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AWWA WEBINAR  American Water Works Association

Sustaining an Asset Management Program: What Works?

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WEBINAR MODERATOR



Dinorah Sanchez
**Asset Management Subject
Matter Expert**
Cityworks

Dinorah is the Asset Management Subject Matter Expert for Cityworks. She currently co-leads the AWWA's Sustaining Asset Management subcommittee and serves on APWA's Asset Management Knowledge Team. Previously, she was the Asset & Operations Manager at the City of Sugar Land's Public Works Department, responsible for the corporate asset management program, GIS-centric work order system, call center and customer service, and budgets. Dinorah earned a Certificate in Asset Management from The Institute of Asset Management. She received her Bachelor of Science from Mercyhurst University in Erie, PA and her Master of Public Service and Administration from the Bush School of Government and Public Service at Texas A&M University.



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PANEL OF EXPERTS



Celine Hyer, PE, IAM
Senior Vice President
Arcadis



Jennifer Suttles, PE
Division Director, Operations
Technical Services
Gwinnett County Department
of Water Resources (GCDWR)



Rachel Crawley, IAM Cert
Asset Management
Program Coordinator
Tarrant Regional Water
District

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AGENDA

- I. Key Success Factors for Sustainable Asset Management Programs
- II. Case Study for Sustaining an Asset Management Program
- III. Leveraging ISO 55000 to Sustain an Asset Management Program

Celine Hyer

Jennifer Suttles

Rachel Crawley

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ASK THE EXPERTS



Celine Hyer, PE, IAM
Arcadis



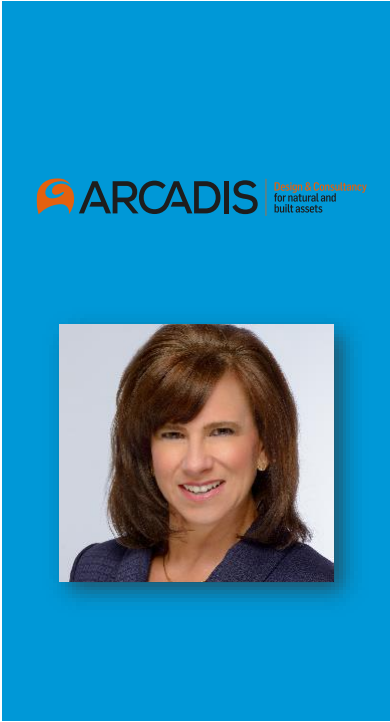
Jennifer Suttles, PE
Gwinnett County Department
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Rachel Crawley, IAM Cert
Tarrant Regional Water
District

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KEY SUCCESS FACTORS FOR SUSTAINABLE ASSET MANAGEMENT PROGRAMS

Celine Hyer, PE, IAM
Senior Vice President
Arcadis



PURPOSE

- Has your Utility successfully started an asset management program but is having a hard time sustaining interest and making progress?
- If so, this session will provide examples of the key elements such as, addressing change management, creating strategy, establishing a culture of asset management, and other successes factors required to sustain an asset management program.

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LEARNING OBJECTIVES

As a result of this presentation the viewers will learn the challenges of sustaining an asset management program and ideas on how to overcome them including:

- Identifying the key attributes of a sustainable and successful Asset Management Program.
- Recognize strategy and change management is important and leveraging it as cooperation among the organization's various procedures and levels to adopt sustainable asset management.
- Understand how to begin to quantify the benefits of an Asset Management Program

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TODAYS AGENDA

- ✓ Introduction to Sustainability and Challenges
- ✓ Key Success Factors
 - Strategy
 - Governance
 - Change Management & Culture
 - Documenting the Benefits
 - Continuous Improvement
- ✓ Questions

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INTRODUCTION TO SUSTAINABILITY AND CHALLENGES

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ASSET MANAGEMENT IMPLEMENTATION DRIVERS ARE DIVERSE, BUT SUSTAINABILITY CHALLENGES ARE THE SAME



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POLL QUESTION

Please select all drivers your organization had for implementing your Asset Management Program

1. State regulatory requirements or SRF loan requirements
2. Increasing asset failures impacting customers
3. Desire to be best in class utility
4. Cost savings on capital or O&M expenditures
5. Other

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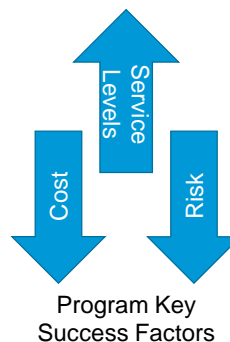
SUSTAINABILITY & ASSET MANAGEMENT

sus·tain·a·bil·i·ty

Noun: the ability to be maintained at a certain rate or level

Asset Management is (from EPA):

- A formalized body of management practices
- Applied to the entire portfolio of assets at all levels of the organization
- That seeks to minimize the total cost of acquiring, operating, maintaining and renewing the assets
- Within an environment of limited resources
- While continuously delivering the service levels customers desire and regulators require
- At an acceptable level of business risk to the organization



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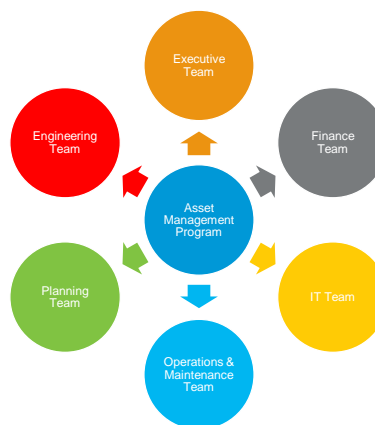
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KEY CHALLENGE: ASSET MANAGEMENT REQUIRES MULTIPLE ENABLERS AND CROSS ORGANIZATIONAL SUPPORT

Asset Management Enablers:

- Leadership & Team Roles
- Information System & Tools
- Documented Processes & Procedures
- Audit and Improvement Process



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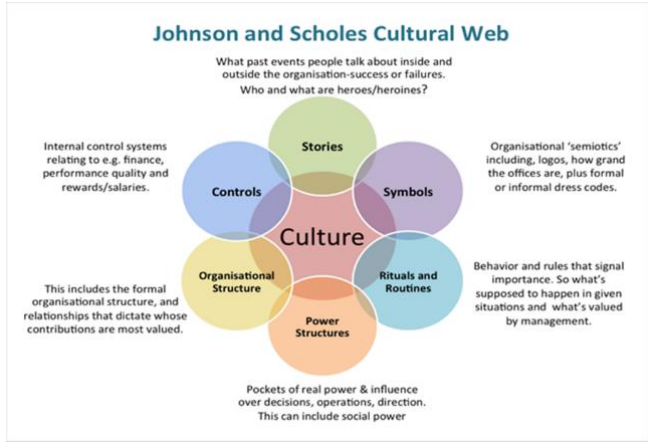


KEY CHALLENGE: IMPLEMENTATION IS TYPICALLY A LONG JOURNEY - 3 OR MORE YEARS



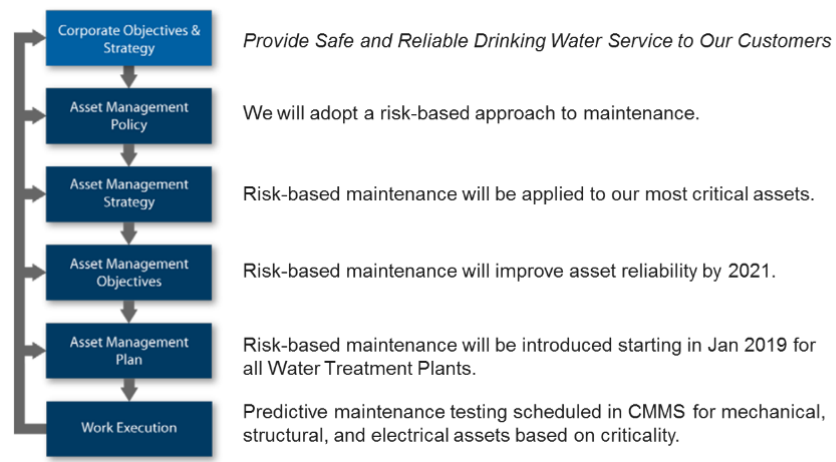
KEY CHALLENGE: CHANGING THE CULTURE OF THE ORGANIZATION IS OFTEN THE FORGOTTEN TASK

“Culture eats strategy for breakfast”



KEY SUCCESS FACTORS STRATEGY

SUCCESSFUL STRATEGY MUST PROVIDE “LINE OF SIGHT” AND ALLOWS FOR PRACTICES TO BECOME PART OF DAILY BUSINESS



DOCUMENTING A LONG-TERM STRATEGY IS KEY – STRATEGIC ASSET MANAGEMENT PLAN (SAMP)

SAMP Table of Contents

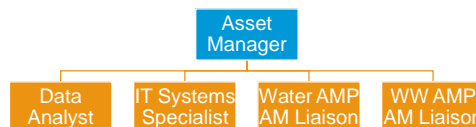
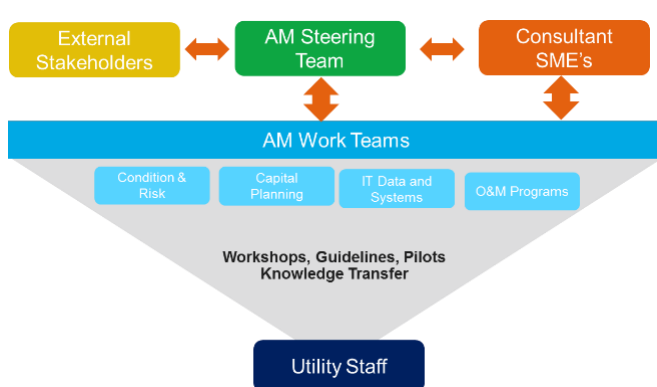
<p>I. Introduction</p> <ul style="list-style-type: none"> • Purpose of plan • Assets Covered by Plan • Current Asset Conditions • Accomplishments to Date <p>II. Strategic Framework</p> <ul style="list-style-type: none"> • Line of Sight/Alignment • Policy Statement • SWOT Analysis • AM Framework Adopted <p>III. Governance</p> <ul style="list-style-type: none"> • Organizational Structure • Communications Plan • Meeting Schedules • Skills/Training Matrix 	<p>VI. Performance Management</p> <ul style="list-style-type: none"> • Levels of Service • Key Performance Indicators <p>IV. Risk Assessment Framework</p> <ul style="list-style-type: none"> • Corporate • Asset Class Specific <p>V. Capital Planning Prioritization Framework</p> <ul style="list-style-type: none"> • Business Cases and Life Cycle Cost • Project Prioritization <p>VI. Continuous Improvement</p> <ul style="list-style-type: none"> • Gap Analysis and Benchmarking • Implementation Roadmap • Funding Needs for Implementation • Management Review Process
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KEY SUCCESS FACTORS - GOVERNANCE

EFFECTIVE GOVERNANCE FOR THE PROGRAM IS KEY – ROLES & RESPONSIBILITIES

- Teams Versus Specific Positions?



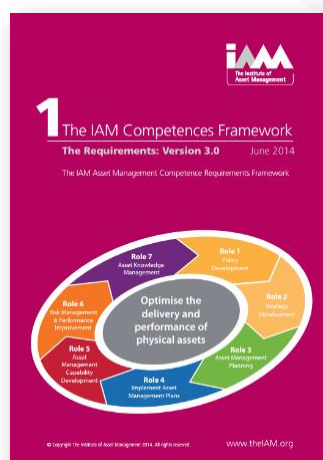
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EFFECTIVE GOVERNANCE FOR THE PROGRAM IS KEY – STAFF COMPETENCIES

- IAM defines 7 key roles with 27 competencies needed
- A skills/training matrix can begin the process
- May need to revise position descriptions to include AM tasks



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EFFECTIVE GOVERNANCE FOR THE PROGRAM IS KEY – COMMUNICATIONS

- Create an Annual Schedule
- Identify all Audiences
- Use Multiple Communication Forms
- Think Outside the Box!



KEY SUCCESS FACTORS – CHANGE MANAGEMENT AND CULTURE

HAVE A PLAN FOR CHANGE MANAGEMENT

Tactics for Building Reinforcement:

- Celebrations & Recognition
- Rewards
- Feedback from Employees
- Audits and Performance Management Systems
- Accountability Systems

ADKAR Model



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SHAPE THE CULTURE TO MAKE ASSET MANAGEMENT BECOME THE WAY YOU DO BUSINESS

Public Sector Strategies:

- Matrix Teams/Matrix Management
- Participatory Leadership
- Fun
- Communications
- Be a Learning Organization
- Prepare the Next Generation

“An organization’s culture is a social reality that signals to employees what they should do, feel and think. It’s a set of behavioral, emotional, and psychological frameworks that members adopt and perpetuate, often unconsciously. **It is ‘the way we do things around here.’**”

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KEY SUCCESS FACTORS – CHANGE DOCUMENTING THE BENEFITS



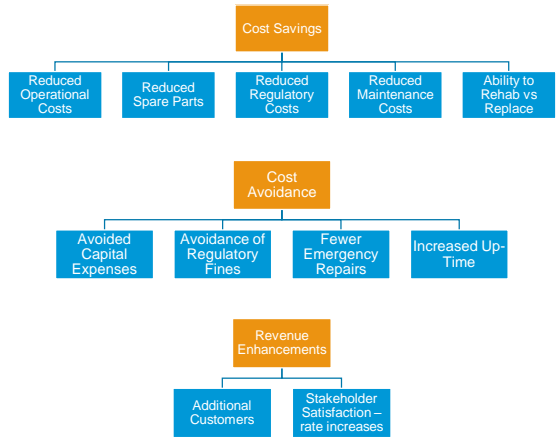
ASSET MANAGEMENT PROVIDES MANY BENEFITS – BUT ARE DIFFICULT TO DOCUMENT

- Financial**
 - Cost Savings
 - Cost Avoidance
 - Revenue Enhancements
- Social**
 - Customer Satisfaction
 - Employee Satisfaction
 - Injury Reduction
- Environmental**
 - Regulatory Improvements
 - Resource Efficiencies

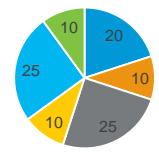


ASSET MANAGEMENT PROVIDES MANY BENEFITS – FINANCIAL SAVINGS ARE THE EASIEST TO EVALUATE

Financial Savings Examples



Savings Documented by Australian Utilities



- Capital Deferral
- Reduced Risk
- Optimized Maintenance
- Optimized Operations
- Reduced Cost of Activities
- Managed Future Renewal Strategies

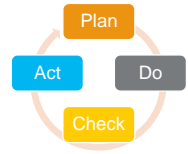


KEY SUCCESS FACTORS – CONTINUOUS IMPROVEMENT FRAMEWORK

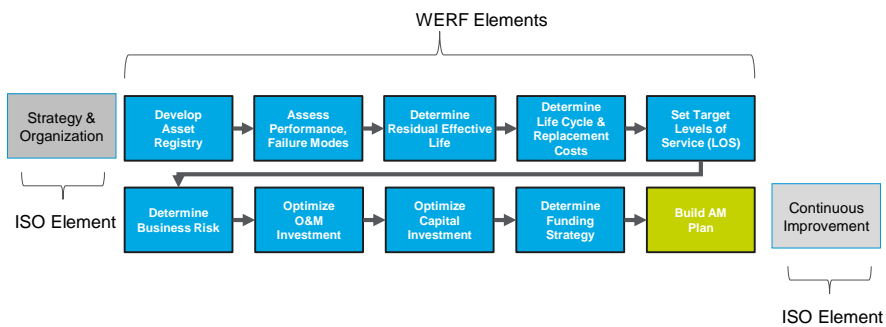


ISO 55000 SERIES ASSET MANAGEMENT FRAMEWORK SUPPORTS A CONTINUOUS IMPROVEMENT PROCESS

Context of Organization	<ul style="list-style-type: none"> Stakeholder needs/Levels of Service Goals and objectives
Leadership	<ul style="list-style-type: none"> Roles and responsibilities AM Policy and SAMP
Planning	<ul style="list-style-type: none"> Risk assessment Asset Management Plans (capital & O&M)
Support	<ul style="list-style-type: none"> IT systems & data People Training, communications and documentation
Operation	<ul style="list-style-type: none"> SOPs Change management and outsourcing
Performance Evaluation	<ul style="list-style-type: none"> Performance measures and tracking Program audits (internal or external)
Improvement	<ul style="list-style-type: none"> Process for implementing corrective actions Continuous Improvement Process



YOU CAN BLEND BOTH ISO AND WRF FRAMEWORKS TO INCLUDE STRATEGY & CONTINUOUS IMPROVEMENT



1. What is my required level of service?
2. What is the current state of my assets?
3. Which assets are critical to sustained performance?
4. What are my best O&M and CIP strategies?
5. What is my best long term funding strategy?

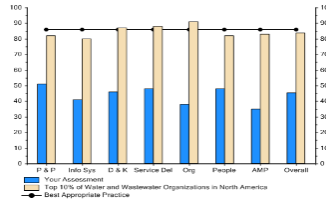
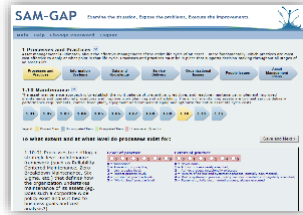


GAP ANALYSIS TOOLS SUPPORT COMPREHENSIVE PROGRAM AUDITS

ISO Gap Analysis Tool
 7 Categories
 39 Questions



SAM Gap Analysis Tool
 7 Categories
 150 Questions



EVALUATION OF SERVICE LEVELS ON A REGULAR BASIS ALSO SUPPORTS CONTINUOUS IMPROVEMENT

Infrastructure Reliability - 4FQ14 Quarterly Report



Level of Service: <i>Provide reliable service to TWA Customers</i>	POTABLE WATER		WASTE WATER		RECLAIMED WATER	
	QTR	YR	QTR	YR	QTR	YR
Provide minimum pressure (at point of service) of 40 psi during average demand	⊕	⊕			○	○
Repair out-of-service fire hydrants within 14 days of notification	●	●				
Restoration of service • Potable Service Lines – 4 hours • Potable Distribution Lines and Reclaimed Service – 8 hours • Sewer Service – 8 hrs	●	●	●	●	●	●
Number of breaks per 100 miles (pipe) per year • Potable and Reclaimed Water – 100 breaks • Waste Water – 30 breaks	⊖	●	●	●	●	●
Unaccounted for water loss 10% or less		●				
Fewer than 11 SSO's per 100 miles (pipe) per year			●	●		
Reduce # of SSO's by 1% over previous year • Wet weather SSO's • Dry weather SSO's				●		
Provide service on scheduled days					○	○

LEGEND ● Target met/exceeded - GOOD ● Target not met – IMPROVEMENT REQ'D ● Low Bound not met – IMPROVEMENT REQ'D
 ⊕ Trend Improving ⊖ Trending Worse



SUMMARY

Asset Management Programs take time to implement and can be difficult to maintain momentum.

- ✓ Using an ISO 55000 series framework incorporates continuous improvement
<https://www.iso.org/standard/55088.html>
- ✓ Applying the ADKAR model can help define change management strategies
<https://www.prosci.com/adkar/adkar-model>

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POLL QUESTION

Where are you on your Asset Management Journey?

1. Not started yet
2. Getting started <1 year
3. Intermediate – working on a planned roadmap to meet maturity
4. Almost fully mature – SAMP and AMP's completed
5. Very mature program according to a formal assessment

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ASK THE EXPERTS



Celine Hyer, PE, IAM
Arcadis





Jennifer Suttles, PE
Gwinnett County Department
of Water Resources (GCDWR)



Rachel Crawley, IAM Cert
Tarrant Regional Water
District

Enter your **question** into the **question pane** on the right-hand side of the screen.

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CASE STUDY FOR SUSTAINING AN ASSET MANAGEMENT PROGRAM

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES

Jennifer Suttles, PE
Division Director
Operations Technical Services



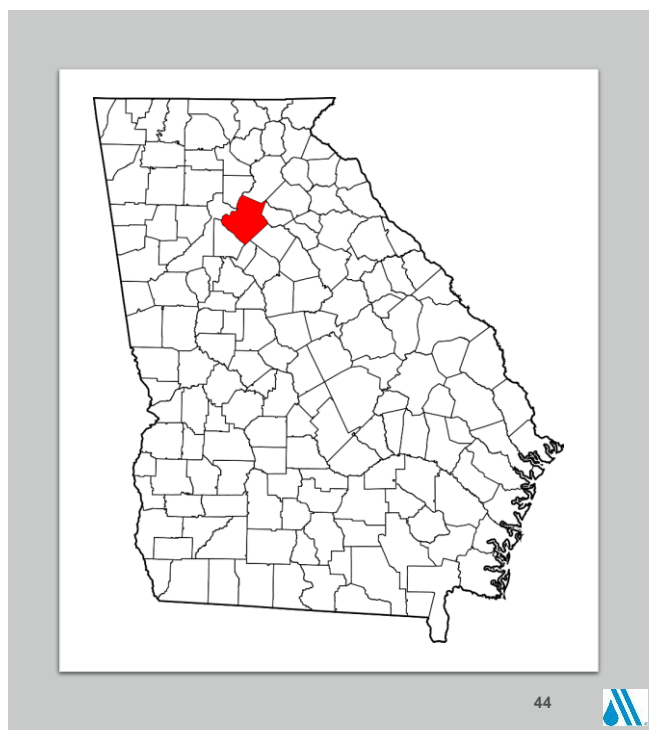
AGENDA

- + Background of Gwinnett systems
- + Early Days of Gwinnett's Asset Management Program
- + Recent Improvements
- + Strategic Asset Management Plan
- + The Future



ABOUT GWINNETT COUNTY

- 437 sq mi Georgia county located 35 miles northeast of Atlanta
- Population approaching 1M
- Projected population 1.5M by 2040
- Most diverse county in the Southeast



ABOUT US - INFRASTRUCTURE

Water Distribution System

3,800 miles



Sewer Collection System

3,000 miles



Storm Water System

1,500 miles



ABOUT US - INFRASTRUCTURE

Water Production

Two Facilities
150 MG per day
98 MG per day



Water Reclamation

Three Facilities
60 MG per day
22 MG per day
16 MG per day



Wastewater Pump Stations

213 Pump Stations



ABOUT US - ORGANIZATION

Department of Water Resources

Technical Services

- BCE's
- Master Plans
- Data Analysis
- AM Plans
- Project Scoping
- CIP Planning

Facility Operations

- Maximo
- PdM
- Reliability Engineering

Field Operations

- Conduct inspections
- Populate CMMS

Engineering and Construction

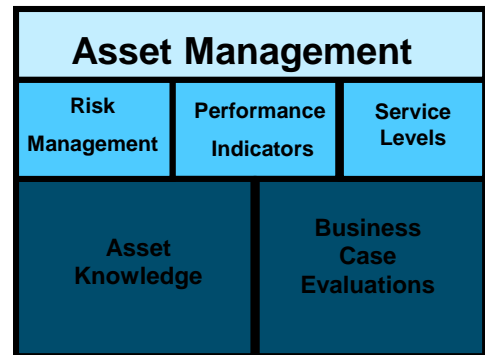
- GIS
- Linear CMMS
- Project Execution

Business and Staff Services

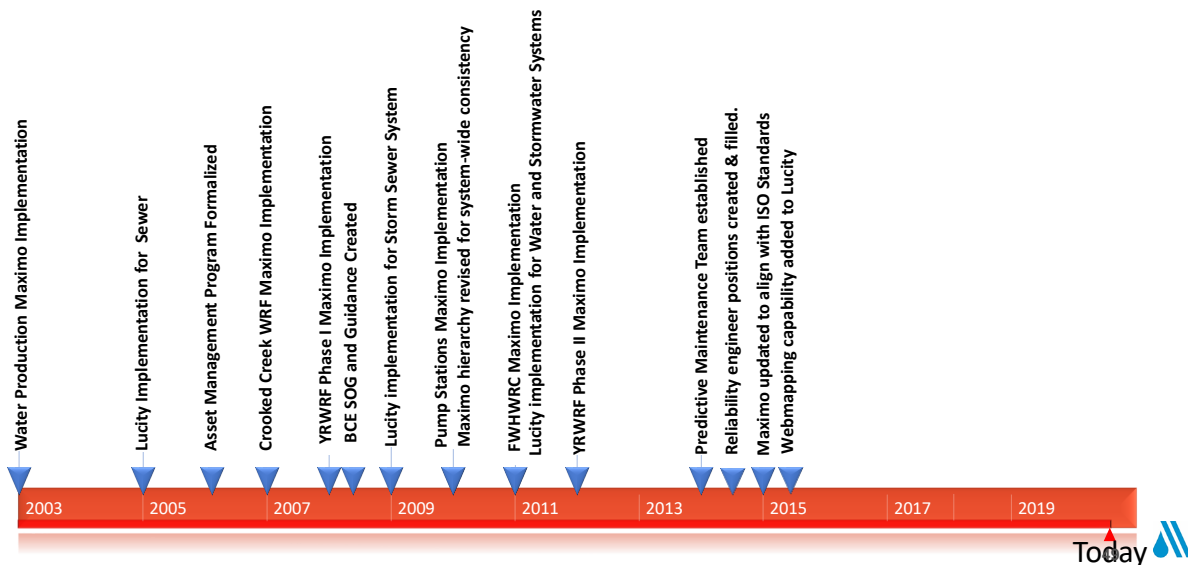
- Customer surveys
- Feedback



THE EARLY YEARS: LAYING THE FOUNDATION



THE EARLY YEARS: BUILDING THE REPOSITORY



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THE EARLY YEARS: BUILDING THE REPOSITORY

- ~ 20 years of data collection around work orders, inspections, etc. within CMMS
 - Lucity: 156k work orders, 330k storm conduit inspections, 53k PACP inspections
 - Maximo: 656k PM/CM work orders
- Continual refinement around hierarchy of the asset registry
- Continual refinement of how work is coded and the quality of the inspections and WO
- Steadily developed AM program to include
 - comprehensive asset inventories,
 - robust maintenance management systems,
 - asset condition documentation,
 - risk-based prioritization,
 - business case evaluations, and
 - monitoring of KPIs



MORE RECENTLY



Gap analysis of full-scale population of EUL, install date, purchase cost and replacement cost for vertical assets



Statistical analysis and failure curves for distribution system



ML algorithms for distribution system and gravity sewer system failure prediction



Creation of a Strategic Asset Management Plan



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DEFINITION - SAMP

- ISO 55000 - A SAMP is documented *“information that specifies how organizational objectives are to be converted into asset management objectives, the approach for developing asset management plans, and the role of the asset management system in supporting achievement of the asset management objectives”*
- High-level strategic plan that documents the relationship between the organizational objectives and the asset management objectives, defines *“the framework required to achieve the asset management objectives”* and *“should be used to develop the asset management plan(s).”*



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STRATEGIC ASSET MANAGEMENT PLAN



Defines the purpose of asset management plans and aligns the County's larger strategic goals to the Plan



Delineates asset classes into various systems



Creates a common methodology for defining risk and a common structure for development of the plan



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POLL

How long has your utility had a Strategic Asset Management Plan?

- Do not currently have a SAMP
- SAMP currently underway but incomplete
- SAMP in place for 2 years or less
- SAMP in place for more than 2 years



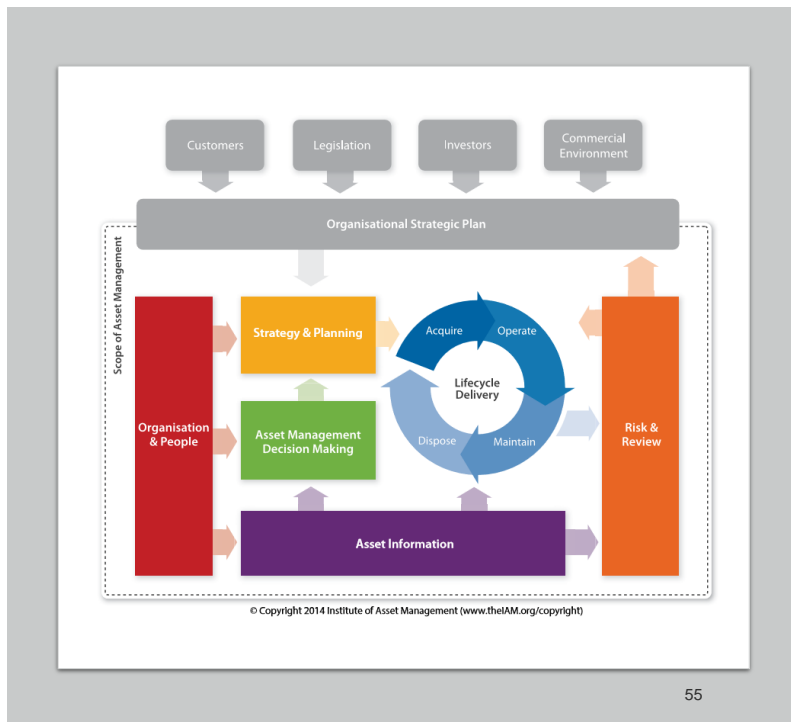
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SAMP STRATEGY SETTING WORKSHOP

- Gained collective understanding of existing GCDWR asset management practices
- Shared common asset management frameworks used by industry peers
- Discussed any potential challenges associated with the development and implementation of the SAMP and subsequent TAMPs
- Discussed how to keep the SAMP and TAMPs current and a part of normal course of business at GCDWR



SAMP - LEVELS OF SERVICE WORKSHOP

- Reviewed common levels of service across core GCDWR functions (water reclamation, water filtration, pump/lift stations, water distribution, sewer collection and force mains, stormwater system, customer service, regulatory compliance, water quality)
- Reviewed operational performance indicators, reference materials, and templates based on experience and industry standards
- Identified a preliminary list of service level measures and targets that align with GCDWR's organizational and Asset Management goals



COMMON STRUCTURE FOR ALL ASSET MANAGEMENT PLANS



1. Introduction
2. Asset Inventory, Hierarchy and Ownership
3. Levels of Service and Key Performance Indicators
4. Criticality
5. Asset Condition and Performance
6. Quantification of Risk
7. Operating, Maintenance and Replacement Strategies
8. Long-term Renewal Plan
9. Recommendations for Data Quality Improvement
10. Appendix: Log of Substantive Changes

FUTURE OF ASSET MANAGEMENT PLANNING AT DWR



- Piloting a Digital Asset Management Plan for Yellow River WRF to provide (near) real-time information on:
 - Inventories
 - KPI's
 - Criticality, Condition and Risk
 - Long range renewal planning
- Being built on business intelligence platform (Tableau)

SUMMARY

- DWR has built a rich foundation of asset knowledge
- Data quality has continuously evolved, improving our ability to make data-driven decisions
- Predictive analytics/AI/ML will more definitely connect capital planning to our levels of service goals
- Common framework of the SAMP will ensure consistency across the organization
- Digital future ensures data will be current, relevant and continuously accessible



THANK YOU!

- For further information, contact me at jennifer.suttles@gwinnettcountry.com.



ASK THE EXPERTS



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Gwinnett County Department
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LEVERAGING ISO 55000 TO SUSTAIN AN ASSET MANAGEMENT PROGRAM

Rachel Crawley, IAM Cert
Asset Management Program
Coordinator
Tarrant Regional Water District



AGENDA

- Tarrant Regional Water District Overview
- TRWD's Asset Management Program and Lessons Learned
- Conclusions



TARRANT REGIONAL WATER DISTRICT OVERVIEW

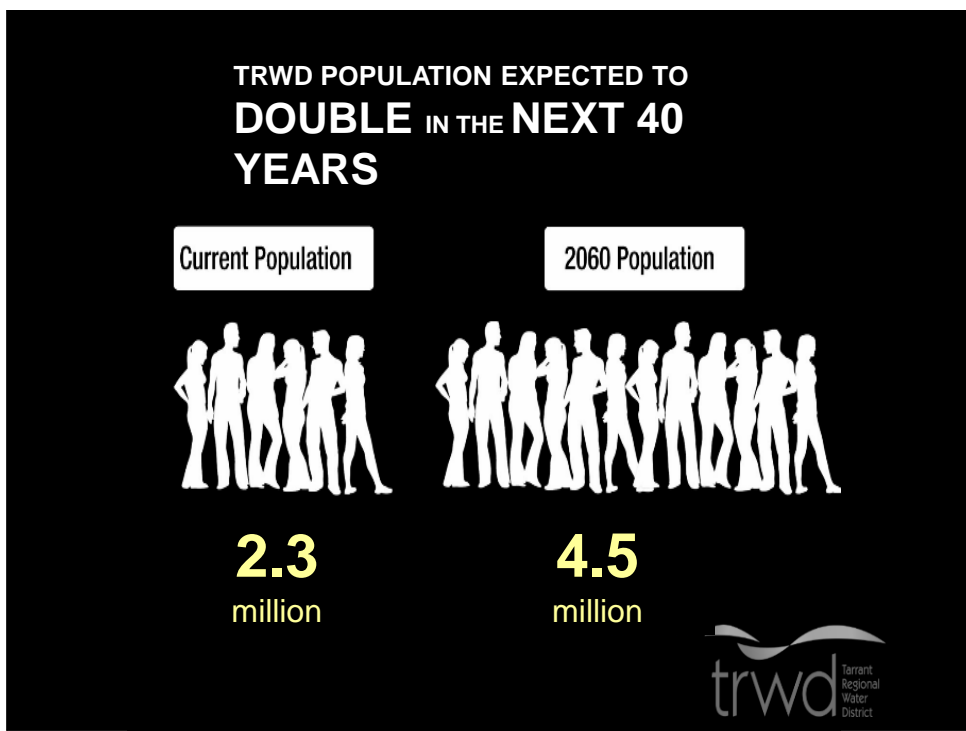


ABOUT TRWD

- Founded in 1924 to manage floods
- One of the largest raw water suppliers in the state of Texas
- Supply over two million people in the North Central Texas area
- Serve more than 30 wholesale customers including the cities of Fort Worth, Arlington, Mansfield and the Trinity River Authority
- Operations span an 11-county area
- Four reservoirs, 11 large pump stations and more than 170 miles of large diameter pipeline used for water transport



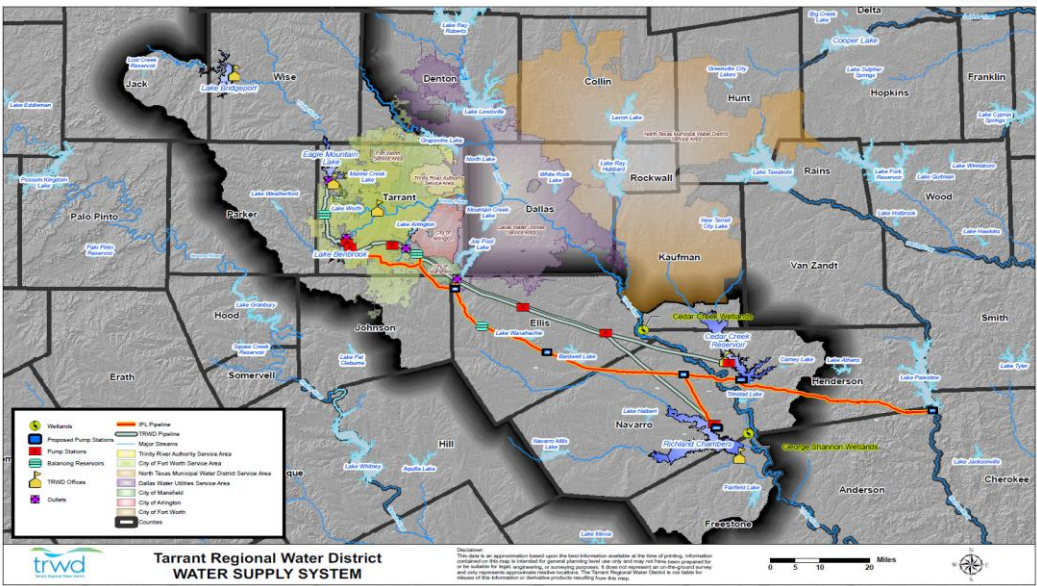
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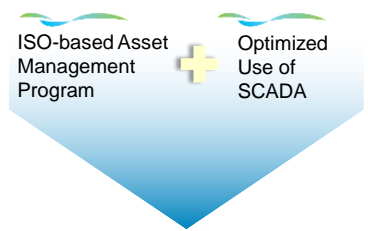
TRWD SYSTEM OVERVIEW



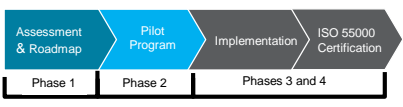
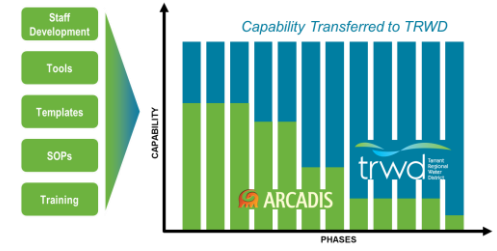
TRWD'S ASSET MANAGEMENT PROGRAM AND LESSONS LEARNED



OUR ASSET MANAGEMENT JOURNEY



- Optimized Performance
- 100% Reliability
- OpEx Optimization



ALIGNING ASSET MANAGEMENT WITH THE BUSINESS



- Lessons Learned
 - Do not underestimate the time and effort required to clarify and communicate objectives
 - Do not be afraid to make adjustments at all levels
 - Ensure key stakeholders understand that asset management was not a functional silo, but a series of processes connecting many aspects of the organization



COMMUNICATING AND RECOGNIZING ORGANIZATIONAL IMPACTS



- Lessons Learned
 - Communications are key and should be driven by the organization
 - Early identification of long-term roles helps anticipate potential organizational adjustments
 - IT, HR, and PMO are examples of groups that were included in the steering committee to ensure full organizational alignment



ENGAGE OPERATIONS EARLY IN THE PROGRAM

- Lessons Learned
 - The team recognized the need to better communicate and engage operations to bring them onboard
 - Conduct in-house inventory and condition assessment to ensure early adoption
 - Developed our own condition assessment and CoF criteria



Asset	Description	Corrosion	Leakage	Supports	Operability	
	Auxiliary Criteria to watch for Packing leakage to be acceptable, Oil Levels, Panels, connections	Local Electrical	1-None 2-Surface 3-N/A 4-Some Metal Loss 5-significant metal loss	1-New or recently refurbished 2-None 3-Drip Only 4-N/A 5-Stream	1-New 2-None 3-Minor issues, no impact 4-N/A 5-Major issues, impacts operability	2-No 1-New 2-Operates Smoothly 3-Operates with minor issues 4-N/A 5-Inoperable
	Mechanical Building					
✓	4949 CENTRIFUGAL, CC1-GMP-1, SCOT ARDOK, MP 19GN SF 2X1.5		1	2	2	
✓	4950 CENTRIFUGAL, CC1-GMP-2, SCOT ARDOK, MP 19GN SF 2X1.5		1	2	2	
✓	4951 CENTRIFUGAL, CC1-GMP-3, SCOT ARDOK, MP 19GN SF 2X1.5		1	2	2	
✓	4955 CENTRIFUGAL, CC1-CWP-1, BELL & GOSSETT, C139865-0143		1	2	2	
✓	4956 CENTRIFUGAL, CC1-CWP-2, BELL & GOSSETT, C139865-0142		1	3	2	
✓	4957 CENTRIFUGAL, CC1-CWP-3, BELL & GOSSETT, C139865-0141		2	2	2	
✓	4964 CENTRIFUGAL, CC1-PCP-1-1, TOWER, SCOT/EVAPCO, MP599F 8X5		1	2	2	



POLL: WHERE DOES ASSET MANAGEMENT FALL AT YOUR ORGANIZATION?

- Engineering
- Operations
- Its own department
- Somewhere else



WHERE DOES ASSET MANAGEMENT FIT IN OUR ORGANIZATION?



- Lessons Learned
 - Engage stakeholders to understand the role of asset management across the organization
 - Assess potential organizational models and chose the one that works for you



ALIGNING THE WHOLE BUSINESS: EMBEDDING ASSET MANAGEMENT INTO THE ORGANIZATION

Lessons Learned

- Leverage your HR function to embed asset management objectives, skills and competencies within the organization

Goals for the Upcoming Review Period - FY 2019		Priority %
Goal Statement		
1. Select and mentor one of your subordinates over the next year. Help them identify a weakness and together work on ways to strengthen their skills or confidence. This will require time, planning, and patience. Have someone selected by Jan 1, 2019 and provide me with monthly updates as to the progress.		10%
2. Take a look at all Critical Assets that fall into the Zone 1 category from the Condition Assessment and modify the PM schedule to reflect proper PM vs CM ratio (6:1) by April 1, 2019.		20%
3. Take a look at all Critical Assets that fall into the Zones 4 and 5 category from the Condition Assessment and develop either a plan for budgeting or begin the CIP approval process by January 1, 2019.		20%
4. Jonathan has taken a lead role at the start-up of 051 - 2021 construction is underway and will be moving fast in the near future. Jonathan needs to give a 10 to 15 minute presentation of the construction process and explain how these pump stations are going to change the Pipeline system as we have known it by June 1, 2019.		10%

Job Title: Asset Management Program Coordinator
Department: Infrastructure Engineering
Reports to: Infrastructure Engineering Director

FLSA Status: Exempt
Classification: Administrative
Safety Sensitive: No
Supervisor: No

Position summary:
 The Asset Management Program Coordinator assists in developing and guides effective implementation of asset management strategies critical to ensuring long-term performance of TRWD's water supply, transmission, floodway and recreation infrastructure. Working as a member of the core TRWD multi-departmental Asset Management Implementation Team, the Asset Management Coordinator engages in a multi-departmental program implementing successful asset management strategies in alignment with ISO 55000 best practices.

Qualifications required:

- Bachelor of Science Degree plus a minimum of five (5) years of experience in asset management-related work
- Microsoft Office and Computerized Maintenance Management System (CMMS) experience
- Institute of Asset Management (IAM) Certification (Asset Management)
- Valid Texas Driver License

Qualifications desired:

- Maximo CMMS experience
- ESRI GIS experience

Essential functions and responsibilities:

- Plan, organize, coordinate, and facilitate ongoing development and implementation of the Asset Management program in collaboration with staff from various departments including but not limited to Operations, IT, Engineering, HR, Finance, Facilities, and Security.
- Coordinate, update and support the Asset Management Steering Team in strategic decision-making related to rehabilitation and replacement of assets.
- Update Asset Management steering team on program activities and outputs.
- Promote and update Asset Management Program framework, strategic goals, policies and methodologies in support of the program.
- Establish, monitor, quality control and coordinate reporting on the achievement of service levels and related key performance indicators.
- Facilitate ongoing activities of the Asset Management Implementation Team and other related internal workgroups.
- Perform analyses on asset condition, performance, and risk data.
- Produce meaningful reports and presentations related to asset management data and information that supports optimized decision-making and investments across the asset life cycle.
- Work with internal teams to leverage asset management data for developing replacement programs, project planning, and financial forecasting for short, medium and long term forecasts.



USING DATA FROM ASSET MANAGEMENT FOR DECISION MAKING



ESTABLISH A STRONG GOVERNANCE

Lessons Learned

- Formal governance maintains momentum and enables continuous improvement
- Transform steering team committee into governance committee

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Annually	Check-in 1 – Identify training needs for budget Review shop drawings and vendor O&M documents for existing facilities in Maximo	Policy Review – Asset Management Policy and Strategic Asset Management Plan ISO Roadmap	Update Asset Management Plans	SOPs (CA, Maintenance, etc.) CA Annual Planning Innovation	Field CA	Field CA KPI Annual Review	Field CA	Field CA Performance Review Alignment	Skills & Competencies – Job Description Review	CA Annual Results	Self-assessment / Audit Function	Staff Resources
Quarterly			CIP project / input to budgeting effort			CIP project / input to budgeting effort			CIP project / input to budgeting effort			CIP project / input to budgeting effort
Monthly	LoS & KPIs Tracking - IT Stakeholder Comms. / Alignment As applicable: After Action Reviews; Continuous Improvement Effort	LoS & KPIs Tracking - IT Stakeholder Comms. / Alignment As applicable: After Action Reviews; Continuous Improvement Effort	LoS & KPIs Tracking - IT Stakeholder Comms. / Alignment As applicable: After Action Reviews; Continuous Improvement Effort	LoS & KPIs Tracking - IT Stakeholder Comms. / Alignment As applicable: After Action Reviews; Continuous Improvement Effort	LoS & KPIs Tracking - IT Stakeholder Comms. / Alignment As applicable: After Action Reviews; Continuous Improvement Effort	LoS & KPIs Tracking - IT Stakeholder Comms. / Alignment As applicable: After Action Reviews; Continuous Improvement Effort	LoS & KPIs Tracking - IT Stakeholder Comms. / Alignment As applicable: After Action Reviews; Continuous Improvement Effort	LoS & KPIs Tracking - IT Stakeholder Comms. / Alignment As applicable: After Action Reviews; Continuous Improvement Effort	LoS & KPIs Tracking - IT Stakeholder Comms. / Alignment As applicable: After Action Reviews; Continuous Improvement Effort	LoS & KPIs Tracking - IT Stakeholder Comms. / Alignment As applicable: After Action Reviews; Continuous Improvement Effort	LoS & KPIs Tracking - IT Stakeholder Comms. / Alignment As applicable: After Action Reviews; Continuous Improvement Effort	LoS & KPIs Tracking - IT Stakeholder Comms. / Alignment As applicable: After Action Reviews; Continuous Improvement Effort
Attendees	Directors/ Managers/ Supervisors	Steering Team/ Imp. Team	Imp. Team	SOPs- SOP owners CA Planning Imp. Team	Imp. Team	Imp. Team Performance Management team	Imp. Team	Imp. Team Directors/ Managers	Directors/ Managers	Imp. Team	Steering team/Imp. Team	Directors

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DON'T PUT THE CART BEFORE THE HORSE...



Lessons Learned

- Optimize the sequence of your program
- Do not be afraid to limit the scope of the effort to certain asset classes
- Leverage a pilot approach as a mechanism to assess, adjust and ensure effectiveness
- Define business requirements before making modifications to your maintenance management system

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CONTINUOUS IMPROVEMENT

- Review constantly how we derive value
- Expanding the program to new asset classes and reviewing criteria previously defined in other asset classes
- Look for ways to streamline processes
- Regularly meeting
- Conduct thorough after action reviews



SUMMARY



SUMMARY

- Engage all critical stakeholders and establish a functional steering committee.
- Engage operations to lead major activities, including the development of technical elements of the program, as well as driving organizational change.
- Enable a feedback mechanism to ensure alignment and value of the new practices at all levels of the organization.
- Effectively and clearly incorporate asset management practices into job functions and daily activities.



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ASK THE EXPERTS



Celine Hyer, PE, IAM
Arcadis



Jennifer Suttles, PE
Gwinnett County Department
of Water Resources (GCDWR)



Rachel Crawley, IAM Cert
Tarrant Regional Water
District

Enter your **question** into the **question pane** on the right-hand side of the screen.

Please specify to whom you are addressing the question.

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ADDITIONAL RESOURCES

- [AWWA's Asset Management Resource Community](#)
- [Leading Business Practices in Asset Management](#)
- [Asset Management Definitions Guidebook](#)
- [Level of Progress in Utility Asset Management](#)
- AWWA Manuals
 - [M28 Rehabilitation of Water Mains](#)
 - [M32 Computer Modeling of Water Distribution Systems](#)
 - [M77 Condition Assessment of Water Mains](#)

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UPCOMING WEBINARS

Aug 21 - FREE Webinar Discussion: Legal Issues Surrounding the Return of Workers and Contractors Post-Quarantine

Aug 25 - FREE Webinar from Yokogawa Fluid Imaging Technologies: Integrated Approach to Monitor Taste and Odor Producing Cyanobacteria

Sep 9 - Inland Desalination and Concentrate Management

[Register for a 2020 Webinar Bundle](#)

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- Until next time, keep the water safe and secure.

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PRESENTER BIOGRAPHY INFORMATION

Celine Hyer is the National Water Conveyance Service Line Leader within Arcadis US and is located in their Tampa Florida office. She has a B.S. in Chemical Engineering and an M.S. in Engineering Management from Florida Institute of Technology. Celine has 30 years of experience in Engineering with 20 years that are directly related to advanced asset management program implementations including strategy and renewal and replacement planning for pipelines as well as treatment and pumping facilities. Ms. Hyer currently serves as the Vice Chair of the AWWA Asset Management Committee, the Vice Chair of the AWWA Water Main Condition Assessment Committee, the Chair of the ASCE UESI Asset Management Division, and is the Chairwoman of the Industry Advisory Board for the Sustainable Water Infrastructure Management Center at Virginia Tech.

Jennifer Suttles is Division Director for Operations Technical Services at the Gwinnett County Department of Water Resources. Her division is responsible for strategic and asset management planning, master planning, research, business case evaluations, and project scoping. Jennifer has a Bachelors in Civil Engineering from Georgia Tech and Masters in Agricultural and Biosystems Engineering from the University of Arizona.

Rachel earned a Bachelor of Science degree in Multidisciplinary Studies from Texas Tech University in 2007. She began her career at TRWD in 2009 in the Engineering Department. Since then she has served as assistant project manager and project manager of the Asset Management Project. She currently holds the role of Asset Management Program Coordinator for TRWD.

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