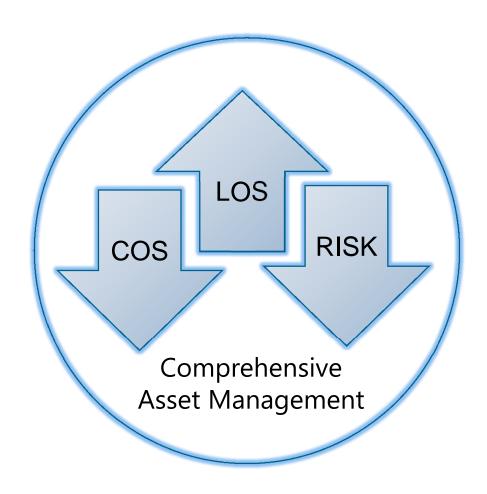


Asset Management: Providing Levels of Service (LOS) at the Lowest Cost of Service (COS) with Acceptable Risk





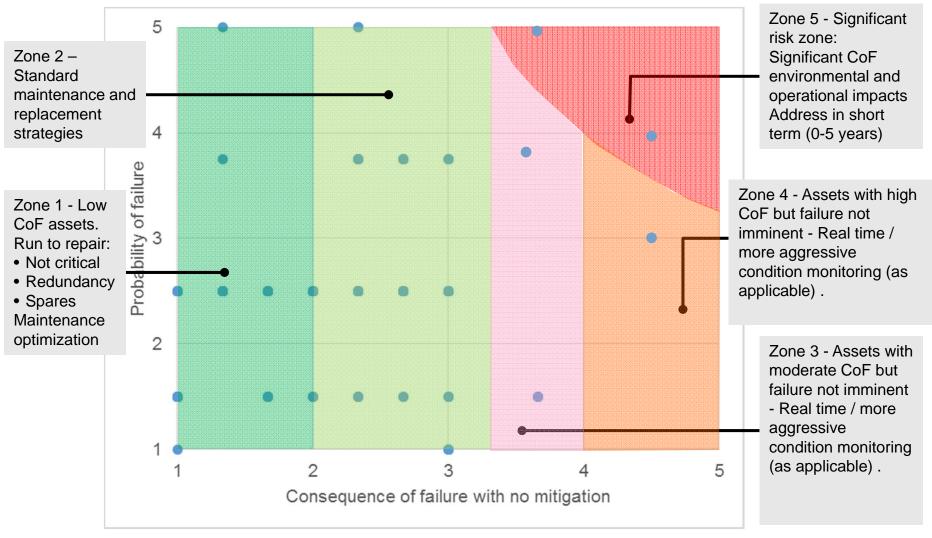
Five Core Questions of Asset Management

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





Identifying Risks Allows for Prioritizing Investments





Roadmap for AM Implementation has Four Phases

1. Phase 1 - Refine Existing AM Practices and Replace CMMS

✓ Develop systems and standards of practice

2. Phase 2 - Prepare Tactical Asset Management Plans

- ✓ Collection System
- ✓ Treatment Plant
- ✓ Recycled Water & Biosolids

3. Phase 3 - Optimize Data-Driven Decision Making

- ✓ Capital Improvement Planning
- ✓ Maintenance Planning
- 4. Phase 4 Review and Refine AM Program
 - ✓ AM Policy
 - ✓ Standards of Practice





AM Program Outcomes, Benefits and Costs

Phase (Duration)	Outcomes	Benefits	Costs
1. Refine Existing AM Practices and Replace CMMS (1.5 Yrs)	Defined SOPsNew CMMSComplete/Accurate Asset Data	Meaningful dataIntegrated AM systemsTransparent SOPs	\$850k (\$650 for CMMS)
2. Prepare TAMPs (2.0 Yrs)	Collections TAMPTreatment TAMPRW/Biosolids TAMP	Risk management strategiesInvestment needs and strategies	TBD
3. Optimize Decision Making (1.5 Yrs)	CIP Prioritization and Business CasesMaintenance Prioritization	Balance LOS with COS and RiskTargeted investmentsBusiness Cases	TBD
4. Review/Refine AM Program (1.0 Yrs)	 Update AM Policy, SOPs and TAMPs 	Continuous learning and improvementAM fit for purpose	TBD
TOTAL COST:			TBD



Questions?



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