



**Procurement Division**  
Public Services Building  
2051 Kaen Road  
Oregon City, OR 97045  
(503) 742-5444 (Office)

## **REQUEST FOR QUOTES (RFQ) #2018-67**

Issue Date: August 6, 2018

Project Name:	Flow Monitoring Flow Meters		
Quote Due Date/Time:	August 22, 2018; 2:00PM		
Procurement Analyst:	Ryan Rice	Phone:	503-742-5446
		Email:	<a href="mailto:rrice@clackamas.us">rrice@clackamas.us</a>

**SUBMIT QUOTES VIA EMAIL TO [PROCUREMENT@CLACKAMAS.US](mailto:PROCUREMENT@CLACKAMAS.US)  
OR MAIL/HAND DELIVERY TO THE ABOVE ADDRESS**

**PLEASE NOTE: EMAIL SUBMISSIONS SHOULD HAVE  
“#2018-67 FLOW METERS” IN THE SUBJECT LINE**

### **1. ANNOUNCEMENT AND SPECIAL INFORMATION**

Quoters are required to read, understand, and comply with all information contained within this Request for Quotes (“RFQ”). All quotes are binding upon Quoter for sixty (60) days from the Quote Due Date/Time. Quotes received after the Quote Due Date/Time may not be considered. If authorized in the RFQ and resulting contract, travel and other expense reimbursement will only be reimbursed in accordance with the Clackamas County Travel Reimbursement Policy in effect at the time the expense is incurred. The Policy may be found at [www.clackamas.us/bids/terms.html](http://www.clackamas.us/bids/terms.html).

It will be the responsibility of potential Quoters to refer daily to the Bids and Contract Information Page ([www.clackamas.us/bids/index.html](http://www.clackamas.us/bids/index.html)) to check for any available addenda, response to clarifying questions, cancellations or other information pertaining to this RFQ.

All questions regarding this RFQ are to be directed to the Procurement Analyst named above. Quoters may not communicate with County employees or representatives about the RFQ during the procurement process until the Procurement office has notified Quoters of the selected Quoter. Communication in violation of this restriction may result in rejection of a Quoter.

### **2. SCOPE**

The purpose of this RFQ is to purchase flow monitoring flow meters similar to Flo-Dar and all associated manhole mounting hardware, batteries, software, cabling, manuals, start up, and training. Flow system must come with all equipment needed for a working system (ie: sensor, remote head, cables, etc.).

Brand names are used only to establish an acceptable standard of quality and are not intended to limit or eliminate competition.

Quantity	Description
1	Non-contact flow sensor with non-wireless data logger.
9	Non-contact flow sensor with Wireless Logger with Wireless Modem.

## **Background**

Clackamas County Water Environment Services (“WES”) has numerous aging flow monitoring sensors, analyzers, and controllers deployed throughout their collection system. Data provided by the sanitary flow meters deployed in the collection system informs the decision-making of the operation staff for how to most efficiently utilize the WES’s pump stations and treatment plants. The data also informs capital improvement planning by monitoring the capacity of the collection system and the WES’s ability to accommodate growth and detecting condition issues. These existing meters are from various manufacturers and many of the meters are more than 20 years old and are nearing the end of their life expectancy and/or are obsolete. Most of the existing meters do not have the functionality to be monitored remotely to ensure operational integrity and do not have the ability to provide real time flow data to the operations and capital planning staff, requiring staff to drive around the service area and manually download the data for review. This is extremely labor intensive, and collecting data weeks after a storm event prevents us from making data-driven decisions regarding system operations when it is most needed. Due to the nature of the service environment for these meters, they require regular operational status updates, maintenance calibration and repair to ensure the flow data being captured is accurate.

In 2014, WES completed a SCADA Master Plan which evaluated the condition of the existing flow monitoring equipment. This project recommended priority be given to upgrading our flow monitoring program, a recommendation which was reinforced recently when we used existing meters to characterize our system for our Collection System Master Plan. This upgrade focuses on the significant need to implement real time flow monitoring to provide the WES’s operations and capital staff with the ability to make informed decisions for operating the collection system pump stations and identify future capacity needs. As part of the flow monitoring program upgrade, it was recommended that WES standardize equipment. Standardizing equipment provides WES with many operational efficiencies minimizing downtime and maintenance costs, and simplifying communication protocols while also maximizing reliability of our flow monitoring program. Our research and discussion with other wastewater utilities have shown that standardizing on one brand of flow monitoring equipment can have reduced costs for training, support, inventory, and maintenance. Thus, WES would like standardize on one brand and style of flow monitoring equipment for the collection system.

*Following is the required specification for the flow monitors.*

## **Part 1. Products**

### **A. General**

- a. Non-Contact open channel flow meter: A flow meter that measures flow and requires no contact with the flow in the channel. This method of flow measurement shall be obtained by a combination of Doppler radar velocity sensing with an attached ultrasonic level meter.
- b. A flow meter that measures flow by insertion of a velocity flow sensor into the channel to determine flow will not be accepted.
- c. Fluid being measured: Raw Municipal Sewage.

### **B. Non-Contact open channel flow sensor**

- a. The sensor shall consist of three transducers housed in an IP 68 rated water tight enclosure.
- b. The sensor shall be of the non-contact type and come with hardware to be mounted above the flow surface with no moving parts.
- c. The sensor shall be capable of operating at temperatures ranging from 14F to 122F.
- d. Power for the sensor shall be supplied by the data logger.
- e. The sensor shall have an option (built in or by added accessory) to measure surcharge level and flow.

### **C. Flow Measurement**

- a. Method: Based on continuity equation ( $Q=V \times A$ ), where Q= flow, V= average velocity and A=area.
- b. The non-contact sensor shall be able to measure velocity and make real time adjustments to convert surface velocity to average velocity via an algorithm that considers fluid level and size of pipe.

- D. Velocity Measurement
  - a. Method: Doppler Radar or Laser
  - b. Operating Range: 0.75 ft/s to 20 ft/s
  - c. Accuracy:  $\pm 0.5\%$  of reading  $\pm 0.03$  m/s (0.1 ft/s)
- E. Level Measurement
  - a. Method: Ultrasonic
  - b. Operating Range from non-contact flow monitoring housing to liquid: 0 to 60 inches
  - c. Accuracy:  $\pm 1\%$
- F. Surge Sensor - Option
  - a. Range: -5 to 20 ft/s
  - b. Accuracy:  $\pm 5\%$
- G. Sensor Cable
  - a. The standard sensor cable shall be abrasive resistant polyurethane jacket with waterproof connectors.
  - b. The flow meters sensor cable assemblies of various lengths shall be available as field installable options determined on a case by case basis. Standard cable length of 60 FT should be assumed. This length will be evaluated on a case by case basis for each installation.
- H. Mounting Hardware
  - a. The permanent mount shall be of stainless steel material suitable for manhole applications and consists of a sensor mount frame, wall mount frame, wall mount bracket, two space bars and clamps which can be bolted directly inside of manhole.
- I. Wireless Data Logger
  - a. The logger shall be a battery-powered data logger housed in a sealed NEMA 6P/IP68 rated enclosure.
  - b. The logger shall provide two sensor ports, one communications port, and one auxiliary port (for external power).
  - c. Power requirements shall be VDC from batteries with option to use external power source.
  - d. The logger shall be capable of operating on 6V alkaline batteries. Four 6V alkaline batteries shall be provided with each unit. The battery compartment shall be sealed with an o-ring for an additional moisture barrier.
  - e. The logger shall be capable of operating for 18 months on batteries with a non-contact flow sensor as described above.
  - f. The logger shall have a minimum of 8 channel alarms with high/high, high/low, and low/low options. The alarms shall also include low battery, low RTC battery, low slate memory and slate memory full.
    - i. In the event of alarm condition, the logger shall be able to send an email or text message (SMS) simultaneously to up to five addresses or cell numbers.
  - g. The logger shall have an LED indicator for operating/programming status visible on so that it can be seen without entry into a manhole.
  - h. The logger shall be able to communicate to a computer locally via USB or RS232 connection.
  - i. The antenna options available shall include options that do not involve manhole lid replacement.
  - j. The logger shall have remote communication options via CDMA2000 xRTT or GSM/GPRS.
  - k. Data shall be stored in non-volatile flash memory and be retained when power is removed:
    - i. Event Log: 1,000 events
    - ii. Sampler History: 2,000 sample events maximum.
    - iii. Datalog: 325,000 data points; 1128 days for 3 channels at 15 minute log intervals.
  - l. Time base accuracy of the Flow Logger shall be 0.002% synchronized every 24 hours with server software and modem.

- m. Antenna for logger shall be made available. The Antenna shall be able to fit into an existing or created manhole pick hole or bolt hole (3/4" – 1" hole).
- n. All loggers shall come with a Stainless Steel Wall or Ladder Rung Hangers
- J. Non Wireless Data Logger
  - a. The non-wireless data logger shall hold all of the same functions as the wireless data logger as described in Section J with the exceptions of J.f.i, J.j, J.l, and J.m above.
  - b. The non-wireless data logger shall be capable of outputting Modbus.

## **Part 2. Data Hosting**

- A. General
  - a. Manufacturer shall provide a data hosting service as described here.
- B. Web-based Data Interface
  - a. Monitoring system shall be capable of interfacing with a web browser-based data management software and remote monitoring application.
  - b. Web-based interface shall be Username/Password-protected.
  - c. Contractor shall grant unlimited, secure access to the unedited/unaltered flow data by establishing a dedicated user identification (Login ID) and password for each desired user, as defined by Clackamas WES.
  - d. Web-based interface shall function on all common web browsers, including Internet Explorer, Google Chrome and Mozilla Firefox.
  - e. Ability to download the unedited/unaltered flow data.
  - f. Ability to monitor operational status of all installed flow meters.
  - g. Ability to view installed flow meter locations in map view.
  - h. Ability to communicate alarms.
- C. Data format –
  - a. Flow data shall be viewable through the web interface in the following formats:
    - i. Hydrographs.
    - ii. Hydrographs shall be downloadable in PDF format.
    - iii. Scatterplots.
    - iv. Scatterplots shall be downloadable in PDF format.
    - v. Tabular data.
    - vi. Tabular data must be capable of showing minimum, maximum, and average values.
    - vii. All data-viewing formats shall display user-selectable measurements obtained from the sensor including, but not limited to:
      - 1. Level
      - 2. Velocity
      - 3. Surface Velocity
      - 4. Flow
      - 5. Battery voltage
      - 6. Surge Level
      - 7. Temperature
      - 8. Sensor specific diagnostic / quality parameters.
    - viii. Data shall be available in intervals of 1 minute, 5 minutes, 15 minutes, 30 minutes, 60 minutes and 24 hours with customizable date and time ranges, depending on established logging interval.
- D. Data Downloading
  - a. Data shall be downloadable in TSV and CSV formats directly from the web-interface.
- E. Reporting capabilities
  - a. Web-based data interface shall provide pre-formatted summary and statistical reports in PDF format. Reports shall be customizable by date range, time range and channels (velocity, level and flow). Required report types include:
    - i. Data Import Report
    - ii. Data Summary Report
    - iii. Summary Statistics Report
    - iv. Event Log Report

- v. Tabular Data Report
- vi. Communication Report
- vii. Sample History Report
- viii. Site Alarm Report
- ix. User Login Report
- x. User Actions Report
- xi. Call Alarm Report

F. Data Storage

- a. Logger Data Storage Specifications
  - i. Flow meters must have the ability to store, at a minimum, over 1000 days of collected data, based on collecting data for up to 3 channels and 15 minute logging intervals.
- b. Server Data Storage Specifications
  - i. Flow monitoring program shall include the storage of the unedited/unaltered flow data on firewall-protected server(s) with built-in backup redundancies. Data shall be stored and backed up in a structured query language (SQL) server database for a period of not less than 2-years.

**Part 3. Execution**

- A. Installation: WES staff will install all the instruments that are provided by the vendor.
  - a. Vendor will train staff on installation of any products purchased, and be onsite with staff during the installation to verify satisfactory installation.
  - b. After staff has completed the installation and before being placed into service, the vendor will need to verify the installation has been correctly completed and provide WES with a certification of proper installation.
- B. Training: After proper installation satisfactory installation, vendor will be required to provide start up training on operation and maintenance of the instruments that are provided by vendor.

**Part 4. Submittals**

- A. Approved operation and Maintenance Manuals delivered prior to training.
- B. Equipment installation and pre-demonstration startup certifications
- C. Written warranty for one year after satisfactory installation certificate provided.

**Part 5. Alternatives**

Please provide any trade-in discounts for the following items currently used by the WES:

- A. Sigma 950 Flow Meter – Qty. 4

**Delivery – Choose one of the following:**

- ☐ Delivery required within \_\_\_\_\_ days of supplier's receipt of order.
- ☐ Delivery required on or before \_\_\_\_\_.
- ☒ Delivery time is of the essence and may be a factor in making an award.

### 3. Sample Contract

Submission of a Quote in response to this RFQ indicates Quoter's willingness to enter into a contract containing substantially the same terms of the below referenced contract, which can be found at: <http://www.clackamas.us/bids/terms.html>, with the below indicated requirements. No action or response to the sample contract is required under this RFQ. The applicable sample contract is the:

**Goods & Services Contract** (unless checked, item does not apply)

The following insurance requirements will be applicable.

- ☐ Professional Liability: combined single limit, or the equivalent, of not less than \$1,000,000 per occurrence, with an annual aggregate limit of \$2,000,000 for damages caused by error, omission or negligent acts.
- ☒ Commercial General Liability: combined single limit, or the equivalent, of not less than \$1,000,000 per occurrence, with an annual aggregate limit of \$2,000,000 for Bodily Injury and Property Damage.
- ☒ Automobile Liability: combined single limit, or the equivalent, of not less than \$500,000 per occurrence for Bodily Injury and Property Damage.

### 4. Quote

Quotes should be short and concise with the following information:

- A. Description of items to be provided;
- B. Price including shipping FOB Destination presented on company letterhead. Price should list any trade-in discounts as listed in Item 2 Scope, Part 5 Alternatives;
- C. Warranty information;
- D. Estimated delivery time upon order submission;
- E. Clackamas County Certifications Form; and
- F. Any additional information that Clackamas County should take into consideration for the project or qualifications.

### 5. Evaluation

Quotes will be evaluated based on subjective factors including, but not limited to: Item description, price including shipping, warranty information, and estimated delivery time.

**CLACKAMAS COUNTY CERTIFICATIONS**  
**RFQ #2018-67**

Each Quoter must read, complete and submit a copy of this Clackamas County Certification with their Quote. Failure to do so may result in rejection of Quote. By signature on this Certification the undersigned certifies that they are authorized to act on behalf of the Quoter and that under penalty of perjury the undersigned will comply with the following:

**SECTION I. OREGON TAX LAWS**

As required in ORS 279B.110(2)(3), the undersigned hereby certifies that, to the best of the undersigned's knowledge, the Quoter is not in violation of any Oregon Tax Laws. For purposes of this certification, "Oregon Tax Laws" means a state tax imposed by ORS 320.005 to 320.150 and 403.200 to 403.250 and ORS chapters 118, 314, 316, 317, 318, 321, 323, and elderly rental assistance program under ORS 310.630 to 310.706, and local taxes administered by the Department of Revenue under ORS 305.620, all as applicable. If a contract is executed, this information will be reported to the Internal Revenue Service. Information not matching IRS records could subject Quoter to 28% backup withholding.

**SECTION II. NON-DISCRIMINATION**

The undersigned hereby certifies that the Quoter has not and will not discriminate in its employment practices with regard to race, creed, age, religious affiliation, sex, disability, sexual orientation, national origin, or any other protected class. Nor has Quoter or will Quoter discriminate against a subcontractor in the awarding of a subcontract because the subcontractor is a disadvantaged business enterprise, a minority-owned business, a woman-owned business, a business that a service-disabled veteran owns or an emergency small business that is certified under ORS 200.055.

**SECTION III. CONFLICT OF INTEREST**

The undersigned hereby certifies that no elected official, officer, agency or employee of Clackamas County is personally interested, directly or indirectly, in any resulting contract from this RFQ, or the compensation to be paid under such contract, and that no representation, statements (oral or in writing), of the County, its Commissioners, officers, agents, or employees had induced Quoter to submit this Quote. In addition, the undersigned hereby certifies that this proposal is made without connection with any person, firm, or corporation submitting a quote for the same material, and is in all respects fair and without collusion or fraud.

**SECTION IV. COMPLIANCE WITH SOLICITATION**

The undersigned further agrees and certifies that they:

1. Have read, understand and agree to be bound by and comply with all requirements, instructions, specifications, terms and conditions of the RFQ (including any attachments); and
2. Are an authorized representative of the Quoter, that the information provided is true and accurate, and that providing incorrect or incomplete information may be cause for rejection of the Quote or contract termination; and
3. Will furnish the designated item(s) and/or service(s) in accordance with the RFQ and Quote; and
4. Will use recyclable products to the maximum extent economically feasible in the performance of the contract work set forth in this RFQ.

Firm Name: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Title: \_\_\_\_\_

Name: \_\_\_\_\_ Telephone: \_\_\_\_\_

Email: \_\_\_\_\_ OR CCB # (if applicable): \_\_\_\_\_

Business Designation (check one):

☐ Corporation ☐ Partnership ☐ Sole Proprietorship ☐ Non-Profit ☐ Limited Liability Company

☐ Resident Quoter, as defined in ORS 279A.120

☐ Non-Resident Quote. Resident State: \_\_\_\_\_

Oregon Business Registry Number: \_\_\_\_\_

## CLACKAMAS COUNTY INSTRUCTIONS TO QUOTERS

Quotes are subject to the applicable provisions and requirements of the Clackamas County Local Contract Review Board Rule C-047-0270 (Intermediate Procurements) and Oregon Revised Statutes.

### QUOTE PREPARATION

1. **QUOTE FORMAT:** Quotes must be submitted as indicated in the RFQ. Quotes may be submitted in writing to Clackamas County via e-mail, mail or in person.
2. **CONFORMANCE TO RFQ REQUIREMENTS:** Quotes must conform to the requirements of the RFQ. Unless otherwise specified, all items quoted are to be new, unused and not remanufactured in any way. Any requested attachments must be submitted with the quote and in the required format. Quote prices must be for the unit indicated on the quote. Failure to comply with all requirements may result in quote rejection.
3. **ADDENDA:** Only documents issued as addenda by Clackamas County serve to change the RFQ in any way. No other directions received by the Quoter, written or verbal, serve to change the RFQ document. NOTE: IF YOU HAVE RECEIVED A COPY OF THE RFQ, YOU SHOULD CONSULT THE CLACKAMAS COUNTY BIDS AND CONTRACT INFORMATION WEBSITE ([www.clackamas.us/bids/index.html](http://www.clackamas.us/bids/index.html)) TO ENSURE THAT YOU HAVE NOT MISSED ANY ADDENDA OR ANNOUNCEMENTS. QUOTERS ARE NOT REQUIRED TO RETURN ADDENDUMS WITH THEIR QUOTE. HOWEVER, QUOTERS ARE RESPONSIBLE TO MAKE THEMSELVES AWARE OF, OBTAIN AND INCORPORATE ANY CHANGES MADE IN ANY ADDENDA ISSUED, AND TO INCORPORATE ANY CHANGES MADE BY ADDENDUM INTO THEIR FINAL QUOTE. FAILURE TO DO SO MAY, IN EFFECT, MAKE THE QUOTER'S QUOTE NON-RESPONSIVE, WHICH MAY CAUSE THE QUOTE TO BE REJECTED.
4. **USE of BRAND or TRADE NAMES:** Any brand or trade names used by Clackamas County in the specifications are for the purpose of describing and establishing the standard of quality, performance and characteristics desired and are not intended to limit or restrict competition. Quoters may submit quotes for substantially equivalent products to those designated unless the RFQ provides that a specific brand is necessary because of compatibility requirements, etc. All such brand substitutions shall be subject to approval by Clackamas County.
5. **PRODUCT IDENTIFICATION:** Quoters must clearly identify all products quoted. Brand name and model or number must be shown. Clackamas County reserves the right to reject any quote when the product information submitted with the quote is incomplete.
6. **FOB DESTINATION:** Unless specifically allowed in the RFQ, ***QUOTE PRICE MUST BE F.O.B. DESTINATION with all transportation and handling charges included in the Quote.***
7. **DELIVERY:** Delivery time must be shown in number of calendar days after receipt of purchase order.
8. **EXCEPTIONS:** Any deviation from quote specifications, or the form of sample contract referenced in this RFQ, may result in quote rejection at County's sole discretion.
9. **SIGNATURE ON QUOTE:** Quotes must be signed by an authorized representative of the Quoter. Signature on a quote certifies that the quote is made without connection with any person, firm or corporation making a quote for the same goods and/or services and is in all respects fair and without collusion or fraud. Signature on a quote also certifies that the Quoter has read and fully understands all quote specifications, and the sample contract referenced in this RFQ (including insurance requirements). No consideration will be given to any claim resulting from quoting without comprehending all requirements of the RFQ.
10. **QUOTE MODIFICATION:** Quotes, once submitted, may be modified in writing before the time and date set for quote closing. Any modifications should be signed by an authorized representative, and state that the new document supersedes or modifies the prior quote. Quoters may not modify quotes after quote closing time.
11. **QUOTE WITHDRAWALS:** Quotes may be withdrawn by request in writing signed by an authorized representative and received by Clackamas County prior to the Quote Due Date/Time. Quotes may also be withdrawn in person before the Quote Due Date/Time upon presentation of appropriate identification.



- 12. QUOTE SUBMISSION:** Quotes may be submitted by returning to Clackamas County Procurement Division in the location designated in the introduction of the RFQ via email, mail or in person; however, no oral or telephone quotes will be accepted. Envelopes, or e-mails containing Quotes should contain the RFQ Number and RFQ Title.

#### **QUOTE EVALUATION AND AWARD**

- 1. PRIOR ACCEPTANCE OF DEFECTIVE PROPOSALS:** Due to limited resources, Clackamas County generally will not completely review or analyze quotes which fail to comply with the requirements of the RFQ or which clearly are not the best quotes, nor will Clackamas County generally investigate the references or qualifications of those who submit such quotes. Therefore, neither the return of a quote, nor acknowledgment that the selection is complete shall operate as a representation by Clackamas County that an unsuccessful quote was complete, sufficient, or lawful in any respect.
- 2. DELIVERY:** Significant delays in delivery may be considered in determining award if early delivery is required.
- 3. CASH DISCOUNTS:** Cash discounts will not be considered for award purposes unless stated in the RFQ.
- 4. PAYMENT:** Quotes which require payment in less than 30 days after receipt of invoice or delivery of goods, whichever is later, may be rejected.
- 5. INVESTIGATION OF REFERENCES:** Clackamas County reserves the right to investigate references and or the past performance of any Quoter with respect to its successful performance of similar services, compliance with specifications and contractual obligations, and its lawful payment of suppliers, sub-contractors, and workers. Clackamas County may postpone the award or execution of the contract after the announcement of the apparent successful Quoter in order to complete its investigation. Clackamas County reserves the right to reject any quote or to reject all quotes at any time prior to Clackamas County's execution of a contract if it is determined to be in the best interest of Clackamas County to do so.
- 6. METHOD OF AWARD:** Clackamas County reserves the right to make the award by item, groups of items or entire quote, whichever is in the best interest of Clackamas County.
- 7. QUOTE REJECTION:** Clackamas County reserves the right to reject any and all quotes.
- 8. QUOTE RESULTS:** Quoters who submit a quote will be notified of the RFQ results. Awarded quote files are public records and available for review by submitting a public records request or by appointment.