Borrego Water District Board of Directors
Special Meeting
January 9, 2024 @ 9:00 a.m.
806 Palm Canyon Drive
Borrego Springs, CA 92004

The Borrego Water District Board of Directors meeting as scheduled will be conducted in person and in an electronic format please note BWD is providing remote attendance options solely as a matter of convenience to the public. BWD will not stop or suspend its in-person public meeting should a technological interruption occur with respect to the GoTo meeting or call-in line listed on the agenda. We encourage members of the public to attend BWD meetings in-person at the address printed on page 1 of this agenda. Anyone who wants to listen to or participate in the meeting remotely is encouraged to observe the GO TO MEETING at:

Borrego Water District Special Meeting January 9, 2023
Jan 9, 2024, 9:00 AM – 12:00 PM (America/Los_Angeles)

Please join my meeting from your computer, tablet or smartphone.
https://meet.goto.com/839539213

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Access Code: 839-539-213
United States: +1 (872) 240-3311

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I. OPENING PROCEDURES -

A. Call to Order
B. Pledge of Allegiance
C. Directors' Roll Call: President Dice, Vice President Baker, Directors Duncan, Johnson & Moran.
Director Baker to join from remote address at 633 Church Lane, Borrego Springs, CA 92004
D. Approval of Agenda
E. Comments from the Public & Requests for Future Agenda Items (may be limited to 3 min)
F. Comments from Directors
G. Correspondence Received from the Public - None

II. ITEMS FOR BOARD CONSIDERATION AND POSSIBLE ACTION -

A. Election of BWD Board Officers – G Poole/K Dice
B. BWD Board Committee Appointment Selection Process – G Poole
C. Jim Wermers Fire and Commercial Water Service Re Configuration at The Mall – G Poole/J Wermers
D. Vendor Selection – Automated Metering Infrastructure Project – T Baker/G Moran/J Clabaugh
E. Borrego Springs Subbasin Watermaster Board – VERBAL D Duncan/K Dice/T Driscoll
   1. Proposition 68 Reimbursement #1 Received/Distributed before 12-31-23
   2. Update on Board Activities Including 1-11-24 Agenda Items
   3. Update on Technical Advisory Committee Activities

III. BOARD COMMITTEE REPORTS, IF NEEDED

STANDING:

A. Operations and Infrastructure: Duncan/Baker

B. Budget and Audit: Dice/Moran

C. ACWA/JPIA Insurance: Dice/Johnson

AGENDA: January 9, 2023: The Borrego Springs Water District complies with the Americans with Disabilities Act. Persons with special needs should call Geoff Poole, General Manager – at (760) 767 – 5806 at least 48 hours in advance of the start of this meeting, in order to enable the District to make reasonable arrangements to ensure accessibility. If you challenge any action of the Board of Directors in court, you may be limited to raising only those issues you or someone else raised at the public hearing, or in written correspondence delivered to the Board of Directors (c/o the Board Secretary) at, or prior to, the public hearing.

BOARD COMMITTEES - AD HOC:

A. Prop 68 Implementation: Baker/Johnson

B. Public Outreach: Dice/Johnson

C. Grants: Dice/Johnson

D. Cyber Security/Risk Management: Baker

E. Developer's Agreement: Baker/Duncan

F. Finance: Baker/Moran

H. Borrego Springs Basin Water Quality: Moran/Johnson

I. Automated Metering Infrastructure Selection: Baker/Moran

IV. STAFF REPORTS – VERBAL

A. General Manager

1. Draft Updated Fallowing Plan
2. Gallons per Day per EDU – Wastewater Update

V. CLOSED SESSION:

A. Conference with Legal Counsel - Potential Initiation of litigation pursuant to paragraph (4) of subdivision (d) of Section 54956.9: (Two (2) potential cases)

B. Conference with Legal Counsel – Existing Litigation (Borrego Water District v. All Persons (Groundwater), Orange County Superior Court Case No. 37-2020-00005776

VI. CLOSING PROCEDURE:

The next Board Meeting is scheduled for 9:00 AM January 23, 2024, to be available online and in person at 806 Palm Canyon Drive. See Board Agenda at BorregoWD.org for details, Agenda information available at least 72 hours before the meeting.

All Documents for public review on file with the District's secretary located at 806 Palm Canyon Drive, Borrego Springs CA 92004. Any public record provided to a majority of the Board of Directors less than 72 hours prior to the meeting, regarding any item on the open session portion of this agenda, is available for public inspection during normal business hours at the Office of the Board Secretary, located at 806 Palm Canyon Drive, Borrego Springs CA 92004.

BORREGO WATER DISTRICT
BOARD OF DIRECTORS MEETING
JANUARY 9, 2024
AGENDA ITEM II.A

January 2, 2024

TO: Board of Directors

FROM: Geoffrey Poole, General Manager

SUBJECT: Election of BWD Board Officers – G Poole/K Dice

RECOMMENDED ACTION:
Discuss and consider new slate of BWD Board Officers, President, Vice-President and Secretary/Treasurer

ITEM EXPLANATION:
New Board Officers are typically elected on the January following the election. Last year, President Dice agreed to serve for another year, so now is the time to consider Officers for a one year term (January 2025). In November 2024, the seats currently held by Directors Johson and Baker will be the expiring and potentially on the ballot if more than 2 candidates file with the Registrar. The following January, a new slate of Officers can be considered for the full two year term.

NEXT STEPS
1. The New Board President will consider Committee Appointments at the January 23rd Meeting.

FISCAL IMPACT
1. N/A

ATTACHMENTS
1. None

BORREGO WATER DISTRICT
BOARD OF DIRECTORS MEETING
JANUARY 9, 2024
AGENDA ITEM II.B

January 2, 2024

TO: Board of Directors

FROM: Geoffrey Poole, General Manager

SUBJECT: BWD Board Committee Appointment Selection Process – G Poole

RECOMMENDED ACTION:
Review schedule and process for Committee Appointments

ITEM EXPLANATION:
Traditionally, the Board President appoints the members of the BWD Standing and AD Hoc Committees. It is intended that the need for each Committee will be reconsidered prior to and Members appointed by the new President at the January 23th meeting.

NEXT STEPS
1. N/A

FISCAL IMPACT
1. N/A

ATTACHMENTS
1. None

BORREGO WATER DISTRICT
BOARD OF DIRECTORS MEETING
JANUARY 9, 2024
AGENDA ITEM II.C

January 2, 2024

TO: Board of Directors

FROM: Geoffrey Poole, General Manager

SUBJECT: Jim Wermers Fire and Commercial Water Service Re Configuration at The Mall – G Poole/J Wermers

RECOMMENDED ACTION:
Receive input from Jim Wermers on condition of pipelines in The Mall and authorize staff to proceed with Project planning for replacement of 4" line.

ITEM EXPLANATION:
Jim Wermers is requesting BWD replace the 4" line serving the fire hydrant inside The Mall's Courtyard (entrance next to Calicos). The request is based on fact that the line experiences frequent breaks and Jim would like to share his observations and why he feels its best to pay for complete replacement of the line pre-emptively. Coincidentally, Alan was in the area on January 3rd and found what appears to be a leak. Upon further investigation by Manuel, the source of the leak was determined to be private irrigation lines owned by Mr. Wermers. This event is a reminder of how close the pipes are to to the adjacent structures and why pre emptive replacement is prudent. Due to the sensitivity of the area, Staff is recommending proceeding with plans to replace the fire line, specifically work with Jim Wermers and return in February with a final plan, budget and schedule. Staff has inquired about the potential to share the costs with Mr. Wermers and he is planning to virtually attend the meeting.

*LEAK IDENTIFIED ON 1-3-24 IN RED CIRCLE
*BLUE LINE = APPROX LOCATION OF EXISTING 4" LINE

NEXT STEPS
1. Develop Final Plan/Budget/Schedule and Return to the Board in Feb.

FISCAL IMPACT
1. TBD

ATTACHMENTS
1. None

BORREGO WATER DISTRICT
BOARD OF DIRECTORS MEETING
JANUARY 9, 2024
AGENDA ITEM II.D

January 2, 2024

TO: Board of Directors

FROM: Geoffrey Poole, General Manager

SUBJECT: Vendor Selection – Automated Metering Infrastructure Project – T Baker/G Moran/J Clabaugh

RECOMMENDED ACTION:
Review process and recommendation. Authorize staff to proceed with Contract development.

ITEM EXPLANATION:
Beginning in mid 2023, BWD Staff and a Board Committee (Baker/Moran) began the development of documents and implementation of an interview and selection process to evaluate possible vendors for the AMI Project, funded by BWDs CA Prop 68 Grant. The process has now concluded with submittal of detailed Proposals and Cost Estimates. Following the process, the Committee is recommending Metron Farnier based on the facts that the system is cellular based which eliminates the need for and cost of BWD to operate and maintain system wide data collection, similar to our SCADA, but much larger in scale. Metron also has designed a system with dramatically more data points every day: 1,440 vs 3, and a software package to utilize the info to estimate inside vs outside use.

The total price for meters and installation is $1.40M and the Grant budget for this Project is $1.23M. BWD will need to fund approximately $170,000 to complete the project. Once the pending Tank and Motor Grant Reimbursement #1 is received, BWD's reserves will be about 85% funded. This will result in sufficient funds available in the Contingency Reserve. In addition, additional funds can be written into the FY25 budget if the project is still ongoing at June 30th.

BORREGO WATER DISTRICT
BOARD OF DIRECTORS MEETING
JANUARY 9, 2024
AGENDA ITEM II.E

January 2, 2024

TO: Board of Directors

FROM: Geoffrey Poole, General Manager

SUBJECT: Borrego Springs Subbasin Watermaster Board – VERBAL D Duncan/K Dice/T Driscoll

1. Proposition 68 Reimbursement #1 Received/Distributed before 12-31-23 (WAY TO GO JESSICA!)
2. Update on Board Activities Including 1-11-24 Agenda Items
3. Update on Technical Advisory Committee Activities

RECOMMENDED ACTION:
Discuss upcoming Watermaster related activities

ITEM EXPLANATION:
BWD Representatives from the Watermaster and TAC will provide a review of recent events and an update on upcoming meetings.

NEXT STEPS
1. TBD

FISCAL IMPACT
1. TBD

ATTACHMENTS
1. None

BORREGO WATER DISTRICT
BOARD OF DIRECTORS MEETING
JANUARY 9, 2024
AGENDA ITEM II.A

January 2, 2024

TO: Board of Directors

FROM: Geoffrey Poole, General Manager

SUBJECT: Election of BWD Board Officers – G Poole/K Dice

RECOMMENDED ACTION:
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NEXT STEPS
1. The New Board President will consider Committee Appointments at the January 23rd Meeting.

FISCAL IMPACT
1. N/A

ATTACHMENTS
1. None

BORREGO WATER DISTRICT
BOARD OF DIRECTORS MEETING
JANUARY 9, 2024
AGENDA ITEM II.B

January 2, 2024

TO: Board of Directors

FROM: Geoffrey Poole, General Manager

SUBJECT: BWD Board Committee Appointment Selection Process – G Poole

RECOMMENDED ACTION:
Review schedule and process for Committee Appointments

ITEM EXPLANATION:
Traditionally, the Board President appoints the members of the BWD Standing and AD Hoc Committees. It is intended that the need for each Committee will be reconsidered prior to and Members appointed by the new President at the January 23th meeting.

NEXT STEPS
1. N/A

FISCAL IMPACT
1. N/A

ATTACHMENTS
1. None

BORREGO WATER DISTRICT
BOARD OF DIRECTORS MEETING
JANUARY 9, 2024
AGENDA ITEM II.C

January 2, 2024

TO: Board of Directors

FROM: Geoffrey Poole, General Manager

SUBJECT: Jim Wermers Fire and Commercial Water Service Re Configuration at The Mall – G Poole/J Wermers

RECOMMENDED ACTION:
Receive input from Jim Wermers on condition of pipelines in The Mall and authorize staff to proceed with Project planning for replacement of 4" line.

ITEM EXPLANATION:
Jim Wermers is requesting BWD replace the 4" line serving the fire hydrant inside The Mall's Courtyard (entrance next to Calicos). The request is based on fact that the line experiences frequent breaks and Jim would like to share his observations and why he feels its best to pay for complete replacement of the line pre-emptively. Coincidentally, Alan was in the area on January 3rd and found what appears to be a leak. Upon further investigation by Manuel, the source of the leak was determined to be private irrigation lines owned by Mr. Wermers. This event is a reminder of how close the pipes are to to the adjacent structures and why pre emptive replacement is prudent. Due to the sensitivity of the area, Staff is recommending proceeding with plans to replace the fire line, specifically work with Jim Wermers and return in February with a final plan, budget and schedule. Staff has inquired about the potential to share the costs with Mr. Wermers and he is planning to virtually attend the meeting.

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*BLUE LINE = APPROX LOCATION OF EXISTING 4" LINE

NEXT STEPS
1. Develop Final Plan/Budget/Schedule and Return to the Board in Feb.

FISCAL IMPACT
1. TBD

ATTACHMENTS
1. None

BORREGO WATER DISTRICT
BOARD OF DIRECTORS MEETING
JANUARY 9, 2024
AGENDA ITEM II.D

January 2, 2024

TO: Board of Directors

FROM: Geoffrey Poole, General Manager

SUBJECT: Vendor Selection – Automated Metering Infrastructure Project – T Baker/G Moran/J Clabaugh

RECOMMENDED ACTION:
Review process and recommendation. Authorize staff to proceed with Contract development.

ITEM EXPLANATION:
Beginning in mid 2023, BWD Staff and a Board Committee (Baker/Moran) began the development of documents and implementation of an interview and selection process to evaluate possible vendors for the AMI Project, funded by BWDs CA Prop 68 Grant. The process has now concluded with submittal of detailed Proposals and Cost Estimates. Following the process, the Committee is recommending Metron Ferrier based on the facts that the system is cellular based which eliminates the need for and cost of BWD to operate and maintain system wide data collection, similar to our SCADA, but much larger in scale. Metron also has designed a system with dramatically more data points every day: 1,440 vs 3, and a software package to utilize the info to estimate inside vs outside use.

The total price for meters and installation is $1.40M and the Grant budget for this Project is $1.23M. BWD will need to fund approximately $170,000 to complete the project. Once the pending Tank and Motor Grant Reimbursement #1 is received, BWD's reserves will be about 85% funded. This will result in sufficient funds available in the Contingency Reserve. In addition, additional funds can be written into the FY25 budget if the project is still ongoing at June 30th.

Statement of Qualifications

Borrego Water District AMI Project

Submitted By: Metron-Farnier

Address: 5665 Airport Blvd. Boulder, CO 80301

Contact: Dustin Rivas, Regional Sales Manager

Phone No: 303-453-9706

Table of Contents

Prime and Individual Solutions Provider Information

Name of Proposer: Metron-Farnier

Contractor License Number and Class (if applicable): N/A

DIR Registration Number (if applicable): N/A

Business Address: 5665 Airport Blvd. Boulder, CO 80301

Point of Contact: Dustin Rivas

Phone No.: 303-453-9706

**Metron-Farnier will be the sole contractor for supply and installation of this AMI project.*

Executive Summary

Metron-Farnier, LLC (Metron) is located in the high-tech hub of Boulder, Colorado. Established in 1990, Metron has been providing advanced metering solutions to utilities for over 30 years. Our physical address is 5665 Airport Blvd., Boulder, CO 80301. Metron offers a full line of high performance residential, commercial, hydrant and fire service water meters augmented with smart meter technologies. The Metron metering and sub metering solutions provide superior measurement accuracy and range with the industry's highest data resolution– and AMI reporting.

The Metron AMA system utilizes the existing cellular (Verizon and/or AT&T) network to backhaul 1- minute, time synchronized, consumption data. The ease of deployment makes this an attractive system to everyone from rural water companies to systems serving 100,000+ residents. Metron currently has over 3,000 utilities utilizing the system. There are also no additional infrastructure or network maintenance costs to incur over the life of the system. The utility also won't have to concern themselves with leasing property for infrastructure. It really is as simple as installing the meter today and reading it online the next.

Metron is proposing a turnkey project. With experience in both manufacturing and installing water meters, Metron is offering to supply meters and use an in-house crew to install the meters.

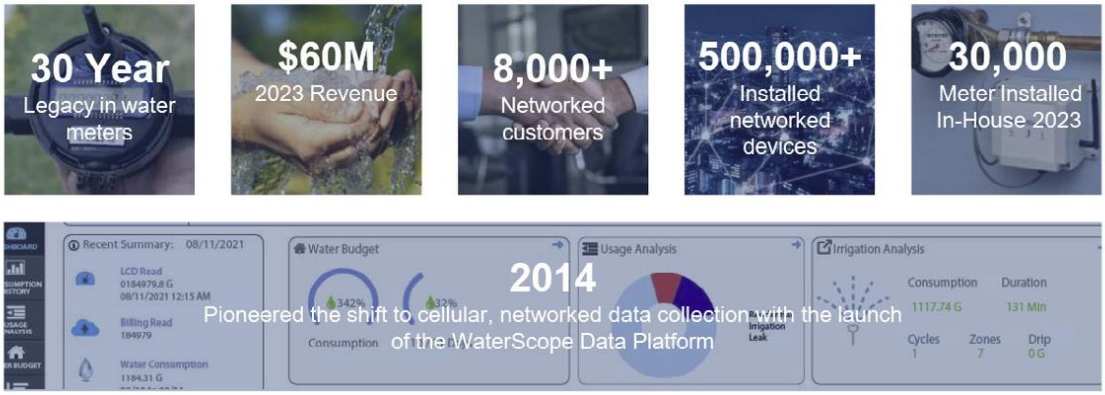
Experience

Who We Are

Metron-Farnier Making A Difference With Smart Water Systems

Metron-Farnier Smart Water System

Metron-Farnier is a water data management company providing customers with industry-leading real-time water use analytics.



What We Do

Advanced Water Data Systems for Better, Faster, Informed Decisions

Metron-Farnier Smart Water System

Monitor Critical Water Consumption Patterns	Avoid High Cost of Failure	Customer Productivity and Return on Investment
High resolution water analytics providing end-to-end property data.	Detects leaks and system failures; real-time alerts; reduce water loss, and prioritize repairs.	Significantly reduce water bills, property damage and operational costs.

Rapidly growing installed base 500,000

20% avg reduction in water costs for Metron networked customers

Level 1 Data: Utility | Level 2 Data: Large Water Users | Level 3 Data: Residents

Product Maturity and Future Roadmap

xii. AMI System

a. Provide the exact name and a narrative description of the AMI solution, from meter to software systems. Metron provides water meters that range from 5/8" – 8" in size that utilize single-jet meter technology. Metron includes VN Registers with each water meter. These registers calculate water consumption down to the minute throughout the day. The cell chip inside of the register connects with Verizon or AT&T's towers to get the information to our web portal. Metron provides a web portal named WaterScope. WaterScope is the utility and end user portal that allows access to view consumption data on a micro and macro level. Along with that, WaterScope can generate reports and send files for billing purposes.

b. Describe whether the system is available as Hosted or On-Premise or both. Hosted.

c. Software hosting is preferred. Specify the differences in hosting versus on- premise (if Proposer can provide either solution). Only Hosting.

d. Include a discussion of cyber-security measures applicable to protect: BWD's network, equipment, software, and customer data. Describe any security certifications currently held related to the proposed solution(s). Metron can provide documents that cover the security of our system upon completion of the contract. Metron has a $1million Cyber-Security Insurance.

e. For a hosted AMI solution, an overview of respective NOCs, including third- party cloud services, uptime percentage, physical locations, security (both physical and cyber), and redundancy. Metron utilizes Microsoft Azure as it's cloud platform to pass information through before it gets to WaterScope.

f. Summarize the system maintenance agreement including terms and conditions. Provide a copy of Proposer's user support Service Level Agreement (SLA) as an appendix. The SLA should clearly indicate the severity levels, description of each level, guaranteed response times, availability of maintenance and support staff, and associated cost. See Appendix III

xiii. Meter Details

a. All meters must conform to NSF 61 standard. Metron conforms to NSF 61 standard.

b. Specify the meter types being proposed and provide their product information/brochures/cutsheets. Brass Single-Jet water meters, ranging from sizes 5/8" – 8". Appendix I includes cutsheets.

c. Polymer composite body water meters and/or polymer composite threads will NOT be accepted. Metron provides brass water meters.

d. Describe how the product is configured (e.g. using handheld with IR port). Both over the air (using 2-way communication through Verizon's servers) and IR port.

e. Confirm the product can be pre-configured in the factory. Yes.

f. Describe the maximum number of digits that can be transmitted for a meter read for each meter size and the reading resolution of the meter. 8 Digits

g. Describe ability to re-program registers in the field and hardware that is required to support this activity. Utility workers will have a tablet application to reprogram units out in the field with IR devices.

h. Describe any accessories that are necessary for operation and maintenance of the product. Tamper screws/bits, tablet, IR device.

i. Verify that the production capacity for meters can satisfy the number and timeline identified in this RFQ. We verify this statement.

j. Provide the register battery type (e.g. alkaline, lithium, etc.) and life warranty provided (in years). Describe the conditions of these warranty(ies). Lithium D-Cell Battery, 20 years.

k. Describe how meters are identified and labeled. The meter shall be permanently labeled on the outside with the manufacturer's name, model number, meter identification or serial number, bar code of this number, and date of manufacture. The label should be weatherproof

and attached to the meter where normal installation will not obscure it. Serial numbers on both meter body and register. Both are waterproof.

l. Battery life/replacement process. The battery is expected to last longer than 20 years. When covered under warranty, the replacement process is as follows: Ask Metron to generate an RA number, ship unit back and include RA number, Metron will ship a new unit to Borrego.

xiv. Endpoint Details

a. Specify the endpoints being proposed and provide product information/brochures/cutsheets. Find in Appendix I

b. Provide a detailed water meter compatibility matrix. Find in Appendix I

c. Describe the frequency of data recording, hourly reads should be stored, more frequent recording is preferred. The VN register is leading the industry with 1-minute data intervals.

d. Describe how many days of meter reads can be stored before there's loss of data. Data is stored within the register for 45 days. Data stored in the cloud/portal will be stored longer than 10 years.

e. Registers must be able to detect and record low flow. For each meter type state the minimum flow that is guaranteed to be detected in gallons per time, e.g. 0.5 gallons in 5 minutes. See Appendix I

f. Describe how the product is configured (e.g. using handheld with IR port). Tablet with IR port.

g. Confirm the product can be pre-configured in the factory. Yes

h. Describe the maximum number of digits that can be transmitted for a meter read for each meter size. 8 Digits

i. Describe ability to re-program endpoints over the air and in the field and hardware that is required to support this activity. Both over the air (using 2-way communication through Verizon's servers) and IR port.

j. Provide a complete list of events and alarms supported by the AMDMS. Conditions - Notifications

Leak, Threshold Leak, Intermittent Leak, High Usage, Backflow, Zero Use, High Meter Flow, High/Low Temperature, Unauthorized Use, Unexpected Use, Watering Event, Emergency Transmit.

k. Provide the endpoint battery type (e.g. alkaline, lithium, etc.) and life warranty provided (in years). Describe the conditions of these warranty(ies). Same as register.

Provide the reading frequency that the battery life warranty is based on. Explain if On-Demand Reads affect this warranty and, if so, to what extent. Describe battery replacement process.

1 minute data. Replacement is a new register.

l. Indicate if any remote antennae will be used (where the portion protruding through the lid relays the signal), the specifications around such device, and whether such device is traffic rated. Indicate how far above the lid the antenna protrudes. Installation must be in compliance with ADA requirements. The BWD prefers that no part of the antenna be higher than the plane of the top of the lid, particularly for meters in pedestrian areas. If required, there will be a pit-mount antenna that protrudes through the lid, but sits flush on top of the lid and is traffic rated.

m. In the case any remote antennae will be used protruding through Bilco-style vault doors or steel plates, Proposer shall provide an installation option that does not compromise the integrity and safety of the door or plate. Metron offers multiple antenna styles.

n. Describe any accessories that are necessary for operation and maintenance of the product. Tamper screws/bits, tablet, IR device.

o. Verify that the production capacity for endpoints can satisfy the number and timeline identified in this RFQ. Metron verifies.

k. If an AMI Network is required, provide radio frequency information to be used by the endpoints and whether licensing with FCC is required. N/A

l. Indicate how the AMI system will obtain readings from meters in ravines, canyons, vaults, and other transmission constraining settings. If Verizon service is not available the utility can try our AT&T option, manually read, or can purchase an option for a drive-by read.

m. If proposed AMI solution includes cellular endpoints, explain the proposed solution for areas with cellular dead spots. If Verizon service is not available the utility can try our AT&T option, manually read, or can purchase an option for a drive-by read.

n. If the proposed AMI solution includes cellular endpoints, provide the cellular carriers supported. Verizon & AT&T

o. Describe how endpoints are identified and labeled. The endpoint shall be permanently labeled on the outside with the manufacturer's name, model number, endpoint identification or serial number, bar code of this number, any required FCC labeling, input/output connections, and date of manufacture. The label should be weatherproof and attached to the endpoint where normal installation will not obscure it. Both the meter body and VN register are labeled. For billing and portal purposes, the important serial number is labeled on the register. Both are waterproof.

For the pit-installed products, provide:

p. Preferred mounting method and photographs of sample installations. Under the lid antenna is preferred.

q. Height of endpoint (antenna) above the meter lid. Note ADA compliance requirements and BWD's preferences stated above. Different antenna options, all ADA compliant.

r. Minimum requirements of the meter pit lid (material construction, maximum thickness, and diameter of hole if required). If pit mount antenna required, 2in diameter hole in lid is needed.

s. Minimum clearance needed between the top of meter/register to the bottom of pit lid. 3 inches.

t. Description of how the radio is wired to the register (e.g. connector, no splicing will be allowed). There is no connection between register and radio, as Metron's endpoint is 2 in 1. Register has a coax connection with antenna.

xv. Meter Box Lid Details

a. The BWD has numerous boxes, extensions, and lids from various manufacturers already installed throughout its service area as described in Section 5.2. Required product must be universal to allow for use with existing installed standard size product from other manufacturers. Yes

b. BWD requires lids that are:

i. AMI compatible

ii. "bee-resistant"

iii. Do not have full penetration through holes (except for the endpoint antenna).

iv. ADA compliant once installed.

c. BWD prefers that lids that are available in 10k and 20k (H-20) load ratings. Yes

d. Verify that the production capacity for lids can satisfy the number and timeline identified in this RFQ. Yes

xvi. AMI Network Infrastructure

a. Provide the product cut sheets as an appendix to your SOQ. Include photographs, dimensions, and weight of proposed equipment. Find in Appendix I

b. Proposer's network design shall provide an adequate communications infrastructure to ensure that for all AMI meters, 98.5 percent will successfully report all daily readings within the last 72 hours, 97.5 percent will successfully report all daily readings within the last 48 hours and that at least 95 percent of all meters will successfully report all daily readings within the last 24 hours (Meters that have temporary physical barriers beyond the control of the District or the selected Proposer are excluded from these performance metrics). Proposer to define in detail any qualifiers to these requirements. Metron complies.

c. Provide the guaranteed interval read success rate and reporting duration for the proposed AMI system. Metron VNs backfill all 1-minute interval data.

d. Provide the guaranteed register read success rate and reporting duration for the proposed AMI system. Metron Guarantees 98% read success rate.

e. Provide the guaranteed on-demand read success rate and response duration for the proposed AMI system for a single request. N/A

f. The BWD will require a test and live production for the AMI Network Infrastructure. Describe the AMI go-live process and timing for transition from test to production. Since Metron is offering a Cellular AMI System, it is an install today and read tomorrow method. No programming/turn-on is needed, the units will be activated and available in WaterScope as soon as BWD receives the units. There is no transition from test to production.

g. Provide a list describing and a map showing the locations of each component of the proposed AMI network infrastructure and the antenna height (reference Appendix 2 for the preferred locations and maximum antenna heights). Proposer is solely responsible for determining the mix of network infrastructure (e.g. data collectors and repeaters), endpoint

placement strategies, and endpoint communication configuration needed to meet or exceed the performance requirements described herein. N/A due to Metron utilizing Verizon/AT&T's existing infrastructure.

h. The network infrastructure shall be sufficient to ensure that at least 70% of all the endpoint transmissions are received by two or more different components of the network infrastructure (e.g. data collectors, repeaters). N/A

i. Indicate the percentage of endpoints from which transmissions are expected to be received by only 1, 2, and 3 or more components of the proposed AMI Network system. N/A

j. State any special mounting requirements, including minimum height, pole, tower, and bracing restrictions, the recommended sighting, and the minimum separation from other radio, cellular, microwave, or other sources of potential interference. N/A

k. If pole- or tower-mounted, explain if the unit can be installed at the base with the antennae mounted on the tower. N/A

l. Verify that the production capacity for network infrastructure can satisfy the number and timeline identified in this RFQ. N/A

m. Describe the proposed approach to managing the installation of the AMI Network. N/A

n. Indicate the approximate time to construct the full AMI Network system, including manufacture, installation, commissioning of equipment, operation, testing, and certification. N/A

o. Describe the backhaul transports that are supported (e.g., Wi-Fi, cellular). Cellular

p. Explain if the product has the capability to store multiple readings in the case of a receiver being unavailable. If so, provide the storage limit of backup reads. 45 Days of 1 minute consumption totals.

q. Direct access to data is a requirement for the BWD. For a hosted system, describe how this access is provided, how security is ensured, and who 'owns' the data. The BWD prefers at

least ninety days of interval data to be readily available. Microsoft Azure stores the data, along with WaterScope. The data is stored in the cloud for longer than 10 years. BWD will own the data.

r. Describe any preventative maintenance requirements for the network infrastructure and the anticipated frequency of maintenance activities. Indicate in terms of FTEs the level of effort required to maintain the proposed network solution. Describe the type of work expected if the BWD performs the maintenance internally. Verizon/AT&T will maintain the system.

s. Briefly describe maintenance procedures in the event of a device malfunction or damage. BWD will have the option of replacing just the meter body, register, or both depending on what is damaged.

t. Describe if Proposer offers maintenance agreement for Proposer to perform maintenance or a Network as a Service (NaaS) option. N/A

u. Describe how the Proposer plans to safeguard performance levels over time if non-District devices are added within the service territory that cause additional 'noise' within the AMI Network. Describe procedures that will be used use to regularly check for, identify and remove interlopers on its licensed frequency(ies) or overpowered signals on unlicensed frequencies. Indicate who will be responsible for this effort. If BWD, describe provisions offered by Proposer or its system to assist in this effort. If Proposer, indicate the length of time such protection will be offered in association with this proposal/contract. Metron will assist with multiple solutions to achieve agreed performance levels.

v. Describe your recommended approach for adding additional infrastructure to cover areas of planned future developments. N/A

xvii. AMDM System

Provide, for the AMDMS being proposed, the following information regarding the application and the application Proposer:

a. The formal name and software version being proposed for implementation. WaterScope

b. Describe if the solution is available as Hosted or On-Premise or both. The District prefers a hosted solution. Hosted.

c. The AMI solution will provide extensive new information to the District to better manage its customers and their accounts, to provide insights in water use, to better run its operations, to reduce water loss through leaks, among others. Describe its capabilities and user interface(s). Due to the granularity of Metron's data intervals, BWD will have all abilities to better manage and understand their water use. From leaks, indoor use, and irrigation both BWD and it's customers will have abilities to access reports and alerts to understand usage.

d. Diagnostic tools are essential to the efficient use of BWD field staff's time. Describe the diagnostic tools and their interfaces (e.g., a field technician handheld, text messages to staff cell phones, emails etc.). Tablet and IR device allows the utility to program and run diagnostics off of the register. The phone app, text messages, email, and the online portal are all ways for the utility to receive information of usage.

e. Describe the solution's resiliency in times of network outages. If the solution provides a means to read meters via a nearby handheld device and transmit the reads from the handheld to the AMDMS, describe it. 45 days of consumption data/reads stored in the register and will backfill when networks is up and running.

i. How long will the handheld operate between battery recharging? N/A

ii. How many meter reads can it store internally? 45 daily reads.

iii. How are the meter reads transmitted to the AMDMS? Through the cellular system.

f. Timely and accurate alerts to leaks and other potential problems will enable the District to reduce water loss in the system. Water loss reports and alerts are enabled in WaterScope.

i. Describe the alerts for undesirable conditions, such as leaks, backflows and tampering. Email alerts will be sent to desired employees on a daily basis.

ii. Describe the methods of alert notification. Email, Text, web portal, push notifications.

g. Describe any capabilities to locate leaks in BWD's system. If BWD desires, WaterScope can create DMA groups to help narrow down leak locations.

h. Currently the only customer access to BWD systems is for payment of bills, which is provided by Springbrook's CivicPay portal. The AMDMS solution must provide a website that can be accessed thru the CivicPay portal and preferably additional iPhone and Android mobile applications, Customer Portal. Describe the capabilities provided to BWD's customers in both the website and on the mobile applications: All access for customers in the web portal is controlled by what the utility would like them to see. The customer app is also controlled by the utility. Reads, usage, and alerts are available in both.

i. How is metered usage data displayed, graphically, tabular, other? How much history will be maintained? Is the display of this information configurable? Data is displayed graphically, with the ability to grab the raw data for numerical breakdown. 10 years of history will be maintained. This can be customized.

ii. Can the user set alerts, if so what are they and how are they set? Also how are the alerts delivered to the customer? Yes, users can receive all alerts that the utility can receive. The utility has ability to restrict which alerts they want the customers to receive. Alerts can be received through text or push notifications.

iii. What other information and analytics are available? Usage, flow rates, leaks, irrigation, residential indoor breakdown, water loss, comparative, water budget, and much more.

i. Direct access to data is a requirement for the BWD. For a hosted AMDMS, describe how this access is provided, how security is ensured, and who 'owns' the data. The BWD expects at least three (3) years of interval data to be readily available in the hosted AMDMS. The BWD requires access to hosted data periodically for their own use beyond the three-year (3) requirement. Describe how the Proposer would meet these requests/requirements. Indicate whether there is a charge for this service (do not specify the amount). BWD will have the ability to grab the raw data out of the Azure servers for longer than 3 years of interval data. Microsoft

and Verizon both have high-level security protocols. If desired Metron can deliver security documents. There is no charge for this data.

j. A narrative description of the proposed AMDMS, system components, and capabilities. Clearly state what is included in the base offering. Include the following: Metron is offering 10 years of access to WaterScope's web portal for both the utility and customer. This includes 1-minute data intervals for each unit deployed in BWD's system. Billing integration is included.

i. The system must provide alerts for undesirable situations such as leaks, backflows, tampering and error conditions. These desired alerts are provided.

1. The alerts must be configurable so BWD can tune the system to best meet its needs, explain the flexibility the AMDMS alert system has when it comes to configuring alerts and alert delivery. Alerts are configurable.

2. Alert delivery: Explain how the AMDMS alert system would integrate into BWD's current notification system. BWD field and key office staff are issued cell phones for business use. During the weekday work hours alerts are received by office staff and if field staff is needed the office staff will call the lead on duty. For non-business hours customer calls are taken by an answering service who will call the designated on-duty BWD person. If that person cannot be reached the answering service will call the backup. Designated on- duty and backup staff are rotated weekly and the answering service is updated. BWD will have the ability to configure the alerts delivery methods and timely manner of the alerts.

3. Alert severity: Alerts have different severities and require different responses and response times. Severe problems missed because of an alert or alert delivery failure must be avoided. Also, over alerting can be just as problematic, if there are too many non- urgent alerts sent, it becomes noise and the alert system can be ignored because it's too difficult to screen out the real problems. Explain how the AMDMS ensures delivery of high quality actionable alerts. Metron allows the utility to adjust the alert schedules and recipients. For "real problems" Metron has incorporated an emergency transmit alert where a large leak has begun, or no usage is occurring, and it sends a text immediately.

ii. Leaks: Water in BWD's desert district is precious and the loss of water through leaks is not only wasteful but upsetting to the community and can cause a loss of goodwill. Discuss:

1. Can the system detect leaks on the consumer side? If so, what conditions, (e.g. slow leak, burst pipe, etc.) can trigger an alert? Yes, WaterScope can detect trickle leaks, but also allows the utility to change parameters to get alerts for leaks of an actionable size.

2. Can it detect leaks in BWD's pipes? If so, how does it detect the location of a leak in the pipeline? If so, what conditions, (e.g. slow leak, burst pipe, etc. can trigger an alert? How accurate is the leak location detection?

3. Can BWD set thresholds for leak detection (e.g. 0.1 gpm for a 3/4" meter)? If yes, describe. Yes, WaterScope allows the utility to adjust thresholds of leaks for each sized meter.

4. Can customer set thresholds for leak detection (e.g. 0.1 gpm for their meter)? If yes, describe. Yes, customers can get leak alerts for their own meter.

iii. The AMDMS must have the ability to generate analytic data to readily assist the utility with predictive meter maintenance, water loss, consumptive water use by group or subgroups of meters. See Appendix II

1. The system should be able to differentiate indoor versus irrigation water use and produce associated analytical reports. Yes, WaterScope is capable of this.

2. The system should be able to maintain analytics for special classifications of meters such as hydrant meters and irrigation meters. Yes, WaterScope is capable of this.

3. The system shall be able to maintain analytics for special classifications of meters such as hydrant meters and irrigation to assist in in water loss calculations and consumptive use by account classification. Provide details on the AMDMS analytic capabilities and their user interface(s). Yes, WaterScope is capable of this. Utilities are able to create groups/segments and run reports based on those certain groups.

iv. A discussion of Validation, Estimation, and Editing (VEE) capabilities.

v. A concise list and description of all operational reports (e.g., system monitoring, meter status, VEE exceptions, etc.) and analytics (e.g., historical use trends, revenue forecasting, leak detection, etc.) available. See Appendix II

vi. A discussion on virtual metering (DMA or aggregated) capabilities: See Appendix II

1. Can user-defined aggregated meters be individually configurable, depending on the user, and can the individual configurations be stored? Can a virtual meter be selected by any attribute within the billing system, such as residential, commercial, etc.? Can a user define stored alerts/alarms for each virtual meter? Can each user define multiple virtual meters? Yes

2. Describe the methods for defining virtual meters. Can virtual meters be selected based on attributes synchronized with the billing system such as customer classes (residential, commercial, industrial) or account status or meter size? Can ESRI GIS-generated meter numbers be imported to define a virtual meter such as each water meter within a water pressure zone? Can user-generated lists of meter numbers be imported to define a virtual meter? Describe any other methods/tools available to define virtual metering. Utilities can create groups or segments to help narrow down analytics. These can be incorporated into the billing system.

3. Is any training or assistance available to support definition of virtual meters for the Utility? Yes

4. Once a virtual meter is created, can the user define the name of the virtual meter and store it in a library for others to use? Yes

5. Can virtual metering data be exported for use in ESRI GIS or third- party reporting applications? Yes

vii. Describe individual user ability to establish user-defined alarms based on user-defined thresholds for operational reports and virtual metering. See Appendix II

k. Discuss the AMDMS resiliency. BWD maintains a 24x7 water service for its customers and needs the tools to ensure the AMI system is running correctly. However, it is not uncommon for wireless communication systems to have outages or missing data transfers. Describe the tools (reports, alerts, other) that. WaterScope will alert for missed reads, and the register will backfill data and reads once the system is up and running again.

i. Describe how the system works if a register fails to transmit a daily update. Does the AMI system estimate usage for the missing data and display the estimates? If so, how many consecutive days of missing data will the system fill in estimated usage data? Is there any notification or indication that estimated data is being used? If so how? WaterScope will alert for missed reads, and the register will backfill data and reads up to 45 days once the system is up and running again.

ii. If a register fails to transmit data for multiple days in a row, how is BWD notified? Can BWD specify the number of consecutive missed days that will trigger the notification? Yes, BWD will be notified of the missing read. Also, WaterScope has details in signal quality and strength to notify poor signal areas.

iii. Describe the other register/meter failure or problem modes (e.g. low battery) and how those are made available to BWD. Metron has access of low battery, tamper, low signal, and reception problems that can be alerted.

iv. If a register fails to work the meter information must be read and entered in the AMI Vendor's system. Describe how this works. Are manual reads keyed into the handheld device application? Can a picture of the meter be taken and stored in the system? Manual read would be necessary.

l. Discuss methodology and roll-out approach. Include: Once the meters are installed they will be available in WaterScope. From there Metron can create a billing transport file or create an API to integrate into BWDs billing system.

i. A discussion on what interface mechanisms are available to facilitate integration with other utility systems (e.g., MultiSpeak, REST API, etc.). All of the above can be made available.

ii. The District will require a test and production environment for the AMDMS. Describe the AMDMS go-live process and timing for transition from test to production. N/A

m. Include discussion of cyber-security measures applicable to protect the

District's software and customer data. Metron has a $1M Cyber Security Insurance. Also, Metron has incorporated high level security protocols.

n. For a hosted AMDMS solution, an overview of respective NOCs, including third- party cloud services, uptime percentage, physical locations, security (both physical and cyber), and redundancy. Microsoft Azure cloud services.

o. Proposer should provide documentation to support future scalability and expandability beyond what is initially required to support BWD's implementation. The only charge to expand is to purchase more meter/VN registers. All updates are included with WaterScope.

p. Provide the implementation process for releasing and applying software and firmware upgrades, bug fixes, and patches. Include overall implementation timeframe, Proposer effort/time/resources, and client effort/time/resources. Discuss the internal QA procedures currently in place to ensure bug fixes, patches, and upgrades are fully tested and validated prior to release. Discuss internal QA procedures currently in place to ensure the identification and correction of system security vulnerability. Metron encourages feedback and request from utilities for future development. All bug fixes are included in updates to the system.

q. Summarize the system maintenance agreement including terms and conditions. Provide a copy of Proposer's user support SLA as an appendix. The SLA should clearly indicate the severity levels, description of each level, guaranteed response times, availability of maintenance and support staff, and associated cost. Maintenance is included in the cost of the connectivity plan.

Implementation Approach

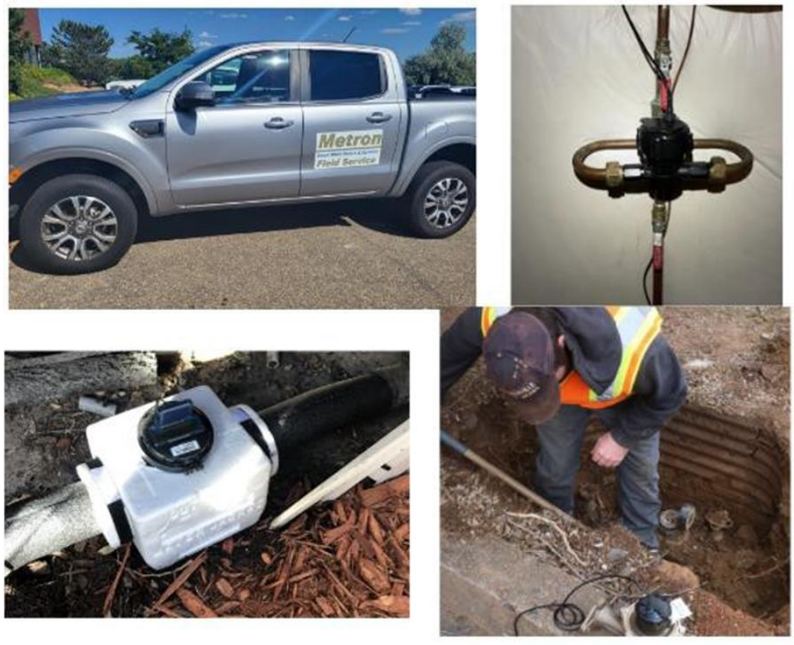
Overview

Metron has a dedicated field service division with meter replacement contracts being a primary function. The division has a full-time staff of specialists for meter replacement projects. The remainder of this document describes our qualifications, team, project methodology and methods.

Qualifications

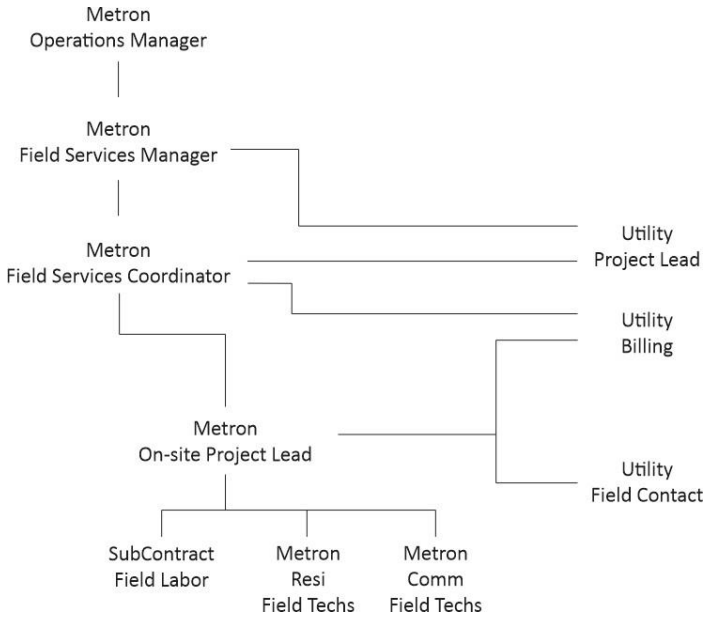
Metron has a dedicated field service division with meter installation contracts being a primary function. The division has a full-time project manager, coordinator, scheduler and multiple technical leads. We have extensive experience in residential and commercial meter replacements, in both indoor and outdoor locations. We also perform register retrofits on competitor meters.

Metron maintains well trained crews for meter replacements along with dedicated vehicles and tools. We utilize a cloud-based software to build project books for scheduling and logging of all field work. This project book is shared with the utility during the project.



Field Services Team

Metron typically structures its project team as shown below:



Field Services Manager
The Metron Field Services Manager will have overall responsibility for the project. He will arrange the site survey, build the project team, lead the kickoff, oversee the project execution, direct training and perform the commissioning.

Field Services Coordinator
The Field Services Coordinator will serve as the communication hub for the project interfacing with the on-site project lead and installers as well as the utility contacts. The project coordinator will also issue the weekly progress reports and be on-call of the utility for any questions.

On-site Project Lead
The on-site project lead will serve as the lead for the field technicians and ensure quality of work and complete/accurate field data is being maintained.

Field Technicians
The field technicians will perform the meter replacements.

Subcontractors
Any subcontractors hired for the project will be licensed and insured. Typically, subcontractors would only be used for physical labor such as digging/excavation on non-standard work.

Utility Contacts
Typically, utilities will have three primary contacts on the project: A project lead, billing/customer service and a field contact. We want to make these interfaces as clear as possible to avoid any confusion or frustration for the utility.

Project Methodology

Metron's project methodology defines our processes and methods before, during and after the project. The following diagram shows the methodology from start to finish. Each phase of the methodology is described.

Project Review

The project review is a pre-sales effort to ensure an understanding of the scope of work and the utility's requirements. This will involve sales, field service and utility personnel. In many cases, Metron Field Service will want to visit the utility for a short site survey.

Kickoff

The kickoff meeting is a necessary part of the project in order to establish all working parameters the project. During the kickoff meeting, Metron will establish all utility requirements with the following list as a starting point.

- Project Team
- Certificate of Insurance w/ utility as co-insured
- Vehicles/Tools
- Project List
- Residential/Commercial Meters
- Personnel Requirements
- End-Customer Interaction
- Appointment Scheduling
- Installation Schedule
- Data Collection
- Progress Reporting
- Billing System Interface
- Training
- Standard vs Non-Standard Work
- Project advertisement / Mailings / Door hangers

Following the kickoff meeting, Metron Field Service will send a report to the utility with notes on all of these parameters plus any other requirements brought forward by the utility.

The field services contract will have clauses on two important topics:

- Accessibility: Metron will have the responsibility to attempt to access the site (via on-site visit or appointment) three times. If we are not able to gain access, the utility will then be responsible for those sites.
- Standard vs non-standard work: The Metron contracts are intended to be meter replacement contracts and all of our training, tools and methods as well as our pricing are targeted for that function. In is usually inevitable that other associated work (such as digging, excavation, line work, etc.) is required. However, rather than inaccurate estimates of this work in the pricing, we isolate this work as non-standard and typically hire local subcontractors to perform the work. Non-standard work will be pre-approved by the utility and invoiced at a reasonable rate.

Project Execution

The project execution is the meter replacement work in the field. Residential and commercial meter replacements are typically handled as separate engagements due to the complexity of larger commercial meters which may also require appointments due to the shutdown. Within the project, the field technicians operate with the "methods" as described in the following section.

Billing System Interface

Metron' Waterscope software has a flexible interface for billing/CIS systems. At the start of the project, a Metron IT representative will contact the utility and begin the process to interface the utility's system with Waterscope through file transfers. This usually serves as a method to update the utility's system during the project as well as for billing purposes.

Training

Metron will conduct multiple stages of training for different groups within the utility. In general, these groups will be field, administration and customer service, but the utility can request additional training.

We typically perform a brief training at the beginning of the project to get the utility personnel a basic understanding of our meters and systems:

Field:	Meters/Registers/Antennas and local communication/configuration
Admin:	Welcome to Waterscope training plus initial login credentials
Customer Service:	Welcome to Waterscope training plus initial login credentials
Billing	Welcome to Waterscope training plus initial login credentials and interface discussion

Towards the end of the project, Metron will work with the utility to schedule full training on the meters and system in the categories listed above. Metron will work with the utility on the training schedule and content.

Commissioning

Commissioning is the completion of the project and transfer of all final documentation.

Methods

Project book

The project book is built within Microsoft Teams and will contain all of the pertinent project details:

Meter list: This is the key information from the utility and must contain a list of all meters with addresses, locations (if available), existing meter number. Any accounts which will need installation appointments (i.e. indoor meters, commercial meters at business, etc.) will also require contact names and phone numbers.

Schedule: This is the project schedule which follows our methodology on the utility project. The percent complete per schedule will be maintained during the project.

% Complete: This is the percent complete based on the meter quantities.

Appointments: If appointments are required, Metron's scheduler will call to arrange dates/times for the appointments and build an appointment sheet for the installers.

Install Sheet: This is the list that the installers will access to record the meter replacement information such as old meter number, final read and new meter/register number.

This project book will be shared with the utility (as read-only).

Data Recording

In addition to the install sheet in the project book, Metron's field installers can also take pictures of the old meter and the new meter at the site. These pictures would be located in a folder with access by the utility. All data is recorded and then reviewed each day. If data recording issues are detected, the specific installer would revisit the site to resolve the issue.

Progress Reporting

Although the utility will be given access to the project book, the on-site lead and/or the project coordinator can meet with the utility on a regular basis as requested.

Personnel Standards

All Metron personnel will be required to wear a badge which shows their picture along with the Metron Field Service logo. Metron also highly recommends that the utility posts the project on their website and also provides a letter stating Metron Field Service's legitimacy in the area.

Customer Interaction

All customer interaction requirements presented by the utility at the kickoff meeting will be followed by all field personnel. Any issues will be conveyed to the utility immediately.

Project Book Example:

Schedule

XXXX

Percent Complete

XXXX Installation Project

% Complete

Summary | Update 6/14/2021

Region	Lot	Actual	% Complete	Price	Bid
sfo Register	0	21		$ 350	$ 7,350
Register Install	0	21		$ 100	$ 2,100
5/8" meters	684	495	58.6%	$195	$81,900
1" meters	15	51	340.0%	$300	$15,300
					$0
1.5" meters	48	58	120.8%	$490	$26,100
2" meters	65	35	50.7%	$200	$13,500
3" meters	0	0		$900	$0
4" meters	0	0		$1,200	$0
					$135,300
	807	589	72.2%		

Appointments

Install sheet

Appendix I

Metron-Farnier
Smart Water Meters & Systems

Innov8-VN
Cellular Water Meter Register

The innov8-VN is a cellular water meter register which mounts with all Metron water meters. The innov8-VN enables the most advanced meter data and analytics in the industry. The register can also be adapted to many other traditional water meters providing instant AMI upgrades to deployed meters. The register senses the meter magnetic down to ¼ turns and stores data in 1 minute or 5-minute intervals. The innov8-VN register utilizes the Verizon Wireless ™ network to securely and reliably deliver readings, high resolution interval data and diagnostic data to the cloud-based meter data management system (MDMS). Utilities and consumers can access data via the powerful Waterscope® web portal and via email notifications.

SPECIFICATIONS

Operational

Cellular Channel	
Carrier:	Verizon Wireless
Method:	LTE Cat-M
FCC/IC:	License exempt
Secondary:	Proprietary InfraRed port
Onboard Storage:	5 min intervals: 227 days 1 min intervals: 45 days
LCD:	8 digits
Display:	Duplicates meter/register Configurable digit underlines
Units:	G, Ft3 or m3
Battery:	One (1) 19Ahr non-replaceable
Type:	Lithium Thioynl Chloride
Lifetime:	10 years nominal

Physical

Dimensions	3.6W x 3.6H x 2.5D inches
w/o antenna	91W x 91W x 63.5D mm
Weight:	0.70 lb (0.31 kg)
Temperature	
Storage	-20° to 140° F (-6° to 60° C)
Operation	-0° to 140° F (-18° to 60° C)
Humidity:	0 to 100% RH condensing Fully submersible (IP-68)

DESIGN

Construction: The innov8-VN register is a compact, fully encapsulated package for all environments.

Meter Attachment: A standard plastic meter housing provides a robust and tamper-resistant attachment to all Metron water meters. Metron can also provide attachment housings for many other meter types.

Outputs: The innov8-VN register can be supplied with a 3-wire standard AMR output. The output cable can be ordered in different lengths and with Itron or Nicor waterproof connectors.

Antennas: The innov8-VN Register has an antenna port which can accommodate either a local antenna or a remote antenna for extension through walls or outside pits/vaults.

Activation: All innov8-VN units come from the factory activated and provisioned on the Verizon Wireless network. Consumption data on the Waterscope web portal can be accessed within 24 hours of installation.

Operation: The innov8-VN Register has an internal sensor which tracks the meter's measuring element and stores consumption every log interval. The unit will also perform on-board measurement diagnostics regularly. Once per day during super off-peak hours (1 to 6am local time), the unit will negotiate a secure channel with the Verizon Wireless tower and transmit a daily packet with the current meter read, the daily interval logs and other diagnostic data. Following the transmission, the unit waits for any commands from the cloud server (such as configuration or data backfill) prior to returning to normal operational mode.

Metron-Farnier
Smart Water Meters & Systems

Innov8-VN
Cellular Water Meter Register

FUNCTIONALITY

Configuration: Configuration can be performed via the local InfraRed (IR) port with Metron's IR bridge. The IR bridge can be coupled via USB to a Win10 computer with the Communicator software or be operated in a standalone mode.

Configuration Options
- Index Ratio (meter calibration)
- LCD Configuration
- Measurement units
- Log Interval
- 3-wire output digits

Datalog capacity:	227 days with 5-min intervals 45 days with 1-min intervals
Data resolution:	per Index Ratio
Data intervals:	Five (5) min (default) or One (1) min
Data Backfill:	Automatic from MDMS
OTA Updates:	Available
Onboard Time:	Synced with Verizon
Security:	VPN and encryption Contact Metron for info

Flags/Alerts

Consumption
- Leak / Threshold Leak / Intermittent Leak
- High Usage / Zero Usage
- Backflow
- Unexpected / Unauthorized Usage
- High/Low Temp
- Watering Event

Diagnostic
- Low Signal Strength

DISCLAIMERS

Transportation: The innov8-VN Register contains a lithium battery and thus is prohibited from shipment by AIR. Please conform with all shipping regulations for lithium batteries.

Safety: The innov8-VN operates with radio frequency (RF) during its cellular communications. Metron can provide a whitepaper covering the potential health effects of smart meters.

Disposal: The battery inside the innov8-VN is not replaceable and removal should never be attempted. The innov8-VN units should be disposed of in accordance with local regulations.

COMPATIBILITY

The innov8-VN is compatible with a wide range of industry registers and electronic meters.

Metron-Farnier:	Spectrum residential meters Altair residential meters Spectrum commercial meters Enduro industrial meters Enduro fire service meters Challenger turbine meters Voyager hydrant meters

Metron has tested meters from other meter manufacturers and offers compatibility with many meters with magnetic measuring elements. The following shows a sample of the types of meters. Consult with your Metron representative for questions on compatibility or testing.

Badger:	PD meters Turbine meters
Sensus:	PD meters Turbine meters
Neptune:	PD meters Turbine meters
Mueller:	PD meters Turbine meters
Master Meter:	PD meters
Elster:	PD meters
Zenner:	PD meters
RG3:	PD meters
Hendey:	PD meters

WARRANTY

Please contact your Metron representative for formal warranty certifications.

LEGAL

Metron-Farnier
Smart Water Meters & Systems

Residential Spectrum Meters

APPLICATIONS

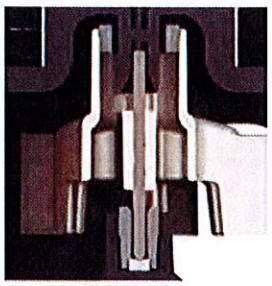
The Spectrum Single-Jet Meter is the widest range, single measuring element meter available to U.S. utilities. The Spectrum residential meters are designed for extremely wide range and long-term accuracy. The single-jet technology is highly impervious to dirt, sand or grit in the water system. The combination of design simplicity, superior grade materials, and high quality manufacturing standards allows for years of virtually new meter performance with no maintenance.

The Spectrum residential meters are available in composite (reinforced plastic) and lead-free bronze models across all common residential sizes.

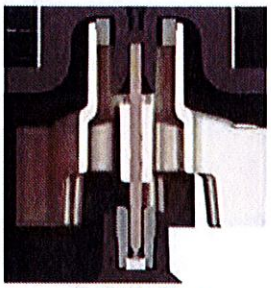
Coupled with the advanced innov8 registers, the Spectrum single-jets are the meter of choice for your revenue assurance and water loss programs.

OPERATIONS

Incoming water rotates a suspended impeller that is magnetically linked to the register. A low friction tungsten carbide bearing supports the impeller at low flow rates while a tungsten carbide thrust bearing provides the support at high flow rates. This unique "dual bearing" design provides unparalleled accuracy and durability at both high and low flows.



@ low flow



@ high flow

To maintain accuracy, the meter must be installed horizontally (±10°) in the direction of water flow.

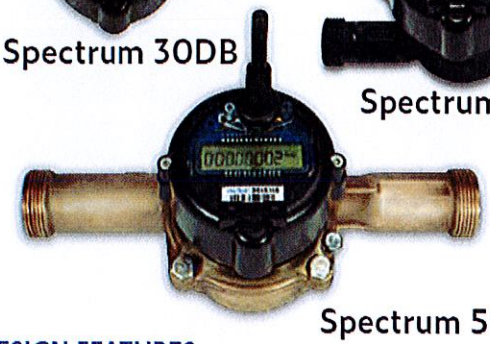
All Spectrum Model D meters utilize innov8 registers. These sealed electronic registers provide a high resolution interface to the meter and have multiple cellular, AMR, AMI and SCADA outputs. All registers are attached with a robust tamper-resistant housing.

Spectrum 30D

Spectrum 25D

Spectrum 30DB

Spectrum 30DL



Spectrum 50DL

DESIGN FEATURES

- High accuracy – exceeding high and low range of AWWA residential standards
- Starting flow below 1/16 gpm
- Excellent performance in adverse water conditions
- Advanced materials for long-term durability
- Unaffected by sand or small debris in line
- No straight pipe requirements upstream or
- downstream of meter
- High resistance to freezing
- Lightweight, compact design for simple installations
- No strainer requirement
- Compatible with all innov8 registers and associated AMR/AMI capabilities.

MATERIALS

All residential Spectrum Model-D meters are designed and manufactured to meet or exceed AWWA C712 standard design and performance specifications. All Models are maintained with NSF-61G lead-free certifications.

STANDARDS

AWWA C712 – Single-Jet Meters
NSF-61G – Drinking Water System Components Health Effects

Metron-Farnier, LLC
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MECHANICAL SPECIFICATIONS

Spectrum 15D	AWWA 5/8x1/2" (15mm) Short
Construction:	Composite
Threads	3/4" NPSM
Lay Length	3.9" (100 mm)
Spectrum 25D	AWWA 5/8x1/2" (15mm)
Construction:	Composite
Threads	3/4" NPSM
Lay Length	7.5" (190 mm)
Spectrum 30D	AWWA 5/8x3/4" (15x20mm)
Construction:	Composite
Threads	1" NPSM
Lay Length	7.5" (190 mm)
Spectrum 30DB	AWWA 5/8x3/4" (15x20mm)
Construction:	Lead-free brass body + Composite plates
Threads	1" NPSM
Lay Length	7.5" (190 mm)
Spectrum 30DL	AWWA 3/4x3/4" (20mm)
Construction:	Composite
Threads	1" NPSM
Lay Length	9.0" (230 mm)
Spectrum 50DL	AWWA 1" (25mm)
Construction:	Lead-free brass
Threads	1.25" NPSM
Lay Length	10.75" (273 mm)

MATERIALS

S25/S30Dx models	
Composite Body & Top-plate:	Reinforced Nylon (Polyamide 12)
Brass Body & Top-plate:	EcoBrass™ - Lead Free Brass
Impeller:	Polypropylene
Impeller Bearing:	Nivaflex
Impeller Pivot:	Sapphire
Impeller Shaft:	Tungsten Carbide
S50DL model	
Body:	Low lead Bronze: ASTM C875
Impeller:	Polypropylene
Impeller Bearings:	Tungsten Carbide
Impeller Shaft:	AISI 303, Tungsten Carbide tip
Register Housing:	Thermoplastic

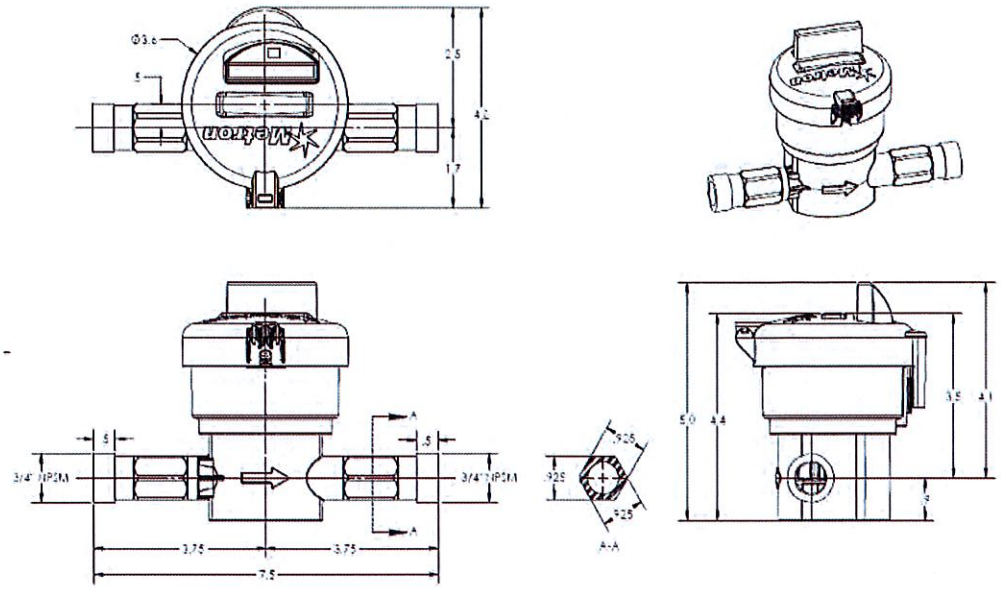
MARKINGS

Engraved on Meter Body:	Model
	Serial Number
	Date of Manufacture
	NSF-6
	Direction of Flow

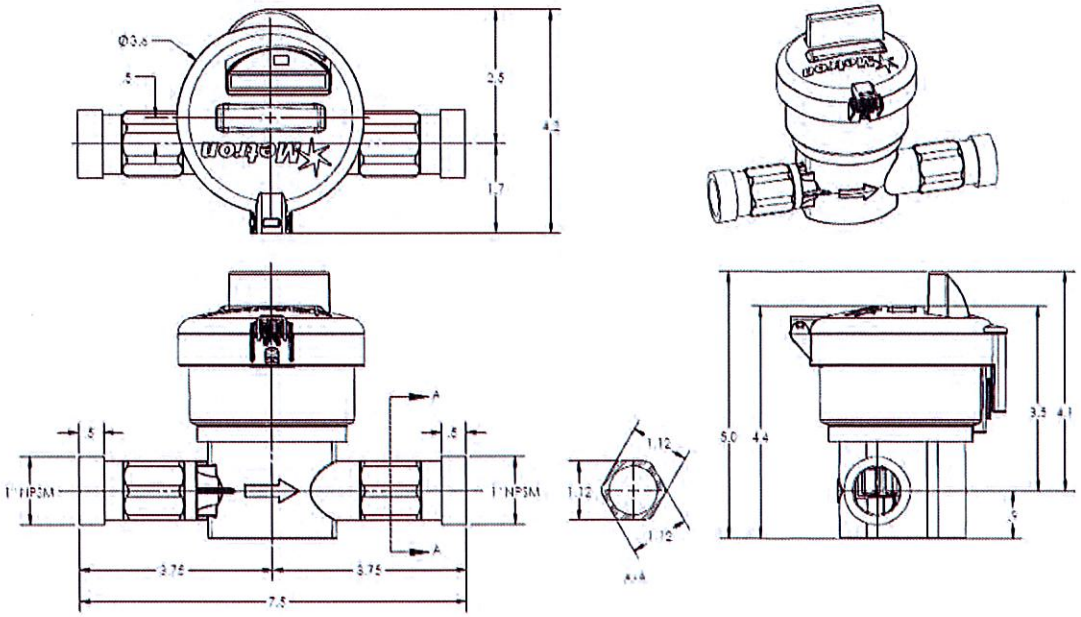
DIMENSIONS

Spectrum 15D – 5/8" Short: Contact Metron

Spectrum 25D – 5/8"

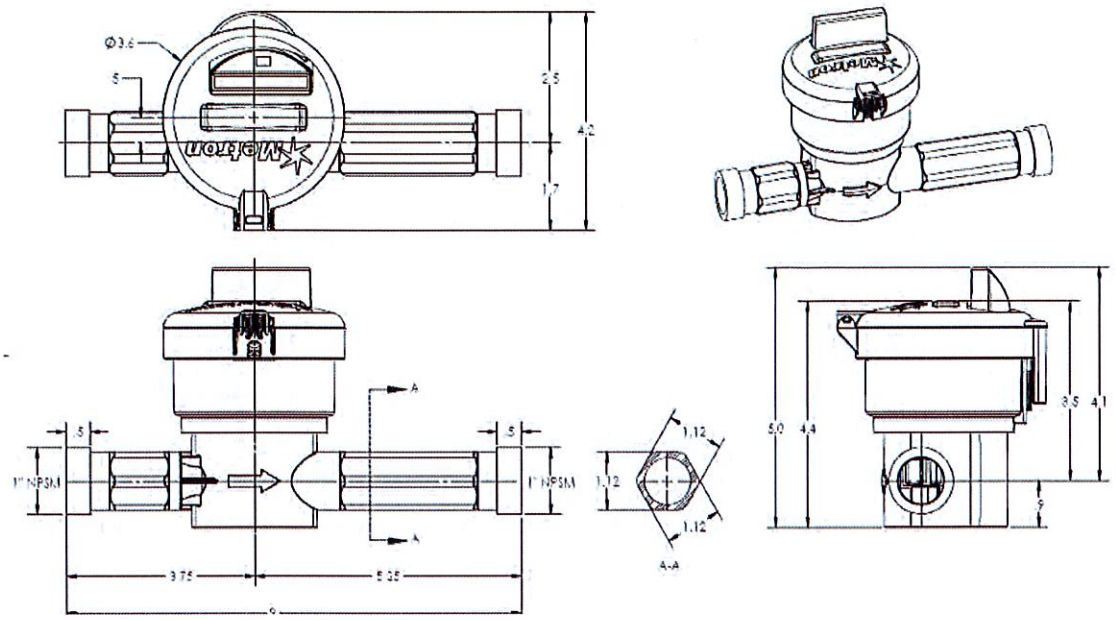


Spectrum 30D and 30DB– 5/8x3/4"

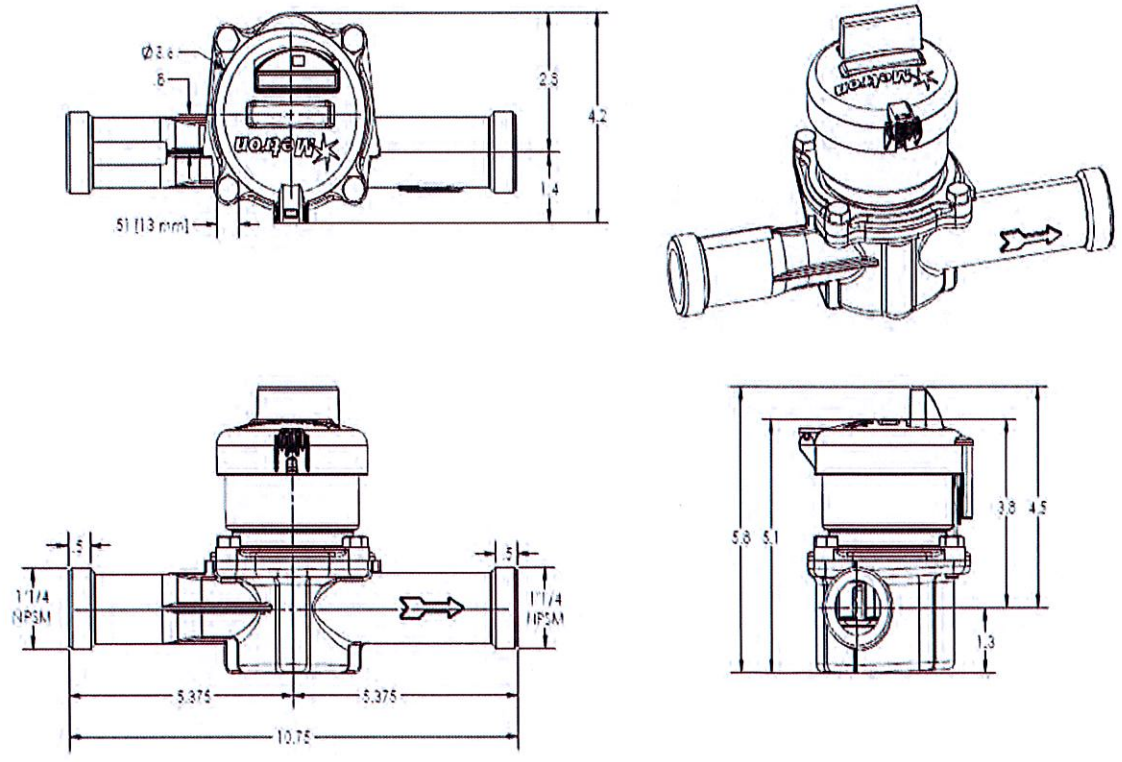


DIMENSIONS

Spectrum 30DL - 3/4"



Spectrum 50DL – 1"



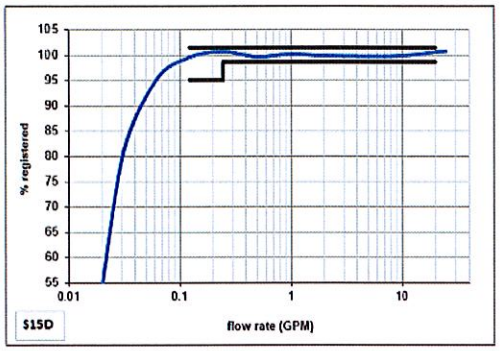
FLOW & PRESSURE SPECIFICATIONS

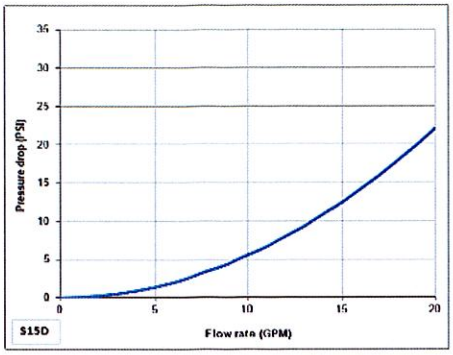
Spectrum 15D – 5/8" Short Model		
Operating Range (98.5 to 101.5%)	0.088 to 15 gpm	(0.02 to 3.4 m3/hr)
Low Flow (95% min)	0.06 gpm	(0.014 m3/hr)
Max Continuous Duty[1]	15 gpm	(3.4 m3/hr)
Max Intermittent[2]	20 gpm	(4.5 m3/hr)
Pressure Loss at Max Continuous	10 psi	(0.69 bar)
Max Operating Pressure	230 psi	(15.9 bar)
Max Operating Temperature	140 °F	(60 °C)
Spectrum 25D – 5/8" Model		
Operating Range (98.5 to 101.5%)	0.125 to 20 gpm	(0.028 to 4.5 m3/hr)
Low Flow (95% min)	0.0625 gpm	(0.0142 m3/hr)
Max Continuous Duty[1]	20 gpm	(4.5 m3/hr)
Max Intermittent[2]	30 gpm	(6.8 m3/hr)
Pressure Loss at Max Continuous	22 psi	(1.51 bar)
Max Operating Pressure	230 psi	(15.9 bar)
Max Operating Temperature	140 °F	(60 °C)
Spectrum 30D / 30DB – 5/8x3/4" Model		
Operating Range (98.5 to 101.5%)	0.125 to 30 gpm	(0.028 to 6.8 m3/hr)
Low Flow (95% min)	0.0625 gpm	(0.0142 m3/hr)
Max Continuous Duty[1]	30 gpm	(6.8 m3/hr)
Max Intermittent[2]	40 gpm	(9.1 m3/hr)
Pressure Loss at Max Continuous	13 psi	(0.9 bar)
Max Operating Pressure	230 psi	(15.9 bar)
Max Operating Temperature	140 °F	(60 °C)
Spectrum 30DL – 3/4" Model		
Operating Range (98.5 to 101.5%)	0.125 to 30 gpm	(0.028 to 6.8 m3/hr)
Low Flow (95% min)	0.0625 gpm	(0.0142 m3/hr)
Max Continuous Duty[1]	30 gpm	(6.8 m3/hr)
Max Intermittent[2]	40 gpm	(9.1 m3/hr)
Pressure Loss at Max Continuous	13 psi	(0.9 bar)
Max Operating Pressure	230 psi	(15.9 bar)
Max Operating Temperature	140 °F	(60 °C)
Spectrum 50DL – 1" Model		
Operating Range (98.5 to 101.5%)	0.5 to 70 gpm	(0.114 to 15.9 m3/hr)
Low Flow (95% min)	0.125 gpm	(0.028 m3/hr)
Max Continuous Duty[1]	50 gpm	(11.4 m3/hr)
Max Intermittent[2]	70 gpm	(15.9 m3/hr)
Pressure Loss at Max Continuous	8.0 psi	(0.55 bar)
Max Operating Pressure	230 psi	(15.9 bar)
Max Operating Temperature	140 °F	(60 °C)

Notes

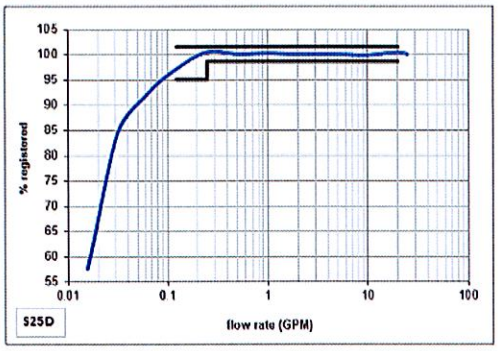
1 Starting flow rate for reference only
2 Max Continuous defined by AWWA as flow rate which can be maintained 24 hrs/day x 7 days/week
3 Max Intermittent defined as flow rate which can be maintained 1 hr/day average

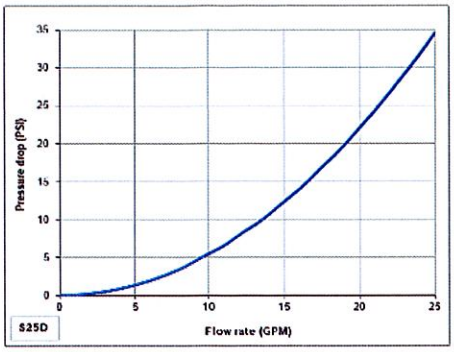
S15D



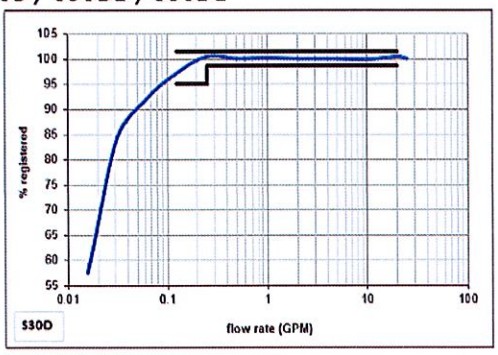


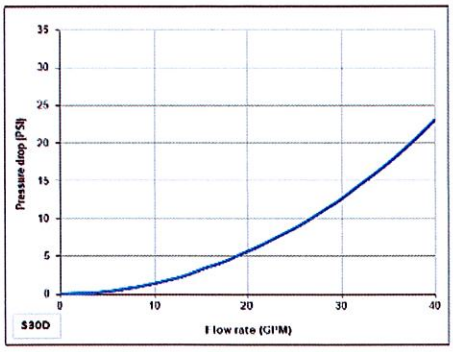
S25D



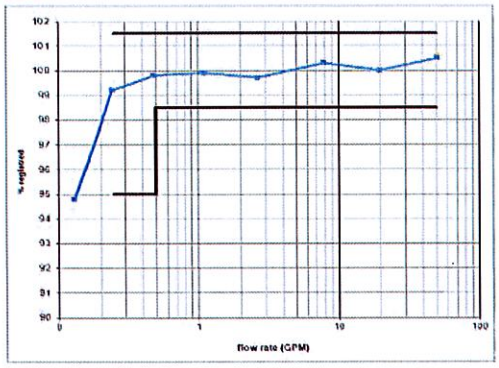


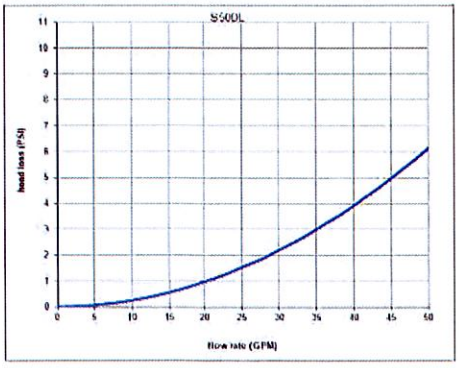
S30D / S30DB / S30DL





S50DL

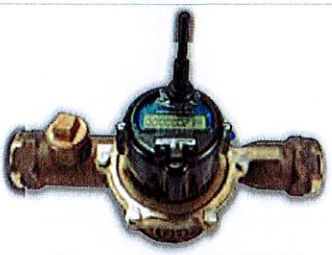




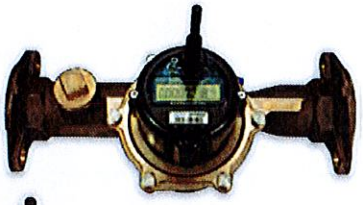
APPLICATIONS

The Spectrum Single-Jet Meter is the widest ranged, single-measuring element meter available to U.S. utilities. The operation of the single jet element allows the meter to be applied in the vast majority of potable cold water, small commercial applications. These meters are designed with a very high range, including low flow performance equaling or exceeded all other metering technologies. Coupled with the advanced innov8 registers, the Spectrum single-jets are the meter of choice for your revenue assurance and water loss programs.

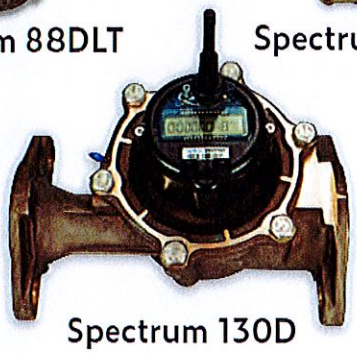
All Spectrum Model-D meters are top-loading, chamber designs which allow for field maintenance and repairs.



Spectrum 88DLT



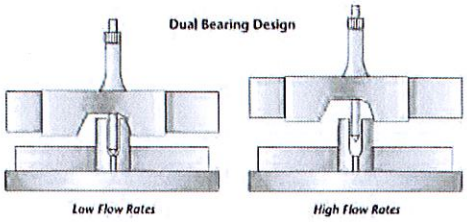
Spectrum 88DL



Spectrum 130D

OPERATIONS

Incoming water rotates a suspended impeller that is magnetically linked to the register. A low friction tungsten carbide bearing supports the impeller at low flow rates while a tungsten carbide thrust bearing provides the support at high flow rates. This unique "dual bearing" design provides unparalleled accuracy and durability at both high and low flows.



To maintain accuracy, the meter must be installed horizontally (±10°) in the direction of water flow. The Spectrum 88DL and 88 DLT come with an integral test port on the outlet. Although regular maintenance is not required, the Spectrum Model D meters have a top-loading measurement chamber for simple access without removing the meter from service. The chamber is bolted to the meter body and secured with a tamper seal.

All Spectrum Model D meters utilize innov8 registers. These sealed electronic registers provide a high resolution interface to the meter and have multiple cellular, AMR, AMI and SCADA outputs. All registers are attached with a robust tamper-resistant housing.

DESIGN FEATURES

- High accuracy below AWWA standards
- Wide range—1000:1 turndown
- Superior low flow registration
- Compact and light
- Convenient options for various lengths and connections
- Low pressure drop
- No regular maintenance
- Excellent performance in adverse water conditions
- Unaffected by sand or small debris in line
- No straight pipe requirements – upstream or downstream
- No strainer requirement
- 5-year flange-to-flange warranty
- 20-year warranty on meter body
- Compatible with all innov8 registers and associated AMR/AMI capabilities.

MATERIALS

All Spectrum Model-D meters are designed and manufactured to meet or exceed AWWA C712 standard design and performance specifications. All Models are maintained with NSF-61G lead-free certifications.

STANDARDS

AWWA C712 – Single-Jet Meters
NSF-61G – Drinking Water System Components Health Effects

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MECHANICAL SPECIFICATIONS

Spectrum 88DL	1.5-inch (40mm)
Flanges	Oval 2-bolt
Lay Length	13" (330 mm)
Dimensions	See drawing
Weight	9.95lb (4.5 kg)
Test Plug	1" Integral
Test Port	Integral 1" NPT threads

Spectrum 88DLT	1.5-inch (40mm)
Connection	Female 1.5" / 11.5 NPT internal threads
Lay Length	12.625" (319 mm)
Dimensions	See drawing
Weight	8.15lb (3.69 kg)

Spectrum 130D	2-inch (50mm)
Flanges	Oval 2-bolt
Lay Length	9.75" (300 mm)
Dimensions	See drawing
Weight	13lb (5.8 kg)
Test Plug	Available on spool
Brass Spacer Spools*	Lead-free flanged spools for 15.25" and 17" LL

* Contact Metron for information on brass spools and couplers.

MATERIALS

Body & Top-plate:	ASTM C875 - Lead Free Bronze
Impeller:	Polypropylene
Impeller Bearings:	Nylon with Carbon Fiber
Impeller Shaft:	AISI 303, Tungsten Carbide tip
Register Housing:	Thermoplastic

TAMPER FEATURES

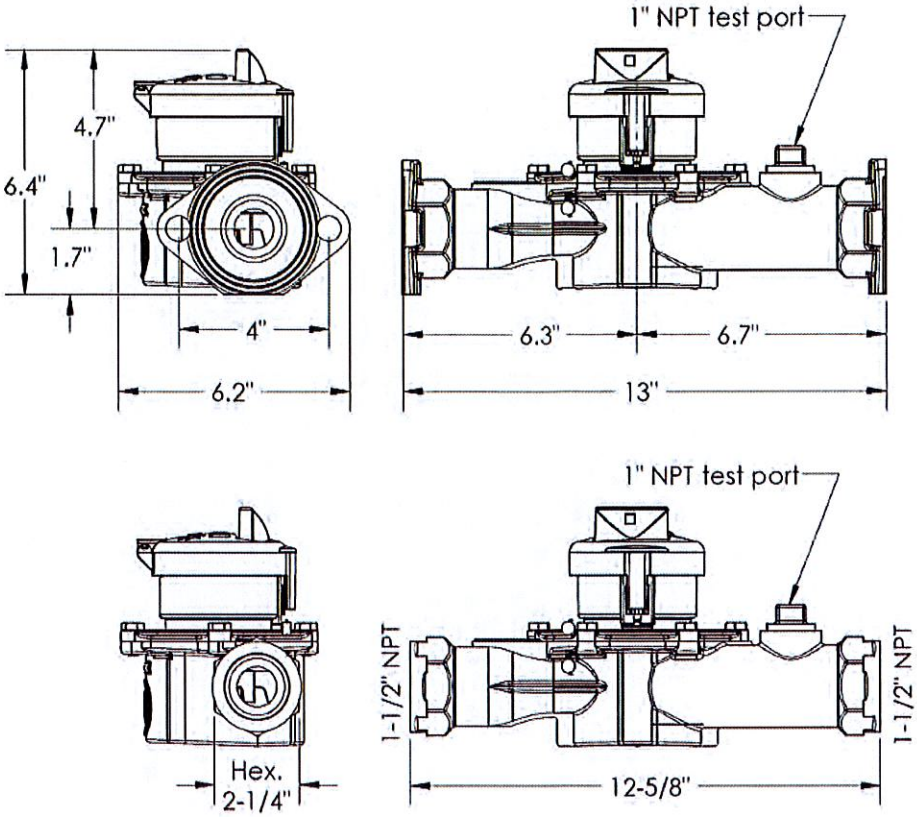
Meter Body	Wire +Lead seal between meter body and top-plate
Register	Tamper-resistant screw

MARKINGS

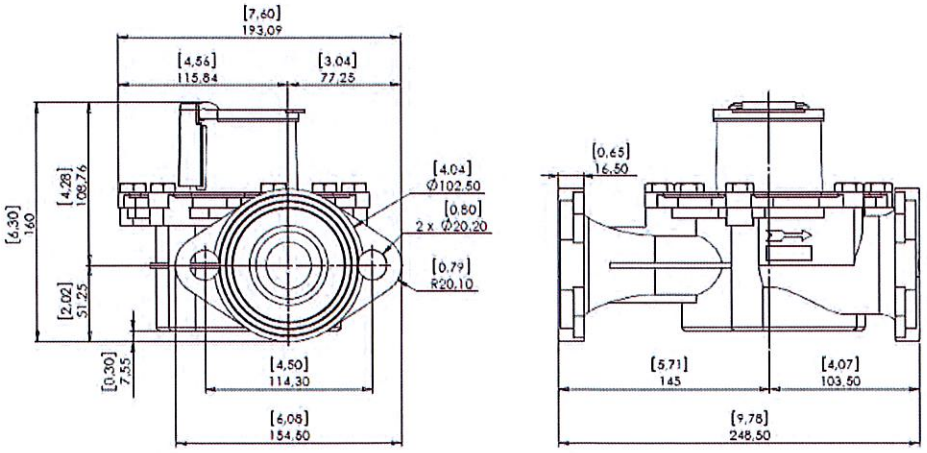
Engraved on Meter Body:	Model
	Serial Number
	Date of Manufacture
	NSF-6
	Direction of Flow

DIMENSIONS

Spectrum 88DL
1.5-Inch Models



Spectrum 130D
2-Inch Model



FLOW & PRESSURE SPECIFICATIONS

Spectrum 88DL / 88DLT– 1.5" Models

Operating Range (98.5 to 101.5%)	0.5 to 105 gpm	(0.11 to 24 m3/hr)
Low Flow (95% min)	0.25 gpm	(0.057 m3/hr)
Max Continuous Flow[1]	88 gpm	(20 m3/hr)
Max Intermittent Flow[2]	105 gpm	(24 m3/hr)
Pressure Loss at Max Continuous	7.25 psi	(0.5 bar)
Max Operating Pressure	230 psi	(15.9 bar)
Max Operating Temperature	120 °F	(48.9 °C)

Spectrum 130D – 2" Model

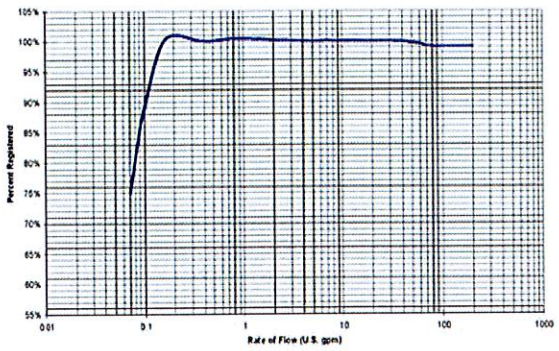
Operating Range (98.5 to 101.5%)	0.75 to 165 gpm	(0.17 to 37.5 m3/hr)
Low Flow (95% min)	0.25 gpm	(0.057 m3/hr)
Max Continuous Flow[1]	130 gpm	(29.5 m3/hr)
Max Intermittent Flow[2]	165 gpm	(37.5 m3/hr)
Pressure Loss at Max Continuous	7.25 psi	(0.5 bar)
Max Operating Pressure	230 psi	(15.9 kPa)
Max Operating Temperature	120 °F	(48.9 °C)

Notes

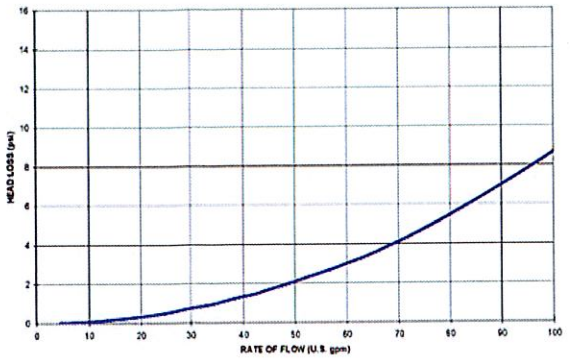
1 Max Continuous defined by AWWA as flow rate which can be maintained 24 hrs/day x 7 days/week
2 Max Intermittent defined as flow rate which can be maintained 1 hr/day average

FLOW ACCURACY

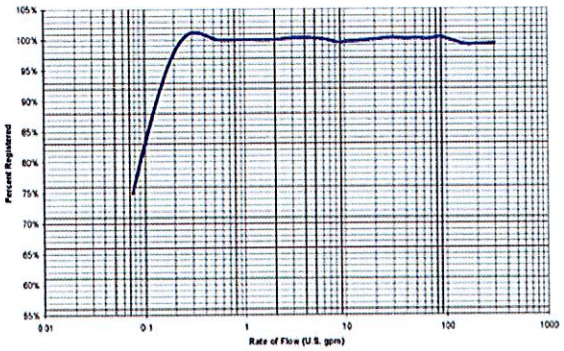
Spectrum 88DL / 88 DLT

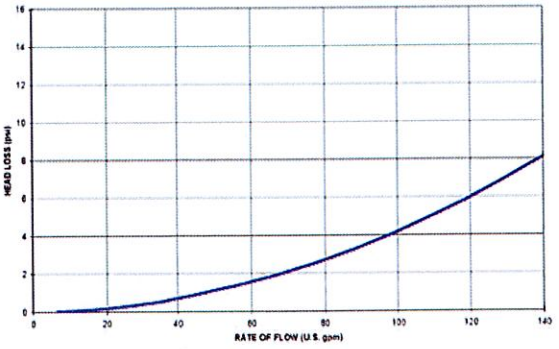


PRESSURE DROP



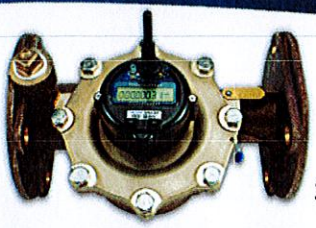
Spectrum 130D

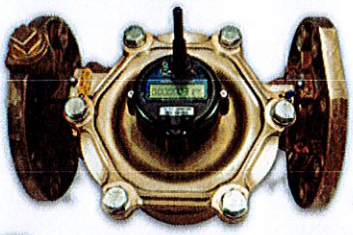


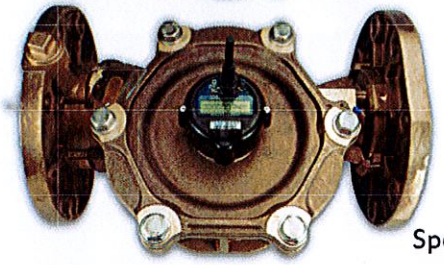


Metron-Farnier
Smart Water Meters & Systems

Large Commercial Spectrum Meters


Spectrum 175D


Spectrum 500D


Spectrum 1000D

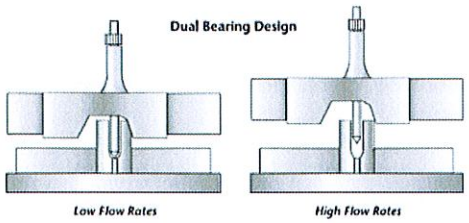
APPLICATIONS

The Spectrum Single-Jet Meter is the widest ranged, single-measuring element meter available to U.S. utilities. The operation of the single jet element allows the meter to be applied in the vast majority of potable cold water, reclaim water and well applications. Coupled with the advanced innov8 registers, the Spectrum single-jets are the meter of choice for your revenue assurance and water loss programs.

The large Spectrum meters come in a selection of configurations for 3-inch, 4-inch and 6-inch applications. The meter has a very wide range so there is no compromise at either low or high flows. All Spectrum Model-D meters are top-loading, chamber designs which allow for field maintenance and repairs.

OPERATIONS

Incoming water rotates a suspended impeller that is magnetically linked to the register. A low friction tungsten carbide bearing supports the impeller at low flow rates while a tungsten carbide thrust bearing provides the support at high flow rates. This unique "dual bearing" design provides unparalleled accuracy and durability at both high and low flows.



To maintain accuracy, the meter must be installed horizontally (±10°) in the direction of water flow. Each of the meters come with an integral test port on the outlet flange. Although regular maintenance is not required, the Spectrum Model D meters have a top-loading measurement chamber for simple access without removing the meter from service. The chamber is bolted to the meter body and secured with a tamper seal.

All Spectrum Model D meters utilize innov8 registers. These sealed electronic registers provide a high resolution interface to the meter and have multiple cellular, AMR, AMI and SCADA outputs. All registers are attached with a robust tamper-resistant housing.

DESIGN FEATURES

- High accuracy below AWWA standards
- Wide range—1000:1 turndown
- Superior low flow registration
- Compact and light
- Low pressure drop
- No regular maintenance
- Excellent performance in adverse water conditions
- Unaffected by sand or small debris in line
- No straight pipe requirements – upstream or downstream
- No strainer requirement
- 5-year flange-to-flange warranty
- 20-year warranty on meter body
- Compatible with all innov8 registers and associated AMR/AMI capabilities.

MATERIALS

All Spectrum Model-D meters are designed and manufactured to meet or exceed AWWA C712 standard design and performance specifications. All Models are maintained with NSF-61G lead-free certifications.

STANDARDS

AWWA C712 – Single-Jet Meters
NSF-61G – Drinking Water System Components Health Effects

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MECHANICAL SPECIFICATIONS

Spectrum 175D	3-inch (65mm)
Flanges	Round 4-bolt
Lay Length	11.8" (300 mm)
Dimensions	See drawing
Weight	26.70 lbs (11.65 kg)
Z-Plate Strainer*	Available (6" LL)
SS Spacer Spools*	Hard-flanged or adjustable
Test Port	Integral 1" NPT threads

Spectrum 500D	3-inch (80mm)	4-inch (100 mm)
Flanges	Round 4-bolt	Round 8-bolt
Lay Length	13.75" (349 mm)	13.75" (349 mm)
Dimensions	See drawing	See drawing
Weight	41.6lb (18.86 kg)	48.45lb (21.97 kg)
Z-Plate Strainer*	Available (6" LL)	Available (7.5" LL)
SS Spacer Spools*	Hard-flanged or adjustable	Hard-flanged or adjustable
Test Port	Integral 1" NPT threads	Integral 1" NPT threads

Spectrum 1000D	4-inch (100mm)	6-inch (150 mm)
Flanges	Round 8-bolt	Round 8-bolt
Lay Length	17.75" (349 mm)	17.75" (349 mm)
Dimensions	See drawing	See drawing
Weight	78lb (35.4 kg)	90lb (40.4 kg)
Z-Plate Strainer*	Available (7.5" LL)	Available (9" LL)
SS Spacer Spools*	Hard-flanged or adjustable	Hard-flanged or adjustable
Test Port	Integral 1" NPT threads	Integral 1" NPT threads

* Contact Metron for information on stainless steel spools and brass strainers

MATERIALS

Body & Top-plate:	ASTM C875 - Lead Free Bronze
Impeller:	Polypropylene
Impeller Bearings:	Tungsten Carbide
Impeller Shaft:	AISI 303, Tungsten Carbide tip
Register Housing:	Thermoplastic

TAMPER FEATURES

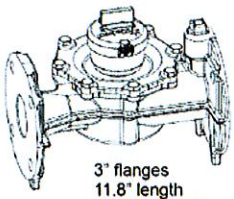
Meter Body	Wire +Lead seal between meter body and top-plate
Register	Tamper-resistant screw

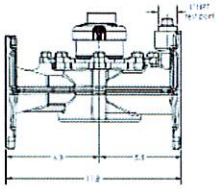
MARKINGS

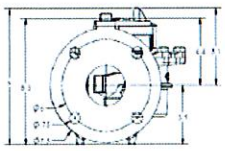
Engraved on Meter Body:	Model
	Serial Number
	Date of Manufacture
	NSF-61G
	Direction of Flow

DIMENSIONS

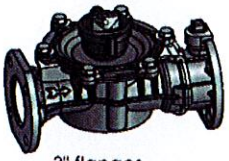
Spectrum 175D 3-Inch Model

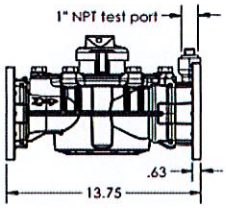


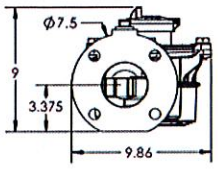




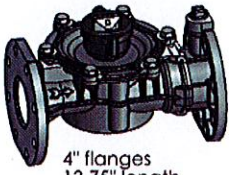
Spectrum 500D 3-Inch Model

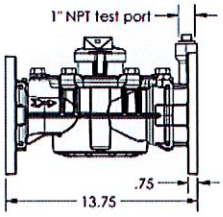


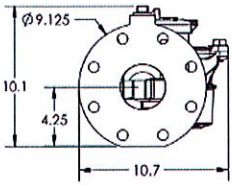




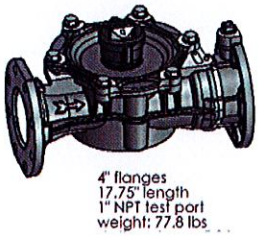
Spectrum 500D 4-Inch Model

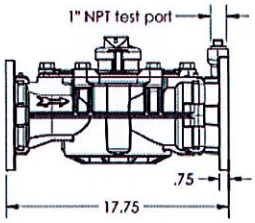


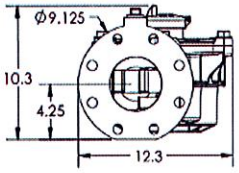




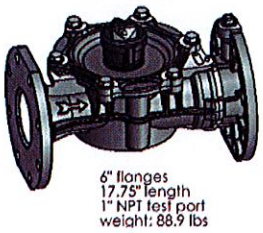
Spectrum 1000D 4-Inch Model

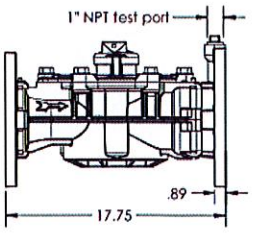


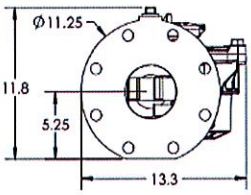




Spectrum 1000D 6-Inch Model







FLOW & PRESSURE SPECIFICATIONS

Spectrum 175D – 3" Model

Operating Range (98.5 to 101.5%)	0.75 to 350 gpm	(0.17 to 79.5 m3/hr)
Low Flow (95% min)	0.5 gpm	(0.11 m3/hr)
Max Continuous Flow[2]	175 gpm	(39.74 m3/hr)
Max Intermittent Flow[3]	245 gpm	(55.6 m3/hr)
Peak Test Flow[4]	350 gpm	(79.49 m3/hr)
Pressure Loss at Max Continuous	7.25 psi	(0.5 bar)
Max Operating Pressure	230 psi	(15.9 bar)
Max Operating Temperature	120 °F	(48.9 °C)

Spectrum 500D – 3" / 4" Models

Operating Range (98.5 to 101.5%)	1.5 to 500 gpm	(0.34 to 113.5 m3/hr)
Low Flow (95% min)	0.75 gpm	(0.17 m3/hr)
Max Continuous Flow[2]	350 gpm	(79.5 m3/hr)
Max Intermittent Flow[3]	500 gpm	(113.5 m3/hr)
Peak Test Flow[4]	600 gpm	(136 m3/hr)
Pressure Loss at Max Continuous	7.25 psi	(0.5 bar)
Max Operating Pressure	230 psi	(15.9 bar)
Max Operating Temperature	120 °F	(48.9 °C)

Spectrum 1000D – 4" / 6" Models

Operating Range (98.5 to 101.5%)	2.0 to 1000 gpm	(0.45 to 227.12 m3/hr)
Low Flow (95% min)	1.0 gpm	(0.23 m3/hr)
Max Continuous Flow[2]	600 gpm	(136 m3/hr)
Max Intermittent Flow[3]	1000 gpm	(227.125 m3/hr)
Peak Test Flow[4]	1100 gpm	(249.83 m3/hr)
Pressure Loss at Max Continuous	7.25 psi	(0.5 bar)
Max Operating Pressure	230 psi	(15.9 bar)
Max Operating Temperature	120 °F	(48.9 °C)

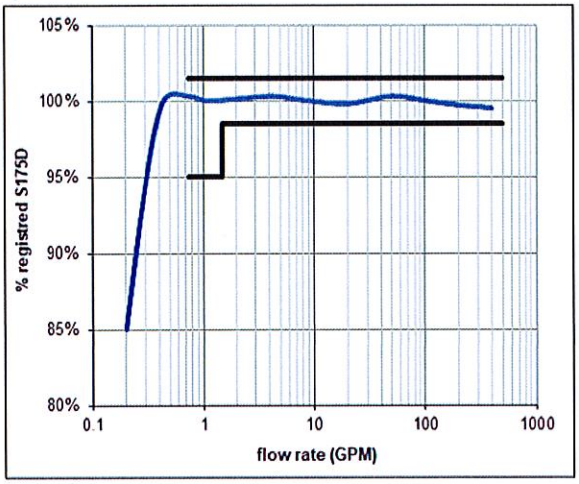
Notes

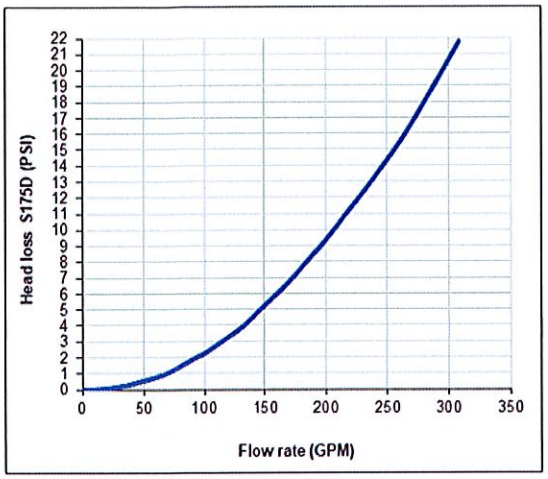
1 Max Continuous defined by AWWA as flow rate which can be maintained 24 hrs/day x 7 days/week
2 Max Intermittent defined as flow rate which can be maintained 1 hr/day average
3 Peak Test flow defined as absolute max flow rate which can be maintained for brief periods under stable conditions while maintaining a minimum of 20 psi downstream of the meter.

FLOW ACCURACY

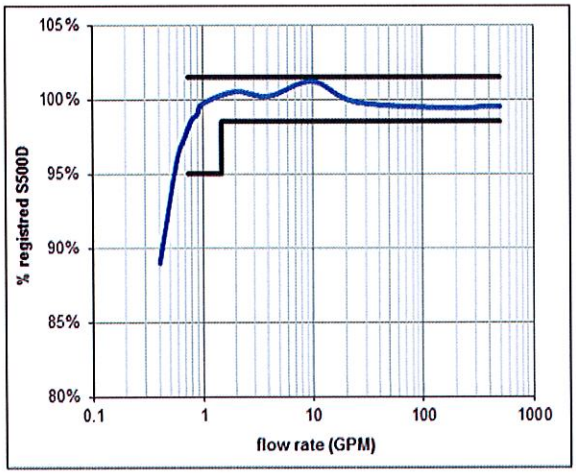
PRESSURE DROP

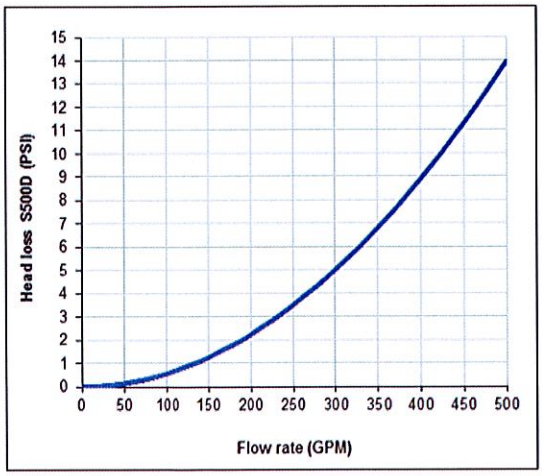
Spectrum 175D





Spectrum 500D





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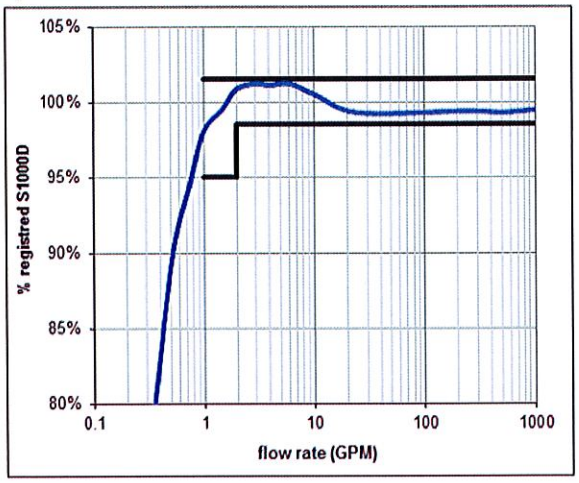
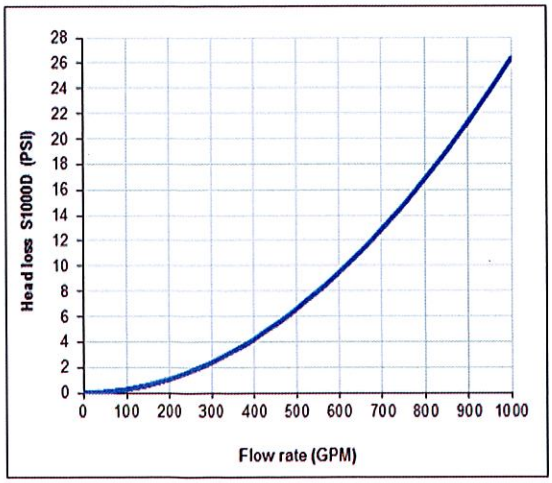


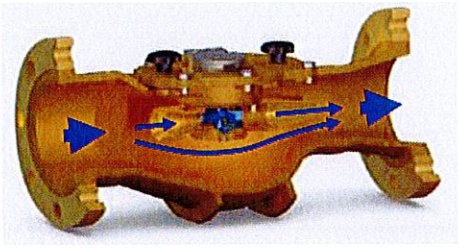


APPLICATIONS

The Enduro water meters are single element, wide range industrial meters. The Enduro Model-D meters utilize a top-loading chamber to insert a small diameter Spectrum meter within the flow stream. This unique system allows for unparalleled accuracy and durability at both high and low flows within a compact meter body. The Enduro meters are an ideal solution for most industrial metering applications.

OPERATIONS

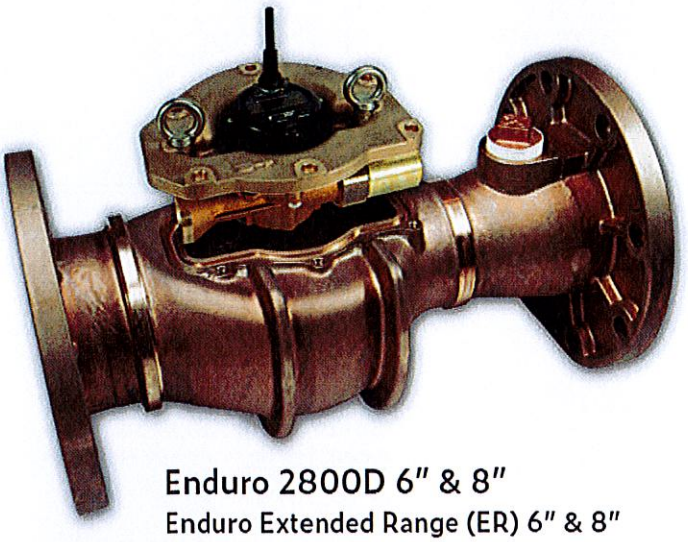
Water enters the meter passing over an in-line water conditioner that directs the water through a small diameter Spectrum meter that proportionally measures the total water flow. This incoming water rotates a suspended impeller in the measuring chamber. A low friction pivot bearing supports the impeller at low flow rates while an upper thrust bearing provides the support at high flow rates. The impeller has an attached magnet at its top for the register interface.



All bearing materials are fortified for minimal wear during high-flow stress. The impeller shaft utilizes tungsten tips to minimize wear and ensure long-term accuracy. The Enduro Model-D meters come with integral flanges (either 6" or 8").

To maintain accuracy, the meter must be installed horizontally (±10°) in the direction of water flow. Enduro meters come with an integral test port on the outlet. Although regular maintenance is not required, the Enduro meters have a top-loading measurement chamber for simple access without removing the meter from service.

All Enduro meters utilize innov8 registers. These sealed electronic registers provide a high resolution interface to the meter and have multiple output options. All registers are attached with a robust tamper-resistant housing.



Enduro 2800D 6" & 8"
Enduro Extended Range (ER) 6" & 8"

DESIGN FEATURES

- High accuracy
- Wide range – 1000:1 turndown
- Superior low flow registration
- Minimal pressure loss
- Long-term durability
- Low and high flow models to accommodate variety of industrial applications
- No regular maintenance
- Small, compact design for simple installations
- Excellent performance in adverse conditions
- Unaffected by sand or small debris in line
- No straight pipe requirements upstream or downstream of meter
- Strainers available for FM Fire Service
- 5-year flange-to-flange warranty

MATERIALS

All Enduro meters are designed and manufactured to meet or exceed AWWA C712 standards design specifications. All Enduro meters meet or exceed AWWA C701 standards Class II turbine meter performance.

All Models are maintained with NSF-61G lead-free certifications.

STANDARDS

AWWA C712 – Single-Jet Meters
NSF-61G – Drinking Water System Components Health Effects

Metron-Farnier, LLC
5665 Airport Blvd
Boulder, CO 80301 U.S.A.

p303.449.8833
f303.449.1464
www.metronfarnier.com

MECHANICAL SPECIFICATIONS

Enduro 2800	6-inch (150mm)	8-inch (200 mm)
Flanges	Round 8-bolt	Round 8-bolt
Lay Length	24" (610 mm)	24" (610 mm)
Dimensions	See drawing	See drawing
Weight	121 lb (54.88 kg)	142 lb (64.4 kg)
Test Port	Integral 2" NPT threads	Integral 2" NPT threads

Enduro 3600	6-inch (150mm)	8-inch (200 mm)
Flanges	Round 8-bolt	Round 8-bolt
Lay Length	24" (610 mm)	24" (610 mm)
Dimensions	See drawing	See drawing
Weight	121 lb (54.88 kg)	142 lb (64.4 kg)
Test Port	Integral 2" NPT threads	Integral 2" NPT threads

Strainers	Fireflow-rated strainers available Contact Metron for additional information

MATERIALS

Body & Top-plate:	ASTM C917 - Lead Free Brass
Impeller:	Polypropylene
Impeller Bearings:	Tungsten Carbide
Impeller Shaft:	AISI 303, Nivaflex tip
Register Housing:	Thermoplastic

TAMPER FEATURES

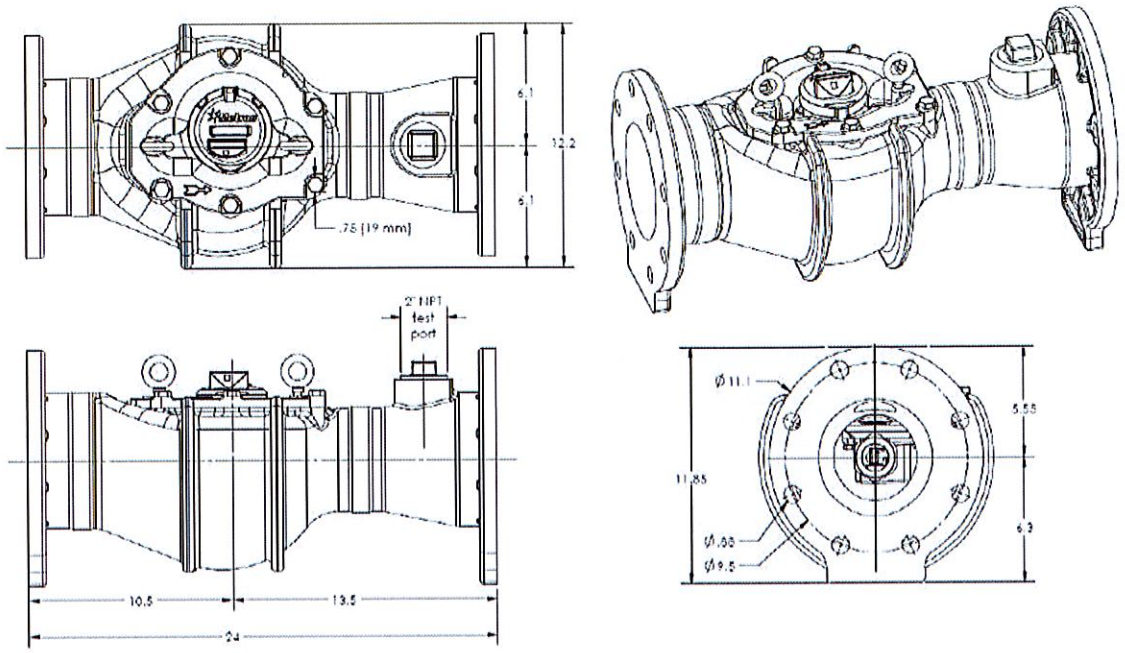
Register	Tamper-resistant screw

MARKINGS

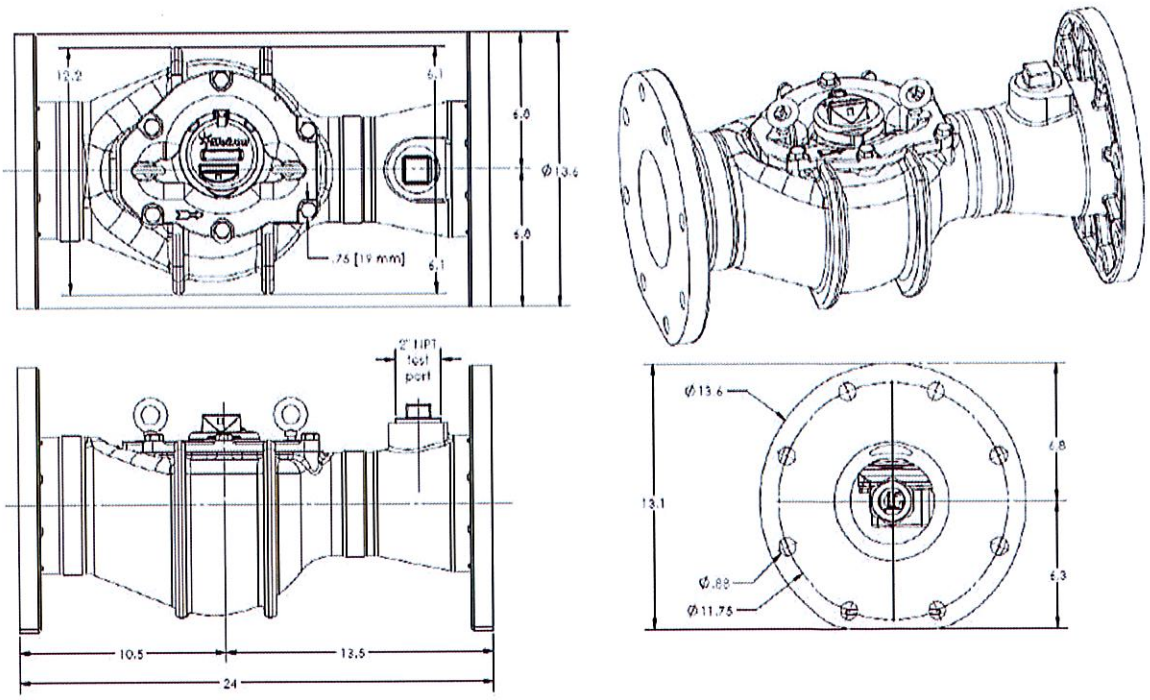
Engraved on Meter Body:	Model Serial Number Date of Manufacture NSF-61G Direction of Flow

DIMENSIONS

Enduro 2800D / 3600D - 6-inch Model



Enduro 2800D / 3600D - 8-inch Model



FLOW & PRESSURE SPECIFICATIONS

Enduro 2800D– 6" and 8" Model

Operating Range (98.5 to 101.5%)	6 to 2800 gpm	(1.38 to 636 m3/hr)
Low Flow (95% min)	4.4 gpm	(1 m3/hr)
Max Continuous Flow[2]	2400 gpm	(545 m3/hr)
Max Intermittent Flow[3]	2800 gpm	(636 m3/hr)
Pressure Loss at Max Continuous	6.40 psi	(0.44 bar)
Max Operating Pressure	230 psi	(15.9 bar)
Max Operating Temperature	120 °F	(48.9 °C)

Enduro 3600D– 6" and 8" Model

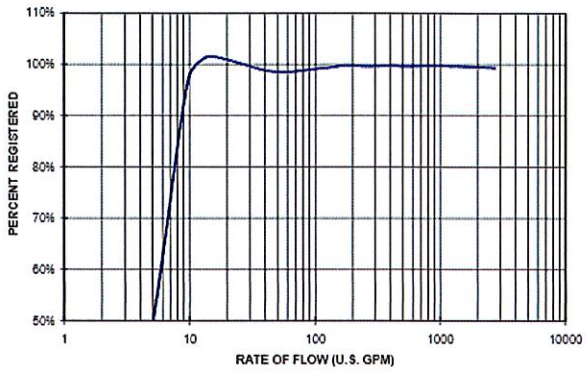
Operating Range (98.5 to 101.5%)	14 to 3600 gpm	(3.2 to 818 m3/hr)
Low Flow (95% min)	8 gpm	(1.82 m3/hr)
Max Continuous Flow[2]	2800 gpm	(636 m3/hr)
Max Intermittent Flow[3]	3600 gpm	(818 m3/hr)
Pressure Loss at Max Continuous	11 psi	(0.76 bar)
Max Operating Pressure	230 psi	(15.9 bar)
Max Operating Temperature	120 °F	(48.9 °C)

Notes

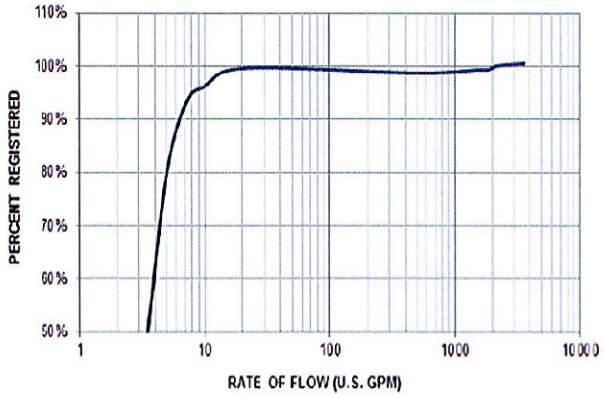
1 Starting flow rate for reference only
2 Max Continuous defined by AWWA as flow rate which can be maintained 24 hrs/day x 7 days/week
3 Max Intermittent defined as flow rate which can be maintained 1 hr/day average

FLOW ACCURACY

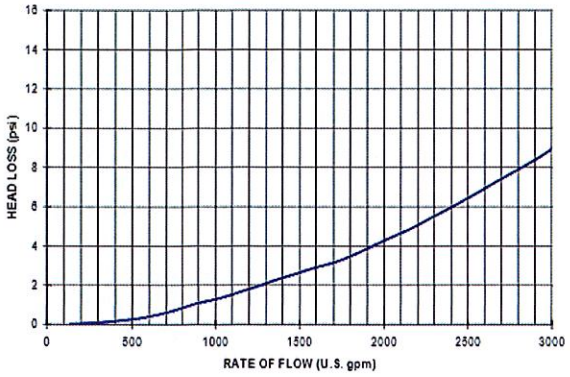
Enduro 2800D

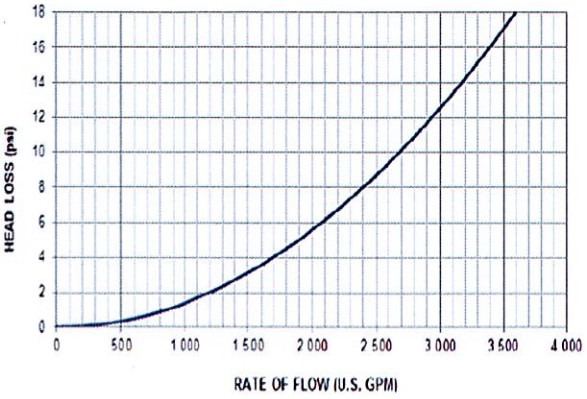


Enduro 3600D



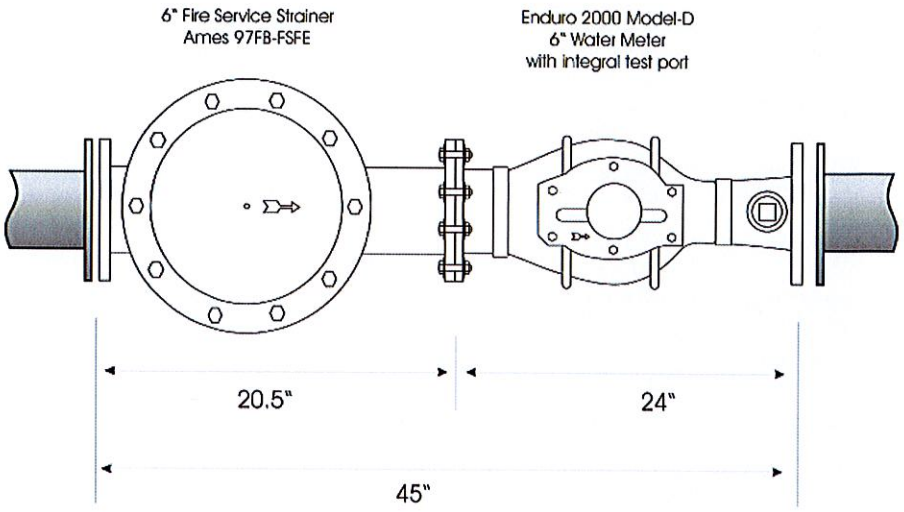
PRESSURE DROP





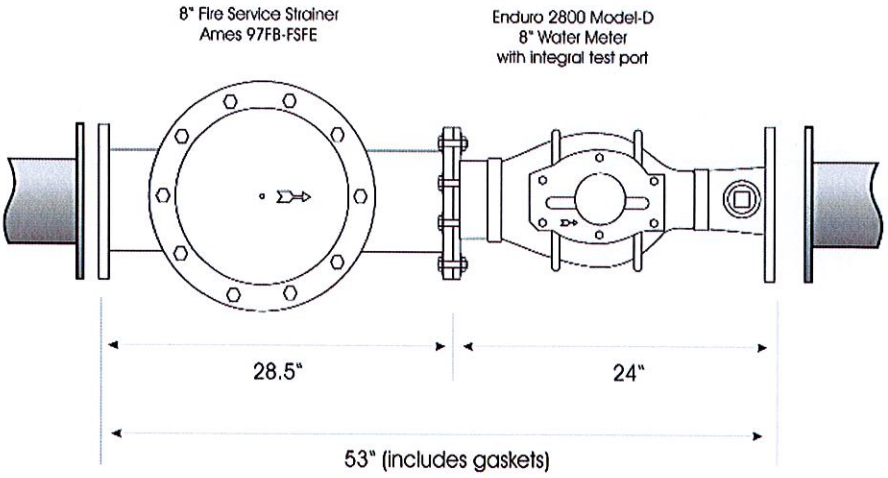
Fire Service Configurations

FSA6



6-inch Assembly
45-inch LL
See Fire Service Brochure for more information

FSA8



8-inch Assembly
53-inch LL
See Fire Service Brochure for more information

Appendix II

AMI Information and Requirements (Overview)

The Metron AMA system utilizes the existing cellular (Verizon and/or AT&T) network to backhaul 1-minute, time synchronized, consumption data. The ease of deployment makes this an attractive system to everyone from rural water companies to systems serving 100,000+ residents. Metron currently has over 3,000 utilities utilizing the system. There are also no additional infrastructure or network maintenance costs to incur over the life of the system. The utility also won't have to concern themselves with leasing property for infrastructure. It really is as simple as installing the meter today and reading it online the next.

All the 1-minute usage analytics is accessed via Metrons own WaterScope web portal. The WaterScope web portal was nominated as a finalist for the ***2022 IoT "Best Utility and Energy Solution"*** worldwide. Access to WaterScope is available to the utility, business owners, homeowners, etc. at no additional cost to the utility or the homeowner. There is both a utility phone app and homeowner app. Metron understands that recurring costs can be frustrating to water utilities, so we've taken the approach that the product is an 'All In' bundle. The cost of the meter includes unlimited software access, cellular coverage, and training/support. Metron is able to provide this because we supply the endpoint, head end system, consumer portal, mobile apps, and support under one umbrella.

Consumption data is stored in the Microsoft Azure storage cloud which eliminates any onsite server needs. The storage capacity is very large and can easily accommodate 1 million plus endpoints. The call-in schedule for the endpoints themselves is also randomized as to not 'weigh down' the system in any way.

Endpoints

The Metron system operates in a very different way than other AMI systems. The Metron endpoint (VN) has the communications built into the register. There are several advantages to this design with battery life (20+ years) and data resolution being the main ones. Typical AMI systems have an endpoint that wakes up every hour, or in some cases 15-minutes, to communicate with the meter to obtain updated usage information. That is a very battery intensive operation and is the limiting factor in the resolution of the data. Because the Metron device has eliminated that constant communication we are able to store the usage intervals down to the single minute. This gives the utility true GPM granularity.

The register stores off the 1-minute intervals throughout the course of the day while the communications aspect is essentially in sleep mode. Then, one time per day, the register will wake up and send the equivalent of a text message over the existing cellular network with time-synchronized midnight-to-midnight consumption data. The data is time-synced so the utility can do macro level analytics such as water loss, time of use, peak flow, etc. on a system wide basis. No more apples to oranges comparison.

The VN has the ability to store up to 45 days' worth of 1-minute interval data. Should a daily transmission fail, the missing data will be backfilled upon the next successful connection. This data may also be retrieved locally via an IrDA communication. The VN offers full two-way functionality which allows for over-the-air programming as well as over-the-air firmware updates. (IrDA as well)

The VN can be installed in pits or indoors and there are also two different antenna options. The pit mount antenna secures through a pre-drilled 2 ¼" hole. The paddle antenna (recommended) screws into the underside of the lid. This is a high gain antenna and also eliminates most tampering as there is not an antenna/radio device through the lid. Each option comes in 5', 12', or 20' cable lengths. In the event the antenna cable gets damaged they are very easy and inexpensive to replace.

The VN is fully submersible (IP68) and operates between -0 to -140 degrees Fahrenheit. Storage is between -20 to 140 degrees.

The VN has a full 10-year warranty, as well as an additional 10 years prorated.

Head End System Information and Requirements

The Metron head end system, WaterScope, is a web-based platform that is accessed via an internet connection, username, and password. WaterScope is maintained by a group of internal software engineers which means there are no third-party licensing requirements. Metron gladly takes customer feedback and suggestions to continue to make WaterScope as useful to a water utility as possible. The platform is constantly improving but the improvements occur without any interruption of day-to-day operations and at no cost to the utility. There are also no recurring charges for the first ten years incurred by the utility for access and no limitations to the number of users. Anybody and everybody within the utility can have login access and all users can be logged in simultaneously.

Conditions - Notifications

As the endpoint transmissions are delivered in the middle of the night the 1-minute analytics are analyzed for several different utility defined conditions. The conditions are custom configurable, and the utility has the option to opt in for auto generated notifications. Those conditions are:

Leak – A leak flag is triggered if there were 1440 1-minute intervals that had consumption above 0. Metron feels that if the meter can't register 0 gallons for at least 1-minute in a 24-hour period there is no question there is a leak.

Threshold Leak – The Metron residential meter is accurate below 1/50th of a gallon per minute. Due to this, the program detects a lot of trickle leaks. In an effort to not overwhelm utility personnel with leak notifications, we've established this condition so the utility can filter notifications by a true GPM flow. For example, if 0.25 gpm is considered an 'actionable' leak rate from a utility perspective, WaterScope will only notify utility personnel of leaks greater than 0.25 gpm. The threshold can then be lowered or raised as needed.

Intermittent Leak – The intermittent leak is designed to identify leaking toilets, or any other fixture in an home that runs intermittently for extended periods of time. The utility can configure the trigger as to not have irrigation events and/or constant leaks trigger the flag.

High Usage – The high usage flag is a configurable daily consumption value. If usage exceeds the daily value, an alert is generated.

Backflow – The backflow alert will trigger if a configurable amount of water runs in reverse over a specified period of time. It is also a useful flag for meters that were mistakenly installed backwards.

Zero Use – The zero-use condition will trigger if NO water is used over a configurable period of time. This flag is useful for rental/vacant properties at the homeowner level, but for the utility can be used as a revenue protection alarm for the larger size meters. 30 days seems like a long period of time, especially for larger meters. The user can configure this alarm by meter size.

High Meter Flow – This alert will notify the utility if flow rates exceed the high-end capacity of the meter. Can be helpful for right sizing an application.

High/Low Temperature – The Metron VN measures the daily high and low ambient temperature. The sensor is built into the register, so the temperature reflects the meter level as opposed to the temperature at the pit lid level.

Unauthorized Use – The utility can upload a list of meters that have been shut-off for non-payment and WaterScope will alert to cases where the homeowner has turned the water back on.

Unexpected Use – This condition is designed for the homeowner so they may receive alerts if water is used unexpectedly. Use cases would be rental/vacant properties, snowbirds, and vacations.

Watering Event – If the utility intends to implement watering restrictions now or in the future the Watering Event condition can help monitor those restrictions. Restrictions can be mandatory/voluntary, based on time of day, and the days in a week. The Metron VN system is the only one that offer this as the VN is the only device that can identify indoor vs outdoor use based on the flow rate.

Emergency Transmit – The emergency transmit feature is meant to catch real time leaks. The condition is configurable by meter, and triggers if a configurable amount of flow occurs over a configurable amount of time. In that event the VN will wake up off schedule and send an emergency text to the homeowner.

NOTE – Some insurance companies are willing to provide a rebate to the homeowner if they opt in for the emergency leak option. This only occurs because of the 1-minute data intervals Metron provides and the real time call in.

Billing Integration & Reports

The WaterScope program is very flexible with regard to integrating with utility billing vendors. Typically, the integration occurs without the utility having to make any changes. There are also no resolution or multiplier requirements that need to be sent to the WaterScope program.

The most common integration method is a file transfer (text or csv). This file is used to populate the WaterScope site with pertinent information such as the Account Number, Customer Name, and Customer Address. Below is a screenshot of the file transfer screen within WaterScope.

WaterScope supports API integrations as well as FTP and VPN file transfers. *webapi.waterscope.us/Help*

Metron has integrated WaterScope and MUNIS a number of times in the past using a variety of different file types.

WaterScope offers a number of integrated reports. There are no third-party requirements to generate the reports, and the user may export unlimited numbers of them. The following outlines currently available reports:

Billing Usage – This report returns a consumption value between a configurable date range.

Read Report – Provides the current read on selected meters. The user has the option to view the full LCD read, or the scaled billing read.

Consumption by Meter Size – Returns a report for aggregated consumption by meter size for the selected range of meters.

Comparative Report – Returns comparative usage for a single meter, group of meters, or all meters for a configurable number of years.

Single Meter Consumption – Returns interval data for a single meter over a configurable date range. The intervals can also be configured by the minute, hourly, daily, or monthly. This same report can be generated by the homeowner per consumer user access.

Historic Read Report – Allows the user to view either the full LCD read or scaled billing read for a configurable date range. The report can be generated by a single meter, group of meters, or all meters.

Endpoint Configuration Report – Displays current programming values of the VN for a single meter, group of meters, or all meters.

Account Daily Consumption – Returns daily consumption values for a single meter, group of meters, or all meters over a configurable date range.

Consumption Report – Similar to the account daily report, but this one lets the user view consumption in interval data. Intervals can viewed hourly, daily, or monthly for a single meter, group of meters, or all meters for a specified date range.

Macro Level Analytics

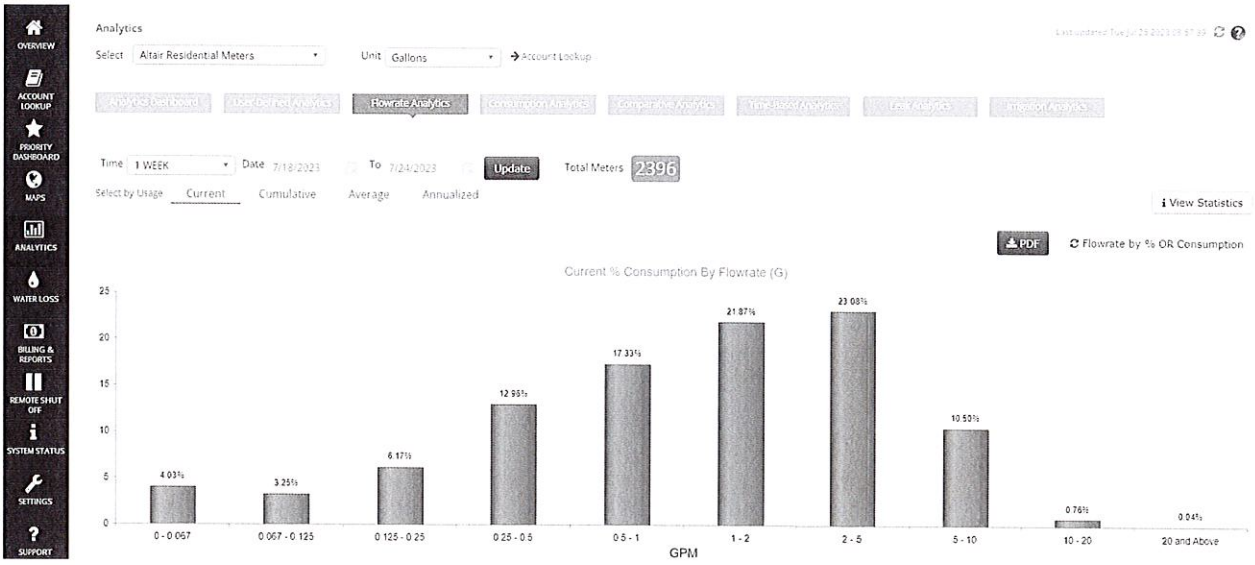
WaterScope offers a number of different macro level analytics. The more prominent ones being District Metering, time of use, flow rate analytics, and comparative analytics.

District Metering – The district metering groups can be configured regionally as well as system wide. The utility can easily identify the supply meter(s) and then subsequently assign the demand meters downstream. Adding/removing meters from a DMA group is also very user friendly. Below is a screenshot of the analytic page:

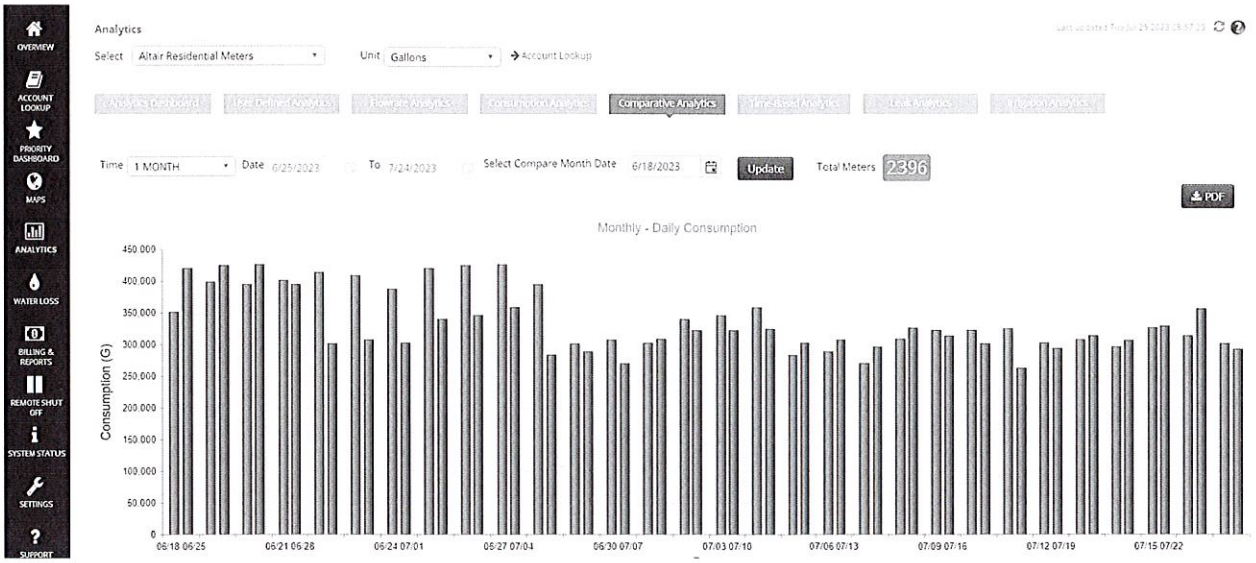
NOTE: *WaterScope also has the ability to monitor cooling towers. Should the utility have any downstream cooling towers the building maintenance group could have the ability to monitor for cycles of concentration, faulty valves, etc.*

Analytics Dashboard – The analytics dashboard gives the utility a customized view of how the water is being consumed within the utility. The breakdown is indoor vs outdoor vs leak. This is a system wide total. The timeframe can easily be edited to reflect a month or a past weeks usage:

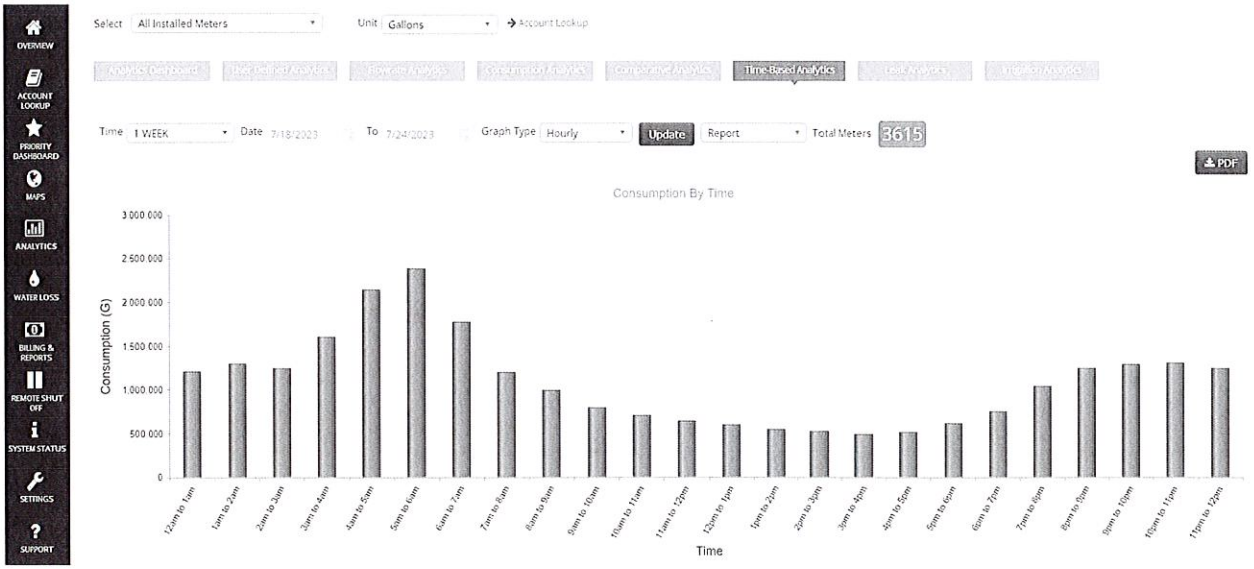
Flowrate Analytics – The flowrate analytics page allows the utility to view total consumption by flow rate, either system wide, by a group of meters (i.e., irrigation meters), by meter size, meter type, etc.



Comparative Analytics – View consumption differences from week to week, month to month, or by a custom date range for system wide consumption or by a utility defined group.



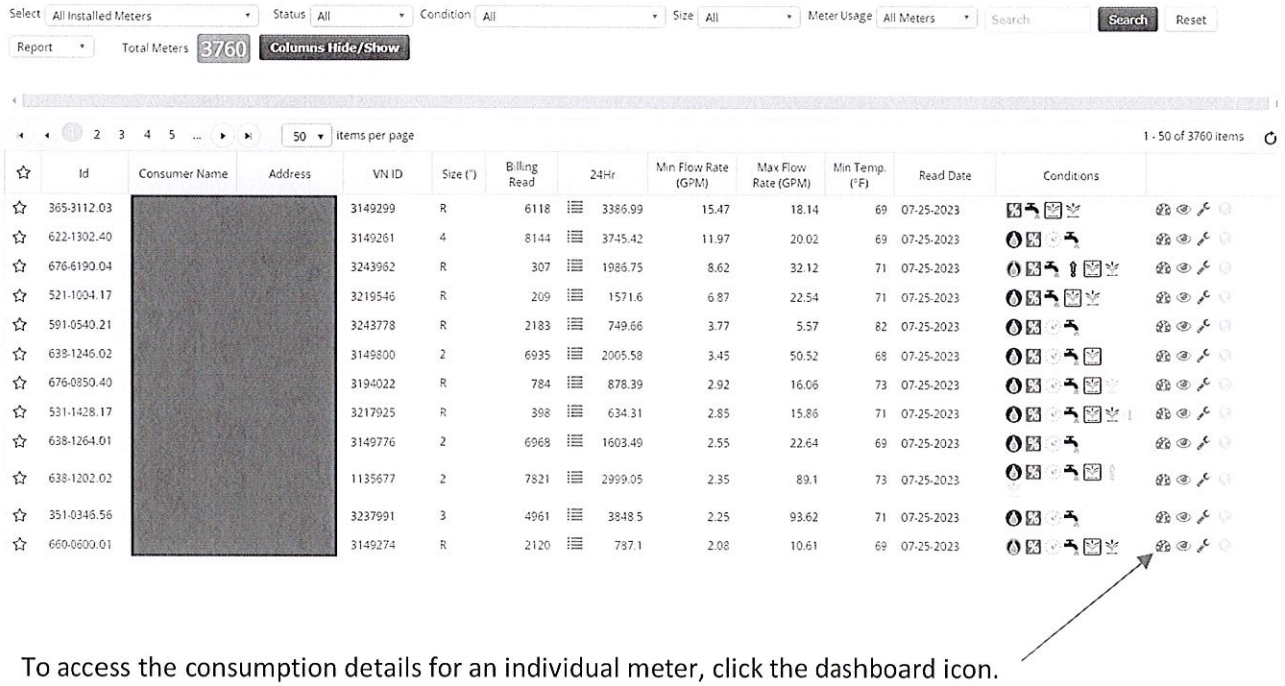
Time Based Analytics – The utility can utilize time-based analytics to see at what times per day the majority of water is being used. This could be especially useful during summer months to ensure that water supplied is keeping up with demand during irrigation.



Micro Level Analytics (The following are also available to the homeowner at the utility discretion)

Aside from the different flag conditions mentioned prior, there are a number of consumption based analytical options for the single meter. The Account Lookup screen is the utility bridge to each individual meter. On the account lookup screen, the utility can view the Account Number, Name, Address, Size, 24-Hour consumption, minimum leak rate, maximum leak rate, and low temperature. The user has the option to configure this screen to only display columns of importance to that user.

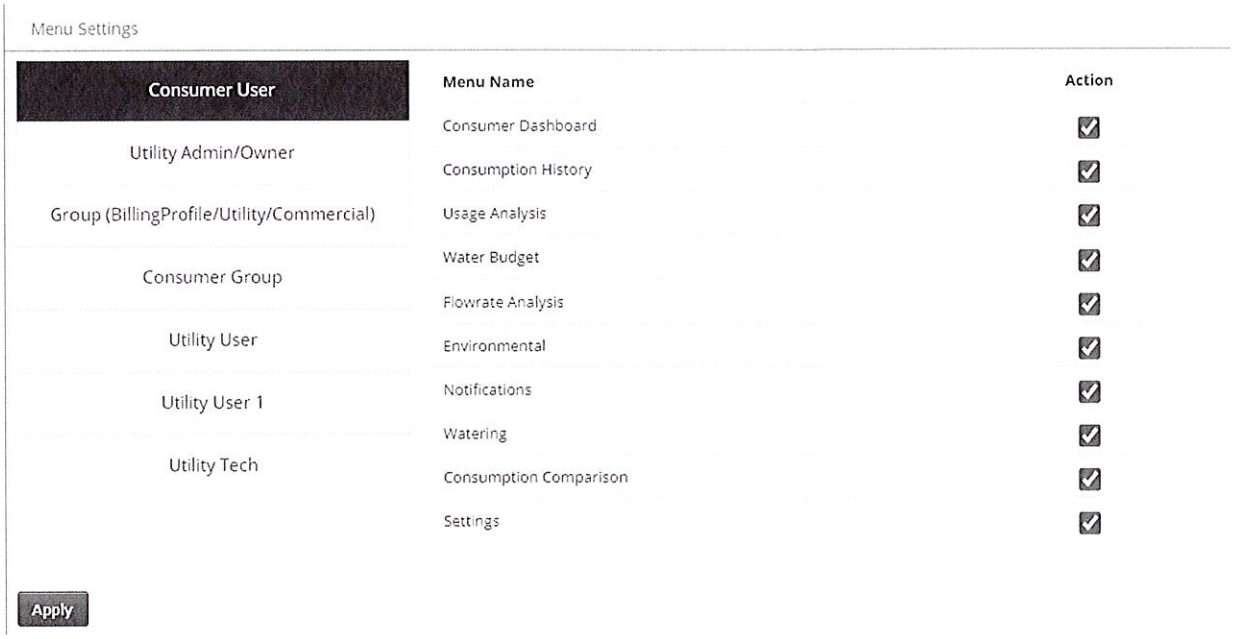
Users can easily filter by condition, size, type, group, etc. It is also very easy to lookup a particular meter via the Search option. Users can also view single meter configuration, signal strength values, current read, as well as enter notes for specific accounts. Notes are accessible to all users within the utility.



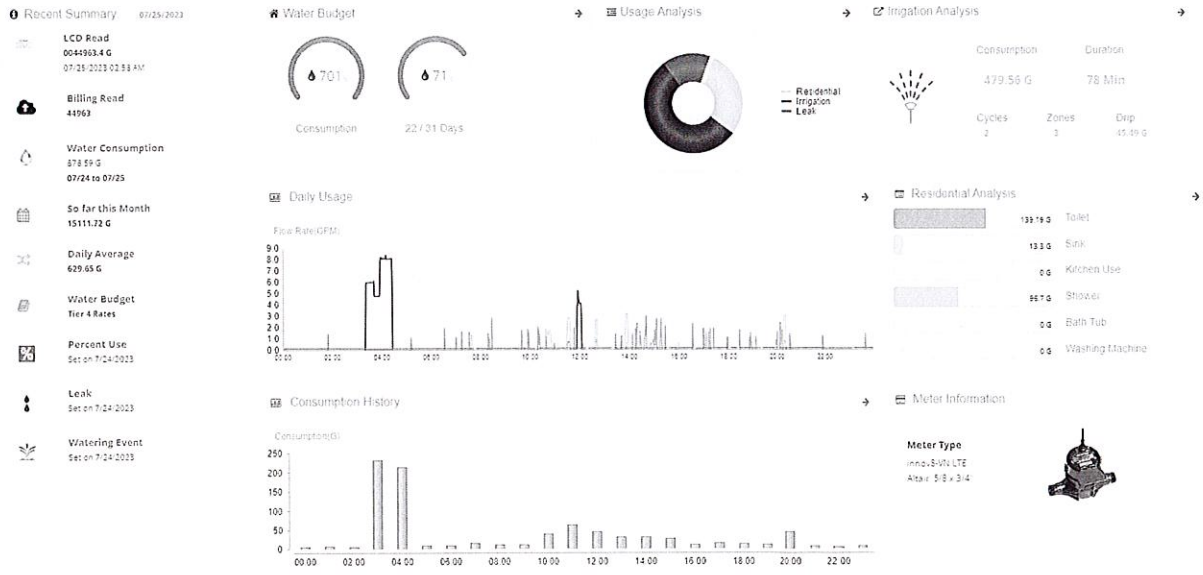
☆	Id	Consumer Name	Address	VN ID	Size (")	Billing Read	24Hr	Min Flow Rate (GPM)	Max Flow Rate (GPM)	Min Temp. (°F)	Read Date	Conditions
☆	365-3112.03			3149299	R	6118	3386.99	15.47	18.14	69	07-25-2023	
☆	622-1302.40			3149261	4	8144	3745.42	11.97	20.02	69	07-25-2023	
☆	676-6190.04			3243962	R	307	1986.75	8.62	32.12	71	07-25-2023	
☆	521-1004.17			3219546	R	209	1571.6	6.87	22.54	71	07-25-2023	
☆	591-0540.21			3243778	R	2183	749.66	3.77	5.57	82	07-25-2023	
☆	638-1246.02			3149800	2	6935	2005.58	3.45	50.52	68	07-25-2023	
☆	676-0850.40			3194022	R	784	878.39	2.92	16.06	73	07-25-2023	
☆	531-1428.17			3217925	R	398	634.31	2.85	15.86	71	07-25-2023	
☆	638-1264.01			3149776	2	6968	1603.49	2.55	22.64	69	07-25-2023	
☆	638-1202.02			1135677	2	7821	2999.05	2.35	89.1	73	07-25-2023	
☆	351-0346.56			3237991	3	4961	3848.5	2.25	93.62	71	07-25-2023	
☆	660-0600.01			3149274	R	2120	787.1	2.08	10.61	69	07-25-2023	

To access the consumption details for an individual meter, click the dashboard icon.

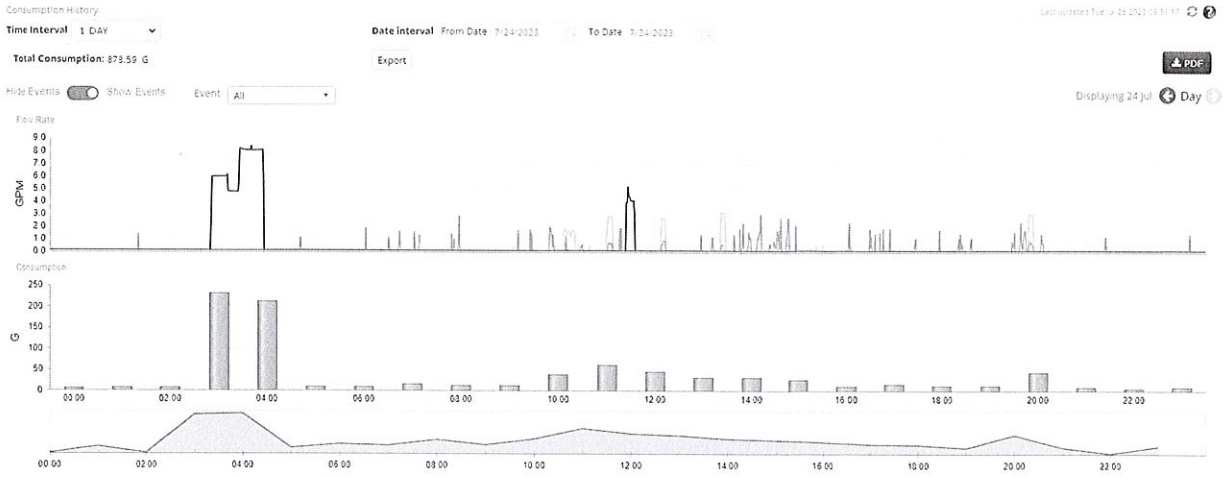
There are a number of different single meter analytics pages available to both the utility and the end user. The utility can ultimately determine what access and what analytical screens are made available to the end users by a simple configuration:



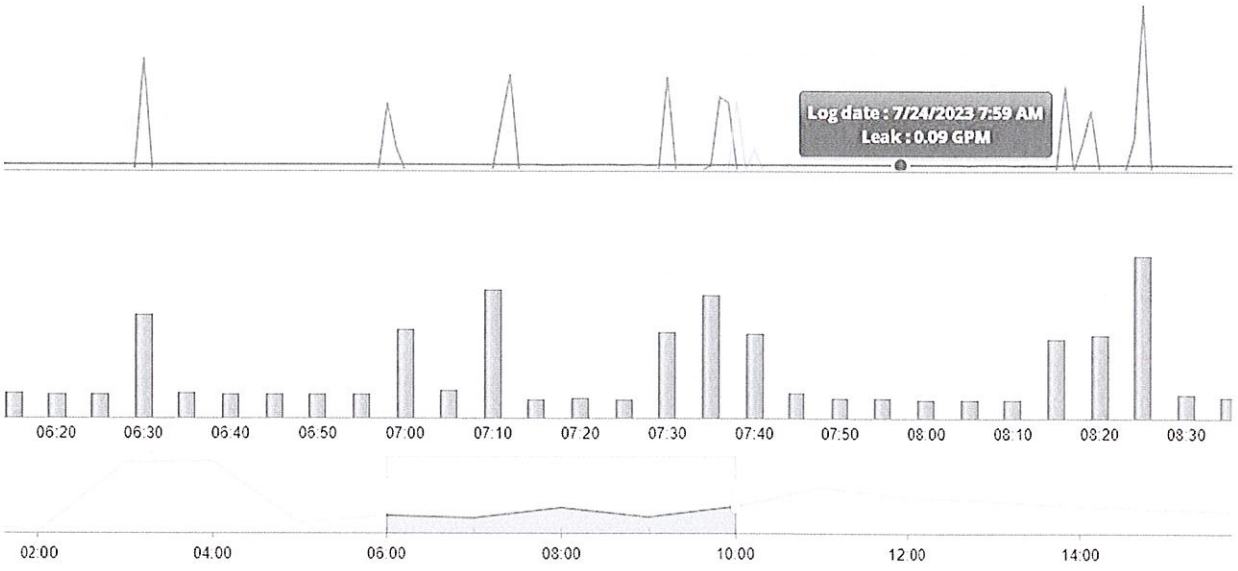
Consumer Dashboard – The consumer dashboard gives a quick summary of things like the current billing read, the past 24 hours consumption, month to date consumption, daily average, as well as a graphical representation of the past 24 hours consumption.



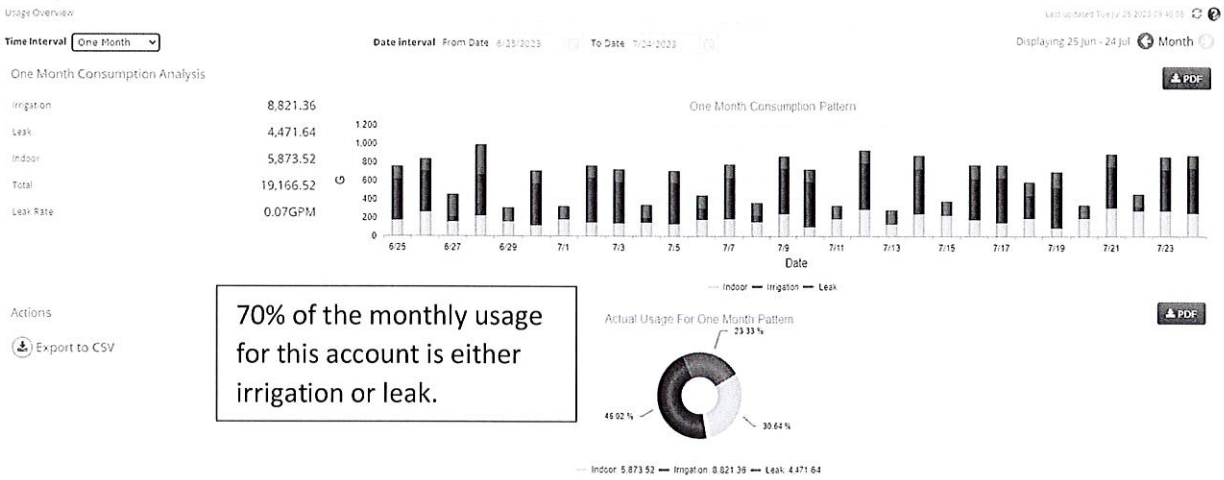
Consumption History – The consumption history allows the user to view the past day, week, month, year, or a custom time period (i.e., start-stop actual billing dates). The WaterScope program analyzes the data in 1-minute intervals and based on the flow rate and duration of time, designates the usage for things such as irrigation, toilet flushes, sink use, etc.



This page is very useful to the utility and end user to view leaks. In the example below the red line outlines a leak running at 0.09 gpm.



Usage Overview – The usage overview page presents the different types of consumption (indoor, outdoor, leak) so both the utility and end user can see how much water is being used in the different categories. When an end user can quantify how much water is potentially being wasted on a leak, or potential over-irrigating, it helps them understand the bill and adjust as necessary.



Water Budget – The water budget feature allows the end user to track monthly usage compared to a goal they have set themselves, or that has been set by the utility. That monthly usage goal can reflect billing tiers, average use within the utility, or seasonal expectations. The tiers within the budget are ultimately controlled by the utility. The screen displays total use per day, indoor vs outdoor, as well as a trend graph for month to date. The data is displayed statistically and graphically. Statistically:

Daily Budget	225.81 G
Cycle Daily Average	351.77 G
Last 24 Hr	375.14 G
Cycle Budget	7000 G

You are 25 days into this cycle

which is 80.65% into the month

You have used 909.56 G for Irrigation

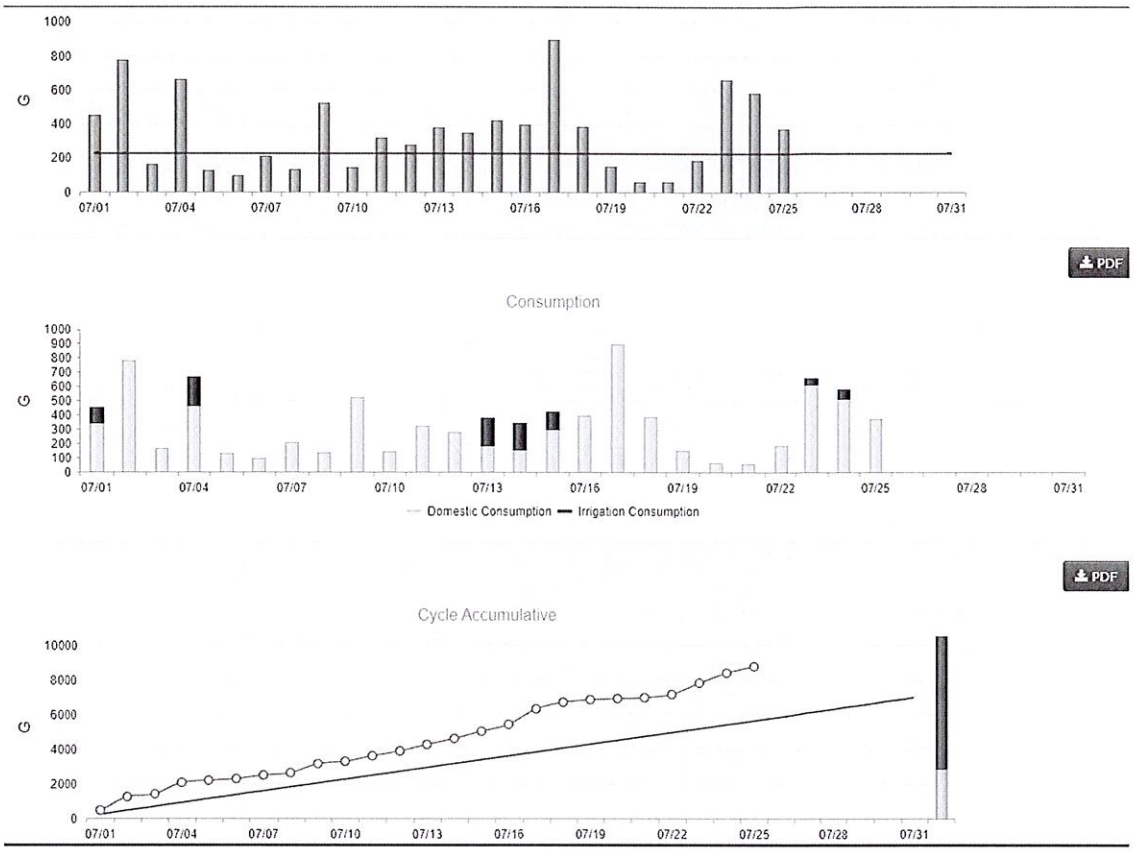
You have used 8794.21 G so far this cycle

which is 125.63% of your water budget

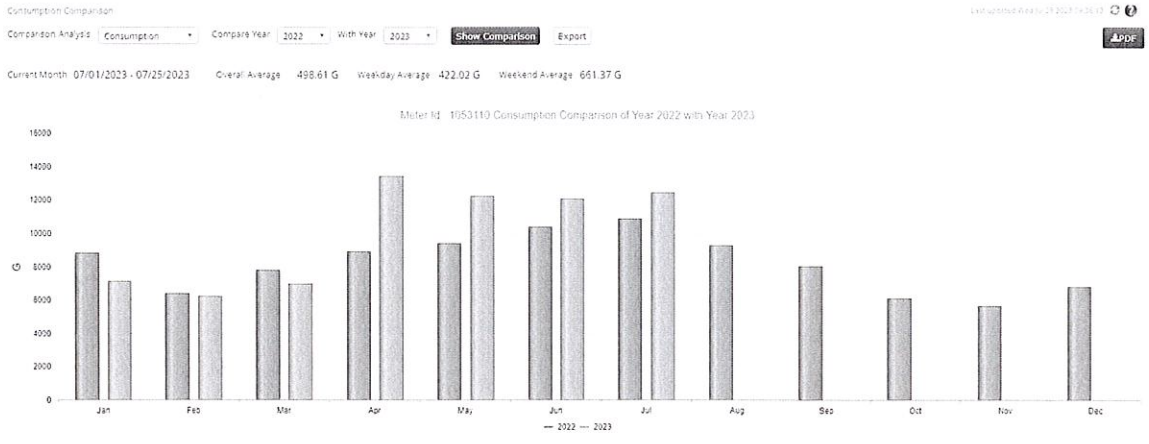
Your Water Budget is

Wasteful

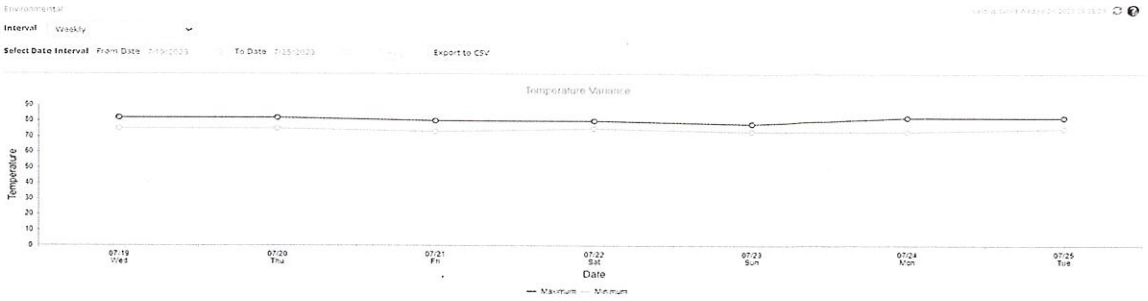
Graphically:



Consumption Comparison – The user may view comparative consumptions year over year either by a total monthly volume, or average usage per day over a given month for a single meter.



Environmental – The user can view daily maximum ambient temperature, as well as daily minimum ambient temperature. Alerts may be setup for both. Monitoring this is particularly beneficial in both the winter and summer months.



Head End System Information and Requirements (Summary)

The WaterScope web portal seems to not only meet, but exceed the expectations of what the utility expects in a head end system. With numerous different conservation tools both at a micro and macro level, WaterScope will provide the necessary tools to the utility to help manage the system efficiently, effectively, and transparently.

With no additional costs after the purchase of the meter, the utility will not have to budget for ongoing costs for 10 years. Starting year 11, the utility will have the option to prepay another fully loaded 10 year bundle, or pay a yearly, per meter bundle fee.

Consumer Portal Information and Requirements

The WaterScope package includes a fully incorporated consumer portal. The consumers can access their usage information either via the web portal or the mobile app. The mobile app is available for both Apple (iOS) and Android. Both the app and the web portal are maintained by Metron so there will be interruption to either the utility or the homeowner when enhancements and patches are made to the program.

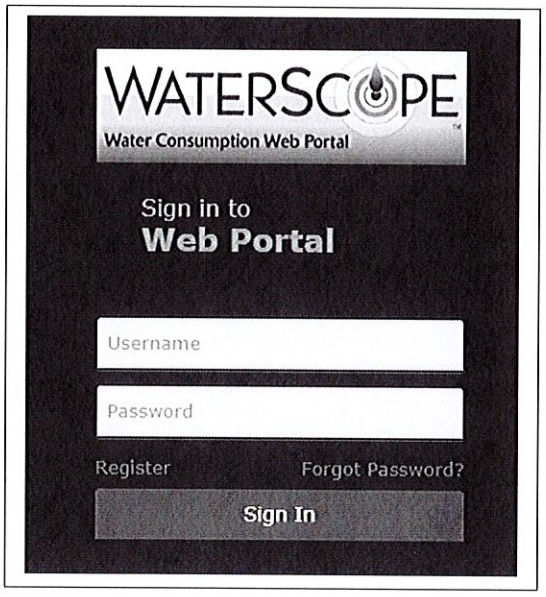
Signup for the consumer portal is very simple. The homeowner simply enters their VN serial number along with the matching account number and as long as the two match WaterScope will allow the signup. The authentication between the VN and account number is to prevent a homeowner from inadvertently signing up for another meter.

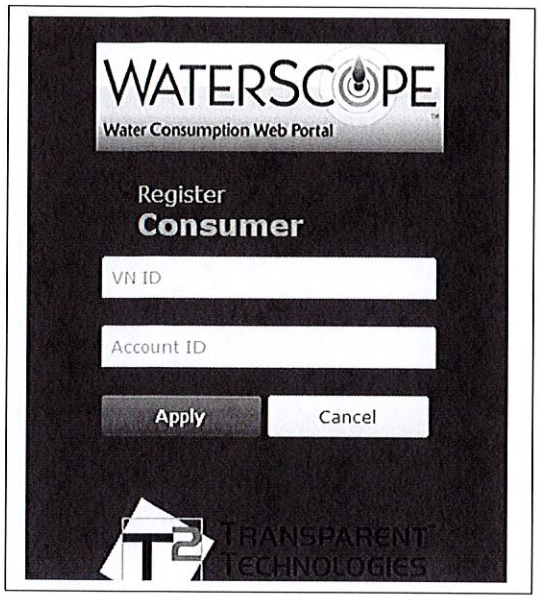
Consumer Portal Web Version

The web version of the consumer portal reflects the exact same screens that were discussed on the Micro level of the head end system. This is very beneficial when the utilities customer support staff engages with a homeowner as it allows both sides to view the same exact information. The utility has the ability to customize what screens the consumer has access to. The homeowner then has the option to decide which alerts they would like to receive. The following will cover the consumer web version with signup process and available analytics.

Sign-up

To signup, a consumer user must have the VN ID as well as the account number. The account number will be the utility account number maintained within the billing software. They will begin by clicking 'Register', the next screen will prompt for the VN and Account number:

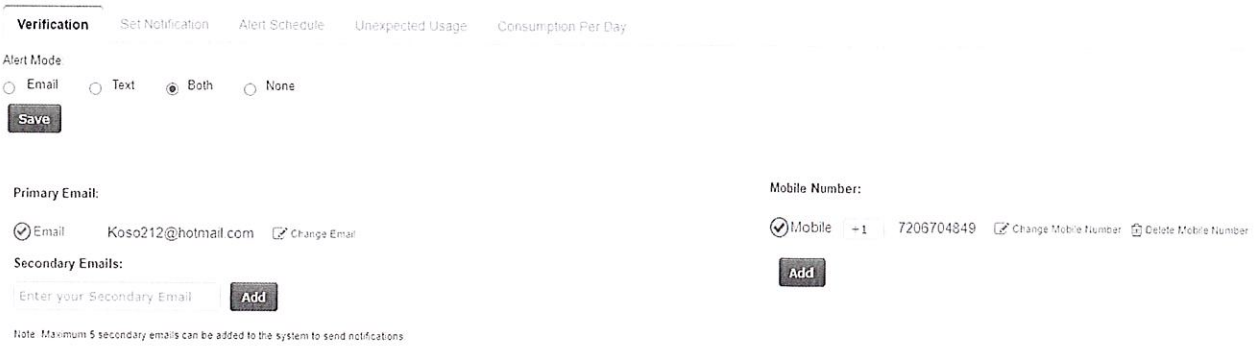




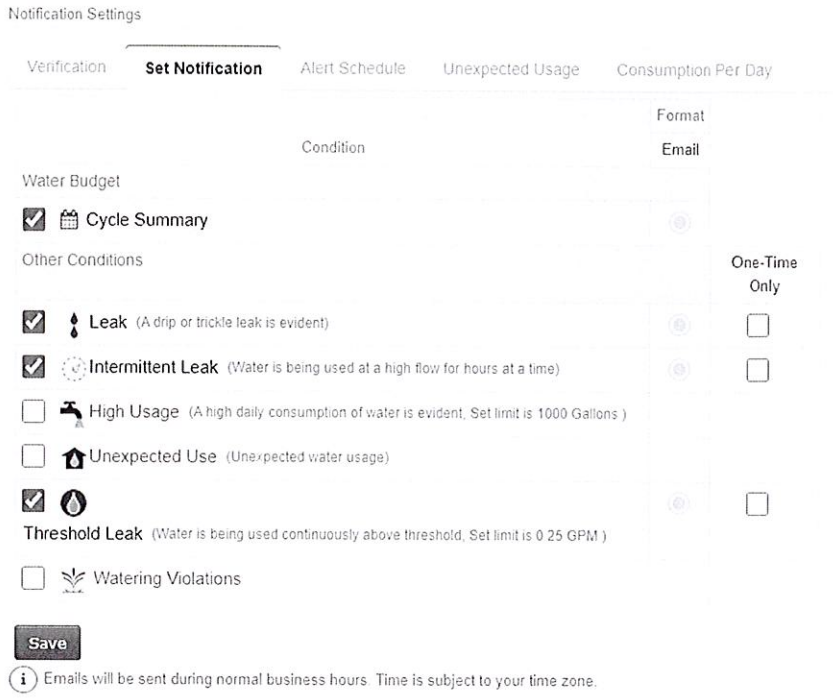
Assuming the VN and Account Number match, the homeowner will receive a welcome email with instructions on how to complete the signup.

Consumer Configuration

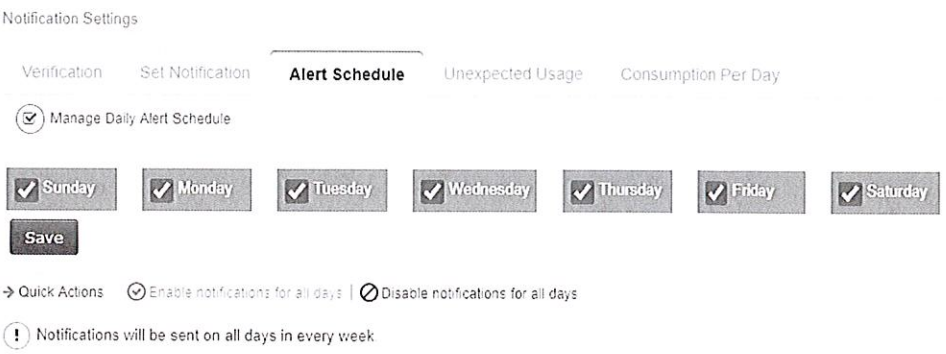
Verification – The consumer can opt in for email, text, or both to receive alerts. They may also add additional emails and phone numbers to the account.



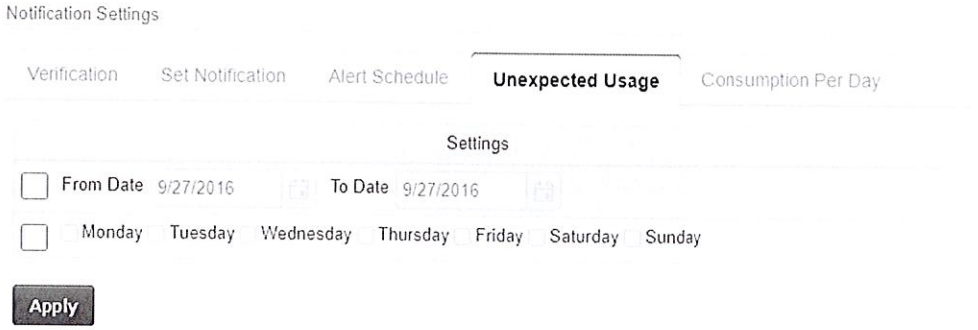
Set Notifications – Allows the homeowner to choose which flag conditions to receive notifications for. There is a brief explanation to the homeowner on what will trigger each condition.



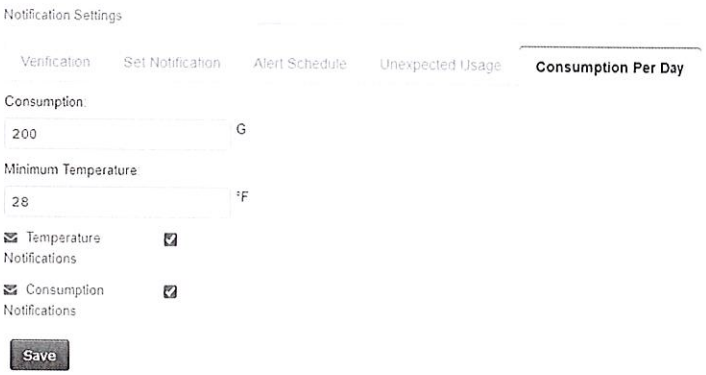
Alert Schedule – The consumer can define what days alerts will come in. 7 days a week is the default.



Unexpected Usage – The consumer can set an unexpected usage date range, or per the days of the week. This is designed to detect unexpected usage for things like rental properties, snowbirds, or when a consumer goes on vacation. It is also beneficial for businesses that may be closed certain days of the week.



Consumption Per Day – The consumer can set daily consumption alerts, as well as low temperature alerts. The notification is only sent if daily usage exceeds the consumer defined threshold, or the temperature falls below the consumer defined value.



Appendix III

Metron-Farnier
COST PROPOSAL & SLA

Date: 11/20/2023
Order/Account No.: Borrego Water District

Buyer:	Borrego Water District		**Seller:**	Metron-Farnier, LLC.
Buyer Rep:	Geoff Poole		**Seller Rep:**	Dustin Rivas
Address	806 Palm Canyon Dr		**Address:**	5665 Airport Blvd.
	Borrego Springs, CA 92004			Boulder, CO
Phone Number	760-767-5806		**Phone Number**	(303) 453-9706
E-Mail	geoff@borregowd.org		**E-Mail**	DustinR@metronfarnier.com

Quantity.	**Product** Description	Unit Cost	Total Cost
3	S25DB 5/8" Residential Meter w/ VN (10 Year Connectivity)	$395.00	$1,185.00
1,453	S30DB 5/8x3/4" Residential Meter w/ VN (10 Year Connectivity)	$395.00	$573,935.00
473	S50DL 1" Residential Meter w/ VN (10 Year Connectivity)	$575.00	$271,975.00
73	S88DL 1.5" Commercial Meter w/ VN (10 Year Connectivity)	$845.00	$61,685.00
29	S130D 2" Commercial Meter w/ VN (10 Year Connectivity)	$995.00	$28,855.00
4	S175D 3" Commercial Meter w/ VN (10 Year Connectivity)	$1,595.00	$6,380.00
6	S500D 4" Commercial Meter w/ VN (10 Year Connectivity)	$2,895.00	$17,370.00
7	S1000D 6" Commercial Meter w/ VN (10 Year Connectivity)	$3,995.00	$27,965.00
3	Standard Installation of 5/8" Meter	$125.00	$375.00
1,453	Standard Installation of 5/8x3/4" Meter	$125.00	$181,625.00
473	Standard Installation of 1" Meter	$195.00	$92,235.00
73	Standard Installation of 1.5" Meter	$375.00	$27,375.00
29	Standard Installation of 2" Meter	$375.00	$10,975.00
4	Standard Installation of 3" Meter	$725.00	$2,900.00
6	Standard Installation of 4" Meter	$915.00	$5,490.00
7	Standard Installation of 6" Meter	$1,300.00	$9,100.00
TBD	Residential Meter Box Lids	$60,00	TBD

Ship To:
806 Palm Canyon Dr, Borrego Springs, CA 92004

Bill To:
806 Palm Canyon Dr, Borrego Springs, CA 92004

Payment Terms:

- **Net 30 Days after each delivery.**

Subtotal	**$1,319,425.00**
Tax (Product Only)	**$76,674.63**
Shipping	**FOB Boulder, CO**
TOTAL PRICE	**$1,396,099.63**

If agreeable, please indicate your acceptance by signing below. This Sales Order and the attached Terms and Conditions of Sale (collectively, the "Order") govern Buyer's purchase of products and services from Seller. This Order constitutes the offer by Seller for the sales of products and services to Buyer and by signing it, Buyer indicates that Buyer accepts all of the terms and conditions contained in this Order and that any inconsistent terms and conditions in any documents associated with a Buyer purchase order or other order document (e.g., general terms and conditions attached to the purchase order form) will be not binding on the parties and of no consequence whatsoever in interpreting the parties' legal rights and responsibilities as they pertain to products or services provided under this Order. No such materials will be deemed to modify, add to, or supersede any provision of this Order. Neither party will have any obligations or liability to the other party with respect to any purchase orders that are not accepted by both parties. By signing below the parties agree to be legally bound by the terms of this Sales Order and the Terms and Conditions of Sale, which are attached hereto and incorporated herein by this reference.

Buyer: Borrego Water District

By: _____

Name: _____

Title: _____

Date: _____

Seller: Metron-Farnier, LLC.

By: _____

Name: _____

Title: _____

Date: _____

TERMS AND CONDITIONS OF SALE

In consideration of the mutual promises set forth herein, Buyer agrees to purchase from Seller, and Seller agrees to sell and deliver to Buyer, the products and/or services set forth on the Sales Order (or other such order form) to which these terms are attached or incorporated by reference. As used herein, "Buyer" means the buyer listed on the Order, and "Seller" means Metron-Farnier, Inc.

1. CONTROLLING DOCUMENT. THIS ORDER CONSTITUTES A REJECTION OF ANY PRIOR OFFER MADE BY SELLER OR BUYER WITH RESPECT TO THE PRODUCTS AND/OR SERVICES SPECIFIED ON THE ORDER AND IS AN OFFER TO SELL SUCH PRODUCTS AND/OR SERVICES ON THE TERMS SET FORTH HEREIN AND NO OTHERS. Buyer's acceptance of this Order shall be evidenced by its execution of the Order or payment of any fees due hereunder, whichever occurs sooner. Buyer's acceptance shall be deemed limited to the terms and conditions of this Order. Except as specifically indicated on the face of this Order, the terms and conditions set forth herein constitute the entire agreement of the parties with respect to the subject matter hereof and cancel and supersede all prior communications, understandings and agreements.

2. PAYMENT. Unless otherwise specified in the Order, all products are invoiced and all payment is due upon Buyer's acceptance of the Order. Any services are invoiced following the performance thereof and due and payable upon receipt unless otherwise agreed in writing. All prices for products and services are exclusive of, and Buyer is responsible for, all sales, value added, use and like taxes and any applicable customs duties, import licenses, excise fees or tariffs. Overdue payments shall be subject to interest at a rate of the lesser of the maximum allowed by law or 1 1/2% per month.

3. PACKING AND SHIPMENT. Unless otherwise specified, Seller will package all products in a manner which is (i) in accordance with good commercial practice, and (ii) reasonably adequate to ensure safe arrival of the products at the named destination. Seller will mark all containers with necessary lifting, handling, and shipping information and with Order numbers, serial numbers, date of shipment, and the names of the consignee and consignor. An itemized packing list will accompany each shipment of products.

4. DELIVERY AND ACCEPTANCE. Quoted lead times and delivery dates are estimates only. Except as otherwise provided in the Order, all products are ***Delivered At Place (DAP) to the destination listed in the Order*** (Incoterms 2010) and Buyer is solely responsible for the unloading during the delivery window provided and the assembly of such products (including procurement of any necessary tools or resources). Buyer shall have three (3) days following delivery of products to inspect whether such products conform to the amounts and specifications set forth in this Order. Where excess products are delivered, Seller's sole liability and Buyer's exclusive remedy shall be to either accept and pay for the excess or to return the excess to Seller at Seller's cost. Where products delivered otherwise do not meet the specifications set forth in the Order, Buyer's exclusive remedy will be for Seller, at Seller's cost and election, to either correct or replace the non-conforming products or issue a pro rata refund accounting for the defect.

5. INSTALLATION SERVICES AND SITE PREPARATION. Upon the parties' agreement and at Buyer's expense, Seller may provide certain services related to the unloading, unpacking, assembly, installation, and/or placement of the products (the "Installation Services") in a designated location at Buyer's facility, the exact location to be agreed to in writing prior to the Installation Services being performed (the "Site"). Buyer shall be responsible for ensuring that the Site is properly prepared for the Installation Services, including, but not limited to, ensuring the grounds of the Site are level, dry, and structurally sound and meets any other requirements provided by Seller in writing. In no event shall Seller be responsible for any preparation of the Site. Seller shall have no liability for improper preparation of the Site by Buyer or its subcontractors. If, in Seller's sole discretion, the Site is not properly prepped upon arrival, Seller may reschedule the Installation Services and Buyer shall be responsible for all costs and fees associated with such rescheduling of the Installation Services. In no event will Seller be obligated to re-perform any of the Installation Services due to incorrect Site placement or improper Site preparation.

6. PRODUCT WARRANTY. Seller warrants that the products as set forth in the applicable documentation accompanying such products. If no warranty documentation accompanies the product, Seller warrants for a period of one year following delivery that all products will (i) be new (except in the case of products known to Buyer to be used or resold) and free from material defects in workmanship, material and manufacture, (ii) not be subject to a security interest, lien, encumbrance or other defect of title, and (iii) substantially comply with the requirements of this Order, including any drawings or specifications incorporated herein. All product warranties are made only to utilities, municipalities and other commercial users purchasing from Seller or its authorized distributor. Warranties do not apply to end-use consumers. The warranties set forth in this Order are made by Seller only to those persons and entities that purchase products directly from Seller or authorized distributors of Seller products. Any products obtained in any manner from any person or entity other than by purchase from Seller or an authorized distributor of Seller products is not covered by the warranties set forth in this Order and Seller makes no warranties, guarantees, or representations with respect to any products so obtained. Where products are delivered are in breach of the foregoing warranty and a warranty claim is received during the applicable warranty period, Seller's sole liability and Buyer's exclusive remedy will be for Seller, at Seller's cost and election, to either correct the non-conformity, replace the non-conforming products with conforming products, or issue a refund of the price paid in exchange for return of the products by Buyer. The foregoing warranty does not apply to, and Buyer shall be solely responsible for, any neglect, abuse, improper installation or assembling, handling or storage, or other misuse of the products by anyone other than Seller or its authorized distributors, including any failure to install or assemble the products in accordance with the written installation or assembly instructions furnished with the products. EXCEPT AS EXPRESSLY SET FORTH IN THIS ORDER, ALL PRODUCTS AND SERVICES ARE PROVIDED "AS IS" AND SELLER DISCLAIMS ANY AND ALL OTHER WARRANTIES WITH REGARD THERETO, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY AS TO MERCHANTABILITY, TITLE, NON-INFRINGEMENT, AND FITNESS FOR A PARTICULAR PURPOSE.

7. CHANGES AND CANCELLATIONS. Buyer has the right to cancel this Order or request changes in quantities, specifications and/or schedules for any reason, subject to the terms of this Section. Any cancellation, change request, or reschedule request must be in writing. Orders may be cancelled without penalty within three days after Buyer's acceptance of the Order, in which case Seller will refund any deposits paid thereunder by Buyer. Orders canceled more than three days after Buyer's acceptance of the Order but before substantial completion of manufacture of the products are subject to a cancellation fee equal to 50% of the total Order value (offset by any deposits paid). Orders cancelled after substantial completion of manufacture of the products are subject to a cancellation fee equal to 100% of the total Order value (offset by any deposits paid). Such fees are due and payable immediately upon cancellation. All other changes to the Order require mutual written agreement.

8. TITLE. Title to all products purchased by Buyer hereunder will pass to Buyer upon Seller's receipt of full payment therefor. As between the parties, all right, title and interest in and to all tools, processes, technologies, know-how, resources, designs and specifications (even if provided by Buyer) used in connection with the manufacture of products hereunder will be and remain with Seller, even if such do not constitute protectable intellectual property (collectively, the "Seller IP").

9. LIMITATION OF LIABILITY. IN NO EVENT WILL SELLER BE LIABLE TO BUYER FOR (A) ANY LOST PROFITS, CONSEQUENTIAL, INCIDENTAL, INDIRECT, PUNITIVE OR SPECIAL DAMAGES OF ANY KIND, REGARDLESS OF FORM OF ACTION (INCLUDING WITHOUT LIMITATION TORT OR CONTRACT), EVEN IF BUYER HAS BEEN NOTIFIED OF THE POSSIBILITY OF SUCH DAMAGES; OR (B) TOTAL AGGREGATE LIABILITY IN EXCESS OF THE TOTAL AMOUNTS PAID FOR THE APPLICABLE PRODUCTS GIVING RISE TO LIABILITY. BUYER ACKNOWLEDGES AND AGREES THAT THIS LIMITATION OF LIABILITY IS A FUNDAMENTAL BASIS OF THE BARGAIN BETWEEN THE PARTIES AND THAT IN THE ABSENCE OF THIS PROVISION, THE ECONOMIC TERMS OF THIS ORDER WOULD BE SUBSTANTIALLY DIFFERENT.

10. INDEMNITY. Buyer shall indemnify, defend and hold harmless Seller (including its employees, officers, agents, suppliers and contractors) from and against any and all claims and losses arising out of or related to Buyer's use of the products and/or services following Seller's delivery or completion thereof (as applicable).

11. NON-DISCLOSURE. Buyer will hold in strict confidence and not disclose to third parties (a) Seller's pricing, (b) Seller's suppliers, and (c) the Seller IP.

12. ASSIGNMENT. No right or obligation under this Order (other than the right to receive monies due) may be assigned by Buyer without the prior written consent of Seller, and any purported assignment without such consent will be null and void ab initio.

13. FORCE MAJEURE. Seller shall not be liable for any failure to deliver products or otherwise perform hereunder to the extent caused by events or circumstances beyond its reasonable control, including but not limited to acts of God, material changes in market conditions or applicable legislation, telecommunications downtime or failures of suppliers or common carriers.

14. INDEPENDENT CONTRACTOR. If services are ordered under this Order, Buyer and Seller agree that Seller is an independent contractor and that no partnership or joint venture shall be deemed to exist between them. This Order does not constitute authority for Seller to act for Buyer as its agent or make commitments for Buyer.

15. SEVERABILITY; WAIVER; NOTICES. If any provision of this Order is held invalid or unenforceable to any extent or in any application, the remainder of the terms of this Order, or the application of such provision to different persons or circumstances or in different jurisdictions, shall not be affected thereby. No failure or delay of Buyer or Seller in exercising at any time any of its rights, powers

or remedies under this Order, in exercising any election or option provided herein, or in requiring the performance by the other party of any of the provisions herein will in any way be construed to be a waiver of such provisions, and any waiver of any provision granted on one occasion shall not be deemed a waiver of such provision on other occasions. All notices relating to a party's rights or obligations hereunder must be in writing and sent to the other party's address set forth in the Order. Notices will be deemed delivered on the third business day (fifth if international) following the date sent.

16. GOVERNING LAW/VENUE. All questions, controversies and disputes arising out of this Order will be governed by and construed in accordance with the laws of the State of Colorado without reference to its conflicts of law rules. The U.N. Convention on the International Sale of Goods shall not apply. Buyer and Seller irrevocably consent to the exclusive jurisdiction of the state and federal courts seated in Denver, Colorado for the resolution of any such question, controversy or dispute, irrespective of any claim of inconvenient forum that may be made.

{End of Document}

BORREGO WATER DISTRICT
BOARD OF DIRECTORS MEETING
JANUARY 9, 2024
AGENDA ITEM II.E

January 2, 2024

TO: Board of Directors

FROM: Geoffrey Poole, General Manager

SUBJECT: Borrego Springs Subbasin Watermaster Board – VERBAL D Duncan/K Dice/T Driscoll

1. Proposition 68 Reimbursement #1 Received/Distributed before 12-31-23 (WAY TO GO JESSICA!)
2. Update on Board Activities Including 1-11-24 Agenda Items
3. Update on Technical Advisory Committee Activities

RECOMMENDED ACTION:
Discuss upcoming Watermaster related activities

ITEM EXPLANATION:
BWD Representatives from the Watermaster and TAC will provide a review of recent events and an update on upcoming meetings.

NEXT STEPS
1. TBD

FISCAL IMPACT
1. TBD

ATTACHMENTS
1. None