

Water Accountability Program Conceptual Plan

Goal: Dovetail Water Loss program with Asset Management program, two areas identified in TMF evaluation, and include Water Conservation program for overall Water Accountability Program.

Why:

- Respect for resource
- Reduce expenditures
- Efficient allocation of resources
- Increase water supply
- Protract need for expanding infrastructure capacity
- Streamline organization: optimize service levels and staff resources

Long-term Objectives:

Quantify all water use

Reduce water loss to no more than 10%

Inventory, Maintenance and Asset Management programs in place and interfacing

Asset Management on GIS platform

I. Components of Program

A. Water Loss

1. Annual water audit to determine % Non-Revenue / % Unaccounted For
2. Identify sources and magnitude:
 - Non-metered water use, authorized:
 - WTP backwash
 - WWTP use
 - Fire hydrant flushing
 - Fire use & training
 - Potable water irrigation (Centennial park)
 - District construction
 - Other District in-house use
 - Non-metered water use, unauthorized:
 - Water theft (open bypasses, meter tampering, unauthorized hydrant use)
 - Real losses
 - Main breaks
 - Known leaks in distribution system (service lines, valves, hydrants, meters)
 - Storage tank overflows

3. Review billing adjustments/losses due to accounting deficiencies
4. Review AMR data to ensure meters are appropriately sized to demand
5. Meter accuracy and replacement program: see Asset Management, below

B. Leak Detection Program

1. Develop appropriate leak detection program
2. Develop reasonable program to respond to identified leaks
3. Monitor speed and quality of leak repairs
4. Analyze system pressure for system stress points; pressure reduction control during night hours?

C. Asset Management Program

1. Review accuracy and placement of source, production and distribution water meters
2. Review accuracy of large (over 2") meters
3. Review average accuracy of smaller meter samples (i.e. test a random sample of 50 ¾" meters)
4. Pipe replacement program
5. Meter testing program database
6. Meter replacement program database
7. Infrastructure condition assessments
8. integrate with GIS platform

D. Maintenance Management Program

Associated with above, includes:

Coordinate work orders, location, repair type and inventory

E. Water Conservation Program

1. Implement Water Conservation Plan
2. Track measures and programs with quantified results

F. Incentive Programs

1. Sub-metering incentives: improved accuracy & leak detection

II. Stages of Implementation

A. Administrative / Kick-Off:

- Solidify Board/managerial support for WAP
- Identify Water Accountability Program team and individual roles
- Team identifies gaps and opportunities, strengths and weaknesses regarding each component of WAP
- Team identifies its overall WAP strategic short and long-term goals and objectives

- B. Determine performance levels / targets for each component of WAP including timelines
- C. Develop solid plan of attack, including technology, staffing and data required for successful WAP outcomes. May require outside assistance similar to TMF program for Asset Management component. (Take TMF to next level)
- D. Pursue funding / state assistance for any required outside assistance.
- E. Coordinate team efforts through monthly meetings / BOD monthly progress reports
- F. Annual review and BOD/public presentation of achievements

III. Who (point people needed):

At a minimum:

Sheila – WAP coordinator and Asset Management; assist with Water Loss

Gene – water loss

Shellie – Inventory / finance interface

Lisa – assist Gene with water loss (AMR, meter accuracy, theft reports, billing adjustments etc), Shellie with inventory management (?), Sheila with meter asset management

Art – Maintenance Management; work with Gene and Sheila on Water loss and Asset Management components; work with Randy on Leak Detection

Randy – Leak Detection, work with Sheila on Asset Management

Mat – Water Conservation & incentive programs; assist Lisa and Gene with water loss (AMR data)