

ASSET MANAGEMENT PLANS CAN MEAN LONG-TERM SAVINGS FOR UTILITIES

By Steven A. Dutch, PE



The implementation of GASB 34 for all governments, beginning in 2004, requires utility agencies to account for, maintain and preserve asset value at a predetermined service level. In a nutshell, value must be preserved through maintenance, and depreciation must be funded in the form of replacement funds.

ASCE National Infrastructure Report Card has given a “D” grade to water and wastewater utilities and estimated that \$500 million is needed over the next 20 years to upgrade existing systems. Why? Historically, many utilities have constructed facilities with grants and loans, giving little or no consideration to long-term maintenance costs to achieve useful life of the facility, or the cost of replacement when useful life is achieved. The attitude prevalent in some agencies was “build it and forget it—new state and federal grants will be available to replace it”. The key goal of these agencies was to placate the existing users by keeping rates low and letting future generations deal with the deterioration and replacement issues. The reality is grant funds are being cut and probably will not be available.

Faced with an aging and deteriorating infrastructure, and the possibility of significant rate increases and future financial crises, many agencies have turned to asset management to prolong the life of facilities and reduce capital replacement expenditures. Asset management is defined as “An integrated optimization process of managing infrastructure assets to minimize the total cost of owning and operating them while continuously delivering the service levels customers desire at an acceptable level of risk.” (*Managing Public Infrastructure Assets*, AMSA, AMWA, WEF, AWWA, 2001).

So what is asset management? Basically, it is a system of knowing what assets you have, what condition they’re in, what their realistic useful life is, what their performance history is, what their value and replacement cost is, what your customer expects for their performance, and what the consequence of failure is, and then finding the optimum lifecycle operating cost and achieving it. Life cycle costs include all costs including initial construction, operation and maintenance, rehabilitation, replacement, and decommissioning and salvage. In fact, asset management has always been part of running a utility. But it typically has not involved focusing on lifecycle costs, service levels and customer service, risks, maintenance, rehabilitation, and replacement in quantitative manner.

The basic steps to develop an asset management system include:

- Establish strategic objectives and goals consistent with the mission of the agency
- Know what you own
- Define service levels and customer expectations
- Track and record maintenance events and costs in detail
- Make decisions based on lifecycle costs, risk, and benefits
- Integrate long-term financial planning into systematic maintenance and capital investments
- Integrate the tools, systems and databases currently used by agencies including GIS, SCADA, maintenance management systems, and financial systems
- Involve everyone at all levels of the organization.

Implementation of an asset management system can be critical to the financial success of an agency but it does not have to be an overwhelming all-consuming task. There is no cookbook approach to implementation. There is no

software package that can be purchased to start an asset management program. The program needs to be tailored to the needs and goals of the agency. Each agency can proceed at its own pace with whatever methods or tools are appropriate to meet its needs. Each agency can begin the program in any part of the system, with the entire system or an individual asset, using whatever information and data is available. Data can be added as it is obtained which will, of course, lead to improved decisions. Case studies have shown that the top-down plus bottom-up approaches yield the most reliable results.

The benefits of an asset management plan is that it provides the agency with a way to integrate the strategic goals and physical aspects of the system. Effective asset management achieves the optimum life cycle cost for planned maintenance. It also provides a full understanding of the of the infrastructure, identifies and prioritizes capital replacements, improves tracking of expenditures, provides a quantitative basis for projecting future needs, provides for efficient management of supplies and materials, reduces risk exposure, and improves customer service.

Does asset management really work? Faced with sky-rocketing maintenance costs, looming replacement projects and associated increases in user costs, several agencies have implemented asset management programs. Case studies of these agencies have shown maintenance cost savings of 30% or more. An additional benefit to many agencies has been an improved bond rating. There are costs to implement the system but these are more than offset by the long-term savings.

For additional information, a good place to start is with the National Association of Clean Water Agencies (www.nacwa.org). They have several publications including a handbook on managing public infrastructure assets.

Steve Dutch is a Senior Consultant in the Environmental Engineering Department of Chastain-Skillman's Tampa office. Steve has a Bachelor's Degree in Environmental Engineering from the University of Maine. He has over 33 years experience in wastewater system planning design and operation. He can be reached at (813) 621-9229 or sdutch@chastainskillman.com.

© 2006 Chastain-Skillman, Inc. This article is taken from the 4th quarter 2005 issue of Consultant's Update, a publication of Chastain-Skillman, Inc.