

A small city's success in implementing a sustainable asset management program

Gresham Oregon: Measuring Progress Towards a Sustainable Asset Management Program – WERF Strategic Asset Management Case Study (SAM6PR08)

The Central Issue

Asset management is practiced at varying levels in many utilities of many sizes. Practitioners recognize the need to measure progress and identify areas for improvement. The SAM GAP benchmarking tool in WERF's SIMPLE knowledge base enables asset managers to do so. Sometimes additional assistance is necessary. Gresham, Oregon – a city of 100,000 and a WERF subscriber – sought assistance from WERF through an independent peer-review approach, to evaluate its ongoing asset management programs. Gresham was able to expand its asset management program beyond the wastewater utility to its entire infrastructure across all sectors.

Context and Background

The City of Gresham wanted a better understanding of future rehabilitation and replacement schedules and long-term projected costs to manage its assets across all sectors.

Findings and Conclusions

The Gresham Peer Review Team consisting of volunteers from consulting firms, utilities, and WERF staff reviewed Gresham's asset management status and needs to outline a roadmap for an integrated asset management program. The main recommendation of the team was to use the "10-step process" as a core framework. Using the gap analysis results as the starting point the question was "what key process steps would improve the asset management program the most?" Ultimately it was decided to concentrate on the first six steps over a two-year period. These six steps were:

1. Develop written protocol and standards for assigning asset IDs including defining the asset hierarchy.
2. Complete inventory of all collection system assets in GIS.
3. Develop condition protocols by management strategy group and execute at level 1 for all assets.
4. Identify imminent primary failure mode by asset ID (capacity, level of service, mortality, efficiency).



Gresham Wastewater Treatment Plant.

5. Determine residual lives for each asset (set defaults at management strategy group level).
6. Set up replacement cost tables; identify and analyze life cycle costs.

Management and Policy Implications

The Water Services Division (WSD) took the lead to communicate to the city council the long-range benefits of asset management. They showed how using only short-term considerations impeded the collection of information to make better long-term management decisions for the city and its infrastructure. There were opportunities along with barriers to implementation.

1. Resources were needed to implement the program and expand it to other city departments.
2. City-wide approach led to cross-departmental cooperation.
3. Starting with the State of the Assets report and continuing into the Asset Management Program development, with a greater understanding of accomplishment and better communication, in that people were "speaking the same language" led to thinking about assets differently.
4. Forming the asset management steering committee helped develop coordination among departments. Everyone learned the concepts and understood value of asset management.
5. The SAMGAP roadmap was instrumental in guiding Gresham WSD's progress. Road blocks were identified and tactics adopted to ensure progress towards establishment of the program.
6. Organizational issues still exist however; progress is being made to keep officials informed and getting them to understand the changes required to have a successful program. No longer will capital budgets be a "wish list" but instead a validated, prioritized capital improvement program that directs funds where they are needed the most.

Executive Summary



Measuring Progress Towards a Sustainable Asset Management Program

7. Using SIMPLE was a huge benefit by saving the WSD money that would have been spent on consulting services.

The lessons learned have allowed Gresham WSD and other city departments to begin thinking about their assets in a different and better way and have increased inter-departmental cooperation.

The value of this project to WERF subscribers is summed up in a

comment by Alan Johnston, Senior Engineer with Gresham's WSD. "I am sure there are lots of muni's like ours that are transitioning into asset replacement/repair/refurbishment experts as our assets age. I believe the honeymoon's over with our young assets and we need to make sure we are doing the right thing when evaluating their replacement."

Related WERF Research	
Project Title	Research Focus
SIMPLE: Sustainable Infrastructure Management Program Learning Environment (03CTS14)	This online knowledge base enhances the ability to train personnel and provide guidance and tools to utilities of all types, sizes, and levels of practice in asset management. SIMPLE contains over 16,000 pages of best practices developed over a 20-year period and from international experience and collaboration with asset management practitioners.
Condition Assessment Strategies and Protocols for Water & Wastewater Utility Assets (03CTS20CO)	Provides information on how to effectively use condition assessment tools and techniques to improve both long-term planning and day-to-day management of assets. The report is structured for two distinct audiences: 1) Utility planning managers who want to use cost-effective condition and performance assessment programs to support long-term planning decisions. 2) Engineering/maintenance managers that want to identify and understand the advantages and disadvantages of tools and techniques for measuring the condition and performance of utility assets to support daily maintenance and operation of assets.
Strategic Asset Management and Communication: Decision Analysis/ Implementation Guidance (SAM1R06c)	Catalogs available Strategic Asset Management (SAM) tools, identifies and prioritizes a core set of needed tools, explores factors for successful asset management, refines pathways for implementing SAM, and develops information to support SAM implementation.
Remaining Asset Life: A State of the Art Review (SAM1R06d)	Synthesizes the broad range of factors that influence remaining asset life. Covers the state of knowledge with respect to the estimation and prediction of remaining asset life, and if there is the capacity to translate between condition and performance data (e.g., the presence of significant defects) and the residual life of an asset.
Leading Practices for Strategic Asset Management (SAM1R06h)	Identifies, documents, and validates leading practices through site visits and a research forum held in 2010. Leading practices are presented in an easy-to-follow format that cites and explains the practice and provides examples. This research is intended to assist utility managers in the practice areas of Organization and People, Strategic Asset Planning, Business Risk, Maintenance, Secondary Data and Knowledge, and Accounting and Costing.
Strategic Asset Management "SAMGAP" Tool – (Access through SIMPLE 03CTS14T)	The Strategic Asset Management (SAM) gap analysis tool is an online, self-assessment process that allows organizations to rapidly measure their performance against data from over 170 of the world's best asset management practitioners. The tool measures the effectiveness of an organization's management practices by identifying the distance between the current state of play – the "as is" – and the desired state – the "to be" – for future sustainable business operations based on benchmarked best practices in the water industry.
Assessing Utility Practices with the Strategic Asset Management Gap (SAMGAP) Analysis Tool (SAM2R06Coa)	Presents an overview of the development and structure of the SAMGAP tool and summarizes 37 utility self-assessments using the tool in a benchmarking research project.

Peer Review Team:

Wayne Green
York Region

Duncan Rose
GHD

Kevin Hadden
Orange County Sanitation District

Simon Watson
Orange County Sanitation District

Ken Jacob
Cobb County Water System

Frank Godin
EMA, Inc.

Daniel Woltering, Ph.D.
Water Environment Research Foundation

Walter Graf
Water Environment Research Foundation

Roy Ramani, Ph.D.
Water Environment Research Foundatio

To Order

Contact WERF at 571-384-2100 or visit www.werf.org and click on Search Research Publications & Tools.
WERF Subscribers: Download unlimited free PDFs. Non-Subscribers: Charges apply to some products.

Refer to: Stock No. **SAM6PR08**
For more information, contact
Walter Graf at wgraf@werf.org.

