

Interactive & Dynamic Asset Management Plans

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Agenda

Overview

Project Objectives

Project Approach

Demonstration

Over 100 Asset Management Programs

Water – US **60**

- NYC DEP +
- Hartford MDC
- Tarrant Regional Water District
- Cincinnati MSD
- Greater Cincinnati Water Works
- Columbus DPU, OH
- Toho Water, FL
- San Diego, CA
- PVSC, Newark, NJ
- LADWP, CA

Water – International **30**

- Severn Trent Water +
- Yorkshire Water
- South West Water
- Northumbrian Water
- Hofor
- Icon Water
- City West Water
- Queensland Urban Utilities
- BIOFOS, EPCOR

Cross Sector **20**

- BART +
- Indianapolis Zoo
- Fiat Chrysler
- Georgia DOT
- Schiphol Airport
- London Underground
- Highways Agency
- Network Rail
- NHS, HSBC
- UK Dept. of Education



We Have Successfully Helped our Clients Turn Data into Knowledge

Challenge

Lots of data

Are we making progress?

What is important?

Need for both enterprise and system level views

What are the improvement initiatives?

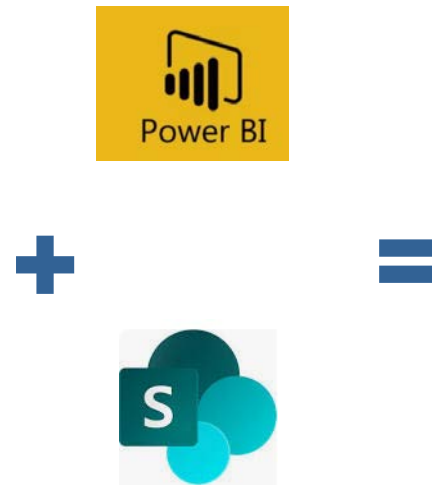
Designed Solutions

Graphical, Informative Dashboards
and
Collaboration Websites

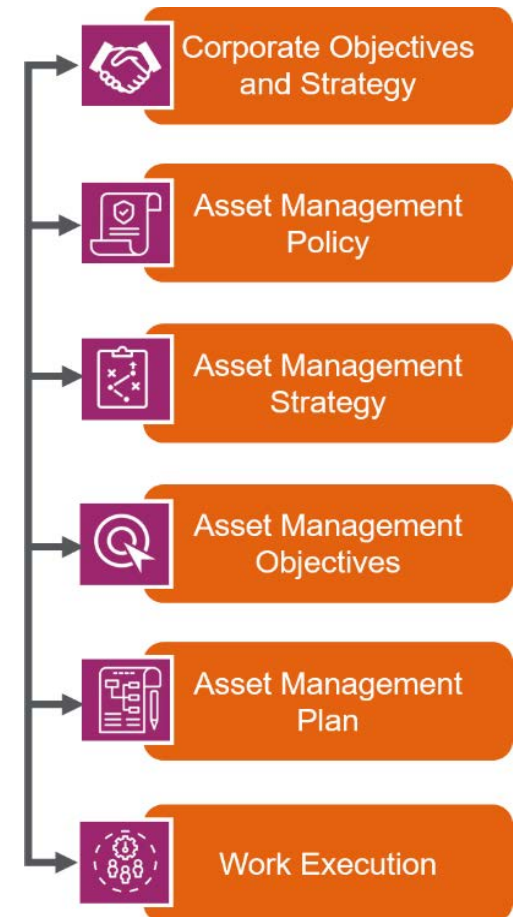


Enabling Tools Help Maintain AMPs Align with Organization's Strategy

- What are the current state of our assets?
- What is our required level of service?
- Which assets are critical to sustain performance?
- What is our infrastructure improvement plan?
- What will it cost to manage the assets?
- What business improvement opportunities should be pursued?

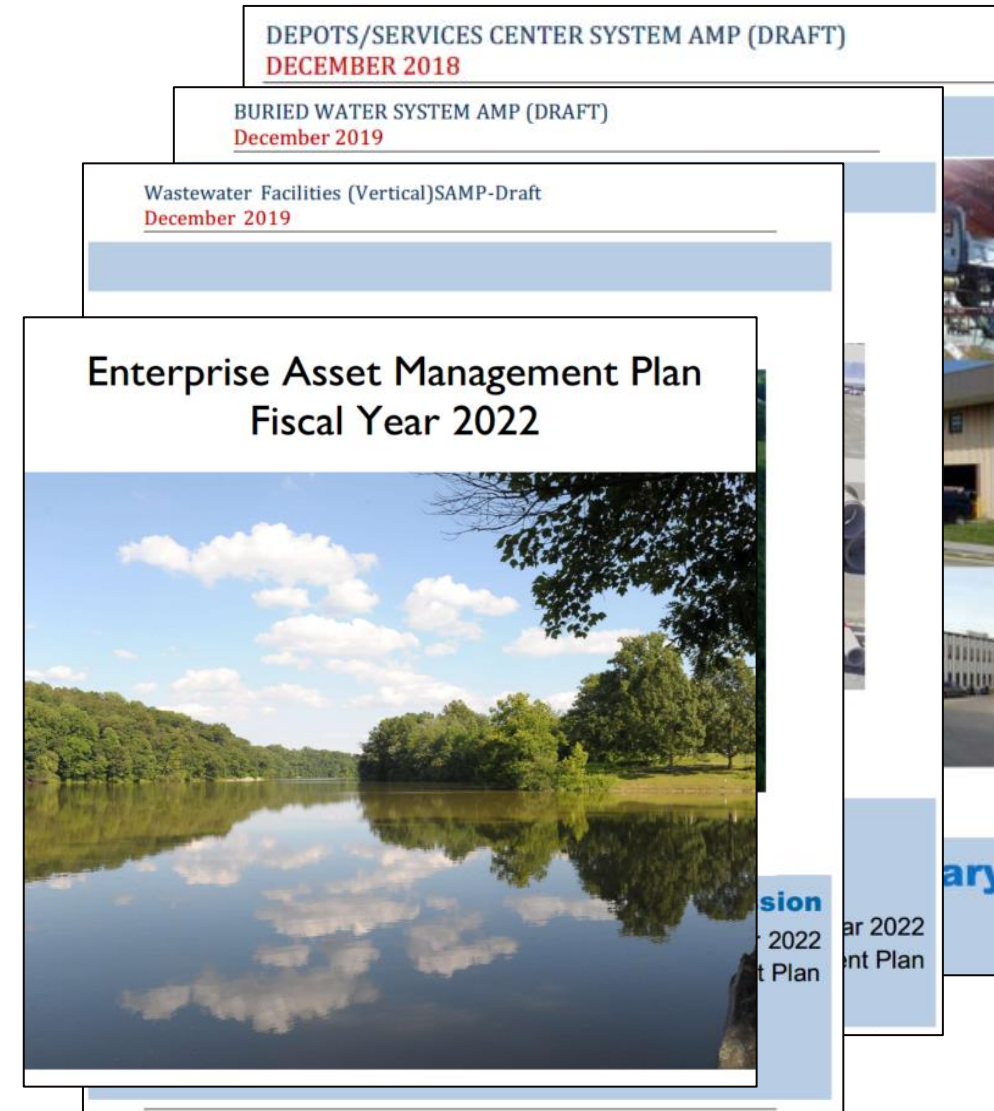


Better Aligned AMPs



Project Scope

- Current AMPs are difficult to read and do not support multiple audiences (Executive, Operational, Implementation)
- Desire to modernize format:
 - Improve user-friendliness
 - More data visualization
 - Greater alignment with organization's strategy
 - Provide more insights & executive level understanding
 - Be reliably and effectively completed with in-house resources



New SAMP Format Objectives

- Easy to use, interactive
- Includes dashboard visualizations with drill-down & filter capability to support decision-making
- Consolidate System AMPs
 - Vertical (W, WW, Dams & Reservoirs)
 - Buried (W, WW)
 - Support Systems (RGH, Lab, Depot/Service Centers)
- Flexible and better illustrate SAMP alignment with organization's strategy
- Utility-centric and utilizes existing AMP content
- Acts as a living collaboration hub for past and present AMP work
- Easily managed and updated by Utility staff

Online Data Visualization for Different Audiences



Executive



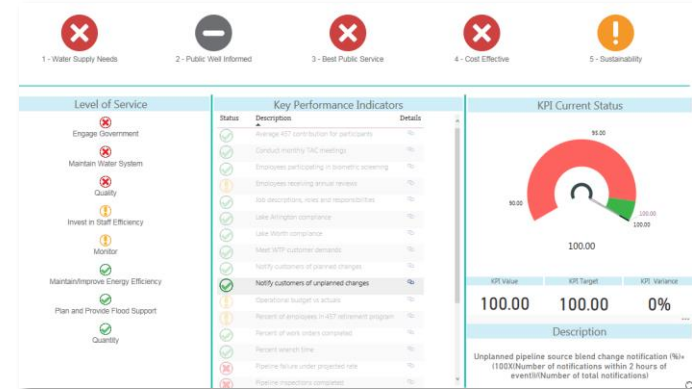
Requested/Approval (costs in Thousands of Dollars)

Phase	None	2011	2012	2013	2014	2015	2016
Plan./Des.Procure.	\$280	\$46,949	\$593,010	\$10,590	\$43,200	\$244,300	\$0
Des./Bid./OSDC	\$1,123	\$159,093	\$54,038	\$44,406	\$29,866	\$47,147	\$3,351
Const.Mgmt.	\$561	\$27,374	\$78,351	\$35,276	\$7,381	\$15,433	\$53,929
Const.	\$5,612	\$88,719	\$566,798	\$734,623	\$425,753	\$136,215	\$173,136

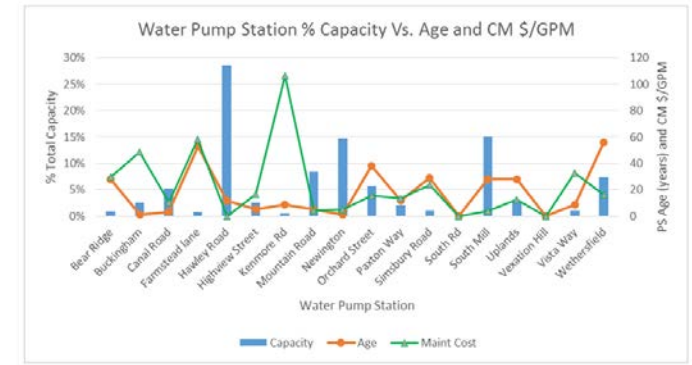
Budgeted (costs in Thousands of Dollars)

Phase	None	2011	2012	2013	2014	2015	2016
Plan./Des.Procure.	\$280	\$10,349	\$578,010	\$0	\$16,200	\$85,000	\$0

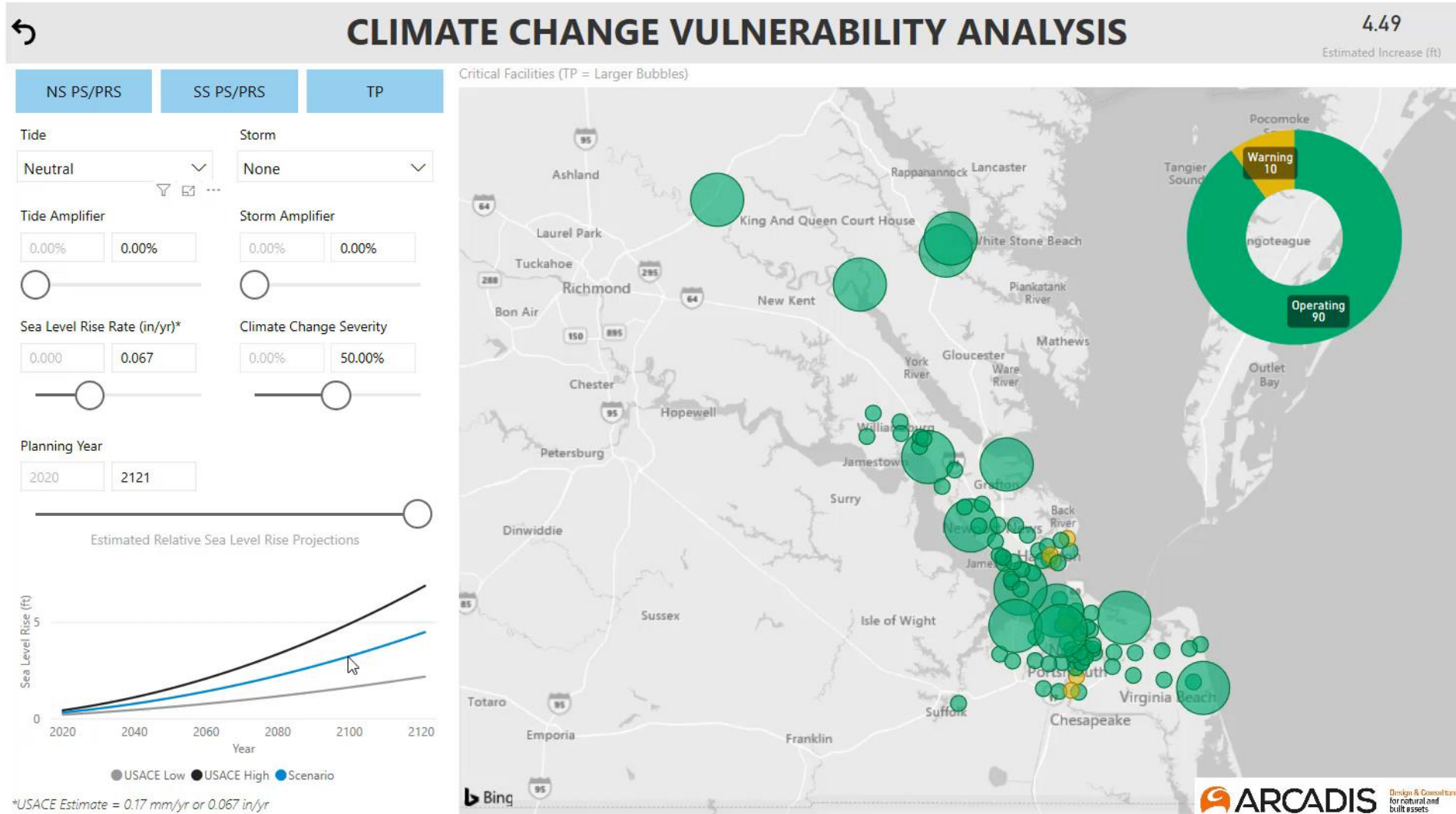
Manager



Supervisor



As Things Change, What is At Risk?

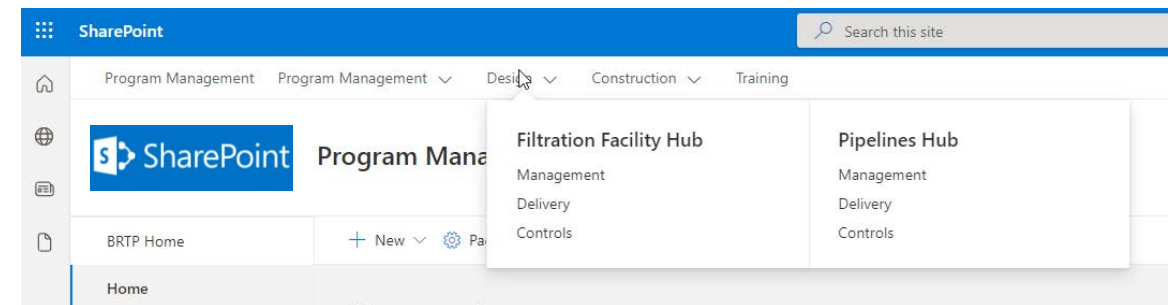
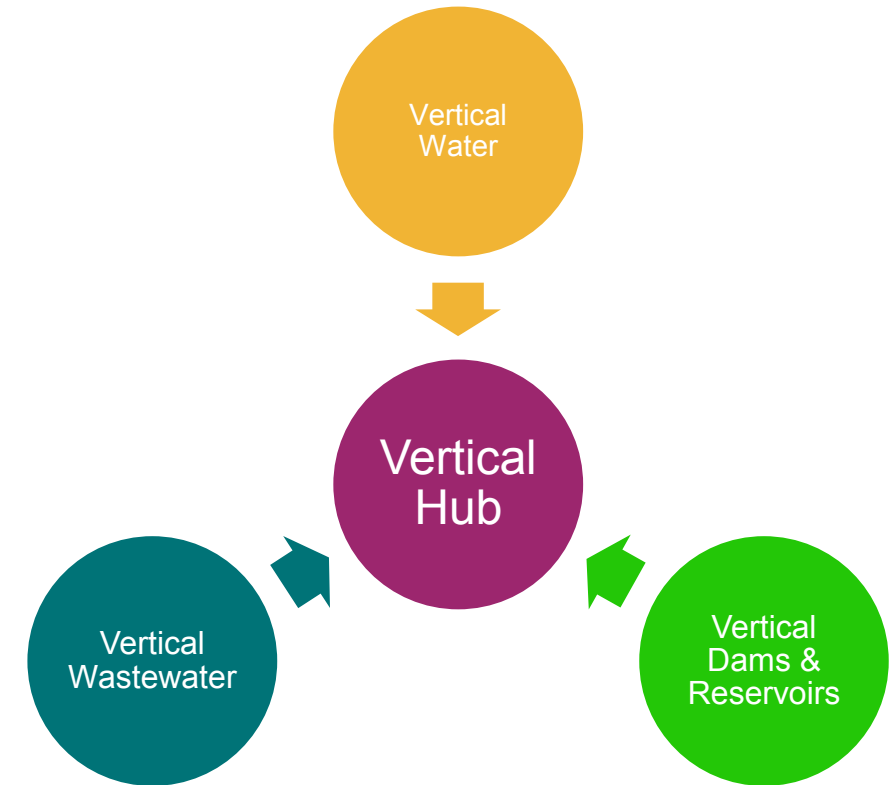


Vision for Online AMPs

- Easy to use, interactive
- Living collaboration hub for past and present AMP work
- Data visualization to provide insights and support decision-making
- Drill-down and filter capability
- Easily managed and updated by Utility staff
- Utility-centric and utilizes existing templates
- Flexible to fit Utility needs

Vision for Consolidating SAMPs – Narratives

- Central Hub and Spoke Design
 - Combines data & content across multiple sites.
 - Trims available information by permissions.
- Advantages
 - Content Rollup and Search
 - Improved Security Model
 - Additional Navigation Capabilities →



Vision for Consolidating SAMPs – Data/Charts

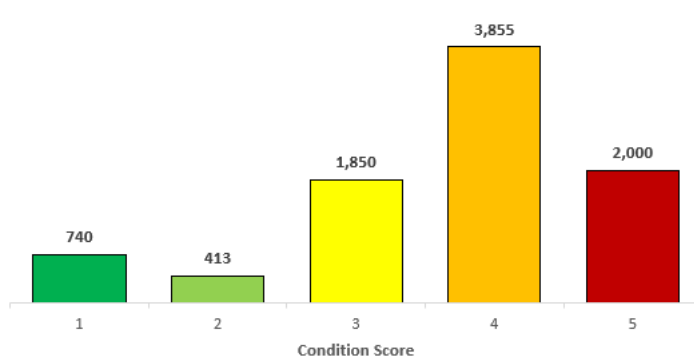
- Use common data source for tables & graphs with consistent format
- Use shared dashboard and use filters to show desired network
- All dashboards update when data source refreshed

Water

Table 1: WF Systems Assets and Replacement Cost by System

System	Number of Assets	Replacement Cost (\$000's)
Water Treatment Plants	6,117	\$700,107
Water Pumping Stations	1,491	\$36,168
Water Storage	936	\$121,369
Specialty Valve Vaults	454	\$5,802
Total	8,998	\$863,446

Figure 3: WF Systems Number of Assets by Condition Score

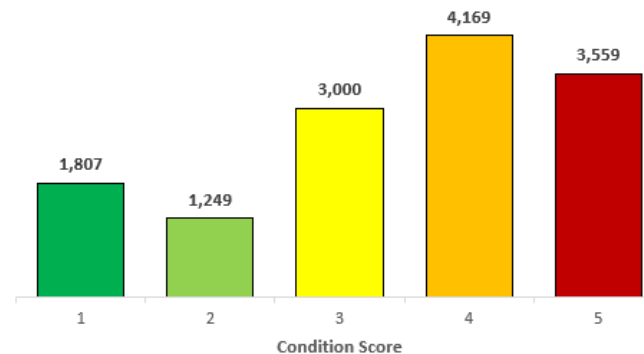


Wastewater

Table 1: WWF Systems Assets and Replacement Cost by System

System	Number of Assets	Replacement Cost (\$000's)
Water Resource Recovery Facilities	10,449	\$624,807
Wastewater Pumping Stations	3,798	\$163,046
Wastewater Storage	211	\$33,047
Total	14,508	\$820,900

Figure 3: WWF Systems Number of Assets by LVL 2 Condition Score

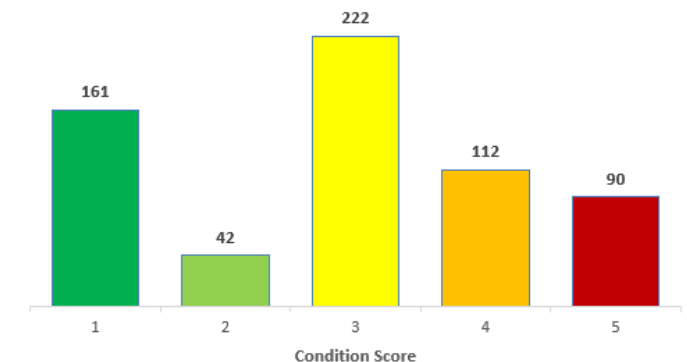


Dams & Reservoirs

Table 1: D&R System Assets and Replacement Cost by Sub-System

Sub-System	Number of Assets	Replacement Cost (\$000's)
Brighton Dam	353	\$36,201
Duckett Dam	225	\$98,278
Little Seneca Dam	68	\$2,994
Total	646	\$137,474

Figure 3: D&R System Number of Assets by Condition Score



Demonstration

The screenshot shows a SharePoint page titled "WSSC Asset Management Plan FY 2023". The page layout includes a top navigation bar with the Arcadis logo and a search bar. A left-hand navigation pane shows the current page and other site elements. The main content area is divided into sections for "Asset Management | WSSC Water" and "Hugh Sinclair | WSSC Water". On the right side, there is a grid of orange buttons for various actions and reports.

Asset Management | WSSC Water
www.wsscwater.com
Asset Management Division. The facilities that WSSC Water operates and everything we use - equipment, water and wastewater networks, our computers, the software that runs the computers, even the chairs we sit on, are assets.

Hugh Sinclair | WSSC Water
www.wsscwater.com
Hugh oversees the development and implementation of the Asset Management Program for more than 500,000 facility and underground assets within WSSC Water's 1,000-square-mile service area.

e-Builder Members Login
app.e-builder.net

Generate Asset Management Plan

Executive Summary **Overview**

Current State of Assets **Required Level of Service**

Criticality and Business Risk Exposure **Infrastructure Improvement Plan**

Capital and O&M Costs **Business Improvement Opportunities**

Contact



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