Advanced (Water) Metering Infrastructure (AMI)

Approval of a Purchase and Installation Agreement
Proof of Performance Phase

City Council Meeting January 22, 2019
Water System
Extensive & Complex System Covering Most of the City’s Boundaries
Water Deliveries Double in the Summertime

System Overview
- 302 Miles of Potable Water Pipeline
- 202 Million Gallon Storage Capacity
- 26,550 Service Connections
- 17 Booster Pumps
- 42 Pressure Reducing Stations
- 2,723 Fire Hydrants
- 8,172 Distribution Valves
- 12 Interconnects with Local Agencies

2018 Water Delivery Facts
- 4.8 Billion Gallons Delivered (~15,000 acre feet)
  - 74% from 4 Local Groundwater Wells
  - 23% from 6 Import Connections
  - 3% from local Recycled Supplier

Utilities Department
Previously Presented to City Council on November 28, 2017

- Background
- What is AMI?
- Benefits
- Selection of AMI Vendor
- Project Description
- Cost of Project
- Funding
- Summary
- Questions

Utilities Department
AMI Water Meters are “Smart Meters”

- Meter with Transmitter
- Meter with Transmitter
- Repeater
- Optional Remote Disconnect Meter with Transmitter

Collector

Cellular or Ethernet Data Transmission

- Server
- Utility Billing Software
- Utility Remote Device
- Utility Computer
- Customer Portal
- Operations Center (NOC)

Server

Utilities Department
AMI Benefits to be Evaluated During the Proof of Performance Phase (250 water meters)

- **Customer**
  - Leak detection
  - Interactive customer web portal
  - Usage data & decisions

- **City**
  - Customer service improvements & efficiencies
  - On-demand meter reads
    - Reduces re-reads and field investigation trips
    - Reduced City and contract staff time in field
  - Annual water meter reading contract savings
  - Supports water conservation
  - Replaces all meters including under-registering meters
Project Description – Proof of Performance

Two Phased Approach

1) Proof of Performance (Current Request)
   • Installation of 250 meters, 4 collectors, and 4 repeaters
   • Test integration into City’s billing system and customer portal
   • Prove technology end-to-end
   • Verify leak detection capabilities and staff efficiencies

2) Full Implementation – (Future City Council Consideration Item)
   • 3+ year installation and phase in period
   • Extensive public outreach
   • Installation of remaining 25,000+ meters, collectors, and repeaters
Proposed Collectors
Proposed Repeaters
Selection of Mueller LLC as the AMI Vendor

RFP and Selection Process

- Scope of Work was developed based on needs
- Six proposals received from highly qualified vendors
- Each vendor presented to the City’s selection panel
- Extensive reference checks performed on all six vendors
- Top three were chosen based on technical scores and pricing
  - 70% technical and 30% cost
- Top three brought back for final interview with panel
- Mueller Systems, LLC scored highest and was selected
AMI Costs

**Current Project**

- Proof of Performance Phase - $191,123  
  *(includes bonding and contingency)*
- Approved FY19 Capital Improvement Program Budget - $3,300,300

**Future Project**

- Full Implementation cost ~$9.5 million
  - Future City Council discussion item along with the upcoming Water Master Plan and Water Rate Study
Questions / Comments

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