

A SURVEY ON ASSET MANAGEMENT (Unabridged)

Introduction

In 2009, CET conducted a survey on asset management. The survey focused around the Governor's November 1, 2008 "Sustainable Infrastructure Task Force Report",¹ which concluded that \$113.6 billion is needed to upgrade, operate, and maintain our existing water and wastewater infrastructure in Pennsylvania over the next 20 years. The Task Force recommended that "All water and wastewater systems be required to prepare long-term asset management plans, which analyze asset condition, risk of failure, expected costs, dates of renewal and the ultimate replacement of infrastructure components."

The purpose of CET's survey was to obtain opinions from the water and wastewater industry on the perceived benefits of asset management. There were 39 survey respondents. Of the 39, 14 manage a water plant, 23 a wastewater plant, 15 a water distribution system, and 26 a wastewater collection system. Several manage more than one type of plant and/or system.

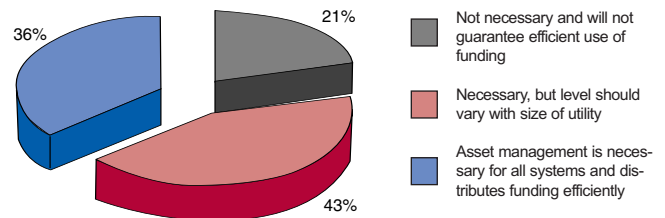
General Acceptance of an Asset Management Plan

An overwhelming majority of the respondents (34 of the 39) believe that asset management is here to stay. They responded that asset management is either likely to be required through funding or regulatory compliance or they felt that it would be implemented as a standard business practice. Just 13 percent (5 respondents) viewed asset management as a "buzz" word that is unlikely to become a sustainable program.

agement is more likely to be required through funding or regulatory compliance, than water managers.

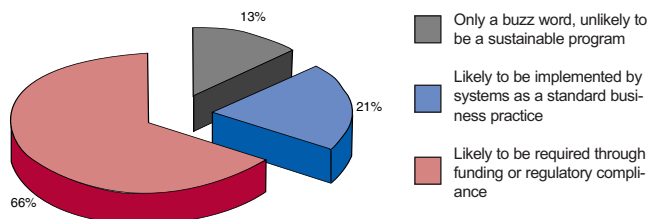
As shown in the chart below, when considering the groups of those who answered that it is necessary and those who indicated it was necessary but should vary with the size of utility, almost 80 percent of the respondents believe that future public subsidy should be dependent upon user rates and asset management implementation.

The Task Force also suggests that future public subsidy to municipal authorities would be dependent upon user rates and effective system management such as asset management. Which of the following three choices below best describes your opinion of such?



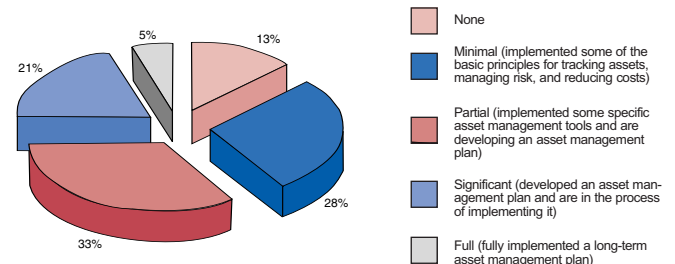
Not only do the majority believe asset management is here to stay, 34 respondents (87 percent) have begun implementing some degree of an asset management plan as depicted below. Only five of the respondents have not started on some type of asset management program.

Given the report's recommendation that all water and wastewater systems should implement a long-term asset management plan, which choice below represents your opinion of the long-term sustainability of an asset management program?



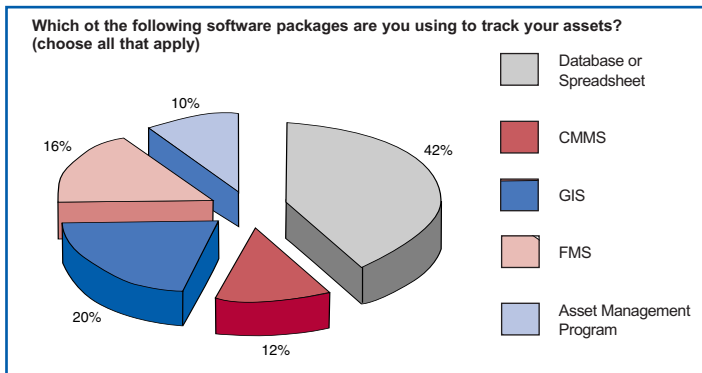
Although not shown in the chart above, twice as many managers of wastewater plants and sewer collection systems believe that asset man-

Which choice below best represents your current level of asset management implementation?



¹ To read the "Sustainable Infrastructure Task Force Report" in its entirety, visit www.cet-inc.com and click on Knowledge Center, 2008, and 'Gov. Sustainable Infrastructure Task Force Report' under the letters category.

Not surprisingly of the five software packages listed in the survey to track assets, most respondents are using a database or spreadsheet. The majority of the respondents (58 percent) are using other types of software to track assets other than a database.



Benefits of Implementing an Asset Management Program

The core of the survey requested an evaluation of the anticipated benefits from implementing an asset management program in their plant/system. Twelve questions focused on operating and management practices and were rated from 1 to 5 (“Adversely” being 1 and “Dramatic” being 5). The top three perceived benefits for implementing an asset management plan based on overall rating, industry, size and type of facility being managed are shown below. The calculated average is shown in parentheses.

Overall Rating

- 1st: Assist with decision making approach for capital improvements **(3.8)**
- 2nd: Assist with managing risk **(3.7)**
- 3rd: Improve ranking for funding for grants and low interest rates **(3.5)**

Categorized by Industry

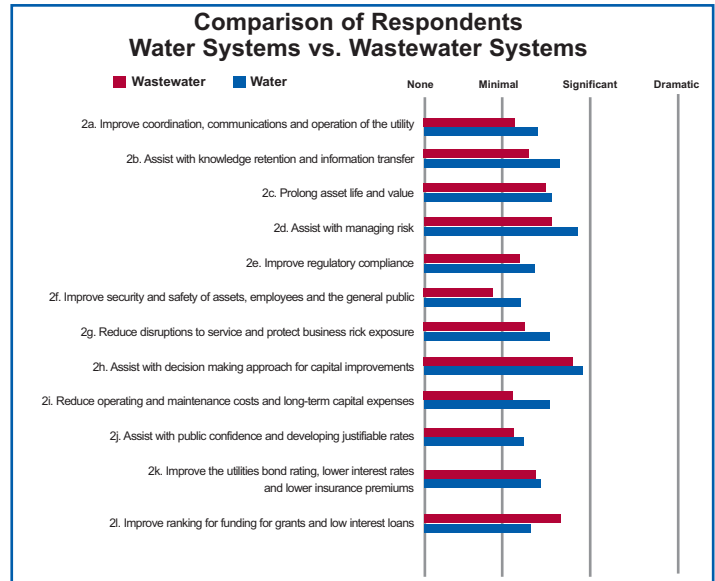
Water

- 1st: Assist with managing risk **(3.9)**
- 2nd: Assist with decision making approach for capital improvements **(3.8)**
- 3rd: Assist with the knowledge retention and information transfer **(3.6)**

Wastewater

- 1st: Assist with decision making approach for capital improvements **(3.8)**
- 2nd: Improve ranking for funding for grants and low interest rates **(3.6)**
- 3rd: Assist with managing risk **(3.5)**

As shown in the graph below, managers of water systems indicated a greater benefit of implementing asset management as compared to managers of wastewater systems in all operating and management practices except for ‘improving ranking for grant funding and lower interest loans’. The scores for water respondents were on average greater than wastewater respondents.



Categorized by Facility Size

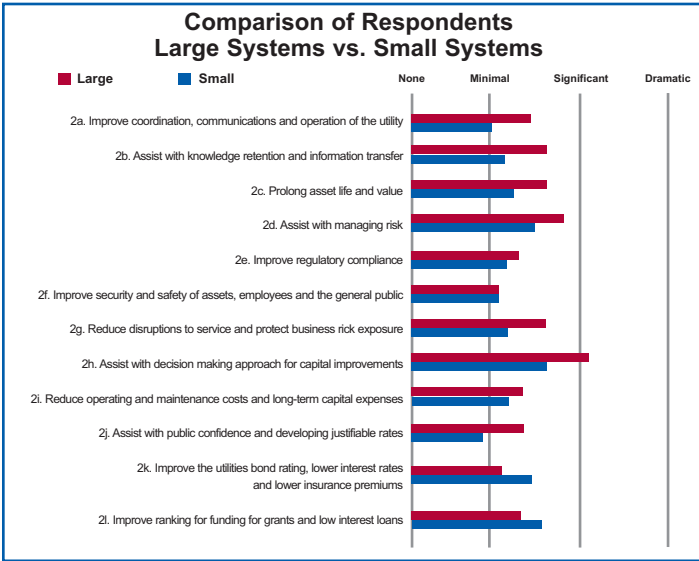
Small Systems (<3 MGD)

- 1st: Improve ranking for funding for grants and low interest rates **(3.7)**
- 2nd: Assist with managing risk **(3.6)**
- 3rd: Assist with decision making approach for capital improvements **(3.5)**

Large Systems (>3 MGD)

- 1st: Assist with decision making approach for capital improvements **(4.1)**
- 2nd: Assist with managing risk **(3.8)**
- 3rd: Assist with the knowledge retention and information transfer, or prolong asset life and value or reduce disruptions to service and protect business risk exposure **(3.6)**

Managers of large systems indicated a greater benefit of implementing asset management as compared to managers of small systems in all operating and management practices except for “improving the utilities bond rating, lower interest rates and lower insurance premiums” and “improving ranking for grant funding and lower interest loans”. The scores for respondents managing large systems were on average greater than respondents managing small systems.



Implemented Programs		
1.	Award priority for asset management plan.	NJ, OH, PA, AZ
2.	Award rate breaks for asset management plan.	ID, FL, IN
3.	Requires asset management plan every 5 years for DWSRF loans if greater than 50 million gals/yr.	RI
4.	Requires Asset Management training to receive DWSRF set aside subsidy.	ME
5.	Requires asset management plans from "at risk" communities.	NM
6.	Assistance and training in asset management.	AR, DE, FL, NH, OH, PA, TX, CA
Possible Programs		
1.	Considering asset management as a loan requirement.	NM, OR, PA
2.	Considering requiring asset management plan for a discharge permit.	PA
3.	Considering priority points for asset management plan.	DE
4.	Award interest rate break with an approved asset management plan.	FL

Categorized by Facility Type

Treatment Facilities

- 1st: Assist with decision making approach for capital improvements (3.8)
- 2nd: Assist with managing risk (3.6)
- 3rd: Assist with the knowledge retention and information transfer, or Prolong asset life and value or Improve ranking for funding for grants and low interest rates (3.4)

Utilities (Collection and/or Distribution Systems)

- 1st: Assist with managing risk or assist with decision making approach for capital improvements (3.8)
- 2nd: Improve ranking for funding for grants and low interest rates (3.6)
- 3rd: Reduce disruptions to service and protect business risk exposure (3.5)

Performance in Other States

Aged infrastructure issues are occurring throughout the United States. In 2009, the ASCE Advisory Committee issued "The 2009 Report Card for American's Infrastructure" (www.infrastructurereportcard.org/report-cards). The report graded 15 categories of infrastructure, including water and wastewater plants and their respective distribution and collection systems. Both systems received a "D-", which is denoted in the report as poor. The systems were evaluated on capacity, condition, funding, future need, operation and maintenance, public safety, and resilience. The report indicated that the estimated 5-year funding needs for water and wastewater systems is \$225 billion, but only an estimated \$146.4 billion will be spent in the 5 years, leaving a \$108.6 billion projected shortfall.

In May 2008, members of the EPA/State Revolving Fund Workshop formed a Sustainable Infrastructure (SI) Subgroup to discuss SI initiatives supported and/or implemented by the states. Their initial finding showed that states vary in the degree of implementing SI initiatives, from a few states not yet started to other states that have implemented several programs. The table below summarizes the states' initiatives.

Managing and Operating a Facility with Asset Management

As demonstrated in the survey results, a majority of respondents agree that asset management is here to stay, have started to some extent an asset management program, and believe that asset management can assist in operation and management of their facility (e.g. assist with a decision making approach for capital improvements and assist with managing risk). It also appears from the answers received that the majority of respondents have started to implement an asset management plan for the purpose of improving the management and operation of their facility and not solely for the purpose of seeking better bond ratings. CET contacted two respectable bond counsels in the Harrisburg, PA vicinity to ask their opinion about the effect an asset management plan may have on a municipality's or authority's bond rating. Both counsels stated that such a plan would have minimal influence on the bond rating. Their reasoning is, if a municipality or authority can show it can make the required principal and interest payments in the forthcoming years, then a plan would have little effect on the rating.

The importance of the asset management concept, however, is recognized by subsidy agencies. The Pennsylvania Infrastructure Investment Authority (PennVest) currently uses a priority rating system that provides a maximum of two points for wastewater projects where the facility can demonstrate a proactive approach to asset management, such as having a document that shows the location, age, and condition of all major assets. Although 2 points may be insignificant, it does demonstrate that the PADEP and PennVest have recognized the value of asset management.

In conclusion, an asset management plan will assist you in producing a sustainable infrastructure by allowing for better decisions regarding acquisitions, operations and maintenance, and renewal and replacement. It is a plan that your board will understand. It is a prac-

tical, strategic, knowledge based approach for improving what utilities have always done. It does not have to be complicated and indeed should not be. Each utility can proceed at its own pace, with whatever methods and tools are appropriate for its needs and resources.

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