

## **Resolution No. 2018-1**

Of the

### **Fox Canyon Groundwater Management Agency**

#### **A RESOLUTION SPECIFYING THE REQUIREMENTS FOR INSTALLATION, OPERATION AND MAINTENANCE OF ADVANCED METERING INFRASTRUCTURE DEVICES**

**WHEREAS**, The Fox Canyon Groundwater Management Agency Ordinance Code specifies certain requirements for the installation and use of flowmeters; and

**WHEREAS**, The Fox Canyon Groundwater Management Agency Board of Directors on February 28, 2018, adopted an Ordinance to Require That Flowmeters Be Equipped with Advanced Metering Infrastructure (AMI) Telemetry (AMI Ordinance); and

**WHEREAS**, Pursuant to the AMI Ordinance, technical standards and specifications for the installation, operation and maintenance of the AMI device to be installed on flowmeters shall be set forth in a resolution adopted by the Agency.

**NOW, THEREFORE, IT IS HEREBY RESOLVED AND ORDERED THAT:**

#### **SECTION 1. Applicability**

This Resolution applies to all groundwater extraction facilities that are required by the Agency Ordinance Code to be equipped with a flowmeter. The operator shall install, operate and maintain the AMI device in accordance with this Resolution.

#### **SECTION 2. Definitions**

- A. Advanced Metering Infrastructure (AMI)** - An architecture for automated, two-way communication between a meter and a central database via cellular, radio, or satellite communication systems to acquire real-time or near real-time groundwater-extraction data.
- B. AMI Device** - All the AMI related components installed at or near the extraction facility, including the Meter Interface, Remote Telemetry Unit (RTU), power source, and related feedback sensors for water usage monitoring.
- C. AMI System** - The entire AMI system that includes all field hardware, communication network, central database and user interface.

- D. Agency** - The Fox Canyon Groundwater Management Agency.
- E. Central Database** - A database that aggregates and organizes extraction data from AMI devices. The central database may be operated by the well owner or is a service provided by a third party.
- F. Feedback Sensors** - Any combination of sensors to monitor extraction of water, or pump status.
- G. Flowmeter, or Meter**- A manufactured instrument for accurately measuring and recording the flow of water in a pipeline.
- H. Meter Interface** - A device that directly records the volume of water measured by the meter or register through a variety of methods including, but not limited to, optical sensor or magnetic signals.
- I. Purveyor** – A well owner or operator supplying groundwater for use by others.
- J. Remote Telemetry Unit (RTU)** - A component that records and stores meter readings at prescribed intervals and transmits them to the central database.
- K. Register** - The output unit or mechanical display that records the water flow measured by the flowmeter.
- L. Supervisory Control and Data Acquisition (SCADA)** - A system for remote monitoring and control of systems by an operator and/or programmable logic controllers.

### **SECTION 3. Installation Requirements**

- A.** AMI devices shall be installed according to manufacturer's instructions and in accordance with applicable building, electrical and mechanical codes.
- B.** The Meter Interface shall be secured to the Meter in a manner that would show signs of tampering in the event of unauthorized removal from the register.
- C.** AMI devices shall be installed in a manner that allows access for manual reading of the flowmeter.

### **SECTION 4. Performance Requirements**

- A.** The AMI Device shall be certified to comply with all applicable Federal Communication Commission (FCC) Rules.

- B. The AMI device shall record the total extractions from the Meter and transmit the data to the central database; in addition, the AMI Device shall employ at least one other method of detecting pump operation, such as pump amperage consumption, revolutions per minute of output shaft, or water pressure.
- C. The AMI Device shall be capable of sending timestamped alerts to the Agency and operator via email or text message within 24-hours if any of the following occurs:
  - 1. No extractions are recorded during pump operation.
  - 2. Reverse flow or backflow is detected when provided by an existing water Meter (e.g. serial communication).
  - 3. An error is detected affecting the ability of the AMI System to meet the specification of this resolution.
- D. The method of recording the total volume of extractions by the AMI system shall be accurate within a range of  $\pm 5\%$  of the flowmeter reading within a six month validation period.
- E. Data of total extractions from the most recent four weeks shall be protected from loss if data transfer abilities fail. In cases of data transfer failure, when data transfer abilities resume the data of total extractions shall include extractions during the time of data transfer failure.
- F. The AMI Device shall be capable of uploading total extractions and alerts to the Central Database a minimum of once per day in a common format (e.g. comma separated value (CSV)) to be specified by the Agency.
- G. All data time settings shall be set to Pacific Standard Time, and all sensors detecting pump operation shall be synched with the RTU.

#### **SECTION 5. Alternative Requirements for Purveyors Utilizing a SCADA System**

A purveyor utilizing a SCADA system shall be deemed in compliance with article 4 of the AMI Ordinance provided the purveyor demonstrates that its SCADA system meets the performance specifications in this Resolution.

#### **SECTION 6. Operation and Maintenance Requirements**

The AMI device or SCADA system shall be maintained in good working order and operated in accordance with this Resolution.

### **SECTION 7. Inspection of AMI Devices**

Agency staff or their designees may inspect AMI devices or SCADA systems for compliance with this Resolution in accordance with the AMI Ordinance.

### **SECTION 8. Demonstration of Compliance**


Compliance with this Resolution can be demonstrated by submitting a list of equipment, including product identification, and manufacturer's information, along with an inspection report from an installer or equipment product distributor certified by the manufacturer to perform installations and maintenance stating that the equipment is properly installed and working.

On a motion by Director Craven and seconded by Director Erano, the foregoing Resolution was duly passed and adopted by the Board of Directors at a regularly scheduled meeting of the Board held on this 28th day of February 2018 in Ventura, California.



Eugene F. West, Chair, Board of Directors  
Fox Canyon Groundwater Management Agency

ATTEST: I hereby certify that the above is a true and correct copy of Resolution No. 2018-1.

By:   
Keely Royas, Clerk of the Board