

Attachment 1: Asset Management Program Overview

Asset Management Program Update

March 27, 2018

In 2011, the District began an effort to standardize its asset management programs by implementing internationally recognized asset management standards in three core business areas: water utility, watershed, and administration. The foundation of the program is the Environmental Protection Agency's (EPA) ten-step asset management planning model, shown in Figure 1. This ten-step model adheres to guidelines set forth in several internationally recognized asset management standards including the International Infrastructure Management Manual (IIMM); the British Standards Institution's Publicly Available Specification for asset management (PAS 55); and, the International Organization for Standardization's guidelines for asset management (ISO 55000).

The District's Asset Management Program (Program) seeks to optimize asset renewal strategies and minimize the total cost of owning assets while providing expected service levels and operating at an acceptable level of risk. The goal of the Program is to optimize management of District assets. The Program does not seek to completely eliminate risk and failure, because it would be impractical and require substantial investments to do so. Asset management also helps make sound financial investments, plan for major aging infrastructure replacements, prevent loss of asset specific knowledge, and substantiate rate increases.

An asset fails when it can no longer provide required services, typically due to one of the following failure modes:

1. Mortality – asset cannot provide service due to its physical condition
2. Capacity – asset's designed capacity does not meet demands
3. Level of Service – asset cannot provide quality or quantity of service expected by customers or prescribed in policy or contractual obligations
4. Efficiency failure – there is a more economical alternative for providing service

The Program generally focuses on addressing physical mortality, and relies on master planning efforts to assess capacity, level of service, and efficiency failures. As such, master plans are equally important in maintaining the District's assets.

Computerized Maintenance Management System

The success of the District's asset management programs is dependent on having an effective computerized maintenance management system (CMMS). The hub of the District's CMMS is its Maximo software system. Maximo is the District's primary system for maintaining its asset inventory and managing maintenance work.

Last fiscal year (FY17), the District successfully upgraded the Maximo software to the latest available version, 7.6. This fiscal year (FY18), the District is deploying unique 'sites' within Maximo for each business area, such as Fleet, Water Treatment Plant Maintenance, Watershed Maintenance, Raw Water Maintenance, and Facilities. These groups have different business processes, and therefore different workflows within Maximo. The multiple sites within Maximo allow each unique business area to customize its maintenance workflows and security permissions. Next fiscal year (FY19), the Maximo site set-up will continue, and the District plans to implement a mobile Maximo software so that field staff can easily access and edit work orders at their work sites.

Figure 1. 10-Step Asset Management Planning Model

