

# NORTH MARSHALL WATER DISTRICT

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August 9, 2023

Ms. Linda C. Bridwell, P.E.  
Executive Director  
Kentucky Public Service Commission  
P.O. Box 615  
Frankfort, Ky 40602-0615

Re: Case No. 2023-00134  
North Marshall Water District  
Alternative Rate Filing Adjustment

Dear Ms. Bridwell:

Enclosed for filing in the referenced case is North Marshall Water District response to Commission Staff's telephone request for clarifications and supporting documents.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Ryan L. White', is written over the signature line.

Manager

Enclosure

1. Does the District pay 100% of the medical and dental insurance premium for a single person?

Response: Yes, the premium for a single person for both medical and dental is paid at 100%. All other policies have a co-pay on the premium. Please note that the district application seeks to recover health insurance expense in accordance with past PSC practices. See the file titled *NMWD\_Rate\_Study.xls*, tab *Medical*, provided in response to item 15 of the initial request for information.

2. What was the basis for the adjustment for training and education expense. Is the adjusted cost a one-time occurrence or is it going to be recurring.

Response: *The District is dedicated to maintaining a trained Staff and believes that the expenses associated with training will very likely increase going forward. Several issues have impacted the training cost for the District. The District has committed to advancing a computer asset management system that uses ARC GIS and mPower Integrator. This software is frequently upgraded and the District is committed to sending at least one of our two technicians to the annual conference for training. The District, now has seven certified operators that require 24 hours of training every 2 years. Management has reviewed the entries into the general ledger for the education and training account and has completed an estimate of the adjustments needed for the posted expenses shown in 2021, 2022 and 2023 to date. See the attached document RFI2a\_Item\_2 for 2023 expenses.*

3. Additional data is needed to address Item I of RFI No. 2 concerning the design life of meters. The information based on the California standard procedure is not recognized by the Commission. Additional information from the meter manufacturer's pertaining to design life is requested.

Response: See the attached manufacturer's warranty titled *MWarranty.pdf*. The following cases used 15 to 20 years for service lives in determining depreciation in these recent Kentucky PSC cases:

<u>District</u>	<u>Case No.</u>	Electronic Meter <u>Useful Life</u>
North Logan WD	2021-00286	20
East Clark Co WD	2021-00318	15
Corinth	2021-00425	15
Gallatin Co. WD	2021-00396	20

Western Pulaski	2021-00445	20
Southern W & S	2022-00099	20
West Laurel	2022-00120	20
Daviess County WD	2022-00142	20
Meade Co. WD	2023-00039	15

*The amount shown in the submitted depreciation is based on the meter cost only. It does not include the cost of the meter setter. The district uses a multi-jet style mechanical meter with an under the glass encoder dial register for meters that are 1" and smaller. The meter has a history of being very accurate. The rate of failure per our testing program is less than 1%. The batteries installed in the encoder / transmitter last on average 10 to 12 years per our 15 years of experience. Currently the cost of replacing the dial/encoder unit is \$190 per meter (material only). Using a 9-year average life of the encoder register, the annual straight-line cost for the register is \$21.11. The cost of a new 5/8 X 3/4 meter model the district uses is approximately \$275 today. If the initial cost of the body is assumed to be \$85.00, the annualized cost over a 30-year life is \$2.83 neglecting the cost of testing. Accordingly, the total annualized cost of a typical 5/8 X 3/4 residential AMR meter is \$23.94 per meter. The equivalent design life can be estimated by dividing the cost of the meter by the annualized cost. Under the assumptions above, the estimated equivalent design life of the meter is  $275 \div 23.94 = 11.49$  years. On the larger meters, we are seeing a similar operating life.*

*During a recent competitive procurement, the district evaluated design life as part of the selection criteria. Most manufacturer's do not publish an actual design life. They do warrant various components. The most liberal warranties that we have reviewed for a typical residential electronic meter is 10-year full replacement with a pro-rated replacement up to another 10 years. The document submitted in the second request includes the logic used in determining a suggested design life. For the North Marshall Water District, we believe the use of 15 years as a design life for the district's meter in the rate study is probably excessive in light of the observations we have made above based on actual experience. The study submitted in response to RFI No. 2 suggests a life of 20-years which based on warranties provided by different manufacturers would reflect the longest design life in the industry. The data in the NARUC manual is applicable to mechanical read meters and is not applicable to electronic meters used by the majority of utilities today to enhance overall operations efficiency.*

4. Provide the agreement with KRWA for the cost of providing services associated with the rate case.

Response: *See the attached document RFI2a\_Item\_4*

5. Regarding the original request for additional information, the district provided a table and several of the employees in the table had in excess of 2080 hours per year. Explain the basis and why the time in excess of 2080 hours wasn't treated as overtime.

*Response: 2021 had 53 pay periods explaining the 2120 regular hours shown for Colburn, Jones and Queen. Smith works on average 32 hours a week. Dossett, Howell, Moore, Noles, Penney and Stevenson are shift operators. If the Holiday falls on days they are regularly scheduled to work they are paid 10 regular hours which explains the additional 40 hours shown for Penney and Howell who are normally schedule to work on Fridays.*



**Consolidated  
Measurement and  
Systems Products  
&  
Meter Accuracy  
Warranty**



# Multi-Jet 5/8" – 2" and Positive Displacement 5/8" – 1"

## Scope of Integrity

This warranty applies exclusively to Master Meter Multi-jet 5/8", 3/4", 1", 1.5", and 2" meters and Positive Displacement 5/8", 3/4", and 1" meters when used for clean cold potable water (per applicable AWWA Standard) and installed in accordance with Master Meter published installation instructions in effect as of the date of Master Meter's shipment. This warranty applies exclusively to the original utility purchaser when product is purchased from either Master Meter or an authorized Master Meter distributor. Coverage in both terms of time and registered usage is from date of shipment by Master Meter.

## Materials and Workmanship

If used and installed as described above, Master Meter warrants all Multi-jet (5/8", 3/4", 1", 1.5" and 2") and Positive Displacement (5/8", 3/4", and 1") to be free from defects in materials and workmanship for a **period of 24 months.**

## Case Integrity

If used and installed as described above, Master Meter, Inc. warrants that the low lead bronze cases of the 5/8", 3/4", 1", 1.5" and 2" Multi-Jet Meters and the 5/8", 3/4", and 1" Positive Displacement Meters will retain their structural integrity **for a period of 25 years** from the date of Master Meter shipment.

*The Master Meter Positive Displacement meets or exceeds the AWWA's most recent revision of C700 Standard for Accuracy  
The Master Meter Multi-jet meets or exceeds the AWWA's most recent revision of C708 Standard for Accuracy.*

20 YEAR TOTAL ACCURACY GUARANTEE					
5 YEARS NEW			15 YEARS REPAIRED		
	5/8" x 3/4"	3/4"	1"	1.5"	2"
NEW Meter Accuracy	5 Years or 750,000 USG	5 Years or 750,000 USG	5 Years or 1,100,000 USG	5 Years or 1,600,000 USG	5 Years or 2,100,000 USG
REPAIRED Meter Accuracy	15 Years or 2,500,000 USG	15 Years or 2,500,000 USG	15 Years or 3,250,000 USG	15 Years or 5,600,000 USG	15 Years or 10,400,000 USG

# Ultrasonic Smart Measurement

## SONATA Ultrasonic for Residential Applications

### Scope of Integrity

This warranty applies exclusively to Master Meter Sonata 5/8", 3/4" and 1" meters when used for clean cold potable water (per applicable AWWA standard) and installed in accordance with Master Meter published installation instructions in effect as of the date of Master Meter's shipment. This warranty applies exclusively to the original utility purchaser when product is purchased from either Master Meter or an authorized Master Meter distributor. Coverage in both terms of time and registered usage is from date of shipment by Master Meter.

### Case Integrity


If used and installed as described above, Master Meter warrants all Sonata meters (5/8", 3/4" and 1") will retain their structural integrity for a **period of 20 years**.

### Electronics

If used and installed as described above, Master Meter warrants all Sonata meters (5/8", 3/4" and 1") batteries, transducers, LCD, and communications output (encoder, or integrated 3G Radio) will be warranted for a **period of 20 years**. Master Meter will repair or replace the meter at no cost for the first ten (10) years and prorated in Years 11 – 20 as listed below.

### Accuracy

Master Meter warrants all Sonata meters (5/8", 3/4" and 1") will meet or exceed +/- 1.5% accuracy in the Normal Operating Range of the meter, as defined in the latest revision of the Sonata Product Data Sheet for a **period of 20 years**. Master Meter will repair or replace the meter at no cost for the first ten (10) years and prorated in Years 11-20 as listed below.



### Ultrasonic Warranty Schedule

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Sonata 3G, Sonata Encoder											30%	30%	30%	30%	30%	40%	40%	40%	40%	40%	
Octave																					

## OCTAVE Ultrasonic for Commercial and Industrial (C&I) Applications

### Scope of Integrity

This warranty applies exclusively to Master Meter Octave 1.5" - 12" meters when used for clean cold potable water (per applicable AWWA standard) and installed in accordance with Master Meter published installation instructions in effect as of the date of Master Meter's shipment. This warranty applies exclusively to the original utility purchaser when product is purchased from either Master Meter or an authorized Master Meter distributor. Coverage in both terms of time and registered usage is from date of shipment by Master Meter.

### Case Integrity

If used and installed as described above, Master Meter warrants all Octave meters (1.5" – 12") will retain their structural integrity for a **period of 10 years**.

### Electronics

If used and installed as described above, Master Meter warrants all Octave meters (1.5" - 12") main board, batteries, transducers and LCD will be warranted for a **period of 10 years**. Externally attached communication output modules (encoder, pulse, 4-20, dual output and Modbus) will be warranted for a **period of 1 year**.

### Accuracy

Master Meter warrants all Octave meters (1.5" - 12") will meet or exceed +/- 1.5% accuracy in the Normal Operating Range of the meter, as defined in the latest revision of the Octave Product Data Sheet for a **period of 10 years**.



# C&I Products – Turbines, Fire Hydrant Meters

## Turbine Meters and Fire Hydrant Meters

Master Meter 2" – 8" bronze body and 10" and 12" cast iron body **Turbine Meters** and **Fire Hydrant Meters** are warranted to perform to all applicable AWWA accuracy standards. Turbine and Fire Hydrant Meters are warranted be free from **material and workmanship** defects for **two years (24 months)** as of the date of Master Meter's shipment. Master Meter Turbine and Fire Hydrant Meters are warranted for accuracy for **one (1) year** from the date of Master Meter shipment.

# Allegro Infrastructure & Equipment Warranty

Base Station	One (1) year <sup>2</sup>
Repeater <sup>1</sup>	One (1) year <sup>2</sup>
Mobile Receiver	One (1) year

1. **Repeater.** This covers all versions of repeaters, including but not limited to: Standard Repeater, Photocell Repeater, and Solar Repeater

2. **Extended Warranty.** Additional warranty for Allegro Infrastructure Equipment can be purchased on a per unit basis. Master Meter's Extended Warranty must be purchased within 12 months of the original shipment date of equipment. Eligibility is based on continuous annual enrollment.


**Escalation for Services: five percent (5%).** Services. Invoices for Ongoing Fees and services shall be delivered annually or monthly, as applicable, in advance. Invoices for other services shall be delivered upon completion of the applicable service.

**ALL MASTER METER PRODUCTS NOT SPECIFICALLY IDENTIFIED ABOVE, OR ANY METER USED FOR NON-POTABLE WATER, ARE WARRANTED TO BE FREE OF DEFECTS IN MATERIALS AND WORKMANSHIP FOR ONE (1) YEAR AS OF THE DATE OF MASTER METER'S SHIPMENT.**





# Register & Electronics – General Limited Warranty

	
Years	
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Direct Read Register	
3G-DS AMR & External Transceivers	30% 30% 30% 30% 30% 40% 40% 40% 40% 40%
3G-DS Interpreter and Interpreter II Register & External Transceivers	30% 30% 30% 30% 30% 40% 40% 40% 40% 40%
Allegro™ Registers & External Transceivers	30% 30% 30% 30% 30% 40% 40% 40% 40% 40%
Interpreter Register for GridLinx™ & External Transceivers	30% 30% 30% 30% 30% 40% 40% 40% 40% 40%
Interpreter Register for Itron® & External Transceivers	30% 30% 30% 30% 30% 40% 40% 40% 40% 40%
eLinx Electronic Encoder Register	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           Prorated Replacement Cost         </div>
AccuLinx Encoder Register	
ReadMaster™ Register	

DISCOUNT PERCENTAGES WILL BE APPLIED AGAINST PUBLISHED LIST PRICES IN EFFECT AT THE TIME THE PRODUCT IS ACCEPTED BY MASTER METER UNDER WARRANTY CONDITIONS. THE WARRANTIES CONTAINED ABOVE HEREOF ARE THE ONLY WARRANTIES WITH RESPECT TO THE LISTED PRODUCTS, AND ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, BETWEEN THE PARTIES OR ARISING BY LAW. IN PARTICULAR, MASTER METER DISCLAIMS ANY AND ALL WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THESE WARRANTIES SHALL BE VOID IN THE EVENT THAT MASTER METER DETERMINES THAT THE FAILURE OR DEFECT IN THE LISTED PRODUCT HAS ARISEN AS A RESULT OF THE PRODUCT BEING USED FOR ANY PURPOSE OTHER THAN THAT WHICH WAS INTENDED AND APPROPRIATE AT THE TIME OF MANUFACTURE INCLUDING USE IN A CONFIGURATION OTHER THAN AS RECOMMENDED BY MASTER METER OR AS A RESULT OF IMPROPER INSTALLATION OR MAINTENANCE.

I. Master Meter, Inc. ("Master Meter") warrants its products and parts to be free from defects in material and workmanship for **one (1) year** from the date of Master Meter's shipment, if not otherwise specified or as set forth in this document.

II. **Allegro™** Integrated registers and **Allegro™ External Transceiver Modules** are warranted to be free from defects in materials and workmanship for **Ten (10) years** from date of shipment by Master Meter and at a prorated replacement cost of current list price during the following **Ten (10) years** based on the discounted rate value listing above (configured to the original factory settings of twice daily transmissions of 12 hourly interval reads, allowing for no more than 2 customer requested firmware upgrades for the life of the product, and no more than 4 data logs per year.) All other Allegro System Components are warranted to be free from defects in materials and workmanship for **One (1) year** from date of shipment by Master Meter.

III. **DIALOG 3G™ DS**, **DIALOG 3G™ DS Interpreter / Interpreter II** registers, and **DIALOG 3G™ External Transceiver Modules** are warranted to be free from defects in materials and workmanship for **Ten (10) years** from date of shipment by Master Meter and at a prorated replacement cost of current list price during the following **Ten (10) years**

based on the discounted rate value listing above (configured to the original factory settings with a typical usage of no more than 4 data logs per year.) All other DIALOG 3G DS System components and features are warranted to be free from defects in materials and workmanship for **One (1) year** from date of shipment by Master Meter.

IV. **Interpreter™ Register with GridLinx™ Protocol**, **Interpreter™ Register with Itron® (formerly Silver Spring Networks) Protocol**, and all **GridLinx or Itron External Transceiver Modules** operating on the GridLinx and Itron Network are warranted to be free from defects in materials and workmanship for **Ten (10) years** from date of shipment by Master Meter and at a prorated replacement cost of current list price during the following **Ten (10) years** based on the discounted rate value listing above (configured to the original factory settings.) All other System Components for Registers based on GridLinx and Itron Network are warranted to be free from defects in materials and workmanship for **One (1) year** from date of shipment by Master Meter.

V. **AccuLinx™**, **eLinx™**, and **DIRECT READ** registers are warranted to be free from material and workmanship defects for **ten (10) years**, and **DIRECT READ** registers for **fifteen (15) years**, from date of Master Meter shipment. All other Master Meter products not specifically

identified above are warranted to be free of defects in materials and workmanship for **one (1) year** from date of Master Meter shipment.

VI. **ReadMaster™** registers are warranted to be free from material and workmanship defects for **five (5) years** from date of shipment by Master Meter (*configured to the original factory settings four (4) transmissions daily*). All other ReadMaster system components not specifically identified above are warranted to be free of defects in materials and workmanship for **one (1) year** from date of shipment by Master Meter.

VII. **DIALOG 3G™ Gas Modules and DIALOG 3G™ Electric Modules** are warranted to be free from defects in material and workmanship for **one (1) year** from date of shipment by Master Meter.

VIII. RETURNS: Master Meter's obligation, and Customer's exclusive remedy, under this Limited Warranty is, at Master Meter's option, to repair or replace the product, provided the Customer (a) returns the product to the location designated by Master Meter within the warranty period; and (b) prepays the freight costs to such location.

## Warranty & Limits of Liability

This warranty does not apply to meters or registers determined by Master Meter, at its sole discretion, to have been damaged by aggressive water conditions, foreign matter in water, vandalism, negligence, installation not in accordance with Master Meter, Inc. installation instructions, misapplication or other use not as described on this document, acts of God or other conditions beyond the control of Master Meter, Inc. This warranty is null and void if it is determined by Master Meter that a meter is altered by the addition of any register not manufactured by or on behalf of Master Meter, Inc. for its specific model and size. If a meter is claimed to breach the accuracy guarantees as stated herein, the customer shall submit a certified copy of the test results at the time the meter is returned to Master Meter, Inc. The accuracy warranty shall be void if an examination of the customer's water system shows poor water quality causing an unusually adverse effect on metering equipment.

Master Meter's liability under this warranty is expressly limited to repair or replacement of the product, or similar product and/or component, at Master Meter's sole discretion, at Master Meter's option. The repaired or replacement product will maintain the original meter's warranty based on the original purchase date. The customer must pay for freight cost of the returned product or products to the factory or service center designated by Master Meter. The product returned becomes the property of Master Meter.

If product is not determined to be under warranty, customer will pay freight for return of the original product. If the product is determined to be under warranty, the product will be repaired and returned to the customer, replaced, or Master Meter will determine a suitable substitute (at Master Meter's sole option), with freight paid by Master Meter. The original product returned becomes the property of Master Meter. Master Meter shall not be liable for special, incidental, in-direct or consequential damages of any kind.

The return of products for warranty claims must follow Master Meter's Returned Materials Authorization (RMA) procedures. All Master Meter Products returned must be affixed with an approved Return Authorization form. For all returns, Master Meter reserves the right to request meter reading records by serial number to validate warranty claims.

For products that have become discontinued or obsolete ("Obsolete Product"), Master Meter may, at its discretion, replace such Obsolete Product with a different product model ("Replacement Product"), provided that the Replacement Product has substantially similar features as the Obsolete Product.

Any description of product, whether in writing or made orally by Master Meter, Inc or its agents, specifications, samples, literature, models, bulletins, drawings, diagrams, data sheets or similar materials used in connection with any customer's order are for the sole purpose of identifying product and shall not be construed as an express or implied warranty. Any suggestions by Master Meter, Inc. or its agents regarding use, application, or suitability of product shall not be construed as an express or implied warranty unless confirmed to be such in writing by Master Meter, Inc.

If any provision hereof, partly or completely, shall be held invalid or unenforceable, such invalidity shall not affect any other provision or portion hereof and these terms shall be construed as if such invalid or unenforceable provision or portion thereof had never existed.

**THE FOREGOING EXPRESS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES OR GUARANTEES WHATSOEVER, WHETHER EXPRESSED OR IMPLIED (EXCEPT FOR WARRANTY OF TITLE) INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. CUSTOMER'S EXCLUSIVE REMEDY AND MASTER METER, INC. AND ITS BUSINESS PARTNERS' SOLE LIABILITY ON ANY CLAIM, WHETHER IN BIAS (INCLUDING STRICT LIABILITY), NEGLIGENCE, CONTRACT, WARRANTY OR OTHERWISE, FOR ANY METER OR REGISTER WHICH FAILS TO MEET THE TERMS OF THE WARRANTY STATED IN THIS DOCUMENT, SHALL BE LIMITED TO REPAIR OR REPLACEMENT AS DESCRIBED ABOVE.**

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**No Consequential or Indirect Damages. EXCEPT AS OTHERWISE PROVIDED, IN NO EVENT SHALL MASTER METER OR ANY OF ITS BUSINESS PARTNERS BE LIABLE TO THE CUSTOMER OR ANY THIRD PARTY FOR ANY CONSEQUENTIAL, INCIDENTAL, INDIRECT, EXEMPLARY, SPECIAL OR PUNITIVE DAMAGES, INCLUDING ANY DAMAGES FOR BUSINESS INTERRUPTION, LOSS OF USE, DATA, REVENUE OR PROFIT, COST OF CAPITAL, COST OF SUBSTITUTE EQUIPMENT, DOWNTIME COSTS, WHETHER ARISING OUT OF BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE) OR OTHERWISE, REGARDLESS OF WHETHER SUCH DAMAGES WERE FORESEEABLE AND WHETHER OR NOT THE MASTER METER WAS ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.**

**Maximum Liability. EXCEPT AS OTHERWISE PROVIDED IN NO EVENT SHALL MASTER METER'S AGGREGATE LIABILITY ARISING OUT OF OR RELATED TO THIS AGREEMENT, WHETHER ARISING OUT OF OR RELATED TO BREACH OF CONTRACT, TORT (INCLUDING**



NEGLIGENCE) OR OTHERWISE, EXCEED THE TOTAL AMOUNT PAID TO THE SELLER PURSUANT TO THIS AGREEMENT. THE FOREGOING LIMITATIONS SHALL APPLY EVEN IF THE CUSTOMER'S REMEDIES UNDER THIS AGREEMENT FAIL OF THEIR ESSENTIAL PURPOSE.

**Sole Remedy.** THIS LIMITATION OF LIABILITY SETS FORTH MASTER METER'S SOLE LIABILITY AND ENTIRE OBLIGATION AND THE CUSTOMER'S EXCLUSIVE REMEDY FOR ANY ACTION THAT IS BROUGHT AGAINST MASTER METER.

**Governing Law and Venue.** ALL DISPUTES ARISING OUT OF OR RELATING TO THIS AGREEMENT SHALL BE GOVERNED BY TEXAS LAW, EXCLUDING ITS CHOICE OF LAW RULES, WITH JURISDICTION AND VENUE IN THE STATE OR FEDERAL COURTS OF TARRANT COUNTY, TEXAS. THE PARTIES CONSENT TO THE PERSONAL JURISDICTION OF, AND VENUE IN, SUCH COURTS AND AGREE THAT NO SUCH COURT IS AN INCONVENIENT FORUM.

**Master Meter, Inc.** The Science of Precise Measurement™  
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