Management Team** ⓘ

The Beauty View Acres Subdivision - DW has a staff of [ENTER STAFF NUMBER] FTEs who perform day-to-day functions to keep the utility functioning properly. Together, these individuals have volunteered as members of the "the asset management team." [Enter active staff to support the plan and identify asset management plan leads] perform asset management planning responsibilities. The team is responsible for preparing, implementing, and updating this plan.

To the extent that other staff such as [list support staff not responsible for implementation but will support the Asset Management Plan: for example, the training coordinator and town mayor] are involved with this or other projects, the asset management team is responsible for coordinating such involvement in the developing and implementing this plan. More specific roles and responsibilities are listed in Table 1-1 and Table 1-2.

[insert your organization chart]

**Figure 1-1. Beauty View Acres Subdivision - DW Organization Chart**

[insert your organization chart]

**Figure 1-1. Beauty View Acres Subdivision - DW Organization Chart**

**Asset Management Team Table** ⓘ

**Table 1-1. Beauty View Acres Subdivision - DW Asset Management Team**

Name	Title	Organization	Role/Responsibility on Project
Helen Howard	Treasure/Secretary	Beauty View Acres Landowners Assn	Board Member
Robert Dunlevy	Environmental Engineer	USEPA	EPA Contact
Steve Wyatt	Engineer	Missouri Department of Natural	State Contact
Dan Daugherty	Water Specialist	Missouri Department of Natural Resources	State Contact
John Hoagland	Administrator	Missouri Rural Water Association	Technical Assistance Provider
Dennis Siders	Regional Director	Midwest Assistance Program	Technical Assistance Provider

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Introduction



Mission Statement



Asset Management Team





# Tab 2. Utility Overview

## Tab 2. Utility Overview

**Beauty View Acres Subdivision - DW - Utility Overview**

EXECUTIVE SUMMARY | 1. INTRODUCTION | **2. UTILITY OVERVIEW** | 3. LOS | 4. CRITICAL ASSETS | 5. O&M STRATEGY | 6. WATER QUALITY & ENERGY EFFICIENCY | 7. CIP | 8. FINANCES | 9. FINALIZE PLAN

**2.0 Utility Overview**

The Beauty View Acres Subdivision - DW serves [insert community names] with a population of [insert community population]. The following table demonstrates key statistics about the utility and the population it serves. Maps of the utility are maintained by the utility at [insert location].

**Table 2-1. Beauty View Acres Subdivision - DW Utility Overview**

**Drinking Water**

**Water Supply Connections**

Residential Facilities connected to potable water Goals:  No.

Commercial Facilities connected to potable water Goals:  No.

Industrial Facilities connected to potable water Goals:  No.

**The Drinking Water Network**

Asset Type	Unit	Description
Wells and Springs	Number	1
Pumping Equipment	Number	2
Disinfection Equipment	Number	1
Concrete & Metal Storage Tanks	Storage Capacity Days	0
Distribution / Collection Mains	LF	0
Buildings	Number	1
Lab / Monitoring Equipment	Number	1
Security Equipment	Number	1
Land	Acres	0

**General Water Supply Information**

Number of Connections: 33  No.

Storage Capacity:  MG

Reserve Storage:  Days

How Sourced:  Descr.

Interconnected:  Descr (if yes)

Water loss and Inflow / Infiltration:  Descr.

Total Volume Produced:  Gallons /Day

Total Volume Sold:  Gallons /Day

Average / Peak Daily Consumption:  Gallons /Day

**Water Supply Asset Values**

Replacement Value	\$431,450	\$000,000
Depreciated Replacement Value	\$233,904	\$000,000

Utility Overview





# Tab 2. Utility Overview, cont.

## Tab 2. Utility Overview

### 2.1 Utility Growth

[Town name] [expects/does not expect] customer growth [of % or number] over the next [number] years. [If growth to utility expansion is expected, the town management is to add the information here] Therefore, the utility(ies) [discuss what the growth or future utility requirements will be referred to in the Capital Improvement Program (CIP) and Finance Strategy].

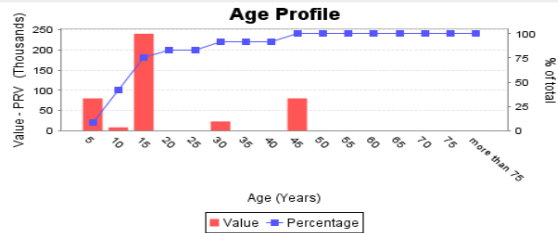


Figure 2-1. Beauty View Acres Subdivision - DW Age Profile

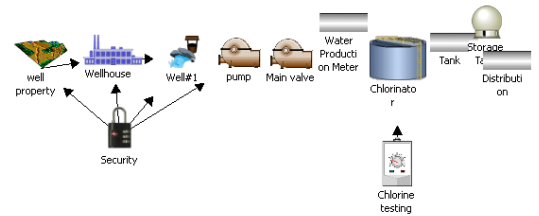


Figure 2-2. Beauty View Acres Subdivision - DW Utility Schematic

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Utility Growth ←





# Tab 3. Level of Service (LOS) Agreement

## Tab 3. LOS

**Beauty View Acres Subdivision - DW - LOS**

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### 3.0 Level of Service (LOS) Agreement

The goal of the Beauty View Acres Subdivision - DW is to [deliver safe water] by providing services that meet or exceed customer expectations and comply with federal regulations. This section describes the utility's Level of Service goals and the key performance targets for each of the level of service goal for present and future performance. The level of service describes the characteristics of utility's performance such as "how much", "of what nature", and "how frequently" about the service and the performance target define how each level of service will be measured. The utility's progress toward meeting those goals will be reported [time interval].

The levels of service determine the amount of funding that is required to maintain, renew and upgrade the water infrastructure to provide the customers with the levels of service specified. The Level of Service goals are defined across the four service areas identified below and a performance

Service Area	Goal	Performance Target	Achieved
<input type="text" value="select a service area"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="Select a measurement"/>

**Table 3-1. Level Of Service Goals** **Add another LOS Goal**

Service Area	Goal	Performance Target	Achieved



# Why I Identify LOS Goals?

- Foundation of your asset management plan
- Meeting or exceeding customer expectations helps you improve your ability to recover the appropriate cost of doing business





# S.M.A.R.T. Goals

Goals should be **SMART**—

Specific,  
Measurable,  
Attainable,  
Realistic  
Time-based

*By using the SMART approach, a utility can not only **set** goals but also **achieve** them.*

**Here is an example:** You have an issue area of “leak or break response time” Your current response time is 24 hours.

**Specific Goal:** Reduce the leak or break response time by 50%

**Goal Date:** One year

**First Step:** Convene a meeting of all utility staff to discuss why the response time is currently 24 hours



# Beauty View Acres

Tab 4. Critical Assets





# Tab 4. Critical Assets

## Tab 4. Critical Assets

**Beauty View Acres Subdivision - DW - Critical Assets**

[EXECUTIVE SUMMARY](#)
[1. INTRODUCTION](#)
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[5. O&M STRATEGY](#)
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[9. FINALIZE PLAN](#)

**4.0 Critical Assets** ?

Some assets are more important than others in making sure that customers receive safe drinking water, or making sure that wastewater is treated effectively, or both. Therefore, the asset management team used the CUPSS software (developed by the U.S. Environmental Protection Agency) to identify and prioritize critical assets and to improve practices used for routine operation and maintenance. This process includes reviewing all assets and recording their conditions (likelihood of failure), criticality to the utility (consequence of failure) and redundancy (the number of back-up assets to help support each asset). This will ensure that the utility(ies) delivers the level of service described in the previous section.

The Beauty View Acres Subdivision - DW asset management team [has completed / is in the process of completing] the critical asset assessment. [Describe the methodology used in conduction the asset assessment].

Tables 4-1 and 4-2 list assets critical to maintain the performance of the utility. [for additional information on assets, see the My Check Up Asset Report.]

**Table 4-1. Beauty View Acres Subdivision - DW Critical Asset Inventory**

Asset	Asset Type	Year Installed	Condition	Criticality	Capacity	Risk	Replacement Date
Well#1	Wells and Springs	1968-06-30	Poor	Catastrophic	Fullsized	High Risk – Immediate Attention	2009-02-01
pump	Pumping Equipment	2001-06-01	Good	Catastrophic	Fullsized	High Risk – Immediate Attention	2011-02-01
Main valve	Pumping Equipment	2001-06-30	Fair (Average)	Major	Fullsized	High Risk – Immediate Attention	2011-02-01
Security	Security Equipment	2001-06-30	Good	Minor	Fullsized	Medium Risk – Aggressive Monitoring	2009-02-01
Tank	Distribution / Collection Mains	1998-06-30	Good	Catastrophic	Fullsized	Medium Risk – Aggressive Monitoring	2036-02-01

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# Tab 5. Operation and Maintenance (O&M) Strategy

## Tab 5. O&M Strategy

**Beauty View Acres Subdivision - DW - O&M Strategy**

EXECUTIVE SUMMARY | 1. INTRODUCTION | 2. UTILITY OVERVIEW | 3. LOS | 4. CRITICAL ASSETS | **5. O&M STRATEGY** | 6. WATER QUALITY & ENERGY EFFICIENCY | 7. CIP | 8. FINANCES | 9. FINALIZE PLAN

### 5.0 Operation and Maintenance (O&M) Strategy

O&M consists of preventive and emergency/reactive maintenance. In this section, the strategy for O&M varies by the asset, criticality, condition and operating history. The risk matrix in My Check Up Asset Report provides the utility's(utilities') assets and identifies the risk value for each asset. This risk matrix and section 4.0 of this document were used as the basis for establishing the maintenance program as a way to make sure that the utility(ies) address the highest risk assets. In addition, the maintenance program addresses the level of service performance objectives to ensure that the utility is running at a level acceptable to the customer.

Unexpected incidents could require changing the maintenance schedule for some assets. This is because corrective action must be taken in response to unexpected incidents, including those found during routine inspections and O&M activities. Utility staff will record condition assessments when

### 5.1 Preventive Maintenance

Preventive maintenance is the day-to-day work necessary to keep assets operating properly, which includes the following:

1. Regular and ongoing annual tasks necessary to keep the assets at their required service level
2. Day-to-day and general upkeep designed to keep the assets operating at the required levels of service
3. Tasks that provide for the normal care and attention of the asset including repairs and minor replacements
4. [Complete routine maintenance tasks here as bullet summary points, describe your methods and rationale for the methods]

Preventive maintenance is carried out because of a planned maintenance program (such as regularly scheduled asset repairs) and historically

**Table 5-1. Beauty View Acres Subdivision - DW Preventive Maintenance Schedule for 2010**

Task Name	Cost (\$)	Frequency	Estimate Annual Cost	Deferred Maintenance
Check and record chlorine residual at the point of application.	\$0	Every 1 day(s) 1 time(s) per day		\$0
Check and record water levels in storage tanks.	\$0	Every 1 day(s) 1 time(s) per day		\$0
Check instrumentation for proper signal input/output. (Chlorine residual and Fluoride)	\$0	Every 1 day(s) 1 time(s) per day		\$0

### 5.2 Emergency/Reactive Maintenance

Reactive maintenance is often carried out because of customer requests or sudden asset failures. The required service and maintenance to fix the customers issue(s) is identified by staff inspection.

**Table 5-2. Beauty View Acres Subdivision - DW Emergency/Reactive Maintenance Expenses for 2009**

Task Name	Cost (\$)	Frequency	Estimate Annual Cost
<b>Total Emergency/Reactive Cost</b>			\$0

### 5.3 Deferred Maintenance

Deferred maintenance is any maintenance, repair, restoration or replacement work that should have been accomplished before now, and that has not been performed. The utility(ies) has(have) a total of \$0.00 for all maintenance activities. The following includes the utility's(ies) plan to reduce overall deferred maintenance over the following 10 years. [Identify the plan for reducing deferred maintenance through additional funding, etc., and show an example of how deferred maintenance might vary over the next 10 years.]

**Total Deferred Maintenance** \$0.00

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O&M Strategy

Preventive Maintenance

Emergency/Reactive Maintenance

Deferred Maintenance





# Beauty View Acres

Tab 6. Water Quality & Energy Efficiency





# Tab 6. Water Quality and Energy Efficiency

## Tab 6. Water Quality & Energy Efficiency

**Beauty View Acres Subdivision - DW - Water Quality**

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**6.0 Water Quality and Energy Efficiency**

This section addresses how the Beauty View Acres Subdivision - DW addresses water quality and water efficiency issues under the two major federal statutes governing water are the Safe Drinking Water Act (SDWA), the Clean Water Act (CWA), and State Drinking Water Regulations.

**Source Water Assessments and Protection**

The cost of water treatment, as well as the risks to public health, can be reduced by protecting source water from contamination. Beauty View Acres Subdivision - DW has reviewed the source water assessments and protection studies that provide information about the drinking water in Beauty View Acres Subdivision - DW and the community. The study results show that the utility should take the action to help reduce potential sources of contamination and protect drinking water. These issues include the following:

- Identify from state assessment any key issues that will need to be addressed in the action plan below

The associated actions are identified in the action plan in Section 9.0; for list of contaminants, see Appendix A.

**National Pollutant Discharge Elimination System (NPDES) Permitting Program**

**Total Maximum Daily Loads (TMDLs)**

Under CWA section 303(d), states are required to identify waters that do not meet water quality standards after the implementation of nationally required levels of pollution control technology, and to develop TMDLs for those waters. On the basis this determination, pollutant loadings are allocated among pollution sources in a water segment. Appendix B includes the waterbodies to which the utility discharges and the causes of impairment. To address these and future impairments, the asset management team has identified projects in the Capital Improvement Plan section 7.0 of this plan.

**Water Quality and Energy Efficiency**



**SWP and Assessments**



**NPDES Permitting Program**



**TMDLs**







# Tab 6. Water Quality and Energy Efficiency, cont.

Tab 6. Water Quality & Energy Efficiency

## 6.1 Implementation Strategy to Protect Watersheds

### Water Quality Monitoring Strategy ⓘ

Water quality monitoring provides the data to characterize waters and identify changes or trends in water quality over time. The collection of monitoring data enables Beauty View Acres Subdivision - DW to identify existing or emerging water quality problems and determine whether current pollution control mechanisms are effective in complying with the regulations. [Name of utility] uses the [Continuous basis at regular sites (i.e., fixed stations)/ As-needed basis at selected sites, to answer specific questions/ Temporary or seasonal basis; at random sites throughout an area or state/ Emergency basis (such as after a spill)] monitoring strategy and findings are included in the CUPSS application. The monitoring assets are included in Section 2.0 Utility Overview and tasks associated with water quality monitoring are included in Section 5.1.

### Water and Energy Efficiency ⓘ

The water and energy sectors are highly interdependent. Customers use enormous amounts of energy to withdraw, treat, and distribute water. Identifying approaches to integrate energy efficient practices into the daily management and long-term planning for our utility also contribute to the long-term sustainability of water infrastructure by reducing operation costs and adding to a utility's bottom line. Beauty View Acres Subdivision - DW is initiating the following steps to encourage water and energy efficiency to aid in forestalling future large capital expenditures in infrastructure and have identified several water and energy efficiency capital improvement project with a total cost of [Enter Costs]:

- Participating in off-peak pumping
- Securing adequate storage
- Purchasing efficient pumps and motors
- Properly sizing equipment to its intended duty/load requirement

### Best Management Practices (BMPs) ⓘ

Adopting BMPs is an emerging trend among the water utility industry. Widespread adoption of better management practices offers great promise to reduce costs and direct system investments using a risk-based approach. BMPs are inherently pollution prevention practices. The asset management team has considered installing several types of BMPs. They include a total implementation cost of [Enter Cost] and conduct BMP activities throughout its preventive maintenance.

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Water Quality Monitoring Strategy



Water and Energy Efficiency



Best Management Practices





# Tab 7. Capital Improvement (CIP) Plan

Tab 7. CIP

Beauty View Acres Subdivision - DW - CIP

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### 7.0 Capital Improvement Plan (CIP) ?

The Beauty View Acres Subdivision - DW capital improvement program (CIP) plan is the description of future capital projects. Capital improvement projects generally create a new asset that previously did not exist or they upgrade and improve an existing capacity. The projects can result from growth or environmental needs, such as the following:

1. Expenditure that purchases or creates a new asset or in any way improves an asset beyond its original design capacity
2. Upgrades that increase the capacity of the asset
3. Construction designed to produce an improvement in the standard operation of the asset beyond its present capacity

In addition to capital improvement projects, the asset management team has reviewed and is establishing a renewal (or rehabilitation) strategy. Renewal expenditure is anything that does not increase the asset's design capacity but restores an existing asset to its original capacity. Any improvement projects that require more than simply restoring an asset to its original capacity are deemed to be a renewal project, such as the following:

**Table 7-1. Beauty View Acres Subdivision - DW Capital Improvement Projects**

Capital Improvement Project	Total Cost	Annual Savings	Type of Capital Improvement Project	Year to Conduct
Chlorine testing	\$150	\$10	Rehab/Replace	2008
Well# 1	\$80,000	\$1,951	Rehab/Replace	2009
pump	\$3,500	\$350	Rehab/Replace	2011
Water Production Meter	\$5,000	\$135	Rehab/Replace	2035
Tank	\$60,000	\$1,579	Rehab/Replace	2036
Distribution	\$135,000	\$3,553	Rehab/Replace	2038
Main valve	\$2,000	\$200	Rehab/Replace	2011

<< Previous | Save and Generate Plan | Save and Continue >>



# Tab 8. Financial Management Strategy

Tab 8. Finances

**Beauty View Acres Subdivision - DW - Finances**

EXECUTIVE SUMMARY | 1. INTRODUCTION | 2. UTILITY OVERVIEW | 3. LOS | 4. CRITICAL ASSETS | 5. O&M STRATEGY | 6. WATER QUALITY & ENERGY EFFICIENCY | 7. CIP | **8. FINANCES** | 9. FINALIZE PLAN

### 8.0 Financial Management Strategy

This section describes the Beauty View Acres Subdivision - DW financial condition and its strategy for future financing. Expenses greater than \$[user completes] are considered capital costs. Capital costs are one time expenses (not including labor) used to replace or upgrade, because of capacity, a part of the utility. Capital costs do not include any O&M costs.

Costs for water are funded through general rates (xx%), targeted rates (xx%) and fees and charges (xx%). External financing for capital expenses exceeding [\$xx] will be financed through [how will the utility finance capital expenses loans, rates, grants]. For details of capital projects, see the CIP plan. Table 8-1 below presents the estimated external financing.

If large expenses are required for expansion or upgrades, the Beauty View Acres Subdivision - DW plans to pay for the improvements through [user enters the financing methods]. The utility(ies) estimates that it will spend a total of \$xx on water over the next 10 years to accommodate growth in the town, compliance with state and federal regulations, and introduce new drinking water or wastewater requirements. A detailed financial summary for the next 10 years is presented in Table 8-1.

Financial ratios are used to determine the financial health of a utility. The utility used the following Operating, Debt, Sales and Expense Ratios to

### 8.1 Financial Forecast

The Financial Forecast shows predicted values of both revenue and expenses for the asset management teams using the values provided in the financial history, see Appendix D. The projections are used to help the utility plan for and predict future expenses and revenue and how to better finance capital improvement projects by acquiring loans or grants or by planned rate changes.

#### Financial Projection Summary

Year	Revenue	Cost of Doing Business	Surplus / Deficit
2008	25,000	-100,000	-75,000
2009	15,000	-95,000	-80,000
2010	15,000	-25,000	-10,000
2011	15,000	-30,000	-15,000
2012	15,000	-25,000	-10,000
2013	15,000	-25,000	-10,000
2014	15,000	-25,000	-10,000
2015	15,000	-25,000	-10,000
2016	15,000	-25,000	-10,000
2017	15,000	-25,000	-10,000
2018	15,000	-25,000	-10,000

Figure 8-1. Beauty View Acres Subdivision - DW

Financial Management Strategy



Forecast Summary





# Tab 8. Financial Management Strategy, cont.

## Tab 8. Finances

### 8.2 Total Expenditures

The following table illustrates the forecasted financial needs for the next 10 years. The actual expenditure in FY 2008 and FY 2009, and the approved budget for 2010, is also shown for comparison.

Table 8-1. Beauty View Acres Subdivision - DW Total Expenditure Summary - Actual/Forecast

FY 2008 Actual	FY 2009 Actual	FY 2010 Budget	Expense/Revenue	Typical Year	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
			Water Supply											
1.0%	1.0%	1.0%	Annual Growth	0.8%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	0.0%	0.0%
		0	Number of Customers	0	0	0	0	0	0	0	0	0	0	0
		\$0	Average Customer Bill	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

<< Previous Save and Generate Plan Save and Continue >>

Total Expenditures





# Beauty View Acres

Tab 9. Finalize Plan





# Tab 9. Finalize Plan

## Tab 9. Finalize Plan

Beauty View Acres Subdivision - DW - Finalize Plan

EXECUTIVE SUMMARY | 1. INTRODUCTION | 2. UTILITY OVERVIEW | 3. LOS | 4. CRITICAL ASSETS | 5. O&M STRATEGY | 6. WATER QUALITY & ENERGY EFFICIENCY | 7. CIP | 8. FINANCES | **9. FINALIZE PLAN**

**9.0 Action Plan**

The Beauty View Acres Subdivision - DW Asset Management Plan refers to many objectives, targets, maintenance and improvements for the utility. Table 9-1 brings all these items together to clearly identify the actions required to successfully implement the Asset Management Plan. For example action items, see Appendix F.

**Action Plan Table**

Priority	Urgency	Service	Performance Target	Status	Final Completion Date	Target Date
1						

**Issue**  **Corrective Action**  [Add another Action Item](#)

**Table 9-1. Action Items**

Priority	Urgency	Service	Issue	Corrective Action	Performance Target	Target No.	Target Date	Status	Final Completion
----------	---------	---------	-------	-------------------	--------------------	------------	-------------	--------	------------------

**9.1 Review Schedule**

The Beauty View Acres Subdivision - DW is/are scheduled to review this plan annually and update the community on new information and changes on 02/25/2010.

02/25/2010 (CUPSS recommends once per year)

Appendices

- Appendix A. Contaminant List
- Appendix B. Impaired Waterbodies and/or TMDLs List
- Appendix C. Financial History
- Appendix D. Financial Ratios
- Appendix F. Glossary

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Action Plan



Action Items



Review Schedule



Appendices





# CUPSS Example

## Q&A on My CUPSS Plan





# Poll Question

1. How did you hear about CUPSS?

- A. State agency
- B. EPA HQ or Regional office
- C. Technical Assistance Provider
- D. Another utility
- E. Other





# Poll Question

2. Which module would you like to see more training on?

- A. My Finances
- B. My Inventory
- C. My O&M
- D. My Check Up Reports
- E. My CUPSS Plan



# TROUBLESHOOTING





# Common Technical Questions



- **Will all the data I've entered be lost if I download a new version of CUPSS?**
  - The data that you entered in the 'Your CUPSS' database will not be deleted by downloading a new version of CUPSS.
- **Why was the example database overwritten when updating the CUPSS application to the latest version?**
  - Updating CUPSS will not overwrite your personal CUPSS database but it will override the Example Database.



# Common Technical Questions




- **Why do I get an error when my computer is idle and activates the screensaver or hibernate mode?**
  - When Windows enters power saving mode it closes the connection to CUPSS database and the system generates an exception. You will need to end all the CUPSS processes before opening the CUPSS application again.
- **I can't download CUPSS to Windows 7 or Vista!**

or
- **I can download but it only gets to 33% and then stops!**
  - Yes you can actually download CUPSS! You just have to have administrative privileges to download to your C Drive or need to download it to your My Documents folder



# More Troubleshooting Tips

## How do I get rid of an Exception Debug Error?

 Close the existing application and then reinstall CUPSS.

## How can I make CUPSS work when I do not have administrative privileges to the computer?

Have your administrator give you full read and write access to the CUPSS folder.

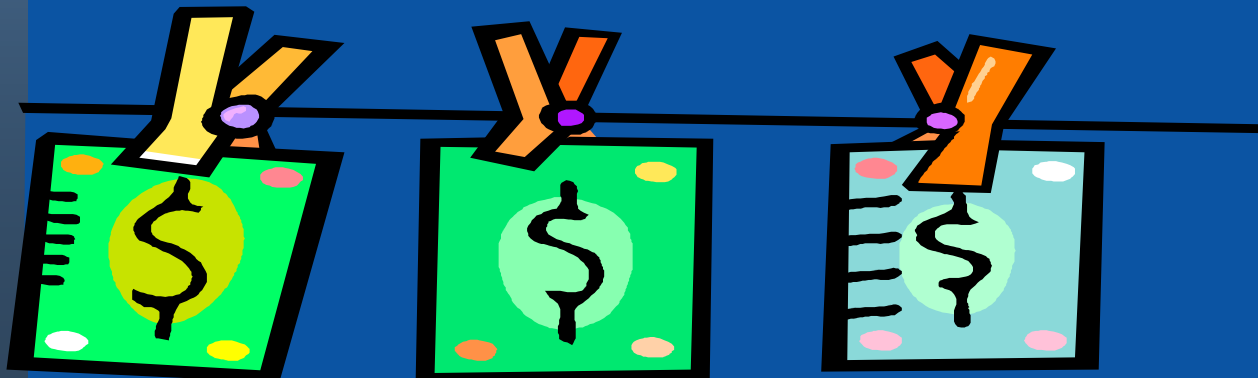
## Why can't I backdate items on the calendar?

The completion date cannot be before the start date. If you need to enter a completion date that occurs prior the current date, change the start date for that task to a date on or before the desired completion date.



# More Troubleshooting Tips

- Why can't I enter currency signs, commas or percent signs to certain text fields?
  - Percentages and Currencies: number with up to 2 decimal places
- How do I enter dollar amounts?
  - \$1,234.00 should be entered as 1234.00 or 1234, not as 1,234, \$1234 or \$1,234





# More Troubleshooting Tips

How do I enter dates?

- Dates: MM/DD/YYYY, and
- December 2, 1999 should be entered as 12/02/1999
- What if I only know the year?
  - 01/01/2008

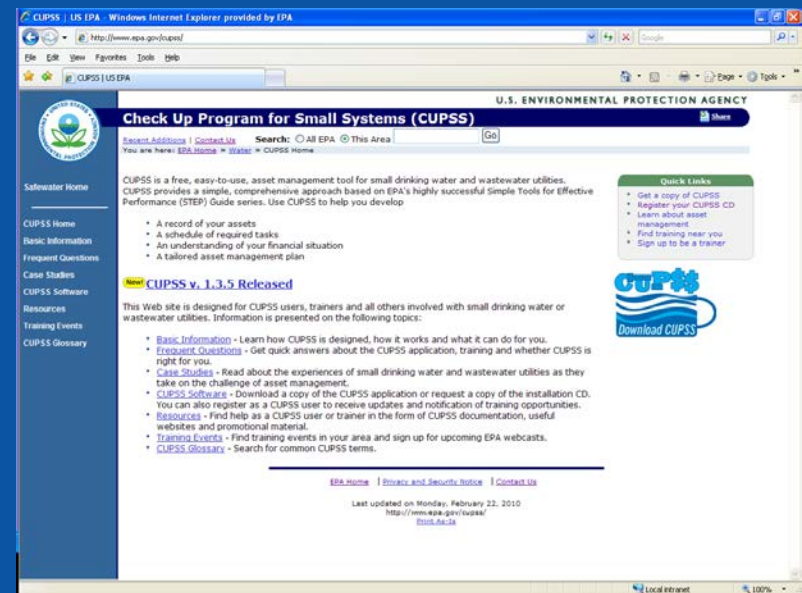




# CUPSS Website

[www.epa.gov/cupss](http://www.epa.gov/cupss)

- Basic Information
- Frequent Questions
- CUPSS Software
- Resources
- CUPSS Glossary







# Listservs

## User's Listserv

- Register for the user's listserv
- Receive email updates of software enhancements

## Trainer's Listserv

- Register for the Trainer's Listserv
- Receive email updates of training opportunities
- Network with trainers like you!



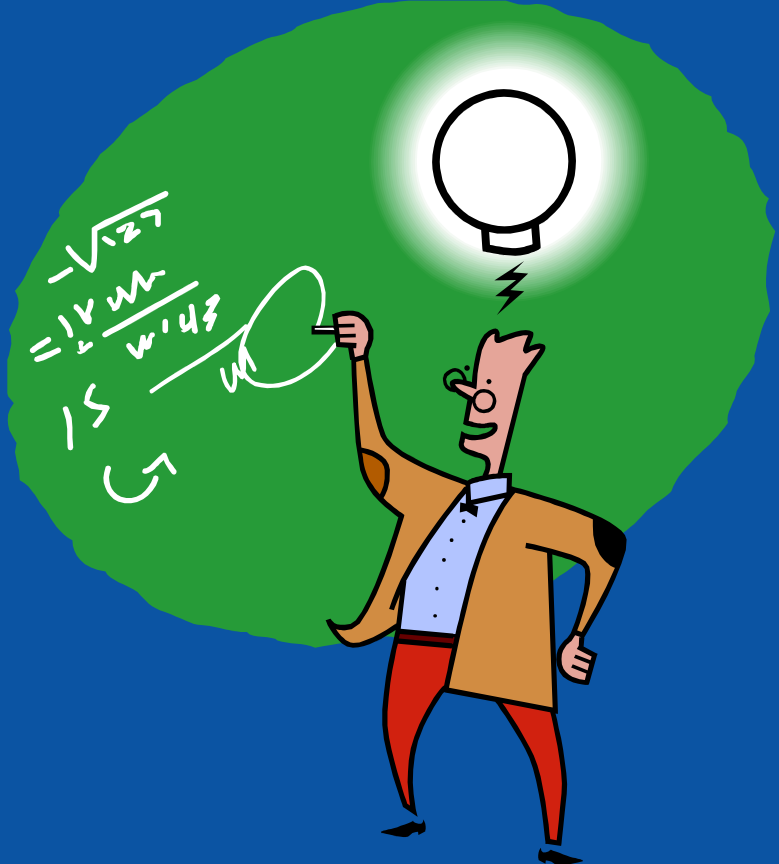
# Email a CUPSS Expert

[cupss@epa.gov](mailto:cupss@epa.gov)

- Enter in Subject line:
  - Technical Question
  - Training Question
  - Enhancement Request
  - Comment
  - Issue
- If it is an issue or bug report
  - Provide step-by-step what you were doing when you received the error
  - Attach a screen shot of the error when possible.



# ADVANCED FEATURES





# GIS and CUPSS

Microsoft Excel - CUPSSDEMO.xls

	A	B	C	D	E	F	G	H	I	J	K	L
1	Latitude	Longitude	Name	Description	Icon	Snippet	IconScale	IconAltitude	IconLineColor	HideNameUntilMouseOver	LineStringColor	LineStringAltitude
2	43°36'34.86"N	116°12'23.30"W	Pump 1		12							
3	43 36 33.22	-116 12 18.40	Valve 2		111							
4	43.60858137	-116.2030968	Well 3		186							
5												

## Excel To KML - Display Excel files on Google Earth.

Export a spreadsheet of lat/long coordinates to Google Earth. Pop-up balloons, icons, and paths are easily created from the spreadsheet data.

**NEW:** Support added for Excel 2007 files.

Direction arrows for GPS tracks. [Read blog article...](#)



Google Earth

File Edit View Tools Add Help

Search

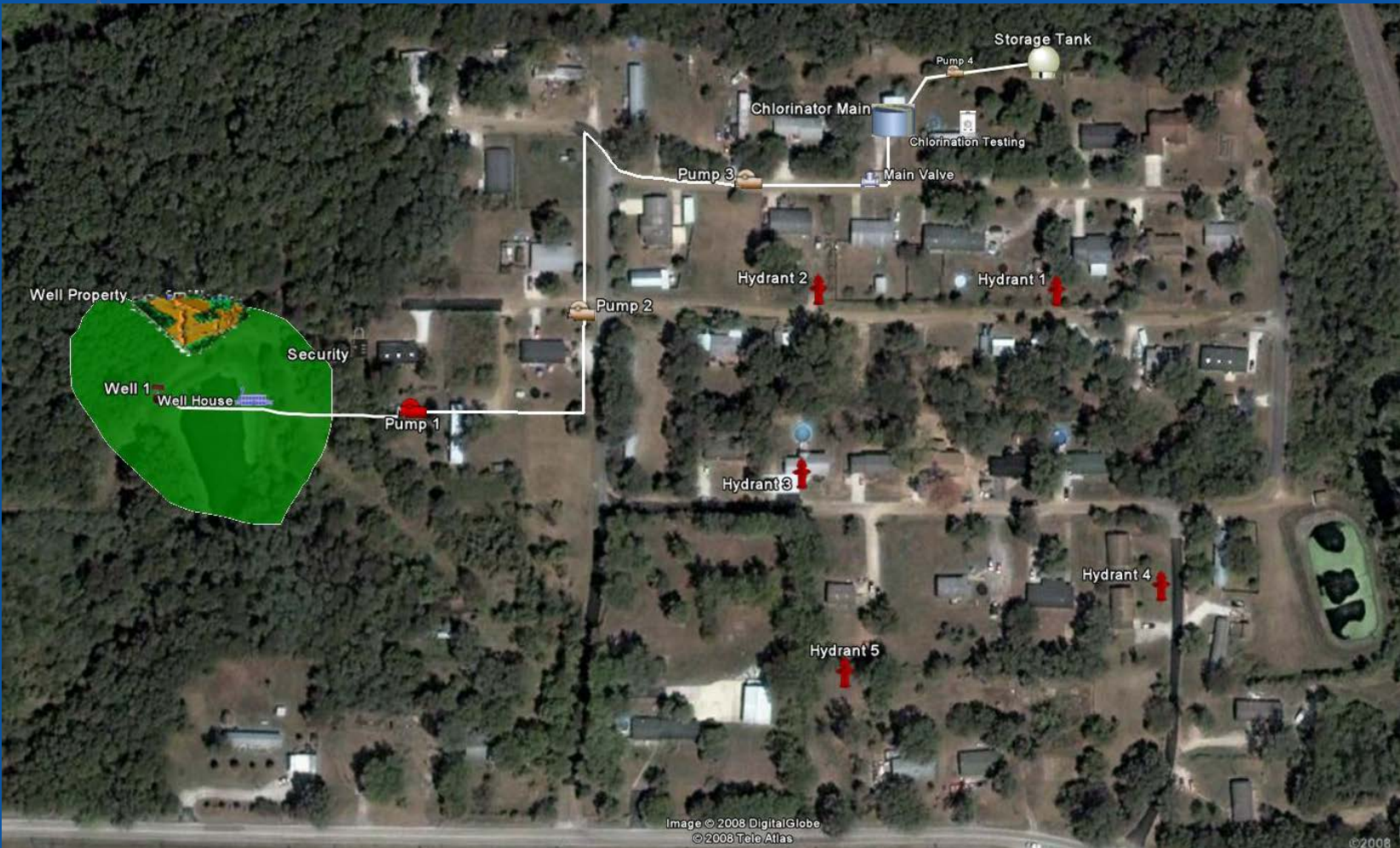
Places Add Content

- My Places
- BEAUTY VIEW ACRES SUBD
- BEAUTY VIEW ACRES SUBD
- PO BOX 245
- Source
  - Well Property
  - Well Property
  - Well Property
- Pipe from well to structure
- Pipe from well to structure
- Well 1
- Well 1
- Pumping Facility
  - Security
  - Pump 1
  - Pump associated with a well and pushes water to
  - Well House
  - Intake Structure with Low Risk
  - Pump 2
  - Pump 3
  - Main Valve
- Treatment and Storage
  - Pipe to Treatment Area
  - Pipe to Treatment Area
  - Chlorinator Main
  - Storage Tank
  - Pump 4
  - Chlorination Testing
  - Pipe to Storage
- Distribution
  - Hydrants
- Beauty view acres.kml
- Temporary Places





# Publish to Google Earth





# Publish to Google Maps

<http://maps.google.com/maps/ms?t=h&hl=en&ie=UTF8&msa=0&msid=100221858065343379632.00044fe65568e4a7bb8b7&ll=38.504595,-90.842031&spn=0.003052,0.006845&z=18>

The screenshot shows a Mozilla Firefox browser window displaying Google Maps. The address bar contains the URL: <http://maps.google.com/maps/ms?t=h&hl=en&ie=UTF8&msa=0&msid=100221858065343379632.00044fe65568e4a7bb8b7&ll=38.504595,-90.842031&spn=0.003052,0.006845&z=18>. The map shows an aerial view of a residential area with streets like Puetz Ln, Oak Dr, Maple Dr, and Lake Dr. A green shaded area is visible on the left side of the map. A popup window for 'Pump 1' is open, displaying the following information:

**Pump 1**  
Last Updated by [test1](#) 54 minutes ago  
Pump associated with a well and pushes water to intake. Risk High.  
Get directions: [To here](#) - [From here](#)  
[Search nearby](#)

The left sidebar shows search results for 'Beauty view acres.kml' with a list of features:

- Well Property
- Well Property
- Pipe from well to structure
- Well 1
- Security
- Pump 1** (highlighted)
- Well House
- Pump 2
- Pump 3
- Main Valve
- Pipe to Treatment Area
- Chlorinator Main
- Storage Tank



# Share CUPSS Transfer Database to a Utility



Check Up Program for Small Systems (CUPSS)

Check Up Program for Small Systems (CUPSS)

 **Welcome to CUPSS**  
Brought to you by USEPA



Welcome! CUPSS is meant to make asset management easy for you. To make it even easier to use CUPSS, information from a small community with both drinking water and wastewater assets has been provided as an example. You may view the example or proceed directly to Your CUPSS.

[Enter Example CUPSS](#) [Enter Your CUPSS](#)

**Trainers - Advanced Options**

Select Database:  [Enter](#)

[Create Database](#) [Load Database](#) [Remove Database](#)



# Share CUPSS

## Transfer Database to a Utility

- **Backup at your office**
  - Go to the application folder (default C:\Program Files\CUPSS), enter the database folder, and copy the Cupss folder to a backup location of your choice
  
- **Restore at the utility**
  - Go to the folder where you saved a backup copy of the CUPSS folder. Copy the entire CUPSS folder back into the application database folder (default C:\Program Files\Cupss\database); overwriting all the existing files





# Share CUPSS Over a Network

Use CUPSS on a:

Personal computer's desktop

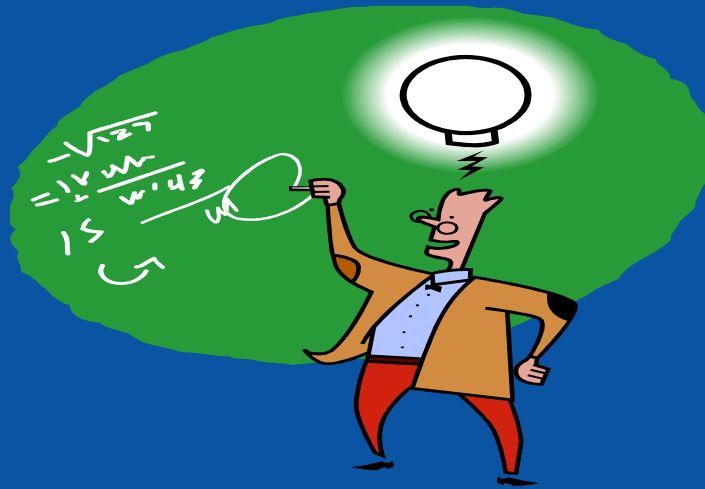
OR

Common network





# ADVANCED FEATURES



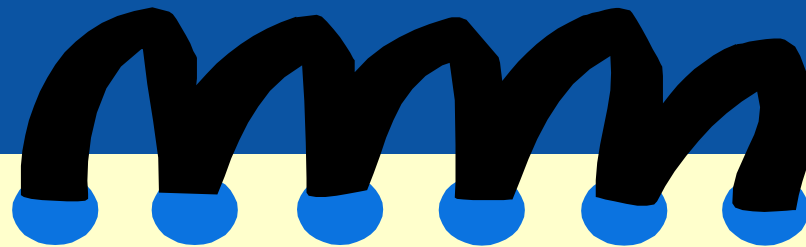
DEMO

The background of the slide features a semi-transparent, light-colored overlay over a photograph of industrial machinery. The machinery includes various pipes, valves, and large handwheels, typical of a refinery or chemical processing plant. The colors are muted, with shades of brown, tan, and blue. The text 'Q&A' is centered over this background.

# Q&A



# Today's Agenda



- Session 2 Summary
- Session 2 Your CUPSS
- Session 2 Quiz
- Session 3
  - My CUPSS Plan
  - Tips and Tricks for Trainers
    - Troubleshooting
    - Advanced Features
- Final Test of Knowledge
- Session 3 Your CUPSS



# Final Test of Knowledge

1. In My Inventory, when you enter an asset in the Inventory List, does it automatically appear in the My Schematic section?

A. Yes

B. No



# Final Test of Knowledge

1. In My Inventory, when you enter an asset in the Inventory List, does it automatically appear in the My Schematic section?

A. Yes

B. No



# Final Test of Knowledge

2. In My O&M, the task types include options under the following two categories:
  - A. Written down and Printed off
  - B. Proactive and Reactive
  - C. Planned and Unscheduled
  - D. Present and Past



# Final Test of Knowledge

2. In My O&M, the task types include options under the following two categories:
  - A. Written down and Printed off
  - B. Proactive and Reactive
  - C. Planned and Unscheduled
  - D. Present and Past





# Final Test of Knowledge, cont.

3. In Search and Report, what option would you use to generate a report that shows all the tasks that you need to perform next week?
- A. Task Date Range
  - B. Asset Category
  - C. Task Type
  - D. Task Status



# Final Test of Knowledge, cont.

3. In Search and Report, what option would you use to generate a report that shows all the tasks that you need to perform next week?

- A. Task Date Range
- B. Asset Category
- C. Task Type
- D. Task Status



# Final Test of Knowledge, cont.

4. In My Finances, what is a good way to see how your revenues and expenses fluctuate over the years?
- A. Revenues section
  - B. Graph It button
  - C. Expenses section
  - D. Import Data From Previous Year button



# Final Test of Knowledge, cont.

4. In My Finances, what is a good way to see how your revenues and expenses fluctuate over the years?
- A. Revenues section
  - B. Graph It button
  - C. Expenses section
  - D. Import Data From Previous Year button



# Your CUPSS

## My CUPSS Plan

(\*For the Session 3 Your CUPSS Assignment, use the example system 'Beauty View Acres Subdivision – WW.' For each of the instructions below, add your utility's specific information.)

- 1) Familiarize yourself with the content and language within the ten steps in the My CUPSS Plan. Under each of these steps, perform the following:
  - 1.1) Identify the brackets [ ] where you can fill in further information for a specific utility. Fill in some of the brackets with your utility information.
  - 1.2) Identify sentences or paragraphs that don't apply to a specific utility. Practice modifying or removing some of these sentences or paragraphs to better reflect your utility's practices.
  - 1.3) Identify areas where it indicates additional information should be added. Insert additional information about some of your utility's processes and procedures.
- 2) After making all of the modifications, click 'Save and Generate Plan'. Email a copy of your My CUPSS Plan to [cupss@epa.gov](mailto:cupss@epa.gov)



# Contacts for CUPSS

Want more information about CUPSS?

Website:

[www.epa.gov/cupss](http://www.epa.gov/cupss)

Email:

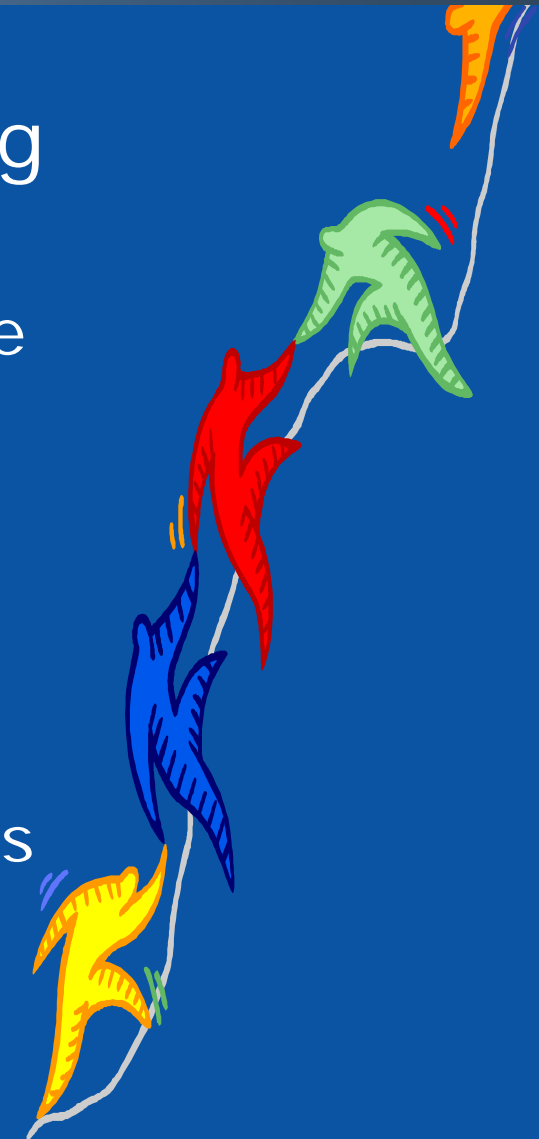
[cupss@epa.gov](mailto:cupss@epa.gov)





# Using the Trainer's Listserv

- Designed for networking between trainers
  - Request speakers to come to your training event
  - Share training tips and lessons learned
  - Identify other trainers in your area
  - Post future training events
- CUPSS Website-  
"Training Events"





# Certificate of Completion

Want a certificate to show you attended this three-part series of CUPSS Trainings?

## Requirements:

- Completed and emailed all three homework assignments to **[cupss@epa.gov](mailto:cupss@epa.gov)**