



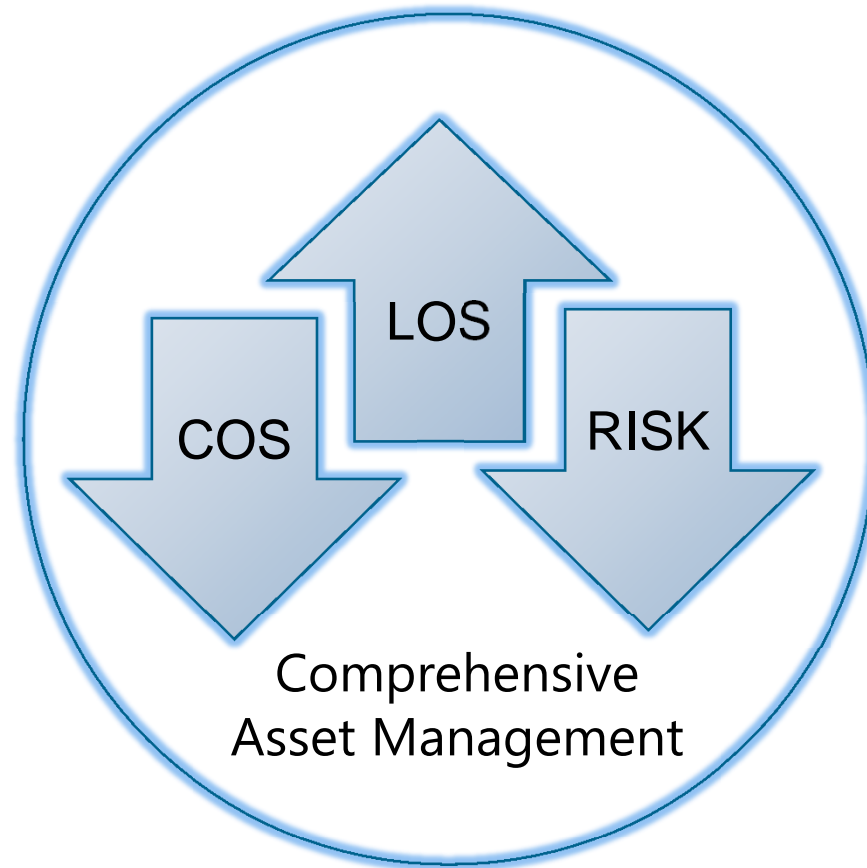
**Napa Sanitation
District**

Board Room
Administration
Engineering

NapaSan Asset Management Plan Board Presentation Update

March 1, 2017

Asset Management



Balance between Levels of Service (LOS), Cost of Service (COS), and Acceptable Risk

Asset Management Program - Vision, Mission and Goals

AM Program Vision

NapaSan owns and operates critical infrastructure serving the community with wastewater collection, treatment, and recycled water production and distribution. NapaSan seeks to operate and maintain their facilities at a high level of service and in a sustainable manner while managing risk for the benefit of the community.



NapaSan Asset Management Plan Program and Team Charter

NapaSan's Mission Statement (2015 Strategic Plan)

The mission of NapaSan is to collect, treat, beneficially reuse and dispose of wastewater in an effective and fiscally responsible manner that respects the environment, maintains the public's health and meets or exceeds all local, state and federal regulations.

NapaSan's Vision Statement (2015 Strategic Plan)

NapaSan will provide consistently reliable service to its customers in its management of Napa's critical water resources, and will remain in full compliance with all applicable regulations while anticipating and preparing for future challenges.

AM Program Purpose

The asset management development effort is a multi-year, phased initiative focused on improving NapaSan's overall efficiencies and effectiveness in delivering services at designated levels. This program will focus on infrastructure assets. The following Vision, Mission and Program Measures of Success will guide overall implementation.

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AM Program Mission

This asset management program will be implemented over a multi-year period, and will be sustained into the future to provide customers ongoing service excellence and cost effectiveness through:

- Prioritization of resources
- Asset information management
- Data focused analysis
- Long-term planning
- Protection of the environment
- Responsible financial stewardship
- Protecting health and promoting safety of the community and the District employees
- Transparent decision making
- Staff development and training – agility in making improvements

Program Measures of Success

- ✓→ Understand, articulate and refine Levels of Service as the strategic performance metrics for asset management
- ✓→ Understand and manage system risk
- ✓→ Integrate information across the Utility
- ✓→ Information is available to all customers
- ✓→ Establish asset management requirements
- ✓→ Quantify actual asset condition and associated risk profile
- ✓→ Continuous improvement of the Utility's long-term asset planning
- ✓→ Achieve consistent and accurate performance monitoring and reporting based on objective asset data
- ✓→ Compare, optimize and prioritize among potential capital projects
- ✓→ Compare, optimize and prioritize among potential maintenance activities
- ✓→ Achieve benefits/cost efficiencies
- ✓→ Confidence in proposed budget recommendations by rate decision-makers is high
- ✓→ Organizational buy in and practicing of AM principles
- ✓→ Increase and retain institutional knowledge through asset knowledge management and training/capabilities development of staff



Asset Management Program - Vision, Mission and Goals

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Five Core Questions of Asset Management

1. What is the current state of my assets?

- What do I own?
- Where is it?
- What condition is it in? What is its performance?
- What is its remaining useful life?
- What is its remaining economic value?

2. What is my required level of service (LOS)?

- What is the demand for my services by my stakeholders?
- What do regulators require?
- What is my actual performance?

3. Which assets are critical to sustained performance?

- How does it fail? How can it fail?
- What is the likelihood of failure?
- What does it cost to repair?
- What are the consequences of failure?

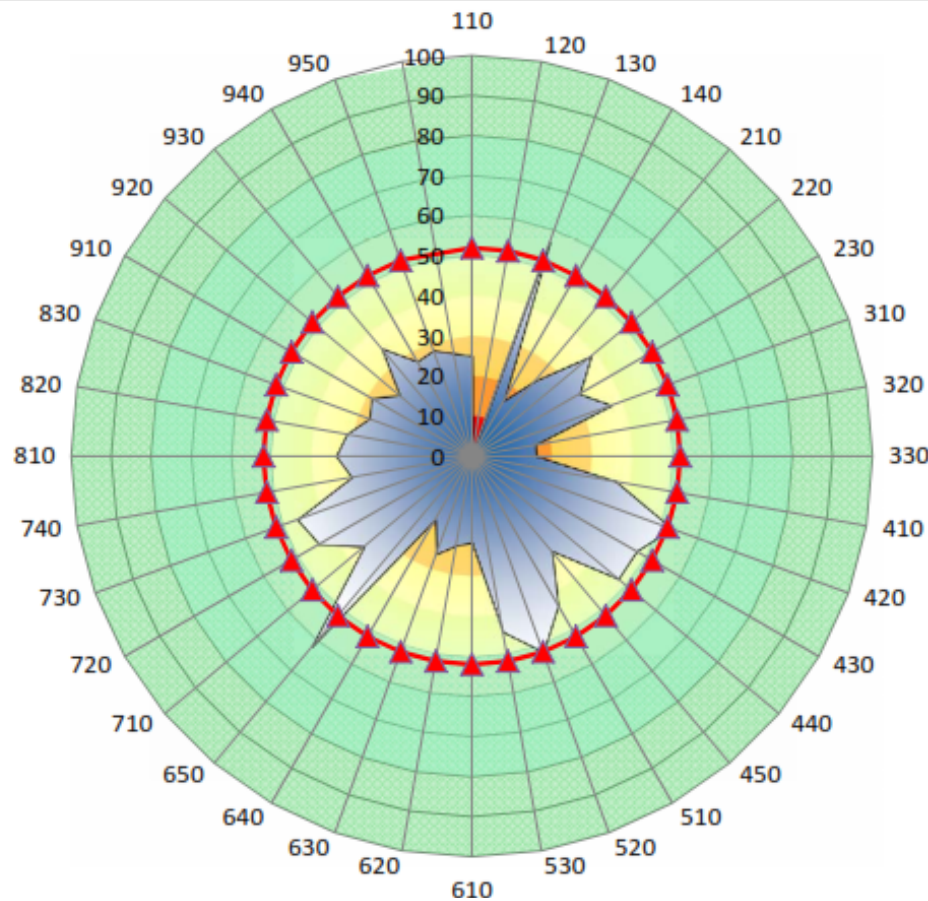
4. What are my best O&M and CIP investment strategies?

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

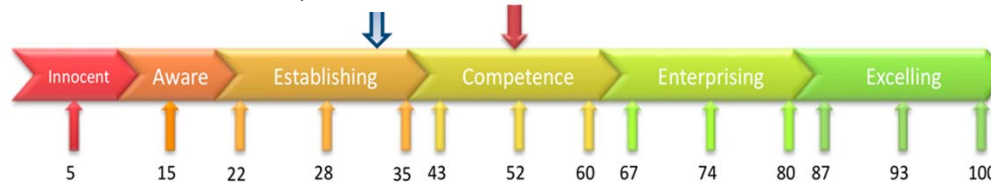
5. What is my best long-term funding strategy?



NSD Draft Gap Assessment Results



NapaSan 33% ISO 55000



AM Elements | AM Practice Areas

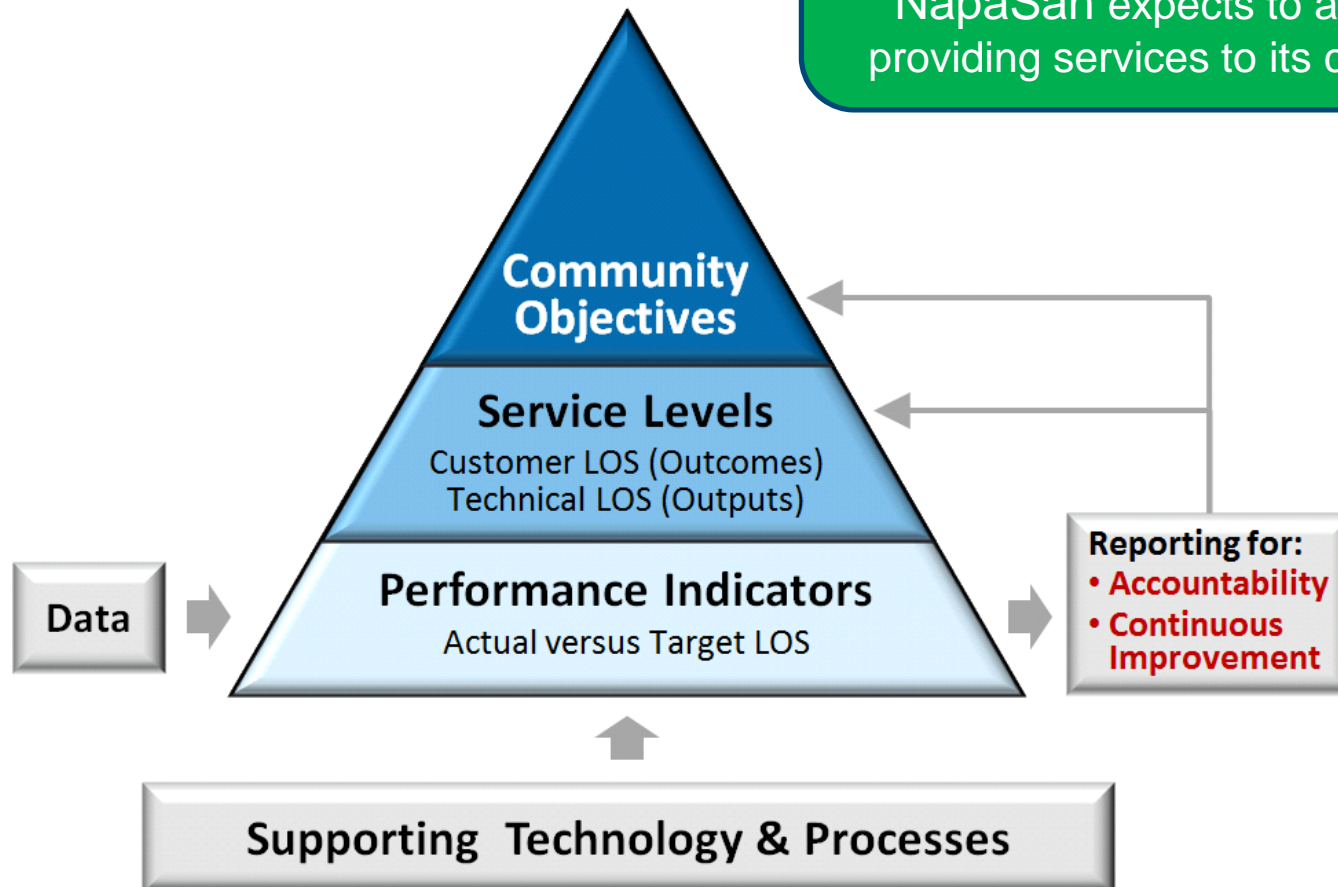
100	Setting Direction
110	AM Policy
120	AM Strategy
130	Demand Analysis
140	Setting AM Objectives
200	Programming
210	Accounting & Costing
220	Strategic Planning
230	Capital Expenditure Evaluation
300	Preparation
310	Maintenance Decision Making
320	Asset Management Plans (AMPs)
330	Implementation of AM Plans
400	Implementation
410	Operations
420	Creation & Acquisition
430	Maintenance
440	Work & Resource Management
450	Rationalisation & Disposal
500	Asset Monitoring
510	Asset Condition Monitoring
520	Asset Performance Monitoring
530	Incident Investigation
600	Management Systems
610	Management System
620	Business Risk Management
630	Asset Risk Management
640	Continuous Improvement
650	Legal, Regulatory & Other Requirements
700	People & Organisation
710	Organizational Issues
720	People Issues
730	Commercial
740	Communication
800	Data & Information
810	Processes for Managing Asset Knowledge
820	Asset Data & Knowledge
830	Activity Data & Knowledge
900	Technology
910	Information System Issues
920	Financial & HR Information Systems
930	Asset & Work Mgmt Info Systems
940	Supply & Logistics Mgmt Info Systems
950	Advanced Information Systems



Start with the end in mind

Levels of Service (LOS) Framework

The way the asset management program describes the outcomes that NapaSan expects to achieve in providing services to its customers.



NapaSan Levels of Service

Customers

External Customers

Rate Payers (sewer service/recycled water)
Waste Haulers
Developers
City of Napa, Regional Board,
State (regulators)
Farmers (agriculture)
Bond Market (public financing)
Wine Industry
Napa Community

Internal Customers

NapaSan Divisions
Board of Directors

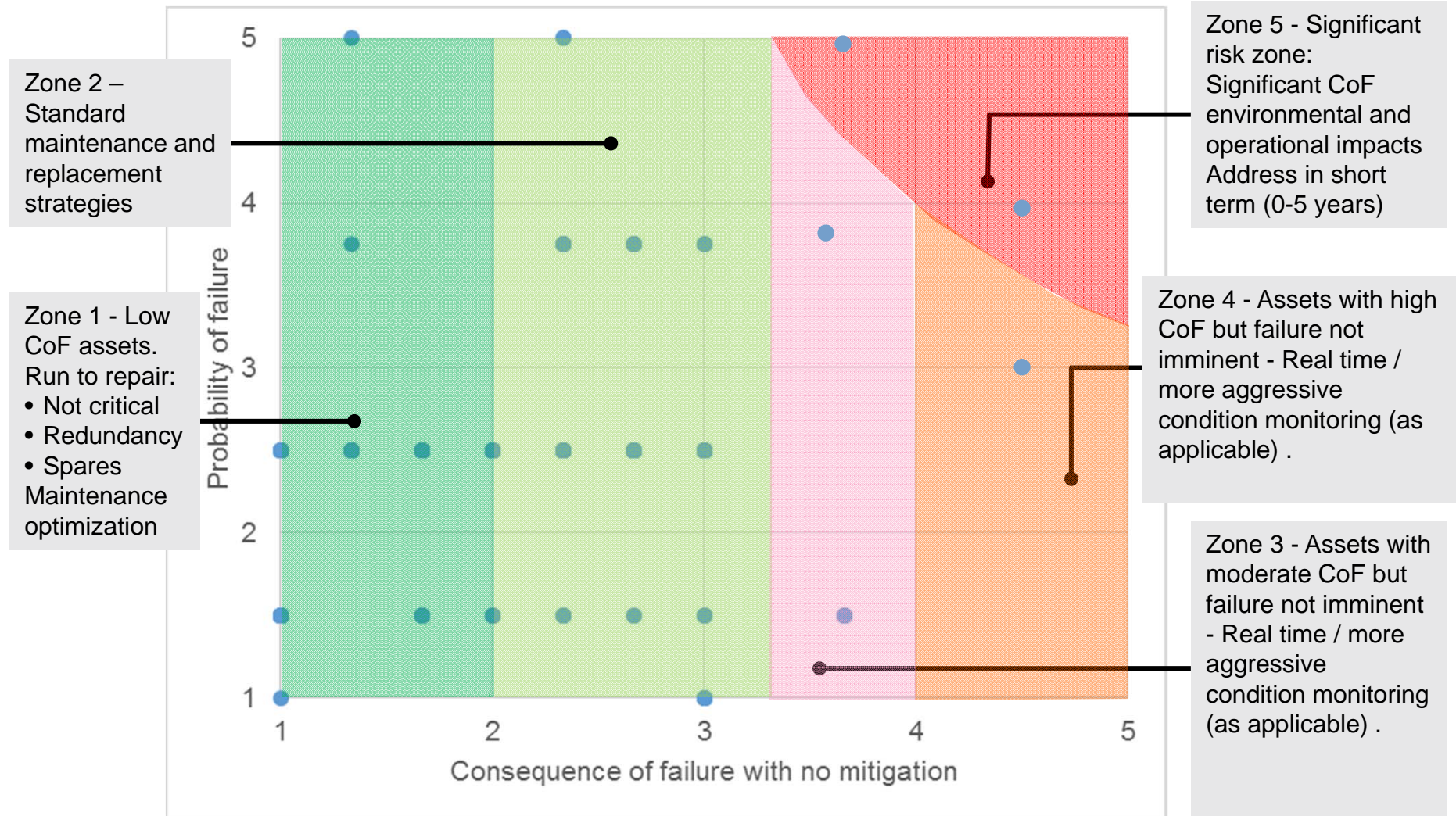


Services

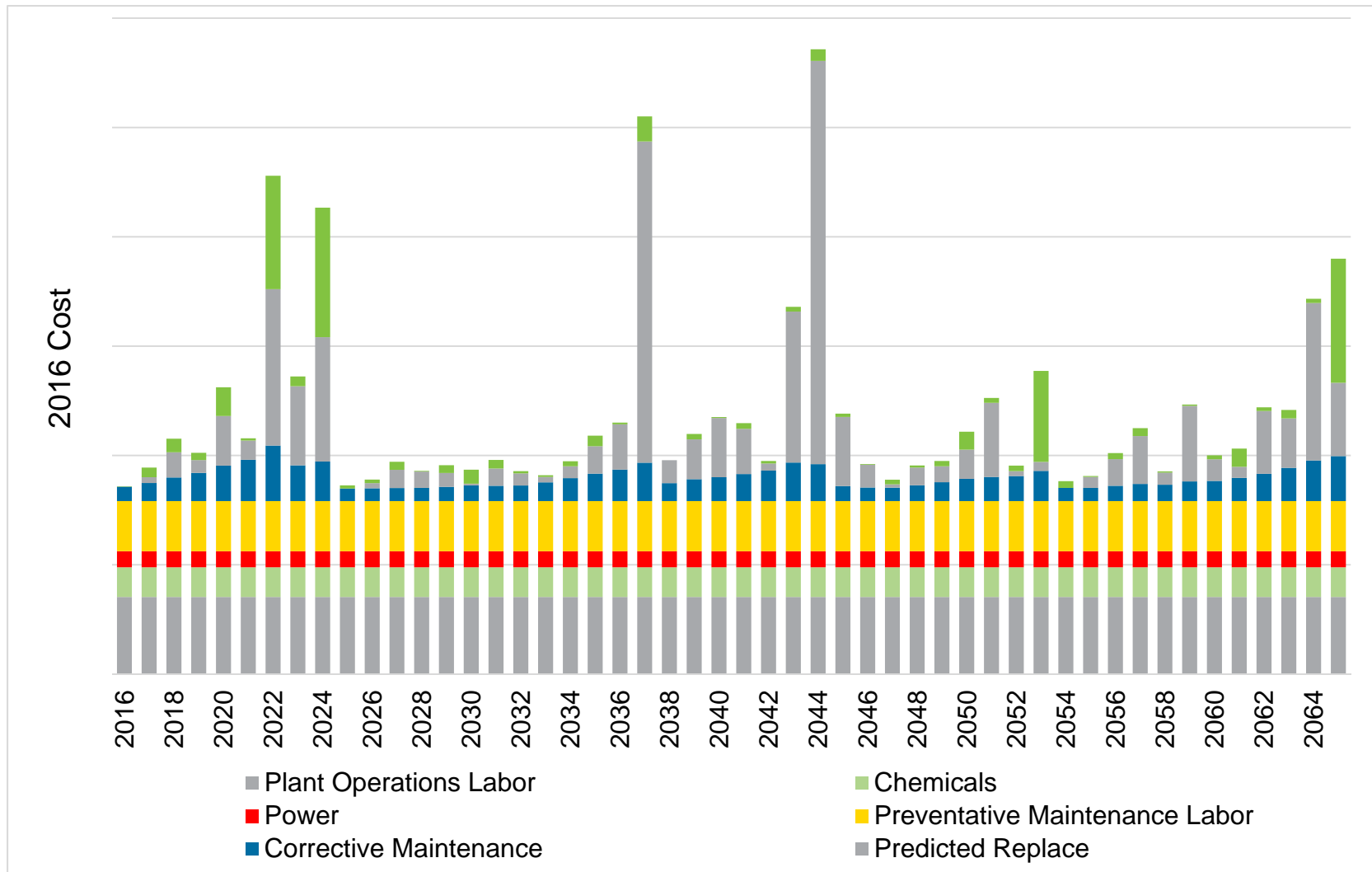
Wastewater collection and treatment
Residual management
Recycled water distribution to farmers
24/7 On-call customer service
Plan check/development services
Maintaining assets (O&M)
Outreach and education
Laboratory services
Energy production
Mutual aid agreements
Waste reduction strategies for businesses



Business Risk Exposure Management Zones



Example O&M and Capital Investment Projections (present cost, no inflation adjustment)



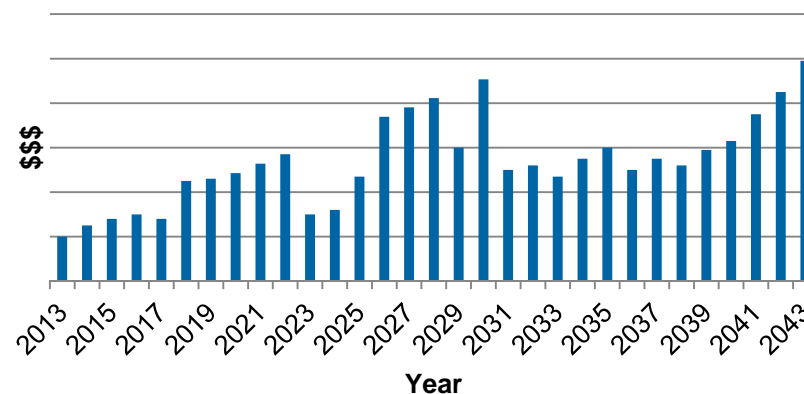
Tactical Asset Management Plans

1. Current State of the Assets
2. Infrastructure Improvement Plan
3. Business Improvement Plan
4. Long term capital and O&M projection (Nessie Curve)
5. Funding Plan
6. Challenges to AM Plan Implementation



The AM Plan tells the story...

Example - 30 Year Investment Requirements



Roadmap for AM implementation

1. Asset Register Improvement

- ✓ Assets set up well in the asset inventory

2. Asset Data and Knowledge

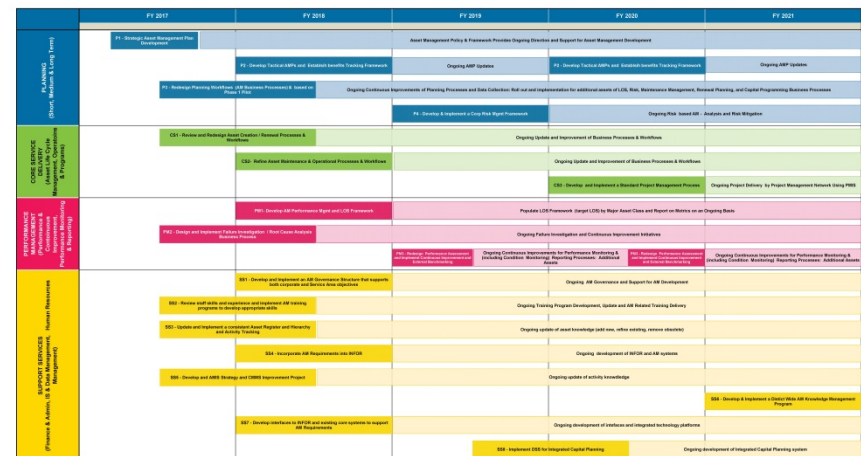
- ✓ Condition and Performance
- ✓ Consequence of Failure
- ✓ Management Strategies (Capital and O&M)

3. Business Process Decision Making Improvements

- ✓ Capital Improvement Planning
- ✓ Maintenance Planning

4. Training and Communication

Example Asset Management Implementation Plan Roadmap



Napa Sanitation District AMP Interview 10-21-2016

Schedule

Task	Status/Schedule
AM Best Practices Review	Workshops completed 11/30/16 and 12/1/16
Gap Assessment	Workshops completed 1/11/17 and 1/12/17
Business Process Improvements and AM Framework	Workshops completed 2/1/17 and 2/2/17
Implementation Roadmap	March 2017
Draft Asset Management Plan	April 2017
Board Presentation	April 19, 2017
Final Asset Management Plan	May 2017
Implementation	July 2017 through June 2022

