

COUNCIL ACTION FORM

SUBJECT: WATER METER AUTOMATIC METER READING SYSTEM

BACKGROUND:

The City of Ames has been purchasing Elster AMCO mechanical water meters with mechanical pulse generator registers as part of a multi-year contract. This has been the standard meter purchased for residential and small commercial accounts for many years. The meters are read manually by entering the meter reading (displayed remotely on the outside of the property) into a hand-held device carried by the City's meter readers. In January of 2013, Elster AMCO informed the City that they would stop producing the mechanical meters and registers by mid-year 2013. The last order taken by Elster AMCO for these type meters was in March 2013. Because Elster AMCO was the last meter manufacturer producing this type of meter register, a replacement meter reading technology needed to be selected.

A process improvement team was formed to recommend a long-term replacement system for both water and electric meters, as well as to determine a short term solution for reading water meters that aligns with both utilities' long term vision and that fits within the adopted CIP and Water Fund rate structure.

The Automated Meter Reading/Advanced Metering Infrastructure (AMR/AMI) process improvement team consists of eight members representing a cross section of all involved departments. This extends from meter reading all the way through billing, as well as maintaining the physical assets for both the water and electric meters. Team members include Mike Wheelock (Utility Customer Service Supervisor), Jeff Martin (Senior Meter Reader), Tim Scher (Electric Meter Supervisor), Dave Blumer (Water Meter Supervisor), Micci Gillespie (Water Meter Principal Clerk), and Steve DuVall (former Assistant Director of Water and Pollution Control). Brian Phillips (Management Analyst) and Keith Abraham (Director of Parks and Recreation) served as facilitators.

The team performed their analysis by contacting vendors and requesting technical information, as well as references for utilities that were currently using their systems. The team invited each vendor in for presentations and contacted all references provided. A survey of internal and external customers was conducted to help determine their needs and wants. Understanding the needs and wants helped the team to know what benefits an AMR/AMI system can provide our customers. Statistical survey results were used when considering the vendors and the products available.

The team initially identified nine viable meter reading technologies, but reduced that number to six options. The three options that were eliminated are AMR Fixed Base (Licensed), AMR Fixed Base (Unlicensed), and AMI Power Line Carrier (PLC). These

technologies were determined not to be workable solutions for the City, based on the high infrastructure cost and the potential for the PLC system to become obsolete in the near future. Once the six viable alternatives were selected, the team drafted a list of criteria required for the technology to best suit the City of Ames. Each technology alternative was scored against the criteria using a rating of 1 to 5, with 5 being the best. Weights were assigned to each criterion to help determine the technology that would best meet the needs of the City.

Based on the alternatives and weighted criteria, the AMR/AMI Team recommended the AMR Walk-by technology as the short term solution, with a requirement that it be provided by a vendor that can transition to an AMI Mesh (unlicensed) system in the future as the long-term solution. The AMR Walk-by system was the basis for the CIP project presented to City Council in January 2014.

Based upon this conclusion, staff has developed a Request for Proposals to procure an AMR Walk-by system as a replacement to the old mechanical register system. Council is now asked to give preliminary approval of specifications for procurement of an AMR Walk-by system including hardware, software, meters and installation services for a complete system, and to issue the Request for Proposals.

The estimated cost for this procurement is as follows:

Water Meters Equipped With AMR (Radio Read) Reading Equipment, Software, Maintenance Agreement	\$356,000 \$ 39,900
Contingency, 5%	\$ 19,795
<hr/> Total	<hr/> \$415,695

The approved FY 14/15 CIP includes \$417,000 to begin the AMR conversion as the first year of a projected ten-year replacement of the old mechanical register system. In addition, the Water Meter operating budget includes \$180,000 each year for routine meter replacements.

ALTERNATIVES:

1. Issue preliminary approval of specifications for procurement of an AMR Walk-by system including hardware, software, meters and installation services for a complete system, and issue a Request for Proposals.
2. Do not issue preliminary approval of specifications and a Request for Proposals at this time. This would negatively impact the water meter replacement program, since the City can no longer purchase new meter registers that operate on the existing legacy meter reading system.

MANAGER'S RECOMMENDED ACTION:

The current water meter technology used by the City has become obsolete and is no longer available in the marketplace. The AMR/AMI Process Improvement Team thoroughly vetted all currently available metering technologies for both water and electric metering to arrive at a recommendation that will support both the short and long term goals for both utilities well into the future.

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1, thereby issuing preliminary approval of specifications for procurement of an AMR Walk-by system including hardware, software, meters and installation services for a complete system and issuing a Request for Proposals. Staff will bring the evaluated proposals to Council later this spring for an award.