APPENDIX Z

Asset Management

Appendix X presents details on the SFPUC Wastewater Enterprise's (WWE's) planned approach to asset management.

WWE Planned Approach to Asset Management Program Development

Beginning in 2007, the WWE embarked on a stakeholder-guided project to develop a formal asset management program, with guidance from consulting experts (**Table** X-1). The project involved the following steps:

1. Developing an enterprise Asset Management Plan (AMP) framework based on industry best practices

2. Conducting an assessment of the WWE's existing documentation relative to the AMP framework

3. Assessing WWE's current capabilities in asset management

4. Identifying prioritized areas for improving WWE's asset management capabilities, considering the organization's vision, current AMP capacity, and implementation challenges

5. Preparing a structured AMP work plan including scope, schedule, cost, and resource estimates, and benefits of completing the AMP

At the same time, as shown in the Table Z-1, ongoing asset management–related improvement efforts were underway. However, they were not yet formally coordinated or led by a common vision and work plan.

AMP Two-Year Work Plan: Addresses Near-Term and Long-Term Priorities

Based on the five-Step AMP development project, and the asset management improvement project also underway, a two-year asset management program work plan has been developed by the WWE. This work plan is summarized below and is divided into three primary tracks, listed and briefly described below.

- Track 1: AMP Team Mobilization and Management
- Track 2: AMP Strategy and Plan Development
- Track 3: AMP Foundation Projects

The first track, AMP Team Mobilization and Management, recognizes the importance of forming an AMP team with clear, dedicated leadership and team members with clearly defined roles and responsibilities. This team will be charged with launching a coordinated effort to implement the AMP work plan across the WWE with defined management, progress monitoring, and communication processes.

The second track, AMP Strategy and Plan Development, focuses on defining and documenting the guiding vision and strategic intent for the AMP efforts, including policy statements, levels of service targets, and a funding strategy. This track will also include compilation and documentation of the WWE's asset management strategies, activities, current status, and future priorities as part of a comprehensive asset management plan document.

The third track, AMP Foundation Projects, recognizes that there are many asset management enhancement efforts the WWE can do right now (and in some cases are already underway), and these efforts should be supported and guided to continue the momentum of the AMP planning efforts, generate quick wins, and lay the foundation for further AMP enhancements in alignment with the AMP strategic planning efforts.

Each of the tasks in the work plan schedule has been detailed out to include the following:

- Statement of purpose
- High-level scope of work outline
- Key resources expected to deliver the scope of work
- Recommended timing and expected duration
- Estimated budget for two-years, including consultant costs and WWE hours required

Implementation Approach for WWE Asset Management Program

While the development of the formal WWE AMP progresses, ongoing Operation & Maintenance, capital projects, and other asset management related work will carry forward and benefit from the AMP work-plan processes, data, and risk-based decision-making approaches. Accordingly, the WWE will be combining the Top-Down and Bottom-Up approaches to asset management as depicted in Figure Z-1.

Implementation of asset management for the WWE will be an ongoing, long–term process

more figure to follow (Figure Z-2). Near-term improvements/tasks to be accomplished through asset management include:

- Developing a high-level asset management policy
- Establishing roles and responsibilities
- Developing level of service targets
- Establishing a process for review and refinement of level of service targets
- Compiling existing high-level statistics on WWE assets
- Establishing cost control and energy management targets
- Developing and documenting the asset renewal planning business process
- Developing and documenting a consistent approach for developing risk scores
- Developing initial risk scores for all major WWE assets
- Estimating replacement costs for all major WWE assets
- Identifying and documenting key asset management practices and processes for near-term improvement

Over the long term, asset management will become a more integrated business practice for the WWE, allowing the enterprise to develop more in-depth strategies and practices, such as:

- Developing asset management functional policies
- Completing an asset management plan for the WWE
- Measuring WWE performance against level of service targets
- Compiling and summarizing available documentation on projected future demands
- Developing and documenting the WWE asset hierarchy
- Preparing current condition-based valuation of WWE assets
- Documenting the overall maintenance strategy for facility and pipeline assets

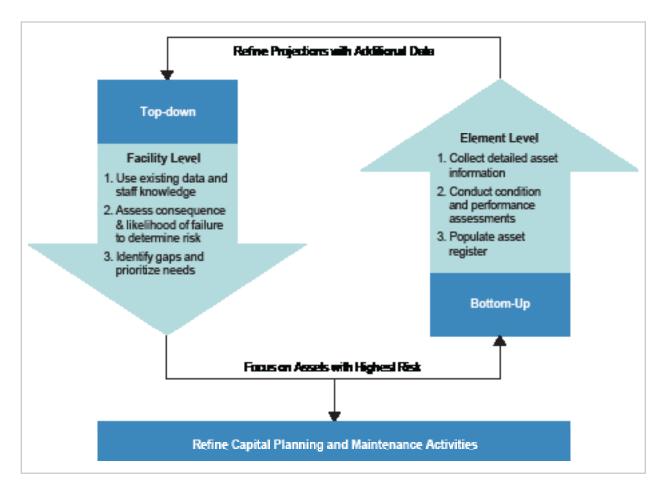| Table Z-1. Wastewater Enterprise Initiatives Currently Underway	
Ongoing WWE Initiative	**Key Objective**
Draft WWE Strategic Business Plan	High-level strategic plan with clearly defined goals, objectives, strategies, KPIs, and resource needs for key WWE focus areas
Sewer System Master Plan preparation	Define long-term facilities plan, critical sewer capital project needs, and future funding needs.
Computerized Maintenance Management System (CMMS) enhancements	Improve use of CMMS (Maximo) and improve related work flows
Channel Pump Station AM Pilot	Provide a model for implementing asset management goals, objectives, processes and techniques across the WWE
Evaluation of field level SOPs	Improve consistency, comprehensiveness, and documentation of operating procedures at WWE facilities
Sewer lifecycle asset management project (Sewer LAMP)	Targeted analyses of asset management elements such as condition assessment, software enhancement, and inspection and maintenance prioritization

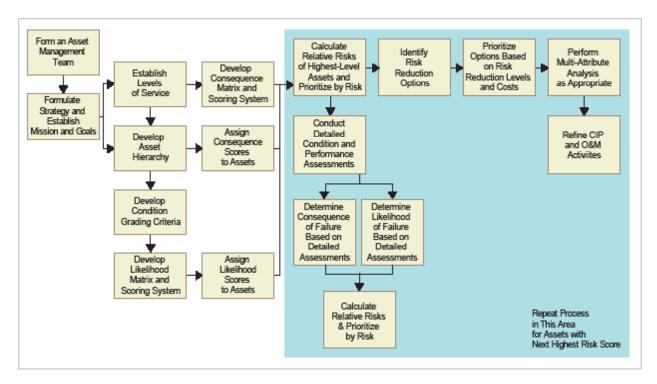**Figure Z-1. Top and Bottom–Up Approaches to Asset Management**

Figure Z-2. Key Steps of Asset Management Implementation – WWE Linear, Process, and Facility Assets