


Navigation: Use the arrows in the bottom-middle of the screen to navigate backward to previous screens or forward through the lesson screens. When you enter an interactive tool, check the notes to receive instruction on using that tool's navigation. If you do not want to hear the audio, set the sound scale on the bottom left to zero or mute the computer's sound.

Welcome to Lesson 6 of the Check Up Program for Small Systems (CUPSS) Self-Paced Training Series! This lesson will explain how your community can get started with generating an asset management plan through the My CUPSS Plan module.

Before you begin using this self-paced training, you might have a few questions about using CUPSS for managing your assets, tasks, and finances. In this lesson, we'll provide information about how the CUPSS software can help you develop a personalized asset management plan. At the beginning of the lesson, we'll review the five core questions of asset management to give you a sense of what's included in an asset management plan. The My CUPSS Plan module will then be introduced and the lesson will conclude with you being ready to prepare your own asset management plan.

Let's get started!

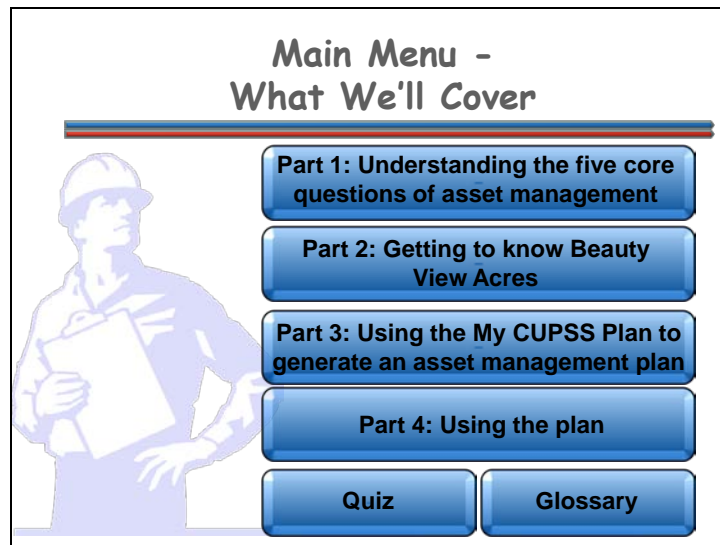
Objectives for Lesson 6



- Become familiar with the steps in developing an asset management plan
- Generate a custom asset management plan

Navigation: Use the arrows in the bottom-middle of the screen to navigate backward to previous screens or forward through the lesson screens. When you enter an interactive tool, check the notes to receive instruction on using that tool's navigation. If you do not want to hear the audio, set the sound scale on the bottom left to zero or mute the computer's sound.

Lesson 6 will introduce you to the My CUPSS Plan module where you'll become familiar with the steps in developing an asset management plan. At the end of this lesson, you will see how a custom asset management plan is generated.



Navigation: Click a button on the slide to begin a part of the lesson. You can start at the beginning or skip ahead, the choice is yours. You may also choose “Quiz” to find test questions or “Glossary” to find term definitions. If you do not want to hear the audio, set the sound scale on the bottom left to zero or mute the computer’s sound.

This lesson is designed to familiarize you with the My Finances Module and the My Financial Check Up Report. Each lesson within the Self-Paced Training Series begins with an overview of the five core questions of asset management.

Here’s what will be covered in this lesson:

Part 1: Understanding the five core questions of asset management

Part 2: Getting to know Beauty View Acres

Part 3: Using the My CUPSS Plan to generate an asset management plan

Part 4: Using the plan

What Are We Learning?

Part 1: Understanding the five core questions of asset management

Main Menu

Navigation: Use the arrows in the bottom-middle of the screen to navigate backward to previous screens or forward through the lesson screens. When you enter an interactive tool, check the notes to receive instruction on using that tool's navigation. If you do not want to hear the audio, set the sound scale on the bottom left to zero or mute the computer's sound.

For each lesson within the Self-Paced Training Series, you'll start with the basics. Let's review the five core questions of asset management.

The screenshot shows a software window titled "Asset Management Core Questions". On the left side, there is a vertical list of four blue buttons with white text, each containing a question number and text. The main content area on the right is titled "Introduction" and contains two paragraphs of text. The first paragraph states that there are five core questions to help get started. The second paragraph lists the first four of these questions. At the bottom of the window, there is a "PROPERTIES" section with three lines of text, a "Properties..." button, and an "Edit in Engage" button. Navigation arrows are visible in the top right corner of the window.

Asset Management Core Questions

1. What is the Current State of Your Assets?

2. What is Your Required Sustained Level of Service (LOS)?

3. Which Assets are Critical to Sustained Performance?

4. What are Your Best Capital Improvement Project (CIP) and O&M Strategies?

Introduction

When you start thinking about asset management, there are five core questions that will help you get the ball rolling.

The five core questions of an asset management framework are:

1. What Is The Current State Of Your Assets?
2. What Is Your Required Sustained Level Of Service?
3. Which Assets Are Critical To Sustained Performance?
4. What Are Your Best "Minimum Life-Cycle-Cost" CIP And O&M Strategies?

PROPERTIES
Allow user to leave interaction:
Show 'Next Slide' Button:
Completion Button Label:

After viewing all the steps
Show upon completion
Next Slide

Properties...

Edit in Engage

Navigation: Use the arrows in the bottom-middle of the screen to navigate backward to previous screens or forward through the lesson screens. Click on the buttons on the left side or click on the arrows at the top of the slide to navigate through the information. If you do not want to hear the audio, set the sound scale on the bottom left to zero or mute the computer's sound.

The image shows a presentation slide with a blue border and a red header bar containing the title "Asset Management Core Questions". On the left side, there is a vertical list of five blue buttons, each containing a question number and text. The main content area on the right is white and contains an "Introduction" section with a paragraph, a sub-section "The five core questions of an asset management framework are:", and a numbered list of the five questions.

Asset Management Core Questions

1. What is the Current State of Your Assets?
2. What is Your Required Sustained Level of Service (LOS)?
3. Which Assets are Critical to Sustained Performance?
4. What are Your Best Capital Improvement Project (CIP) and O&M Strategies?
5. What is Your Best Long-term Financing Strategy?

Introduction

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- What Is Your Required Sustained Level Of Service?
- Which Assets Are Critical To Sustained Performance?
- What Are Your Best "Minimum Life-Cycle-Cost" Capital Improvement Project (CIP) and Operation and Maintenance (O&M) Strategies?
- What Is Your Best Long-term Financing Strategy?

You'll soon see how these questions all relate to effective asset management!

Asset Management Core Questions

1. What is the Current State of Your Assets?

2. What is Your Required Sustained Level of Service (LOS)?

3. Which Assets are Critical to Sustained Performance?

4. What are Your Best Capital Improvement Project (CIP) and O&M Strategies?

5. What is Your Best Long-term Financing Strategy?


1. What is the Current State of Your Assets...

Asset Management Core Question
Question 1 of 5

1

What Is The Current State Of Your Assets?

- What does the utility own?
- Where is it?
- What is its condition?
- What is its useful life?
- What is its value?



Question 1 What Is The Current State Of Your Assets?

The first step in managing a utility's assets is knowing their current state. Because some of this information may be difficult to find, estimates can be used when necessary. Over time, as assets are replaced or rehabilitated, the utility's inventory will become more accurate.

Questions to ask:

- What does the utility own?
- Where is it?
- What is its condition?
- What is its useful life?
- What is its value?

Asset Management Core Questions

1. What is the Current State of Your Assets?

2. What is Your Required Sustained Level of Service (LOS)?

3. Which Assets are Critical to Sustained Performance?

4. What are Your Best Capital Improvement Project (CIP) and O&M Strategies?

5. What is Your Best Long-term Financing Strategy?


2. What is Your Required Sustained Level of Service (...)

Asset Management Core Question
Question 2 of 5

2

What Is The Utility's Required Sustained Level Of Service (LOS)?

- What do the regulators require?
- What are the utility's performance goals?
- What LOS do the customers demand?
- What are the physical capabilities of the assets?



Question 2 What Is Your Required Sustained Level Of Service?

Knowing the utility's required "sustainable" level of service will help the utility implement an asset management plan and communicate to stakeholders what is being done. The required sustainable level of service is the set of features that describe the utility's short- and long-term performance standards as well as the customer's expectations.

Questions to ask in determining the utility's Level of Service (LOS):

- What do the regulators require? Find out what the utility has to provide and how.
- What are the utility's performance goals? Or what services is the utility currently providing? Find out if the services can be improved.
- What level of service do the stakeholders and customers demand or expect? Another way to ask this is 'what is the best way to meet the needs of the customers'? Find out from customers what services are most important to them.
- What are the physical capabilities of the assets? Or what else can the utility do in it's current capacity? Figure out if the utility is doing all it can do.

Asset Management Core Questions

1. What is the Current State of Your Assets?

2. What is Your Required Sustained Level of Service (LOS)?

3. Which Assets are Critical to Sustained Performance?

4. What are Your Best Capital Improvement Project (CIP) and O&M Strategies?

5. What is Your Best Long-term Financing Strategy?


3. Which Assets are Critical to Sustained Performance?

Asset Management Core Question
Question 3 of 5

3

Which Assets Are Critical To Sustained Performance?

- How can assets fail?
- How do assets fail?
- What are the likelihoods and consequences of asset failure?
- What does it cost to repair the asset?
- What are other costs that are associated with asset failure?



Question 3 Which Assets Are Critical To Sustained Performance?

Because assets fail, how you manage the consequences of failure is vital. Not every asset presents the same failure risk, or is equally critical to the drinking water or wastewater system's operations. Therefore, it is important to know which assets are required to sustain the utility's performance. Critical assets are those that you decide have a high risk of failing (like if the asset is old or in poor condition) and major consequences if they do fail (major expense, system failure, safety concerns, etc.). You can decide how critical each asset is and rank them accordingly.

Questions to ask:

- How can assets fail? Different things contribute to an asset failing. This can include: Demand exceeds design capacity (which comes from population growth) or physical deterioration from age, usage, or nature.
- How do assets fail? The type of failure depends on the type of asset: Water pipes can leak or disinfection equipment can stop working.
- What are the likelihoods (meaning the probabilities) and the consequences of asset failure? Likelihoods of failure depend on age and condition. Consequences of failure depend on how critical the asset is: Is it the Chlorinator in a small system that has no other backup? Are the customers logging more complaints than comments?
- What does it cost to repair or replace the asset? Cost depends upon if the utility has to repair, rehabilitate, or replace the asset.

- What are the other costs (such as social costs or environmental costs) that are associated with asset failure?

These are important values to know, understand and consider in any decision-making process. Running a utility is fundamentally a business operation and should be treated that way.

Asset Management Core Questions

1. What is the Current State of Your Assets?

2. What is Your Required Sustained Level of Service (LOS)?

3. Which Assets are Critical to Sustained Performance?

4. What are Your Best Capital Improvement Project (CIP) and O&M Strategies?

5. What is Your Best Long-term Financing Strategy?

4. What are Your Best Capital Improvement Project (...)

Asset Management Core Question
Question 4 of 5

4

What Are Your Best Capital Improvement Project (CIP) and O&M Strategies?

- What alternative management strategies exist?
- What strategies are the most feasible for my organization?

Question 4 What Are Your Best “Minimum Life-Cycle-Cost” Capital Improvement Project (CIP) and Operation and Maintenance (O&M) Strategies?

It is important to recognize that operations and maintenance (O&M), personnel, and the capital budget account for an estimated 85 percent of a typical system’s expenses. Asset management enables a system to determine the lowest cost options for providing the highest level of service over time. Utilities want to optimize the work O&M crews are doing, where they are doing it, and why. An asset management program helps a utility make risk-based decisions by choosing the right project, at the right time, for the right reason.

Questions to ask:

- What alternative management strategies exist? Run to failure may be a very real option for some utilities. Is it necessarily the best option?
- What strategies are the most feasible for the organization?

Asset Management Core Questions

1. What is the Current State of Your Assets?
2. What is Your Required Sustained Level of Service (LOS)?
3. Which Assets are Critical to Sustained Performance?
4. What are Your Best Capital Improvement Project (CIP) and O&M Strategies?
5. What is Your Best Long-term Financing Strategy?


5. What is Your Best Long-term Financing Strategy...

Asset Management Core Question
Question 5 of 5

5

What Is The Utility's Best Long-term Financing Strategy?

- Do we have enough funding to maintain our assets for our required level of service?
- Is our rate structure sustainable for our system's long-term needs?



Question 5 What Is Your Best Long-term Financing Strategy?

Knowing the full economic costs of services provided is critical for making sound financial decisions and developing an effective long-term funding strategy. Having this information in an asset management plan will help tell the utility's "story." An asset management plan that refers to the utility's sustainable level of service is good for communicating this information to decision makers and customers. The utility can decide how to fund it's strategies by knowing the system's financial forecast.

Questions to ask:

- Do we have enough funding to maintain our assets for our required level of service?
- Is our rate structure sustainable for our system's long-term needs?

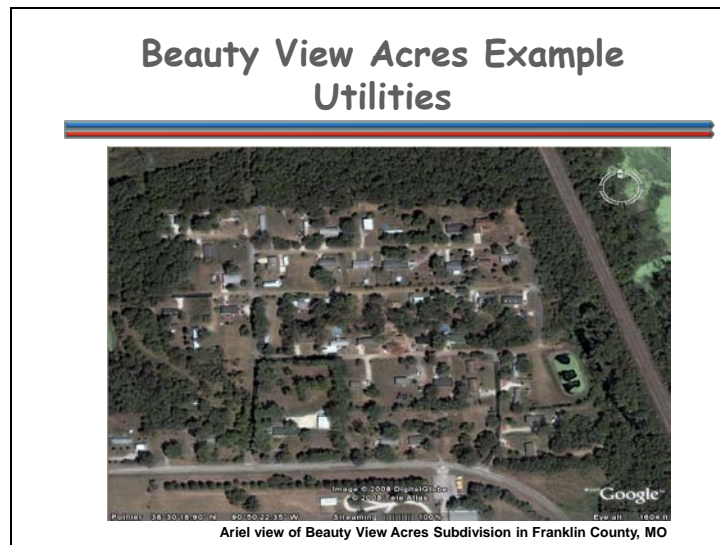
What Are We Learning?

Part 2: Getting to know Beauty View Acres

Main Menu

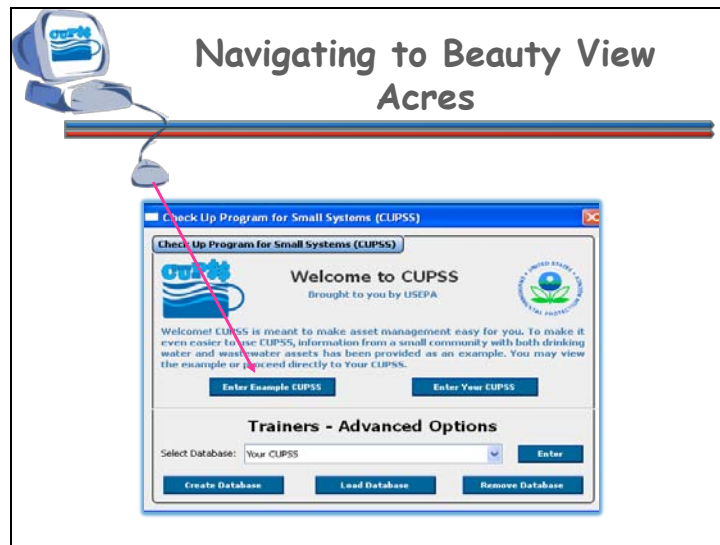
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In Part 2, you're going to be introduced to Beauty View Acres, the example drinking water and wastewater systems within CUPSS.



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An important feature within the CUPSS application is that an example drinking water utility and an example wastewater utility are included. These are real utilities that are using CUPSS. Beauty View Acres is a subdivision in Franklin County, Missouri with a population of about 75 people. Data from Beauty View Acres has been added to each module to be used as a helpful tool in case you don't know what to enter, or where to enter your own information.

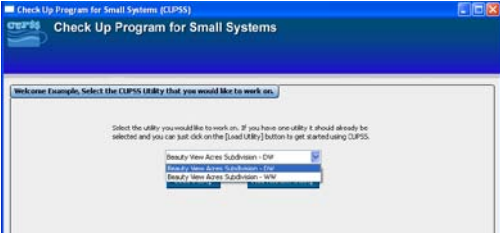


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When you first open CUPSS, you will see a welcome screen. To view the example Beauty View Acres utilities, click the "Enter Example CUPSS" button to proceed to the CUPSS homepage. Information (including the username and password) is pre-populated in the example to show you what your CUPSS can and will look like.

Beauty View Acres Data

- Beauty View Acres Subdivision in Franklin County, MO
 - Primary water source: Groundwater
 - Wastewater: Sewer
 - Population served: 75

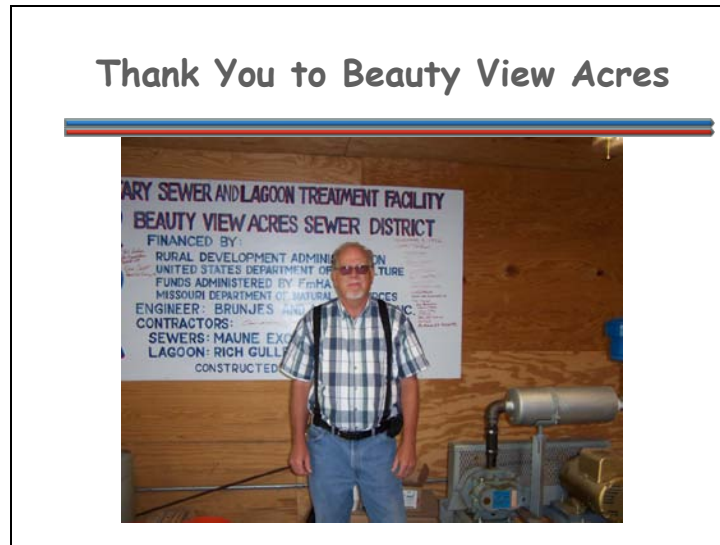


The screenshot shows a window titled "Check Up Program for Small Systems (CUPSS)". The main heading is "Check Up Program for Small Systems". Below this, there is a instruction: "Welcome! Example: Select the CUPSS Utility that you would like to work on." A smaller instruction follows: "Select the utility you would like to work on. If you have one utility it should already be selected and you can just click on the [Load Utility] button to get started using CUPSS." A dropdown menu is open, showing "Beauty View Acres Subdivision - CW" selected. Below the dropdown, there are two buttons: "Load Utility" and "Cancel".

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Once you've entered the Example database, you can view either the drinking water system or the wastewater system. Beauty View Acres' primary water source is groundwater and they have a sewer wastewater system. The population of the subdivision is about 75 people.

Each example system contains assets that have been entered in the My Inventory module, tasks that have been entered in the My O&M module, budget information that have been entered in the My Finances module, and additional information that have been entered in the My CUPSS Plan. You can view all of this information to get an idea of the data that is needed for your system.



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This is Joe from Beauty View Acres. We would like to thank him and all others who helped gather the data to be used as example projects in the CUPSS application.

What Are We Learning?

Part 3: Using the My CUPSS Plan to generate an asset management plan

Main Menu

Navigation: Use the arrows in the bottom-middle of the screen to navigate backward to previous screens or forward through the lesson screens. When you enter an interactive tool, check the notes to receive instruction on using that tool's navigation. If you do not want to hear the audio, set the sound scale on the bottom left to zero or mute the computer's sound.

In Part 3, you're going to learn how to use the My CUPSS Plan to generate an asset management plan.

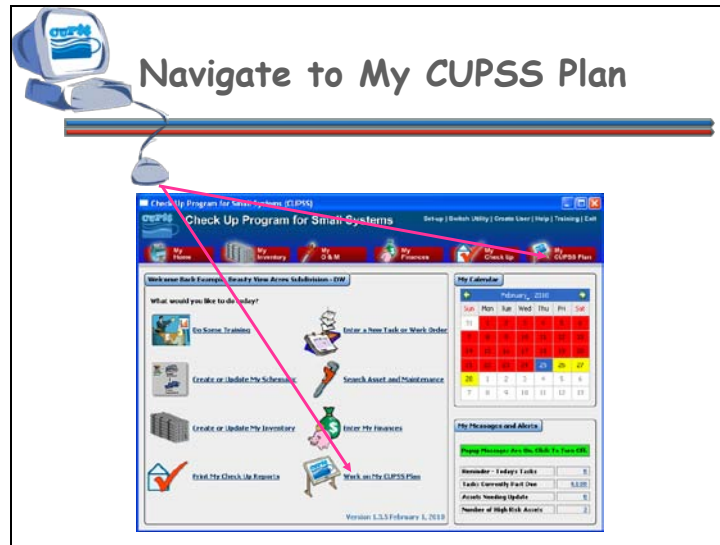
My CUPSS Plan

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.

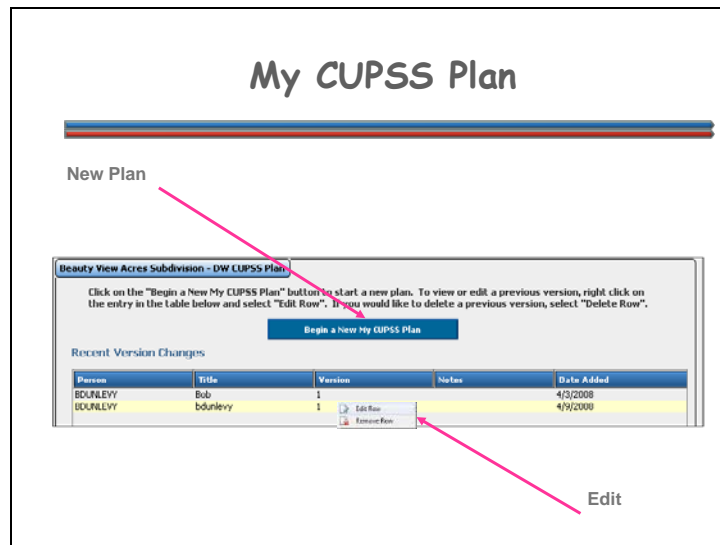
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We are ready to review the different elements of the personal asset management plan that CUPSS will develop for you. This module is called My CUPSS Plan.



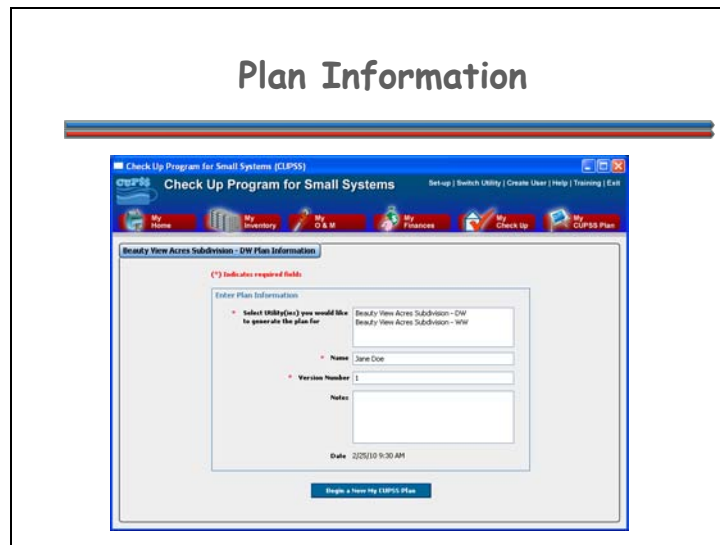
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These are ways that you can get to the My CUPSS Plan module from the My Home page.



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Click on "Begin a New My CUPSS Plan" to start a new plan. If you want to edit a previous version, right click on the version you would like to make edits to and select "Edit Row".



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The next step is to enter specific information about this plan. When you have finished entering data here, click the "Begin a New My CUPSS Plan" button to continue.

Fields available on the New Plan page:

Select Utility(ies) you would like to generate the plan for Select one or more utilities to add to the report. Hold down the Ctrl key to make multiple selections.

- **Name** Enter your name (format: "First Name" "Middle Initial" "Last Name") and your job title.
- **Version Number** If multiple versions of MY CUPSS Plans have been or will be created, indicate which version number this Plan is.
- **Notes** Enter notes if desired and/or necessary.

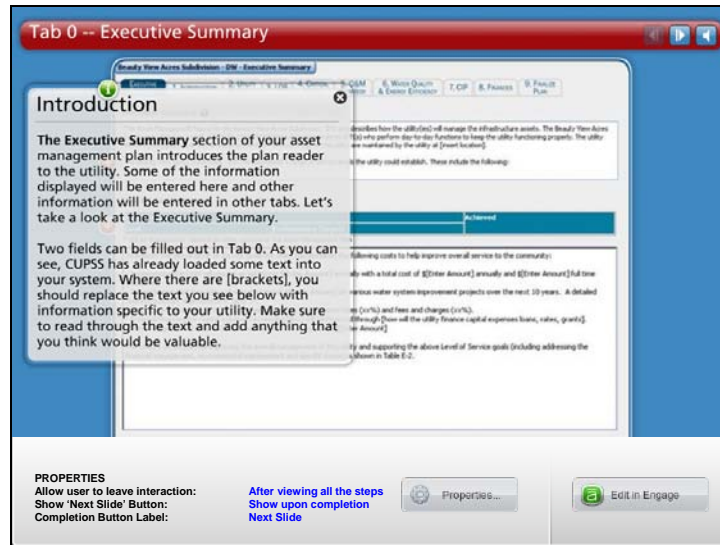


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There are ten steps in filling out in "My CUPSS Plan Wizard." Much of the information is pre-populated with boiler plate text. You can customize this text by deleting sections you don't need or adding sections that may not be already included. The ten steps are:

- Executive Summary
- Step 1 – Introduction
- Step 2 – Utility Overview
- Step 3 – Level of Service (LOS)
- Step 4 – Critical Assets
- Step 5 – Operations & Maintenance (O&M) Strategy
- Step 6 – Water Quality & Energy Efficiency
- Step 7 – Capital Improvement Projects (CIP)
- Step 8 – Finances
- Step 9 – Finalize Plan

It is important to remember to save the contents after each step. To complete the plan click on “Save and Generate Plan,” or to continue working on the plan click on “Save and Continue” at the bottom of the page.



Navigation: Use the arrows in the bottom-middle of the screen to navigate backward to previous screens or forward through the lesson screens. Click on the arrows at the top right to cycle through the information pop ups or click on each pop up individually. If you do not want to hear the audio, set the sound scale on the bottom left to zero or mute the computer's sound.

Tab 0 -- Executive Summary

Beauty View Acres Subdivision - DW - Executive Summary

1. Executive Summary 2. Utility 3. Type 4. Demographics 5. Q&M 6. WATER QUALITY & ENERGY EFFICIENCY 7. CIP 8. FINANCES 9. FAILURE PLAN

Introduction

The Executive Summary section of your asset management plan introduces the plan reader to the utility. Some of the information displayed will be entered here and other information will be entered in other tabs. Let's take a look at the Executive Summary.

Two fields can be filled out in Tab 0. As you can see, CUPSS has already loaded some text into your system. Where there are [brackets], you should replace the text you see below with information specific to your utility. Make sure to read through the text and add anything that you think would be valuable.

describes how the utility(ies) will manage the infrastructure assets. The Beauty View Acres (ES) who perform day-to-day functions to keep the utility functioning properly. The utility are maintained by the utility at [insert location].

the utility could establish. These include the following:

Achieved

Following costs to help improve overall service to the community:

with a total cost of \$[Enter Amount] annually and \$[Enter Amount] full time

various water system improvement projects over the next 10 years. A detailed

is (0%) and fees and charges (0%).

dthrough [how will the utility finance capital expenses (loans, rates, grants),

er Amount]

ty and supporting the above Level of Service goals (including addressing the

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

Previous Save and Continue Plan Save and Continue

Introduction

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Tab 0 -- Executive Summary

Beauty View Acres Subdivision - DW - Executive Summary

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 [000] gallons per day of water to 33 of connections. Maps of the utility are maintained by the utility at [insert location].

the utility could establish. These include the following:

Table E-1. Levels of Service

The first editable text field is located at the top of the page under the Executive Summary section before Table E-1. This section allows you to enter general information specific to your utility.

1.1 Mission Statement

The mission statement defines the goals of the Beauty View Acres Subdivision - DW and is the goals 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/collection public assets, while ensuring the long-term cost of operating these assets. We strive to make the most cost-effective removal and replacement investments and provide the highest-quality customer service possible.

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				

Previous Save and Continue Plan Save and Continue

Executive Summary

The first editable text field is located at the top of the page under the Executive Summary section before Table E-1. This section allows you to enter general information specific to your utility.

Levels of Service

Next you see Table E-1, which lists the utility's goals and performance targets. The items for this table will be entered in the fourth tab, 3.LOS, and are displayed in the Executive Summary after you have completed and saved that section.

The text displayed here in the second editable text box after Table E-1 refers to the future costs the utility is anticipating as it improves service to the community. You might wish to discuss annual operating costs, the budget for improvements, and how additional funds will be procured.

Table E-1. Levels of Service

Level of Service	Performance Target	Achieved

* 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 CIP 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 B-1.
 - Costs for water are funded through general rates (10%), targeted rates (10%) and fees and charges (10%).
 - External financing for capital expenses exceeding \$[Enter] will be financed through (1) the utility finance capital expenses loans, rates, grants).
 - The average annual capital cost over the next 10 years will be \$[Enter Amount].
 The utility's action plan for ensuring the overall management of the utility and supporting the above Level of Service goals (including addressing the financial management, environmental management and specific issues) is shown in Table C-1.

will manage the infrastructure assets. The Beauty View Acres functions to keep the utility functioning properly. The utility (insert location).
 These include the following:

Achieved

to improve overall service to the community:
 \$[Enter Amount] annually and \$[Enter Amount] full time employees over the next 10 years. A detailed financial summary is presented in Table B-1.
 Targeted rates (10%).
 Finance capital expenses (loans, rates, grants).

Level of Service goals (including addressing the

Target Date for Completion

* Will be Populated by Tables from other sections of the Asset Management Plan

Levels of Service

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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 [000] 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	Performance Targets	Achieved
Goal		

* 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:

... with a total cost of [Enter Amount] annually and [Enter Amount] full time ... various water system improvement projects over the next 10 years. A detailed ... (00%) and fees and charges (00%). ... through [how will the utility finance capital expenses (loans, rates, grants), ... [Enter Amount]

... and supporting the above Level of Service goals (including addressing the ... shown in Table E-2.

Action Plan

The second table, Table E-2, refers to your Action Plan. The items for this table are entered in the tenth tab, 9. Finalize Plan, and are displayed after you have completed and saved that section.

Table E-2. Action Plan

Priority	Service (Aid, W, WW)	Issue	Strategic Action Plan	Target Date for Completion
The five most important actions				

* Will be Populated by Tables from other sections of the Asset Management Plan

Previous Save and Continue Plan Save and Continue

Action Plan

The second table, Table E-2, refers to your Action Plan. The items for this table are entered in the tenth tab, 9. Finalize Plan, and are displayed after you have completed and saved that section.

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. FAILURE 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 [000] 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	Performance Targets	Achieved
Goal		

* 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 B-1.
- Costs for water are funded through general rates (cc%), targeted rates (cc%) and fees and charges (cc%).
- External financing for capital expenses exceeding \$[cc] 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 [] shown in Table E-2:

Generate Plan

Be sure to click "Save and Continue" or "Save and Generate Plan" when you are finished filling out the fields.

TABLE E-1. Levels of Service

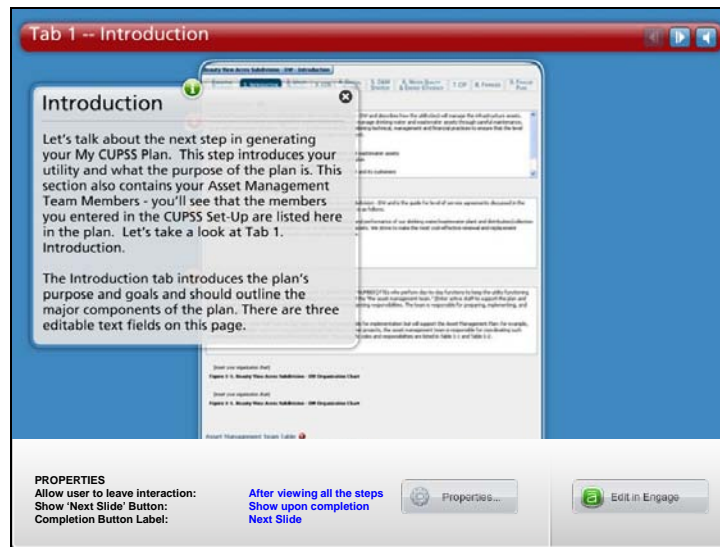
Objective Action Plan	Target Date for Completion

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

Save and Generate Plan

Be sure to click "Save and Continue" or "Save and Generate Plan" when you are finished filling out the fields.

Slide 18



Navigation: Use the arrows in the bottom-middle of the screen to navigate backward to previous screens or forward through the lesson screens. Click on the arrows at the top right to cycle through the information pop ups or click on each pop up individually. If you do not want to hear the audio, set the sound scale on the bottom left to zero or mute the computer's sound.

Tab 1 -- Introduction

Introduction

Let's talk about the next step in generating your My CUPSS Plan. This step introduces your utility and what the purpose of the plan is. This section also contains your Asset Management Team Members - you'll see that the members you entered in the CUPSS Set-Up are listed here in the plan. Let's take a look at Tab 1, Introduction.

The Introduction tab introduces the plan's purpose and goals and should outline the major components of the plan. There are three editable text fields on this page.

Introduction

Let's talk about the next step in generating your My CUPSS Plan. This step introduces your utility and what the purpose of the plan is. This section also contains your Asset Management Team Members – you'll see that the members you entered in the CUPSS Set-Up are listed here in the plan. Let's take a look at Tab 1, Introduction.

The Introduction tab introduces the plan's purpose and goals and should outline the major components of the plan. There are three editable text fields on this page.

Name	Title	Organization	Role/Responsibility on Project
Helen Howard	Treasurer/Secretary	Beauty View Acres Landowners Assoc	Board Member
Robert Chabrey	Environmental of Engineer	UNPA	EPA Contact
Mirco Wyatt	Engineer	Missouri Department of Natural Resources	State Contact
Dan Brangherly	Water Specialist	Missouri Department of Natural Resources	State Contact
John Houghland	Administrator	Missouri Rural Water Association	Technical Assistance Provider
Dennis Sidors	Regional Director	Missouri Assistance Program	Technical Assistance Provider



Introduction Section

The Introduction section provides the purpose for the asset management plan and briefly describes what the plan includes.

1.0 Introduction

The Asset Management Plan for the Beauty View Acres Subdivision - DR and describes how the utility(ies) will manage the infrastructure assets. Customer service demands and regulators require utilities to actively manage drinking water and wastewater assets through careful maintenance, repair and replacement decisions. This plan is an effective tool for conducting 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 demonstrate 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 - DR and its customers

Asset Management Teams Table

Name	Title	Organization	Role/Responsibility on Project
Yellen Howard	Treasurer/Secretary	Beauty View Acres Landowners Assn	Board Member
Robert Chastney	Environmental Engineer	UNPA	EPA Contact
Mervyn Wyatt	Engineer	Missouri Department of Natural Resources	State Contact
Dan Brangherly	Water Specialist	Missouri Department of Natural Resources	State Contact
John Hovland	Administrator	Missouri Rural Water Association	Technical Assistance Provider
Dennis Sidors	Regional Director	Missouri Assistance Program	Technical Assistance Provider

Introduction Section

The Introduction section provides the purpose for the asset management plan and briefly describes what the plan includes.



Beauty View Acres Subdivision - DM - Introduction

1.0 Introduction

The Asset Management Plan is for the Beauty View Acres Subdivision - DM 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 - DM and its customers

1.1 Mission Statement

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

performance of our drinking water/wastewater plant and distribution/collecion... We strive to make the most cost-effective renewal and replacement...

responsibility of the asset management team. The asset management team will support the plan and... The team is responsible for preparing, implementing, and... for implementation but will support the Asset Management Plan for example, projects, the asset management team is responsible for coordinating with... and responsibilities are listed in Table 1-1 and Table 1-2.

Mission Statement

The Mission Statement section is where you can include the utility's goals and/or the utility's mission statement. Pre-populated text for the Mission Statement is included; if you already have a mission statement, replace the pre-populated mission statement with your statement.

1.1 Mission Statement

The mission statement defines the goals of the Beauty View Acres Subdivision - DM and is the guide for level of service agreements discussed in the section 3. The Beauty View Acres Subdivision - DM 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/collecion 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.

Name	Role/Responsibility on Project
Beauty View Acres Landowners Assoc	Board Member
EPA	EPA Contact
Department of Natural Resources	State Contact
John Hovland	Minnesota Rural Water Association Technical Assistance Provider
Dennis Nelson	Minnesota Rural Water Association Technical Assistance Provider

Previous Save and Generate Plan Save and Continue

Mission Statement

The Mission Statement section is where you can include the utility's goals and/or the utility's mission statement. Pre-populated text for the Mission Statement is included; if you already have a mission statement, replace the pre-populated mission statement with your statement.



Asset Management Team

The Asset Management Team section, provides the opportunity to introduce the staff who perform day-to-day functions for your utility and who have helped prepare the plan. The Asset Management Team table provides information on the utility's partners in asset management. As you learned in the Session 1 training, team members can be added in the setup area of CUPSS and can include utility staff, managers, local decision makers, and

1.2 Asset Management Team

The Beavertown Water Services (BWS) has a staff of (20100) (20100) (20100) who perform day-to-day functions to keep the utility functioning properly. Together, these individuals have volunteered as members of the "Asset Management Team." These active staff "report" the plan and identify asset management plan needs; perform asset management planning responsibilities. The team is responsible for preparing, implementing, and updating the plan.

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

Start your session (Alt)

Figure 1-1. Beavertown Water Services - BWS Organization Chart

Start your session (Alt)

Figure 1-2. Beavertown Water Services - BWS Organization Chart

Asset Management Team Table

Name	Title	Organization	Role/Responsibility
Robert Howard	President/Secretary	Beavertown Water Services	Board Member
Robert Doolittle	Investment of Engineer	USDA	SPR Contact
Wesley Wright	Engineer	Missouri Department of Natural Resources	Water Contact
Sam Dougherty	Water Specialist	Missouri Department of Natural Resources	Water Contact
John Houghton	Administrator	Missouri State Water Association	Technical Assistance Provider
Denise Sabers	Regional Director	National Assistance Program	Technical Assistance Provider

Asset Management Team

The Asset Management Team section, provides the opportunity to introduce the staff who perform day-to-day functions for your utility and who have helped prepare the plan. The Asset Management Team table provides information on the utility's partners in asset management. As you learned in the Session 1 training, team members can be added in the setup area of CUPSS and can include utility staff, managers, local decision makers, and technical assistance providers.



Beauty View Acres Subdivision - DWR - Introduction

Existing Submittal 1. Introduction 2. Utility Systems 3. LIDS 4. General Assets 5. DEM 6. Water Quality & Entry Process 7. DP 8. Fees 9. Final Plan

1.0 Introduction

The Asset Management Plan is for the Beauty View Acres Subdivision - DWR and describes how the utility(s) 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 - DWR and its customers

1.1 Mission Statement

The mission statement defines the goals of the Beauty View Acres Subdivision - DWR and is the guide for level of service agreements discussed in the section 3. The Beauty View Acres Subdivision - DWR 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/collecion utility assets, while minimizing the long-term cost of operating these 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 - DWR 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." DWR senior staff to support the plan and identify asset management plan health/perform asset management planning responsibilities. The team is responsible for preparing, implementing, and updating the plan.

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

Role Responsibility on Project

Acres Landowners Assn	Board Member
	EPA Contact
Department of Natural Resources	State Contact
Water Association	Technical Assistance Provider
Insurance Program	Technical Assistance Provider

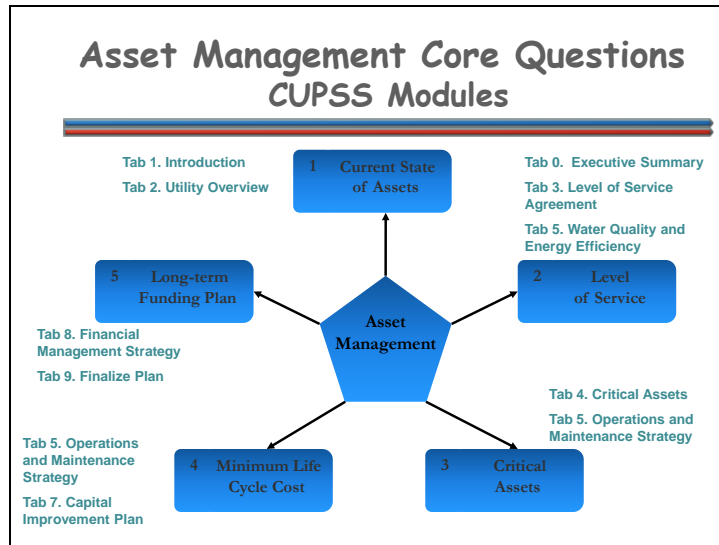
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Save and Generate Plan

Be sure to click "Save and Continue" or "Save and Generate Plan" when you are finished filling out the fields.

Save and Generate Plan

Be sure to click "Save and Continue" or "Save and Generate Plan" when you are finished filling out the fields.



Navigation: Use the arrows in the bottom-middle of the screen to navigate backward to previous screens or forward through the lesson screens. When you enter an interactive tool, check the notes to receive instruction on using that tool's navigation. If you do not want to hear the audio, set the sound scale on the bottom left to zero or mute the computer's sound.

Here's a diagram showed earlier and you can see how the My CUPSS Plan wizard relates to asset management. My CUPSS Plan wizards takes a utility through ten easy steps to provide answers specific to that utility and create an Asset Management Plan. An Asset Management Plan will provide a utility with valuable information that can be used when making key management decisions.


We will now demonstrate how the My CUPSS Plan assists in answering all 5 core asset management questions. Each core question will be displayed and then the corresponding My CUPSS plan sections that answer the question.

This way when you start working through the My CUPSS Plan wizard you will understand which asset management core question or questions you are answering! Let's get started!

Asset Management Core Question
Question 1 of 5

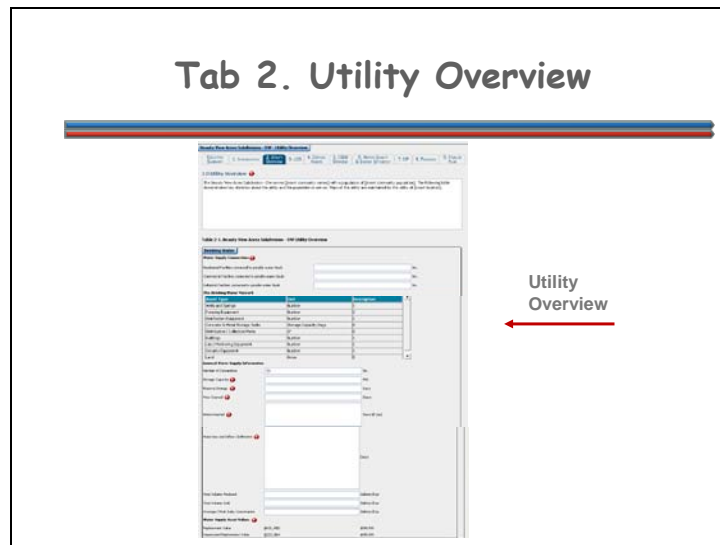
1

What Is The Current State Of The
Utility's Assets?



Navigation: Use the arrows in the bottom-middle of the screen to navigate backward to previous screens or forward through the lesson screens. When you enter an interactive tool, check the notes to receive instruction on using that tool's navigation. If you do not want to hear the audio, set the sound scale on the bottom left to zero or mute the computer's sound.

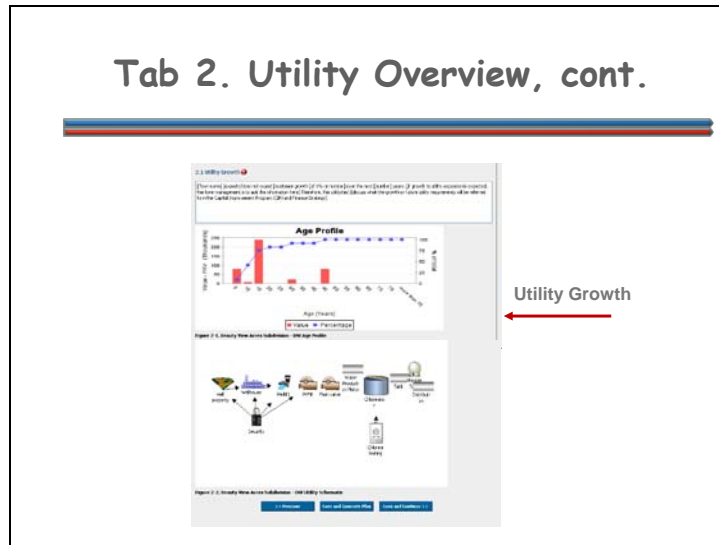
The first step in managing a utility's assets is knowing their current state. The Utility overview tab provides tables and pre-populated tables that summarize the state of a utilities assets.



Navigation: Use the arrows in the bottom-middle of the screen to navigate backward to previous screens or forward through the lesson screens. When you enter an interactive tool, check the notes to receive instruction on using that tool's navigation. If you do not want to hear the audio, set the sound scale on the bottom left to zero or mute the computer's sound.

The Utility Overview tab provides an overview of the utility, the community or communities it serves, and the size of the population served. The editable text box provides you with some starter text on this general information and gives you the ability to add additional information that would be helpful to the plan reader.

You can use the Utility Overview summary graph to enter summary information for your utility, such as the types of customers served, storage capacity, volume serviced, and asset values. Information for your drinking water network is populated from the My Inventory module within CUPSS and lists the assets in your utility.



Navigation: Use the arrows in the bottom-middle of the screen to navigate backward to previous screens or forward through the lesson screens. When you enter an interactive tool, check the notes to receive instruction on using that tool's navigation. If you do not want to hear the audio, set the sound scale on the bottom left to zero or mute the computer's sound.

The Utility Growth section of the plan discusses the future customer growth, or lack of growth, anticipated and the utility expansions or downsizing that will be required to meet the growth prediction. When entering this information you might wish to refer to your future Capital Improvement Projects or financial strategies.

The Age Profile is created from the assets in My Inventory and graphs the age and value of assets for your utility.

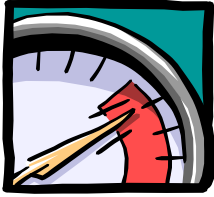
The utility schematic at the bottom of the page displays the diagram you may have completed within the My Inventory module within CUPSS.

Be sure to click "Save and Continue" or "Save and Generate Plan" when you are finished filling out the fields.

Asset Management Core Question
Question 2 of 5

2

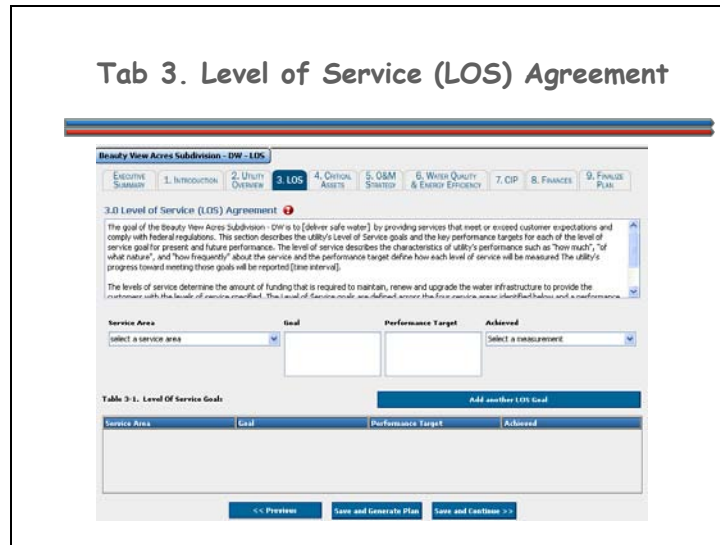
What Is The Utility's
Required Sustained
Level Of Service
(LOS)?



Navigation: Use the arrows in the bottom-middle of the screen to navigate backward to previous screens or forward through the lesson screens. When you enter an interactive tool, check the notes to receive instruction on using that tool's navigation. If you do not want to hear the audio, set the sound scale on the bottom left to zero or mute the computer's sound.

Knowing the utility's required "sustainable" level of service will help the utility implement an asset management plan and communicate to stakeholders what is being done. The required sustainable level of service is the set of features that describe the utility's short- and long-term performance standards as well as the customer's expectations.

The LOS tab of the My CUPSS plan allows for level of service goals to be entered for various service areas. In addition, the Water Quality and Energy Efficiency tab helps to support answering core questions. This section describes the utility's water quality and energy efficiency strategies.



Navigation: Use the arrows in the bottom-middle of the screen to navigate backward to previous screens or forward through the lesson screens. When you enter an interactive tool, check the notes to receive instruction on using that tool's navigation. If you do not want to hear the audio, set the sound scale on the bottom left to zero or mute the computer's sound.

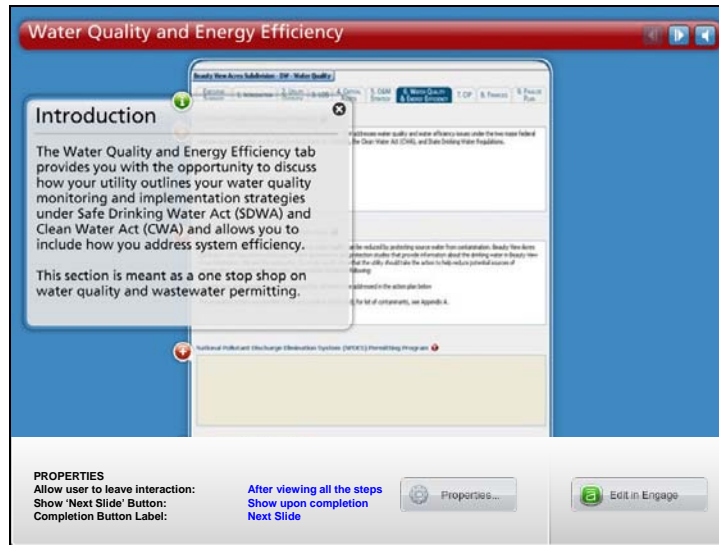
Tracking your level of service goals will help you determine your short- and long-term goals which will enable you to establish best practices. Listing these LOS goals in your asset management plan will allow you to prioritize and optimize everyday activities.

This section of the Asset Management Plan provides information on the obligations of the utility, as well as future performance goals. This information is important because it identifies the utility's goals and how often those goals are achieved, an important measure that the utility is being managed effectively. You need to input data as prompted, including information regarding how often goal performance will be met and which aspects of the utility have LOS Agreements. Additionally, you need to input your LOS goals and the level at which that the goals will be met. CUPSS Self-paced Training Lesson 1: Asset Management 101, introduced the notion of developing SMART goals – goals that are Specific, Measurable, Attainable, Realistic and Time-based.”

To add a new goal, select one of the four service areas from the dropdown list and enter text for your goal and performance target. Also specify a measurement by which you can gauge if the target was achieved. Click Add another LOS Goal to save your entry

and to add another goal. The performance targets also show in the dropdown under Tab 9. Finalize Plan when you are identifying your action items.

Make sure to click “Save and Continue” or “Save and Generate Plan” when you are finished filling out the fields.



Navigation: Use the arrows in the bottom-middle of the screen to navigate backward to previous screens or forward through the lesson screens. Click on the arrows at the top right to cycle through the information pop ups or click on each pop up individually. If you do not want to hear the audio, set the sound scale on the bottom left to zero or mute the computer's sound.

Water Quality and Energy Efficiency

Introduction

The Water Quality and Energy Efficiency tab provides you with the opportunity to discuss how your utility outlines your water quality monitoring and implementation strategies under Safe Drinking Water Act (SDWA) and Clean Water Act (CWA) and allows you to include how you address system efficiency.

This section is meant as a one stop shop on water quality and wastewater permitting.

Introduction

The Water Quality and Energy Efficiency tab provides you with the opportunity to discuss how your utility outlines your water quality monitoring and implementation strategies under Safe Drinking Water Act (SDWA) and Clean Water Act (CWA) and allows you to include how you address system efficiency.

This section is meant as a one stop shop on water quality and wastewater permitting.



Source Water Assessments and Protection

For drinking water utilities, the Source Water Assessments and Protection section identifies any key water quality or protection issues you have studied and are addressing in the action plan. A list of contaminants are found in Appendix A of the My CUPSS Plan (note that these Appendices are not shown in the My CUPSS Plan wizard).

Source Water Assessments and Protection

The cost of water treatment, as well as the risk to public health, can be reduced by protecting source water from contamination. Beauty View Acres Subdivision - DWR has reviewed the source water assessments and protection studies that provide information about the drinking water in Beauty View Acres Subdivision - DWR 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.

Total Maximum Daily Loads (TMDLs)

Under CWA section 303(c), 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 of this determination, pollutant loadings are allocated among pollution sources in a water segment. Appendix B includes the watersheds 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 the plan.

Source Water Assessments and Protection

For drinking water utilities, the Source Water Assessments and Protection section identifies any key water quality or protection issues you have studied and are addressing in the action plan. A list of contaminants are found in Appendix A of the My CUPSS Plan (note that these Appendices are not shown in the My CUPSS Plan wizard).



Beauty View Acres Subdivision - DW - Water Quality

Executive Summary 1. Introduction 2. Utility Overview 3. LOS 4. Census Assets 5. O&M Strategy 6. Water Quality & Energy Efficiency 7. COP 8. Financials 9. Future Plans

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.

National Pollutant Discharge Elimina...

The National Pollutant Discharge Elimination System (NPDES) Permitting Program section, contains information on your NPDES permit, resources the plan reader can access regarding your permit, and information on any exceedances and corrective actions. This section only appears as an editable field for wastewater utilities.

National Pollutant Discharge Elimination System (NPDES) Permitting Program

allocations are allocated here. To the plan.

National Pollutant Discharge Elimination System Permitting Program

The National Pollutant Discharge Elimination System (NPDES) Permitting Program section, contains information on your NPDES permit, resources the plan reader can access regarding your permit, and information on any exceedances and corrective actions. This section only appears as an editable field for wastewater utilities.



Beauty View Acres Subdivision - DW - Water Quality

Executive Summary | 1. Introduction | 2. Utility Overview | 3. LOS | 4. Contour Assets | 5. O&M Strategy | **6. Water Quality & Energy Efficiency** | 7. COP | 8. Finances | 9. Future Plans

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.

Total Maximum Daily Loads (TMDLs)

The Total Maximum Daily Loads (TMDLs) section contains basic information about TMDLs and lists any impaired waterbodies the utility currently discharges into and the causes of impairment.

Total Maximum Daily Loads (TMDLs)

Under CWA section 303(c), 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 of 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 requirements, the asset management team has identified projects in the Capital Improvement Plan section 7.0 of the plan.

PCMSJ Permitting Program

Under CWA section 303(c), 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 of 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 requirements, the asset management team has identified projects in the Capital Improvement Plan section 7.0 of the plan.

Total Maximum Daily Loads

The Total Maximum Daily Loads (TMDLs) section contains basic information about TMDLs and lists any impaired waterbodies the utility currently discharges into and the causes of impairment.

Water Quality and Energy Efficiency Continued

Introduction

The Water Quality and Energy Efficiency tab provides you with the opportunity to discuss how your utility outlines your water quality monitoring and implementation strategies under Safe Drinking Water Act (SDWA) and Clean Water Act (CWA) and allows you to include how you address system efficiency. This section continues the previous slide's discussion.

- Participating in off-peak pumping
- Ensuring 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 an enhanced approach. BMPs are inherently pollution prevention practices. The asset management team has considered multiple scenarios of BMPs. They include a total implementation cost of [Green Card] and conduct BMP activities throughout its preventive maintenance.

PROPERTIES
Allow user to leave interaction: [After viewing all the steps](#)
Show 'Next Slide' Button: [Show upon completion](#)
Completion Button Label: [Next Slide](#)

Properties... Edit in Engage

Navigation: Use the arrows in the bottom-middle of the screen to navigate backward to previous screens or forward through the lesson screens. Click on the arrows at the top right to cycle through the information pop ups or click on each pop up individually. If you do not want to hear the audio, set the sound scale on the bottom left to zero or mute the computer's sound.

Water Quality and Energy Efficiency Continued

Introduction

The Water Quality and Energy Efficiency tab provides you with the opportunity to discuss how your utility outlines your water quality monitoring and implementation strategies under Safe Drinking Water Act (SDWA) and Clean Water Act (CWA) and allows you to include how you address system efficiency. This section continues the previous slide's discussion.

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.

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

Introduction Water Quality and Energy Efficiency Continued

The Water Quality and Energy Efficiency tab provides you with the opportunity to discuss how your utility outlines your water quality monitoring and implementation strategies under Safe Drinking Water Act (SDWA) and Clean Water Act (CWA) and allows you to include how you address system efficiency. This section continues the previous slide's discussion.



6.1 Implementation Strategy to Protect Watersheds
Water Quality Monitoring Strategy

The Water Quality Monitoring Strategy section outlines your monitoring strategy, including the frequency of monitoring tasks listed within CUPSS. This will help you to identify existing or emerging water quality problems and determine whether current pollution control mechanisms are effective in complying with the regulations.

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.

Widepread adoption of better management practices offers great promise to each. BMPs are inherently pollution prevention practices. The asset management, a total implementation cost of [Enter Cost] and conduct BMP activities throughout its

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

Water Quality Monitoring Strategy

The Water Quality Monitoring Strategy section outlines your monitoring strategy, including the frequency of monitoring tasks listed within CUPSS. This will help you to identify existing or emerging water quality problems and determine whether current pollution control mechanisms are effective in complying with the regulations.



Water and Energy Efficiency

The Water and Energy Efficiency section outlines the steps you are taking to improve water and energy efficiency for the utility's operations. This section allows you to identify and list approaches to integrate energy efficient practices into the daily management and long-term planning for your utility. It contains a list of possible approaches - you can edit these as you wish.

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. Beady View Acres Subdivision - DW is installing 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 Cost].

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

... offers great promise to reduce costs and direct system investments using a risk-based approach. ... 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.

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

Water and Energy Efficiency

The Water and Energy Efficiency section outlines the steps you are taking to improve water and energy efficiency for the utility's operations. This section allows you to identify and list approaches to integrate energy efficient practices into the daily management and long-term planning for your utility. It contains a list of possible approaches – you can edit these as you wish.

Water Quality and Energy Efficiency Continued

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 CJPSS 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

Wide-spread adoption of better management practices offers great promise to each. BMPs are inherently pollution prevention practices. The asset management... total implementation cost of [Enter Cost] and conduct BMP activities throughout its

Save and Generate Plan

Make sure to click "Save and Continue" or "Save and Generate Plan" when you are finished filling out the Water Quality and Energy Efficiency fields.

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

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

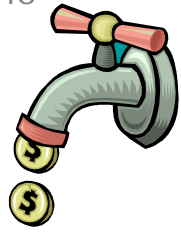
Save and Generate Plan

Make sure to click "Save and Continue" or "Save and Generate Plan" when you are finished filling out the Water Quality and Energy Efficiency fields.

Asset Management Core Question
Question 3 of 5

3

Which Assets Are Critical To Sustained Performance?

An illustration of a grey faucet with a red handle, dripping two gold coins with dollar signs. The faucet is positioned on the right side of the slide, below the question text.

Navigation: Use the arrows in the bottom-middle of the screen to navigate backward to previous screens or forward through the lesson screens. When you enter an interactive tool, check the notes to receive instruction on using that tool's navigation. If you do not want to hear the audio, set the sound scale on the bottom left to zero or mute the computer's sound.

Because assets fail, how you manage the consequences of failure is vital. Not every asset presents the same failure risk, or is equally critical to the drinking water or wastewater system's operations. Therefore, it is important to know which assets are required to sustain the utility's performance. Critical assets are those that you decide have a high risk of failing (like if the asset is old or in poor condition) and major consequences if they do fail (major expense, system failure, safety concerns, etc.). You can decide how critical each asset is and rank them accordingly.

These are important values to know, understand and consider in any decision-making process. The Critical Assets tab provides information on the priority of distinctive assets within the utility.

Tab 4. Critical Assets

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 condition (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 2 in the process of completing the critical asset assessment. (Describe the methodology used in conducting the asset assessment.)

Table 4-1 and 4-2 list critical assets critical to maintain the performance of the utility. (For additional information on assets, see the My Check-Up Asset Report.)

Asset	Asset Type	Year Installed	Condition	Consequence	Redundancy	Risk	Replacement Date
Wtrd1	Works and Springs	1968 06-30	Fair	Catastrophic	Fulfilled	High Risk - Immediate Attention	2009-02-01
gump	Pumping Equipment	2001 06-01	Good	Catastrophic	Fulfilled	High Risk - Immediate Attention	2011-02-01
Main valve	Pumping Equipment	2001 06-30	Fair (Average)	Major	Fulfilled	High Risk - Immediate Attention	2011-02-01
Security	Security Equipment	2001 06-30	Good	Minor	Fulfilled	Medium Risk - Aggressive Monitoring	2009-02-01
Tank	Distribution / Collection Main	1998 06-30	Good	Catastrophic	Fulfilled	Medium Risk - Aggressive Monitoring	2036-02-01

Navigation: Use the arrows in the bottom-middle of the screen to navigate backward to previous screens or forward through the lesson screens. When you enter an interactive tool, check the notes to receive instruction on using that tool's navigation. If you do not want to hear the audio, set the sound scale on the bottom left to zero or mute the computer's sound.

Tracking your assets will help you determine which assets are critical to your utility. Tracking your high risk assets will help you identify and prioritize these critical assets. This information will help you improve O&M practices and enhance your long-term planning efforts. Your asset management plan can keep a record of all assets and the consequence of their failure.

The Critical Assets tab provides information on the priority of distinctive assets within the utility. This information is crucial because it provides the reader with a concise overview of the state of each of the utility's critical assets, including information on the condition of the asset, the asset's consequence of failure, the risk associated with the asset, and the asset's targeted replacement date. The critical asset assessment should be conducted using the parameters in the My Inventory module within CUPSS. Enter information about what stage you have reached in the asset management process (complete/in the process).

The table in this section lists assets critical to the sustained performance of the system. These assets are ranked using the probability of failure (as a function of condition and redundancy) and the consequence of failure.

Make sure to click “Save and Continue” or “Save and Generate Plan” when you are finished filling out the Critical Assets section.

The screenshot displays a software window titled "Tab 5 -- Operations & Maintenance". A large "Introduction" pop-up window is overlaid on the main content, which includes a table with columns for "Year", "Budget", and "Estimated Annual Cost". Below the pop-up, a "PROPERTIES" panel is visible, containing several configuration options and buttons.

PROPERTIES
Allow user to leave interaction: [After viewing all the steps](#)
Show 'Next Slide' Button: [Show upon completion](#)
Completion Button Label: [Next Slide](#)

Buttons: Properties..., Edit in Engage

Navigation: Use the arrows in the bottom-middle of the screen to navigate backward to previous screens or forward through the lesson screens. Click on the arrows at the top right to cycle through the information pop ups or click on each pop up individually. If you do not want to hear the audio, set the sound scale on the bottom left to zero or mute the computer's sound.

Tab 5 -- Operations & Maintenance

Introduction

The Operations and Maintenance (O&M) Strategy tab provides general information on the operations and maintenance of the utility's assets. This is important as it informs the plan reader as to the methodology used in determining how assets are managed day-to-day. In the editable text fields, you should describe the rationale and features for the maintenance program including any routine or preventive practices and specific O&M challenges. In addition, you might want to describe how you are using CUPSS to improve your O&M practices and when your maintenance strategy will be revised and updated.

The screenshot shows a software interface for the O&M Strategy tab. The main text area contains a 'Maintenance Schedule for 2009' table with columns for Frequency, Estimated Annual Cost, and Deferred Maintenance. Below this is a summary table for 'Emergency/Reactive Maintenance Expenses for 2009'.

Frequency	Estimated Annual Cost	Deferred Maintenance
1 day(s) 1 time(s) per day	\$0	\$0
1 day(s) 1 time(s) per day	\$0	\$0
1 day(s) 1 time(s) per day	\$0	\$0

Task Name	Cost (\$)	Frequency	Estimated Annual Cost
Total Emergency/Reactive Cost			\$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(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

Introduction

The Operations and Maintenance (O&M) Strategy tab provides general information on the operations and maintenance of the utility's assets. This is important as it informs the plan reader as to the methodology used in determining how assets are managed day-to-day. In the editable text fields, you should describe the rationale and features for the maintenance program including any routine or preventive practices and specific O&M challenges. In addition, you might want to describe how you are using CUPSS to improve your O&M practices and when your maintenance strategy will be revised and updated.



O&M Strategy

The Operations and Maintenance (O&M) Strategy section lays out the overall plan and how all of the maintenance areas are integrated using CUPSS.

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 the Check Up Asset Report provides the utility's criticality assets and identifies the risk value for each asset. The risk matrix, and section 4.0 of the document were used as the basis for establishing the maintenance program as a way to make sure that the utility's address the highest risk assets. In addition, the maintenance program addresses the level of service performance objectives to ensure that the utility is meeting at a level acceptable to the customer.

Unpredicted 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

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

Unpredicted 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

assets operating properly, which includes the following:

- Identify required service level
- Identify at the required levels of service level
- Identify required and repair requirements
- Identify describe your methods and standards for the methods
- Identify maintenance program (such as regularly scheduled asset repair) and historically

Maintenance Schedule for 2009

Frequency	Estimated Annual Cost	Deferred Maintenance
1 time(s) per day	\$0	\$0
1 day(s) 1 time(s) per day	\$0	\$0
1 day(s) 1 time(s) per day	\$0	\$0

Table 5-2: Beauty View Acres Subdivision - BW Emergency/Reactive Maintenance Expenses for 2009

Task Name	Cost (\$)	Frequency	Estimated Annual Cost
Total Emergency/Reactive Cost			\$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's total deferred maintenance is a total of \$0.00 for all maintenance activities. The following includes the utility's 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

[Previous](#)
[Save and Generate Plan](#)
[Save and Continue >](#)

O&M Strategy

The Operations and Maintenance (O&M) Strategy section lays out the overall plan and how all of the maintenance areas are integrated using CUPSS.



Preventive Maintenance

The Preventive Maintenance section provides more specific information on the strategy used to manage routine and preventive maintenance. Here you can describe the methods used to complete maintenance, the rationale for using the methods, and the maintenance schedule. Items listed in the Preventative Maintenance Schedule table are for planned tasks you entered in the My O&M module within CUPSS.

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:

Task/Service	Cost (\$)	Frequency	Priority	Annual Cost	Deferred Maint. cost
Check and record/diagnostic residual at the point of installation	\$0	Every 1 day(s) 1 time(s) per day	\$0	\$0	\$0
Check and record water levels in storage tanks	\$0	Every 1 day(s) 1 time(s) per day	\$0	\$0	\$0
Check instrumentation for proper signal	\$0	Every 1 day(s) 1 time(s) per day	\$0	\$0	\$0
Input/output, (diagnostic residual and Plumb)	\$0	Every 1 day(s) 1 time(s) per day	\$0	\$0	\$0

5.2 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)/hardware) a total of \$0.00 for all maintenance activities. The following includes the utility(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

Navigation: < Previous, Save and Estimate Plan, Save and Continue >

Preventive Maintenance

The Preventive Maintenance section provides more specific information on the strategy used to manage routine and preventive maintenance. Here you can describe the methods used to complete maintenance, the rationale for using the methods, and the maintenance schedule. Items listed in the Preventative Maintenance Schedule table are for planned tasks you entered in the My O&M module within CUPSS.



Ready View Access Subdivision: O&M - O&M Strategy

Essential Services | 1. Subdivision | 2. Utility Overview | 3. LGS | 4. Capital Assets | **5. O&M Strategy** | 6. Work Quality & Cost Efficiency | 7. O&P | 8. Finance | 9. Final 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, critically, condition and operating history. The risk matrix in the Check Up Asset Report provides the utility/city/county assets and identifies the risk value for each asset. The risk matrix and section 4.0 of the document were used as the basis for establishing the maintenance program as a way to make sure that the utility/city address the highest risk assets. In addition, the maintenance program addresses the level of service performance objectives to ensure that the utility is operating at a level acceptable to the customer.

Emergency / Reactive Maintenance

The Emergency/Reactive Maintenance section describes how you address emergency maintenance issues and requests for maintenance filed by your customers. The Emergency/Reactive Maintenance Expenses table lists unplanned expenses from the previous year. These items are retrieved from the My O&M module within CUPSS where the task type was selected as unscheduled.

4.2 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 customer's asset(s) is identified by staff inspection.

Table 5-2: Ready View Access Subdivision: O&M Emergency/Reactive Maintenance Expenses for 2019

Task Name	Cost (\$)	Emergency	Estimated Annual Cost
Total Emergency/Reactive Cost			\$0

Total Deferred Maintenance: \$0.00

< Previous | Save and Estimate Plan | Save and Estimate >

Emergency / Reactive Maintenance

The Emergency/Reactive Maintenance section describes how you address emergency maintenance issues and requests for maintenance filed by your customers. The Emergency/Reactive Maintenance Expenses table lists unplanned expenses from the previous year. These items are retrieved from the My O&M module within CUPSS where the task type was selected as unscheduled.



Deferred Maintenance

The Deferred Maintenance section outlines the status of the utility's deferred maintenance tasks and discusses the plan to reduce the amount of deferred maintenance. You might want to include an example of how deferred maintenance could vary over the upcoming years. This section concludes by providing a sum of the total deferred maintenance values from the tables on the page.

5.3 Deferred Maintenance

Deferred maintenance is any maintenance, repair, restoration or replacement work that should have been completed before now, and that has not been performed. The utility has had a total of \$0.00 for all maintenance activities. The following includes the utility's 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

5.1 Deferred Maintenance

Deferred maintenance is any maintenance, repair, restoration or replacement work that should have been completed before now, and that has not been performed. The utility has had a total of \$0.00 for all maintenance activities. The following includes the utility's 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

Frequency	Estimated Annual Cost	Deferred Maintenance
1 time(s) per day	\$0	\$0
1 day(s) 1 time(s) per day	\$0	\$0
1 day(s) 1 time(s) per day	\$0	\$0

Frequency	Estimated Annual Cost
	\$0

Deferred Maintenance

The Deferred Maintenance section outlines the status of the utility's deferred maintenance tasks and discusses the plan to reduce the amount of deferred maintenance. You might want to include an example of how deferred maintenance could vary over the upcoming years. This section concludes by providing a sum of the total deferred maintenance values from the tables on the page.

Tab 5 -- Operations & Maintenance

The screenshot shows a software interface for 'Operations & Maintenance' with a red header bar. A dialog box titled 'Save and Generate Plan' is overlaid on the screen. The dialog box contains the following text:

Save and Generate Plan

All the tables on this screen will be automatically generated from what you've previously entered in the CUPSS modules.

Make sure to click "Save and Continue" or "Save and Generate Plan" when you are finished filling out the O&M fields.

At the bottom of the dialog box, there are three buttons: '<< Previous', 'Save and Generate Plan', and 'Save and Continue >>'. A search icon is also visible in the dialog box.

The background software interface shows a navigation menu with options like '1. Schedule', '2. Unit Outcome', '3. LGS', '4. Capital Assets', '5. O&M Strategy', '6. Work Quality & Cost Efficiency', '7. COP', '8. Finance', and '9. Final Plan'. The main content area displays text about O&M strategy and a table titled 'Table 5.1. Brandy View Acres Subdivision - O&M Preventive Maintenance Schedule for 2010'. The table has columns for 'Task Name', 'Unit (U)', 'Frequency', 'Estimated Annual Cost', and 'Deferred Maintenance'. The table contains three rows of data:

Task Name	Unit (U)	Frequency	Estimated Annual Cost	Deferred Maintenance
Check and record oil level at the gas oil	1	1 time(s) per day	\$0	\$0
Oil level	1	1 time(s) per day	\$0	\$0
Oil level	1	1 time(s) per day	\$0	\$0

Save and Generate Plan


All the tables on this screen will be automatically generated from what you've previously entered in the CUPSS modules.

Make sure to click "Save and Continue" or "Save and Generate Plan" when you are finished filling out the O&M fields.

Asset Management Core Question
Question 4 of 5

4

What Are The Utility's Best Capital Improvement Project (CIP) and O&M Strategies?

An illustration showing two utility workers in safety gear standing next to a yellow and blue piece of equipment, possibly a generator or transformer, with various mechanical components and cables.

Navigation: Use the arrows in the bottom-middle of the screen to navigate backward to previous screens or forward through the lesson screens. When you enter an interactive tool, check the notes to receive instruction on using that tool's navigation. If you do not want to hear the audio, set the sound scale on the bottom left to zero or mute the computer's sound.

It is important to recognize that operations and maintenance (O&M), personnel, and the capital budget account for an estimated 85 percent of a typical system's expenses. Asset management enables a system to determine the lowest cost options for providing the highest level of service over time. Utilities want to optimize the work O&M crews are doing, where they are doing it, and why. An asset management program helps a utility make risk-based decisions by choosing the right project, at the right time, for the right reason.

Tracking your O&M tasks will help you develop an O&M strategy for your asset management plan. The Operations and Maintenance (O&M) Strategy tab gives you a template to describe your routine, preventive, and emergency maintenance approaches.

Tracking your high risk assets will help you identify and prioritize these critical assets. The Capital Improvement Plan (CIP) tab provides information that will help you improve O&M practices and enhance your long-term planning efforts.

Tab 7. Capital Improvement Plan (CIP)

The screenshot displays the '7.0 Capital Improvement Plan (CIP)' section of a software application. At the top, a navigation bar includes tabs for '1. Introduction', '2. Utility Outlook', '3. LOS', '4. Capital Assets', '5. CIP Strategy', '6. Water Quality & Future Expenses', '7. CIP', '8. Finance', and '9. Public Plan'. The main content area is titled '7.0 Capital Improvement Plan (CIP)' and contains the following text:

The Beauty View Area Subdivision - low cost improvement program (CIP) plan is the description of future capital projects. Capital improvement projects generally create an asset that currently does not exist or their upgrade and improve existing capacity. The projects can result from growth or environmental needs, such as the following:

1. Expansion that purchase 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 is a condition in which an asset does not increase the asset's design capacity, but restores an existing asset to original capacity. Any improvement projects that require more than simply restoring an asset to its original capacity are deemed to be a new investment, such as the following:

Table 7-1. Beauty View Area Subdivision - CIP Capital Improvement Projects

Capital Improvement Project	Total Cost	Annual Savings	Type of Capital Improvement Project	Year to Conduct
Chlorine tanking	\$139	\$30	Replace/Upgrade	2036
Wells	\$40,000	\$1,501	Replace/Upgrade	2023
Storage	\$3,200	\$158	Replace/Upgrade	2011
Water Production Meter	\$3,000	\$133	Replace/Upgrade	2015
Tank	\$40,000	\$1,379	Replace/Upgrade	2036
Distribution	\$133,000	\$3,553	Replace/Upgrade	2038
Main valve	\$2,000	\$208	Replace/Upgrade	2011

At the bottom of the screen, there are three buttons: 'Previous', 'Save and Generate Plan', and 'Save and Continue'.

Navigation: Use the arrows in the bottom-middle of the screen to navigate backward to previous screens or forward through the lesson screens. When you enter an interactive tool, check the notes to receive instruction on using that tool's navigation. If you do not want to hear the audio, set the sound scale on the bottom left to zero or mute the computer's sound.


The Capital Improvement Plan (CIP) tab provides information on the scope and cost of future projects. This information is important because it allows the plan reader to gain an understanding of upcoming obligations and resource needs. Items in this table are from the My Inventory module within CUPSS, for assets that have been marked as Future Investment as the asset status.

Make sure to click "Save and Continue" or "Save and Generate Plan" when you are finished filling out the CIP section.

Asset Management Core Question
Question 5 of 5

5

What Is The Utility's Best Long-term Financing Strategy?



Navigation: Use the arrows in the bottom-middle of the screen to navigate backward to previous screens or forward through the lesson screens. When you enter an interactive tool, check the notes to receive instruction on using that tool's navigation. If you do not want to hear the audio, set the sound scale on the bottom left to zero or mute the computer's sound.

Knowing the economic costs of services provided is critical for making sound financial decisions and developing an effective long-term funding strategy. Having this information in an asset management plan will help tell the utility's "story."

Tracking your finances will help you predict your yearly revenues and expenses. The Financial Management Strategy tab can help you analyze these annual financial trends and develop the best long-term financing strategy.

Tab 8. Financial Management Strategy

The screenshot shows a software interface with a title bar 'Energy One Asset Additions - CUP - Finance'. Below the title bar are several tabs: 'Home', '1. Substation', '2. Plant', '3. CIP', '4. Other', '5. DSM', '6. Misc. Assets', '7. CIP', '8. Finance', and '9. Forecast'. The main content area is divided into sections: '8.1.0 Financial Management Strategy', '8.2.0 Financial Forecast', and '8.3.0 Financial Projection Summary'. The '8.3.0' section contains a line graph titled 'Financial Projection Summary' with a legend for Revenue (blue squares), Cost of Doing Business (red circles), and Surplus/Deficit (green triangles). The x-axis represents years from 2009 to 2018, and the y-axis represents dollar amounts from -100,000 to 25,000.

Financial Management Strategy

Forecast Summary

Navigation: Use the arrows in the bottom-middle of the screen to navigate backward to previous screens or forward through the lesson screens. When you enter an interactive tool, check the notes to receive instruction on using that tool’s navigation. If you do not want to hear the audio, set the sound scale on the bottom left to zero or mute the computer’s sound.

The Financial Management Strategy tab discusses the utility’s financial condition and its strategy for future financing. You might wish to discuss expenses, how costs are covered, and financing methods for CIPs.

The Financial Forecast section shows the financial forecast and the financial projection summary graph from the My Financial Check Up Report. To change this graph, you can edit the financial information in the My Finances module within CUPSS.

Tab 8. Financial Management Strategy, cont.

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. Biennial View Across Subdivisions - 10Y Total Expenditure Summary - Actual/Forecast														
FY 2008 Actual	FY 2009 Actual	FY 2010 Budget	Income in the current Year	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019		
1.0%	1.0%	1.8%	Water Supply	0.0%	1.0%	1.3%	1.6%	1.0%	1.0%	1.3%	1.6%	1.0%	0.0%	0.0%
			Annual Grant	0	0	0	0	0	0	0	0	0	0	0
			Number of Cable users	0	0	0	0	0	0	0	0	0	0	0
			Average per Cable user bill	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Total Expenditures
←

[Previous](#) [Save and Generate Plan](#) [Save and Continue](#)

Navigation: Use the arrows in the bottom-middle of the screen to navigate backward to previous screens or forward through the lesson screens. When you enter an interactive tool, check the notes to receive instruction on using that tool's navigation. If you do not want to hear the audio, set the sound scale on the bottom left to zero or mute the computer's sound.

The Total Expenditure section of the plan addresses recent expenditures and anticipated expenses in the next 10 years. The Expenditure Summary table lists line items for expenses, revenues, and other financial items you have already entered in the My Finances module within CUPSS.

Make sure to click "Save and Continue" or "Save and Generate Plan" when you are finished filling out this section.

Asset Management Core Questions

- 1** What Is The Current State Of The Utility's Assets?
- 2** What Is The Utility's Required Sustained Level Of Service (LOS)?
- 3** Which Assets Are Critical To Sustained Performance?
- 4** What Are The Utility's Best Capital Improvement Project (CIP) and O&M Strategies?
- 5** What Is The Utility's Best Long-term Financing Strategy?

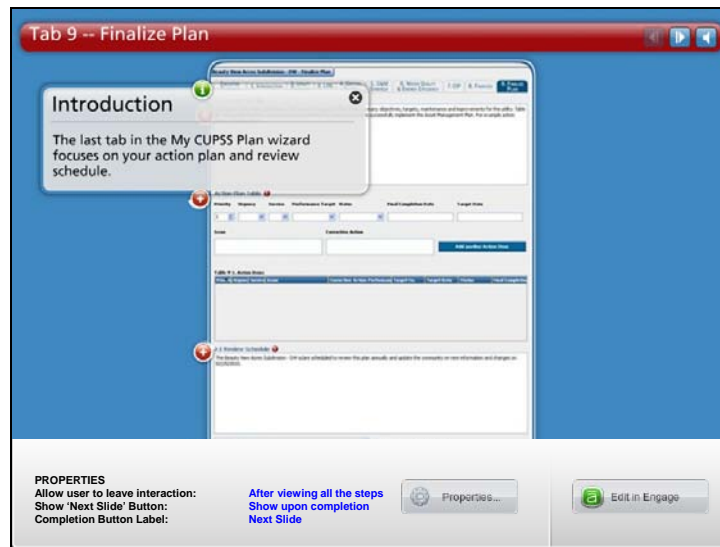
***Navigation:** Use the arrows in the bottom-middle of the screen to navigate backward to previous screens or forward through the lesson screens. When you enter an interactive tool, check the notes to receive instruction on using that tool's navigation. If you do not want to hear the audio, set the sound scale on the bottom left to zero or mute the computer's sound.*

You have completed answering all five core questions for your utility using the My CUPSS Plan wizard.

As a review the five core questions of an asset management framework are:

1. What Is The Current State Of The Utility's Assets?
2. What Is The Utility's Required Sustained Level Of Service?
3. Which Assets Are Critical To Sustained Performance?
4. What Are The Utility's Best "Minimum Life-Cycle-Cost" CIP And O&M Strategies?
 - What Is The Utility's Best Long-term Financing Strategy?

There is one final step to finalize your plan with the Finalize Plan tab. Then you are ready to put your asset management plan in to action!



Navigation: Use the arrows in the bottom-middle of the screen to navigate backward to previous screens or forward through the lesson screens. Click on the arrows at the top right to cycle through the information pop ups or click on each pop up individually. If you do not want to hear the audio, set the sound scale on the bottom left to zero or mute the computer's sound.

Tab 9 -- Finalize Plan

Introduction

The last tab in the My CUPSS Plan wizard focuses on your action plan and review schedule.

Introduction

The last tab in the My CUPSS Plan wizard focuses on your action plan and review schedule.



The screenshot shows a software interface for 'Finalize Plan' with a red header bar. A tooltip titled 'Action Plan' is overlaid on the left side of the screen. The tooltip contains the following text:

Action Plan

Your action plan summarizes the entire asset management plan and reviews the objectives, targets, maintenance, and improvements discussed throughout the plan. Additionally, this section introduces the items listed in the Action Items table.

The background interface includes a breadcrumb trail: 'Ready View Asset Substation - DM - Finalize Plan'. Below this, there are several tabs: 'External Screen', '3. Introduction', '2. About', '3. LSS', '4. Goals', '5. OAM Assets', '6. Work Order & Error Entries', '7. CP', '8. Priority', and '9. Finalize Plan'. The main content area shows a table with columns for 'Final Completion Date' and 'Target Date'. Below the table is a button labeled 'Add another Action Item'. At the bottom of the interface, there is a list of appendices: 'Appendix A. Contaminant List', 'Appendix B. Impaired Waterbodies and/or TMDLs List', 'Appendix C. Financial History', 'Appendix D. Financial Ratios', and 'Appendix F. Glossary'. Navigation buttons at the bottom include '<< Previous', 'Save and Generate Plan', and 'Save and Continue >>'. A search icon is visible in the bottom right corner of the tooltip area.

Action Plan

Your action plan summarizes the entire asset management plan and reviews the objectives, targets, maintenance, and improvements discussed throughout the plan. Additionally, this section introduces the items listed in the Action Items table.



Action Items

The Action Items table compiles all the aspects of the utility that require action or follow-up. You should clearly define any objectives and milestones to which you are committing in your plan. Action items should have a reasonable likelihood of being accomplished and should be more specific than LOS goals.

To add an item to the table, select the item's priority, urgency, and service. Also enter data in the fields to describe the issue, the steps you will take to correct the issue, as well as target and completion dates. The

Action Plan Table

Priority	Urgency	Service	Performance Target	Status	Fiscal Completion Date	Target Date
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

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

Issue	Priority	Urgency	Service	Performance Target	Status	Fiscal Completion Date	Target Date
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Action Items

The Action Items table compiles all the aspects of the utility that require action or follow-up. You should clearly define any objectives and milestones to which you are committing in your plan. Action items should have a reasonable likelihood of being accomplished and should be more specific than LOS goals.

To add an item to the table, select the item's priority, urgency, and service. Also enter data in the fields to describe the issue, the steps you will take to correct the issue, as well as target and completion dates. The performance target options are set on the LOS tab. To save the data you have entered and to enter another item to the table, click Add another Action Item.



9.0 Action Plan

The Ready New Access Submitter (or Asset Management Plan) refers to many objectives, targets, maintenance and agreements for the utility. Table 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.

Review Schedule

The Review Schedule section provides information as to when the plan will be reviewed and updated. A regular review of the utility's information is important, and having a set date for the review increases the possibility that the evaluation will be completed. Use the date dropdown to select the date for review of your CUPSS Plan.

9.1 Reviewer Schedule

The Ready New Access Submitter (or Asset Management Plan) is scheduled to review the plan annually and update the community on new information and changes on 02/28/2015.

Appendix F: Dictionary

Previous | Save and Generate Plan | Save and Continue

Review Schedule

The Review Schedule section provides information as to when the plan will be reviewed and updated. A regular review of the utility's information is important, and having a set date for the review increases the possibility that the evaluation will be completed. Use the date dropdown to select the date for review of your CUPSS Plan.



Appendices

The Appendices listed below the date box show additional sections that are included but you do not need to enter any information at this time, they will be included in your printed plan.

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

Appendices

The Appendices listed below the date box show additional sections that are included but you do not need to enter any information at this time, they will be included in your printed plan.

Tab 9 -- Finalize Plan

3.0 Action Plan

The Ready New Asset Submission (or Asset Management Plan) refers to many objectives, targets, milestones and agreements for the utility. Table 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.

Priority	Agency	Service	Performance Target	Status	Final Completion Date	Target Date

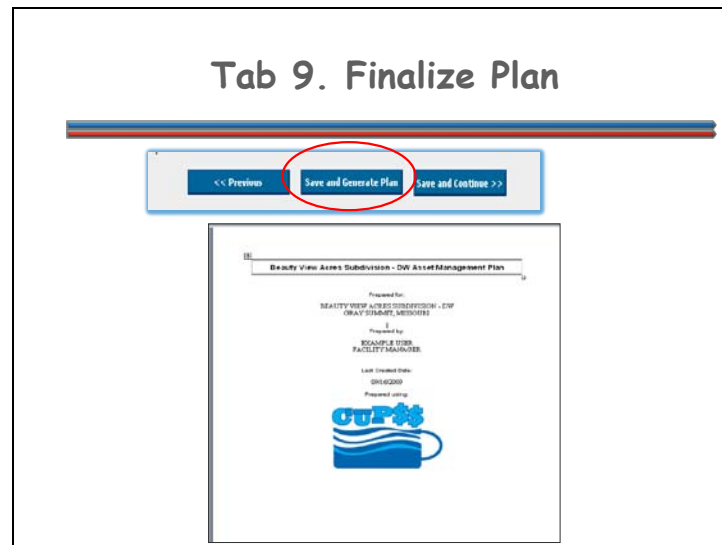
Save and Generate Plan

When you are done filling out all information in the My CUPSS Plan module, click "Save and Generate Plan" to open an .rtf file of your customized asset management plan in your default word processor. Clicking the "Save and Continue" button when on the Finalize Plan step saves your report and take you back to the My CUPSS Plan page. Clicking the "Previous" button takes you to the previous page.

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

Save and Generate Plan

When you are done filling out all information in the My CUPSS Plan module, click "Save and Generate Plan" to open an .rtf file of your customized asset management plan in your default word processor. Clicking the "Save and Continue" button when on the Finalize Plan step saves your report and take you back to the My CUPSS Plan page. Clicking the "Previous" button takes you to the previous page.



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When you are done filling out all information in the My CUPSS Plan module, click "Save and Generate Plan" to open an .rtf file of your customized asset management plan in your default word processor.

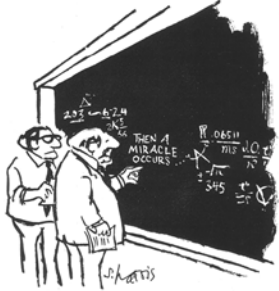
Your word processor will open your My CUPSS Plan. You are now ready to share your plan with your CUPSS team and others. You are also able to make any additions or deletions you might find necessary in your word processor. Please keep in mind any changes made in your word processor will not be reflected in CUPSS. To save changes in CUPSS return to the My CUPSS module to edit your plan.

The slide features a title "What Are We Learning?" at the top, followed by a decorative horizontal line with blue and red segments. Below this is the subtitle "Part 4: Using the plan". In the bottom right corner, there is a small blue button labeled "Main Menu".

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In Part 4, you're going to learn how to use the asset management plan that you've created.

Asset Management Plan Uses



- Use your Asset Management plan to:
 - Enhance your system’s technical, managerial, and financial capacity
 - Help facilitate or support communication and decision making efforts
 - Encourage integration with other initiatives and activities that are being pursued

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Now that you’ve created your Asset Management Plan, how do you use it? Your asset management plan can help improve your internal utility operations, your outside communication with decision makers, as well as implementing the other initiatives that are expected of you.

Use your Asset Management plan to:

- Enhance your system’s technical, managerial, and financial capacity.
- Help facilitate or support communication and decision making efforts.
- Encourage integration with other initiatives and activities that are being pursued.

Asset Management and Capacity Building

Enhance your system's technical, managerial, and financial capacity with elements in your asset management plan like:



- Operator Knowledge
 - Treatment and Operations
 - Succession Planning
- System Policies and Procedures
 - Organization
 - O&M Strategies
 - Security Procedures
 - Recordkeeping
- Financial Projections
 - Capital Improvement Projects
 - Rate Reviews and Rate Setting

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Your asset management plan can help address high-priority needs that are critical to your system's ongoing performance. You can enhance your system's technical, managerial, and financial capacity with elements in your asset management plan like:

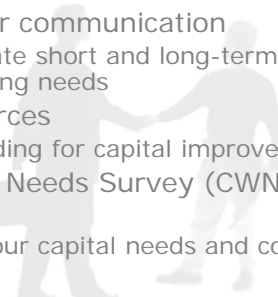
- **Operator Knowledge** - Your plan contains a wealth of knowledge from your system's staff, which can range from a 1-person to multi-person team. Having years of experience of your system's treatment and operations written down and memorialized will help with consistency in administration and decision making as well as be an extremely important resource in succession planning.
- **System Policies and Procedures** - Your plan will note or maybe even create policies and procedures that your system uses in its everyday functions. Your plan will contain your Asset Management Team showing your system's organizational structure, will detail your operation and maintenance strategies and your security procedures, and will also highlight your recordkeeping policies.
- **Financial Projections** - Your plan will also provide your system's financial status showing how much revenue is coming in and expenses going out so that you'll be able to project what funds are needed for upcoming capital improvements at your system. Looking at these projections will help determine if the system's rates are

sufficient and if a rate review needs to be implemented to accomplish your system's long-term goals.

Asset Management and Facilitation

Your Asset Management plan can help facilitate:

- Board/Owner communication
 - Communicate short and long-term capital and operating needs
- Funding sources
 - Secure funding for capital improvements
- Clean Water Needs Survey (CWNS) Submittals
 - Estimate your capital needs and costs



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Your asset management plan can be used as a valuable tool in setting the stage for sustainable level of service conversations with your system's leadership, in describing financing needs, and in providing documentation of capital needs and expected future costs. You can use your Asset Management plan to help facilitate:

- Board/Owner communication - Your plan can help communicate short and long-term capital and operating needs with your board or owner.
- Funding sources - Your plan can help describe your financing needs that may be used to secure funding for capital improvements.
- Clean Water Needs Survey (CWNS) Submittals - Your plan can help estimate your capital needs and costs to submit to the CWNS to meet the water quality goals set in the Clean Water Act.

Asset Management and Integration

Integrate your Asset Management Plan into initiatives that you're already pursuing or involved with like:

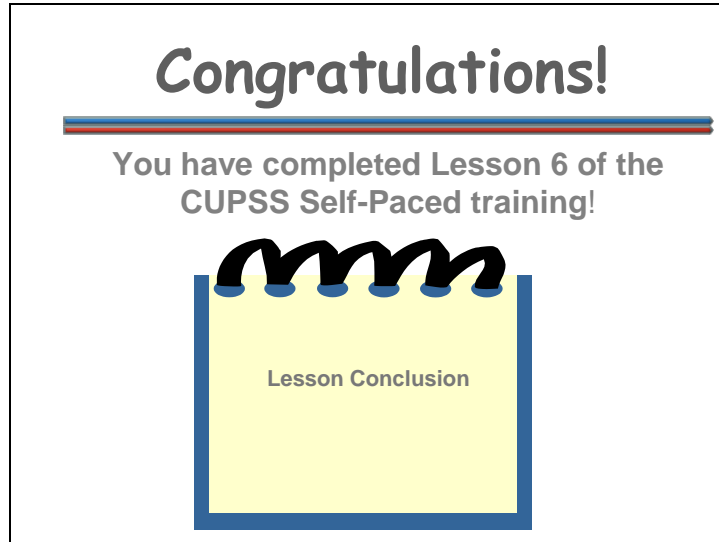
- Security and Disaster Preparedness
 - Inventory lists
 - Inventory mapping
 - Identifying critical assets
- Water/Energy Efficiency
 - Asset Condition
 - Redundancy
- Enforcement
 - Informal enforcement actions



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Asset management takes time and can be a lot of work when first getting started. The key is to know that asset management isn't a stand alone plan or new program. It actually can be integrated with a number of things a system is already doing. You can integrate your Asset Management Plan into initiatives that you're already pursuing or involved with like:

- **Security and Disaster Preparedness** - Vulnerability assessments include having an inventory list, mapping their inventory, and identifying critical assets. All of these are included in your asset management plan.
- **Water/Energy Efficiency** - Water and Energy Efficiency efforts can also benefit from asset management practices by looking at the condition of assets and if there is any redundancy.
- **Enforcement** - Also asset management can be integrated in enforcement efforts as well. If a system is having compliance problems, asset management can be used as a way to get them on track and can possibly be used to justify informal enforcement actions.



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Congratulations! You have completed Lesson 6 of the CUPSS Self-Paced training!

For More CUPSS Information

- Email us at:
 - cupss@epa.gov
- Visit the CUPSS website
 - www.epa.gov/cupss



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