Witness: Andy Lewis and Heather Hoelting

1. Reference the response to PSC-DR-1-5, and the Excel attachment thereto. Confirm that the grand total of customers who, since January 2018 received an estimated bill for more than two consecutive months, is 18,777.

Response:

KAW assumes this question meant to refer to KAW's response to PSC 2-5, not PSC 1-5. KAW has filed a supplemental response to PSC 2-5 contemporaneously herewith. Please see that supplemental response and the explanation therein for the updated totals.

As indicated in that supplemental response, there have been no more than 5,251 customers who, since January 2018, received an estimated bill for more than two consecutive months. KAW has confirmed with estimated billing data 4,678 of those customers and is working to obtain additional estimated billing data to confirm the other 573 customers.

Witness: Andy Lewis

- 2. Reference the response to AG-DR-1-2, wherein it is stated that 99.9% of KAW's meters are AMR. Of the customers possessing non-AMR meters, provide:
 - a. the number of customers affected by consecutive months of estimated bills; and
 - b. the means by which these meters are read.

Response:

- a. As of 3/7/2023, 259 customers have non-AMR meters. Of those 259, 11 experienced consecutive estimated reads in January 2023 and 5 in February 2023. As noted in response to AG 2-1, estimated reads do not necessarily result in an estimated bill. KAW attempts to get actual reads for each bill.
- b. For all non-AMR meters, the read data is received through automatic cellular transmission.

Witness: Andy Lewis

- 3. Reference the response to AG-DR-1-3, and Attachment 1 thereto. Confirm that from 2018-2023:
 - a. the number of instances of "Broken Reading Device Company Action Required" totaled 27,653.
 - b. the number of instances of "No Read Can be Obtained" totals 43,108.

Response:

KAW confirms:

- a. "Broken Reading Device Company Action Required" totaled 27,653; and
- b. the number of instances of "No Read Can be Obtained" totals 43,108.

Count of DeviceID	Year 💌						
EnglishDescription1	2018	2019	2020	2021	2022	2023 (Grand Total
Broken Reading Device - Company Action Required	25,137	2,028	149	26	270	43	27,653
No Read can be Obtained	7,512	4,637	8,304	13,617	8,618	420	43,108
Grand Total	32,649	6,665	8,453	13,643	8,888	463	70,761

Witness: Andy Lewis

- 4. Regarding the Company's response to AG-DR-2-3, above:
 - a. explain how many of the broken reading devices referenced in subpart (a) were the result of damage to the radio read devices after installation, and how many were due to any type or sort of manufacturer's and/or design defect;
 - b. identify the name of the manufacturer of the broken reading devices referenced in subpart (a), and the model type and/or number. For each reading device manufacturer so identified:
 - (i) explain whether any product recalls were issued;
 - (ii) discuss the extent to which the manufacturer(s) have been willing to work with the Company in repairs and/or replacement of radio read devices found to be, or suspected of being defective.

Response:

- a. KAW does not maintain records with the level of detail necessary to answer this question.
- b. Effective 6/2022, KAW began serializing endpoints as an asset, so we have limited visibility into the product movement, manufacturer, and models prior to that time. Since 6/2022, there have been 163 Neptune R900 and 77 Mueller Hot Rod reading devices in this category.

(i) There have been no product recalls on the models identified provided above.

(ii) There have been no discussions with Neptune or Mueller regarding the above models.

Witness: Andy Lewis

- 5. Regarding damaged / broken radio read devices, explain whether the Company:
 - a. is aware of any studies or literature establishing a normal or average rate for incidences of damage to radio read devices. If so, provide those studies / literature, and provide what the Company believes to be the average life span of its radio read devices;
 - b. has considered procuring more durable devices, if any are available.

Response:

a. The phrase "damaged/broken" is ambiguous and implies radio read devices that are somehow damaged from being, for example, dropped, having liquids spilled on them, or otherwise "damaged." Further, KAW interprets the phrase "radio read devices" to mean the devices that KAW meter personnel have that receive or "read" information transmitted to those devices from KAW meters which is consistent with the AG's definition of "radio read devices" as set forth in AG 1-4 as "KAW radio receivers." These devices are typically belt clip receivers or truck mounted receivers.

KAW is not aware of any studies or literature that analyze incidents of "damage" to radio read devices. KAW purchases radio read devices as commercial "off-the-shelf" items from suppliers that are all manufactured in accordance with American Water Works Association specifications. A copy of those specifications and data sheets can be found in Attachment 1 and Attachment 2 for AG 2-5.

b. KAW is unaware of "more durable" radio read devices than those recommended by the manufacturers.

Page 1 of 2

Mueller SYSTEMS

Mi.Net[®] Mueller Infrastructure Network

Mi.Net Mobile Transceiver

Features

APPLICATIONS: The Mueller Systems **Mi.Net** Mobile Transceiver is a high performance, vehicle based AMR/AMI transceiver. It is designed to collect water meter data via radio frequency while driving a meter route at posted speed limits in AMR mode. When used in conjunction with the **Mi.Net** AMI system, the Mobile Transceiver can be used as a disaster recovery device to obtain meter data from stranded assets. The complete **Mi.Net** Mobile hardware package includes the radio transceiver, magnetic antenna, and all cable connections. Implementation of a mobile meter reading solution like **Mi.Net** Mobile ensures significant performance improvements in reading efficiency, data collection, customer satisfaction and cash flow for utilities.

OPERATION: The Mi.Net Mobile Transceiver can be temporarily or permanently mounted in any vehicle. Once initialized, it operates quietly in the background and transfers data to a computer of the customer's choice. The Mi.Net Mobile Transceiver can also provide full two way communication to actuate remote disconnect meters (RDMs), initiate data logging, and meter right sizing. The Mi.Net Mobile Transceiver receives data on multiple discreet frequencies for secure and reliable data processing. During the reading process, the technician can view a number of route progress screens which include route mapping with representations of all meter locations, tabular screens depicting all meters, meters remaining to be read, collected meter readings and route performance overview. At the end of the collection period, the data is uploaded via the EZ Reader™ route management software into the utility's billing software with just a few clicks of a mouse. A standard series of reports are available for viewing performance of the system, the status of all event and duration codes, battery health, and past high leaks and backflow events.

PERFORMANCE: The **Mi.Net** Mobile Transceiver receives power via the vehicle auxiliary power outlet and a USB connection provides data interchange with the laptop. A sensitive magnetic antenna mounted on the vehicle's roof provides the basis for all radio frequency (RF) communication with Mueller Systems radios. Meter information is received and processed as it is transmitted to ensure continuous high performance data capture on multiple receiver channels of the **Mi.Net** Mobile Transceiver. The meter reader collects all RF data by simply driving past the meters equipped with Mueller Systems legacy Hot Rod transmitters or Mi.Node M units. The system also provides the option of a complete two way interface for transmission of commands to Mi.Node M radios.

CONFORMANCE TO STANDARDS: The system is FCC Certified for operation in the United States. It is fully compliant with FCC Part 15 and no FCC license is required for operation.

CONSTRUCTION: The **Mi.Net** Mobile Transceiver is small, lightweight and encased in a rugged metal enclosure for protection. All internal electronics are shielded against electro-magnetic interference. Connection to the laptop, antenna, and power are accomplished on the front of the unit. All connections are clearly marked for operational efficiency and ease of installation. LED lights on the front of the unit confirm power, RF reception, and temperature status.



Mi.Net Mobile Transceiver

Materials and	Specifications
RADIO FREQUENCY	Operates on 902 to 928MHz (No FCC license required)
PC OPERATING SYSTEM	Windows 7 or newer
OPERATING SOFTWARE	EZ Reader Route Management Suite
STANDARDS	FCC Part 15, CSA, and ROHS
RECEIVER POWER SUPPLY	Powered via vehicle power outlet; 12VDC
RECEIVER DIMENSIONS	L: 9.5" W: 8.4" H: 3.5"
RECEIVER WEIGHT	6 lbs (approximately)
ANTENNA HEIGHT	35" Magnetic Mount
TWO WAY COMMUNICATION	FCC LICENSE EXEMPT
OPTIONS	VESA Vehicle Mounting Bracket
OPERATING TEMPERATURE	-40°F to + 122°F (-20°C to + 50°C)
STORAGE TEMPERATURE	-40°F to + 176°F (-20°C TO + 80°C)

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Mueller SYSTEMS

Mi.Net[®] Mueller Infrastructure Network

Mi.Net Mobile Transceiver

Mi.Net Mobile Transceiver Dimensions





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Streamline Operational Efficiencies

Neptune R900[®] System: Mobile Data Collector and Software



The mobile data collector provides fast, accurate automatic water meter reading to preserve resources and streamline operational efficiencies. Critical data is transformed into actionable information to help identify hidden causes of loss and optimize operational efficiency. Access to consumption data and alerts of leaks and backflow conditions aid in proactively addressing high bill complaints, reducing delinquent payments, and eliminating write-offs.

The R900[®] System is designed to easily accommodate and support past generations of meters, encoder registers, and data collectors – preserving your asset investments and offering the flexibility to incorporate future innovations as needed.

- Reliable, accurate, and field-proven
- Seamless compatibility with all generations of R900[®] endpoints
- Automatic, rugged, portable, easy-to-use
- Improves accuracy, increases reader safety, and reduces reading time

- Common core code base for faster availability of new features and functionalities
- Save money with flexible hardware connection options via Bluetooth or USB
- Makes Automatic Meter Reading (AMR) safer and simpler
- Small enough to fit in any vehicle



KAW_R_AGDR2_NUM005_031423_Attachment 2 Page 2 of 2

Specifications

Physical Specifications

- Dimensions: 8" (width) x 3.15" (height) x 11" (length excluding connections and handle)
- Weight: ~5 lbs

Electrical Specifications

- Power consumption: < 1A
- Power supply: 12V DC via vehicle power source adapter

Neptune recommends the following mobile computing hardware specifications for optimal performance:

- 12.1" XGA (800 x 600) minimum
- 89-key keyboard
- Operating System:
- Windows® 7 Professional 32 & 64
- ° Windows[®] 8 Professional 32 & 64
- ° Windows[®] 8.1 Professional 64
- ° Windows[®] 10 Professional 64
- .Net Framework 4.5 or higher
- Processor: Intel Pentium 1.7 Ghz or faster processor

- Memory: 1 GB minimum
- Communication
- Internal 802.11 b/g wireless LAN
- ° Windows Wireless Connection Manager (if Bluetooth connection to the receiver is desired, Bluetooth v2.1 + EDR required)
- USB 2.0
- GPS receiver (required for the mapping and mobility module)
- Minimum of 2 GB of available hard drive space

Environmental Conditions

- Operating temperature: -4°F to +122°F (-20°C to +50°C)
- Storage temperature: -40°F to +185°F (-40°C to +85°C)
- Operating humidity: 5 to 95% noncondensing relative humidity





Neptune Technology Group 1600 Alabama Highway 229 Tallassee, AL 36078 800-633-8754 f 334-283-7293

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Witness: Andy Lewis

- 6. Reference the response to AG-DR-1-4, in which the Company broke down for each year from 2018-2022 the 10 occasions in which it purchased new radio read devices, and 2 occasions in which it returned existing equipment.
 - a. Confirm the following breakdown of equipment purchases / returns by the Company during this four year period:
 - (i) Purchased 10 Neptune belt clip receivers;
 - (ii) Purchased 31 truck mounted receivers (consisting of 17 Neptune receivers, and 14 Mueller receivers);
 - (iii) Purchased 28 hand-held receivers (consisting of 8 Neptune, and 20 Mueller); and
 - (iv) Returned 8 truck-mounted receivers for repair (consisting of 4 Mueller, and 4 Neptune)

Response:

KAW confirms.

Witness: Andy Lewis and David Hill

- 7. Reference the response to AG-DR-1-6.
 - a. In stating that "[u]nscheduled meter replacements are a good proxy for MIU¹ replacements," explain whether there is any way to distinguish actual MIU replacements from actual meter replacements. If not, are there more unscheduled MIU replacements every year than actual meter replacements?
 - b. Explain whether the approximately 27,000 unscheduled meter replacements from 2018-2023 (to date) represents a departure from industry norms.
 - c. If there is more than one manufacturer of KAW's meters and MIU units, explain whether the incidence of premature failure is greater for any one such manufacturer.
 - d. Explain whether there is a nexus between cold weather and unscheduled meter replacements.
 - e. Explain whether the approximately 27,000 unscheduled meter replacements from 2018-2023 is also included within the total number of meters replaced during this time frame (approximately 44,000) referenced in the response to AG-DR-1-8, or if the two figures are separate.

Response:

- a. Prior to 2022, the MIU and meter were tracked as a single asset and therefore there was not a way to distinguish between the two. Since July 2022, the enterprise asset management system was modified to account for the MIU and the meter as two separate assets. Since the modification to the asset management system, 5,772 MIUs and 5486 meters have been replaced
- b. During the time period cited in the question, the unscheduled meter replacements represent less than a four percent (4%) annual early replacement rate. That number is in-line with industry norms.
- c. KAW uses several meter manufacturers. The decision to select a specific meter or meter manufacturer is driven by meter type (e.g., disc, turbine, ultrasonic, etc.), meter technology (e.g., AMR, AMI, radio frequency, cellular, etc.), historical experience related to operability, quality, accuracy, proprietary end user software and associated options, and finally, cost. Since 2018, Mueller (Hersey) brand meters have been removed earlier than planned more frequently than other brands. See Figure 1 below:

Figure 1

¹ Meter Interface Units.



* For purposes of this chart, early-removed meters are defined as meters removed more than 2 years prior to regulatory testing requirement limits

- d. There does not appear to be a direct relationship between the cold weather and unscheduled meter replacements.
- e. The 27,000 unscheduled replacements referenced in AG 1-6 are a subset of the 44,000 replacements referenced in AG 1-8.

Witness: Andy Lewis

- 8. Reference the response to AG-DR-1-5, in which the Company stated, *inter alia*: ". . . historically, KAW has made a few warranty claims for metering equipment and received like kind meters or credits on future purchases. . . ." Provide the number of such claims by year since 2018, and identify the manufacturer.
 - a. Discuss the performance guarantees that the manufacturers of KAW's meters provide.

Response:

Since 2018, KAW has returned 577 meters to Mueller for warranty claims. All of those were in 2020.

a. The current performance guaranties are outlined in the warranty documents attached hereto.

EXHIBIT C Warranty

<u>Mueller Systems – Product Warranty Statement</u>

Automated Meter Reading (AMR) / Advanced Metering Infrastructure (AMI) Products					
Product	Description	Warranty Period			
AMR / AMI Software	These items of Software will perform in accordance with Mueller's published specifications for the duration of the Warranty Period.	One (1) year from date of shipment to Purchaser.			
AMR / AMI Hardware – unless otherwise expressly specified herein	During the Warranty Period, these Products will be free from defects in materials and workmanship.	One (1) year from date of shipment to Purchaser.			
AMR / AMI Radio Modules – AMI water module endpoints and AMR water module endpoints	During the Warranty Period, these Products will be free from defects in materials and workmanship.	Ten (10) years from date of shipment to Purchaser. Additionally, the unit is covered by a prorated warranty for years eleven (11) through fifteen (15) at a fifty-percent (50%) discount, and years sixteen (16) through twenty (20) at a twenty-five-percent (25%) discount from the date of shipment to Purchaser. All discounts will be calculated on the then current published price of the original product. All prorated warranty discounts are to be used towards the purchase of replacement units.			
Encoder Register Products, Wall Pads and Pit Pads.	During the Warranty Period, these Products will be free from defects in materials and workmanship.	Ten (10) years from date of shipment to Purchaser. Additionally, the unit is covered by a prorated warranty for years eleven (11) through fifteen (15) at a fifty-percent (50%) discount, and years sixteen (16) through twenty (20) at a twenty-five-percent (25%) discount from the date of shipment to Purchaser. All discounts will be calculated on the then current published price of the original product. All prorated warranty discounts are to be used towards the purchase of replacement units.			
Water Metering Products					
Product	Description	Warranty Period			
All Meter Products not otherwise specified herein	During the Warranty Period, these Products will be free from defects in materials and workmanship.	One (1) year from date of shipment to Purchaser.			
Remote Disconnect Meters (RDM) valve and solenoid assembly	During the Warranty Period, these Products will be free from defects in materials and workmanship.	Five (5) year warranty or two-thousand (2,000) actuations of the valve, whichever comes first, from the date of shipment to Purchaser.			

mechanical meters the above listed these Products will be free from defects in materials and workmanship.	years from date of shipment to Purchaser.		
	(15) years from date of shipment to Purchaser.		
Standard registers for the above listed mechanical metersDuring the Warranty Period, these Products will be free from defects in materials and workmanship.Ten (10) year	Ten (10) years from date of shipment to Purchaser.		
AWWA ³ New Meter Accuracy AWWA ³ New Meter Accuracy registration o 1" – Five (5) registration o 1-1/2" – Two registration o 2" – Two (2) registration o	5) years from the date of shipment to Purchaser or the of 500,000 U.S. gallons, whichever comes first; 5) years from the date of shipment to Purchaser or the of 750,000 U.S. gallons, whichever comes first; years from the date of shipment to Purchaser or the of 1,000,000 U.S. gallons, whichever comes first; to (2) years from the date of shipment to Purchaser or the of 1,600,000 U.S. gallons, whichever comes first; years from the date of shipment to Purchaser or the of 2,700,000 U.S. gallons, whichever comes first;		
AWWA Repaired Meterregistration o 3/4" - Fifteer registration o 1" - Fifteen (registration o 1-1/2" - Ten registration o 2" - Ten (10)	5/8" – Fifteen (15) years from the date of shipment to Purchaser or the registration of 1,500,000 U.S. gallons, whichever comes first; 3/4" – Fifteen (15) years from the date of shipment to Purchaser or the registration of 2,250,000 U.S. gallons, whichever comes first; 1" – Fifteen (15) years from the date of shipment to Purchaser or the registration of 3,000,000 U.S. gallons, whichever comes first; 1-1/2" – Ten (10) years from the date of shipment to Purchaser or the registration of 5,000,000 U.S. gallons, whichever comes first; 2" – Ten (10) years from the date of shipment to Purchaser or the registration of 5,000,000 U.S. gallons, whichever comes first;		
Model HbMAG electromagnetic cold water meters During the Warranty Period, these Products will be free from defects in materials and workmanship. Two (2) years	rs from date of shipment to Purchaser.		
	During the Warranty Period (ten (10) years from date of shipment to Purchaser) these Products will meet or exceed accuracy of +/- 1.5% between the specified minimum flow rate to the specified maximum for the following sizes:		
5/8" Meter	0.1 gpm to 20 gpm		
5/8" x ³ /4", ³ /4" Short, and ³ /4" Long Meter	0.1 to 30 gpm		
1" Meter	0.4 to 55 gpm		
1 ½" Meter	0.25 to 100 gpm		
2" Meter	1.5 to 160 gpm		

Exhibit D

End User License Agreement

This End User License Agreement (this "Agreement") is entered into this ______ day of ______ 2019 Between Mueller Group LLC, a Delaware limited liability corporation having its principal offices at 1200 Abernathy Rd, NE, Suite 1200, Atlanta, GA 30328 ("Provider"), and American Water Works Service Co., Inc. having its principal offices at One Water Street Camden, NJ 08102 ("Customer"). This Agreement supports, and is subject to, the Agreement for the Supply of Goods by and between Customer and Provider dated _________, 2019, as negotiated and executed by Customer and Provider (the "Supply Agreement"). This Agreement is entered into with the express agreement of Provider and Customer that all other terms, conditions and stipulations contained in the Supply Agreement and any addenda, attachments or amendments thereto shall remain in full force and effect and without any change or modification unless expressly stated herein. For the purposes of this Agreement, all capitalized terms used herein and not otherwise defined shall have the meaning set forth in the Supply Agreement. In the event of a conflict between this Agreement and the Supply Agreement, the Supply Agreement shall govern. In consideration of the mutual obligations set forth in this Agreement, Customer and Provider agree as follows:

1. **DEFINITIONS**.

a. "**AW Data**" means all data submitted to or collected by Provider, Provider's personnel or any subcontractor by or on behalf of Customer, its Affiliates, or Authorized Consumers (defined below) as well as any and all alterations, additions, changes, enhancements, improvements, modifications, substitutions, derivations or upgrades to any of the foregoing.

b. "**Documentation**" means the user guides, reference manuals, and installation materials provided by Provider to Customer related to the Software and Equipment.

c. "**Equipment**" means the Goods specified in the Supply Agreement.

d. "**Software**" means the object code versions of the Firmware and Online Software provided by Provider to Customer.

e. "**Software Services**" means the services specified in <u>Appendix A</u>.

2. **SOFTWARE**

a. <u>Software on Equipment License</u>. For Equipment purchased by Customer from Provider, Provider hereby grants Customer a limited, non-exclusive, non-sublicensable, nontransferable, perpetual, irrevocable license to use and execute the Software embedded in the Equipment for its internal business purposes in connection with such Equipment ("**Firmware**").

b. <u>Online Software Access</u>. Subject to the terms of this Agreement and the payment of the fees specified in Section 6a herein, Provider grants to Customer, its Affiliates, and Customer's end-user water customers ("Authorized Consumers") the limited, non-exclusive, non-sublicensable, non-transferable right to remotely access and use the online software related to the Mi.Net system for Customer's internal business use and for the benefit of its Authorized Consumers ("Online Software").

c. Customer Support. Provider will provide Customer the Software Services described in <u>Appendix A</u> ("Service Level Agreement").

d. <u>Restrictions</u>. Except as specifically and expressly permitted in writing by Provider, Customer shall not (i) violate any restriction set forth in this Agreement; (ii) modify, translate, decompile, reverse compile, disassemble, or create or attempt to create, by reverse engineering or otherwise, the source code from the object code of the Software; or (iii) adapt the Software in any way for use to create a derivative work; (iv) include or combine the Software in or with any other software. Except as expressly permitted in this Agreement, Customer may not copy the Software other than to make one machine readable copy for disaster recovery or archival purposes. Customer may only make copies of Documentation as reasonably necessary for the use contemplated herein and with proper inclusion of Provider' copyright notices.

Data Security. Provider will establish e. and institute, monitor, maintain and comply with a written system and information security program (the "Data Safeguards") that includes administrative, technical and physical protocols and controls to safeguard physical and electronic access to Customer Data and any Customer systems, and to prevent, detect, respond to and recover from any unauthorized disclosure, access, destruction, loss, damage, alteration and use of Customer Data and any Customer systems. Provider will use commercially reasonable efforts to ensure the Data Safeguards for Product will comply with Customer's Supplier Security Requirements which are set forth herein at Exhibit C within two (2) years of the Effective Date and will be no less rigorous than the most stringent of (a) Provider's thencurrent data security requirements for systems and data of a similar nature, (b) any systems or data security requirements specified elsewhere in this Agreement or required by applicable Law, and (c) the exercise of the degree of skill, diligence, prudence and foresight which would reasonably and ordinarily be expected from time to time from a skilled and experienced service provider seeking in good faith to comply with its contractual obligations, complying with all applicable Laws and engaged in the same type of undertaking under similar circumstances and conditions. Provider will review and test (and re-test as necessary) at least annually the Data Safeguards to assess adherence to and the effectiveness of the Data Safeguards, and, subject to Customer's approval, implement action plans to remediate identified vulnerabilities and deficiencies.

Ownership. This Agreement does not f. grant to Customer any ownership interest in the Software or Documentation. Customer has a license to use the Software and Documentation as provided in this Agreement. Customer hereby agrees and acknowledges that Provider owns all right, title, and interest in the Software and Documentation, and Customer will not contest those rights or engage in any conduct contrary to those rights. Any copy, modification, revision, enhancement. adaptation, translation. or derivative work of or created from the Software and Documentation made by or at the direction of Customer shall be owned solely and exclusively by Provider, as shall all patent rights, copyrights, trade secret rights, trademark rights and all other proprietary rights, worldwide.

g. <u>Reservation</u>. Provider reserves all rights not specifically granted under this Agreement.

5. **CONFIDENTIALITY**

The confidentiality provisions set forth in the Supply Agreement shall also apply to this Agreement. The parties expressly acknowledge and agree that, as between Customer and Provider, all AW Data is Customer's Confidential Information.

The Software, Equipment and Documentation, including any ideas, concepts, know-how and technology contained therein, shall be considered the proprietary and confidential information of Provider and, as such, shall be subject to the confidentiality provisions of this Agreement.

6. FEES AND PAYMENT

a. <u>Fees and Payment</u>. The fees for the Software are set forth in <u>Appendix B and shall</u> be paid in accordance with the payment terms set forth in the Supply Agreement.

7. **TERM; TERMINATION**

a. <u>Term and Termination</u>. Unless otherwise terminated pursuant to the terms of the Supply Agreement, the term of this Agreement is three (3) years commencing upon the date of this Agreement. Thereafter, this Agreement will automatically renew for subsequent, successive one (1) year periods at the then-current Provider prices unless either party gives the other party written notice of its intent to not renew at one hundred and eighty (180) days prior to the expiration of the then current term.

b. <u>Termination for Breach</u>. If either party breaches this Agreement, and such breach is not cured within ten (10) days of the breach, after receiving written notice, the non-breaching party may terminate this Agreement, including all licenses provided herein, effective upon written notice to the other party. The breaching party agrees that if it breaches this Agreement, the nonbreaching party will be entitled to injunctive or similar equitable relief and that the breaching party will not argue in any proceeding that its breach will not cause irreparable harm to the nonbreaching party or that the non-breaching party can be adequately compensated for any such harm by any remedies other than by injunctive relief.

c. Immediate Right to Terminate. Either party shall have the right to immediately terminate this Agreement: (i) in order to protect its Confidential Information, or its intellectual property rights; (ii) in order to comply with applicable law; or (iii) if the other party makes an assignment for the benefit of creditors, suffers or permits the appointment of a receiver for its business or assets, or avails itself of, or becomes subject to, any proceeding under any statute relating to insolvency or for the protection of creditor rights or if the other party becomes insolvent or technically bankrupt.

c. <u>Effect of Termination</u>. Upon termination (i) all Customer access to Online Software shall be withdrawn; and (ii) each party will return any and all Confidential Information of the other party in its possession or control. Provider will provide post-termination data retrieval assistance to Customer.

d. <u>Non-Exclusive Remedy</u>. Termination of this Agreement or any license or access granted hereunder shall not limit the remedies otherwise available to either party, including injunctive relief.

e. <u>Survival</u>. Unless otherwise stated herein, any provision that, by its nature or terms, is intended to survive the expiration or termination of this Agreement, will survive.

8. LIMITED WARRANTIES; REMEDIES

Subject a. Software. to the exclusions herein, Provider warrants that commencing from the date of shipment or provision to Customer and continuing for the period of one (1) year (the "Warranty Period"), (i) the media on which the Software is furnished will be free of defects in materials and workmanship under normal use; and (ii) the Software will perform substantially in conformance with the applicable Documentation provided to Customer by Provider. Provider does not warrant that the Software will operate in combinations with other software, except as specified in the Documentation, that the Software will meet the Customer's requirements or that the operation of the Software will be uninterrupted or error-free. In the event of a breach of the foregoing warranties in this Section 8(a), Provider shall, at Provider's option, either (x) repair or replace any Software containing an error or condition which is reported by Customer in writing to Provider which causes the Software not to conform with the warranty set forth herein at no additional cost to Customer; or (y) refund all amounts paid by Customer to Provider for the Software in the previous twelve (12) months and terminate this Agreement and all licenses provided herein.

b. Exclusions. The warranties provided by Provider shall not apply to Software which: (i) have been altered, except with the express written consent, permission or instruction of Provider, (ii) have been used in conjunction with another product or software resulting in the defect, except for those third party products specifically approved by Provider, (iii) were other than the most current version of the Software (but only to the extent that any failure of the Software would have been avoided by the use of the most current version), (iv) have been damaged by improper environment, abuse, misuse, accident, negligence, act of God, excessive operating conditions, or unauthorized attachments or modifications or (v) have not been properly installed and operated in accordance with the Documentation, or as otherwise instructed by Provider.

c. Authority. Provider represents and warrants to Customer that it has the right and authority to enter into this Agreement and to perform its obligations under this Agreement.

<u>d. Service Warranty</u>. Provider represents and warrants that all customer service provided pursuant to this Agreement shall be provided in accordance with the Service Level Agreement set forth at Appendix A.

DISCLAIMERS. TO THE EXTENT e. PERMITTED BY APPLICABLE LAW, THE WARRANTIES AND REMEDIES STATED ABOVE ARE EXCLUSIVE AND NO OTHER WARRANTIES OR REMEDIES EXPRESS, IMPLIED OR STATUTORY, APPLY TO THE DOCUMENTATION AND THE SOFTWARE TO BE PROVIDED BY PROVIDER UNDER THIS AGREEMENT, INCLUDING BUT NOT LIMITED TO WARRANTIES OR CONDITIONS OF TITLE, NON-

INFRINGEMENT, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUALITY OR PERFORMANCE, AND ANY IMPLIED WARRANTY ARISING FROM COURSE OF PERFORMANCE, COURSE OF DEALING OR USAGE OF TRADE, ALL OF WHICH PROVIDER EXPRESSLY DISCLAIMS.

9. [Reserved]

10. [Reserved]

b. The provisions of this Agreement allocate the risks between Customer and Provider. Provider' pricing reflects this allocation of risk and the limitations of liability specified herein.

11. [Reserved]

12. **GENERAL.** The Software will not be exported or re-exported in violation of any export provisions of the United States or any other applicable jurisdiction. q. The parties specifically exclude from application to the Agreement the United Nations Convention on Contracts for the International Sale of Goods and the Uniform Computer Information Transactions Act. If any provision of this Agreement is contrary to and in violation of any applicable law, such provision will be considered null and void to the extent that it is contrary to such law, but all other provisions will remain in effect. The waiver or failure of either party to exercise any right herein shall not be deemed a waiver of any further right hereunder. This Agreement constitutes the entire agreement between the parties with respect to the subject matter hereof and supersedes all other prior and contemporary agreements, understandings, and commitments between the parties regarding the subject matter of this Agreement.

[Signatures Appear on the Following Page]

Exhibit E

Warranties*

Dated: May 14, 2019

*Badger Meter reserves the right to release new warranty documents as new products are released to the market or modify its product warranties, provided the new warranties are in conformance with the requirements in the applicable specifications, and meet the actual needs or are otherwise suitable for the intended use.



Recordall® Disc Meters

Engineered Polymer Model 25

PRODUCTS COVERED

This warranty shall apply to all Recordall[®] Engineered Polymer Model 25 Disc Meters when used to measure potable water, including the registers and encoders used with these meters, (collectively "Product") sold on or after September 15, 2017. This warranty is extended only to utilities, municipalities, other commercial users and authorized Badger Meter, Inc. distributors, hereafter referred to as "Customer," and does NOT apply to consumers or any person or entity who is not an original customer of Badger Meter or its authorized distributors.

MATERIALS AND WORKMANSHIP

Badger Meter warrants Product to be free from defects in materials and workmanship appearing within the following time frames and those listed in the table below:

Engineered Polymer Housings

Twenty-five (25) years and six (6) months after shipment from Badger Meter.

Local Registers Supplied with the Meters Listed Herein

Twenty-five (25) years and six (6) months after shipment from Badger Meter.

	AWWA New Meter Accuracy	AWWA Repaired Meter Accuracy (AWWA M6 Manual)	Badger Meter Extended Low Flow Meter Accuracy
Recordall Meter Model, Size	The meter product will meet or exceed new meter accuracy standards set forth in AWWA Standard C710 for the following periods:	The meter product will meet or exceed repaired meter accuracy standards set forth in AWWA Manual M-6, Chapter 5, Table 5.3 for the following periods:	Badger Meter further warrants the meter product to meet or exceed the following extended low flow accuracies in excess of AWWA standard:
Model 25 5/8 in., 5/8 x 3/4 in., 3/4 in.	Five (5) years from date of shipment or registration of 750,000 gallons, whichever occurs first.	Fifteen (15) years from date of shipment or registration of 2,500,000 gallons, whichever occurs first, with a 25 gpm safe maximum operating capacity, and a 15 gpm maximum rate for continuous operation.	Badger Meter warrants Product low flow accuracy of 98.5% at a rate of 1/4 gpm for five (5) years from date of shipment or registration of 675,000 gallons, whichever occurs first.

PRODUCT RETURNS

Any Product proved to the satisfaction of Badger Meter to have failed the foregoing warranties will, at the option of Badger Meter, be repaired or replaced without charge to the Customer. The obligation hereunder of Badger Meter shall be limited to such repair and replacement and shall be conditioned upon Badger Meter receiving written notice of any alleged defect within ten (10) days after its discovery. This exclusive remedy shall not be deemed to have failed its essential purpose so long as Badger Meter is willing and able to replace defective products or issue a credit to purchaser within a reasonable time of proof to Badger Meter that a defect is involved. Product returns must be shipped by the Customer prepaid F.O.B. to the nearest Badger Meter factory or distribution center. The Customer shall be responsible for all direct and indirect costs associated with removing original product and reinstalling the repaired or replacement Product.

LIMITS OF LIABILITY

This warranty shall not apply to Product repaired or altered by any party other than Badger Meter. The foregoing warranty applies only to the extent that the Product is installed, serviced and operated strictly in accordance with AWWA Standard C710 and the AWWA M6 Manual. The warranty shall not apply and shall be void with respect to Product exposed to conditions other than those detailed in Badger Meter Product technical literature, or which have been subject to vandalism, negligence, accident, acts of God, improper installation, operation or repair, alteration, or other circumstances which are beyond the reasonable control of Badger Meter. With respect to Product not manufactured by Badger Meter, the warranty obligations of Badger Meter shall in all respects conform and be limited to the warranty extended to Badger Meter by the supplier. THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES WHATSOEVER, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE (except warranties of title).

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

Exclusion of Consequential Damages and Disclaimer of Other Liability

The liability of Badger Meter with respect to breaches of the foregoing warranty shall be limited as stated herein. The liability of Badger Meter shall in no event exceed the contract price. BADGER METER SHALL NOT BE SUBJECT TO AND DISCLAIMS: (1) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY, (2) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY BADGER METER, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATING THERETO, AND (3) ALL CONSEQUENTIAL, INCIDENTAL, AND CONTINGENT DAMAGES WHATSOEVER.



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Recordall® Disc Meters

Engineered Polymer Model 25

PRODUCTS COVERED

This warranty shall apply to all Recordall[®] Engineered Polymer Model 25 Disc Meters when used to measure potable water, including the registers and encoders used with these meters, (collectively "Product") sold on or after September 15, 2017. This warranty is extended only to utilities, municipalities, other commercial users and authorized Badger Meter, Inc. distributors, hereafter referred to as "Customer," and does NOT apply to consumers or any person or entity who is not an original customer of Badger Meter or its authorized distributors.

MATERIALS AND WORKMANSHIP

Badger Meter warrants Product to be free from defects in materials and workmanship appearing within the following time frames and those listed in the table below:

Engineered Polymer Housings

Twenty-five (25) years and six (6) months after shipment from Badger Meter.

Local Registers Supplied with the Meters Listed Herein

Twenty-five (25) years and six (6) months after shipment from Badger Meter.

	AWWA New Meter Accuracy	AWWA Repaired Meter Accuracy (AWWA M6 Manual)	Badger Meter Extended Low Flow Meter Accuracy
Recordall Meter Model, Size	The meter product will meet or exceed new meter accuracy standards set forth in AWWA Standard C710 for the following periods:	The meter product will meet or exceed repaired meter accuracy standards set forth in AWWA Manual M-6, Chapter 5, Table 5.3 for the following periods:	Badger Meter further warrants the meter product to meet or exceed the following extended low flow accuracies in excess of AWWA standard:
Model 25 5/8 in., 5/8 x 3/4 in., 3/4 in.	Five (5) years from date of shipment or registration of 750,000 gallons, whichever occurs first.	Fifteen (15) years from date of shipment or registration of 2,500,000 gallons, whichever occurs first, with a 25 gpm safe maximum operating capacity, and a 15 gpm maximum rate for continuous operation.	Badger Meter warrants Product low flow accuracy of 98.5% at a rate of 1/4 gpm for five (5) years from date of shipment or registration of 675,000 gallons, whichever occurs first.

PRODUCT RETURNS

Any Product proved to the satisfaction of Badger Meter to have failed the foregoing warranties will, at the option of Badger Meter, be repaired or replaced without charge to the Customer. The obligation hereunder of Badger Meter shall be limited to such repair and replacement and shall be conditioned upon Badger Meter receiving written notice of any alleged defect within ten (10) days after its discovery. This exclusive remedy shall not be deemed to have failed its essential purpose so long as Badger Meter is willing and able to replace defective products or issue a credit to purchaser within a reasonable time of proof to Badger Meter that a defect is involved. Product returns must be shipped by the Customer prepaid F.O.B. to the nearest Badger Meter factory or distribution center. The Customer shall be responsible for all direct and indirect costs associated with removing original product and reinstalling the repaired or replacement Product.

LIMITS OF LIABILITY

This warranty shall not apply to Product repaired or altered by any party other than Badger Meter. The foregoing warranty applies only to the extent that the Product is installed, serviced and operated strictly in accordance with AWWA Standard C710 and the AWWA M6 Manual. The warranty shall not apply and shall be void with respect to Product exposed to conditions other than those detailed in Badger Meter Product technical literature, or which have been subject to vandalism, negligence, accident, acts of God, improper installation, operation or repair, alteration, or other circumstances which are beyond the reasonable control of Badger Meter. With respect to Product not manufactured by Badger Meter, the warranty obligations of Badger Meter shall in all respects conform and be limited to the warranty extended to Badger Meter by the supplier. THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES WHATSOEVER, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE (except warranties of title).

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

Exclusion of Consequential Damages and Disclaimer of Other Liability

The liability of Badger Meter with respect to breaches of the foregoing warranty shall be limited as stated herein. The liability of Badger Meter shall in no event exceed the contract price. BADGER METER SHALL NOT BE SUBJECT TO AND DISCLAIMS: (1) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY, (2) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY BADGER METER, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATING THERETO, AND (3) ALL CONSEQUENTIAL, INCIDENTAL, AND CONTINGENT DAMAGES WHATSOEVER.



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E-Series® Ultrasonic Meter

Lead-Free Bronze Alloy Meters, 3, 4 inch

PRODUCTS

This warranty shall apply to all Badger Meter E-Series® Ultrasonic lead-free meters, sizes 3 inch and 4 inch, when used to measure potable cold water, and the internal encoder and battery used with these meters (collectively "Product"), sold on or after February 18, 2019. This warranty is not transferable and is extended only to utilities, municipalities, other commercial users and authorized distributors, hereafter referred to as "Customer" and does NOT apply to consumers or any person or entity who is not an original customer of Badger Meter or its authorized distributors.

MATERIALS AND WORKMANSHIP

Badger Meter, Inc. ("Badger Meter") warrants Product to be free from defects in materials and workmanship appearing within the following time frames.

Housings, Transducers and Register/Encoder

Three (3) years and six (6) months after shipment from Badger Meter.

Battery

Ten (10) years and six (6) months after shipment from Badger Meter.

Pressure Sensors

Two (2) years and six (6) months after shipment from Badger Meter.

METER ACCURACY

The Product will meet meter accuracy of $\pm 1.5\%$ for the published normal test flow limits set forth in Badger Meter's current published product data sheet for three (3) years from date of shipment from Badger Meter.

EXTENDED LOW-FLOW METER ACCURACY

Badger Meter further warrants the Product will meet extended minimum test flow accuracy of \pm 3% for the published ranges set forth in Badger Meter's current published data sheet for three (3) years from date of shipment from Badger Meter.

PRODUCT RETURNS

Any Product proved to the satisfaction of Badger Meter to have failed the foregoing warranties will, at the option of Badger Meter, be repaired or replaced without charge to the Customer. Any eligible Product repaired or replaced by Badger Meter will retain the original Product's warranty based on the original Product purchase date, at Badger Meter's sole discretion. The Badger Meter obligation hereunder shall be limited to such repair and replacement and shall be conditioned upon Badger Meter receiving written notice of any alleged defect within ten (10) days after its discovery. This exclusive remedy shall not be deemed to have failed its essential purpose so long as Badger Meter is willing and able to replace defective products or issue a credit to purchaser within a reasonable time of proof to Badger Meter that a defect is involved. Product returns must be shipped by the Customer prepaid F.O.B. to the nearest Badger Meter factory or distribution center. The Customer shall be responsible for all direct and indirect costs associated with removing the original Product and reinstalling the repaired or replacement Product.

LIMITS OF LIABILITY

This warranty shall not apply to Product repaired or altered by parties other than Badger Meter. The foregoing warranty applies only to the extent that the Product is installed, serviced and operated strictly in accordance with AWWA Standard C715 and AWWA M6 Manual, as applicable. The warranty shall not apply and shall be void with respect to Product exposed to conditions other than those detailed in the Badger Meter Product technical and/or operational literature, or which have been exposed to adverse installation conditions, damaged by any water conditions and/or water guality, including but not limited to foreign matter in the water such as dirt, sand, minerals, debris, deposits, biofilms, extreme corrosivity, or other impurities, or which have been subject to passage of high-speed air slugs, vandalism, negligence, accident, acts of God, alteration, improper installation, operation or repair, or other circumstances which are beyond the reasonable control of Badger Meter. With respect to Product not manufactured by Badger Meter, the warranty obligations of Badger Meter shall in all respects conform and be limited to the warranty extended to Badger Meter by the supplier.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES WHATSOEVER, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE (except warranties of Title).

Warranty

Any description of Product, whether in writing or made orally by Badger Meter or its agents, specifications, samples, models, bulletins, drawings, diagrams, engineering 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 warranty. Any suggestions by Badger Meter or its agents regarding use, application or suitability of Product shall not be construed as an express warranty unless confirmed to be such in writing by Badger Meter.

Exclusion of Consequential Damages and Disclaimer of Other Liability

Badger Meter liability with respect to breaches of the foregoing warranty shall be limited as stated therein. Badger Meter liability shall in no event exceed the contract price. BADGER METER SHALL NOT BE SUBJECT TO AND DISCLAIMS: (1) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY (2) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY BADGER METER, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATING THERETO, AND (3) ALL CONSEQUENTIAL, INCIDENTAL AND CONTINGENT DAMAGES WHATSOEVER.

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Badger MeterFire Series Meters and
Fire Series Meter Assemblies

PRODUCTS COVERED

This warranty shall apply to all Badger Meter Fire Series Meters, sizes 3 inch through 10 inch, Fire Series Meter Assemblies, sizes 4 inch through 12 inch, and the local registers and encoders used with these meters (collectively "Product") sold on or after October 1, 2015. This warranty is extended only to utilities, municipalities, other commercial users and authorized Badger Meter, Inc. distributors, hereafter referred to as "Customer" and does NOT apply to consumers or any person or entity who is not an original customer of Badger Meter or its authorized distributors.

MATERIALS AND WORKMANSHIP

Badger Meter warrants Product to be free from defects in materials and workmanship appearing within the following time frames:

Housings

One (1) year and six (6) months after shipment from Badger Meter.

Local Registers for Turbo Series Meters Supplied with the Meters Listed Herein

Five (5) years and six (6) months after shipment from Badger Meter.

Local Registers for Disc Series Meters Supplied with the Meters Listed Herein

Twenty-five (25) years and six (6) months after shipment from Badger Meter.

METER ACCURACY

The meter Product will meet or exceed accuracy standards of AWWA Standard C703 for one (1) year and six (6) months after shipment from Badger Meter.

PRODUCT RETURNS

Any Product proved to the satisfaction of Badger Meter to have failed the foregoing warranties will, at the option of Badger Meter, be repaired or replaced without charge to the Customer. The obligation hereunder of Badger Meter shall be limited to such repair and replacement and shall be conditioned upon Badger Meter receiving written notice of any alleged defect within ten (10) days after its discovery. This exclusive remedy shall not be deemed to have failed its essential purpose so long as Badger Meter is willing and able to replace defective products or issue a credit to purchaser within a reasonable time of proof to Badger Meter that a defect is involved. Product returns must be shipped by the Customer prepaid F.O.B. to the nearest Badger Meter factory or distribution center. The Customer shall be responsible for all direct and indirect costs associated with removing original product and reinstalling the repaired or replacement Product.

LIMITS OF LIABILITY

This warranty shall not apply to Product repaired or altered by any party other than Badger Meter. This warranty applies only to the extent that the Product is installed, serviced and operated strictly in accordance with AWWA Standard C703 and AWWA M6 Manual. The warranty shall not apply and shall be void with respect to Product exposed to conditions other than those detailed in Badger Meter Product technical literature, or which have been subject to vandalism, negligence, accident, acts of God, improper installation, operation or repair, alteration, or other circumstances which are beyond the reasonable control of Badger Meter. With respect to Product not manufactured by Badger Meter, the warranty obligations of Badger Meter shall in all respects conform and be limited to the warranty extended to Badger Meter by the supplier.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES WHATSOEVER, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE (except warranties of title).

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

Exclusion of Consequential Damages and Disclaimer of Other Liability. The liability of Badger Meter with respect to breaches of the foregoing warranty shall be limited as stated herein. The liability of Badger Meter shall in no event exceed the contract price. BADGER METER SHALL NOT BE SUBJECT TO AND DISCLAIMS: (1) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY, (2) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY BADGER METER, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATING THERETO, AND (3) ALL CONSEQUENTIAL, INCIDENTAL, AND CONTINGENT DAMAGES WHATSOEVER.

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 Legacy



HR-E[®] LCD

High Resolution ELCD encoder

PRODUCTS COVERED

This Badger Meter warranty shall apply to the High Resolution ELCD encoder (HR-E LCD) ("Product"), sold on or after April 20, 2016. The warranty is extended only to utilities, municipalities, or other commercial users, and authorized Badger Meter, Inc. (Badger Meter®) distributors, hereinafter referred to as "Customer," and does NOT apply to consumers or any person or entity who is not an original customer of Badger Meter or its authorized distributors.

MATERIALS AND WORKMANSHIP

Badger Meter warrants the Product to be free from defects in materials and workmanship appearing within ten (10) years and six (6) months after shipment from Badger Meter.

PRODUCT RETURNS

Product failures must be proven and verified to the satisfaction of Badger Meter. The Badger Meter obligation hereunder shall be limited to such repair and replacement and shall be conditioned upon Badger Meter receiving written notice of any asserted defect within 10 (ten) days after its discovery. If the defect arises and a valid claim is received within the Warranty Period, at its option, Badger Meter will either (1) exchange the Product with a new, used or refurbished Product that is at least functionally equivalent to the original Product, or (2) refund the purchase price of the Product.

Product returns must be shipped by the Customer prepaid F.O.B. to the nearest Badger Meter factory or distribution center. The Customer shall be responsible for all direct and indirect costs associated with removing the original Product and reinstalling the repaired or replacement Product. A replacement Product assumes the remaining warranty of the original Product, or ninety (90) days from the date of replacement, whichever provides longer coverage.

LIMITS OF LIABILITY

This warranty shall not apply to any Product repaired or altered by any party other than Badger Meter. The foregoing warranty applies only to the extent that the Product is installed, serviced and operated strictly in accordance with Badger Meter instructions. The warranty shall not apply and shall be void with respect to a Product exposed to conditions other than those detailed in applicable technical literature, or which have been subject to vandalism, negligence, accident, acts of God, improper installation, operation or repair, alteration, or other circumstances which are beyond the reasonable control of Badger Meter. With respect to products not manufactured by Badger Meter, the warranty obligations of Badger Meter shall in all respects conform and be limited to the warranty extended to Badger Meter by the supplier.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES WHATSOEVER, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE (except warranties of title).

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

EXCLUSION OF CONSEQUENTIAL DAMAGES AND DISCLAIMER OF OTHER LIABILITY

Badger Meter liability with respect to breaches of the foregoing warranty shall be limited as stated herein. Badger Meter liability shall in no event exceed the contract price. BADGER METER SHALL NOT BE SUBJECT TO AND DISCLAIMS: (1) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY, (2) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY BADGER METER, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATING THERETO, AND (3) ALL CONSEQUENTIAL, INCIDENTAL AND CONTINGENT DAMAGES WHATSOEVER.

Badger Meter Warranty

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 Legacy document number: LCD-W-01



HR-E

High Resolution Encoder

PRODUCTS COVERED

This Badger Meter warranty shall apply to the High Resolution Encoder (HR-E) ("Product"), sold on or after June 3, 2014. This warranty is not transferable and is extended only to utilities, municipalities, other commercial users and authorized distributors, hereafter referred to as "Customer" and does NOT apply to consumers or any person or entity who is not an original customer of Badger Meter or its authorized distributors.

MATERIALS AND WORKMANSHIP

Badger Meter warrants the Product to be free from defects in materials and workmanship appearing within ten (10) years and six (6) months after shipment from Badger Meter.

PRODUCT RETURNS

Any Product proved to the satisfaction of Badger Meter to have failed the foregoing warranties will, at the option of Badger Meter, be repaired or replaced without charge to the Customer. The Badger Meter obligation hereunder shall be limited to such repair and replacement and shall be conditioned upon Badger Meter receiving written notice of any alleged defect within ten (10) days after its discovery. This exclusive remedy shall not be deemed to have failed its essential purpose so long as Badger Meter is willing and able to replace defective products or issue a credit to purchaser within a reasonable time of proof to Badger Meter that a defect is involved. Product returns must be shipped by the Customer prepaid F.O.B. to the nearest Badger Meter factory or distribution center. The Customer shall be responsible for all direct and indirect costs associated with removing the original Product and reinstalling the repaired or replacement Product.

LIMITS OF LIABILITY

This warranty shall not apply to Product repaired or altered by parties other than Badger Meter. The foregoing warranty applies only to the extent that the Product is installed, serviced and operated strictly in accordance with Badger Meter instructions. The warranty shall not apply and shall be void with respect to Product exposed to conditions other than those detailed in the Badger Meter Product technical literature or which have been subject to vandalism, negligence, accident, acts of God, alteration, improper installation, operation or repair, or other circumstances which are beyond the reasonable control of Badger Meter. With respect to Product not manufactured by Badger Meter, the warranty obligations of Badger Meter shall in all respects conform and be limited to the warranty extended to Badger Meter by the supplier. THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES WHATSOEVER, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE (except warranties of Title).

Any description of Product, whether in writing or made orally by Badger Meter or its agents, specifications, samples, models, bulletins, drawings, diagrams, engineering 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 warranty. Any suggestions by Badger Meter or its agents regarding use, application or suitability of Product shall not be construed as an express warranty unless confirmed to be such in writing by Badger Meter.

Exclusion of Consequential Damages and Disclaimer of Other Liability

Badger Meter liability with respect to breaches of the foregoing warranty shall be limited as stated therein. Badger Meter liability shall in no event exceed the contract price. BADGER METER SHALL NOT BE SUBJECT TO AND DISCLAIMS: (1) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY (2) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY BADGER METER, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATING THERETO, AND (3) ALL CONSEQUENTIAL, INCIDENTAL AND CONTINGENT DAMAGES WHATSOEVER.

Badger Meter Warranty

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Badger Meter

Badger Meter | Lead-Free Bronze Disc Meters

PRODUCTS COVERED

This warranty shall apply to all Recordall® Lead-Free Bronze Disc Meters, models 25 through 170, when used to measure potable water, including the registers and encoders used with these meters (collectively "Product") sold on or after January 25, 2019. This warranty is extended only to utilities, municipalities, other commercial users and authorized Badger Meter, Inc. distributors, hereafter referred to as "Customer" and does NOT apply to consumers or any person or entity who is not an original customer of Badger Meter or its authorized distributors.

MATERIALS AND WORKMANSHIP

Badger Meter warrants Product to be free from defects in materials and workmanship appearing within the following time frames and those listed in the table below:

Housings

Twenty-five (25) years and six (6) months after shipment from Badger Meter.

Local Registers Supplied with the Meters Listed Herein Twenty-five (25) years and six (6) months after shipment from Badger Meter.

	AWWA New Meter Accuracy	AWWA Repaired Meter Accuracy (AWWA M6 Manual)	Badger Meter Extended Low Flow Meter Accuracy
Recordall Meter Model, Size	The meter product will meet or exceed new meter accuracy standards set forth in AWWA Standard C700 for the following periods:	The meter product will meet or exceed repaired meter accuracy standards set forth in AWWA Manual M-6, Chapter 5, Table 5.3 for the following periods:	Badger Meter further warrants the meter product to meet or exceed the following extended low flow accuracies in excess of AWWA standard:
Model 25, 5/8 in. and 5/8 x 3/4 in.	Five (5) years from date of shipment or registration of 750,000 gallons, whichever occurs first.	Fifteen (15) years from date of shipment or registration of 2,500,000 gallons, whichever occurs first, with a 25 gpm safe maximum operating capacity and a 15 gpm maximum rate for continuous operation.	Badger Meter warrants Product low flow accuracy of 98.5% at a rate of 1/4 gpm and low flow accuracy of 95.0% at a rate of 1/8 gpm for five (5) years from date of shipment or registration of 675,000 gallons, whichever occurs first.
Model 35, 3/4 in.	Five (5) years from date of shipment or registration of 750,000 gallons, whichever occurs first.	Fifteen (15) years from date of shipment or registration of 2,500,000 gallons, whichever occurs first, with a 35 gpm safe maximum operating capacity and a 25 gpm maximum rate for continuous operation.	Badger Meter warrants Product low flow accuracy of 97% at a rate of 3/8 gpm for five (5) years from date of shipment or registration of 675,000 gallons, whichever occurs first.
Model 55, 1 in.	Five (5) years from date of shipment or registration of 1,000,000 gallons, whichever occurs first.	Fifteen (15) years from date of shipment or registration of 3,000,000 gallons, whichever occurs first, with a 55 gpm safe maximum operating capacity and a 40 gpm maximum rate for continuous operation.	Badger Meter warrants Product low flow accuracy of 95% at a rate of 1/2 gpm for three (3) years from date of shipment or registration of 575,000 gallons, whichever occurs first.
Model 70, 1 in.	Five (5) years from date of shipment or registration of 1,100,000 gallons, whichever occurs first.	Fifteen (15) years from date of shipment or registration of 3,250,000 gallons, whichever occurs first, with a 70 gpm safe maximum operating capacity and a 50 gpm maximum rate for continuous operation.	Badger Meter warrants Product low flow accuracy of 95% at a rate of 3/4 gpm for three (3) years from date of shipment or registration of 1,100,000 gallons, whichever occurs first.
Model 120, 1-1/2 in.	Two (2) years from date of shipment or registration of 1,600,000 gallons, whichever occurs first.	Fifteen (15) years from date of shipment or registration of 5,600,000 gallons, whichever occurs first, with a 120 gpm safe maximum operating capacity and a 80 gpm maximum rate for continuous operation.	Badger Meter warrants Product low flow accuracy of 95% at a rate of 1-1/4 gpm for two (2) years from date of shipment or registration of 1,440,000 gallons, whichever occurs first.
Model 170, 2 in.	Two (2) years from date of shipment or registration of 2,100,000 gallons, whichever occurs first.	Fifteen (15) years from date of shipment or registration of 10,400,000 gallons, whichever occurs first, with a 170 gpm safe maximum operating capacity and a 100 gpm maximum rate for continuous operation.	Badger Meter warrants Product low flow accuracy of 95% at a rate of 1-1/2 gpm for two (2) years from date of shipment or registration of 1,890,000 gallons, whichever occurs first.

Badger Meter Warranty

PRODUCT RETURNS

Any Product proved to the satisfaction of Badger Meter to have failed the foregoing warranties will, at the option of Badger Meter, be repaired or replaced without charge to the Customer. Any eligible Product repaired or replaced by Badger Meter will retain the original Product's warranty based on the original Product purchase date, at Badger Meter's sole discretion. The Badger Meter obligation hereunder shall be limited to such repair and replacement and shall be conditioned upon Badger Meter receiving written notice of any alleged defect within ten (10) days after its discovery. This exclusive remedy shall not be deemed to have failed its essential purpose so long as Badger Meter is willing and able to replace defective products or issue a credit to purchaser within a reasonable time of proof to Badger Meter that a defect is involved. Product returns must be shipped by the Customer prepaid F.O.B. to the nearest Badger Meter factory or distribution center. The Customer shall be responsible for all direct and indirect costs associated with removing the original Product and reinstalling the repaired or replacement Product.

LIMITS OF LIABILITY

This warranty shall not apply to Product repaired or altered by parties other than Badger Meter. The foregoing warranty applies only to the extent that the Product is installed, serviced and operated strictly in accordance with AWWA Standard C700 and AWWA M6 Manual, as applicable. The warranty shall not apply and shall be void with respect to Product exposed to conditions other than those detailed in the Badger Meter Product technical and/or operational literature, or which have been exposed to adverse installation conditions, damaged by any water conditions and/or water quality, including but not limited to foreign matter in the water such as dirt, sand, minerals, debris, deposits, biofilms, extreme corrosivity, or other impurities, or which have been subject to passage of highspeed air slugs, vandalism, negligence, accident, acts of God, alteration, improper installation, operation or repair, or other circumstances which are beyond the reasonable control of Badger Meter. With respect to Product not manufactured by Badger Meter, the warranty obligations of Badger Meter shall in all respects conform and be limited to the warranty extended to Badger Meter by the supplier.

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THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES WHATSOEVER, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE (except warranties of Title).

Any description of Product, whether in writing or made orally by Badger Meter or its agents, specifications, samples, models, bulletins, drawings, diagrams, engineering 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 warranty. Any suggestions by Badger Meter or its agents regarding use, application or suitability of Product shall not be construed as an express warranty unless confirmed to be such in writing by Badger Meter.

Exclusion of Consequential Damages and Disclaimer of Other Liability

Badger Meter liability with respect to breaches of the foregoing warranty shall be limited as stated therein. Badger Meter liability shall in no event exceed the contract price. BADGER METER SHALL NOT BE SUBJECT TO AND DISCLAIMS: (1) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY (2) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY BADGER METER, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATING THERETO, AND (3) ALL CONSEQUENTIAL, INCIDENTAL AND CONTINGENT DAMAGES WHATSOEVER.

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M-Series® Electromagnetic Flow Meters

PRODUCTS COVERED

This warranty shall apply to all M-Series[®] Electromagnetic Flow Meters (collectively "Product") sold on or after August 1, 2014. This warranty is extended only to utility users and authorized Badger Meter, Inc. distributors, hereafter referred to as "Customer" and does NOT apply to consumers or any person or entity who is not an original customer of Badger Meter or its authorized distributors.

MATERIALS AND WORKMANSHIP

Badger Meter warrants Product to be free from defects in materials and workmanship appearing within two (2) years and six (6) months after shipment from Badger Meter.

PRODUCT RETURNS

Any Product proved to the satisfaction of Badger Meter to have failed the foregoing warranties will, at the option of Badger Meter, be repaired or replaced without charge to the Customer. The obligation hereunder of Badger Meter shall be limited to such repair and replacement and shall be conditioned upon Badger Meter receiving written notice of any alleged defect within ten (10) days after its discovery. This exclusive remedy shall not be deemed to have failed its essential purpose so long as Badger Meter is willing and able to replace defective products or issue a credit to purchaser within a reasonable time of proof to Badger Meter that a defect is involved. Product returns must be shipped by the Customer prepaid F.O.B. to the nearest Badger Meter factory or distribution center. The Customer shall be responsible for all direct and indirect costs associated with removing original product and reinstalling the repaired or replacement Product.

LIMITS OF LIABILITY

This warranty shall not apply to Product repaired or altered by any party other than Badger Meter. The foregoing warranty applies only to the extent that the Product is installed, serviced and operated strictly in accordance with Badger Meter instructions. The warranty shall not apply and shall be void with respect to Product exposed to conditions other than those detailed in the Badger Meter Product technical literature, or which have been subject to vandalism, negligence, accident, acts of God, improper installation, operation or repair, alteration, or other circumstances which are beyond the reasonable control of Badger Meter.

With respect to Product not manufactured by Badger Meter, the warranty obligations of Badger Meter shall in all respects conform and be limited to the warranty extended to Badger Meter by the supplier.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES WHATSOEVER, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE (except warranties of title).

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

Exclusion of Consequential Damages and Disclaimer of Other Liability. The liability of Badger Meter with respect to breaches of the foregoing warranty shall be limited as stated herein. The liability of Badger Meter shall in no event exceed the contract price. BADGER METER SHALL NOT BE SUBJECT TO AND DISCLAIMS: (1) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY, (2) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY BADGER METER, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATING THERETO, AND (3) ALL CONSEQUENTIAL, INCIDENTAL, AND CONTINGENT DAMAGES WHATSOEVER.

Badger Meter Warranty



MAG-WR-00329-EN-03 (August 2014)

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Control. Manage. Optimize.

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ORION® Water Products

with BEACON AMA®

PRODUCTS

This warranty shall apply to Badger Meter ORION® series AMR/AMI Water Endpoints, Endpoint Assemblies, reading hardware, and software for a BEACON® AMA system, sold on or after December 17, 2018.

ORION series AMR/AMI Water Endpoints include Fixed Network (SE), Migratable (ME), and Classic (CE). Endpoint Assemblies are Water Endpoints factory-connected to Badger Meter HR-E[®] LCD, and HR-E[®] encoders.

This warranty is not transferable and is extended only to utilities, municipalities, other commercial users and authorized distributors, hereafter referred to as "Customer" and does NOT apply to consumers or any person or entity who is not an original Customer of Badger Meter or its authorized distributors.

MATERIAL AND WORKMANSHIP

Badger Meter warrants all ORION series AMR/AMI Water Endpoints, Endpoint Assemblies, reading hardware and software, hereafter referred to as "Product(s)" as listed below, to be free from defects in material and workmanship for the time period stated.

ORION Water Endpoints ^{1, 2}	20 years and 6 months after shipment
ORION Endpoint Assemblies ¹	20 years and 6 months after shipment
Trimble® T10 Tablet ³	3 years after shipment
Panasonic Toughbook® Laptop for BEACON AMA Mobile Solution ³	3 years after shipment
Trimble [®] Ranger 7 Handheld ³	3 years after shipment
Trimble [®] Ranger 7 ORION ME, CE Modules ³	3 years after shipment
ORION Mobile Migratable (ME) Transceiver Kit ³ or Classic (CE) Receiver Kit ³	3 years after shipment
Trimble [®] Ranger 3 Handheld ³ and Charging Cradle	3 years after shipment
ORION Fixed Network (SE) Gateway Transceiver	1 year after shipment

¹ Water Endpoints, Endpoint Assemblies and Endpoint batteries—collectively ORION Water Endpoint Products—are warranted to be free from defects in material and workmanship for twenty (20) years and six (6) months after shipment from Badger Meter. Badger Meter will repair or replace, at its discretion, a non-performing ORION Water Endpoint Product at no cost during the first ten (10) years, and at a prorated price during the last ten (10) years of the warranty. Badger Meter will apply these prorated price discounts to the ORION Water Endpoint Product list prices at the time of ORION Water Endpoint Product return and according to the following prorated price discount; Schedule: Years 11 through 12 - 75% discount; Year 13 through 15 -50% discount; Year 16 - 40% discount. Replacement Products are warranted for and under the balance of the original applicable Product warranty.

² ORION Water Endpoints that are sold factory-connected to an E-Series[®] meter are warranted per the 20-year proration shown above. Refer to the appropriate E-Series Ultrasonic Meter warranty for meter, electronics and battery coverage.

³ Batteries, antennas, cables and accessories warranty is limited to 12 months from the date of shipment.

PRODUCT RETURNS

Product failures must be proven and verified to the satisfaction of Badger Meter. The Badger Meter obligation hereunder shall be limited to such repair and replacement and shall be conditioned upon Badger Meter receiving written notice of any asserted defect within 10 (ten) days after its discovery. This exclusive remedy shall not be deemed to have failed its essential purpose so long as Badger Meter is willing and able to replace the defective Product for the Customer within a reasonable time, after receipt of proof that a defect is involved. Product returns must be shipped by the Customer prepaid F.O.B. to the nearest Badger Meter factory or distribution center. The Customer shall be responsible for all direct and indirect costs associated with removing the Product and reinstalling the repaired or replacement Product.

LIMITS OF LIABILITY

This warranty shall not apply to any Product repaired or altered by any Party other than Badger Meter. The foregoing warranty applies only to the extent that the Product is installed, serviced and operated strictly in accordance with Badger Meter instructions. The warranty shall not apply and shall be void with respect to Products exposed to conditions other than those detailed in Product technical literature or which have been subject to vandalism, negligence, accident, acts of God, improper installation, operation or repair, alteration or other circumstances which are beyond the reasonable control of Badger Meter. With respect to products not manufactured by Badger Meter, the warranty obligations of Badger Meter shall in all respects conform and be limited to the warranty extended to Badger Meter by the supplier.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES WHATSOEVER, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE (except warranties of Title).

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

Exclusion of Consequential Damages and Disclaimer of Other Liability

The liability of Badger Meter with respect to breaches of the foregoing warranty shall be limited as stated herein. Badger Meter's liability shall in no event exceed the contract price. BADGER METER SHALL NOT BE SUBJECT TO AND DISCLAIMS: (1) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY, (2) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY BADGER METER, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATING THERETO, AND (3) ALL CONSEQUENTIAL, INCIDENTAL AND CONTINGENT DAMAGES WHATSOEVER.

Badger Meter Warranty

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ORION® Water Products

with ReadCenter®

PRODUCTS

This warranty shall apply to Badger Meter ORION[®] series AMR/AMI Water Endpoints, Endpoint Assemblies, reading hardware, and software for a ReadCenter[®] system, sold on or after May 18, 2017.

ORION series AMR/AMI Water Endpoints include Fixed Network (SE), Migratable (ME), Classic (CE) and Classic with Data Profiling (CE). Endpoint Assemblies are Water Endpoints factory-connected to Badger Meter HR-E[®] LCD, HR-E[®], ADE[®], RTR[®] encoders.

This warranty is not transferable and is extended only to utilities, municipalities, other commercial users and authorized distributors, hereafter referred to as "Customer" and does NOT apply to consumers or any person or entity who is not an original Customer of Badger Meter or its authorized distributors.

MATERIAL AND WORKMANSHIP

Badger Meter warrants all ORION series AMR/AMI Water Endpoints, Endpoint Assemblies, reading hardware and software, hereafter referred to as "Product(s)" as listed below, to be free from defects in material and workmanship for the time period stated.

ORION Water Endpoints ^{1, 2}	20 years and 6 months after shipment
ORION Endpoint Assemblies ¹	20 years and 6 months after shipment
Trimble [®] Ranger Handheld ³ and Charging Cradle	3 years after shipment
ORION Mobile Migratable (ME) Transceiver Kit ³ or Classic (CE) Receiver Kit ³	3 years after shipment
ORION Fixed Network (SE) Gateway Transceiver	1 year after shipment
ReadCenter [®] Reading Data Management Software	1 year after shipment
ORS Mobile Reading System for ReadCenter	3 years after shipment
ORION Permalog+ Acoustic Leak Logger	3 years after shipment

¹ Water Endpoints, Endpoint Assemblies and Endpoint batteries— collectively ORION Water Endpoint Products—are warranted to be free from defects in material and workmanship for twenty (20) years and six (6) months after shipment from Badger Meter. Badger Meter will repair or replace, at its discretion, a non-performing ORION Water Endpoint Product at no cost during the first ten (10) years, and at a prorated price during the last ten (10) years of the warranty. Badger Meter will apply these prorated price discounts to the ORION Water Endpoint Product list prices at the time of ORION Water Endpoint Product return and according to the following prorated price discount; Schedule: Years 11 through 12 - 75% discount; Year 18 - 20% discount; and Years 19 through 20 - 10% discount. Replacement Products are warranted for and under the balance of the original applicable Product warranty.

² ORION Water Endpoints that are sold factory-connected to an E-Series[®] meter are warranted per the 20-year proration shown above. Refer to the appropriate E-Series Ultrasonic Meter Warranty for meter, electronics and battery coverage.

 $^{\scriptscriptstyle 3}$ Batteries, cables and accessories warranty is limited to 12 months from the date of shipment.

PRODUCT RETURNS

Product failures must be proven and verified to the satisfaction of Badger Meter. The Badger Meter obligation hereunder shall be limited to such repair and replacement and shall be conditioned upon Badger Meter receiving written notice of any asserted defect within 10 (ten) days after its discovery. This exclusive remedy shall not be deemed to have failed its essential purpose so long as Badger Meter is willing and able to replace the defective Product for the Customer within a reasonable time, after receipt of proof that a defect is involved. Product returns must be shipped by the Customer prepaid F.O.B. to the nearest Badger Meter factory or distribution center. The Customer shall be responsible for all direct and indirect costs associated with removing the Product and reinstalling the repaired or replacement Product.

LIMITS OF LIABILITY

This warranty shall not apply to any Product repaired or altered by any Party other than Badger Meter. The foregoing warranty applies only to the extent that the Product is installed, serviced and operated strictly in accordance with Badger Meter instructions. The warranty shall not apply and shall be void with respect to Products exposed to conditions other than those detailed in Product technical literature or which have been subject to vandalism, negligence, accident, acts of God, improper installation, operation or repair, alteration or other circumstances which are beyond the reasonable control of Badger Meter. With respect to products not manufactured by Badger Meter, the warranty obligations of Badger Meter shall in all respects conform and be limited to the warranty extended to Badger Meter by the supplier.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES WHATSOEVER, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE (except warranties of Title).

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

Exclusion of Consequential Damages and Disclaimer of Other Liability

The liability of Badger Meter with respect to breaches of the foregoing warranty shall be limited as stated herein. Badger Meter's liability shall in no event exceed the contract price. BADGER METER SHALL NOT BE SUBJECT TO AND DISCLAIMS: (1) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY, (2) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY BADGER METER, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATING THERETO, AND (3) ALL CONSEQUENTIAL, INCIDENTAL AND CONTINGENT DAMAGES WHATSOEVER.

Badger Meter Warranty

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 Switzerland | Badger Meter Swiss AG | Mittelholzerstrasse 8 | 3006 Bern | Switzerland | +41-31-932 01 11



Recordall® Combo Meters

PRODUCTS COVERED

This warranty shall apply to all Recordall[®] Combo Meters, size 8 inch, and the registers and encoders used with these meters (collectively "Product") sold on or after September 15, 2017. This warranty is extended only to utilities, municipalities, other commercial users and authorized Badger Meter, Inc. distributors, hereafter referred to as "Customer," and does NOT apply to consumers or any person or entity who is not an original customer of Badger Meter or its authorized distributors.

MATERIALS AND WORKMANSHIP

Badger Meter warrants Product to be free from defects in materials and workmanship appearing within one (1) year and six (6) months after shipment from Badger Meter.

Housings

One (1) year and six (6) months after shipment from Badger Meter.

Local Registers for Disc Meter Supplied with the Meters Listed Herein

Twenty-five (25) years and six (6) months after shipment from Badger Meter.

Local Registers for 8 in. Turbo Series Meters Supplied with the Meters Listed Herein

Five (5) years and six (6) months after shipment from Badger Meter.

METER ACCURACY

The meter Product will meet or exceed accuracy standards of AWWA Standard C702 for one (1) year and six (6) months after shipment from Badger Meter.

PRODUCT RETURNS

Any Product proved to the satisfaction of Badger Meter to have failed the foregoing warranties will, at the option of Badger Meter, be repaired or replaced without charge to the Customer. The obligation hereunder of Badger Meter shall be limited to such repair and replacement and shall be conditioned upon Badger Meter receiving written notice of any alleged defect within ten (10) days after its discovery. This exclusive remedy shall not be deemed to have failed its essential purpose so long as Badger Meter is willing and able to replace defective products or issue a credit to purchaser within a reasonable time of proof to Badger Meter that a defect is involved. Product returns must be shipped by the Customer prepaid F.O.B. to the nearest Badger Meter factory or distribution center. The Customer shall be responsible for all direct and indirect costs associated with removing original product and reinstalling the repaired or replacement Product.

LIMITS OF LIABILITY

This warranty shall not apply to Product repaired or altered by any party other than Badger Meter. The foregoing warranty applies only to the extent that the Product is installed, serviced and operated strictly in accordance with AWWA Standard C702 and the AWWA M6 Manual. The warranty shall not apply and shall be void with respect to Product exposed to conditions other than those detailed in Badger Meter Product technical literature, or which have been subject to vandalism, negligence, accident, acts of God, improper installation, operation or repair, alteration, or other circumstances which are beyond the reasonable control of Badger Meter. With respect to Product not manufactured by Badger Meter, the warranty obligations of Badger Meter shall in all respects conform and be limited to the warranty extended to Badger Meter by the supplier.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES WHATSOEVER, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE (except warranties of title).

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

Exclusion of Consequential Damages and Disclaimer of Other Liability

The liability of Badger Meter with respect to breaches of the foregoing warranty shall be limited as stated herein. The liability of Badger Meter shall in no event exceed the contract price. BADGER METER SHALL NOT BE SUBJECT TO AND DISCLAIMS: (1) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY, (2) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY BADGER METER, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATING THERETO, AND (3) ALL CONSEQUENTIAL, INCIDENTAL, AND CONTINGENT DAMAGES WHATSOEVER.

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Recordall® Compound Series Meters

Sizes 2"...6"

PRODUCTS COVERED

This warranty shall apply to all Recordall® Compound Series Meters, sizes 2"...6", and the local registers used with these meters (collectively "Product") sold on or after July 1, 2013. This warranty is extended only to utilities, municipalities, other commercial users and authorized Badger Meter, Inc. distributors, hereafter referred to as "Customer" and does NOT apply to consumers or any person or entity who is not an original customer of Badger Meter or its authorized distributors.

MATERIALS AND WORKMANSHIP

Badger Meter warrants Product to be free from defects in materials and workmanship appearing within the following time frames:

Bronze Housings

One (1) year and six (6) months after shipment from Badger Meter.

Local Registers for Low Flow Registration (Disc Measuring Element) **Supplied with the Meters Listed Herein**

Twenty-five (25) years and six (6) months after shipment from Badger Meter.

Local Registers for High Flow Registration (Turbo Measuring Element) **Supplied with the Meters Listed Herein**

Five (5) years and six (6) months after shipment from Badger Meter.

METER ACCURACY

The meter Product will meet or exceed accuracy standards of AWWA Standard C702 for one (1) year and six (6) months after shipment from Badger Meter.

PRODUCT RETURNS

Any Product proved to the satisfaction of Badger Meter to have failed the foregoing warranties will, at the option of Badger Meter, be repaired or replaced without charge to the Customer. The obligation hereunder of Badger Meter shall be limited to such repair and replacement and shall be conditioned upon Badger Meter receiving written notice of any alleged defect within ten (10) days after its discovery. This exclusive remedy shall not be deemed to have failed its essential purpose so long as Badger Meter is willing and able to replace defective products or issue a credit to purchaser within a reasonable time of proof to Badger Meter that a defect is involved. Product returns must be shipped by the Customer prepaid F.O.B. to the nearest Badger Meter factory or distribution center. The Customer shall be responsible for all direct and indirect costs associated with removing original product and reinstalling the repaired or replacement Product.

LIMITS OF LIABILITY

This warranty shall not apply to Product repaired or altered by any party other than Badger Meter. The foregoing warranty applies only to the extent that the Product is installed, serviced and operated strictly in accordance with AWWA Standard C702 and AWWA M6 Manual. The warranty shall not apply and shall be void with respect to Product exposed to conditions other than those detailed in Badger Meter Product technical literature, or which have been subject to vandalism, negligence, accident, acts of God, improper installation, operation or repair, alteration, or other circumstances which are beyond the reasonable control of Badger Meter. With respect to Product not manufactured by Badger Meter, the warranty obligations of Badger Meter shall in all respects conform and be limited to the warranty extended to Badger Meter by the supplier.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES WHATSOEVER, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE (except warranties of title).

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

Exclusion of Consequential Damages and Disclaimer of Other Liability. The liability of Badger Meter with respect to breaches of the foregoing warranty shall be limited as stated herein. The liability of Badger Meter shall in no event exceed the contract price. BADGER METER SHALL NOT BE SUBJECT TO AND DISCLAIMS: (1) ANY OTHER OBLIGATIONS **OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY, (2) ANY OBLIGATIONS WHATSOEVER** ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES **RENDERED BY BADGER METER, OR ANY UNDERTAKINGS,** ACTS OR OMISSIONS RELATING THERETO, AND (3) ALL CONSEQUENTIAL, INCIDENTAL, AND CONTINGENT DAMAGES WHATSOEVER.

Badger Meter Warranty

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 Legacy Document #: RCS-W-1-EN



Recordall® Turbo Series Meters

PRODUCTS COVERED

This warranty shall apply to all Recordall[®] Turbo Series Meters, sizes 1-1/2"...20", and the local registers used with these meters (collectively "Product") sold on or after July 1, 2013. This warranty is extended only to utilities, municipalities, other commercial users and authorized Badger Meter, Inc. distributors, hereafter referred to as "Customer" and does NOT apply to consumers or any person or entity who is not an original customer of Badger Meter or its authorized distributors.

MATERIALS AND WORKMANSHIP

Badger Meter warrants Product to be free from defects in materials and workmanship appearing within the following time frames:

Bronze Housing

One (1) year and six (6) months after shipment from Badger Meter.

Local Registers Supplied with the Meters Listed Herein

Five (5) years and six (6) months after shipment from Badger Meter.

METER ACCURACY

The meter Product will meet or exceed accuracy standards of AWWA Standard C701 for one (1) year and six (6) months after shipment from Badger Meter. AWWA does not provide a standard for 1-1/2" turbo meters. However, the typical operating range for the 1-1/2" turbo meter meets the accuracy requirements of this standard.

PRODUCT RETURNS

Any Product proved to the satisfaction of Badger Meter to have failed the foregoing warranties will, at the option of Badger Meter, be repaired or replaced without charge to the Customer. The obligation hereunder of Badger Meter shall be limited to such repair and replacement and shall be conditioned upon Badger Meter receiving written notice of any alleged defect within ten (10) days after its discovery. This exclusive remedy shall not be deemed to have failed its essential purpose so long as Badger Meter is willing and able to replace defective products or issue a credit to purchaser within a reasonable time of proof to Badger Meter that a defect is involved. Product returns must be shipped by the Customer prepaid F.O.B. to the nearest Badger Meter factory or distribution center. The Customer shall be responsible for all direct and indirect costs associated with removing original product and reinstalling the repaired or replacement Product.

LIMITS OF LIABILITY

This warranty shall not apply to Product repaired or altered by any party other than Badger Meter. The foregoing warranty applies only to the extent that the Product is installed, serviced and operated strictly in accordance with AWWA Standard C701 and AWWA M6 Manual. The warranty shall not apply and shall be void with respect to Product exposed to conditions other than those detailed in Badger Meter Product technical literature, or which have been subject to vandalism, negligence, accident, acts of God, improper installation, operation or repair, alteration, or other circumstances which are beyond the reasonable control of Badger Meter. With respect to Product not manufactured by Badger Meter, the warranty obligations of Badger Meter shall in all respects conform and be limited to the warranty extended to Badger Meter by the supplier.

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

Exclusion of Consequential Damages and Disclaimer of Other Liability. The liability of Badger Meter with respect to breaches of the foregoing warranty shall be limited as stated herein. The liability of Badger Meter shall in no event exceed the contract price. BADGER METER SHALL NOT BE SUBJECT TO AND DISCLAIMS: (1) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY, (2) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY BADGER METER, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATING THERETO, AND (3) ALL CONSEQUENTIAL, INCIDENTAL, AND CONTINGENT DAMAGES WHATSOEVER.

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Neptune T-10, HP Turbine, **TRU/FLO® Compound Cold Water Meters Warranty**



1. Terms of Limited Warranty.

With respect to its Neptune T-10, HP TURBINE, TRU/FLO® Compound Water Meters (collectively the "Water Meters"), Neptune Technology Group Inc. ("Neptune") warrants the following on meters sold on or after 11/1/92:

The Water Meters will be, at the later of (i) the date of original purchase from Neptune or (ii) the date of original shipment from Neptune-authorized distributor of Water Meters (that later date is referred to as "the Date of Shipment") and will remain for a period of eighteen (18) months from the Date of Shipment, or twelve (12) months from date of installation, whichever comes first, free from manufacturing defects in workmanship and material.

- (a) Maincase. The no-lead high copper alloy or Brass maincase of the Water Meters will be at the Date of Shipment free from manufacturing defects in workmanship and material for the life of the Water Meter.
- (b) Frost Protection. All Neptune T-10 Cold Water Meters shipped with a synthetic polymer or cast iron bottom cap will, commencing upon the Date of Shipment, be warranted against chamber damage for a period of ten (10) years.
- (c) Registers. Standard, roll sealed registers of the Water Meters will be at the Date of Shipment, and shall remain for the following periods, free from manufacturing defects in workmanship and material for a period of ten (10) years. The ARB®, ProRead[™] (ARB VI), and E-Coder® (ARB VII) system registers are warranted for ten (10) years from Date of Shipment. All ProRead encoder receptacles shipped after January 1, 2001 shall be warranted for five years from the Date of Shipment. All other components and parts are covered under Neptune's standard one-year material and workmanship guarantee.
- (d) Meter Accuracy for Neptune T-10. Neptune T-10 Meters and Neptune T-10 nutating disc chambers in TRU/FLO Compound Water Meters are warranted to meet or exceed, as listed herein, accuracy standards of the AWWA Standard C700-95 for a period of: (i) five (5) years from Date of Shipment for 5/8", 3/4" and 1" meters; (ii) for a period of two (2) years from the Date of Shipment for 1 1/2" and 2" meters; or (iii) the applicable registration shown below, whichever occurs first. Neptune further guarantees that the Neptune T-10 and Neptune T-10 nutating disc chambers in TRU/FLO Compound Water Meters will perform to at least Repaired Meter Accuracy Standards, according to AWWA Manual M-6 Chapter 5 (1999) Table 5.3 for an additional ten (10) years or the registration shown below, whichever occurs first.
- (e) Meter Accuracy for HP Turbine and TRU/FLO. The HP Turbine and TRU/FLO Compound Cold Water Meters will perform, for a period of one (1) year from the Date of Shipment, to American Water Works Association ("AWWA") accuracy standards for new water meters.

SIZE	EXTENDED LOW FLOW ACCURACY	NEW METER ACCURACY	REPAIRED METER ACCURACY
5% & 5%"x ¾"	1% US gpm @ 95% 5 years or 500,000 gallons	500,000 gallons	1,500,000 gallons
3⁄4″	¼ US gpm @ 95% 5 years or 750,000 gallons	750,000 gallons	2,250,000 gallons
1″	¾ US gpm @ 95% 5 years or 1,000,000 gallons	1,000,000 gallons	3,000,000 gallons
1 1⁄2″	¾ US gpm @ 95% 2 years or 1,600,000 gallons	1,600,000 gallons	5,000,000 gallons
2"	1 US gpm @ 95% 2 years or 2,700,000 gallons	2,700,000 gallons	8,000,000 gallons



CHNOLOGY GROUP INC

W METER 09.11

2. Warranty Return.

If a Neptune Water Meter fails an accuracy test during an applicable warranty period, it may be returned to Neptune for repair or replacement at Neptune's option. An accuracy test shall be conducted by the customer according to AWWA standards. Any meter being returned for repair to Neptune under this performance guarantee must be returned with a copy of the customer's test results. If the meter is returned to Neptune without a copy of the test results or if Neptune's factory test shows the meter to meet current AWWA standards, the customer will be charged a nominal testing fee by Neptune in such cases. Neptune will repair or replace the meter at Neptune's option after the meter has been tested by Neptune. Meters repaired or replaced under the performance guarantee will be guaranteed to perform to AWWA repaired meter accuracy standards.

3. Warranties are exclusive.

The warranties set forth in this certificate of warranty are in lieu of any other warranty, guarantee, or representation, whether expressed or implied, including without limitation, the warranty of merchantability and the warranty of fitness for a particular purpose.

4. Damages limited to costs of replacement and repair.

If the Water Meter fails to meet the warranties set forth in Paragraph 1 of this Certificate of Warranty, Neptune, at its option shall, without charge of labor or materials, repair or replace the Water Meter or part thereof, provided that (a) the Water Meter is delivered to a Neptune representative, (b) the Water Meter is accompanied by a Return Material Authorization (RMA), and (c) all costs of delivery to Neptune are assumed by the purchaser of the Water Meter. Neptune's liability is limited to its costs of replacement and repair of the defective water meter. Damages resulting from miscalculation of water usage or lost revenue or profit are not recoverable from Neptune. It is the responsibility of the customer to periodically verify the operation and accuracy of its meters.

5. Warranties are inapplicable under certain conditions.

The warranties set forth in this Certificate of Warranty do not apply to any Water Meter that has been damaged by, or subjected to, conditions which, in the opinion of Neptune, have affected the Water Meter's ability of performance, including but not limited to: misuse; improper handling, application or installation; excessive operating conditions; foreign materials in the water; aggressive water conditions; tampering or unauthorized repairs or modifications; accidental or intentional damage; acts of God. This Certificate of Warranty shall not apply if product is placed in non-recommended installation, is connected or altered by other than Neptune recommended procedures, is used with other than genuine Neptune meter registers and components, or read by equipment not approved or licensed by Neptune. Neptune makes no claims concerning operability and/or compatibility or third party reading systems. In addition, this Certificate of Warranty, Neptune shall have the right to inspect any Water Meter or part thereof that is claimed to be defective at Neptune or other location designated by Neptune.

NEPTUNE'S LIABILITY WITH RESPECT TO BREACHES OF THE FOREGOING LIMITED WARRANTY SHALL BE LIMITED AS STATED HEREIN. NEPTUNE'S LIABILITY SHALL IN NO EVENT EXCEED THE PURCHASE PRICE. NEPTUNE SHALL NOT BE SUBJECT TO AND DISCLAIMS THE FOLLOWING: (1) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY (2) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY NEPTUNE, OR ANY UNDERTAKINGS, ACT OR OMISSIONS RELATING THERETO, AND (3) ALL CONSEQUENTIAL, INCIDENTAL, SPECIAL, MULTIPLE, EXEMPLARY, AND PUNITIVE DAMAGES WHATSOEVER.



W METER 09.11

E-Coder[®])R900*i*[™] Warranty Statement

I. Warranty Effective Date

This warranty will be effective for any E-Coder®)R900*i*™ that has shipped since product introduction.

II. E-Coder)R900i

Neptune Technology Group Inc. warrants that the E-Coder)R900*i* (which includes a Neptune-supplied battery that is not intended to be removable or replaceable) shall be free from defects in manufacture and design for a period of twenty (20) years from the "date of shipment" (such period being the "Warranty Period"). Neptune shall not be responsible for any defects in the E-Coder)R900*i* (whether due to design, materials, manufacture, or otherwise) which manifest themselves after the expiration of the Warranty Period. Neptune will repair or replace a non-performing E-Coder)R900*i* free of charge for the first ten (10) years and at a discount off of the <u>then</u>-current contract price or the <u>then-current list price</u>, whichever is less, during the remaining ten (10) years according to the discount schedule at the right.

III. Warranties are inapplicable under certain conditions.

This warranty does not include field replacement labor or materials costs, which are the responsibility of the utility. This warranty does not apply if product is placed in non-recommended installations; may have been repaired with parts not recommended by Neptune; was converted, altered, or connected by other than Neptune recommended procedures; is used with other than genuine Neptune meter registers and components or read by equipment not approved or licensed by Neptune; or damaged due to improper care or maintenance, or improper periodic testing (please refer to E-Coder)R900*i* Installation and Maintenance Guide). This warranty does not apply to any E-Coder)R900*i* that has been damaged by, or subjected to, conditions which, in the opinion of Neptune, have affected the E-Coder)R900*i* register's ability of performance, including but not limited to: misuse; improper handling; application or installation; excessive operating conditions; tampering or unauthorized repairs and modifications; accidental or intentional damage; or acts of God. In no event shall Neptune be liable for special, incidental, indirect, or consequential damages, including, without limitation, lost revenue.

THE ABOVE WARRANTY FOR THE E-Coder)R900*i* IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY NEPTUNE WITH RESPECT TO THE E-CODER)R900*i*. ALL OTHER WARRANTIES, CONDITIONS, TERMS, REPRESENTATIONS, OR OTHER LEGALLY OPERATIVE PROVISIONS CONCERNING THE E-CODER)R900*i* ARE HEREBY EXPRESSLY EXCLUDED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY, CONDITION, TERM, AND REPRESENTATION OR OTHER LEGALLY OPERATIVE PROVISION AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THIS PARAGRAPH IS EXPRESSLY INTENDED TO EXCLUDE FROM THIS CONTRACT ALL STATUTORY AND COMMON LAW

WARRANTIES TO THE MAXIMUM EXTENT PERMITTED BY LAW. TO AVOID ANY AMBIGUITY OR MISUNDERSTANDING, ALL PROBLEMS ARISING WITH AN E-Coder)R900*i* AFTER THIS POINT ARE BUYER'S RESPONSIBILITY. NEPTUNE'S LIABILITY SHALL IN NO EVENT EXCEED THE PURCHASE PRICE OF THE E-CODER)R900*i*. NEPTUNE SHALL NOT BE SUBJECT TO AND DISCLAIMS THE FOLLOWING: (1) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACHOF CONTRACT OR OF WARRANTY, (2) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY NEPTUNE, OR ANY UNDERTAKINGS, ACTS, OR OMISSIONS RELATING THERETO, AND (3) ALL CONSEQUENTIAL, INCIDENTAL, SPECIAL.



Year of Failure	E-Coder®)R900 <i>i</i> ™ Replacement Price Discount*
1-10	Full replacement: 100%
11	50%
12	50%
13	40%
14	40%
15	30%
16	30%
17	20%
18	20%
19	10%
20	10%

*Replacement price discount percentages will be applied towards <u>then</u>-current contract prices or <u>then-current list prices</u>, <u>whichever is less</u>, in effect for the year product is accepted by Neptune under warranty conditions. Replacement E-Coder/R900i registers are warranted for one (1) year after date of shipment or balance of original E-Coder/R900i warranty, whichever is greater.





W E-CODER)R900i 05.16

ProRead[™]/E-CODER[®]/ProCoder[™] Encoder Warranty Statement





Products Covered

This warranty shall apply to the ProRead[™] absolute encoder, E-CODER[®] solid state absolute encoder register, and ProCoder[™] absolute encoder register, hereinafter referred to as "Product", sold by Neptune Technology Group Inc. The warranty is extended only to utilities, municipalities, other commercial users, and authorized distributors, hereinafter referred to as "Customer", and does NOT apply to consumers.

Materials and workmanship

Neptune Technology Group Inc. ("Neptune[®]") warrants that the product shall be free from defects in manufacture and design for a period of ten (10) years from the date of shipment (such period being the "Warranty Period") when installed, serviced and operated according to Neptune's instructions. Neptune shall not be responsible for any defects in the product (whether due to design, materials, manufacture, or otherwise) which manifest themselves after the expiration of the Warranty Period. Neptune will repair or replace a non-performing product free of charge for ten (10) years.

Warranties are inapplicable under certain conditions

This warranty does not include field replacement labor or materials costs, which are the responsibility of the Customer. This warranty does not apply if product is placed in non-recommended installations; may have been repaired with parts not recommended by Neptune; is converted, altered or connected by other than Neptune recommended procedures; is used with other than genuine Neptune components or read by equipment not approved or licensed by Neptune; or damaged due to improper care or maintenance, or improper periodic testing (please refer to *Encoder Quick Install Guide*). This warranty does not apply to any Product that has been damaged by, or subjected to, conditions which, in the opinion of Neptune, have affected the Product's ability of performance, including but not limited to: misuse; improper handling; application or installation; excessive operating conditions; tampering or unauthorized repairs and modifications; accidental or intentional damage; or acts of God. In no event shall Neptune be liable for special, incidental, indirect or consequential damages, including, without limitation, lost revenue.

THE ABOVE WARRANTY IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY NEPTUNE WITH RESPECT TO THE PRODUCT. **ALL OTHER WARRANTIES, CONDITIONS, TERMS, REPRESENTATIONS, OR OTHER LEGALLY OPERATIVE PROVISIONS CONCERNING THE PRODUCT ARE HEREBY EXPRESSLY EXCLUDED, INCLUDING WITHOUT LIMITATION, ANY WARRANTY, CONDITION, TERM, AND REPRESENTATION OR OTHER LEGALLY OPERATIVE PROVISION AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** THIS PARAGRAPH IS EXPRESSLY INTENDED TO EXCLUDE FROM THIS CONTRACT ALL STATUTORY AND COMMON LAW WARRANTIES TO THE MAXIMUM EXTENT PERMITTED BY LAW. TO AVOID ANY AMBIGUITY OR MISUNDERSTANDING, ALL PROBLEMS ARISING WITH THE PRODUCT AFTER THIS POINT ARE CUSTOMER'S RESPONSIBILITY. NEPTUNE'S LIABILITY SHALL IN NO EVENT EXCEED THE PURCHASE PRICE. NEPTUNE SHALL NOT BE SUBJECT TO AND DISCLAIMS THE FOLLOWING: (1) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY; (2) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY NEPTUNE, OR ANY UNDERTAKINGS, ACTS, OR OMISSIONS RELATING THERETO; AND (3) ALL CONSEQUENTIAL, INCIDENTAL, SPECIAL, MULTIPLE, EXEMPLARY, AND PUNITIVE DAMAGES WHATSOEVER.



UTILITY **Encoder Compatibility Guarantee** MANAGEMENT Automatic Reading and Billing (ARB®) System (ARB V. ProRead, E-CODER, and ProCoder) SYSTEMS™ With the purchase of the ARB encoder metering system, Neptune will provide the assurance that the ARB System purchased today can be expanded from reading with Neptune handheld devices to reading with Neptune mobile products and fixed network systems. **Guarantee of Compatibility** The Pocket ProReader RF, Advantage Probe, R900[®], E-CODER[®])R900*i*[™], ProCoder)R900*i*, DAP handhelds (PC9300, 9800 & CE5320B) and Neptune mobile systems are designed and built by Neptune. This guarantees the utility compatibility between these systems and the ARB encoder registers. For Probed Reads: When reading ARB encoders with the Pocket ProReader RF, Advantage Probe, or DAP handhelds (PC9300, 9800 and CE5320B), Neptune guarantees that the meter reading obtained will match the mechanical odometer reading. For RF Reads: When reading ARB encoders connected to an R900 where the R900 reads a ProRead or ARB V encoder hourly, or in the case of E-CODER or ProCoder where the R900 reads the E-CODER or ProCoder every 15 minutes. Neptune guarantees the encoder reading and the remote reading will match upon manual activation of the R900 with a magnet to force an immediate read and transmission. In the event of the E-CODER/R900/ or ProCoder/R900/ where the R900 transmission is updated every 15 minutes. Neptune will guarantee the encoder reading and remote reading to match upon this update. **Damage Guarantee** The Pocket ProReader RF, Advantage Probe, R900, E-CODER)R900i, ProCoder)R900i, DAP handhelds (PC9300 & 9800, CE5320B) and Neptune mobile systems are warranted against causing damage to any ARB encoder register during interrogation. If it is found that the Pocket ProReader RF, Advantage Probe, R900, DAP handhelds (PC9300 & 9800, CE5320B) or Neptune mobile systems caused damage to an ARB encoder register during interrogation, Neptune will either repair or replace the register at no charge to the utility. If there are any questions concerning this Meter & Reading Information Systems Guarantee, please write to: Manager of Consumer Relations, Neptune Technology Group Inc., 1600 Alabama Hwy, 229, Tallassee, Alabama 36078, If a Neptune water meter fails an accuracy test during an applicable warranty period, it may be returned to Neptune for repair or replacement at Neptune's option. An accuracy test shall be conducted by the customer according to AWWA standards. If foreign material causes the meter not to perform appropriately, all such materials shall be removed prior to the customer conducting the test. Any meter being returned for repair to Neptune under this performance guarantee must be returned with a copy of the customer's test results. If the meter is returned to Neptune without a copy of the test results or if Neptune's factory test shows the meter to meet current AWWA standards, the customer will be charged a nominal testing fee by Neptune in such cases. Neptune will repair or replace the meter at Neptune's option after the meter has been tested by Neptune. Meters repaired or replaced under the performance guarantee will be guaranteed to perform to AWWA repaired meter accuracy standards. This guarantee is void if components have not been maintained or installed according to Neptune installation and maintenance quidelines, or are otherwise damaged or defective. The accuracy guarantee will not apply where a properly formatted electronic meter reading cannot be obtained on six-digit encoders. The last digit will be displayed only as a zero (0) or five (5) when read remotely. As part of the encoder technology, the electronic reading from the R900 is guaranteed to match the reading on the encoder register upon manual activation of the R900 with a magnet to force an immediate read and transmission (one per hour). System damage as a result of vandalism or acts of God are not covered. Additional warranties may also apply to individual system components. Neptune's liability with respect to breaches of the foregoing warranty shall be limited as stated herein. Neptune's liability shall in no event exceed the purchase price. Neptune shall not be subject to and disclaims the following: (1) any other obligations or liabilities arising out of breach of contract or of warranty; (2) any obligations whatsoever arising from tort claims (including negligence and strict liability) or arising under other theories of law with respect to products sold or services rendered by Neptune, or any undertakings, acts, or omissions relating thereto; and (3) all consequential, incidental, special, multiple, exemplary, and punitive damages whatsoever. THE WARRANTIES SET FORTH HEREIN ARE IN LIEU OF AND EXCLUDE ALL OTHER WARRANTIES. WHETHER EXPRESSED, IMPLIED OR STATUTORY. INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NEPTUNE TECHNOLOGY GROUP INC. W ENCODER 10.17



A NEPTUNE TECHNOLOGY GROUP WARRANTY STATEMENT

MACH 10[®] Ultrasonic Meter

1. TERMS OF LIMITED WARRANTY

With respect to its Neptune[®] MACH 10[®] water meter ("MACH 10"), Neptune Technology Group Inc. ("Neptune") warrants that for meters sold after 08/01/2018 for potable water or combined potable water and residential fire service applications the MACH 10 meter will be warranted to be free from manufacturing defects in workmanship and material as follows:

The MACH 10 will be, at the later of (i) the date of original purchase from Neptune or (ii) the date of original shipment from a Neptune-authorized distributor of water meters (that later date is referred to as "the Date of Shipment"), and will remain for a period of 18 months from the Date of Shipment, or 12 months from date of installation, whichever comes first, free from manufacturing defects in workmanship and material. Neptune makes the following additional warranties with respect to certain MACH 10 components, dependent upon the size of meter:

a) Lead Free Bronze Maincase

i) ⁵/₈" - 1" MACH 10

Neptune warrants that the MACH 10 lead free bronze maincase will be free from manufacturing defects in workmanship and material for twenty (20) years from the Date of Shipment.

ii) 11/2" - 2" MACH 10

Neptune warrants that the MACH 10 lead free bronze maincase will be free from manufacturing defects in workmanship and material for ten (10) years from the Date of Shipment.

b) Electronics (Battery, PCB, Transducers, LCD)

i) 5/8" - 1" MACH 10

Neptune warrants that the electronics of the MACH 10 will be free from manufacturing defects in workmanship and material for a period of twenty (20) years from the Date of Shipment. Neptune will repair or replace a non-performing MACH 10 free of charge for the first ten (10) years and at a discount of the <u>then-current contract price</u>, or the <u>then-current list price</u>, whichever is less, during the following ten (10) years per the following table. The MACH 10 warranty does not include the external housing that encapsulates the electronics.

ii) 1¹/₂" - 2" MACH 10

Neptune warrants the electronics of the MACH 10 will be free from manufacturing defects in workmanship and material for a period of ten (10) years from the Date of Shipment. Neptune will repair or replace a non-performing MACH 10 free of charge during the ten (10) year Warranty Period. The MACH 10 warranty does not include the external housing that encapsulates the electronics.

With respect to Section 1 and subparts a) and b), the period from the Date of Shipment to the expiration of the specified time period is the "Warranty Period" with respect to each specified component. Neptune shall not be responsible for any defects in the MACH 10 or any specified component (whether due to design, materials, manufacture, or otherwise) that manifest themselves after the expiration of the specified Warranty Period.

Year of Failure	MACH 10 [®]
	Replacement Price Discount*
1-10	Full replacement: 100%
11	50%
12	50%
13	40%
14	40%
15	30%
16	30%
17	20%
18	20%
19	10%
20	10%





2. MACH 10 METER ACCURACY

Provided that the MACH 10 meter and the components specified in Section 1 and subparts a) and b) are functioning properly (regardless of whether the MACH 10 meter and specified components are within or outside an applicable Warranty Period), Neptune makes the following warranties with respect to meter accuracy, dependent upon the size of meter:

i) ⁵/₈" - 1" MACH 10

Neptune MACH 10 meters are warranted to meet or exceed meter accuracy of $\pm 1.5\%$ for the published ranges set forth in Neptune's current product sheet in existence at the time of the Date of Shipment of the MACH 10 meter for twenty (20) years from Date of Shipment. Neptune further warrants the MACH 10 to meet or exceed extended low flow accuracy of $\pm 3\%$ for the published ranges set forth in Neptune's current product sheet in existence at the time of the Date of Shipment of the MACH 10 meter for twenty (20) years from Date of Shipment.

ii) 11/2" - 2" MACH 10

Neptune MACH 10 meters are warranted to meet or exceed meter accuracy of $\pm 1.5\%$ for the published ranges set forth in Neptune's current product sheet in existence at the time of the Date of Shipment of the MACH 10 meter for ten (10) years from date of shipment. Neptune further warrants the MACH 10 to meet or exceed extended low flow accuracy of $\pm 3\%$ for the published ranges set forth in Neptune's current product sheet in existence at the time of the Date of Shipment of the MACH 10 meter for ten (10) years from Date of Shipment of the MACH 10 meter for ten (10) years from Date of Shipment.

3. WARRANTY RETURNS

If a Neptune MACH 10 meter fails an accuracy test during an applicable Warranty Period, it may be returned to Neptune for evaluation. Any MACH 10 meter proved to the satisfaction of Neptune to have failed the warranties set forth in this Certificate of Warranty will, at the option of Neptune, be repaired or replaced at no cost to the customer. An accuracy test shall be conducted by the customer according to then-current AWWA testing standards. Any meter being returned for repair to Neptune under this performance warranty must be returned with a copy of the customer's test results. If the meter is returned to Neptune without a copy of the test results or if Neptune's factory test shows the meter to meet Neptune's published accuracy specifications, then the customer will be charged a nominal testing fee by Neptune in such cases. If after the meter has been tested by Neptune, Neptune determines that the meter has failed the warranties set forth in this Certificate of Warranty, then Neptune will repair or replace the meter at Neptune's option. Repaired or replacement MACH 10 meters are warranted for one (1) year after Date of Shipment of the repaired or replacement MACH 10 meter warranty, whichever is greater.

4. RESPONSIBILITY LIMITED TO COSTS OF REPLACEMENT AND REPAIR

If the MACH 10 fails to meet the warranties set forth in Sections 1 and 2 of this Certificate of Warranty, then Neptune, at its option shall repair or replace the MACH 10 or part thereof, provided that (a) the MACH 10 is delivered to a Neptune representative, (b) the MACH 10 is accompanied by a Return Material Authorization (RMA), and (c) all costs of delivery to Neptune are assumed by the purchaser of the MACH 10. Neptune's liability is limited to its costs of replacement and repair of the non-performing MACH 10, and without limitation, this warranty does not include field replacement, labor, or materials costs, which are the responsibility of the customer. Damages resulting from miscalculation of water usage or lost revenue or profit are not recoverable from Neptune. It is the responsibility of the customer to periodically verify the operation and accuracy of its meters.





5. WARRANTIES ARE INAPPLICABLE UNDER CERTAIN CONDITIONS

The warranties set forth in this Certificate of Warranty do not apply to any MACH 10 meter that has been damaged by, or subjected to, conditions which, in the opinion of Neptune, have affected the ability of the MACH 10 to perform, including but not limited to: misuse; improper handling, application or installation; excessive operating conditions; foreign materials in the water; aggressive water conditions; tampering or unauthorized repairs or modifications; accidental or intentional damage; or acts of God. This Certificate of Warranty shall not apply if the product is placed in a non-recommended installation, is connected or altered by other than Neptune recommended procedures, or is read by equipment not approved or licensed by Neptune. Neptune makes no claims concerning operability and/or compatibility or third-party reading systems. In addition, this Certificate of Warranty shall not apply if third-party reading equipment is believed to have caused damage to the MACH 10. In order to determine its liability, if any, under this Certificate of Warranty, Neptune shall have the right to inspect any MACH 10 meter or part thereof that is claimed to be defective at Neptune or other location designated by Neptune.

THE ABOVE WARRANTY FOR THE MACH 10 WATER METER IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY NEPTUNE WITH RESPECT TO THE MACH 10. **ALL OTHER WARRANTIES, CONDITIONS, TERMS, REPRESENTATIONS, OR OTHER LEGALLY OPERATIVE PROVISIONS CONCERNING THE MACH 10 ARE HEREBY EXPRESSLY EXCLUDED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY, CONDITION, TERM, AND REPRESENTATION OR OTHER LEGALLY OPERATIVE PROVISION AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** THIS PARAGRAPH IS EXPRESSLY INTENDED TO EXCLUDE FROM THIS CONTRACT ALL STATUTORY AND COMMON LAW WARRANTIES TO THE MAXIMUM EXTENT PERMITTED BY LAW. TO AVOID ANY AMBIGUITY OR MISUNDERSTANDING, ALL PROBLEMS ARISING WITH A MACH 10 WATER METER AFTER THIS POINT SHALL BE BUYER'S RESPONSIBILITY. NEPTUNE'S LIABILITY SHALL IN NO EVENT EXCEED THE PURCHASE PRICE OF THE MACH 10 WATER METER. NEPTUNE SHALL NOT BE SUBJECT TO AND DISCLAIMS THE FOLLOWING: (1) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY, (2) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY NEPTUNE, OR ANY UNDERTAKINGS, ACTS, OR OMISSIONS RELATING THERETO, AND (3) ALL CONSEQUENTIAL, INCIDENTAL, SPECIAL, MULTIPLE, EXEMPLARY, AND PUNITIVE DAMAGES WHATSOEVER.



A NEPTUNE TECHNOLOGY GROUP WARRANTY STATEMENT

Trimble Nomad and Trimble Ranger

WARRANTY - HARDWARE

The warranty on the Trimble Nomad 900B/900LE, 1050B/1050LE, and Trimble Ranger 3XE is twenty-four (24) months from shipment date. Warranty described in this section applies to Trimble units only; excludes any accessories. Warranty services provided during the warranty period are:

- For a unit defective in materials or workmanship, free repair of unit, including parts and labor (unless damaged by abuse or negligence)
- Return shipment of repaired product via prepaid ground service
- Repair turnaround time of five (5) working days, excluding transit time
- Toll-free assistance provided by Customer Support 1-800-647-4832
- These services are the purchaser's exclusive remedy for warranty issues

ENTITLEMENTS/EXTENDED MAINTENANCE CONTRACT SERVICES

Entitlements or extended maintenance contracts are available from your Authorized Neptune Sales Representative. Entitlement services provided during extended period are:

- Free repair of unit, including parts and labor
- Return shipment of repaired product via prepaid ground service
- Repair turnaround time of five (5) working days, excluding transit time
- Toll-free assistance provided by Customer Service 1-800-647-4832

ENTITLEMENT EXCLUSIONS AND CONDITIONS

- Accessories including: rechargable batteries, cables, cradles and antennas
- Equipment damaged by abuse or negligence or environmental damage such as a result of fires and storms
- Firmware modifications
- Priority Overnight return shipment of repaired units

WARRANTY - ACCESSORIES

Accessories are warrantied for 90 days from the shipment date. Accessories include: rechargable batteries, cables, cradles, antenna, etc. Entitlements are not available for accessories.

REPAIR NOTES

- A Return Material Authorization (RMA) number MUST accompany all incoming repairs. This number may be obtained by calling Customer Support at 1-800-647-4832.
- Customer pays all incoming shipment charges.
- Repair turnaround (non-warranty/non-maintenance) is approximately fifteen (15) business days*, excluding transit (*not including days required to obtain a purchase order for the repairs). All repairs conducted without a maintenance contract are charged as time-and-materials repairs.
- Batteries, cables, and chargers for products covered under warranty or maintenance contract may be replaced at no charge at Neptune's discretion.
- All outgoing repairs are shipped ground service.
- Requested Priority Overnight return shipment is paid by the purchaser.
- Repair warranty is ninety (90) days from shipment date.

NEPTUNE DISCLAIMS ALL IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.





A NEPTUNE TECHNOLOGY GROUP WARRANTY STATEMENT

MRX920[™]Mobile Data Collector

WARRANTY - HARDWARE

The warranty on the MRX920 mobile data collector unit is 12 months from shipment date. Warranty applies to the collector unit only and does not include the $MX900^{M}$ software or accessories including cables, antenna, carrying case, etc. Warranty services provided during the warranty period are:

- Free repair (including parts and labor) of a unit defective in materials or workmanshipⁱ, or replacement of the defective unit at Neptune's discretion
- Return shipment of repaired product via pre-paid ground service
- Repair turnaround of five days, excluding transit time
- Toll-free assistance provided by Customer Support 1-800-647-4832
- These services are purchaser's exclusive remedy for warranty issues

HARDWARE ENTITLEMENT (EXTENDED MAINTENANCE) CONTRACT

Entitlements, previously known as "extended maintenance contracts," are available from your authorized Neptune[®] sales representative. An entitlement contract covers the following services beyond the original 12-month hardware warranty described in the above section:

- Free repair of unit, including parts and labor¹. Accessories and software excluded.
- Return shipment of repaired product is pre-paid ground service
- Free inspection and preventative maintenance
- Repair turnaround time of five working days, excluding transit time
- Toll-free assistance at Customer Support 1-800-647-4832

NOT INCLUDED IN THE ENTITLEMENT CONTRACT:

- Accessories, e.g., rechargeable batteries, cables, antennas, USB flash drives, any peripherals, etc.
- MX900 software
- Equipment damaged by abuse or negligence or environmental damage such as a result of fires and storms
- Firmware modifications
- Priority Overnight return shipment of repaired units
- Neptune does not repair or support a laptop, or other devices, provided by a third party
- * MRX920 unit's normal wear and tear is not covered. Misuse of the unit or abuse automatically voids any warranty or entitlement contract.

REPAIR NOTES:

- A Returned Material Authorization (RMA) number MUST accompany all incoming repairs. Email Neptune Customer Support at support@neptunetg.com to request a RMA.
- Customer pays all incoming shipment charges
- Repair turnaround time for units not under warranty or an entitlement contract is 20 working days from the receipt of purchase order, excluding transit time
- For out-of-warranty units and units without entitlement contracts, repair fee charged will be based on the cost of labor and material as assessed by Neptune
- All outgoing repairs are shipped ground service. Customer may request Priority Overnight return shipment at customer's own expense.
- Repair warranty is 90 days from shipment date

NEPTUNE DISCLAIMS ALL IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.





WARRANTY – SOFTWARE

Please refer to the MX900 software warranty statement for additional terms and conditions.

WARRANTY – ACCESSORIES

Accessories are warranted against product defect or workmanship for 90 days from shipment date. Abuse and normal wear and tear excluded.

NEPTUNE DISCLAIMS ALL IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

ⁱDamages resulting from abuse and/or improper handling of the unit, as assessed by Neptune, will void the warranty and entitlement contract.





R900[®] Meter Interface Unit (MIU)

I. WARRANTY EFFECTIVE DATE

This warranty will be effective for any R900[®] meter interface unit (MIU) that is shipped on or after October 1, 2004 (R900 v3 or later).

II. R900 METER INTERFACE UNIT

Neptune Technology Group Inc. warrants that the R900 MIU (the "MIU") (which includes a Neptune[®]-supplied battery that is not intended to be removable or replaceable) shall be free from defects in manufacture and design for a period of twenty (20) years from the "Date of Shipment" (such period being the "Warranty Period"). Neptune shall not be responsible for any defects in the MIU (whether due to design, materials, manufacture, or otherwise) which manifest themselves after the expiration of the Warranty Period. Neptune will repair or replace a non-performing MIU free of charge for the first ten (10) years and at discount off of the <u>then</u>-current contract price or the <u>then-current list price</u>, whichever is less, during the remaining ten (10) years according to the discount schedule at the right.

III. WARRANTIES ARE INAPPLICABLE UNDER CERTAIN CONDITIONS.

This warranty does not include field replacement labor or materials costs, which are the responsibility of the utility. This warranty does not apply if product is placed in non-recommended installations; may have been repaired with parts not recommended by Neptune; converted, altered, or connected by other than Neptune recommended procedures; is used with other than genuine Neptune meter registers and components or read by equipment not approved or licensed by Neptune; or damaged due to improper care or maintenance, or improper periodic testing (please refer to *R900 Installation and Maintenance Guide*). This warranty does not apply to any MIU that has been damaged by, or subjected to, conditions which, in the opinion of Neptune, have affected the R900 MIU's ability of performance, including but not limited to: misuse; improper handling; application or installation; excessive operating conditions; tampering or unauthorized repairs and modifications; accidental or intentional damage; or acts of God. In no event shall Neptune be liable for special, incidental, indirect, or consequential damages, including, without limitation, lost revenue.

THE ABOVE WARRANTY FOR THE MIU IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY NEPTUNE WITH RESPECT TO THE MIU. ALL OTHER WARRANTIES, CONDITIONS, TERMS, REPRESENTATIONS, OR OTHER LEGALLY OPERATIVE PROVISIONS CONCERNING THE MIU ARE HEREBY EXPRESSLY EXCLUDED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY, CONDITION, TERM, AND REPRESENTATION OR OTHER LEGALLY OPERATIVE PROVISION AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THIS PARAGRAPH IS EXPRESSLY INTENDED TO EXCLUDE FROM THIS CONTRACT ALL STATUTORY AND COMMON LAW WARRANTIES TO THE MAXIMUM EXTENT PERMITTED BY LAW. TO AVOID ANY AMBIGUITY OR MISUNDERSTANDING, ALL PROBLEMS ARISING WITH AN MIU AFTER THIS POINT ARE BUYER'S RESPONSIBILITY. NEPTUNE'S LIABILITY SHALL IN NO EVENT EXCEED THE PURCHASE PRICE OF THE MIU. NEPTUNE SHALL NOT BE SUBJECT TO AND DISCLAIMS THE FOLLOWING: (1) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY, (2) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY NEPTUNE, OR ANY UNDERTAKINGS, ACTS, OR OMISSIONS RELATING THERETO, AND (3) ALL CONSEQUENTIAL, INCIDENTAL, SPECIAL, MULTIPLE, EXEMPLARY, AND PUNITIVE DAMAGES WHATSOEVER.

Year of Failure	R900 MIU
	Replacement Price Discount*
1-10	Full replacement: 100%
11	50%
12	50%
13	40%
14	40%
15	30%
16	30%
17	20%
18	20%
19	10%
20	10%

*Replacement price discount percentages will be applied towards then-current contract prices or then-current list prices, whichever. is less, in effect for the year product is accepted by Neptune under warranty conditions. Replacement MIUs are warranted for one (1) year after date of shipment or balance of original MIU warranty, whichever is greater.



R900® Belt Clip Transceiver Warranty Statement



B UTILITY MANAGEMENT SYSTEMS™

Warranty - Hardware

The warranty on the R900® Belt Clip Transceiver is twelve (12) months from shipment date. Warranty services provided during the warranty period are:

- For a unit defective in materials or workmanship, free repair of unit, including parts and labor (unless damaged by abuse or negligence)
- Return shipment of repaired product via prepaid ground service
- Repair turnaround time of five (5) working days, excluding transit time
- Toll-free assistance provided by Customer Support 1-800-647-4832
- These services are the purchaser's exclusive remedy for warranty issues

Extended Maintenance Contract Services

Extended maintenance contracts are available from your Authorized Neptune Sales Representative. Maintenance contract services provided during extended period are:

- Free repair of unit, including parts and labor
- Return shipment of repaired product via prepaid ground service
- Repair turnaround time of five (5) working days, excluding transit time
- Toll-free assistance provided by Customer Support 1-800-647-4832

NOT included in the Extended Maintenance Contract Services:

- Rechargeable batteries
- Cables and chargers
- Equipment damaged by abuse or negligence, or environmental damage such as a result of fires and storms
- Firmware modifications
- Priority Overnight return shipment of repaired units

Repair Notes:

- A Return Material Authorization (RMA) number MUST accompany all incoming repairs. This number may be obtained by calling Customer Support at 1-800-647-4832.
- Customer pays all incoming shipment charges.
- Repair turnaround (non-warranty/non-maintenance) is approximately fifteen (15) business days*, excluding transit (*not including days required to obtain a purchase
 order for the repairs).
- Batteries, cables, and chargers for products covered under warranty or maintenance contract may be replaced at no charge at Neptune's discretion.
- · All outgoing repairs are shipped ground service.
- Requested Priority Overnight return shipment is paid by the purchaser.
- Repair warranty is ninety (90) days from shipment date.

NEPTUNE DISCLAIMS ALL IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.



UTILITY MANAGEMENT SYSTEMS™

R900® Gateway Warranty Statement

Warranty

The warranty on the R900® Gateway data collector system components is 12 months from shipment date. Warranty services provided during warranty period are:

- For a unit defective in materials or workmanship, free repair (including parts and labor), or at Neptune's discretion, replacement of the defective unit
- Return shipment of repaired product via prepaid ground service
- Toll-free assistance at Customer Support 1-800-647-4832
- These services are purchaser's exclusive remedy for warranty issues
- Repair turnaround time of 10 working days, excluding transit time

NOT included in the Warranty:

- Battery
- Cables and hardware
- Equipment damaged by abuse or negligence, or environmental damage as a fault of fires and storms
- Firmware modifications
- Priority Overnight return shipment of repaired units
- USB flash drives
- Antennas

Extended Maintenance Contract Services:

Maintenance contracts are available from your authorized Neptune Sales representative. Maintenance contract services during the extended period include:

- Free repair of unit, including parts and labor
- Return shipment of repaired product is prepaid ground service
- Free inspection and preventative maintenance
- Repair turnaround time of 10 working days, excluding transit time
- Toll-free assistance at Customer Support 1-800-647-4832

NOT included in Extended Maintenance Contract Services:

- Batteries
- Cables and miscellaneous hardware
- Equipment damaged by abuse or negligence or environmental damage as a result of fires and storms
- Firmware modifications
- Priority Overnight return shipment of repaired units
- Neptune disclaims any implied warranties, including the implied warranties of merchantability and fitness for a particular purpose
- Antennas
- USB flash drive







Witness: Andy Lewis

- 9. Reference the response to PSC-DR-1-6.
 - a. Regarding the statement at p. 3 of that response that KAW ". . . has changed wireless carriers to achieve better connectivity," provide a discussion regarding whether this change has helped reduce the number of consecutive meter estimates. If so, explain how the Company knows this, and provide supporting data; conversely, if the Company knows that the change has not reduced the number of consecutive meter estimates, provide an explanation of how the Company knows this, and provide supporting data.
 - b. Regarding p. 3 of this response where it is stated that KAW has recently consolidated some of its meter reading routes, explain in detail whether the Company has obtained any data indicating that this consolidation has: (i) yielded increased efficiencies; and (ii) reduced the number of difficult meter reads.
 - c. In the last paragraph of the narrative response on p. 3, KAW stated that "There has been a recent upward trend in these,²..." Discuss the measures KAW has taken to reduce this recent upward trend, and if so: (i) whether those efforts have been successful; and (ii) provide supporting data.

Response:

- a. The purpose of the wireless carrier switch was to improve the communication between the truck computer system and reading database. The original reason for the change was to achieve better cell service inside all work vehicles. Besides switching carriers, KAW also installed cell signal boosters into all meter reading vehicles to further enhance signals. Meters are still read by radio devices and stored inside the truck computer until uploaded to the database. Giving the meter reading trucks a more reliable wireless service improved upload and download latency and made meter readers more efficient but did not have a direct effect on consecutive estimate numbers.
- b. The meter re-route initiative went into effect December 27, 2022. KAW has yet to determine if this change will result in efficiencies or reduction of difficult to read meters.

² Referring to the number of consecutive estimates.

- c. KAW has implemented the following actions to reduce consecutive estimates, and improve visibility and response to conditions that may cause consecutive estimates:
- 1. A consecutive estimate reporting dashboard was created in Q4 2022 to monitor the number of consecutive estimates and probable cause of meter reading issues that result in a skipped automatic meter reading. For example, the dashboard identifies the number of meter reading "skips" and their associated cause, such as communication errors. Refer to PSC 2-7 for a list of skip codes. Local operations use information from the dashboard to target meters needing replacement, MIUs that need repair, and meters that may need to be manually read to reduce consecutive estimates.
- 2. KAW, in concert with American Water Works Service Company, Inc. ("Service Company"), implemented an interim practice to mitigate automatic route estimation by the SAP system. On a daily basis, the local KAW operations team coordinates with the Service Company meter team to ensure as many meter readings, whether automatically read or manually read, are uploaded to SAP prior to the cutoff period at which SAP automatically estimates the entire meter route. In this case, the large number of manually read meters increases the risk of a long meter reading cycle, and the interim practice focuses on uploading available readings within the proper SAP window, while providing more time to read and upload manually obtained readings.
- 3. KAW continues to work with the Service Company work order management team to issue an automatically generated work order to investigate or change a meter after the meter has been estimated for 2 consecutive months. This initiative is currently a work in progress as it requires reprogramming of the enterprise work management system.
- 4. The industry availability of new meters impacted KAW's ability to obtain meters in the second half of 2022 due to supply chain shortages. Upon receipt of additional meter inventory in December 2022, KAW has been able to replace 1409 meters associated with the list of consecutively estimated accounts.
- 5. To date, KAW has identified approximately 6,700 meters that require manual reading each month. Manual reading of meters at this monthly volume increases risk of future estimates. An accelerated meter replacement plan has been implemented to replace those meters by May 1, 2023.

KAW is continuing to monitor consecutive estimate activity, but has not yet seen a reduction in overall consecutive estimates relative to the fall of 2022.

KENTUCKY-AMERICAN WATER COMPANY CASE NO. 2022-00299 ATTORNEY GENERAL'S SECOND REQUEST FOR INFORMATION

Witness: Andy Lewis, David Hill, and Jeffrey Newcomb

- 10. Reference the response to PSC-DR-1-6, p. 4.
 - a. Provide the total number of KAW's installed residential meters.
 - b. Provide the projected service life that the manufacturer(s) of KAW's residential meters represented to KAW.
 - c. Provide the lifespan of KAW's metering infrastructure embedded into the Company's current depreciation rates.
 - d. Provide the vintage of KAW's current residential meters, as well as their installation date. If KAW obtained a certificate of public convenience and necessity for the installation of these meters, provide the docket number.
 - e. If and when KAW decides to seek Commission approval to procure new residential meters, discuss what technical features the Company might seek in order to mitigate the levels of consecutive estimated meter readings, and of expired service orders.

Response:

- a. As of March 1, 2023, KAW has 127,718 installed residential meters.
- b. Please see attached warranties to AG 2-8. Additionally, American Water specifies to manufacturers that products submitted for bid should have a battery life commensurate with the transmitter's warranty period.
- c. Concentric Advisors Inc. was consulted with and assisted in the response to this discovery request.

The current depreciation rates for all metering assets were set in KAW's 2015 rate case (Case No. 2015-00418) which relied upon a depreciation study conducted by Mr. John Spanos of Gannett Fleming Valuation and Rate Consultants, LLC. That study is attached as Attachment 1. A review of this study indicates that the average service life, Iowa curve dispersion, and net salvage estimates for all six metering assets were established for the metering group as a whole. Accordingly, the metering infrastructure life was set to the same average service life and Iowa curve dispersion as that of the metering vault, meter box, or battery life.

When considering the metering group as a whole at the time of the last depreciation study, the total original cost of installation was \$33,790,535 composed of the following amounts:

Account Number	Account Name	Original Cost of Investment
334.10	Meters	\$10,190,322
334.11	Meters – Bronze Case	\$1,601,962
334.12	Meters – Plastic Case	\$281,243
334.13	Meters – Other	\$4,829,282
334.20	Meter Installations	\$16,136,245
334.3	Meter Vaults	\$751,479

As the meter installations account is composed of meter setters (a manufactured material piece that connects the meter inlet and outlet), it is expected that these assets would have a longer physical life than meters.

Depreciation studies, including the study carried out for KAW in 2015, often include the graphical representation of the historical retirement trends through an actuarial analysis. This analysis studies the percentage of plant surviving by age in order to establish the historical retirement experience. In completing the previous depreciation study, Mr. Spanos grouped all metering assets into a single actuarial analysis and recommended the use of the Iowa 40-R0.5 for the life of the group as a whole. When the data for the account as a whole is considered, the fit to the 40-R0.5 is reasonable, particularly through age 27.5 when the historical data begins to show indications of a life longer than the 40-R0.5.

In completing the actuarial analysis, it appears that Mr. Spanos considered the impact of technological change on the life of metering assets through the use of a shortened experience band. As demonstrated at page VII-63 through VII-66, Mr. Spanos considered both an "all-inclusive" experience band of 1995 through 2014, and separately considered a shortened band from 2005 – 2014. In doing so, Mr. Spanos appeared to be considering the impact that newer technological changes would have on metering assets. The experience from 2005 through 2014 indicated two distinct retirement profiles. First the data indicated a significant level of early retirement activity which is consistent with an Iowa 18-R2 curve. Additionally, the data also provided indication of a longer life for assets surviving beyond age 18 more consistent with a sixty-year average service life estimate. Therefore, on average the current Iowa 40-R0.5 was a reasonable overall fit of the combined six accounts.

The above conclusions are represented in Attachment 2 which re-creates the actuarial analysis completed as part of the depreciation study submitted in 2015-00418 using the experience band of 2005 through 2014 as presented in the last depreciation study. That band best represented the most recent retirement experience available at the time of the last study. The 18-year life is shown in black, with an Iowa 18-R2. It is noted that this curve is a good fit to the historical data through approximately age 16.5. The longer lived metering installations and vaults assets are shown with the red line, an Iowa 60-R0.5. This Iowa curve is a good fit to the tail of the historical data from approximately age 50 through the end of the life. When the two lines are averaged over the data set as a whole, the blue line, an Iowa 40-R0.5, results in a good fit to the historical data. While the black and red lines provide good visual fits to different sections of the data set, the blue line provides the best visual fit to the set as a whole.

Over the period since 2015, depreciation studies reviewing metering assets throughout North America are now commonly recommending Iowa curves ranging from 12 to 20 years. This recent trend to shortening average service life estimates recognizes the faster paced nature of technological change, while also allowing commercial and industrial meters to be depreciated appropriately over the longer life of those assets. In the circumstances of KAW, where it appears that Mr. Spanos considered the weighting of a shorter depreciation period relative to the metering assets, it appears that a life of approximately 18 years was considered for metering assets.

- d. Please see the attached Excel file titled KAW_R_AGDR2_NUM010_031423.xlsx.
- e. KAW does not generally seek Commission approval for procurement of like kind meters. KAW would seek Commission approval, however, to procure Advanced Metering Infrastructure (AMI) technology, which is an integrated system of meters, communications networks, and data management systems that can produce a wide range of benefits. In addition to AMI meters, AMI cellular-network systems can utilize smart cellular endpoints to transmit meter data through existing 3rd party cellular infrastructure to the Company's database system for analysis and reporting ("meter data management system").

The implementation of AMI would increase billing accuracy and reduce the likelihood of estimated bills (e.g., due to weather events or other obstacles to accessing customer meters) by automatically providing timely, accurate reads through the network. In addition, AMI would reduce the number of service orders by eliminating the need to drive by premises to collect reads and eliminate the need to roll a truck to complete certain high volume service orders such as "Move in-Move out orders."

KENTUCKY PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY

OF

JOHN J. SPANOS

ON BEHALF OF

KENTUCKY AMERICAN WATER COMPANY

CASE NO. 2015-00418

January 29, 2016

FRANKFORT, KENTUCKY

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DIRECT TESTIMONY JOHN J. SPANOS

1			INTRODUCTION
2	1.	Q.	Please state your name and address.
3		A.	John J. Spanos. My business address is 207 Senate Avenue, Camp Hill,
4			Pennsylvania.
5	2.	Q.	With what firm are you associated?
6		A.	I am associated with the firm of Gannett Fleming Valuation and Rate
7			Consultants, LLC. ("Gannett Fleming")
8	3.	Q.	How long have you been associated with Gannett Fleming?
9		A.	I have been associated with the firm since college graduation in June 1986.
10	4.	Q.	What is your position in the firm?
11		A.	I am Senior Vice President.
12	5.	Q.	On whose behalf are you testifying in this proceeding?
13		A.	I am testifying on behalf of Kentucky American Water Company ("KAWC" or
14			the "Company").
15	6.	Q.	Please state your qualifications.
16		A.	I have 29 years of depreciation experience, which includes giving expert
17			testimony in over 200 cases before 40 regulatory commissions including this
18			Commission. Please refer to Appendix A for my qualifications.
19	7.	Q.	What is the purpose of your testimony?
20		A.	My testimony is in support of the depreciation study conducted under my
21			direction and supervision for KAWC. Based upon that study, I am
22			recommending that new depreciation accrual rates be adopted by the
23			Company.

1

OVERVIEW

2 8. Q. Please describe what you mean by the term "depreciation".

Α. "Depreciation" refers to the loss in service value not restored by current 3 maintenance, incurred in connection with the consumption or prospective 4 retirement of utility plant in the course of service from causes which can be 5 6 reasonably anticipated or contemplated, against which the Company is not protected by insurance. Among the causes to be given consideration are 7 wear and tear, decay, action of the elements, inadequacy, obsolescence, 8 9 changes in the art, changes in demand, and the requirements of public authorities. Depreciation accrual rates are used to allocate, for accounting 10 purposes, the cost of assets over their service lives. 11

In the study that I performed and that is the basis for my testimony, I 12 used the straight line whole life method of depreciation, with the average 13 service life procedure to develop recommended depreciation accrual rates. In 14 addition, I calculated the amount required to amortize the variance between 15 the book depreciation reserve and the calculated accrued depreciation. The 16 17 total annual depreciation is based on a system of depreciation accounting which aims to distribute the cost of fixed capital assets over the estimated 18 useful life of the unit, or group of assets, in a systematic and rational manner. 19

For General Plant Accounts 340.1, 340.15, 340.21, 340.22, 340.23, 340.3, 340.32, 340.5, 342, 343, 344, 346.1, 346.19, 346.2, 347 and 348; I used the straight line method of amortization. The annual amortization is based on amortization accounting which distributes the unrecovered cost of fixed capital assets over the remaining amortization period selected for each

1 account and vintage.

2 9. Q. Have you prepared an exhibit presenting the results of your study?

- A. Yes. The report titled, "2014 Depreciation Study Calculated Annual
 Depreciation Accruals Related to Utility Plant as of December 31, 2014"
 which has been marked Exhibit No. JJS-1 sets forth the results of my study.
- 6 10. Q. How did you determine the recommended annual depreciation accrual
 7 rates?
- A. The determination of annual depreciation accrual rates consists of two phases. In the first phase, service life and net salvage characteristics are estimated for each depreciable group, that is, each plant account or subaccount identified as having similar characteristics. In the second phase, the annual depreciation accrual rates are calculated based on the service life and net salvage estimates determined in the first phase.
- 14

ESTIMATION OF SERVICE LIFE AND NET SALVAGE

15 11. Q. Please describe the first phase of the study, that is, the manner in which
 you estimated the service life and net salvage characteristics for each
 depreciable group.

A. The service life and net salvage study consisted of compiling historical data from records related to the Company's plant; analyzing these data to obtain historical trends of survivor and salvage characteristics; obtaining supplementary information from management and operating personnel concerning the Company's practices and plans as they relate to plant operations; and interpreting the above data to form judgments of average service life and net salvage characteristics.

1 **12.** Q. What historical data did you analyze for the purpose of estimating the 2 service life characteristics of the Company's plant?

Α. The data consisted of the entries made by the Company to record plant 3 transactions from 1995 through 2014. The transactions included additions, 4 retirements, transfers and the related balances. 5 The Company, in accordance with my instructions, classified the data by depreciable group, 6 type of transaction, the year in which the transaction took place, and the year 7 in which the plant was installed. The data included surviving plant balances 8 9 as of December 31, 1994.

10 13. Q. What method did you use to analyze this service life data?

A. I used the retirement rate method. That method is the most appropriate when aged retirement data are available, because it develops the average rates of retirement actually experienced during the period of study. Other methods of life analysis infer the rates of retirement based on a selected type survivor curve.

16 **14. Q.** Please describe the results of your use of the retirement rate method.

17 Α. Each retirement rate analysis resulted in a life table which, when plotted, formed an original survivor curve. Each original survivor curve as plotted 18 from the life table represents the average survivor pattern experienced by the 19 20 several vintage groups during the experience band studied. Inasmuch as this survivor pattern does not necessarily describe the life characteristics of the 21 22 property group, interpretation of the original curves is required in order to use 23 them as valid considerations in service life estimation. Iowa type survivor curves were used in these interpretations. 24
15. Q. Please explain briefly what an "lowa-type survivor curve" is and how you use it in estimating service life characteristics for each depreciable group.

A. The range of survivor characteristics usually experienced by utility and
industrial properties is encompassed by a system of generalized survivor
curves known as the lowa type curves. The lowa curves were developed at
the lowa State College Engineering Experiment Station through an extensive
process of observation and classification of the ages at which industrial
property had been retired.

lowa type curves are used to smooth and extrapolate original survivor
 curves determined by the retirement rate method. The lowa curves and
 truncated lowa curves were used in this study to describe the forecasted
 rates of retirement based on the observed rates of retirement and the outlook
 for future retirements.

The estimated survivor curve designations for each depreciable group indicate the average service life, the family within the Iowa system and the relative height of the mode. For example, the Iowa 52-R3 indicates an average service life of fifty-two years; a right-moded, or R, type curve (the mode occurs after average life for right-moded curves); and a moderate height, 3, for the mode (possible modes for R type curves range from 1 to 5).

21 16. Q. Did you physically observe the Company's plants and equipment as 22 part of your depreciation study?

A. Yes. I made a field review of the Company's property on June 1 and 2, 2015
 to observe representative portions of plant for this study. I have also taken

two previous site visits over the last 10 years. Field reviews are conducted to
 become familiar with Company operations and obtain an understanding of the
 function of the plant and information with respect to the reasons for past
 retirements and the expected future causes of retirements. This knowledge,
 as well as information from other discussions with management, was
 incorporated in the interpretation and extrapolation of the statistical analyses.

How did your experience in development of other depreciation studies

What historical data did you analyze for the purpose of estimating net

7 8 17. Q.

affect your work in this case?

- A. Because I customarily conduct field reviews for my depreciation studies, I
 have had the opportunity to visit scores of similar plants and meet with
 operation's personnel at other companies. The knowledge accumulated from
 those visits and meetings provide me useful information that I can draw on to
 confirm or challenge my numerical analyses concerning plant condition and
 remaining life estimates.
- 15 **18. Q.**

16

salvage characteristics?

A. The data consisted of the entries made by the Company to record
 retirements, cost of removal and gross salvage during the period 1980
 through 2014.

20 **19. Q.** What method did you use to analyze this net salvage data?

A. The net salvage data were analyzed by expressing the net salvage and its two components, cost of removal and gross salvage, as percents of the original cost retired on annual, three-year moving average and most recent five-year average bases. The use of averages smooth the annual fluctuations and assists in identifying underlying trends.

1	20. Q.	Please describe the manner in which you used the analyses of net
2		salvage to estimate net salvage percents.
3	Α.	The results of the net salvage analyses provided indications of historical net
4		salvage levels. The judgments of net salvage incorporated these historical
5		indications and consideration of estimates made for other water companies.
6		
7		CALCULATION OF DEPRECIATION
8	21. Q.	Please describe the second phase of the process that you used, that is,
9		the calculation of annual depreciation accrual rates.
10	A.	After I estimated the service life and net salvage characteristics for each
11		depreciable group, I calculated annual depreciation accrual rates for each
12		group in accordance with the straight line remaining life method, using the
13		average service life procedure.
14	22. Q.	What group procedure is being used in this proceeding for depreciable
15		accounts?
16	Α.	The average service life procedure is used in the current proceeding for all
17		depreciable accounts and installation years. The average service procedure
18		also was used in the Company's last depreciation study.
19	23. Q.	Please describe briefly the amortization of certain General Plant
20		accounts.
21	Α.	General Plant Accounts 340.1, 340.15, 340.21, 340.22, 340.23, 340.3,
22		340.32, 340.5, 342, 343, 344, 346.1, 346.19, 346.2, 347 and 348 include a
23		very large number of units, but represent approximately four percent of
24		depreciable utility plant. Depreciation accounting is difficult for these assets,

inasmuch as periodic inventories are required to properly reflect plant in
 service. In amortization accounting, units of property are capitalized in the
 same manner as they are in depreciation accounting. However, retirements
 are recorded when a vintage is fully amortized rather than as the units are
 removed from service. That is, there is no dispersion of retirement. All units
 are retired when the age of the vintage reaches the amortization period.

7

DESCRIPTION OF REPORT

8 24. Q. Please outline the contents of your report.

9 Α. My report is presented in nine parts. Part I, Introduction includes statement related to the scope and basis of the depreciation study. Part II, Estimation of 10 Survivor Curves includes descriptions of the methodology of estimating 11 survivor curves. Parts III and IV set forth the analysis of determining life and 12 Part V, Calculation of Annual and Accrued net salvage estimation. 13 Depreciation includes the concepts of depreciation and amortization using the 14 remaining life. Part VI, Results of Study presents a description of the results, 15 and a summary of the depreciation calculations. Parts VII, VIII and IX include 16 17 graphs and tables that relate to the service life and net salvage analyses, and the detailed depreciation calculations. 18

The table on pages VI-5 through VI-7 presents the estimated survivor curve, the net salvage percent, the original cost as of December 31, 2014, the calculated annual depreciation accrual amount and rate, book depreciation reserve, future accruals and the composite remaining life for each account or subaccount. The section beginning on page VII-2 presents the results of the retirement rate analyses prepared as the historical bases for the service life

estimates. The section beginning on page VIII-2 presents the results of the
 analyses of historical net salvage data. The section beginning on page IX-2
 presents the depreciation calculations related to surviving original cost as of
 December 31, 2014.

Please use an example to illustrate the manner in which the study is

5 **25. Q.**

6

presented in the report.

A. I will use Account 331, Mains and Accessories, as my example, inasmuch as
it is a large depreciable group and is representative of the presentation.

9 The retirement rate method was used to analyze the survivor 10 characteristics of this group. The life table for the 1995-2014 experience 11 band is presented on pages VII-54 through VII-56 of the report. The life table, 12 or original survivor curve, is plotted along with the estimated smooth survivor 13 curve, the 85-R3 on page VII-53. The net salvage analysis for the period 14 1980 through 2014 is presented on pages VIII-22 and VIII-23.

The calculation of the annual depreciation accrual rate related to the original cost at December 31, 2014 of utility plant is presented on pages IX-32 through IX-34. The calculation is based on the 85-R3 survivor curve, negative 25 percent net salvage and the attained age. The tabulation sets forth the installation year, the original cost, calculated accrued depreciation, allocated book reserve, future accruals, remaining life and annual accrual amount. The totals are brought forward to the table on page VI-6.

22

1		RECOMMENDATION
2	26. Q.	What is your recommendation regarding annual depreciation accrual
3		rates for the Company?
4	Α.	I recommend that the Company use a composite annual depreciation accrual
5		rate for each account or subaccount. My recommended depreciation accrual
6		rates, based on the depreciation study, are set forth for each account in
7		column 8 of Table 1 on pages VI-5 through VI-7 of Exhibit JJS-1. In my
8		opinion, these are reasonable and appropriate depreciation accrual rates for
9		the Company.
10	27. Q.	Are your recommended depreciation accrual rates reasonable for plant
11		added subsequent to December 31, 2014?
12	Α.	Yes. The annual depreciation accrual rates calculated as of December 31,
13		2014, can reasonably be applied to the total balance including new plant
14		additions during the next several years.
15	28. Q.	Does this complete your direct testimony?
16	Α.	Yes, it does.

APPENDIX A

JOHN SPANOS

DEPRECIATION EXPERIENCE

Q. Please state your name.

A. My name is John J. Spanos.

Q. What is your educational background?

 A. I have Bachelor of Science degrees in Industrial Management and Mathematics from Carnegie-Mellon University and a Master of Business Administration from York College.

Q. Do you belong to any professional societies?

 A. Yes. I am a member and past President of the Society of Depreciation Professionals and a member of the American Gas Association/Edison Electric Institute Industry Accounting Committee.

Q. Do you hold any special certification as a depreciation expert?

A. Yes. The Society of Depreciation Professionals has established national standards for depreciation professionals. The Society administers an examination to become certified in this field. I passed the certification exam in September 1997 and was recertified in August 2003, February 2008 and January 2013.

Q. Please outline your experience in the field of depreciation.

A. In June, 1986, I was employed by Gannett Fleming Valuation and Rate Consultants, Inc. as a Depreciation Analyst. During the period from June, 1986 through December, 1995, I helped prepare numerous depreciation and original cost studies for utility companies in various industries. I helped perform depreciation studies for the following telephone companies: United Telephone of Pennsylvania, United Telephone of New Jersey, and Anchorage Telephone Utility. I helped perform depreciation studies for the following companies in the railroad industry: Union Pacific Railroad, Burlington Northern Railroad, and Wisconsin Central Transportation Corporation.

I helped perform depreciation studies for the following organizations in the electric utility industry: Chugach Electric Association, The Cincinnati Gas and Electric Company (CG&E), The Union Light, Heat and Power Company (ULH&P), Northwest Territories Power Corporation, and the City of Calgary - Electric System.

I helped perform depreciation studies for the following pipeline companies: TransCanada Pipelines Limited, Trans Mountain Pipe Line Company Ltd., Interprovincial Pipe Line Inc., Nova Gas Transmission Limited and Lakehead Pipeline Company.

I helped perform depreciation studies for the following gas utility companies: Columbia Gas of Pennsylvania, Columbia Gas of Maryland, The Peoples Natural Gas Company, T. W. Phillips Gas & Oil Company, CG&E, ULH&P, Lawrenceburg Gas Company and Penn Fuel Gas, Inc.

I helped perform depreciation studies for the following water utility companies: Indiana-American Water Company, Consumers Pennsylvania Water Company and The York Water Company; and depreciation and original cost studies for Philadelphia Suburban Water Company and Pennsylvania-American Water Company.

In each of the above studies, I assembled and analyzed historical and simulated data, performed field reviews, developed preliminary estimates of service life and net salvage, calculated annual depreciation, and prepared reports for submission to state public utility commissions or federal regulatory agencies. I performed these studies under the general direction of William M. Stout, P.E.

In January, 1996, I was assigned to the position of Supervisor of Depreciation Studies. In July, 1999, I was promoted to the position of Manager, Depreciation and Valuation Studies. In December, 2000, I was promoted to the position as Vice-President of Gannett Fleming Valuation and Rate Consultants, Inc. and in April 2012, I was promoted to my present position as Senior Vice President of the Valuation and Rate Division of Gannett Fleming Inc. (now doing business as Gannett Fleming Valuation and Rate Consultants, LLC). In my current position I am responsible for conducting all depreciation, valuation and original cost studies, including the preparation of final exhibits and responses to data requests for submission to the appropriate regulatory bodies.

Since January 1996, I have conducted depreciation studies similar to those previously listed including assignments for Pennsylvania-American Water Company; Aqua Pennsylvania; Kentucky-American Water Company; Virginia-American Water Company; Indiana-American Water Company; Hampton Water Works Company; Omaha Public Power District; Enbridge Pipe Line Company; Inc.; Columbia Gas of Virginia, Inc.; Virginia Natural Gas Company National Fuel Gas Distribution Corporation - New York and Pennsylvania Divisions; The City of Bethlehem - Bureau of Water; The City of Coatesville Authority; The City of Lancaster - Bureau of Water; Peoples Energy Corporation; The York Water Company; Public Service Company of Colorado; Enbridge Pipelines; Enbridge Gas Distribution, Inc.; Reliant Energy-HLP; Massachusetts-American Water Company; St. Louis County Water Company; Missouri-American Water Company; Chugach Electric Association; Alliant Energy; Oklahoma Gas & Electric Company; Nevada Power Company; Dominion Virginia Power; NUI-Virginia Gas Companies; Pacific Gas & Electric Company; PSI Energy; NUI - Elizabethtown Gas Company; Cinergy Corporation – CG&E; Cinergy Corporation – ULH&P; Columbia Gas of Kentucky; South Carolina Electric & Gas Company; Idaho Power Company; El Paso Electric Company; Aqua North Carolina; Aqua Ohio; Aqua Texas, Inc.; Ameren Missouri; Central Hudson Gas & Electric; Centennial Pipeline Company; CenterPoint Energy-Arkansas; CenterPoint Energy – Oklahoma; CenterPoint Energy – Entex; CenterPoint Energy - Louisiana; NSTAR – Boston Edison Company; Westar Energy, Inc.; United Water Pennsylvania; PPL Electric Utilities; PPL Gas Utilities; Wisconsin Power & Light Company; TransAlaska Pipeline; Avista Corporation; Northwest Natural Gas; Allegheny Energy Supply, Inc.; Public Service Company of North Carolina; South Jersey Gas Company; Duquesne Light Company; MidAmerican Energy Company; Laclede Gas; Duke Energy Company; E.ON U.S. Services Inc.; Elkton Gas Services; Anchorage Water and Wastewater Utility; Kansas City Power and Light; Duke Energy North Carolina; Duke Energy South Carolina; Monongahela Power Company; Potomac Edison Company; Duke Energy Ohio Gas; Duke Energy Kentucky; Duke Energy Indiana; Northern Indiana Public Service Company; Tennessee-American Water Company; Columbia Gas of Maryland; Bonneville Power Administration; NSTAR Electric and Gas Company; EPCOR Distribution, Inc.; B. C. Gas Utility, Ltd; Entergy Arkansas; Entergy Texas; Entergy Mississippi; Entergy Louisiana; Entergy Gulf States Louisiana; the Borough of Hanover; Louisville Gas and Electric Company; Kentucky Utilities Company; Madison Gas and Electric; Central Maine Power; PEPCO; PacifiCorp; Minnesota Energy Resource Group; Jersey Central Power & Light Company; Cheyenne Light, Fuel and Power Company; United Water Arkansas; Central Vermont Public Service Corporation; Green Mountain Power; Portland General Electric Company; Atlantic City Electric; Nicor Gas Company; Black Hills Power; Black Hills Colorado

Gas; Black Hills Kansas Gas; Black Hills Service Company; Black Hills Utility Holdings; Public Service Company of Oklahoma; City of Dubois; Peoples Gas Light and Coke Company; North Shore Gas Company; Connecticut Light and Power; New York State Electric and Gas Corporation; Rochester Gas and Electric Corporation and Greater Missouri Operations. My additional duties include determining final life and salvage estimates, conducting field reviews, presenting recommended depreciation rates to management for its consideration and supporting such rates before regulatory bodies.

Q. Have you submitted testimony to any state utility commission on the subject of utility plant depreciation?

Yes. I have submitted testimony to the Pennsylvania Public Utility Commission; the A. Commonwealth of Kentucky Public Service Commission; the Public Utilities Commission of Ohio; the Nevada Public Utility Commission; the Public Utilities Board of New Jersey; the Missouri Public Service Commission; the Massachusetts Department of Telecommunications and Energy; the Alberta Energy & Utility Board; the Idaho Public Utility Commission; the Louisiana Public Service Commission; the State Corporation Commission of Kansas; the Oklahoma Corporate Commission; the Public Service Commission of South Carolina; Railroad Commission of Texas – Gas Services Division; the New York Public Service Commission; Illinois Commerce Commission; the Indiana Utility Regulatory Commission; the California Public Utilities Commission; the Federal Energy Regulatory Commission ("FERC"); the Arkansas Public Service Commission; the Public Utility Commission of Texas; Maryland Public Service Commission; Washington Utilities and Transportation Commission; The Tennessee Regulatory Commission; the Regulatory Commission of Alaska; Minnesota Public Utility Commission; Utah Public Service Commission; District of Columbia Public Service

Commission; the Mississippi Public Service Commission; Delaware Public Service Commission; Virginia State Corporation Commission; Colorado Public Utility Commission; Oregon Public Utility Commission; South Dakota Public Utilities Commission; Wisconsin Public Service Commission; Wyoming Public Service Commission; Maine Public Utility Commission; Iowa Utility Board; Connecticut Public Utilities Regulatory Authority; and the North Carolina Utilities Commission.

Q. Have you had any additional education relating to utility plant depreciation?

A. Yes. I have completed the following courses conducted by Depreciation Programs, Inc.:
"Techniques of Life Analysis," "Techniques of Salvage and Depreciation Analysis,"
"Forecasting Life and Salvage," "Modeling and Life Analysis Using Simulation," and
"Managing a Depreciation Study." I have also completed the "Introduction to Public Utility Accounting" program conducted by the American Gas Association.

Q. Does this conclude your qualification statement?

A. Yes.

VERIFICATION

COMMONWEALTH OF PENNSYLVANIA)) COUNTY OF CUMBERLAND)

The undersigned, **John J. Spanos**, being duly sworn, deposes and says he is the Senior Vice President of Gannett Fleming Valuation and Rate Consultants, LLC, that he has personal knowledge of the matters set forth in the foregoing testimony, and the answers contained therein are true and correct to the best of his information, knowledge, and belief.

JOHN J. SPANOS

SS:

Subscribed and sworn to before me, a Notary Public in and before said County and State, this $\underline{/34}$ day of January, 2016.

Lutte (SEAL) Notary Public

My Commission Expires:

February 10, 2019

COMMONWEALTH OF PENNSYLVANIA NOTARIAL SEAL Cheryl Ann Rutter, Notary Public East Pennsboro Twp., Cumberland County My Commission Expires Feb. 20, 2019 USENER PENNSYLVANIA ASSOCIATION OF NOTARIES

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LIST OF CASES IN WHICH JOHN J. SPANOS SUBMITTED TESTIMONY

	Year	Jurisdiction	Docket No.	Client/Utility	<u>Subject</u>
01.	1998	PA PUC	R-00984375	City of Bethlehem – Bureau of Water	Original Cost and Depreciation
02.	1998	PA PUC	R-00984567	City of Lancaster	Original Cost and Depreciation
03.	1999	PA PUC	R-00994605	The York Water Company	Depreciation
04.	2000	D.T.&E.	DTE 00-105	Massachusetts-American Water Company	Depreciation
05.	2001	PA PUC	R-00016114	City of Lancaster	Original Cost and Depreciation
06.	2001	PA PUC	R-00017236	The York Water Company	Depreciation
07.	2001	PA PUC	R-00016339	Pennsylvania-American Water Company	Depreciation
08.	2001	OH PUC	01-1228-GA-AIR	Cinergy Corp – Cincinnati Gas & Elect Co.	Depreciation
09.	2001	KY PSC	2001-092	Cinergy Corp – Union Light, Heat & Power Co.	Depreciation
10.	2002	PA PUC	R-00016750	Philadelphia Suburban Water Company	Depreciation
11.	2002	KY PSC	2002-00145	Columbia Gas of Kentucky	Depreciation
12.	2002	NJ BPU	GF02040245	NUI Corporation/Elizabethtown Gas Co.	Depreciation
13.	2002	ID PUC	IPC-E-03-7	Idaho Power Company	Depreciation
14.	2003	PA PUC	R-0027975	The York Water Company	Depreciation
15.	2003	IN URC	R-0027975	Cinergy Corp – PSI Energy, Inc.	Depreciation
16.	2003	PA PUC	R-00038304	Pennsylvania-American Water Co.	Depreciation
17.	2003	MO PSC	WR-2003-0500	Missouri-American Water Co.	Depreciation
18.	2003	FERC	ER-03-1274-000	NSTAR-Boston Edison Company	Depreciation
19.	2003	NJ BPU	BPU 03080683	South Jersey Gas Company	Depreciation
20.	2003	NV PUC	03-10001	Nevada Power Company	Depreciation
21.	2003	LA PSC	U-27676	CenterPoint Energy – Arkla	Depreciation
22.	2003	PA PUC	R-00038805	Pennsylvania Suburban Water Company	Depreciation
23.	2004	AB En/Util Bd	1306821	EPCOR Distribution, Inc.	Depreciation
24.	2004	PA PUC	R-00038168	National Fuel Gas Distribution Corp (PA)	Depreciation
25.	2004	PA PUC	R-00049255	PPL Electric Utilities	Depreciation
26.	2004	PA PUC	R-00049165	The York Water Company	Depreciation
27.	2004	OK Corp Cm	PUC 200400187	CenterPoint Energy – Arkla	Depreciation
28.	2004	OH PUC	04-680-El-AIR	Cinergy Corp. – Cincinnati Gas and Electric Company	Depreciation
29.	2004	RR Com of TX	GUD#	CenterPoint Energy – Entex Gas Services Div.	Depreciation
30.	2004	NY PUC	04-G-1047	National Fuel Gas Distribution Gas (NY)	Depreciation
31.	2004	AR PSC	04-121-U	CenterPoint Energy – Arkla	Depreciation
32.	2005	IL CC	05-	North Shore Gas Company	Depreciation
33.	2005	IL CC	05-	Peoples Gas Light and Coke Company	Depreciation
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	Year	Jurisdiction	Docket No.	<u>Client/Utility</u>	Subject
34.	2005	KY PSC	2005-00042	Union Light Heat & Power	Depreciation
35.	2005	IL CC	05-0308	MidAmerican Energy Company	Depreciation
36.	2005	MO PSC	GF-2005	Laclede Gas Company	Depreciation
37.	2005	KS CC	05-WSEE-981-RTS	Westar Energy	Depreciation
38.	2005	RR Com of TX	GUD #	CenterPoint Energy – Entex Gas Services Div.	Depreciation
39.	2005	FERC		Cinergy Corporation	Accounting
40.	2005	OK CC	PUD 200500151	Oklahoma Gas and Electric Co.	Depreciation
41.	2005	MA Dept Tele- com & Ergy	DTE 05-85	NSTAR	Depreciation
42.	2005	NY PUC	05-E-934/05-G-0935	Central Hudson Gas & Electric Co.	Depreciation
43.	2005	AK Reg Com	U-04-102	Chugach Electric Association	Depreciation
44.	2005	CA PUC	A05-12-002	Pacific Gas & Electric	Depreciation
45.	2006	PA PUC	R-00051030	Aqua Pennsylvania, Inc.	Depreciation
46.	2006	PA PUC	R-00051178	T.W. Phillips Gas and Oil Co.	Depreciation
47.	2006	NC Util Cm.		Pub. Service Co. of North Carolina	Depreciation
48.	2006	PA PUC	R-00051167	City of Lancaster	Depreciation
49.	2006	PA PUC	R00061346	Duquesne Light Company	Depreciation
50.	2006	PA PUC	R-00061322	The York Water Company	Depreciation
51.	2006	PA PUC	R-00051298	PPL GAS Utilities	Depreciation
52.	2006	PUC of TX	32093	CenterPoint Energy – Houston Electric	Depreciation
53.	2006	KY PSC	2006-00172	Duke Energy Kentucky	Depreciation
54.	2006	SC PSC		SCANA	
55.	2006	AK Reg Com	U-06-6	Municipal Light and Power	Depreciation
56.	2006	DE PSC	06-284	Delmarva Power and Light	Depreciation
57.	2006	IN URC	IURC43081	Indiana American Water Company	Depreciation
58.	2006	AK Reg Com	U-06-134	Chugach Electric Association	Depreciation
59.	2006	MO PSC	WR-2007-0216	Missouri American Water Company	Depreciation
60.	2006	FERC	ISO82, ETC. AL	TransAlaska Pipeline	Depreciation
61.	2006	PA PUC	R-00061493	National Fuel Gas Distribution Corp. (PA)	Depreciation
62.	2007	NC Util Com.	E-7 SUB 828	Duke Energy Carolinas, LLC	Depreciation
63.	2007	OH PSC	08-709-EL-AIR	Duke Energy Ohio Gas	Depreciation
64.	2007	PA PUC	R-00072155	PPL Electric Utilities Corporation	Depreciation
65.	2007	KY PSC	2007-00143	Kentucky American Water Company	Depreciation
66.	2007	PA PUC	R-00072229	Pennsylvania American Water Company	Depreciation
67.	2007	KY PSC	2007-0008	NiSource – Columbia Gas of Kentucky	Depreciation
68.	2007	NY PSC	07-G-0141	National Fuel Gas Distribution Corp (NY)	Depreciation

	<u>Year</u>	Jurisdiction	Docket No.	<u>Client/Utility</u>	<u>Subject</u>
69.	2008	AK PSC	U-08-004	Anchorage Water & Wastewater Utility	Depreciation
70.	2008	TN Reg Auth	08-00039	Tennessee-American Water Company	Depreciation
71.	2008	DE PSC	08-96	Artesian Water Company	Depreciation
72.	2008	PA PUC	R-2008-2023067	The York Water Company	Depreciation
73.	2008	KS CC	08-WSEE1-RTS	Westar Energy	Depreciation
74.	2008	IN URC	43526	Northern Indiana Public Service Co.	Depreciation
75.	2008	IN URC	43501	Duke Energy Indiana	Depreciation
76.	2008	MD PSC	9159	NiSource – Columbia Gas of Maryland	Depreciation
77.	2008	KY PSC	2008-000251	Kentucky Utilities	Depreciation
78.	2008	KY PSC	2008-000252	Louisville Gas & Electric	Depreciation
79.	2008	PA PUC	2008-20322689	Pennsylvania American Water CoWastewater	Depreciation
80.	2008	NY PSC	08-E887/08-00888	Central Hudson	Depreciation
81.	2008	WV TC	VE-080416/VG-8080417	Avista Corporation	Depreciation
82.	2008	IL CC	ICC-09-166	Peoples Gas, Light and Coke Co.	Depreciation
83.	2009	IL CC	ICC-09-167	North Shore Gas Company	Depreciation
84.	2009	DC PSC	1076	Potomac Electric Power Company	Depreciation
85.	2009	KY PSC	2009-00141	NiSource – Columbia Gas of Kentucky	Depreciation
86.	2009	FERC	ER08-1056-002	Entergy Services	Depreciation
87.	2009	PA PUC	R-2009-2097323	Pennsylvania American Water Co.	Depreciation
88.	2009	NC Util Cm	E-7, Sub 090	Duke Energy Carolinas, LLC	Depreciation
89.	2009	KY PSC	2009-00202	Duke Energy Kentucky	Depreciation
90.	2009	VA St. CC	PUE-2009-00059	Aqua Virginia, Inc.	Depreciation
91.	2009	PA PUC	2009-2132019	Aqua Pennsylvania, Inc.	Depreciation
92.	2009	MS PSC	09-	Entergy Mississippi	Depreciation
93.	2009	AK PSC	09-08-U	Entergy Arkansas	Depreciation
94.	2009	TX PUC	37744	Entergy Texas	Depreciation
95.	2009	TX PUC	37690	El Paso Electric Company	Depreciation
96.	2009	PA PUC	R-2009-2106908	The Borough of Hanover	Depreciation
97.	2009	KS CC	10-KCPE-415-RTS	Kansas City Power & Light	Depreciation
98.	2009	PA PUC	R-2009-	United Water Pennsylvania	Depreciation
99.	2009	OH PUC		Aqua Ohio Water Company	Depreciation
100.	2009	WI PSC	3270-DU-103	Madison Gas & Electric Co.	Depreciation
101.	2009	MO PSC	WR-2010	Missouri American Water Co.	Depreciation
102.	2009	AK Reg Cm	U-09-097	Chugach Electric Association	Depreciation
103.	2010	IN URC	43969	Northern Indiana Public Service Co.	Depreciation
104.	2010	WI PSC	6690-DU-104	Wisconsin Public Service Corp.	Depreciation
105.	2010	PA PUC	R-2010-2161694	PPL Electric Utilities Corp.	Depreciation

	Year	Jurisdiction	Docket No.	<u>Client/Utility</u>	<u>Subject</u>
106.	2010	KY PSC	2010-00036	Kentucky American Water Company	Depreciation
107.	2010	PA PUC	R-2009-2149262	Columbia Gas of Pennsylvania	Depreciation
108.	2010	MO PSC	GR-2010-0171	Laclede Gas Company	Depreciation
109.	2010	SC PSC	2009-489-Е	South Carolina Electric & Gas Co.	Depreciation
110.	2010	NJ BD OF PU	ER09080664	Atlantic City Electric	Depreciation
111.	2010	VA St. CC	PUE-2010-00001	Virginia American Water Company	Depreciation
112.	2010	PA PUC	R-2010-2157140	The York Water Company	Depreciation
113.	2010	MO PSC	ER-2010-0356	Greater Missouri Operations Co.	Depreciation
114.	2010	MO PSC	ER-2010-0355	Kansas City Power and Light	Depreciation
115.	2010	PA PUC	R-2010-2167797	T.W. Phillips Gas and Oil Co.	Depreciation
116.	2010	PSC SC	2009-489-Е	SCANA – Electric	Depreciation
117.	2010	PA PUC	R-2010-22010702	Peoples Natural Gas, LLC	Depreciation
118.	2010	AK PSC	10-067-U	Oklahoma Gas and Electric Co.	Depreciation
119.	2010	IN URC		Northern Indiana Public Serv. Co NIFL	Depreciation
120.	2010	IN URC		Northern Indiana Public Serv. Co Kokomo	Depreciation
121.	2010	PA PUC	R-2010-2166212	Pennsylvania American Water Co - WW	Depreciation
122.	2010	NC Util Cn.	W-218,SUB310	Aqua North Carolina, Inc.	Depreciation
123.	2011	OH PUC	11-4161-WS-AIR	Ohio American Water Company	Depreciation
124.	2011	MS PSC	EC-123-0082-00	Entergy Mississippi	Depreciation
125.	2011	CO PUC	11AL-387E	Black Hills Colorado	Depreciation
126.	2011	PA PUC	R-2010-2215623	Columbia Gas of Pennsylvania	Depreciation
127.	2011	PA PUC	R-2010-2179103	Lancaster, City of – Bureau of Water	Depreciation
128.	2011	IN URC	43114 IGCC 4S	Duke Energy Indiana	Depreciation
129.	2011	FERC	IS11-146-000	Enbridge Pipelines (Southern Lights)	Depreciation
130.	2011	II CC	11-0217	MidAmerican Energy Corporation	Depreciation
131.	2011	OK CC	201100087	Oklahoma Gas & Electric Co.	Depreciation
132.	2011	PA PUC	2011-2232243	Pennsylvania American Water Company	Depreciation
133.	2011	FERC	2011-2232243	Carolina Gas Transmission	Depreciation
134.	2012	WA UTC	UE-120436/UG-120437	Avista Corporation	Depreciation
135.	2012	AK Reg Cm	U-12-009	Chugach Electric Association	Depreciation
136.	2012	MA PUC	DPU 12-25	Columbia Gas of Massachusetts	Depreciation
137.	2012	TX PUC	40094	El Paso Electric Company	Depreciation
138.	2012	ID PUC	IPC-E-12	Idaho Power Company	Depreciation
139.	2012	PA PUC	R-2012-2290597	PPL Electric Utilities	Depreciation
140.	2012	PA PUC	R-2012-2311725	Hanover, Borough of – Bureau of Water	Depreciation
141.	2012	KY PSC	2012-00222	Louisville Gas and Electric Company	Depreciation
142.	2012	KY PSC	2012-00221	Kentucky Utilities Company	Depreciation
143.	2012	PA PUC	R-2012-2285985	Peoples Natural Gas Company	Depreciation

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	<u>Year</u>	Jurisdiction	Docket No.	<u>Client/Utility</u>	<u>Subject</u>
144.	2012	DC PSC	Case 1087	Potomac Electric Power Company	Depreciation
145.	2012	OH PSC	12-1682-EL-AIR	Duke Energy Ohio (Electric)	Depreciation
146.	2012	OH PSC	12-1685-GA-AIR	Duke Energy Ohio (Gas)	Depreciation
147.	2012	PA PUC	R-2012-2310366	Lancaster, City of – Sewer Fund	Depreciation
148.	2012	PA PUC	R-2012-2321748	Columbia Gas of Pennsylvania	Depreciation
149.	2012	FERC	ER-12-2681-000	ITC Holdings	Depreciation
150.	2012	MO PSC	ER-2012-0174	Kansas City Power and Light	Depreciation
151.	2012	MO PSC	ER-2012-0175	KCPL Greater Missouri Operations Co.	Depreciation
152.	2012	MO PSC	GO-2012-0363	Laclede Gas Company	Depreciation
153.	2012	MN PUC	G007,001/D-12-533	Integrys – MN Energy Resource Group	Depreciation
153.	2012	TX PUC		Aqua Texas	Depreciation
155.	2012	PA PUC	2012-2336379	York Water Company	Depreciation
156.	2013	NJ BPU	ER12121071	PHI Service Co.– Atlantic City Electric	Depreciation
157.	2013	KY PSC	2013-00167	Columbia Gas of Kentucky	Depreciation
158.	2013	VA St CC	2013-00020	Virginia Electric and Power Co.	Depreciation
159.	2013	IA Util Bd	2013-0004	MidAmerican Energy Corporation	Depreciation
160.	2013	PA PUC	2013-2355276	Pennsylvania American Water Co.	Depreciation
161.	2013	NY PSC	13-E-0030, 13-G-0031, 13-S-0032	Consolidated Edison of New York	Depreciation
162.	2013	PA PUC	2013-2355886	Peoples TWP LLC	Depreciation
163.	2013	TN Reg Auth	12-0504	Tennessee American Water	Depreciation
164.	2013	ME PUC	2013-168	Central Maine Power Company	Depreciation
165.	2013	DC PSC	Case 1103	PHI Service Co. – PEPCO	Depreciation
166.	2013	WY PSC	2003-ER-13	Cheyenne Light, Fuel and Power Co.	Depreciation
167.	2013	FERC	ER130000	Kentucky Utilities	Depreciation
168.	2013	FERC	ER130000	MidAmerican Energy Company	Depreciation
169.	2013	FERC	ER130000	PPL Utilities	Depreciation
170.	2013	PA PUC	R-2013-2372129	Duquesne Light Company	Depreciation
171.	2013	NJ BPU	ER12111052	Jersey Central Power and Light Co.	Depreciation
172.	2013	PA PUC	R-2013-2390244	Bethlehem, City of – Bureau of Water	Depreciation
173.	2013	OK CC	UM 1679	Oklahoma, Public Service Company of	Depreciation
174.	2013	IL CC	13-0500	Nicor Gas Company	Depreciation
175.	2013	WY PSC	20000-427-EA-13	PacifiCorp	Depreciation
176.	2013	UT PSC	13-035-02	PacifiCorp	Depreciation
177.	2013	OR PUC	UM 1647	PacifiCorp	Depreciation
178.	2013	PA PUC	2013-2350509	Dubois, City of	Depreciation
179.	2014	IL CC	14-0224	North Shore Gas Company	Depreciation
180.	2014	FERC	ER14-	Duquesne Light Company	Depreciation

	<u>Year</u>	Jurisdiction	Docket No.	<u>Client/Utility</u>	<u>Subject</u>
181.	2014	SD PUC	EL14-026	Black Hills Power Company	Depreciation
182.	2014	WY PSC	20002-91-ER-14	Black Hills Power Company	Depreciation
183.	2014	PA PUC	2014-2428304	Hanover, Borough of – Municipal Water Works	Depreciation
184.	2014	PA PUC	2014-2406274	Columbia Gas of Pennsylvania	Depreciation
185.	2014	IL CC	14-0225	Peoples Gas Light and Coke Company	Depreciation
186.	2014	MO PSC	ER-2014-0258	Ameren Missouri	Depreciation
187.	2014	KS CC	14-BHCG-502-RTS	Black Hills Service Company	Depreciation
188.	2014	KS CC	14-BHCG-502-RTS	Black Hills Utility Holdings	Depreciation
189.	2014	KS CC	14-BHCG-502-RTS	Black Hills Kansas Gas	Depreciation
190.	2014	PA PUC	2014-2418872	Lancaster, City of – Bureau of Water	Depreciation
191.	2014	WV PSC	14-0701-E-D	First Energy – MonPower/PotomacEdison	Depreciation
192	2014	VA St CC	PUC-2014-00045	Aqua Virginia	Depreciation
193.	2014	VA St CC	PUE-2013	Virginia American	Depreciation
194.	2014	OK CC	PUD201400229	Oklahoma Gas and Electric	Depreciation
195.	2014	OR PUC	UM1679	Portland General Electric	Depreciation
196.	2014	IN URC	Cause No. 44576	Indianapolis Power & Light	Depreciation
197.	2014	MA DPU	DPU. 14-150	NSTAR Gas	Depreciation
198.	2014	CT PURA	14-05-06	Connecticut Light and Power	Depreciation
199.	2014	MO PSC	ER-2014-0370	Kansas City Power & Light	Depreciation
200.	2014	KY PSC	2014-00371	Kentucky Utilities Company	Depreciation
201.	2014	KY PSC	2014-00372	Louisville Gas and Electric Company	Depreciation
202.	2015	PA PUC	R-2015-2462723	United Water Pennsylvania Inc.	Depreciation
203.	2015	PA PUC	R-2015-2468056	Columbia Gas of Pennsylvania	Depreciation
204.	2015	NY PSC	15-E-0283/15-G-0284	New York State Electric and Gas Corporation	Depreciation
205.	2015	NY PSC	15-E-0285/15-G-0286	Rochester Gas and Electric Corporation	Depreciation
206.	2015	MO PSC	WR-2015-0301/SR-2015-0302	Missouri American Water Company	Depreciation
207.	2015	OK CC	PUD 201500208	Oklahoma, Public Service Company of	Depreciation
208.	2015	WV PSC	15-0676-W-42T	West Virginia American Water Company	Depreciation
209.	2015	PA PUC	2015-2469275	PPL Electric Utilities	Depreciation
210.	2015	IN URC	Cause No. 44688	Northern Indiana Public Service Company	Depreciation
211.	2015	OH PSC	14-1929-EL-RDR	First Energy-Ohio Edison/Cleveland Electric/ Toledo Edison	Depreciation
212.	2015	NM PRC	15-00127-UT	El Paso Electric	Depreciation
213.	2015	TX PUC	PUC-44941; SOAH 473-15-5257	El Paso Electric	Depreciation
214.	2015	WI PSC	3370-DU-104	Madison Gas and Electric Company	Depreciation
215.	2015	OK CC	PUD 201500273	Oklahoma Gas and Electric	Depreciation



KENTUCKY AMERICAN WATER

2014 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO UTILITY PLANT AS OF DECEMBER 31, 2014

Prepared by:



Excellence Delivered As Promised

KENTUCKY AMERICAN WATER COMPANY Lexington, Kentucky

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2014 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO UTILITY PLANT AS OF DECEMBER 31, 2014

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, LLC Camp Hill, Pennsylvania



Excellence Delivered As Promised

January 11, 2016

Kentucky American Water Company 2300 Richmond Road Lexington, KY 40502

Attention Mr. Nick O. Rowe, President

Ladies and Gentlemen:

Pursuant to your request, we have conducted a depreciation study related to the utility plant of Kentucky American Water Company as of December 31, 2014. The attached report presents a description of the methods used in the estimation of depreciation, the summary of annual depreciation accrual rates, the statistical support for the life and net salvage estimates and the detailed tabulations of annual and accrued depreciation.

Respectfully submitted,

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, LLC

John J. Apanos

JOHN J. SPANOS Sr. Vice President

JJS:krm

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EXECUTIVE SUMMARY

Pursuant to Kentucky American Water Company's ("KAWC") request, Gannett Fleming Valuation and Rate Consultants, LLC ("Gannett Fleming") has conducted a depreciation study related to KAWC plant as of December 31, 2014. The purpose of this study was to determine the annual depreciation accrual rates and amounts for book and ratemaking purposes.

The depreciation rates are based on the straight line method using the average service life ("ASL") procedure and were applied on a remaining life basis. The calculations were based on attained ages and estimated average service life as well as forecasted net salvage characteristics for each depreciable group of assets.

KAWC's accounting policy has not changed since the previous depreciation study was prepared, nor were there any significant policy changes that might affect the results of the study presented here. Thus, the net salvage and average service life estimates proposed in this study do not vary significantly from the approved estimates that are currently in place, and the overall depreciation accrual rate at 2.61 percent is slightly higher due to plant growth.

Gannett Fleming recommends the calculated annual depreciation accrual rates proposed herein apply specifically to KAWC's plant in service as of December 31, 2014 as summarized in Table 1 of the study. The study sets forth a total annual depreciation expense of \$13.7 million as applied to the depreciable original cost of \$532.7 million as of December 31, 2014.

PART I. INTRODUCTION

KENTUCKY AMERICAN WATER COMPANY DEPRECIATION STUDY

PART I. INTRODUCTION

SCOPE

This report presents the results of the depreciation study prepared for the Kentucky American Water Company as applied to utility plant in service as of December 31, 2014. It relates to the concepts, methods, and basic judgments which underlie recommended annual depreciation accrual rates related to current utility plant in service.

The service life and net salvage estimates resulting from the study were based on informed judgment which incorporated analyses of historical plant retirement data as recorded through 2014; a review of Company practice and outlook as they relate to plant operation and retirement; and consideration of current practice in the water industry, including knowledge of service life and salvage estimates used for other water properties.

PLAN OF REPORT

Part I, Introduction, contains statements with respect to the plan of the report, and the basis of the study. Part II, Estimation of Survivor Curves, presents descriptions of the considerations and the methods used in the service life and net salvage studies. Part III, Service Life Considerations, presents the factors and judgment utilized in the average service life analysis. Part IV, Net Salvage Considerations, presents the judgment utilized of the net salvage study. Part V, Calculation of Annual and Accrued Depreciation, describes the procedures used in the calculation of group depreciation. Part VI, Results of Study, presents summaries by depreciable group of annual depreciation accrual rates and amounts, as well as composite remaining lives. Part VII, Service Life Statistics presents the statistical analysis of service life estimates, Part VIII, Net Salvage Statistics sets forth the statistical indications of net salvage percents, and Part IX, Detailed Depreciation Calculations presents the detailed tabulations of annual depreciation.

BASIS OF THE STUDY

Depreciation

Depreciation, in public utility regulation, is the loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of utility plant in the course of service from causes which are known to be in current operation and against which the utility is not protected by insurance. Among causes to be given consideration are wear and tear, deterioration, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand, and the requirements of public authorities.

Depreciation, as used in accounting, is a method of distributing fixed capital costs, less net salvage, over a period of time by allocating annual amounts to expense. Each annual amount of such depreciation expense is part of that year's total cost of providing water utility service. Normally, the period of time over which the fixed capital cost is allocated to the cost of service is equal to the period of time over which an item renders service, that is, the item's service life. The most prevalent method of allocation is to distribute an equal amount of cost to each year of service life. This method is known as the straight-line method of depreciation.

For most accounts, the annual depreciation was calculated by the straight line method using the average service life procedure and the remaining life basis. For certain General Plant accounts, the annual depreciation is based on amortization accounting. Both types of calculations were based on original cost, attained ages, and estimates of service lives and net salvage. The straight line method, average service life procedure is a commonly used depreciation calculation procedure that has been widely accepted in jurisdictions throughout North America. Gannett Fleming recommends its continued use. Amortization accounting is used for certain General Plant accounts because of the disproportionate plant accounting effort required when compared to the minimal original cost of the large number of items in these accounts. An explanation of the calculation of annual and accrued amortization is presented beginning on page V-4 of the report.

Service Life and Net Salvage Estimates

The service life and net salvage estimates used in the depreciation and amortization calculations were based on informed judgment which incorporated a review of management's plans, policies and outlook, a general knowledge of the water utility industry, and comparisons of the service life and net salvage estimates from our studies of other water utilities. The use of survivor curves to reflect the expected dispersion of retirement provides a consistent method of estimating depreciation for water plant. Iowa type survivor curves were used to depict the estimated survivor curves for the plant accounts not subject to amortization accounting.

The procedure for estimating service lives consisted of compiling historical data for the plant accounts or depreciable groups, analyzing this history through the use of widely accepted techniques, and forecasting the survivor characteristics for each depreciable group on the basis of interpretations of the historical data analyses and the probable future. The combination of the historical experience and the estimated future yielded estimated survivor curves from which the average service lives were derived.

PART II. ESTIMATION OF SURVIVOR CURVES

PART II. ESTIMATION OF SURVIVOR CURVES

The calculation of annual depreciation based on the straight line method requires the estimation of survivor curves and the selection of group depreciation procedures. The estimation of survivor curves is discussed below and the development of net salvage is discussed in later sections of this report.

SURVIVOR CURVES

The use of an average service life for a property group implies that the various units in the group have different lives. Thus, the average life may be obtained by determining the separate lives of each of the units, or by constructing a survivor curve by plotting the number of units which survive at successive ages.

The survivor curve graphically depicts the amount of property existing at each age throughout the life of an original group. From the survivor curve, the average life of the group, the remaining life expectancy, the probable life, and the frequency curve can be calculated. In Figure 1, a typical smooth survivor curve and the derived curves are illustrated. The average life is obtained by calculating the area under the survivor curve, from age zero to the maximum age, and dividing this area by the ordinate at age zero. The remaining life expectancy at any age can be calculated by obtaining the area under the curve, from the observation age to the maximum age, and dividing this area by the percent surviving at the observation age. For example, in Figure 1, the remaining life at age 30 is equal to the crosshatched area under the survivor curve divided by 29.5 percent surviving at age 30. The probable life at any age is developed by adding the age and remaining life. If the probable life of the property is calculated for each year of age, the probable life curve shown in the chart can be developed. The frequency curve presents the number of units retired in each age interval. It is derived by obtaining the

differences between the amount of property surviving at the beginning and at the end of each interval.

This study has incorporated the use of Iowa curves developed from a retirement rate analysis of historical retirement history. A discussion of the concepts of survivor curves and of the development of survivor curves using the retirement rate method is presented below.

Iowa Type Curves

The range of survivor characteristics usually experienced by utility and industrial properties is encompassed by a system of generalized survivor curves known as the lowa type curves. There are four families in the lowa system, labeled in accordance with the location of the modes of the retirements in relationship to the average life and the relative height of the modes. The left moded curves, presented in Figure 2, are those in which the greatest frequency of retirement occurs to the left of, or prior to, average service life. The symmetrical moded curves, presented in Figure 3, are those in which the greatest frequency of retirement occurs at average service life. The right moded curves, presented in Figure 4, are those in which the greatest frequency occurs to the right of, or after, average service life. The origin moded curves, presented in Figure 5, are those in which the greatest frequency of retirement occurs at the origin, or immediately after age zero. The letter designation of each family of curves (L, S, R or O) represents the location of the mode of the associated frequency curve with respect to the average service life. The numbers represent the relative heights of the modes of the frequency curves within each family.

The lowa curves were developed at the lowa State College Engineering Experiment Station through an extensive process of observation and classification of the ages at which industrial property had been retired. A report of the study which resulted in the classification of property survivor characteristics into 18 type curves,

11-3



Figure 1. A Typical Survivor Curve and Derived Curves



Figure 2. Left Modal or "L" Iowa Type Survivor Curves



Figure 3. Symmetrical or "S" Iowa Type Survivor Curves


Figure 4. Right Modal or "R" lowa Type Survivor Curves



Figure 5. Origin Modal or "O" lowa Type Survivor Curves

which constitute three of the four families, was published in 1935 in the form of the Experiment Station's Bulletin 125. These curve types have also been presented in subsequent Experiment Station bulletins and in the text, "Engineering Valuation and Depreciation."¹ In 1957, Frank V. B. Couch, Jr., an Iowa State College graduate student submitted a thesis presenting his development of the fourth family consisting of the four O type survivor curves.

Retirement Rate Method of Analysis

The retirement rate method is an actuarial method of deriving survivor curves using the average rates at which property of each age group is retired. The method relates to property groups for which aged accounting experience is available and is the method used to develop the original stub survivor curves in this study. The method (also known as the annual rate method) is illustrated through the use of an example in the following text, and is also explained in several publications, including "Statistical Analyses of Industrial Property Retirements,"² "Engineering Valuation and Depreciation,"³ and "Depreciation Systems."⁴

The average rate of retirement used in the calculation of the percent surviving for the survivor curve (life table) requires two sets of data: first, the property retired during a period of observation, identified by the property's age at retirement; and second, the property exposed to retirement at the beginning of the age intervals during the same period. The period of observation is referred to as the <u>experience band</u>, and the band of years which represent the installation dates of the property exposed to retirement during the experience band is referred to as the <u>placement band</u>. An example of the calculations used in the development of a life table follows. The example includes

¹Marston, Anson, Robley Winfrey and Jean C. Hempstead. Engineering Valuation and Depreciation, 2nd Edition. New York, McGraw-Hill Book Company. 1953.

²Winfrey, Robley, <u>Statistical Analyses of Industrial Property Retirements.</u> Iowa State College Engineering Experiment Station, Bulletin 125. 1935.

³Marston, Anson, Robley Winfrey, and Jean C. Hempstead, Supra Note 1.

⁴Wolf, Frank K. and W. Chester Fitch. <u>Depreciation Systems</u>. Iowa State University Press. 1994.

schedules of annual aged property transactions, a schedule of plant exposed to retirement, a life table and illustrations of smoothing the stub survivor curve.

Schedules of Annual Transactions in Plant Records

The property group used to illustrate the retirement rate method is observed for the experience band 2005-2014 during which there were placements during the years 2000-2014. In order to illustrate the summation of the aged data by age interval, the data were compiled in the manner presented in Schedules 1 and 2 on pages II-11 and II-12 In Schedule 1, the year of installation (year placed) and the year of retirement are shown. The age interval during which a retirement occurred is determined from this information. In the example which follows, \$10,000 of the dollars invested in 2000 were retired in 2005. The \$10,000 retirement occurred during the age interval between 4½ and 5½ years on the basis that approximately one-half of the amount of property was installed prior to and subsequent to July 1 of each year. That is, on the average, property installed during a year is placed in service at the midpoint of the year for the purpose of the analysis. All retirements also are stated as occurring at the midpoint of a one-year age interval of time, except the first age interval which encompasses only one-half year.

The total retirements occurring in each age interval in a band are determined by summing the amounts for each transaction year-installation year combination for that age interval. For example, the total of \$143,000 retired for age interval 4½-5½ is the sum of the retirements entered on Schedule 1 immediately above the stair step line drawn on the table beginning with the 2005 retirements of 2000 installations and ending with the 2014 retirements of the 2009 installations. Thus, the total amount of 143 for age interval 4½-5½ equals the sum of:

10 + 12 + 13 + 11 + 13 + 13 + 15 + 17 + 19 + 20.

SCHEDULE 1. RETIREMENTS FOR EACH YEAR 2005-2014 SUMMARIZED BY AGE INTERVAL

Experience Band 2005-2014

Placement Band 2000-2014

	Retirements, Thousands of Dollars During Year										TableDouring	A	
Year					Durin	g year					Total During	Age	
Placed	aced 2005 2006 2007 2008		<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u> <u>2013</u>		<u>2014</u>	<u>Age Interval</u>	Interval			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
2000	10	11	12	13	14	16	23	24	25	26	26	131⁄2-141⁄2	
2001	11	12	13	15	16	18	20	21	22	19	44	121⁄2-131⁄2	
2002	11	12	13	14	16	17	19	21	22	18	64	111⁄2-121⁄2	
2003	8	9	10	11	11	13	14	15	16	17	83	101⁄2-111⁄2	
2004	9	10	11	12	13	14	16	17	19	20	93	91⁄2-101⁄2	
2005	4	9	10	11	12	13	14	15	16	20	105	81⁄2-91⁄2	
2006		5	11	12	13	14	15	16	18	20	113	71⁄2-81⁄2	
2007			6	12	13	15	16	17	19	19	124	61⁄2-71⁄2	
2008				6	13	15	16	17	19	19	131	51⁄2-61⁄2	
2009					7	14	16	17	19	20	143	41/2-51/2	
2010						8	18	20	22	23	146	31/2-41/2	
2011							9	20	22	25	150	21⁄2-31⁄2	
2012								11	23	25	151	11/2-21/2	
2013									11	24	153	1/2-11/2	
2014										13		0-1⁄2	
Total	53	68	86	106	128		196	231	273	308	1,606		

SCHEDULE 2. OTHER TRANSACTIONS FOR EACH YEAR 2005-2014 SUMMARIZED BY AGE INTERVAL

Experience Band 2005-2014

Placement Band 2000-2014

-			Acquisiti	ons, Tran		Sales, Th	ousands o	of Dollars				
					During	g Year					T (I D	A
Year <u>Placed</u>	2005	<u>2006</u>	<u>2007</u>	<u>2008</u>	2009	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	Total During Age Interval	Age Interval
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2000	-	-	-	-	-	-	60 ^ª	-	-	-	-	131⁄2-141⁄2
2001	-	-	-	-	-	-	-	-	-	-	-	121⁄2-131⁄2
2002	-	-	-	-	-	-	-	-	-	-	-	111/2-121/2
2003	-	-	-	-	-	-	-	(5) ^b	-	-	60	101/2-111/2
2004	-	-	-	-	-	-	-	6 ^a	-	-	-	9½-10½
2005	-	-	-	-	-	-	-	-	-	-	(5)	81⁄2-91⁄2
2006		-	-	-	-	-	-	-	-	-	6	71⁄2-81⁄2
2007			-	-	-	-	-	-	-	-	-	61⁄2-71⁄2
2008				-	-	-	-	(12) ^b	-	-	-	51⁄2-61⁄2
2009					-	-	-	-	22 ^a	-	-	41⁄2-51⁄2
2010						-	-	(19) ^b	-	-	10	31/2-41/2
2011							-	-	-	-	-	21/2-31/2
2012								-	-	(102) ^c	(121)	11/2-21/2
2013									-	-	-	1/2-11/2
2014											-	0-1⁄2
Total	-	-	-	-	-	-	60	(30)	22	(102)	(50)	

^a Transfer Affecting Exposures at Beginning of Year

^b Transfer Affecting Exposures at End of Year

^c Sale with Continued Use

Parentheses Denote Credit Amount.

In Schedule 2, other transactions which affect the group are recorded in a similar manner. The entries illustrated include transfers and sales. The entries which are credits to the plant account are shown in parentheses. The items recorded on this schedule are not totaled with the retirements, but are used in developing the exposures at the beginning of each age interval.

Schedule of Plant Exposed to Retirement

The development of the amount of plant exposed to retirement at the beginning of each age interval is illustrated in Schedule 3 on page II-14.

The surviving plant at the beginning of each year from 2005 through 2014 is recorded by year in the portion of the table headed "Annual Survivors at the Beginning of the Year." The last amount entered in each column is the amount of new plant added to the group during the year. The amounts entered in Schedule 3 for each successive year following the beginning balance or addition are obtained by adding or subtracting the net entries shown on Schedules 1 and 2. For the purpose of determining the plant exposed to retirement, transfers-in are considered as being <u>exposed</u> to retirement in this group <u>at the beginning of the year</u> in which they occurred, and the sales and transfers-out are considered to be removed from the plant exposed to retirement at the <u>beginning of the following year</u>. Thus, the amounts of plant shown at the beginning of each year are the amounts of plant from each placement year considered to be exposed to retirement at the beginning of each year are the installation year 2010 are calculated in the following manner:

Exposures at age 0 = amount of addition	= \$750,000
Exposures at age ½ = \$750,000 - \$ 8,000	= \$742,000
Exposures at age 1½ = \$742,000 - \$18,000	= \$724,000
Exposures at age 2½ = \$724,000 - \$20,000 - \$19,000	= \$685,000
Exposures at age 3½ = \$685,000 - \$22,000	= \$663,000

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SCHEDULE 3. PLANT EXPOSED TO RETIREMENT JANUARY 1 OF EACH YEAR 2005-2014 SUMMARIZED BY AGE INTERVAL

Experience Band 2005-2014

Placement Band 2000-2014

Veer -	Exposures, Thousands of Dollars Annual Survivors at the Beginning of the Year										Total at	4.55	
Year _	0005	0000								2014	Beginning of	Age	
Placed	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>		<u>2010 2011 2012 2013</u>				Age Interval	Interval	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
2000	255	245	234	222	209	195	239	216	192	167	167	131⁄2-141⁄2	
2001	279	268	256	243	228	212	194	174	153	131	323	121⁄2-131⁄2	
2002	307	296	284	271	257	241	224	205	184	162	531	111⁄2-121⁄2	
2003	338	330	321	311	300	289	276	262	242	226	823	101⁄2-111⁄2	
2004	376	367	357	346	334	321	307	297	280	261	1,097	91⁄2-101⁄2	
2005	420 ^a	416	407	397	386	374	361	347	332	316	1,503	81⁄2-91⁄2	
2006		460 ^a	455	444	432	419	405	390	374	356	1,952	71⁄2-81⁄2	
2007			510 ^a	504	492	479	464	448	431	412	2,463	61⁄2-71⁄2	
2008				580 ^a	574	561	546	530	501	482	3,057	51⁄2-61⁄2	
2009					660 ^a	653	639	623	628	609	3,789	41⁄2-51⁄2	
2010						750 ^a	742	724	685	663	4,332	31⁄2-41⁄2	
2011							$850^{\rm a}$	841	821	799	4,955	21/2-31/2	
2012								960 ^a	949	926	5,719	11⁄2-21⁄2	
2013									1,080ª	1,069	6,579	1/2-11/2	
2014										1,220 ^a	7,490	0-1⁄2	
Total	<u>1,975</u>	2,382	2,824	<u>3,318</u>	3,872	4,494	5,247	<u>6,017</u>	6,852	<u>7,799</u>	44,780		

For the entire experience band 2005-2014, the total exposures at the beginning of an age interval are obtained by summing diagonally in a manner similar to the summing of the retirements during an age interval (Table 1). For example, the figure of 3,789, shown as the total exposures at the beginning of age interval $4\frac{1}{2}-5\frac{1}{2}$, is obtained by summing:

255 + 268 + 284 + 311 + 334 + 374 + 405 + 448 + 501 + 609.

Original Life Table

The original life table, illustrated in Schedule 4 on page II-16, is developed from the totals shown on the schedules of retirements and exposures, Schedules 1 and 3, respectively. The exposures at the beginning of the age interval are obtained from the corresponding age interval of the exposure schedule, and the retirements during the age interval are obtained from the corresponding age interval of the retirement schedule. The retirement ratio is the result of dividing the retirements during the age interval by the exposures at the beginning of the age interval. The percent surviving at the beginning of each age interval is derived from survivor ratios, each of which equals one minus the retirement ratio. The percent surviving is developed by starting with 100% at age zero and successively multiplying the percent surviving at the beginning of each interval by the survivor ratio, i.e., one minus the retirement ratio for that age interval. The calculations necessary to determine the percent surviving at age 5½ are as follows:

Percent surviving at age 41/2	=	88.15			
Exposures at age 41/2	=	3,789,000			
Retirements from age 4½ to 5½	=	143,000			
Retirement Ratio	=	143,000 ÷	- 3,789,000		0.0377
Survivor Ratio	Ħ	1.000	- 0.0377	=	0.9623
Percent surviving at age 51/2	=	(88.15) >	(0.9623)	=	84.83

The totals of the exposures and retirements (columns 2 and 3) are shown for the purpose of checking with the respective totals in Schedules 1 and 3. The ratio of the total retirements to the total exposures, other than for each age interval, is meaningless.

SCHEDULE 4. ORIGINAL LIFE TABLE CALCULATED BY THE RETIREMENT RATE METHOD

Experience Band 2005-2014

Placement Band 2000-2014

(Exposure and Retirement Amounts are in Thousands of Dollars)

Age at Beginning of Interval	Exposures at Beginning of Age Interval	Retirements During Age Interval	Retirement Ratio	Survivor Ratio	Percent Surviving at Beginning of Age Interval
(1)	(2)	(3)	(4)	(5)	(6)
0.0 0.5 1.5	7,490 6,579 5,719	80 153 151	0.0107 0.0233 0.0264	0.9893 0.9767 0.9736	100.00 98.93 96.62
2.5	4,955	150	0.0303	0.9697	94.07
3.5	4,332	146	0.0337	0.9663	91.22
4.5	3,789	143	0.0377	0.9623	88.15
5.5	3,057	131	0.0429	0.9571	84.83
6.5	2,463	124	0.0503	0.9497	81.19
7.5	1,952	113	0.0579	0.9421	77.1 1
8.5	1,503	105	0.0699	0.9301	72.65
9.5	1,097	93	0.0848	0.9152	67.57
10.5	823	83	0.1009	0.8991	61.84
11.5	531	64	0.1205	0.8795	55.60
12.5	323	44	0.1362	0.8638	48.90
13.5	167	26	0.1557	0.8443	42.24
14.5					35.66
Total	<u>44,780</u>	<u>1,606</u>	N		

Column 2 from Schedule 3, Column 12, Plant Exposed to Retirement.

Column 3 from Schedule 1, Column 12, Retirements for Each Year.

Column 4 = Column 3 Divided by Column 2.

Column 5 = 1.0000 Minus Column 4.

Column 6 = Column 5 Multiplied by Column 6 as of the Preceding Age Interval.

The original survivor curve is plotted from the original life table (column 6, Schedule 4). When the curve terminates at a percent surviving greater than zero, it is called a stub survivor curve. Survivor curves developed from retirement rate studies generally are stub curves.

Smoothing the Original Survivor Curve

The smoothing of the original survivor curve eliminates any irregularities and serves as the basis for the preliminary extrapolation to zero percent surviving of the original stub curve. Even if the original survivor curve is complete from 100% to zero percent, it is desirable to eliminate any irregularities, as there is still an extrapolation for the vintages which have not yet lived to the age at which the curve reaches zero percent. In this study, the smoothing of the original curve with established type curves was used to eliminate irregularities in the original curve.

The lowa type curves are used in this study to smooth those original stub curves which are expressed as percents surviving at ages in years. Each original survivor curve was compared to the lowa curves using visual and mathematical matching in order to determine the better fitting smooth curves. In Figures 6, 7, and 8, the original curve developed in Schedule 4 is compared with the L, S, and R lowa type curves which most nearly fit the original survivor curve. In Figure 6, the L1 curve with an average life between 12 and 13 years appears to be the best fit. In Figure 7, the S0 type curve with a 12-year average life appears to be the best fit and appears to be better than the L1 fitting. In Figure 8, the R1 type curve with a 12-year average life appears to be the best fit and spears to be the best fit and appears to be the best fit and appears to be better than either the L1 or the S0.

In Figure 9, the three fittings, 12-L1, 12-S0 and 12-R1 are drawn for comparison purposes. It is probable that the 12-R1 lowa curve would be selected as the most representative of the plotted survivor characteristics of the group.



FIGURE 6. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN L1 IOWA TYPE CURVE ORIGINAL AND SMOOTH SURVIVOR CURVES



FIGURE 7. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN SO IOWA TYPE CURVE ORIGINAL AND SMOOTH SURVIVOR CURVES



FIGURE 8. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN R1 IOWA TYPE CURVE ORIGINAL AND SMOOTH SURVIVOR CURVES



FIGURE 9. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN L1, S0 AND R1 IOWA TYPE CURVE ORIGINAL AND SMOOTH SURVIVOR CURVES

PART III. SERVICE LIFE CONSIDERATIONS

PART III. SERVICE LIFE CONSIDERATIONS

FIELD TRIPS

In order to be familiar with the operation of the Company and observe representative portions of the plant, field trips have been conducted. A general understanding of the function of the plant and information with respect to the reasons for past retirements and the expected future causes of retirements are obtained during field trips. This knowledge and information were incorporated in the interpretation and extrapolation of the statistical analyses.

The following is a list of the locations visited during the most recent field trips.

June 2, 2015

Field Operations Center Richmond Road Station Jacobsen Reservoir Kentucky River Station #1 Kentucky River Station #2 Brock Tank and Booster Station Fairgrounds Tank Owenton Wastewater Plant Lexington Headquarters Building

March 13 & 14, 2007

Newtown Pike Booster Station Hume Road Booster Station Clays Mill Booster Station Richmond Road Booster Station Owenton Treatment Plant North Booster Station Kentucky River Treatment Plant Kentucky River Intake Russell Cave Booster Station Hall Booster Station Briar Hill Booster Station Cox Street Booster Station Mercer Road Booster Station Kentucky Power Treatment Plant Rockdale Chlorine Booster Station

Service Life Analysis

The service life estimates were based on judgment which considered a number of factors. The primary factors were the statistical analyses of data; current company policies and outlook as determined during field reviews of the property and other conversations with management; and the survivor curve estimates from previous studies of this company and other water companies.

For most of the mass plant accounts and subaccounts, the statistical analyses resulted in good to excellent indications of significant survivor patterns. These accounts represent 82 percent of depreciable plant. Generally, the information external to the statistics led to no significant departure from the indicated survivor curves for the accounts listed below.

Account No.	Account Description
304.01	Structures and Improvements - Source of Supply
304.2 & 304.3	Structures and Improvements
304.4	Structures and Improvements - Transmission and Distribution
304.6	Structures and Improvements - Office Buildings
304.7	Structures and Improvements - Store, Shop and Garage
304.8	Structures and Improvements - Miscellaneous
306	Lake, River and Other Intakes
310.1	Other Power Generation Equipment
311.2, 311.3, 311.4	
311.52, & 311.54	Pumping Equipment
320.1	Purification System - Structures
320.11	Purification System - Equipment
331	Mains and Accessories
333	Services
335	Fire Hydrants
341.1	Transportation Equipment - Light Duty Trucks
341.2	Transportation Equipment - Heavy Duty Trucks
341.3	Transportation Equipment - Autos
341.4	Transportation Equipment - Other
345	Power Operated Equipment

Account 331, Mains and Accessories, is used to illustrate the manner in which

the study was conducted for the accounts in the preceding list. Aged plant accounting

data have been compiled for the years through 2014. These data have been coded according to account or property group, type of transaction, year in which the transaction took place, and year in which the utility plant was placed in service. The retirements, other plant transactions and plant additions were analyzed by the retirement rate method.

The survivor curve estimate for this account is the 85-R3 and is based on the statistical indication for the period 1995 through 2014. The 85-R3 is a good fit of the significant portion of the original survivor curve as set forth on page VII-53, is consistent with management outlook for a continuation of the historical experience and is within the typical service life range of 75 to 100 years for water mains.

The life span estimates for major structures and equipment in Accounts 304.2, 304.3, 304.6 and 320.1 which represent 15 percent of depreciable plant, were based on the type construction, attained age, observed features and conditions at the time of the filed visit, and the plans of management.

Amortization accounting is proposed for certain General Plant accounts that represent numerous units of property, but a small portion of the depreciable plant in service. These accounts represent approximately 4 percent of total utility plant. A discussion of the basis for the amortization periods is presented in the section "Calculation of Annual and Accrued Amortization".

Generally, the estimates for the remaining accounts were based on judgments which considered the nature of the plant and equipment, the previous estimate for this company and a general knowledge of service lives for similar equipment in other water companies.

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PART IV. NET SALVAGE CONSIDERATIONS

PART IV. NET SALVAGE CONSIDERATIONS

SALVAGE ANALYSIS

The estimates of net salvage by account were based in part on historical data compiled for the years 1980 through 2014. Cost of removal and salvage were expressed as percents of the original cost of plant retired, both on annual and three-year moving average bases. The most recent five-year average also was calculated for consideration. The net salvage estimates by account are expressed as a percent of the original cost of plant retired.

Net Salvage Considerations

The estimates of salvage were based primarily on judgment which considered a number of factors. The primary factors were the analyses of historical data; a knowledge of management's plans and operating policies; and net salvage estimates from previous studies of this company and other water companies. The accounts for which the historical analyses were representative of expectations for future net salvage levels represent 87 percent of the depreciable plant balance and are presented below:

304.2 & 304.3	Structures and Improvements
304.4	Structures and Improvements - Transmission and Distribution
304.6	Structures and Improvements - Office Buildings
304.7	Structures and Improvements - Store, Shop and Garage
304.8	Structures and Improvements - Miscellaneous
309	Supply Mains
311.2, 311.3, 311.4,	
311.52 & 311.54	Pumping Equipment
320.1 & 320.11	Purification System
330.0 & 330.1	Distribution Reservoirs, Elevated Tanks and Standpipes
331	Mains and Accessories
333	Services
334.1, 334.11, 334.12,	
334.13, 334.2 & 334.3	Meters and Meter Installations
341.1	Transportation Equipment - Light Duty Trucks
341.2	Transportation Equipment - Heavy Duty Trucks
341.3	Transportation Equipment - Autos
345	Power Operated Equipment

The combined analysis for Accounts 334.1 through 334.3, Meters and Meter Installations, is used to illustrate the manner in which the study was conducted for the accounts in the preceding list. Depreciation reserve accounting data were compiled for the years 1980 through 2014. These data include the retirements, cost of removal and gross salvage.

The net salvage estimate for this account is negative 20 percent and is based on the trends in cost of removal and salvage percents as shown in the tabulation on pages VIII-26 and VIII-27. Cost of removal as a percent of the original cost retired has fluctuated during the experience and most recently increased as a percentage of plant retired. The overall and most recent five-year bands averaged 29 and 55 percent removal cost, respectively. Gross salvage has been sporadic, averaging 12 percent for the 35-year period, but trending to 16 percent in recent years. The negative 20 percent net salvage estimate is based primarily on the overall cost of removal and gross salvage percent, but considers the upward trend in recent years.

Amortization accounting is proposed for certain General Plant accounts which represent 4 percent of depreciable property. Future gross salvage and removal cost for these accounts will be recorded against the oldest vintage being retired. Inasmuch as there will be minimal to no depreciation reserve entries related to salvage, the estimate of net salvage for accounts subject to amortization is zero percent.

Generally, the net salvage estimates for the remaining accounts, which comprise 9 percent of the total depreciable plant in service, were based on judgments which considered the nature of the plant and equipment, reviews of available historical data, and a general knowledge of net salvage percents for similar equipment in other water companies.

PART V. CALCULATION OF ANNUAL AND ACCRUED DEPRECIATION

PART V. CALCULATION OF ANNUAL AND ACCRUED DEPRECIATION

GROUP DEPRECIATION PROCEDURES

A group procedure for depreciation is appropriate when considering more than a single item of property. Normally the items within a group do not have identical service lives, but have lives that are dispersed over a range of time. There are two primary group procedures, namely, average service life and equal life group. In the average service life procedure, the rate of annual depreciation is based on the average life or average remaining life of the group, and this rate is applied to the surviving balances of the group's cost. A characteristic of this procedure is that the cost of plant retired prior to average life is not fully recouped at the time of retirement, whereas the cost of plant retired subsequent to average life is more than fully recouped. Over the entire life cycle, the portion of cost not recouped prior to average life is balanced by the cost recouped subsequent to average life.

Single Unit of Property

The calculation of straight line depreciation for a single unit of property is straightforward. For example, if a \$1,000 unit of property attains an age of four years and has a life expectancy of six years, the annual accrual over the total life is:

$$\frac{\$1,000}{(4+6)}$$
 = \$100 per year.

The accrued depreciation is:

$$1,000\left(1-\frac{6}{10}\right)=$$
 $400.$

Remaining Life Annual Accruals

For the purpose of calculating remaining life accruals as of December 31, 2014, the depreciation reserve for each plant account is allocated among vintages in proportion to the calculated accrued depreciation for the account. Explanations of remaining life accruals and calculated accrued depreciation follow. The detailed calculations as of December 31, 2014, are set forth in the Results of Study section of the report.

Average Service Life Procedure

In the average service life procedure, the remaining life annual accrual for each vintage is determined by dividing future book accruals (original cost less book reserve) by the average remaining life of the vintage. The average remaining life is a directly weighted average derived from the estimated future survivor curve in accordance with the average service life procedure.

The calculated accrued depreciation for each depreciable property group represents that portion of the depreciable cost of the group which would not be allocated to expense through future depreciation accruals, if current forecasts of life characteristics are used as the basis for such accruals. The accrued depreciation calculation consists of applying an appropriate ratio to the surviving original cost of each vintage of each account, based upon the attained age and service life. The straight line accrued depreciation ratios are calculated as follows for the average service life procedure:

$$Ratio = 1 - \frac{Average Remaining Life}{Average Service Life}.$$

CALCULATION OF ANNUAL AND ACCRUED AMORTIZATION

Amortization is the gradual extinguishment of an amount in an account by distributing such amount over a fixed period, over the life of the asset or liability to which it applies, or over the period during which it is anticipated the benefit will be realized. Normally, the distribution of the amount is in equal amounts to each year of the amortization period.

The calculation of annual and accrued amortization requires the selection of an amortization period. The amortization periods used in this report were based on judgment which incorporated a consideration of the period during which the assets will render most of their service, the amortization period and service lives used by other utilities, and the service life estimates previously used for the asset under depreciation accounting.

Amortization accounting is proposed for certain General Plant accounts that represent numerous units of property, but a very small portion of depreciable utility plant in service. The accounts and their amortization periods are as follows:

Office Furniture and Equipment 340.10 Furniture 20 340.15 Computer Software - Special Rate 10
340.21 Mainframe 5
340.22 Personal Computers 5
340.23 Peripheral - Other 5
340.30 Computer Software 5
340.32 Computer Software - Personal 5
340.33 Computer Software - Other 5
340.50 Other 15
342.00 Stores Equipment 25
343.00 Tools, Shop and Garage Equipment 20

<u>Account</u>		Amortization Period, Years
344.00	Laboratory Equipment	15
346.10	Communication Equip Non-Telephone	15
346.19	Communication Equip Remote Control	
	and Control and Instrumentation	15
346.20	Communication Equip Telephone	15
347.00	Miscellaneous Equipment	20
348.00	Other Tangible Property	20

The calculated accrued amortization is equal to the original cost multiplied by the

ratio of the vintage's age to its amortization period. The annual amortization amount is

determined by dividing the original cost by the period of amortization for the account.

PART VI. RESULTS OF STUDY

PART VI. RESULTS OF STUDY

QUALIFICATION OF RESULTS

The calculated annual and accrued depreciation are the principal results of the study. Continued surveillance and periodic revisions are normally required to maintain continued use of appropriate annual depreciation accrual rates. An assumption that accrual rates can remain unchanged over a long period of time implies a disregard for the inherent variability in service lives and salvage and for the change of the composition of property in service. The annual accrual rates were calculated in accordance with the straight line remaining life method of depreciation, using the average service life procedure based on estimates which reflect considerations of current historical evidence and expected future conditions.

The annual depreciation accrual rates are applicable specifically to the water plant in service as of December 31, 2014. For most plant accounts, the application of such rates to future balances that reflect additions subsequent to December 31, 2014, is reasonable for a period of three to five years.

DESCRIPTION OF DETAILED TABULATIONS

A summary of the results of the study, as applied to the original cost of water plant in service as of December 31, 2014, is presented on pages VI-5 through VI-7 of this report. The table sets forth the original cost, the book depreciation reserve, future accruals, the calculated annual depreciation rate and amount, and the composite remaining life related to water plant for all districts.

The service life estimates were based on judgment that incorporated statistical analysis of retirement data, discussions with management and consideration of

estimates made for other water utilities. The results of the statistical analysis of service life are presented in the section beginning on page VII-2, within the supporting documents of this report.

For each depreciable group analyzed by the retirement rate method, a chart depicting the original and estimated survivor curves followed by a tabular presentation of the original life table(s) plotted on the chart. The survivor curves estimated for the depreciable groups are shown as dark smooth curves on the charts. Each smooth survivor curve is denoted by a numeral followed by the curve type designation. The numeral used is the average life derived from the entire curve from 100 percent to zero percent surviving. The titles of the chart indicate the group, the symbol used to plot the points of the original life table, and the experience and placement bands of the life tables which where plotted. The experience band indicates the range of years for which retirements were used to develop the stub survivor curve. The placements indicate, for the related experience band, the range of years of installations which appear in the experience.

The analyses of salvage data are presented in the section titled, "Net Salvage Statistics". The tabulations present annual cost of removal and salvage data, three-year moving averages and the most recent five-year average. Data are shown in dollars and as percentages of original costs retired.

The tables of the calculated annual depreciation applicable to depreciable assets as of December 31, 2014 are presented in account sequence starting on page IX-2 of the supporting documents. The tables indicate the estimated survivor curve and net salvage percent for the account and set forth, for each installation year, the original cost, the calculated accrued depreciation, the allocated book reserve, future accruals, the remaining life, and the calculated annual accrual amount.

KENTUCKY AMERICAN WATER COMPANY

TABLE 1. ESTIMATED SURVIVOR CURVE, NET SALVAGE, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO UTILITY PLANT AS OF DECEMBER 31, 2014

	DEPRECIABLE GROUP	SURVIVOR	NET SALVAGE	ORIGINAL COST AS OF DECEMBER 31, 2014	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATE ACCRUAL AMOUNT	D ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)
	DEPRECIABLE PLANT								
	STRUCTURES AND IMPROVEMENTS								
304.10 304.20	SOURCE OF SUPPLY POWER AND PUMPING STRUCTURES	50-S0.5	(10)	19,702,930.67	1,555,709	20,117,515	441,280	2.24	45.0
	KENTUCKY RIVER STATION	60-R1.5	• (15)	2,864,305.93	1,337,928	1,956,024	81,255	2.84	24.1
	FRANKLIN COUNTY TANK AND BOOSTER STATION OTHER STRUCTURES	60-R1.5	• (15)	4,720,826.87	407,928	5,021,023	116,770	2.47	43.1
	OTHER AIRBOIDRES	60-R1.5	(15)	1,970,900.24	536,859	1,729,676	38,739	1.97	44.6
	TOTAL ACCOUNT 304.20			9,556,033.04	2,282,715	8,706,723	236,765	2.48	36.8
304.30	WATER TREATMENT								
	KENTUCKY RIVER STATION	00-111.0	• (15)	3,738,064.57	1,138,051	3,160,723	128,415	3.44	24.6
	KENTUCKY RIVER STATION II RICHMOND ROAD STATION TREATMENT PLANT	60-R1.5 60-R1.5	• (15)	28,113,173.56	1,530,713	30,799,436	714,061	2.54	43.1
	OTHER STRUCTURES	60-R1.5	* (15) (15)	3,010,913.05 1,947,460.65	1,015,501 273,569	2,447,049 1,966,011	114,663 40,069	3.81 2.06	21.3 49.1
	TOTAL ACCOUNT 304.30			36,809,611,83	3,957,834	38,373,219	997,208	2.71	38,5
304.40	TRANSMISSION AND DISTRIBUTION	40-R2.5	(5)	917,658.95	609,642				
04.60	OFFICE BUILDINGS			517,000.53	009,042	353,900	12,794	1.39	27.7
	MAIN OFFICE OTHER STRUCTURES	60-R2 60-R2	• (15) (15)	6,580,259.63	1,261,113	6,306,185	238,686	3.63	26.4
	TOTAL ACCOUNT 304 60	00-n2	(13)	3,511,986.66	627,728	3,411,057	71,560	2.04	47.7
				10,092,240.29	1,688,841	9,717,242	310,246	3.07	31.3
104.70 104.80	STORE, SHOP AND GARAGE MISCELLANEOUS	55-R2 25-S0,5	0	1,757,378.21	417,594	1,339,784	30,959	1.76	43.3
		20-00.0	U	1,386,565,83	63,343	1,323,222	85,670	6.18	15.4
	TOTAL STRUCTURES AND IMPROVEMENTS			80,222,424.82	10,775,679	79,931,605	2,114,922	2.64	37.8
305.00 306.00	COLLECTING AND IMPOUNDING RESERVOIRS	70-R3	0	854,646.28	269,131	585,515	13,465	1.58	43.5
306.00	LAKE, RIVER AND OTHER INTAKES SUPPLY MAINS	50-S1 70-R3	(10) (10)	1,630,781,88	380,905	1,412,955	33,012	2.02	42.8
310.10	OTHER POWER GENERATION EQUIPMENT	35-R3	(10)	18,571,338.59 2,797,503.82	3,403,704 543,437	17,024,768 2,393,942	284,883 87,385	1.53 3,12	59.8 27.4
	PUMPING EQUIPMENT				5.00,001	2,000,042	0,,000	0.12	21
311.20	ELECTRIC	43-50.5	(15)	15,190,660.84	2,395,649	15,073,611	459,708	3.03	32.8
311.30	DIESEL	43-50.5	(15)	433,456.17	143,807	354,668	14,012	3.23	25.3
311.40	HYDRAULIC	43-S0.5	(15)	382,746.71	9,117	431,042	15,612	4.08	27.6
311.52 311.54	SOURCE OF SUPPLY TRANSMISSION AND DISTRIBUTION PUMPING EQUIPMENT	43-S0.5 43-S0.5	(15) (15)	11,847,163.43 94,347.20	1,154,628	12,469,610	323,751	2.73	38.5
	TOTAL ACCOUNT 311	40-00.0	(15)		3,036	105,463	2,852	3.02	37.0
				27,948,374,35	3,705,238	28,434,394	815,935	2.92	34.8
320.10	PURIFICATION SYSTEM - STRUCTURES KENTUCKY RIVER STATION	55-R3	• (15)	4 6 49 740 65	5 6 4 5 6 4 5	0.000 707			
	KENTUCKY RIVER STATION II	55-R3	• (15)	4,643,710.65 14,644,017.18	2,646,540 1,225,747	2,693,727 15,614,873	146,952 350,765	3.16 2.40	18.3 44.5
	RICHMOND ROAD STATION TREATMENT PLANT	55-R3	• (15)	6,952,424,28	2,815,216	5,180,072	241,948	3,48	21.4
	OTHER STRUCTURES	55-R3	(15)	2,435,413.37	688,310	2,112,415	55,248	2.27	38.2
	TOTAL ACCOUNT 320.10			28,675,565.48	7,375,813	25,601,087	794,913	2.77	32.2
320.11	PURIFICATION SYSTEM - EQUIPMENT	27-L2	(15)	10,164,816.80	3,213,416	8,476,123	495,648	4.88	17.1
320.11 320.20	PURIFICATION SYSTEM - EQUIPMENT PURIFICATION SYSTEM - FILTER MEDIA	27-L2 10-S3	(15) D	10,164,816.80 742,339.73	3,213,416 624,686	8,476,123 117,654	495,648 19,689	4.88 2.65	17.1 6.0

KENTUCKY AMERICAN WATER COMPANY

TABLE 1. ESTIMATED SURVIVOR CURVE, NET SALVAGE, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO UTILITY PLANT AS OF DECEMBER 31, 2014

		DEPRECIABLE GROUP		NET	ORIGINAL COST AS OF DECEMBER 31, 2014	BOOK DEPRECIATION RESERVE	FUTURE	CALCULATE ACCRUAL AMOUNT	ACCRUAL RATE	COMPOSITE REMAINING LIFE
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)
		DEPRECIABLE PLANT								
r	330.00	DISTRIBUTION RESERVOIRS AND STANDPIPES	55-R4	(10)	1,771,358.24	342,105	1,606,389	35,777	2.02	44.9
	330.10	ELEVATED TANKS AND STANDPIPES	55-R4	(10)	10,930,352.61	3,890,223	8,133,165	206,749	1.89	39.3
ĩ	330.20	GROUND LEVEL FACILITIES	55-R4	0	2,912,613,49	186,216	2,726,398	53,378	1.83	51.1
	330.40	CLEARWELLS	55-R4	0	1,096,315.61	132,801	963,514	19,077	1,74	50.5
		TOTAL ACCOUNT 330			16,710,639.95	4,551,345	13,429,456	314,981	1.88	42.6
	331.00	MAINS AND ACCESSORIES	85-R3	(25)	231,000,140,04	36,888,213	251,861,962	3,538,431	1.53	71.2
ι	333.00	SERVICES	52-R3	(75)	33,537,375.18	16,738,259	41,952,148	1,085,493	3.24	38.6
		METERS								
	334.10	METERS	40-R0.5	(20)	10,190,322.35	(1,243,290)	13,471,677	356,906	3.50	37.7
	334.11	BRONZE CASE	40-R0.5	(20)	1,601,962.99	250,819	1,671,536	46,530	2.90	35.9
	334.12	PLASTIC CASE	40-R0.5	(20)	261,243.57	(43,413)	380,905	12,333	4.39	30.9
	334.13	OTHER	40-R0.5	(20)	4,829,282.51	(43,035)	5,838,174	178,786	3.70	32.7
		TOTAL ACCOUNT 334.1			16,902,811.42	(1,078,918)	21,362,292	594,555	3.52	35.9
	334.20	METER INSTALLATIONS	40-R0.5	(20)	16,136,245.69	4,752,257	14,611,238	466,359	2.89	31.3
	334.30	METER VAULTS	40-R0.5	(20)	751,479.59	(46,782)	948,557	24,869	3.31	- 38,1
	335.00	FIRE HYDRANTS	70-R4	(40)	14,842,364.09	3,219,068	17,560,241	319,775	2.15	54.9
	339.60	OTHER P/E COMPANY PLANNING STUDY	10-SQ	0	615,609.75	211,951	403,659	61,560	10.00	6.6
		OFFICE FURNITURE AND EQUIPMENT								
	340.10	FURNITURE	20-SQ	0	627,473.47	300,948	326,525	31,371	5.00	10.4
	340.15	COMPUTER SOFTWARE - SPECIAL RATE	10-SQ	0	11,943,983.92	2,357,819	9,586,165	1,194,399	10.00	8.0
	340.21	MAINFRAME	5-SQ	0	67,231.24	33,681	33,550	13,447	20.00	2.5
	340.22	PERSONAL COMPUTERS	5-SQ	0	494,722.87	304,236	190,487	98,945	20.00	1.9
	340.23	PERIPHERAL-OTHER	5-SQ	0	1,309,552.78	404,285	905,268	261,911	20.00	3.5
	340.30	COMPUTER SOFTWARE	5-SQ	0	1,032,031.37	255,232	776,799	206,406	20.00	3.8
	340.32 340.50	COMPUTER SOFTWARE-PERSONAL OTHER	5-SQ 15-SQ	0	297,838.26 16,685,41	32,156 11,811	265,682 4,874	59,567 1,113	20.00 6.67	4.5 4.4
	540.50	UMER	15-50	U	16,005.41	11,031	4.074	1,113	0.07	4.4
		TOTAL OFFICE FURNITURE AND EQUIPMENT			15,789,519.32	3,700,168	12,089,350	1,867,159	11.83	6.5
	244.45	TRANSPORTATION EQUIPMENT	10105			500 (TT		100 000		
	341,10 341,20	LIGHT DUTY TRUCKS HEAVY DUTY TRUCKS	10-L2.5	15	1,902,195.84	508,477	1,108,389	165,653	8.76	6.7
	341.20	AUTOS	11-L2 10-S2.5	15 20	2,049,860,95 63,562,74	356,697 20,435	1,385,685 30,415	166,481 6,424	8.12 10.11	8.3 4.7
	341.30	OTHER	10-52.5 9-L2.5	20	63,562.74 868,391.52	187,103	30,415 507,611	6,424 87,374	10.11	4.7 5.8
	541.40		ə=L2.3	20						
ㅈ		TOTAL ACCOUNT 341			4,884,011.05	1,072,713	3,032,100	426,932	8.74	7.1

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KENTUCKY AMERICAN WATER COMPANY

TABLE 1. ESTIMATED SURVIVOR CURVE, NET SALVAGE, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO UTILITY PLANT AS OF DECEMBER 31, 2014

						BOOK DEPRECIATION	CALCULATED ANI FUTURE ACCRUAL AC		ANNUAL	COMPOSITE REMAINING
		DEPRECIABLE GROUP	CURVE	SALVAGE	DECEMBER 31, 2014	RESERVE	ACCRUALS	AMOUNT	RATE	LIFE
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)
		DEPRECIABLE PLANT								
]	342.00	STORES EQUIPMENT	05.00							
ī	343.00	TOOLS, SHOP AND GARAGE EQUIPMENT	25-SQ 20-SQ	0	30,241.65	6,436	23,806	1,210	4.00	19.7
	344.00	LABORATORY EQUIPMENT	15-SQ	0	2,210,012,40 1,274,096,10	862,859 348,564	1,347,153 925,532	110,501	5.00	12.2
	345.00	POWER OPERATED EQUIPMENT	23-S1.5	10	1,359,771,07	686,858	536,936	84,941 37,162	6.67 2.73	10.9 14.4
•	346.10	COMMUNICATION EQUIPMENT - NON-TELEPHONE	15-SQ	0	310,520,43	83,195	227,325	20,702	6.67	11.0
	346.19	REMOTE CONTROL AND INSTRUMENTATION	15-SQ	ō	2,685,851.25	665,334	2,220,517	192,389	6.67	11.5
	346.20	COMMUNICATION EQUIPMENT - TELEPHONE	15-SQ	0	92,694.65	24,614	68,081	6,180	6.67	11.0
	347.00	MISCELLANEOUS EQUIPMENT	20-SQ	0	1,687,584.70	596,654	1,090,931	84,379	5.00	12.9
	348.00	OTHER TANGIBLE PROPERTY	20-SQ	D	117,627.86	93,996	23,632	5,881	5.00	4.0
		TOTAL DEPRECIABLE PLANT			532,746,387.94	103,669,792	547,692,969	13,903,311	2.61	39.4
		OVERRECOVERED RESERVE FOR AMORTIZATION								
	339.60	OTHER P/E COMPANY PLANNING STUDY				71,284		(14,257) *	•	
	340.10	FURNITURE				26,554		(5,311) *	•	
	340.15 340.21	COMPUTER SOFTWARE - SPECIAL RATE MAINFRAME				827,624		(165,525) *		
	340.21	PERSONAL COMPUTERS				16,981		(3,396) *		
	340.23	PERIPHERAL-OTHER				172,468 27,541		(34,494) * (5,508) *		
	340.30	COMPUTER SOFTWARE				418,616		(83,723) *		
	340.32	COMPUTER SOFTWARE-PERSONAL				69,772		(13,954)		
	340.50	OTHER				894		(179) *		
	342.00	STORES EQUIPMENT				(6,436)		1,287 *		
	343.00 344.00	TOOLS, SHOP AND GARAGE EQUIPMENT LABORATORY EQUIPMENT				(1,211)		242 *		
	346.10	COMMUNICATION EQUIPMENT - NON-TELEPHONE				(120,764)		24,153		
	345.19	REMOTE CONTROL AND INSTRUMENTATION				(75,272) (206,727)		15,054 * 41,345 *		
	346.20	COMMUNICATION EQUIPMENT - TELEPHONE				(20,878)		4,176 **		
	347.00	MISCELLANEOUS EQUIPMENT				(93,072)		18,614		
	348.00	OTHER TANGIBLE PROPERTY				2,569		(514) *		
		TOTAL OVERRECOVERED RESERVE FOR AMORTIZATION				1,109,944		(221,989)		
		NONDEPRECIABLE PLANT								
	301.00	ORGANIZATION			37,450.43					
	302.00	FRANCHISES AND CONSENTS			70,260.82					
	303.20	LAND - SOURCE OF SUPPLY			1,078,374.40					
	303.30 303.40	LAND - PUMPING			218,054,70					
	303.40	LAND - WATER TREATMENT LAND - TRANSMISSION AND DISTRIBUTION			800,183.34 7,473,930.66					
_										
2		TOTAL NONDEPRECIABLE PLANT			9,678,254.35					
Ame		TOTAL UTILITY PLANT			542,424,642.29	104,779,735	547,692,969	13,681,322		
<u>ē</u>										

LIFESPAN PROCEDURE WAS USED. CURVE SHOWN IS INTERIM SURVIVOR CURVE.
 S-YEAR AMORTIZATION OF UNRECOVERED RESERVE RELATED TO UTILIZATION OF AMORTIZATION ACCOUNTING.

VI-7

PART VII. SERVICE LIFE STATISTICS

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AGE IN YEARS

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KENTUCKY AMERICAN WATER COMPANY ACCOUNT 304.10 STRUCTURES AND IMPROVEMENTS - SOURCE OF SUPPLY

V||-2
KENTUCKY AMERICAN WATER COMPANY

ACCOUNT 304.10 STRUCTURES AND IMPROVEMENTS - SOURCE OF SUPPLY

ORIGINAL LIFE TABLE

PLACEMENT BAND 1962-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	18,959,036		0.0000	1.0000	100.00
0.5	18,295,881	9,152	0.0005	0.9995	100.00
1.5	18,117,276	11,676	0.0006	0.9994	99.95
2.5	17,284,014	6,621	0.0004	0.9996	99.89
3.5	18,171,906		0.0000	1.0000	99.85
4.5	2,614,993		0.0000	1.0000	99.85
5.5	2,655,776	7,089	0.0027	0.9973	99.85
6.5	2,592,240		0.0000	1.0000	99.58
7.5	2,590,465	3,999	0.0015	0.9985	99.58
8.5	930,337		0.0000	1.0000	99.43
9.5	930,337	2,378	0.0026	0.9974	99.43
10.5	873,189	20,277	0.0232	0.9768	99.17
11.5	400,021	21,588	0.0540	0.9460	96.87
12.5	125,035		0.0000	1.0000	91.64
13.5	86,153		0.0000	1.0000	91.64
14.5	86,153		0.0000	1.0000	91.64
15.5	86,153	7,742	0.0899	0.9101	91.64
16.5	78,410	984	0.0125	0.9875	83.41
17.5	77,426		0.0000	1.0000	82.36
18.5	77,560		0.0000	1.0000	82.36
19.5	77,560		0.0000	1.0000	82.36
20.5	77,782	6,593	0.0848	0.9152	82.36
21.5	71,189		0.0000	1.0000	75.38
22.5	71,189	788	0.0111	0.9889	75.38
23.5	46,871		0.0000	1.0000	74.54
24.5	46,871		0.0000	1.0000	74.54
25.5	6,089		0.0000	1.0000	74.54
26.5	3,556		0.0000	1.0000	74.54
27.5	3,556		0.0000	1.0000	74.54
28.5	3,556		0.0000	1.0000	74.54
29.5	3,556		0.0000	1.0000	74.54
30.5	356		0.0000	1.0000	74.54
31.5	356		0.0000	1.0000	74.54
32.5	11,832		0.0000	1.0000	74.54
33.5	11,832		0.0000	1.0000	74.54
34.5	11,832		0.0000	1.0000	74.54
35.5	11,832		0.0000	1.0000	74.54
36.5	11,832	·	0.0000	1.0000	74.54
37.5	11,832	134	0.0113	0.9887	74.54
38.5	11,698	1,100	0.0940	0.9060	73.70

ACCOUNT 304.10 STRUCTURES AND IMPROVEMENTS - SOURCE OF SUPPLY

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1962-2014

EXPERIENCE BAND 1995-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	11,698	222	0.0189	0.9811	66.77
40.5	11,477		0.0000	1.0000	65.51
41.5	11,477		0.0000	1.0000	65.51
42.5	11,477		0.0000	1.0000	65.51
43.5	11,477		0.0000	1.0000	65.51
44.5	11,477		0.0000	1.0000	65.51
45.5	11,477		0.0000	1.0000	65.51
46.5	11,477		0.0000	1.0000	65.51
47.5	11,477		0.0000	1.0000	65.51
48.5	11,477		0.0000	1.0000	65.51
49.5	11,477		0.0000	1.0000	65.51
50.5	11,477		0.0000	1.0000	65.51
51.5	11,477	11,477	1.0000		65.51
52.5					

KY American Water Co December 31, 2014





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ACCOUNTS 304.20 AND 304.30 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1912-2014

EXPERIENCE BAND 1995-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0 0.5 1.5	42,194,148 42,153,473 43,167,893		0.0000 0.0000 0.0000	1.0000 1.0000 1.0000	100.00 100.00 100.00
2,5	45,121,655	7,512	0.0002	0.9998	100.00
3.5 4.5	44,385,290 11,653,975	19,587 126,736	0.0004 0.0109	0.9996 0.9891	99.98 99.94
5.5	12,060,074	37,447	0.0031	0.9969	98.85
6.5 7.5	13,521,847 12,729,921	41,373 277,134	0.0031 0.0218	0.9969 0.9782	98.55 98.24
8.5	11,525,088	34,427	0.0030	0.9970	96.11
9.5	11,229,769	84,183	0.0075	0.9925	95.82
10.5	10,884,476	34,648	0.0032	0.9968	95.10
11.5 12.5	10,839,771 10,778,166	204,287 24,792	0.0188 0.0023	0.9812 0.9977	94.80 93.01
13.5	10,377,292	24,752	0.0025	0.9975	92.80
14.5	9,959,367		0.0000	1.0000	92.57
15.5	9,041,828	18,767	0.0021	0.9979	92.57
16.5	9,007,349	13,191	0.0015	0.9985	92.37
17.5	8,445,487	18,221	0.0022	0.9978	92.24
18.5	5,990,891	692	0.0001	0.9999	92.04
19.5	5,971,011	10,767	0.0018	0.9982	92.03
20.5	5,981,111	38,661	0.0065	0.9935	91.86
21.5	5,212,949	2,680	0.0005	0.9995	91.27
22.5	3,577,331	98,564 14,082	0.0276 0.0041	0.9724 0.9959	91.22 88.71
23.5 24.5	3,467,050 3,436,828	88,862	0.0259	0.9939	88.35
25.5	2,985,113	31,581	0.0106	0.9894	86.06
26.5	1,419,620	72,133	0.0508	0.9492	85.15
27.5	1,121,843	12,660	0.0113	0.9887	80.83
28.5	1,141,252	20,971	0.0184	0.9816	79.92
29.5	1,119,538	6,110	0.0055	0.9945	78.45
30.5	1,102,166		0.0000	1.0000	78.02
31.5	1,103,644	1,447	0.0013	0.9987	78.02
32.5	953,529	6,075	0.0064 0.0087	0.9936 0.9913	77.92 77.42
33.5 34.5	948,429 945,335	8,250 480	0.0007	0.9995	76.75
35.5	1,003,161	218,730	0.2180	0.7820	76.71
36.5	889,742	3,602	0.0040	0.9960	59.98
37.5	928,729	1,602	0.0017	0.9983	59.74
38.5	926,013	13,279	0.0143	0.9857	59.64

KENTUCKY AMERICAN WATER COMPANY

ACCOUNTS 304.20 AND 304.30 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1912-2014

AGE AT EXPOSURES AT RETIREMENTS PCT SURV DURING AGE BEGIN OF BEGINNING OF RETMT SURV BEGIN OF AGE INTERVAL INTERVAL INTERVAL INTERVAL RATIO RATIO 58.78 39.5 905,716 14,186 0.0157 0.9843 40.5 884,798 57.86 93,259 0.1054 0.8946 41.5 787,189 22,809 0.0290 0.9710 51.76 0.0157 42.5 680,639 10,680 0.9843 50.26 43.5 585,643 11,914 0.0203 0.9797 49.47 44.5 486,356 115,071 0.2366 0.7634 48.47 45.5 371,742 370 0.0010 0.9990 37.00 46.5 373,936 7,073 0.0189 0.9811 36.96 47.5 294,937 19,595 0.0664 0.9336 36.26 48.5 266,143 0.0000 1.0000 33.85 49.5 266,143 33.85 51,589 0.1938 0.8062 50.5 214,554 0.9872 2,755 0.0128 27.29 51.5 211,798 2,600 0.0123 0.9877 26.94 52.5 205,084 975 0.0048 0.9952 26.61 1,322 0.0065 53.5 204,879 0.9935 26.48 199,724 54.5 0.0000 26.31 1.0000 403 0.0027 55.5 148,332 0.9973 26.31 56.5 129,710 542 0.0042 0.9958 26.24 0.0000 26.13 57.5 37,128 1.0000 37,128 0.0000 1.0000 58.5 26.13 30,923 1,427 0.0461 26.13 59.5 0.9539 24.93 60.5 57,525 0.0000 1.0000 0.0015 24.93 61.5 57,525 88 0.9985 62.5 90 0.0016 0.9984 24.89 57,437 39 0.0008 24.85 63.5 48,647 0.9992 64.5 48,607 0.0000 1.0000 24.83 65.5 48,721 108 0.0022 0.9978 24.83 283 66.5 46,447 0.0061 0.9939 24.77 67.5 44,830 0.0000 1.0000 24.62 46,770 0.0000 24.62 68.5 1.0000 69.5 59,036 0.0000 1.0000 24.62 70.5 59,036 0.0000 1.0000 24.62 103 0.0017 24.62 71.5 59,036 0.9983 24.58 72.5 58,933 412 0.0070 0.9930 58,151 73.5 0.0000 1.0000 24.41 74.5 58,151 6,930 0.1192 0.8808 24.41 75.5 51,221 0.0000 1.0000 21.50 76.5 42,496 0.0000 1.0000 21.50 77.5 42,496 0.0000 1.0000 21.50

42,496

78.5

21.50

0.0000

1.0000

KENTUCKY AMERICAN WATER COMPANY

ACCOUNTS 304.20 AND 304.30 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1912-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	42,496	14,721	0.3464	0.6536	21.50
80.5	14,770		0.0000	1.0000	14.05
81.5	14,770	0	0.0000	1.0000	14.05
82.5	15,613	28	0.0018	0.9982	14.05
83.5	15,584		0.0000	1.0000	14.03
84.5	15,584		0.0000	1.0000	14.03
85.5	15,021		0.0000	1.0000	14.03
86.5	15,021		0.0000	1.0000	14.03
87.5	15,021		0.0000	1.0000	14.03
88.5	13,081	49	0.0038	0.9962	14.03
89.5	843		0.0000	1.0000	13.97
90.5	843		0,0000	1.0000	13.97
91.5	843		0.0000	1.0000	13.97
92.5	843	843	1.0000		13.97
93.5					





ACCOUNT 304.40 STRUCTURES AND IMPROVEMENTS - TRANSMISSION AND DISTRIBUTION

ORIGINAL LIFE TABLE

EXPERIENCE BAND 1995-2014

PLACEMENT BAND 1954-2011

AGE AT	EXPOSURES AT	RETIREMENTS			PCT SURV
BEGIN OF	BEGINNING OF	DURING AGE	RETMT	SURV	BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
0.0	510,562		0.0000	1.0000	100.00
0.5	510,562		0.0000	1.0000	100.00
1.5	521,313		0.0000	1.0000	100.00
2.5	935,819	6,233	0.0067	0.9933	100.00
3.5	967,947	708	0.0007	0.9993	99.33
4.5	941,723		0.0000	1.0000	99.26
5,5	850,735	2,822	0.0033	0.9967	99.26
6.5	822,525	53	0.0001	0.9999	98.93
7.5	822,473	11,337	0.0138	0.9862	98.93
8.5	732,618	10,340	0.0141	0.9859	97.56
9.5	710,708	20,000	0.0281	0.9719	96.19
10.5	690,708		0.0000	1,0000	93.48
11.5	690,708	4,340	0.0063	0.9937	93.48
12.5	666,625		0.0000	1.0000	92.89
13.5	666,625		0.0000	1.0000	92.89
14.5	658,345	199	0.0003	0.9997	92.89
15.5	606,350	1,527	0.0025	0.9975	92.86
16.5	465,718	1,200	0.0026	0.9974	92.63
17.5	464,491		0.0000	1.0000	92.39
18.5	457,265		0.0000	1.0000	92.39
19.5	457,265		0.0000	1.0000	92.39
20.5	457,265		0.0000	1.0000	92.39
21.5	457,265		0.0000	1.0000	92.39
22.5	44,286	3,468	0.0783	0.9217	92.39
23.5	1,420		0.0000	1.0000	85.16
24.5	1,420		0.0000	1.0000	85.16
25.5	1,420		0.0000	1.0000	85.16
26.5	1,420		0.0000	1.0000	85.16
27.5	1,420		0.0000	1.0000	85.16
28.5	1,420		0.0000	1.0000	85.16
29.5	1,420		0.0000	1.0000	85.16
30.5	1,420		0.0000	1.0000	85.16
31.5	1,420	1,420	1.0000		85.16
32.5					
33.5					
34.5					
35 5					

35.5

36.5 37.5

38.5

ACCOUNT 304.40 STRUCTURES AND IMPROVEMENTS - TRANSMISSION AND DISTRIBUTION

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1954-2011

EXPERIENCE BAND 1995-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5					
40.5	1,100		0.0000		
41.5	1,100		0.0000		
42.5	1,100		0.0000		
43.5	1,100		0.0000		
44.5	1,100		0.0000		
45.5	1,100		0.0000		
46.5	1,100		0.0000		
47.5	1,100		0.0000		
48.5	1,100		0.0000		
49.5	1,100		0.0000		
50.5	1,100		0.0000		
51.5	1,100	1,100	1.0000		
52.5					



KENTUCKY AMERICAN WATER COMPANY

ACCOUNT 304.60 STRUCTURES AND IMPROVEMENTS - OFFICE BUILDINGS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1965-2014

AGE AT BEGIN OF	EXPOSURES AT BEGINNING OF	RETIREMENTS DURING AGE	RETMT	SURV	PCT SURV BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
0.0	9,309,722		0.0000	1.0000	100.00
0.5	9,015,697		0.0000	1.0000	100.00
1.5	8,622,783	4,361	0.0005	0.9995	100.00
2.5	8,580,403	39,394	0.0046	0.9954	99.95
3.5	7,888,322	33,675	0.0043	0.9957	99.49
4.5	5,094,779	21,094	0.0041	0.9959	99.07
5,5	5,104,454		0.0000	1.0000	98.66
6.5	3,153,219		0.0000	1.0000	98.66
7.5	3,209,438	1.	0.0000	1.0000	98.66
8,5	3,182,547		.0.0000	1.0000	98.66
9.5	3,124,921		0.0000	1.0000	98.66
10.5	3,112,298	3,018	0.0010	0.9990	98.66
11.5	3,058,725	13,257	0.0043	0.9957	98.56
12.5	3,119,840	31,563	0.0101	0.9899	98.13
13.5	3,064,506		0.0000	1.0000	97.14
14.5	3,062,773	4,303	0.0014	0.9986	97.14
15.5	2,897,009		0.0000	1.0000	97.00
16.5	2,670,886	14,252	0.0053	0.9947	97.00
17.5	569,813	487	0.0009	0.9991	96.49
18.5	559,334	4,184	0.0075	0.9925	96.40
19.5	529,093	32,709	0.0618	0,9382	95.68
20.5	469,286	1,413	0.0030	0.9970	89.77
21.5	473,819	5,864	0.0124	0.9876	89.50
22.5	472,057		0.0000	1.0000	88.39
23.5	473,811		0.0000	1.0000	88.39
24.5	1,150,232	21,861	0.0190	0.9810	88.39
25.5	1,076,953	937	0.0009	0.9991	86.71
26.5	992,327	814	0.0008	0.9992	86.63
27.5	854,543		0.0000	1.0000	86.56
28.5	826,803	36,730	0.0444	0.9556	86.56
29.5	797,876		0.0000	1.0000	82.72
30.5	795,990		0.0000	1.0000	82.72
31.5	795,990	1,229	0.0015	0.9985	82.72
32.5	721,865		0.0000	1.0000	82.59
33.5	721,865		0.0000	1.0000	82.59
34.5	721,865		0.0000	1.0000	82.59
35.5	716,767	926	0.0013	0.9987	82.59
36.5	715,841		0.0000	1.0000	82.48
37.5	710,895	484	0.0007	0.9993	82.48
38.5	710,411		0.0000	1.0000	82.43

ACCOUNT 304.60 STRUCTURES AND IMPROVEMENTS - OFFICE BUILDINGS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1965-2014

EXPERIENCE BAND 1995-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5 40.5 41.5 42.5 43.5 44.5 45.5 46.5 46.5 48.5	710,411 708,330 703,320 683,424 678,971 7,142 7,142 7,142 7,142 7,142 7,142	2,081 1,813 24,635	0.0029 0.0000 0.0027 0.0363 0.0000 0.0000 0.0000 0.0000 0.0000	0.9971 1.0000 1.0000 0.9973 0.9637 1.0000 1.0000 1.0000 1.0000 1.0000	82.43 82.19 82.19 82.19 81.97 78.99 78.99 78.99 78.99 78.99 78.99
49.5					78.99







KENTUCKY AMERICAN WATER COMPANY

ACCOUNT 304.70 STRUCTURES AND IMPROVEMENTS - STORE, SHOP AND GARAGE

ORIGINAL LIFE TABLE

PLACEMENT BAND 1957-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	1,145,473		0.0000	1.0000	100.00
0.5	1,142,161		0.0000	1.0000	100.00
1.5	1,688,263		0.0000	1.0000	100.00
2.5	1,688,263		0.0000	1.0000	100.00
3.5	1,680,714		0.0000	1.0000	100.00
4.5	1,700,557		0.0000	1.0000	100.00
5.5	901,201	29,115	0.0323	0.9677	100.00
6.5	914,612		0.0000	1.0000	96.77
7.5	968,131	7,226	0.0075	0.9925	96.77
8.5	960,904		0.0000	1.0000	96.05
9.5	958,286		0.0000	1.0000	96.05
10.5	958,286		0.0000	1.0000	96.05
11.5	958,286	15,694	0.0164	0.9836	96.05
12.5	898,632	3,588	0.0040	0.9960	94.47
13.5	883,382		0.0000	1,0000	94.10
14.5	883,382	3,506	0.0040	0.9960	94.10
15.5	809,244		0.0000	1.0000	93.72
16.5	809,244		0.0000	1.0000	93.72
17.5	814,894		0.0000	1.0000	93.72
18.5	667,640		0.0000	1.0000	93.72
19.5	667,640		0.0000	1.0000	93.72
20.5	667,640		0.0000	1.0000	93.72
21.5	121,538		0.0000	1.0000	93.72
22.5	122,287		0.0000	1.0000	93.72
23.5	123,011	1,930	0.0157	0.9843	93.72
24.5	103,168		0.0000	1.0000	92.25
25.5	103,168		0.0000	1.0000	92.25
26.5	60,642	9,119	0.1504	0.8496	92.25
27.5	7,123		0.0000	1.0000	78.38
28.5	7,123		0.0000	1.0000	78.38
29.5	7,123		0.0000	1.0000	78.38
30.5	7,123		0.0000	1.0000	78.38
31.5	7,123		0.0000	1.0000	78.38
32.5	7,123		0.0000	1.0000	78.38
33.5	7,123		0.0000	1.0000	78.38
34.5	7,831		0.0000	1.0000	78.38
35.5	7,831		0.0000	1.0000	78.38
36.5	7,831		0.0000	1.0000	78.38
37.5	15,875		0.0000	1,0000	78.38
38.5	15,875		0.0000	1.0000	78.38

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KENTUCKY AMERICAN WATER COMPANY

ACCOUNT 304.70 STRUCTURES AND IMPROVEMENTS - STORE, SHOP AND GARAGE

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1957-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5 40.5 41.5 42.5 43.5 44.5 45.5 46.5 47.5 48.5	15,875 15,875 15,875 15,126 14,402 14,402 14,402 14,402 14,402 14,402 14,402	724	0.0000 0.0000 0.0479 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 0.9521 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	78.38 78.38 78.38 78.38 74.63 74.63 74.63 74.63 74.63 74.63 74.63 74.63
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5	14,402 14,402 14,402 14,402 14,402 14,402 13,694 13,694 13,694	708	$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0492\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\end{array}$	1.0000 1.0000 1.0000 0.9508 1.0000 1.0000 1.0000	74.63 74.63 74.63 74.63 74.63 70.96 70.96 70.96 70.96



AGE IN YEARS

KENTUCKY AMERICAN WATER COMPANY

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KENTUCKY AMERICAN WATER COMPANY

ACCOUNT 304.80 STRUCTURES AND IMPROVEMENTS - MISCELLANEOUS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1934-2012

AGE AT EXPOSURES AT RETIREMENTS PCT SURV BEGIN OF BEGINNING OF DURING AGE RETMT SURV BEGIN OF INTERVAL AGE INTERVAL INTERVAL RATIO RATIO INTERVAL 0.0 1,764,826 0.0000 1.0000 100.00 1,767,972 0.5 0.0000 1.0000 100.00 1.5 1,896,760 0.0000 1.0000 100.00 2.5 1,781,102 0.0000 1.0000 100.00 3.5 1,787,225 0.0000 1.0000 100.00 4.5 1,801,800 0.0000 1.0000 100.00 5.5 1,869,211 33,501 0.0179 0.9821 100.00 6.5 1,835,710 125,540 0,0684 0.9316 98.21 7.5 1,716,124 186,971 0.1089 0.8911 91.49 56,599 0.9568 81.52 8.5 1,309,063 0.0432 78.00 9.5 934,101 12,171 0.0130 0.9870 76.98 10.5 914,055 29,516 0.0323 0.9677 11.5 294,031 12,893 0.0438 0.9562 74.50 12.5 247,090 9,215 0.0373 0.9627 71.23 68.57 13.5 218,835 50 0.0002 0.9998 14.5 209,741 56,276 0.2683 0.7317 68.56 15.5 208,002 3,200 0.0154 0.9846 50.16 16.5 191,347 0.0000 1.0000 49.39 0.0077 17.5 168,124 1,300 0.9923 49.39 18.5 166,824 1,893 0.0113 0.9887 49.01 164,931 6,000 0.0364 0.9636 48.45 19.5 20.5 155,785 0.0000 1.0000 46.69 151,744 1,400 0.0092 0.9908 46.69 21.5 0.0102 46.26 22.5 145,231 1,476 0.9898 45.79 23.5 138,166 701 0.0051 0.9949 0.0000 1.0000 45.56 24.5 123,591 0.0000 1.0000 45.56 25.5 56,229 26.5 56,229 0.0000 1.0000 45.56 27.5 31,199 0.0000 1.0000 45.56 28.5 31,205 6,000 0.1923 0.8077 45.56 29.5 2,205 0.0000 1.0000 36.80 30.5 2,205 0.0000 1.0000 36.80 2,205 1.0000 36.80 31.5 0.0000 32.5 2,205 600 0.2722 0.7278 36.80 33.5 1,605 0.0000 1.0000 26.78 1.0000 26.78 0.0000 34.5 1,605 26.78 35.5 1,605 1,266 0.7888 0.2112 0.0000 1.0000 5.66 36.5 22,219 0.0000 1.0000 5.66 37.5 22,219 0.0000 1.0000 5.66 38.5 22,219

ACCOUNT 304.80 STRUCTURES AND IMPROVEMENTS - MISCELLANEOUS

ORIGINAL LIFE TABLE, CONT.

EXPERIENCE BAND 1995-2014

PLACEMENT BAND 1934-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5 40.5 41.5 42.5 43.5 44.5 45.5 46.5 47.5 48.5	22,219 22,219 22,219 22,219 21,165 21,165 21,165 21,165 21,165 21,165 21,165	1,054	$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0474\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0003\\ 0.0000\end{array}$	1.0000 1.0000 0.9526 1.0000 1.0000 1.0000 1.0000 0.9997 1.0000	5.66 5.66 5.66 5.39 5.39 5.39 5.39 5.39 5.39 5.39
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	21,159 21,159 21,159 21,159 21,159 21,159 21,159	21,159	0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 1.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	5.39 5.39 5.39 5.39 5.39 5.39 5.39
59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	291 291 291 291 291 291 291 291 291		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000		
69.5 70.5 71.5 72.5 73.5 74.5 75.5 76.5 76.5 78.5 78.5 79.5 80.5	291 291 291 291 291 291 291 291 291 291		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000		

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KY American Water Co December 31, 2014





KENTUCKY AMERICAN WATER COMPANY

ACCOUNT 305.00 COLLECTING AND IMPOUNDING RESERVOIRS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1913-2005

AGE AT EXPOSURES AT RETIREMENTS PCT SURV BEGIN OF BEGINNING OF DURING AGE RETMT SURV BEGIN OF INTERVAL AGE INTERVAL INTERVAL RATIO RATIO INTERVAL 0.0 0.0000 100.00 5,534 1.0000 0.5 75,873 0.0000 1.0000 100.00 1.5 79,459 0.0000 1.0000 100.00 2.5 92,707 0.0000 1.0000 100.00 106,720 3.5 0.0000 1.0000 100.00 4.5 106,720 0.0000 100.00 1.0000 5.5 109,004 0.0000 1.0000 100.00 6.5 872,764 0.0000 1.0000 100.00 872,764 0.0000 1.0000 100.00 7.5 872,764 0.0000 1.0000 100.00 8.5 9.5 869,482 0.0000 1.0000 100.00 1.0000 10.5 869,482 0.0000 100.00 11.5 869,482 0.0000 1.0000 100.00 12.5 869,482 0.0000 1.0000 100.00 13.5 869,482 0.0000 1.0000 100.00 14.5 869,482 0.0000 1.0000 100.00 15.5 869,482 4,096 0.0047 0.9953 100.00 16.5 865,386 9,156 0.0106 0.9894 99.53 17.5 861,382 660 0.0008 0.9992 98.48 18.5 859,130 0.0000 1.0000 98.40 19.5 859,130 30,591 0.0356 0.9644 98.40 20.5 0.0000 94.90 797,948 1.0000 21.5 817,802 0.0000 94.90 1.0000 22.5 813,717 94.90 0.0000 1.0000 23.5 799,704 3,536 0.0044 0.9956 94.90 94.48 24.5 796,168 0.0000 1.0000 25.5 94.48 793,884 0.0000 1.0000 26.5 33,659 0.0000 1.0000 94.48 27.5 33,659 0.0000 1.0000 94.48 28.5 1.0000 33,659 0.0000 94.48 29.5 33,659 0.0000 1.0000 94.48 30.5 33,659 0.0000 1.0000 94.48 34,050 0.0000 94.48 31.5 1.0000 34,050 0.0000 1.0000 94.48 32.5 1.0000 33.5 34,050 0.0000 94.48 94.48 34.5 34,050 0.0000 1.0000 35.5 34,050 0.0000 1.0000 94.48 5,152 94.48 36.5 34,050 0.1513 0.8487 1.0000 80.18 37.5 28,898 0.0000 38.5 28,898 0.0000 1.0000 80.18

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KENTUCKY AMERICAN WATER COMPANY

ACCOUNT 305.00 COLLECTING AND IMPOUNDING RESERVOIRS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1913-2005

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5 40.5 41.5 42.5 43.5 44.5 45.5 46.5 47.5	28,898 28,898 5,640 574 574 574 574 574 574 574 574	23,441	0.0000 0.8111 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 0.1889 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	80.18 80.18 15.14 15.14 15.14 15.14 15.14 15.14 15.14 15.14
48.5 49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5	574 574 574 182 182 182 722 722 722 722 722	392	0.0000 0.0000 0.6825 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 0.3175 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	15.14 15.14 15.14 4.81 4.81 4.81 4.81 4.81 4.81 4.81 4
58.5 59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 66.5	722 36,524 36,342 36,342 36,342 36,342 36,342 36,342 36,342 36,342	182	0.0000 0.0050 0.0050 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 0.9950 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	4.81 4.81 4.78 4.78 4.78 4.78 4.78 4.78 4.78 4.78
68.5 70.5 71.5 72.5 73.5 74.5 75.5 76.5 77.5 78.5	36,342 36,342 36,342 36,342 36,342 36,342 28,430 28,430 28,430 28,430 28,430	7,912	0.0000 0.0000 0.0000 0.0000 0.2177 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 0.7823 1.0000 1.0000 1.0000 1.0000 1.0000	4.78 4.78 4.78 4.78 4.78 4.78 3.74 3.74 3.74 3.74 3.74 3.74

ACCOUNT 305.00 COLLECTING AND IMPOUNDING RESERVOIRS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1913-2005

EXPER	IENCE	BAND	1995-	2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	28,430	3,576	0.1258	0.8742	3.74
80.5					3.27
81.5	73,214		0.0000		
82.5	73,214		0.0000		
83.5	73,214		0.0000		
84.5	73,214		0.0000		
85.5	73,214		0.0000		
86.5	73,214		0.0000		
87.5	73,214		0.0000		
88.5	73,214		0.0000		
89.5	73,214		0.0000		
90.5	73,214		0.0000		
91.5	73,214		0.0000		
92.5	73,214		0.0000		
93.5	73,214		0.0000		
94.5	73,214		0.0000		
95.5	73,214		0.0000		
96.5	73,214		0,0000		
97.5	73,214		0.0000		
98.5	73,214		0.0000		
99.5	73,214		0.0000		
100.5	73,214	73,214	1.0000		
101.5					



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ACCOUNT 306.00 LAKE, RIVER AND OTHER INTAKES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1958-2013

EXPERIENCE BAND 1995-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
TNICKVAD	WGE INTERVAL	INTERVAL	RAIIO	KA110	THIERVAD
0.0	1,409,320		0.0000	1.0000	100.00
0.5	1,409,490		0.0000	1.0000	100.00
1.5	1,367,314		0.0000	1,0000	100.00
2.5	1,152,524		0.0000	1.0000	100.00
3.5	1,317,644	2,379	0,0018	0.9982	100.00
4.5	500,984	3,666	0.0073	0.9927	99.82
5.5	497,317		0.0000	1.0000	99.09
6.5	497,317		0.0000	1.0000	99.09
7.5	494,939		0.0000	1.0000	99.09
8,5	494,939		0.0000	1.0000	99.09
9.5	475,114		0.0000	1.0000	99.09
10.5	475,114		0.0000	1.0000	99.09
11.5	475,114		0.0000	1.0000	99.09
12.5	229,820		0.0000	1.0000	99.09
13.5	229,820	20,500	0.0892	0.9108	99.09
14.5	209,320		0.0000	1.0000	90.25
15.5	209,320		0.0000	1.0000	90.25
16.5	209,320		0.0000	1.0000	90.25
17.5	205,954		0.0000	1.0000	90.25
18.5	205,954		0.0000	1.0000	90.25
19.5	205,954		0.0000	1.0000	90.25
20.5	205,784		0.0000	1.0000	90.25
21.5	198,799	16,301	0.0820	0.9180	90.25
22.5	176,548		0.0000	1.0000	82.85
23.5	34,525	5,779	0.1674	0.8326	82.85
24.5	63,178		0.0000	1.0000	68.98
25.5	63,178	5,598	0.0886	0.9114	68.98
26.5	57,580		0.0000	1.0000	62.87
27.5	57,580		0.0000	1.0000	62.87
28.5	77,112		0.0000	1.0000	62.87
29.5	77,112		0.0000	1.0000	62.87
30.5	77,112		0.0000	1.0000	62.87
31.5	77,112		0.0000	1.0000	62.87
32.5	77,278		0.0000	1.0000	62.87
33.5	77,727		0.0000	1.0000	62.87
34.5	77,727		0.0000	1.0000	62.87
35.5	77,727		0.0000	1.0000	62.87
36.5	82,916		0.0000	1.0000	62.87
37.5	82,916		0.0000	1.0000	62.87
38.5	82,916		0.0000	1.0000	62.87

KENTUCKY AMERICAN WATER COMPANY

ACCOUNT 306.00 LAKE, RIVER AND OTHER INTAKES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1958-2013

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5 40.5 41.5 42.5 43.5 44.5 45.5 45.5 46.5 47.5 48.5	82,916 82,916 82,916 82,866 59,768 20,147 20,147 20,147 20,147 20,147	50 8,047	0.0000 0.0006 0.0000 0.1346 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 0.9994 1.0000 0.8654 1.0000 1.0000 1.0000 1.0000 1.0000	62.87 62.87 62.83 62.83 54.37 54.37 54.37 54.37 54.37 54.37
49.5 50.5 51.5 52.5 53.5	615 615 615 449	166	0.0000 0.0000 0.2694 0.0000	1.0000 1.0000 0.7306 1.0000	54.37 54.37 54.37 39.72 39.72

KENTUCKY AMERICAN WATER COMPANY ACCOUNT 309.00 SUPPLY MAINS ORIGINAL AND SMOOTH SURVIVOR CURVES



KENTUCKY AMERICAN WATER COMPANY

ACCOUNT 309.00 SUPPLY MAINS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1934-2013

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0 0.5 1.5 2.5 3.5 4.5 5.5	13,527,002 13,582,708 13,538,972 15,301,938 15,284,893 1,907,103 3,883,331		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	100.00 100.00 100.00 100.00 100.00 100.00 100.00
6.5 7.5 8.5	3,978,069 4,021,960 4,021,960		0.0000 0.0000 0.0000	1.0000 1.0000 1.0000	100.00 100.00 100.00
9.5 10.5 11.5 12.5 13.5 14.5	4,021,960 4,036,123 4,036,482 4,075,113 4,077,484 4,055,720	14,520	0.0000 0.0000 0.0036 0.0000 0.0000	1.0000 1.0000 0.9964 1.0000 1.0000	100.00 100.00 100.00 99.64 99.64
15.5 16.5 17.5 18.5	4,055,720 4,055,720 4,055,720 4,055,720 4,183,505		0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000	99.64 99.64 99.64 99.64 99.64 99.64
19.5 20.5 21.5 22.5 23.5	4,183,505 4,154,173 4,148,698 2,393,820 2,384,490		0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000	99.64 99.64 99.64 99.64 99.64 99.64
24.5 25.5 26.5 27.5 28.5	2,387,716 411,488 317,225 224,031 224,031		0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000	99.64 99.64 99.64 99.64 99.64 99.64
29.5 30.5 31.5 32.5 33.5	664,522 650,359 650,000 596,848 594,477		0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000	99.64 99.64 99.64 99.64 99.64 99.64
34.5 35.5 36.5 37.5 38.5	590,979 700,710 700,710 700,710 632,808		0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000	99.64 99.64 99.64 99.64 99.64 99.64

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KENTUCKY AMERICAN WATER COMPANY

ACCOUNT 309.00 SUPPLY MAINS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1934-2013

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5 40.5 41.5 42.5 43.5 44.5 45.5 45.5 46.5 47.5 48.5	632,808 632,808 634,704 624,030 624,249 621,022 615,093 612,218	207	0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0003 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 0.9997 1.0000 1.0000 1.0000	99.64 99.64 99.64 99.64 99.64 99.64 99.64 99.61 99.61
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	188,131 171,769 171,769 171,783 172,217 172,720 62,990 62,990 62,990 3,107		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	99.61 99.61 99.61 99.61 99.61 99.61 99.61 99.61 99.61
59.5 60.5 61.5 62.5 63.5 64.5 65.5	3,107 228,297 226,401 226,401 226,183 226,183 226,183	266	0.0000 0.0012 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 0.9988 1.0000 1.0000 1.0000 1.0000 0.9998	99.61 99.61 99.49 99.49 99.49 99.49 99.49 99.49
66.5 67.5 68.5	226,133 226,133 226,133		0.0000 0.0000 0.0000	1.0000 1.0000 1.0000	99.47 99.47 99.47 99.47
69.5 70.5 71.5 72.5	226,133 226,092 226,092 226,077	14	0.0000 0.0000 0.0001 0.0000	1.0000 1.0000 0.9999 1.0000	99.47 99.47 99.47 99.46
73.5 74.5 75.5 76.5 77.5 78.5	225,644 224,729 224,729 224,728 224,337 224,316	412 1 391 21 305	0.0018 0.0000 0.0000 0.0017 0.0001 0.0014	0.9982 1.0000 1.0000 0.9983 0.9999 0.9986	99.46 99.28 99.28 99.28 99.11 99.10
79.5 80.5	224,011	489	0.0022	0.9978	98.96 98.75

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KY American Water Co December 31, 2014

EXPERIENCE BAND 2005-2014

KENTUCKY AMERICAN WATER COMPANY

ACCOUNT 309.00 SUPPLY MAINS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1934-2013

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0 0.5 1.5 2.5 3.5 4.5 5.5 6.5	13,487,220 13,513,595 13,464,383 13,476,318 13,449,943 97,415 97,415 91,961		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	100.00 100.00 100.00 100.00 100.00 100.00 100.00
7.5 8.5 9.5	39,782 39,782 39,782		0.0000 0.0000 0.0000	1.0000 1.0000 1.0000	100.00 100.00 100.00
10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5	69,114 74,589 1,825,620 1,834,950 1,809,688 3,785,917 3,886,108 3,982,178	14,520	0.0000 0.1947 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 0.8053 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	100.00 100.00 80.53 80.53 80.53 80.53 80.53 80.53 80.53
18.5 19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	3,982,178 3,982,178 3,967,009 3,961,893 2,249,493 2,242,534 2,246,032 269,804 169,612 73,543 201,327		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	80.53 80.53 80.53 80.53 80.53 80.53 80.53 80.53 80.53 80.53 80.53
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	201,327 187,164 186,805 144,327 141,956 141,684 141,684 141,684 147,613 150,488 22,704		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	80.53 80.53 80.53 80.53 80.53 80.53 80.53 80.53 80.53 80.53

EXPERIENCE BAND 2005-2014

KENTUCKY AMERICAN WATER COMPANY

ACCOUNT 309.00 SUPPLY MAINS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1934-2013

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5 40.5 41.5 42.5 43.5 44.5 45.5 46.5 47.5 48.5	463,194 463,194 463,194 452,521 452,521 449,295 559,026 553,097 550,221 610,104	207	0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0004 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 0.9996 1.0000 1.0000 1.0000	80.53 80.53 80.53 80.53 80.53 80.53 80.53 80.50 80.50 80.50
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	186,017 169,613 171,509 171,727 171,727 61,997 61,997 61,997 2,114		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	80.50 80.50 80.50 80.50 80.50 80.50 80.50 80.50 80.50
59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	2,114 2,156 260 274 490 993 993 993 993 993	266	0.0000 0.1236 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 0.8764 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	80.50 80.50 70.55 70.55 70.55 70.55 70.55 70.55 70.55 70.55
69.5 70.5 71.5 72.5 73.5 74.5 75.5 76.5 77.5 78.5	993 226,092 226,092 226,077 225,644 224,729 224,729 224,728 224,337 224,316	14 412 1 391 21 305	0.0000 0.0001 0.0000 0.0018 0.0000 0.0000 0.0017 0.0001 0.0014	1.0000 1.0000 0.9999 1.0000 0.9982 1.0000 1.0000 0.9983 0.9999 0.9986	70.55 70.55 70.55 70.55 70.42 70.42 70.42 70.30 70.29
79.5 80.5	224,011	489	0.0022	0.9978	70.19 70.04

🖉 Gannett Fleming

KY American Water Co December 31, 2014





KENTUCKY AMERICAN WATER COMPANY

ACCOUNT 310.10 OTHER POWER GENERATION EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1963-2014

AGE AT EXPOSURES AT RETIREMENTS PCT SURV BEGIN OF BEGINNING OF DURING AGE RETMT SURV BEGIN OF INTERVAL AGE INTERVAL INTERVAL RATIO INTERVAL RATIO 0.0 2,589,551 0.0000 1.0000 100.00 0.5 2,585,765 6,249 0.0024 0.9976 100.00 1.5 2,510,119 16,447 0.0066 0.9934 99.76 2.5 2,473,570 0.0000 1.0000 99.10 3.5 2,428,106 15,929 0.0066 0.9934 99.10 4.5 592,504 0.0000 1.0000 98.45 5.5 627,629 0.0000 1.0000 98.45 6.5 694,869 0.0000 1.0000 98.45 7.5 498,828 0.0000 1.0000 98.45 8.5 498,828 0.0000 1.0000 98.45 9.5 498,828 7,941 0.0159 0.9841 98.45 10.5 490,887 1,325 0.0027 0.9973 96.89 11.5 476,776 0.0000 1.0000 96.63 12.5 476,776 0.0000 1.0000 96.63 13.5 545,370 9,442 0.0173 0.9827 96.63 14.5 535,928 27 0.0001 0.9999 94.95 15.5 535,901 0.0000 1.0000 94.95 16.5 535,901 0.0000 1.0000 94.95 17.5 535,901 0.0000 1.0000 94.95 18.5 326,749 0.0000 1.0000 94.95 19.5 326,749 0.0000 1.0000 94.95 20.5 326,749 0.0000 1.0000 94.95 21.5 326,749 0.0000 1.0000 94.95 22.5 326,749 0.0000 1.0000 94.95 23.5 326,749 0.0000 1.0000 94.95 24.5 326,749 11,986 0.0367 0.9633 94.95 25.5 259,564 28,935 0.1115 0.8885 91.47 26.5 68,594 0.0000 1.0000 81.27 27.5 68,594 0.0000 1.0000 81.27 28.5 68,594 0.0000 1.0000 81.27 29.5 68,594 14,473 0.2110 0.7890 81,27 30.5 54,121 0.0000 1.0000 64.12 31.5 68,622 0.0000 1.0000 64.12 32.5 68,622 15,511 0.2260 0.7740 64.12 33.5 14,501 0.0000 1.0000 49.63 34.5 14,501 0.0000 1.0000 49.63 35.5 14,501 0.0000 1.0000 49.63 36.5 14,501 0.0000 1.0000 49.63 37.5 14,501 0.0000 1.0000 49.63 38.5 14,501 0.0000 1.0000 49.63

ACCOUNT 310.10 OTHER POWER GENERATION EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1963-2014

EXPERIENCE BAND 1995-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5 40.5	14,501 14,501		0.0000	1.0000	49.63 49.63
41.5	14,501		0.0000	1.0000	49.63
42.5 43.5	14,501 14,501		0.0000 0.0000	1.0000 1.0000	49.63 49.63
44.5	14,501		0.0000	1.0000	49.63
45.5 46.5	14,501	14,501	1.0000		49.63

EXPERIENCE BAND 2005-2014

KENTUCKY AMERICAN WATER COMPANY

ACCOUNT 310.10 OTHER POWER GENERATION EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1963-2014

EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
2,358,347 2,354,561 2,293,026 2,264,418 2,218,954 383,352 351,292 218,093 22,052 231,204	6,249 16,447 15,929	0.0000 0.0027 0.0072 0.0000 0.0072 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 0.9973 0.9928 1.0000 0.9928 1.0000 1.0000 1.0000 1.0000 1.0000	100.00 100.00 99.73 99.02 99.02 98.31 98.31 98.31 98.31 98.31 98.31
231,204 223,263 209,152 209,152 209,152 209,152 209,152 276,337 467,307 467,307 258,156	7,941 1,325	0.0343 0.0059 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	0.9657 0.9941 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	98.31 94.93 94.37 94.37 94.37 94.37 94.37 94.37 94.37 94.37 94.37
258,156 258,156 258,156 326,749 326,749 259,564 68,594 68,594 68,594 68,594 54,121 54,121	11,986 28,935 14,473 15,511	0.0000 0.0000 0.0000 0.0000 0.0367 0.1115 0.0000 0.0000 0.0000 0.2110 0.0000 0.2210 0.0000 0.2866	1.0000 1.0000 1.0000 1.0000 0.9633 0.8885 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 0.7890 1.0000 0.7134	94.37 94.37 94.37 94.37 94.37 94.37 90.91 80.77 80.77 80.77 80.77 63.73 63.73 63.73 63.73
	BEGINNING OF AGE INTERVAL 2,358,347 2,354,561 2,293,026 2,264,418 2,218,954 383,352 351,292 218,093 22,052 231,204 231,204 231,204 231,204 231,204 231,204 231,204 231,204 231,204 231,204 231,204 239,152 209,152 258,156 258,156 258,156 258,156 258,156 259,564 68,594 68,594 68,594 68,594 68,594 54,121 54,121	BEGINNING OF AGE INTERVALDURING AGE INTERVAL2,358,347 2,354,5616,249 16,447 2,264,418 2,218,95416,447 16,447 2,264,418 2,218,9542,264,418 2,218,95415,929 383,352 351,292 218,093 22,052 231,20415,929 383,352 351,292 218,093 22,052 231,204231,204 231,2047,941 223,263 2,052 209,152 209,152 209,152 209,152 209,152 209,152 209,152 209,152 209,152 209,152 209,152 209,152 209,152 209,152 209,152 258,156 258,156 258,156 258,156 258,156 258,156 258,156 258,156 259,564 68,594 68,594 68,594 68,59414,473 54,121	BEGINNING OF AGE INTERVALDURING AGE INTERVALRETMT RATIO2,358,3470.00002,354,5616,2490.00272,293,02616,4470.00722,264,4180.00002,218,95415,9290.0072383,3520.0000351,2920.0000231,2047,9410.0343223,2631,3250.0000209,1520.0000209,1520.0000209,1520.0000258,1560.0000258,1560.0000258,1560.0000258,1560.0000258,1560.0000258,1560.0000326,74911,9860.0367259,56428,9350.111568,5940.000068,59414,4730.211054,1210.000054,1210.0000	BEGINNING OF AGE INTERVAL DURING AGE INTERVAL RETMT RATIO SURV RATIO 2,358,347 0.0000 1.0000 2,354,561 6,249 0.0027 0.9973 2,293,026 16,447 0.0072 0.9928 2,264,418 0.0000 1.0000 2,218,954 15,929 0.0072 0.9928 383,352 0.0000 1.0000 218,093 0.0000 1.0000 22,052 0.0000 1.0000 231,204 7,941 0.0343 0.9657 223,263 1,325 0.0000 1.0000 209,152 0.0000 1.0000 209,152 0.0000 1.0000 209,152 0.0000 1.0000 276,337 0.0000 1.0000 258,156 0.0000 1.0000 258,156 0.0000 1.0000 258,156 0.0000 1.0000 258,156 0.0000 1.0000 258,156 0.00000 1.0000

38.5

ACCOUNT 310.10 OTHER POWER GENERATION EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT	BAND 1963-2014		EXPER	IENCE BAN	D 2005-2014
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5					
40.5					
41.5	14,501		0.0000		
42.5	14,501		0.0000		
43.5	14,501		0.0000		
44.5	14,501		0.0000		
45.5	14,501	14,501	1.0000		
46.5					



60

AGE IN YEARS

40

80

100

120

KENTUCKY AMERICAN WATER COMPANY ACCOUNTS 311.20 THRU 311.54 PUMPING EQUIPMENT ORIGINAL AND SMOOTH SURVIVOR CURVES

0 L 0

20
ACCOUNTS 311.20 THRU 311.54 PUMPING EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0 0.5 1.5	23,804,614 22,454,500 19,900,435	107,717	0.0000	1.0000 0.9952	100.00
2.5	23,664,048	69,455 100,308	0.0035 0.0042	0.9965 0.9958	99.52 99.17
3.5	23,189,356	161,537	0.0042	0.9930	98.75
4.5	15,613,722	45,583	0.0029	0.9971	98.06
5.5	12,752,455	55,756	0.0044	0.9956	97.78
6.5	9,494,063	30,534	0.0032	0.9968	97.35
7.5	9,220,210	15,024	0.0016	0.9984	97.04
8.5	9,164,156	12,228	0.0013	0.9987	96.88
9.5	8,827,469	15,795	0.0018	0.9982	96.75
10.5	8,827,002	137,924	0.0156	0.9844	96.58
11.5	8,644,944	69,031	0.0080	0.9920	95.07
12.5	8,577,216		0.0000	1.0000	94.31
13.5	8,725,824	56,298	0.0065	0.9935	94.31
14.5	8,517,121	107,853	0.0127	0.9873	93.70
15.5	8,179,060	1,500	0.0002	0.9998	92.51
16.5	7,827,389	102,542	0.0131	0.9869	92.50
17.5	7,007,209	88,130	0.0126	0.9874	91.29
18.5	7,110,676	60,030	0.0084	0.9916	90.14
19.5	7,015,212	26,860	0.0038	0.9962	89.38
20.5	7,022,791	93,457	0.0133	0.9867	89.03
21.5	6,754,491	1,862,585	0.2758	0.7242	87.85
22.5	2,643,745	48,750	0.0184	0.9816	63.62
23.5	2,591,482	103,300	0.0399	0.9601	62.45
24.5	2,590,055	115,099	0.0444	0.9556	59.96
25.5	2,080,842	56,158	0.0270	0.9730	57.30
26.5	1,465,372	17,602	0.0120	0.9880	55.75
27.5	1,031,334	67,555	0.0655	0.9345	55.08
28.5	1,011,145	22,799	0.0225	0.9775	51.47
29.5	954,336	10,337	0.0108	0.9892	50.31
30.5	929,428		0.0000	1.0000	49.77
31.5	890,856	11,064	0.0124	0.9876	49.77
32.5	871,527	14,228	0.0163	0.9837	49.15
33.5	593,428	<i>*</i> • • •	0.0000	1.0000	48.35
34.5	593,428	688	0.0012	0.9988	48.35
35.5	652,110	~ ~ ~ ~	0.0000	1.0000	48.29
36.5	690,434	2,841	0.0041	0.9959	48.29
37.5 38.5	686,964	29,938	0.0436	0.9564	48.09
6.0	533,086	73,102	0.1371	0.8629	46.00

EXPERIENCE BAND 1995-2014

KENTUCKY AMERICAN WATER COMPANY

ACCOUNTS 311.20 THRU 311.54 PUMPING EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5 40.5 41.5	586,990 568,040 563,735	9,606 4,434	0.0164 0.0078 0.0000	0.9836 0.9922 1.0000	39.69 39.04 38.73
42.5	562,732	4,114	0.0073	0.9927	38.73
43.5	605,217	36,103	0.0597	0.9403	38.45
44.5	460,953	1,613	0.0035	0.9965	36.16
45.5 46.5	476,264 484,777	55,663	0.0000 0.1148	1.0000 0.8852	36.03
47.5	415,952	4,834		0.8852	36.03 31.89
48.5	355,420	8,137	0.0229	0.9771	31.52
49.5	321,565	50,529	0.1571	0.8429	30.80
50.5	271,036	1,762	0.0065	0.9935	25.96
51.5 52.5	269,273 255,196	8,684	0.0323	0.9677	25.79
52.5	255,198	285	0.0011 0.0000	0.9989	24.96
54.5	257,264	3,135	0.0122	1.0000 0.9878	24.93 24.93
55.5	218,833		0.0000	1.0000	24.53
56.5	197,202	30	0.0002	0.9998	24.63
57.5	197,172	28,404	0.1441	0.8559	24.63
58,5	167,673	4,968	0.0296	0.9704	21.08
59.5	49,664		0.0000	1.0000	20.45
60.5	123,164		0.0000	1.0000	20.45
61.5	122,469	1,663	0.0136	0.9864	20.45
62.5	120,806		0.0000	1.0000	20.18
63.5	141,444	6,475	0.0458	0.9542	20.18
64.5	134,503	1,022	0.0076	0.9924	19.25
65.5	117,490	5,091	0.0433	0.9567	19.11
66.5 67.5	112,399 91,441		0.0000	1.0000	18.28
68.5	91,441	223	0.0000 0.0024	1.0000 0.9976	18.28 18.28
69.5	91,218		0.0000	1.0000	18.23
70.5	91,218		0.0000	1.0000	18.23
71.5	91,640		0.0000	1.0000	18.23
72.5	91,640	53,191	0.5804	0.4196	18.23
73.5	38,449		0.0000	1.0000	7.65
74.5	36,111	8,687	0.2406	0.7594	7.65
75.5	27,423	10,710	0.3906	0.6094	5.81
76.5	16,713		0.0000	1.0000	3.54
77.5	16,713		0.0000	1.0000	3.54
78.5	16,713		0.0000	1.0000	3.54
79.5	16,713	10,809	0.6467	0.3533	3.54
80.5					1.25



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🖄 Gannett Fleming

ACCOUNT 320.10 PURIFICATION SYSTEM - STRUCTURES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1900-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
110 I DI (VI III	NOT THIRING	714 1 73 17 V AT	NALIO	MATTO	TNTERVAL
0.0	21,325,114		0.0000	1.0000	100.00
0.5	21,335,267		0.0000	1.0000	100.00
1.5	21,350,974		0.0000	1.0000	100.00
2.5	21,466,697	4,658	0.0002	0.9998	100.00
3.5	21,463,739	62,636	0.0029	0.9971	99.98
4.5	6,757,637		0.0000	1.0000	99.69
5.5	6,652,539	1,935	0.0003	0.9997	99.69
6.5	9,748,101		0.0000	1.0000	99.66
7.5	9,332,416		0.0000	1.0000	99.66
8.5	11,826,158		0.0000	1.0000	99.66
9.5	11,812,900		0.0000	1.0000	99.66
10.5	11,814,719		0.0000	1.0000	99.66
11.5	11,807,727	10,624	0.0009	0.9991	99.66
12.5	10,843,589		0.0000	1.0000	99.57
13.5	10,961,496		0.0000	1.0000	99.57
14.5	10,961,496	1,195	0.0001	0.9999	99.57
15.5	10,954,719	11,565	0.0011	0.9989	99.56
16.5	10,988,808	1,558	0.0001	0.9999	99.45
17.5	10,880,498		0.0000	1.0000	99.44
18.5	8,426,135	247,973	0.0294	0.9706	99.44
19.5	8,174,937	64,334	0.0079	0.9921	96.51
20.5	8,135,135	7,318	0.0009	0.9991	95.75
21.5	8,167,220		0.0000	1.0000	95.67
22.5	8,120,060	170,557	0.0210	0.9790	95.67
23.5	7,954,117	93,353	0.0117	0.9883	93.66
24.5	8,305,061	3,288	0.0004	0.9996	92.56
25.5	8,257,847	114,352	0.0138	0.9862	92.52
26.5	4,033,426	4,350	0.0011	0.9989	91.24
27.5	3,809,086	510,628	0.1341	0.8659	91.14
28.5	2,665,038		0.0000	1.0000	78.92
29.5	2,665,038		0.0000	1.0000	78.92
30.5	2,673,979	14,276	0.0053	0.9947	78.92
31.5	2,659,704		0.0000	1.0000	78.50
32.5	2,578,819		0.0000	1.0000	78.50
33.5	2,475,664	105,661	0.0427	0.9573	78.50
34.5	2,382,259		0.0000	1.0000	75.15
35.5	2,989,249	44,906	0.0150	0.9850	75.15
36.5	4,932,319	224	0.0000	1.0000	74.02
37.5	4,483,156		0.0000	1.0000	74.02
38.5	4,482,142		0.0000	1.0000	74.02

ACCOUNT 320.10 PURIFICATION SYSTEM - STRUCTURES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1900-2014

EXPERIENCE BAND 1995-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	4,484,013	13,000	0.0029	0.9971	74.02
40.5	4,431,298	61,447	0.0139	0.9861	73.80
41.5	4,334,595	494	0.0001	0.9999	72.78
42.5	4,322,770		0.0000	1.0000	72.77
43.5	4,316,458		0.0000	1.0000	72.77
44.5	3,892,350		0.0000	1.0000	72.77
45.5 46.5 47.5	3,892,350 3,899,630 3,899,630	725 141,891	0.0002 0.0000 0.0364	0.9998 1.0000 0.9636	72.77 72.76 72.76
48.5 49.5	2,612,784 2,612,784	8,379	0.0000	1.0000 0.9968	70.11
50.5	2,602,128	105	0.0000	1.0000	69.89
51.5	2,602,022	622	0.0002	0.9998	69.88
52.5	2,597,180	477	0.0002	0.9998	69.87
53.5	2,596,869	7,735	0.0030	0.9970	69.85
54.5	2,581,320	7,954	0.0031	0.9969	69.65
55.5	2,028,624	1,887,207	0.9303	0.0697	69.43
56.5	65,442		0.0000	1.0000	4.84
57.5	65,442		0.0000	1.0000	4.84
58.5 59.5	65,784 63,914	1,870	0.0284	0.9716	4.84
60.5 61.5 62.5	65,420 42,527 42,527	102	0.0016 0.0000	0.9984 1.0000	4.70 4.70
63.5 64.5	42,527 14,769	231	0.0000 0.0054 0.0000	1.0000 0.9946 1.0000	4.70 4.70 4.67
65.5	18,345	8,111	0.4421	0.5579	4.67
66.5	5,903		0.0000	1.0000	2.61
67.5	5,903		0.0000	1.0000	2.61
68.5	5,903		0.0000	1.0000	2.61
69.5	5,903		0.0000	1.0000	2.61
70.5	5,903	165	0.0000	1.0000	2.61
71.5	5,903		0.0000	1.0000	2.61
72.5	5,903		0.0280	0.9720	2.61
73.5	5,737	175	0.0000	1.0000	2.53
74.5	5,737		0.0305	0.9695	2.53
75.5	5,563		0.0000	1.0000	2.46
76.5	5,424		0.0000	1.0000	2.46
77.5	5,424		0.0000	1.0000	2.46
78.5	5,082	1,355	0.2667	0.7333	2.46

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ACCOUNT 320.10 PURIFICATION SYSTEM - STRUCTURES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT I	BAND 1900-2014		EXPE	RIENCE BAN	D 1995-2014
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5 80.5 81.5 82.5 83.5 84.5 85.5 86.5 86.5 87.5 88.5 89.5 90.5	3,727 2,221 2,221 2,219 2,219 2,219 2,219	2 2,193	0.0000 0.0000 0.0007 0.0000 0.0000 0.9881	1.0000 1.0000 0.9993 1.0000 1.0000 0.0119	1.80 1.80 1.80 1.80 1.80 1.80 0.02
91.5 92.5 93.5 94.5 95.5 96.5 97.5 98.5	11,753 11,753 11,753 11,753 11,753 11,753		0.0000 0.0000 0.0000 0.0000 0.0000		
99.5 100.5 101.5 102.5 103.5 104.5 105.5 106.5 107.5 108.5	11,753 11,753 11,753 11,753 11,753 11,753 11,753 11,753 11,753 11,753		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000		
109.5 110.5 111.5 112.5 113.5 114.5	11,753 11,753 11,753 11,753 11,753	2,400	0.0000 0.0000 0.0000 0.0000 0.2042		





ACCOUNT 320.11 PURIFICATION SYSTEM - EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1970-2014

AGE AT	EXPOSURES AT	RETIREMENTS			PCT SURV
BEGIN OF	BEGINNING OF	DURING AGE	RETMT	SURV	BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
0.0	9,293,691		0.0000	1.0000	100.00
0.5	8,472,544	9,455	0.0011	0.9989	100.00
1.5	7,756,673	35,082	0.0045	0,9955	99.89
2.5	8,305,176	36,043	0.0043	0.9957	99.44
3.5	8,432,297	22,407	0.0027	0.9973	99.01
4.5	8,362,059	3,180	0.0004	0.9996	98.74
5.5	8,414,734	45,276	0.0054	0.9946	98.70
6.5	9,854,335	466,653	0.0474	0.9526	98.17
7.5	8,092,856	71,994	0.0089	0.9911	93.52
8.5	7,996,189	123,194	0.0154	0.9846	92.69
9.5	7,786,730	27,107	0.0035	0.9965	91.26
10.5	7,751,967	131,186	0.0169	0.9831	90.95
11.5	7,605,254	311,375	0.0409	0.9591	89.41
12.5	7,042,827	164,873	0.0234	0.9766	85.75
13.5	7,963,985	43,224	0.0054	0.9946	83.74
14.5	7,446,489	51,352	0.0069	0.9931	83.29
15.5	6,436,730	61,734	0.0096	0.9904	82.71
16.5	6,282,501	68,861	0.0110	0.9890	81.92
17.5	6,198,441	332,613	0.0537	0.9463	81.02
18.5	5,574,737	113,696	0.0204	0.9796	76.67
19.5	5,461,041	433,444	0.0794	0.9206	75.11
20,5	5,018,855	41,052	0.0082	0,9918	69.15
21.5	4,351,408	256,663	0.0590	0.9410	68.58
22.5	4,086,166	395,049	0.0967	0.9033	64.54
23.5	3,343,132	494,125	0.1478	0.8522	58.30
24.5	3,093,213	134,249	0.0434	0.9566	49.68
25.5	2,941,197	1,039,425	0.3534	0.6466	47.52
26.5	1,644,038	27,162	0,0165	0.9835	30.73
27.5	1,473,942	679	0.0005	0.9995	30.22
28.5	1,473,263	58,259	0.0395	0.9605	30.21
29.5	1,415,004	27,758	0.0196	0.9804	29.01
30.5	1,385,065	13,512	0.0098	0.9902	28.44
31.5	1,371,553	2,389	0.0017	0.9983	28.17
32.5	1,369,164	93,883	0.0686	0.9314	28.12
33.5	304,948	11,568	0.0379	0.9621	26.19
34.5	293,380	6,182	0.0211	0.9789	25.20
35.5	287,198	2,245	0.0078	0.9922	24.66
36.5	284,952	5,352	0.0188	0.9812	24.47
37.5	279,600	7,876	0.0282	0.9718	24.01
38,5	271,724		0.0000	1.0000	23.34

EXPERIENCE BAND 1995-2014

KENTUCKY AMERICAN WATER COMPANY

ACCOUNT 320.11 PURIFICATION SYSTEM - EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1970-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	271,724	5,342	0.0197	0.9803	23.34
40.5	266,274	10,454	0.0393	0.9607	22.88
41.5	255,820	243	0.0010	0.9990	21.98
42.5	255,577	77	0.0003	0.9997	21.96
43.5	255,500	11,048	0.0432	0.9568	21.95
44.5					21.00



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EXPERIENCE BAND 2007-2014

KENTUCKY AMERICAN WATER COMPANY

ACCOUNT 320.20 PURIFICATION SYSTEM - FILTER MEDIA

ORIGINAL LIFE TABLE

PLACEMENT BAND 2007-2011

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	742,340		0.0000	1.0000	100.00
0.5	742,340		0.0000	1.0000	100.00
1.5	742,340		0.0000	1.0000	100.00
2.5	742,340		0.0000	1.0000	100.00
3.5	574,019		0.0000	1.0000	100.00
4.5	168,569		0.0000	1.0000	100.00
5.5	27,968		0.0000	1.0000	100.00
6.5	27,968		0.0000	1.0000	100.00
7.5					100.00





ACCOUNTS 330.00 THRU 330.40 DISTRIBUTION RESERVOIRS AND STANDPIPES

ORIGINAL LIFE TABLE

EXPERIENCE BAND 1995-2014

PLACEMENT BAND 1949-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	13,475,390 12,467,830		0.0000	1.0000	100.00
1.5 2.5	11,893,955 11,728,470	29,652	0.0025	0.9975 1.0000	100.00 99.75
3.5 4.5 5.5	11,750,115 9,160,126 10,107,963	30,837 23,378	0.0000 0.0034 0.0023	1.0000 0.9966 0.9977	99.75 99.75 99.41
6.5 7.5	10,084,049 10,742,457	3,531	0.0004	0.9996	99.18 99.15
8.5 9.5	10,573,414		0.0000	1.0000 1.0000	99.15 99.15
10.5 11.5	5,601,657 5,600,529	1,128 32,954	0.0002	0.9998 0.9941	99.15 99.13
12.5 13.5 14.5	5,529,401 4,601,168 4,586,753	19,247	0.0035 0.0000 0.0000	0.9965 1.0000 1.0000	98.55 98.20 98.20
15.5 16.5	4,588,755 3,801,327 3,658,561	23,351	0.0061	0.9939	98.20 98.20 97.60
17.5 18.5	3,663,588 2,642,363	10,495 13,450	0.0029 0.0051	0.9971 0.9949	97.60 97.32
19.5 20.5	2,744,959 2,743,157	517	0.0000 0.0002	1.0000 0.9998	96.83 96.83
21.5 22.5	2,743,890 2,739,303	2,044	0.0007	0.9993 1.0000	96.81 96.74
23.5 24.5 25.5	2,717,659 2,050,561 979,411	3,632 641 1,451	0.0013 0.0003 0.0015	0.9987 0.9997 0.9985	96.74 96.61 96.58
26.5 27.5	1,142,435 371,298	3,375	0.0030	0.9970	96.43 96.15
28.5 29.5	372,767 726,313		0.0000	1.0000	96.15 96.15
30.5 31.5	726,313 726,313	1,331	0.0000 0.0018	1.0000 0.9982	96.15 96.15
32.5 33.5	724,983 725,041 706 833	15,622	0.0000	1.0000 0.9785	95.97 95.97 93.90
34.5 35.5 36.5	706,933 705,113 702,278	1,820 2,835	0.0026 0.0040 0.0000	0.9974 0.9960 1.0000	93.90 93.66 93.29
37.5	697,251 877,103	1,060	0.0015	0.9985 1.0000	93.29 93.14

ACCOUNTS 330.00 THRU 330.40 DISTRIBUTION RESERVOIRS AND STANDPIPES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1949-2014

AGE AT	EXPOSURES AT	RETIREMENTS			PCT SURV
BEGIN OF	BEGINNING OF	DURING AGE	RETMT	SURV	BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
39.5	761,193	°450	0.0006	0.9994	93.14
40.5	824,195		0.0000	1.0000	93.09
41.5	823,008	1,161	0.0014	0.9986	93.09
42.5	822,314		0.0000	1.0000	92.96
43.5	822,314	113	0.0001	0.9999	92.96
44.5	851,444	1,213	0.0014	0.9986	92.94
45.5	880,096		0.0000	1.0000	92.81
46.5	705,394		0.0000	1.0000	92.81
47.5	705,394	746	0.0011	0.9989	92.81
48.5	703,925	2,000	0.0028	0.9972	92.71
49.5	334,254	200	0.0006	0.9994	92.45
50.5	334,054		0.0000	1.0000	92.40
51.5	334,054		0.0000	1.0000	92.40
52.5	334,054	58	0.0002	0.9998	92.40
53.5	333,995		0.0000	1.0000	92.38
54.5	333,995		0.0000	1.0000	92.38
55.5	333,995		0.0000	1,0000	92.38
56.5	333,995	237	0.0007	0.9993	92.38
57.5	333,759	187,467	0.5617	0.4383	92.31
58.5	146,292	137	0.0009	0.9991	40.46
59.5	146,155	433	0.0030	0.9970	40.42
60.5	59,551	31	0.0005	0.9995	40.31
61.5	59,489	231	0.0039	0.9961	40.28
62.5	59,259		0.0000	1.0000	40.13
63.5	59,259	29,394	0.4960	0.5040	40.13
64.5	29,865		0.0000	1.0000	20.22
65.5					20.22
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# ACCOUNT 331.00 MAINS AND ACCESSORIES

#### ORIGINAL LIFE TABLE

PLACEMENT BAND 1900-2014

AGE AT BEGIN OF	EXPOSURES AT BEGINNING OF	RETIREMENTS DURING AGE	RETMT	SURV	PCT SURV BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
0.0	211,679,057		0.0000	1.0000	100.00
0.5	196,460,770	21,374	0.0001	0.9999	100.00
1.5	194,972,552	100,669	0.0005	0.9995	99.99
2.5	194,834,067	100,177	0.0005	0.9995	99.94
3.5	192,395,161	370,803	0.0019	0.9981	99.89
4.5	119,834,229	78,967	0.0007	0.9993	99.69
5.5	119,673,723	8,005	0.0001	0.9999	99.63
6.5	115,705,267	66,655	0.0006	0.9994	99.62
7,5	91,534,077	67,034	0.0007	0.9993	99.56
8.5	88,337,197	44,371	0.0005	0.9995	99.49
9.5	92,336,671	60,266	0.0007	0.9993	99.44
10.5	92,631,576	13,577	0.0001	0.9999	99.38
11.5	90,399,458	35,980	0.0004	0.9996	99.36
12.5	87,612,806	38,322	0.0004	0.9996	99.32
13.5	81,149,883	126,800	0.0016	0.9984	99.28
14.5	75,522,281	125,270	0.0017	0.9983	99.12
15.5	70,003,040	43,780	0.0006	0.9994	98.96
16.5	65,628,848	29,004	0.0004	0.9996	98.90
17.5	60,682,202	172,324	0.0028	0.9972	98.85
18.5	55,816,265	15,293	0.0003	0.9997	98.57
19.5	52,822,893	90,248	0.0017	0.9983	98.55
20.5	49,315,409	128,242	0.0026	0.9974	98.38
21.5	46,832,797	34,068	0.0007	0.9993	98.12
22.5	44,761,449	45,629	0.0010	0.9990	98.05
23.5	43,389,477	15,220	0.0004	0.9996	97.95
24.5	40,733,330	21,287	0.0005	0.9995	97.92
25.5	38,058,298	85,920	0.0023	0.9977	97.86
26.5	33,215,397	20,815	0.0006	0.9994	97.64
27.5	25,745,232	11,133	0.0004	0.9996	97.58
28.5	28,518,579	9,787	0.0003	0.9997	97.54
29.5	23,878,366	81,237	0.0034	0.9966	97.51
30.5	22,420,272	20,014	0.0009	0.9991	97.18
31.5	22,187,779	116,891	0.0053	0.9947	97.09
32.5	21,992,487	81,540	0.0037	0.9963	96.58
33.5	21,670,278	33,512	0.0015	0.9985	96.22
34.5	21,068,871	19,333	0.0009	0.9991	96.07
35.5	20,072,842	71,231	0.0035	0.9965	95.98
36.5	19,475,984	13,515	0.0007	0.9993	95.64
37.5	18,585,514	20,715	0.0011	0.9989	95.57
38.5	18,912,771	50,802	0.0027	0.9973	95.47

## ACCOUNT 331.00 MAINS AND ACCESSORIES

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1900-2014

AGE AT	EXPOSURES AT	RETIREMENTS			PCT SURV
BEGIN OF	BEGINNING OF	DURING AGE	RETMT	SURV	BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
					2011 2010 07 AL
39.5	18,850,889	14,294	0.0008	0.9992	95.21
40.5	15,900,440	54,963	0.0035	0.9965	95.14
41.5	15,328,135	59,720	0.0039	0.9961	94.81
42.5	13,803,274	20,418	0.0015	0.9985	94.44
43.5	13,240,757	21,135	0.0016	0.9984	94.30
44.5	12,920,124	17,037	0.0013	0.9987	94.15
45.5	12,222,286	85,160	0.0070	0.9930	94.03
46.5	11,677,166	7,596	0.0007	0.9993	93.37
47.5	11,025,313	45,303	0.0041	0.9959	93.31
48.5	6,660,145	19,099	0.0029	0.9971	92.93
40 F		40 500			
49.5	6,163,083	40,582	0.0066	0.9934	92.66
50.5	5,717,289	7,744	0.0014	0.9986	92.05
51.5	5,389,149	13,642	0.0025	0.9975	91.93
52.5	5,052,455	29,155	0.0058	0.9942	91.69
53.5	4,804,079	1,193	0.0002	0.9998	91.16
54.5	4,386,575	4,989	0.0011	0.9989	91.14
55.5	3,932,252	5,205	0.0013	0.9987	91.04
56.5	3,295,526	15,390	0.0047	0.9953	90.92
57.5	2,961,576	13,135	0.0044	0.9956	90.49
58.5	1,944,674	9,291	0.0048	0.9952	90.09
59.5	1,410,779	2,829	0.0020	0.9980	89,66
60.5	1,735,645	19,899	0.0115	0.9885	89.48
61.5	1,435,799	22,808	0.0159	0.9841	88.46
62.5	1,261,282	3,598	0.0029	0.9971	87.05
63,5	1,201,481	1,985	0.0017	0.9983	86.80
64.5	1,072,465	1,838	0.0017	0.9983	86.66
65.5	983,691	4,556	0.0046	0.9954	86.51
66.5	859,045	5,040	0.0059	0.9941	86.11
67.5	830,137	13,355	0.0161	0.9839	85.60
68.5	802,325	2,951	0.0037	0.9963	84.23
69.5	789,710	5,747	0.0073	0.9927	83.92
70.5	783,291	2,294	0.0029	0.9971	83.31
71.5	778,651	4,608	0.0059	0.9941	83.06
72.5	772,203	2,497	0.0032	0.9968	82.57
73.5	755,346	7,320	0.0097	0.9903	82.30
74.5	732,110	5,656	0.0077	0.9923	81.51
75.5	706,241	17,169	0.0243	0.9757	80.88
76.5	672,396	23,555	0.0350	0.9650	78.91
77.5	533,376	6,053	0.0113	0.9887	76.15
78.5	494,147	1,027	0.0021	0.9979	75,28
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# ACCOUNT 331.00 MAINS AND ACCESSORIES

### ORIGINAL LIFE TABLE, CONT.

PLACEMENT	BAND 1900-2014		EXPER	RIENCE BAN	D 1995-2014
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5 80.5 81.5 82.5 83.5 84.5 85.5 86.5 87.5	450,106 50,708	7,903 30	0.0176	0.9824 0.9994	75.13 73.81 73.76
88.5	30		0.0000		
89.5 90.5 91.5 92.5 93.5 94.5 95.5 96.5 96.5 98.5 99.5	30 30 30 30 2,194 2,194 2,194 2,194 2,194 2,194 2,194		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000		
99.5 100.5 101.5 102.5 103.5 104.5 105.5 106.5 107.5 108.5	2,194 2,194 2,194 2,194 2,194 2,194 2,194 2,194 2,194 30	2,164	0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.9863 0.0000		

# KENTUCKY AMERICAN WATER COMPANY ACCOUNT 333.00 SERVICES ORIGINAL AND SMOOTH SURVIVOR CURVES





### ACCOUNT 333.00 SERVICES

# ORIGINAL LIFE TABLE

PLACEMENT BAND 1934-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	38,307,481		0.0000	1.0000	100.00
0.5	38,507,034	23,020	0.0006	0.9994	100.00
1.5	38,165,875	23,517	0.0006	0.9994	99.94
2.5	36,726,736	20,147	0.0005	0.9995	99.88
3.5	35,769,228	12,311	0.0003	0.9997	99.82
4.5	34,610,967	20,401	0.0006	0,9994	99.79
5.5	31,559,534	10,022	0.0003	0.9997	99.73
6.5	29,787,414	16,351	0.0005	0.9995	99.70
7.5	29,341,343	39,317	0.0013	0.9987	99.64
8.5	28,651,364	5,628	0.0002	0.9998	99.51
9.5	28,319,200	96,060	0.0034	0.9966	99.49
10.5	28,031,404	104,115	0.0037	0.9963	99.15
11.5	27,505,019	21,242	0.0008	0.9992	98.79
12.5	27,056,227	36,769	0.0014	0.9986	98.71
13.5	17,082,231	83,204	0.0049	0.9951	98.58
14.5	15,391,039	103,392	0.0067	0.9933	98.09
15.5	13,968,664	39,111	0.0028	0.9972	97.44
16.5	12,847,442	47,844	0.0037	0.9963	97.16
17.5	12,143,169	13,508	0.0011	0.9989	96.80
18.5	11,294,101	95,848	0.0085	0.9915	96.69
19.5	10,401,040	3,777	0.0004	0.9996	95.87
20.5	9,797,851	15,774	0.0016	0.9984	95.84
21.5	9,148,736	6,100	0.0007	0.9993	95.68
22.5	8,444,266	21,474	0.0025	0.9975	95.62
23.5	7,786,027	64,053	0.0082	0.9918	95.38
24.5	7,080,791	14,196	0.0020	0.9980	94.59
25.5	6,400,515	98,042	0.0153	0.9847	94.40
26.5	5,690,582	103,768	0.0182	0.9818	92.96
27.5	5,021,522	14,271	0.0028	0.9972	91.26
28.5	4,610,582	15,075	0.0033	0.9967	91.00
29.5	4,263,556	4,530	0.0011	0.9989	90.70
30.5	4,025,004	8,435	0.0021	0.9979	90.61
31.5	3,878,982	12,797	0.0033	0.9967	90.42
32.5	3,701,903	68,526	0.0185	0.9815	90.12
33.5	3,532,116	10,873	0.0031	0.9969	88.45
34.5	3,295,728	43,152	0.0131	0.9869	88.18
35.5	2,990,541	15,671	0.0052	0.9948	87.02
36.5	2,737,322	3,682	0.0013	0.9987	86.57
37.5	2,490,784	4,239	0.0017	0.9983	86.45
38.5	2,320,447	80,407	0.0347	0.9653	86.31

### ACCOUNT 333.00 SERVICES

### ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1934-2014

AGE AT	EXPOSURES AT	RETIREMENTS			PCT SURV
BEGIN OF	BEGINNING OF	DURING AGE	RETMT	SURV	BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
39.5	2,145,434	4,346	0.0020	0.9980	83.31
40.5	1,942,071	32,563	0.0168	0.9832	83.15
41.5	1,840,696	8,266	0.0045	0.9955	81.75
42.5	1,694,870	10,831	0.0043	0.9936	81.38
43.5	1,591,176	1,592	0.0010	0.9990	80.86
44.5	1,514,932	22,365	0.0148	0.9852	80.78
45.5	1,386,308	11,458	0.0083	0.9917	79.59
46.5	1,279,365	71,240	0.0557	0.9443	78.93
47.5	1,122,582	76,960	0.0686	0.9314	74.54
48.5	945,220	49,076	0.0519	0.9481	69.43
		,			
49.5	814,833	42,579	0.0523	0.9477	65.82
50.5	741,662	44,573	0.0601	0.9399	62.38
51.5	627,430	64,179	0.1023	0.8977	58.63
52.5	476,787	31,070	0.0652	0.9348	52.64
53.5	426,223	28,763	0.0675	0.9325	49.21
54.5	368,918	18,732	0.0508	0.9492	45.89
55.5	318,435	42,816	0.1345	0.8655	43.56
56.5	271,480	31,524	0.1161	0.8839	37.70
57.5	235,147	32,406	0.1378	0.8622	33.32
58.5	208,952	29,897	0.1431	0.8569	28.73
59.5	187,956	18,358	0.0977	0.9023	24,62
60.5	271,923	32,516	0.1196	0.8804	22.21
61.5	238,917	24,041	0.1006	0.8994	19.56
62.5	214,876	19,559	0.0910	0.9090	17.59
63.5	195,317	25,275	0.1294	0.8706	15.99
64.5	168,257	8,443	0.0502	0.9498	13.92
65.5	159,814	7,220	0.0452	0.9548	13.22
66.5	152,594	10,721	0.0703	0.9297	12.62
67.5	141,872	4,591	0.0324	0.9676	11.74
68.5	137,000	9,509	0.0694	0.9306	11.36
69.5	127,490	4,009	0.0314	0.9686	10.57
70.5	123,482	3,258	0.0264	0.9736	10.24
71.5	120,224	1,501	0.0125	0.9875	9.97
72.5	117,920	18,918	0.1604	0.8396	9.84
73.5	98,931	8,132	0.0822	0.9178	8.26
74.5	90,640	1,185	0.0131	0.9869	7.58
75.5	89,275	32,156	0.3602	0.6398	7.48
76.5	57,119	49,860	0.8729	0.1271	4.79
77.5	6,892	2,362	0.3427	0.6573	0.61
78.5	4,530	2	0.0005	0.9995	0.40
79.5	4,528	129	0.0284	0.9716	0.40
80.5	•				0.39

EXPERIENCE BAND 2005-2014

# KENTUCKY AMERICAN WATER COMPANY

## ACCOUNT 333.00 SERVICES

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1934-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	17,358,356		0.0000	1.0000	100.00
0.5	17,244,959	492	0.0000	1.0000	100.00
1.5	16,854,933		0.0000	1.0000	100.00
2.5	15,239,513	58	0.0000	1.0000	100.00
3.5	23,810,056	4,312	0.0002	0.9998	100.00
4.5	23,834,459	456	0.0000	1.0000	99.98
5.5	21,639,458	1,841	0.0001	0,9999	99.98
6.5	20,553,750	4,368	0.0002	0.9998	99.97
7.5	20,681,323	36,659	0.0018	0.9982	99,95
8.5	20,591,663	2,024	0.0001	0.9999	99.77
9.5	20,805,604	94,407	0.0045	0.9955	99.76
10.5	21,014,420	98,116	0.0047	0.9953	99.31
11.5	20,985,203	14,667	0.0007	0.9993	98.84
12.5	21,165,135	28,073	0.0013	0.9987	98.77
13.5	11,680,097	80,719	0.0069	0.9931	98.64
14.5	10,436,087	100,376	0.0096	0.9904	97.96
15.5	9,492,540	35,966	0.0038	0.9962	97.02
16.5	8,782,867	44,980	0.0051	0.9949	96.65
17.5	8,482,725	7,468	0.0009	0.9991	96.16
18.5	7,969,430	86,337	0.0108	0.9892	96.07
19.5	7,381,961		0.0000	1.0000	95.03
20.5	6,927,305	980	0.0001	0.9999	95.03
21.5	6,432,130		0.0000	1.0000	95.02
22.5	5,807,256	12,928	0.0022	0.9978	95.02
23.5	5,299,187	51,873	0.0098	0.9902	94.81
24.5	4,811,075	5,612	0.0012	0.9988	93.88
25.5	4,345,843	90,459	0.0208	0.9792	93.77
26.5	3,864,218	97,369	0.0252	0.9748	91.82
27.5	3,353,516	9,967	0.0030	0.9970	89.50
28.5	3,007,061	13,313	0.0044	0.9956	89.24
29.5	2,703,752	2,261	0.0008	0.9992	88.84
30.5	2,624,565	6,283	0.0024	0.9976	88.77
31.5	2,506,865	10,957	0.0044	0.9956	88.56
32.5	2,451,842	66,512	0.0271	0.9729	88.17
33.5	2,329,839	9,762	0.0042	0.9958	85.78
34.5	2,137,931	40,357	0.0189	0.9811	85.42
35.5	1,892,727	13,150	0.0069	0.9931	83.81
36.5	1,693,865	1,306	0.0008	0.9992	83.22
37.5	1,547,875	3,370	0.0022	0.9978	83.16
38.5	1,498,216	79,759	0.0532	0.9468	82.98

### ACCOUNT 333.00 SERVICES

### ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1934-2014

#### EXPERIENCE BAND 2005-2014

AGE AT BEGIN OF	EXPOSURES AT BEGINNING OF	RETIREMENTS DURING AGE	RETMT	SURV	PCT SURV BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
39.5	1,408,489	3,424	0,0024	0.9976	78.56
40.5	1,278,234	31,852	0.0249	0.9751	78.37
41.5	1,259,064	7,309	0.0058	0.9942	76.42
42.5	1,196,264	10,100	0.0084	0.9916	75.97
43.5	1,139,807	910	0.0008	0.9992	75.33
44.5	1,101,915	20,129	0.0183	0.9817	75.27
45.5	1,024,362	10,959	0.0107	0.9893	73.90
46.5	965,161	70,177	0.0727	0.9273	73.11
47.5	846,393	76,464	0.0903	0.9097	67.79
48.5	701,065	48,678	0.0694	0.9306	61.67
49.5	610,142	41,985	0.0688	0.9312	57.38
50.5	563,067	43,993	0.0781	0.9219	53.44
51.5	472,672	62,379	0.1320	0.8680	49.26
52.5	346,443	30,290	0.0874	0.9126	42.76
53.5	314,033	28,551	0.0909	0.9091	39.02
54.5	278,288	18,262	0.0656	0.9344	35.47
55.5	244,488	42,559	0.1741	0.8259	33.15
56.5	212,362	31,492	0.1483	0.8517	27.38
57.5	191,449	32,244	0.1684	0.8316	23.32
58.5	161,699	29,798	0.1843	0.8157	19.39
59.5	131,523	18,250	0.1388	0.8612	15.82
60.5	113,909	32,410	0.2845	0.7155	13.62
61.5	81,477	23,549	0.2890	0.7110	9.75
62.5	60,060	19,174	0.3193	0.6807	6.93
63.5	46,361	25,107	0.5416	0.4584	4.72
64.5	28,661	7,829	0.2731	0.7269	2.16
65.5	26,882	2,948	0.1096	0.8904	1.57
66.5	34,367	9,859	0.2869	0.7131	1.40
67.5	25,059	4,049	0.1616	0.8384	1.00
68.5	27,252	7,062	0.2591	0.7409	0.84
69.5	30,261	4,009	0.1325	0.8675	0.62
70.5	123,482	3,258	0.0264	0.9736	0.54
71.5	120,224	1,501	0.0125	0.9875	0.52
72.5	117,920	18,918	0.1604	0.8396	0.52
73.5	98,931	8,132	0.0822	0.9178	0.43
74.5	90,640	1,185	0.0131	0.9869	0.40
75.5	89,275	32,156	0.3602	0.6398	0.39
76.5	57,119	49,860	0.8729	0.1271	0.25
77.5	6,892	2,362	0.3427	0.6573	0.03
78.5	4,530	2	0.0005	0.9995	0.02
79.5	4,528	129	0.0284	0.9716	0.02
80.5					0.02



Gannett Fleming

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KY American Water Co December 31, 2014

# ACCOUNTS 334.10 THRU 334.30 METERS AND METER INSTALLATIONS

### ORIGINAL LIFE TABLE

PLACEMENT BAND 1934-2014

AGE AT	EXPOSURES AT	RETIREMENTS			PCT SURV
BEGIN OF	BEGINNING OF	DURING AGE	RETMT	SURV	BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
0.0	43,581,832	1,755	0.0000	1.0000	100.00
0.5	42,513,673	538,936	0.0127	0.9873	100.00
1.5	37,274,944	926,052	0.0248	0.9752	98.73
2.5	33,809,989	339,048	0.0100	0.9900	96.28
3.5	28,012,188	98,132	0.0035	0.9965	95.31
4.5	25,303,578	563,399	0.0223	0.9777	94.98
5.5	23,233,725	129,677	0.0056	0.9944	92.86
6.5	20,642,601	70,470	0.0034	0.9966	92.34
7.5	20,419,106	129,651	0.0063	0.9937	92.03
8.5	18,062,248	120,221	0.0067	0.9933	91.44
9.5	17,133,441	103,487	0.0060	0.9940	90.83
10.5	15,510,864	196,729	0.0127	0.9873	90.29
11.5	13,720,236	234,738	0.0171	0.9829	89.14
12.5	12,293,767	198,222	0.0161	0.9839	87.62
13.5	10,906,944	162,364	0.0149	0.9851	86.20
14.5	10,132,666	209,916	0.0207	0.9793	84.92
15.5	9,248,438	291,010	0.0315	0.9685	83.16
16.5	8,497,621	153,731	0.0181	0.9819	80.54
17.5	7,676,843	161,423	0.0210	0.9790	79.09
18.5	7,044,605	123,518	0.0175	0.9825	77.42
19.5	6,644,280	46,041	0.0069	0.9931	76.07
20.5	6,271,577	34,351	0.0055	0.9945	75.54
21.5	5,808,526	43,918	0.0076	0.9924	75.13
22,5	5,332,565	7,973	0.0015	0.9985	74.56
23.5	4,984,616	72,329	0.0145	0.9855	74.45
24.5	4,606,482	52,933	0.0115	0.9885	73.37
25.5	4,085,023	72,525	0.0178	0.9822	72.52
26.5	3,678,366	29,535	0.0080	0.9920	71.24
27.5	3,272,400	27,600	0.0084	0.9916	70.66
28,5	2,959,993	6,918	0.0023	0.9977	70.07
29.5	2,642,146	7,330	0.0028	0.9972	69.90
30.5	2,447,576	12,291	0.0050	0.9950	69.71
31.5	2,307,354	7,788	0.0034	0.9966	69.36
32.5	2,130,730	4,291	0.0020	0.9980	69.13
33.5	1,990,880	12,615	0.0063	0.9937	68.99
34.5	1,802,500	4,798	0.0027	0.9973	68.55
35.5	1,607,397	3,757	0.0023	0.9977	68.37
36.5	1,425,464	1,055	0.0007	0.9993	68,21
37.5	1,312,322	4,107	0.0031	0.9969	68.16
38.5	1,230,751	15,933	0.0129	0.9871	67.94

ACCOUNTS 334.10 THRU 334.30 METERS AND METER INSTALLATIONS

# ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1934-2014

AGE AT BEGIN OF	EXPOSURES AT BEGINNING OF	RETIREMENTS DURING AGE	RETMT	SURV	PCT SURV BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
39.5	1,151,576	4,838	0.0042	0.9958	67.06
40.5	1,018,495	3,493	0.0034	0.9966	66.78
41.5	966,375	32,718	0.0339	0.9661	66.55
42.5	857,472	2,620	0.0031	0.9969	64.30
43.5	808,070	2,096	0.0026	0.9974	64.10
44.5	758,403	832	0.0011	0.9989	63.94
45.5	732,551	4,102	0.0056	0.9944	63.87
46.5	692,083	2,735	0.0040	0.9960	63,51
47.5	627,596	8,313		0.9868	63.26
48.5	545,744	5,522	0.0101	0.9899	62.42
49.5	464,165	549	0.0012	0.9988	61.79
50.5	404,924	652	0.0016	0.9984	61.72
51.5	351,531	930	0.0026	0.9974	61.62
52.5	320,553	848	0.0026	0.9974	61.45
53.5	288,938	775	0.0027	0.9973	61.29
54.5	253,102	883	0.0035	0.9965	61.13
55.5	237,402	435	0.0018	0.9982	60.91
56.5	217,843	211	0.0010	0.9990	60.80
57.5 58.5	185,528	21	0.0001	0.9999	60.74
50.5	163,312	670	0.0041	0.9959	60.74
59.5	142,061	180	0.0013	0.9987	60.49
60.5	161,756	406	0.0025	0.9975	60.41
61.5	140,824	864	0.0061	0.9939	60.26
62.5	121,952	78	0.0006	0.9994	59.89
63.5	112,273	43	0.0004	0.9996	59.85
64.5	110,007	756	0,0069	0.9931	59.83
65.5	89,097	2,311	0.0259	0.9741	59.42
66.5	67,074	696	0.0104	0.9896	57.88
67.5	59,754	823	0.0138	0.9862	57.28
68.5	58,316	1,991	0.0341	0.9659	56.49
69.5	56,044	349	0.0062	0.9938	54.56
70.5	55,568	717	0.0129	0.9871	54.22
71.5	54,811	3,624	0.0661	0.9339	53.52
72.5	50,187	5,504	0.1097	0.8903	49.98
73.5	41,204	938	0.0228	0.9772	44.50
74.5	39,390	995	0.0252	0.9748	43.49
75.5	36,366	1,318	0.0362	0,9638	42.39
76.5	34,238	542	0.0158	0.9842	40.85
77.5	33,459	1,304	0.0390	0.9610	40.20
78.5	31,601	1,086	0.0344	0.9656	38.64
79.5	27,969	598	0.0214	0.9786	37.31
80.5					36.51

#### ACCOUNTS 334.10 THRU 334.30 METERS AND METER INSTALLATIONS

### ORIGINAL LIFE TABLE

PLACEMENT BAND 1934-2014

EXPERIENCE BAND 2005-2014

AGE AT BEGIN OF	EXPOSURES AT BEGINNING OF	RETIREMENTS DURING AGE	RETMT	SURV	PCT SURV BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
0.0	31,653,913	1,396	0.0000	1.0000	100.00
0.5	31,857,064	523,386	0.0164	0.9836	100.00
1.5	27,791,459	891,724	0.0321	0.9679	98.35
2.5	24,953,233	277,483	0.0111	0.9889	95.20
3.5	20,052,338	5,737	0.0003	0.9997	94.14
4.5	17,815,841	490,380	0.0275	0.9725	94.11
5.5	16,160,763	99,627	0.0062	0.9938	91.52
6.5	13,891,686	44,497	0.0032	0.9968	90.96
7.5	14,077,233	49,476	0.0035	0.9965	90.67
8.5	12,112,179	85,746	0.0071	0.9929	90.35
9.5	11,313,259	39,436	0.0035	0.9965	89.71
10.5	9,963,696	111,108	0.0112	0.9888	89.39
11.5	8,648,158	166,799	0.0193	0.9807	88.40
12.5	7,812,477	98,203	0.0126	0.9874	86.69
13.5	6,871,101	. 112,116	0.0163	0.9837	85.60
14.5	6,404,302	172,038	0.0269	0.9731	84.21
15.5	5,969,476	263,493	0.0441	0.9559	81.94
16.5	5,475,342	136,854	0.0250	0.9750	78.33
17.5	4,990,316	143,572	0.0288	0.9712	76.37
18.5	4,641,637	111,312	0.0240	0.9760	74.17
19.5	4,603,258	40,377	0.0088	0.9912	72.39
20.5	4,414,972	25,787	0.0058	0.9942	71.76
21.5	4,111,235	32,960	0.0080	0.9920	71.34
22.5	3,783,741	2,576	0.0007	0.9993	70.77
23.5	3,552,467	66,424	0.0187	0.9813	70.72
24.5	3,347,979	48,359	0.0144	0.9856	69.40
25.5	2,996,111	70,579	0.0236	0.9764	68.39
26.5	2,757,416	26,310	0.0095	0.9905	66.78
27.5	2,435,749	25,061	0.0103	0.9897	66.15
28.5	2,144,047	6,070	0,0028	0.9972	65.47
29.5	1,834,648	3,860	0.0021	0.9979	65.28
30.5	1,713,665	10,774	0.0063	0.9937	65.14
31.5	1,593,499	6,344	0.0040	0.9960	64.73
32.5	1,483,118	2,046	0.0014	0.9986	64.48
33.5	1,375,092	11,015	0.0080	0.9920	64.39
34.5	1,200,435	3,580	0.0030	0.9970	63.87
35.5	1,035,888	2,210	0.0021	0.9979	63.68
36.5	888,768	120	0.0001	0.9999	63.54
37.5	811,932	3,613	0.0044	0.9956	63.54
38.5	794,994	14,950	0.0188	0.9812	63.25

ACCOUNTS 334.10 THRU 334.30 METERS AND METER INSTALLATIONS

### ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1934-2014

EXPERIENCE BAND 2005-2014

AGE AT	EXPOSURES AT	RETIREMENTS			PCT SURV
BEGIN OF	BEGINNING OF	DURING AGE	RETMT	SURV	BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
39,5	773,747	4,341	0.0056	0.9944	62.06
40.5	703,461	2,644	0.0038	0.9962	61.72
41.5	685,906	31,809	0.0464	0.9536	61.48
42.5	591,044	2,389	0.0040	0.9960	58.63
43.5	566,237	1,774	0.0031	0.9969	58.40
44.5	551,774	168	0.0003	0.9997	58.21
45.5	524,030	3,659	0.0070	0.9930	58.19
46.5	486,514	2,401	0.0049	0.9951	57.79
47.5	454,682	7,938	0.0175	0.9825	57.50
48.5	397,496	5,391	0.0136	0.9864	56.50
49.5	340,318	415	0.0012	0.9988	55.73
50.5	301,961	283	0.0009	0.9991	55.66
51.5	269,899	598	0.0022	0.9978	55.61
52.5	. 255,970	686	0.0027	0.9973	55.49
53.5	230,923	703	0.0030	0.9970	55.34
54.5	195,409	549	0.0028	0.9972	55.17
55.5	198,174	124	0.0006	0.9994	55.02
56.5	195,319	128	0.0007	0.9993	54,98
57.5	168,270	4	0.0000	1.0000	54.95
58.5	145,066	526	0.0036	0.9964	54.95
59.5	120,510	50	0.0004	0.9996	54.75
60.5	99,493	197	0.0020	0.9980	54.72
61.5	78,809	54	0.0007	0.9993	54.61
62.5	61,840	0	0.0000	1.0000	54.58
63.5	56,098		0.0000	1.0000	54.58
64.5	55,625	81	0.0015	0.9985	54.58
65.5	37,546	1,305	0.0348	0.9652	54.50
66.5	20,592	46	0.0022	0.9978	52.60
67.5	15,282	240	0.0157	0.9843	52.49
68.5	15,718	1,360	0.0865	0.9135	51.66
69.5	17,286	138	0.0080	0.9920	47.19
70.5	55,568	717	0.0129	0.9871	46.82
71.5	54,811	3,624	0.0661	0.9339	46.21
72.5	50,187	5,504	0.1097	0.8903	43.16
73.5	41,204	938	0.0228	0.9772	38.42
74.5	39,390	995	0.0252	0.9748	37.55
75.5	36,366	1,318	0.0362	0.9638	36.60
76.5	34,238	542	0.0158	0.9842	35,28
77.5	33,459	1,304	0.0390	0.9610	34.72
78.5	31,601	1,086	0.0344	0.9656	33.36
79.5	27,969	598	0.0214	0.9786	32.22
80.5					31.53

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## ACCOUNT 335.00 FIRE HYDRANTS

### ORIGINAL LIFE TABLE

PLACEMENT BAND 1934-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0 0.5 1.5	12,587,185 10,489,756 9,550,361	2,131 4,728	0.0000 0.0002 0.0005	1.0000 0.9998 0.9995	100.00 100.00 99.98
2.5	9,241,787	7,209	0.0008	0.9992	99.93
3.5	8,946,545	8,997	0.0010	0.9990	99.85
4.5	8,557,178	12,976	0.0015	0.9985	99.75
5.5	8,239,601	2,001	0.0002	0.9998	99.60
6.5	7,961,772	4,898	0.0006	0.9994	99.58
7.5	7,489,967	8,365	0.0011	0.9989	99.52
8.5	6,607,463	731	0.0001	0.9999	99.40
9.5 10.5 11.5	6,021,092 5,627,553 5,126,995	1,415 2,191	0.0002 0.0004 0.0000	0.9998 0.9996 1.0000	99.39 99.37 99.33
12.5 13.5	4,733,580 4,413,029	2,281 69	0.0005	0.9995	99.33 99.28
14.5	4,292,384	723	0.0002	0.9998	99.28
15.5	4,079,690	734	0.0002	0.9998	99.26
16.5 17.5 18.5	3,951,349 3,814,321	1,693 2,563	0.0004	0.9996 0.9993	99.25 99.20
19.5	3,566,682	5,043	0.0014	0.9986	99.14
	3,449,227	3,853	0.0011	0.9989	99.00
20.5	3,539,289	5,392	0.0015	0.9985	98.89
21.5	3,457,889	8,174	0.0024	0.9976	98.74
22.5	3,198,128	2,490	0.0008	0.9992	98.50
23.5	3,055,490	4,944	0.0016	0.9984	98.43
24.5	2,778,121	1,672	0.0006	0.9994	98.27
25.5	2,617,207	1,370	0.0005	0.9995	98.21
26.5	2,454,969	3,459	0.0014	0.9986	98.16
27.5	2,294,213	1,153	0.0005	0.9995	98.02
28.5	2,290,485	1,860	0.0008	0.9992	97.97
29.5 30.5	2,183,177 2,065,489	1,646	0.0008	0.9992	97.89
31.5 32.5	2,003,489 2,029,760 1,999,436	3,981 2,583 5,214	0.0019 0.0013 0.0026	0.9981 0.9987 0.9974	97.82 97.63 97.50
33.5	1,949,751	5,305	0.0027	0.9973	97.25
34.5	1,841,111	10,917		0.9941	96.98
35.5	1,718,719	1,705	0.0010	0.9990	96.41
36.5	1,595,755	1,944	0.0012	0.9988	96.31
37.5	1,490,457	3,679	0.0025	0.9975	96.20
38.5	1,431,266	4,466	0.0031	0.9969	95.96

## ACCOUNT 335.00 FIRE HYDRANTS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1934-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	1,347,494	998	0.0007	0.9993	95.66
40.5	988,215	3,643	0.0037	0.9963	95.59
41.5	858,645	3,144	0.0037	0.9963	95.24
42.5	783,401	2,579	0.0033	0.9967	94.89
43.5	726,309	1,600	0.0022	0.9978	94.57
44.5	659,647	1,575	0.0024	0.9976	94.37
45.5	603,036	1,933	0.0032	0.9968	94.14
46.5	537,437	2,325	0.0043	0.9957	93.84
47.5	473,629	556	0.0012	0.9988	93.43
48.5	367,998	1,908	0.0052	0.9948	93.32
49.5	308,999	423	0.0014	0.9986	92.84
50.5	265,450	1,090		0.9959	92.71
51.5	236,733	345	0.0015	0.9985	92.33
52.5	192,218	303	0.0016	0.9984	92.20
53.5	164,241	817	0.0050	0.9950	92.05
54.5	140,162	425	0.0030	0.9970	91.59
55.5	102,996	2,594		0.9748	91.32
56.5	85,786	727	0.0085	0.9915	89.02
57.5	65,982	98	0.0015	0.9985	88.26
58.5	50,251	2,598	0.0517	0.9483	88.13
59.5	30,652	3,453	0.1126	0.8874	83.57
60.5	32,756	1,891	0.0577	0.9423	74.16
61.5	23,576	1,136	0.0482	0.9518	69.88
62.5	19,022	1,662		0.9126	66.51
63.5 64.5 65.5	16,714 15,751	726 832	0.0435 0.0528 0.1154	0.9565 0.9472	60.70 58.06
66.5 67.5	14,370 12,397 11,078	1,658 1,285 220	0.1036 0.0199	0.8846 0.8964 0.9801	55.00 48.65 43.61
68.5 69.5	10,820 10,594	226	0.0209	0.9791 1.0000	42.74 41.85
70.5 71.5 72.5	10,594 9,410 8,961	1,184 437	0.1118 0.0464	0.8882	41.85 37.17
72.5 73.5 74.5	8,343 8,059	530 253 637	0.0591 0.0304 0.0790	0.9409 0.9696 0.9210	35.45 33.35 32.34
75.5	7,337	1,373	0.1871	0.8129	29.78
76.5	5,933	365	0.0614	0.9386	24.21
77.5	5,552	1,997	0.3597	0.6403	22.72
78.5	3,555	2,871	0.8077	0.1923	14.55
79.5 80.5	684	171	0.2494	0.7506	2.80 2.10

EXPERIENCE BAND 2005-2014

### KENTUCKY AMERICAN WATER COMPANY

#### ACCOUNT 335.00 FIRE HYDRANTS

### ORIGINAL LIFE TABLE

PLACEMENT BAND 1934-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	8,871,483		0.0000	1.0000	100.00
0.5	7,052,607	1,013	0.0001	0.9999	100.00
1.5	6,443,835	1,147	0.0002	0.9998	99.99
2.5	6,278,321	2,820	0.0004	0.9996	99.97
3.5	6,188,694	3,507	0.0006	0.9994	99.92
4.5	5,723,556	12,976	0.0023	0.9977	99.87
5.5	5,553,385	1,440	0.0003	0.9997	99.64
6.5	5,315,889	4,095	0.0008	0.9992	99.61
7.5	4,888,025	5,619	0.0011	0.9989	99.54
8.5	4,211,708		0.0000	1.0000	99.42
9.5	3,675,925	614	0.0002	0.9998	99.42
10.5	3,395,195	2,191	0.0006	0.9994	99.41
11.5	3,062,696		0.0000	1.0000	99.34
12.5	2,922,487	2,281	0.0008	0.9992	99.34
13.5	2,730,427	69	0.0000	1.0000	99.26
14.5	2,817,585	525	0,0002	0.9998	99.26
15.5	2,674,893		0.0000	1.0000	99.24
16.5	2,635,962	1,061	0.0004	0.9996	99.24
17.5	2,593,530	753	0.0003	0.9997	99.20
18.5	2,389,058	2,247	0.0009	0.9991	99.17
19.5	2,335,687	1,366	0,0006	0.9994	99.08
20.5	2,221,179	2,554	0.0012	0.9988	99.02
21.5	2,051,843	2,504	0.0012	0.9988	98.91
22.5	1,795,897		0.0000	1.0000	98.79
23.5	1,666,819	3,730	0.0022	0.9978	98.79
24.5	1,451,431	543	0.0004	0.9996	98.57
25.5	1,377,568		0.0000	1.0000	98.53
26.5	1,288,619	478	0.0004	0.9996	98.53
27.5	1,193,748	1,153	0.0010	0.9990	98.49
28.5	1,154,919	684	0.0006	0.9994	98.40
29.5	1,091,811	387	0.0004	0.9996	98.34
30.5	1,300,212	3,291	0.0025	0.9975	98.31
31.5	1,385,592	2,583	0.0019	0.9981	98.06
32.5	1,386,766	3,316		0.9976	97.87
33.5	1,367,993	3,812	0.0028	0.9972	97.64
34.5	1,304,937	10,245	0.0079	0.9921	97.37
35.5	1,207,384	1,231	0.0010	0.9990	96.60
36.5	1,136,079	877	0.0008	0.9992	96.51
37.5	1,073,682	2,732	0.0025	0.9975	96.43
38.5	1,106,347	4,321	0.0039	0.9961	96.19

### ACCOUNT 335.00 FIRE HYDRANTS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1934-2014

### EXPERIENCE BAND 2005-2014

AGE AT	EXPOSURES AT	RETIREMENTS			PCT SURV
BEGIN OF	BEGINNING OF	DURING AGE	RETMT	SURV	BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
39.5	1,059,228	998	0.0009	0.9991	95.81
40.5	738,478	3,490	0.0047	0.9953	95.72
41.5	627,699	2,793	0.0044	0.9956	95.27
42.5	595,207	2,220	0.0037	0,9963	94.84
43,5	566,783	1,078	0.0019	0.9981	94.49
44.5	522,473	1,433	0.0027	0.9973	94.31
45.5	501,805	1,570	0.0031	0.9969	94.05
46.5	451,748	2,084	0.0046	0.9954	93.76
47.5	408,116	556	0.0014	0.9986	93.32
48.5	317,452	875	0.0028	0.9972	93.20
49.5	279,575	423	0.0015	0.9985	92.94
50.5	241,592	1,090	0.0045	0.9955	92.80
51.5	222,508	302	0.0014	0.9986	92.38
52.5	182,410	303	0.0017	0.9983	92.26
53.5	155,391	817	0.0053	0.9947	92.10
54,5	132,989	183	0.0014	0.9986	91.62
55.5	97,351	2,594	0.0266	0.9734	91.49
56.5	82,159	623	0.0076	0.9924	89.05
57.5	62,699	98	0.0016	0.9984	88.38
58.5	47,829	2,532	0.0529	0.9471	88.24
59.5	28,077	3,453	0.1230	0.8770	83.57
60.5	21,007	1,891	0.0900	0.9100	73.29
61.5	11,828	1,136	0.0960	0.9040	66.70
62.5	7,420	1,662	0.2240	0.7760	60.29
63.5	5,787	726	0.1255	0.8745	46,79
64.5	5,179	786	0.1517	0.8483	40.92
65.5	4,528	1,600	0.3534	0.6466	34.71
66.5	2,730	444	0.1627	0.8373	22.44
67.5	2,477	220	0.0889	0.9111	18.79
68.5	2,298	226	0.0985	0.9015	17.12
69.5	2,262		0.0000	1.0000	15.43
70.5	10,594	1,184	0.1118	0.8882	15.43
71.5	9,410	437	0.0464	0.9536	13.71
72.5	8,961	530	0.0591	0.9409	13.07
73.5	8,343	253	0.0304	0.9696	12.30
74.5	8,059	637	0.0790	0.9210	11.93
75.5	7,337	1,373	0.1871	0.8129	10.98
76.5	5,933	365	0.0614	0.9386	8.93
77.5	5,552	1,997	0.3597	0.6403	8.38
78.5	3,555	2,871	0.8077	0.1923	5.36
79.5	684	171	0.2494	0.7506	1.03
80.5					0.77



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🖄 Gannett Fleming

KY American Water Co December 31, 2014

EXPERIENCE BAND 1995-2014

### KENTUCKY AMERICAN WATER COMPANY

#### ACCOUNT 341.10 TRANSPORTATION EQUIPMENT - LIGHT DUTY TRUCKS

#### ORIGINAL LIFE TABLE

PLACEMENT BAND 1974-2014

AGE AT EXPOSURES AT RETIREMENTS PCT SURV BEGIN OF BEGINNING OF DURING AGE RETMT SURV BEGIN OF INTERVAL AGE INTERVAL INTERVAL RATIO RATIO INTERVAL 0.0 4,010,638 0.0000 1.0000 100.00 0.5 3,829,582 0.0000 1.0000 100.00 1.5 3,847,758 32,938 0.0086 0.9914 100.00 2.5 3,312,446 0.0000 1.0000 99.14 3.5 3,267,050 24,286 0.0074 0.9926 99.14 4.5 2,558,105 0.0401 102,459 0.9599 98,41 5.5 2,422,518 516,816 0.2133 0.7867 94.47 6.5 1,907,066 187,075 0.0981 0.9019 74.31 7.5 1,658,486 279,606 0.1686 0.8314 67.02 8.5 1,378,881 34,956 0.0254 0.9746 55.72 9.5 1,343,925 281,692 0.2096 0.7904 54.31 10.5 1,062,233 265,999 0.2504 0,7496 42.93 11.5 796,233 100,902 0.1267 0.8733 32.18 12.5 715,477 117,348 0.1640 0.8360 28.10 13.5 596,377 125,817 0.2110 0.7890 23.49 14.5 470,560 94,237 0.2003 0.7997 18.54 15.5 376,323 65,381 0.1737 14.82 0.8263 16.5 310,942 141,600 0.4554 0.5446 12.25 17.5 169,342 0.0000 1.0000 6.67 18.5 178,559 73,037 0.4090 0.5910 6.67 19.5 105,522 0.0000 1.0000 3.94 20.5 106,261 0.0000 1.0000 3.94 21.5 106,261 12,573 0.1183 0.8817 3.94 22.5 93,688 16,288 0.1739 0.8261 3.48 24,313 23.5 77,400 0.3141 2.87 0.6859 24.5 53,087 21,690 0.4086 0.5914 1.97 25.5 31,397 8,945 0.2849 0.7151 1.16 26.5 22,452 1,567 0.0698 0.9302 0.83 27.5 20,885 0.0000 1.0000 0.77 28.5 20,885 0.0000 1.0000 0.77 29.5 20,885 0.0000 1.0000 0.77 30.5 20,885 0.0000 1.0000 0.77 31.5 20,885 20,146 0.9646 0.0354 0.77 32.5 739 0.0000 1.0000 0.03 33.5 739 0.0000 1.0000 0.03 34.5 739 0.0000 1.0000 0.03 35.5 739 0.0000 1.0000 0.03 36.5 739 0.0000 1.0000 0.03 37.5 739 0.0000 1.0000 0.03 38.5 739 0.0000 1.0000 0.03 739 1.0000 39.5 739 0.03 40.5

EXPERIENCE BAND 2005-2014

# KENTUCKY AMERICAN WATER COMPANY

## ACCOUNT 341.10 TRANSPORTATION EQUIPMENT - LIGHT DUTY TRUCKS

### ORIGINAL LIFE TABLE

PLACEMENT BAND 1974-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	2,770,698		0.0000	1.0000	100.00
0.5	2,547,342		0.0000	1.0000	100.00
1.5	2,547,342	32,938	0.0129	0.9871	100.00
2.5	2,144,824		0.0000	1.0000	98.71
3.5	2,169,352	24,286	0.0112	0.9888	98.71
4.5	1,501,754	102,459	0.0682	0.9318	97.60
5.5	1,469,402	516,816	0.3517	0.6483	90,94
6.5	1,082,812	168,720	0.1558	0.8442	58.96
7.5	1,059,147	191,812	0.1811	0.8189	49.77
8.5	962,415	20,715	0.0215	0.9785	40.76
9.5	1,034,093	211,166	0.2042	0.7958	39.88
10.5	838,015	254,155	0.3033	0.6967	31.74
11.5	583,861	73,282	0.1255	0.8745	22.11
12.5	523,151	74,038	0.1415	0.8585	19.34
13.5	463,650	99,099	0.2137	0.7863	16.60
14.5	388,864	94,237	0.2423	0.7577	13.05
15.5	345,664	65,381	0.1891	0.8109	9.89
16.5	289,229	141,600	0.4896	0.5104	8,02
17.5	149,196		0.0000	1.0000	4.09
18.5	149,196	73,037	0.4895	0.5105	4.09
19.5	76,159		0.0000	1.0000	2.09
20.5	76,159		0.0000	1.0000	2.09
21.5	76,159	12,573	0.1651	0.8349	2.09
22.5	83,733	16,288	0.1945	0.8055	1.74
23.5	67,444	24,313	0.3605	0.6395	1.40
24.5	43,131	12,473	0.2892	0.7108	0.90
25.5	30,658	8,945	0.2918	0.7082	0.64
26.5	21,713	1,567	0.0722	0.9278	0.45
27.5	20,146		0.0000	1.0000	0.42
28.5	20,146		0.0000	1.0000	0.42
29.5	20,146		0.0000	1.0000	0.42
30.5	20,885		0.0000	1.0000	0.42
31.5	20,885	20,146	0.9646	0.0354	0.42
32.5	739		0.0000	1.0000	0.01
33.5	739		0.0000	1.0000	0.01
34.5	739		0.0000	1.0000	0.01
35.5	739		0.0000	1.0000	0.01
36.5	739		0.0000	1.0000	0.01
37.5	739		0.0000	1.0000	0.01
38.5	739		0.0000	1.0000	0.01
39.5	739	739	1.0000		0.01
40.5					


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EXPERIENCE BAND 1995-2014

# KENTUCKY AMERICAN WATER COMPANY

# ACCOUNT 341.20 TRANSPORTATION EQUIPMENT - HEAVY DUTY TRUCKS

### ORIGINAL LIFE TABLE

PLACEMENT BAND 1979-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0 0.5 1.5 2.5 3.5 4.5 5.5	2,983,298 2,577,994 2,122,034 1,791,085 1,667,732 1,364,452 1,274,723	89,729 63,646	0.0000 0.0000 0.0000 0.0000 0.0000 0.0658 0.0499	1.0000 1.0000 1.0000 1.0000 1.0000 0.9342 0.9501	100.00 100.00 100.00 100.00 100.00 100.00 93.42
6.5 7.5 8.5	1,274,723 1,075,632 860,938 764,821	63,646 147,181 96,117 206,522	0.1368 0.1116 0.2700	0.9501 0.8632 0.8884 0.7300	93.42 88.76 76.61 68.06
9.5 10.5 11.5 12.5	558,299 540,064 468,007 405,551	18,235 72,057 62,456 46,467	0.0327 0.1334 0.1335 0.1146	0.9673 0.8666 0.8665 0.8854	49.68 48.06 41.65 36.09
13.5 14.5 15.5 16.5	359,084 281,903 116,877 116,877	77,181 182,450 34,320	0.2149 0.6472 0.0000 0.2936	0.7851 0.3528 1.0000 0.7064	31.95 25.09 8.85 8.85
17.5 18.5 19.5	82,557 82,557 82,557	16,692	0.0000 0.0000 0.2022	1.0000 1.0000 0.7978	6.25 6.25 6.25
20.5 21.5 22.5 23.5	65,865 65,865 65,865 36,964	28,900	0.0000 0.0000 0.4388 0.0000	1.0000 1.0000 0.5612 1.0000	4.99 4.99 4.99 2.80
24.5 25.5 26.5 27.5 28.5	36,964 36,964 17,424 12,424 12,424	19,540 5,000	0.0000 0.5286 0.2870 0.0000 0.0000	1.0000 0.4714 0.7130 1.0000 1.0000	2.80 2.80 1.32 0.94 0.94
29.5 30.5 31.5 32.5	12,424 12,424 12,424 12,424 12,424		0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000	0.94 0.94 0.94 0.94 0.94
33.5 34.5 35.5	12,424 12,424		0.0000	1.0000	0.94 0.94 0.94

# ACCOUNT 341.20 TRANSPORTATION EQUIPMENT - HEAVY DUTY TRUCKS

### ORIGINAL LIFE TABLE

PLACEMENT BAND 1979-2014

EXPERIENCE BAND 2005-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0 0.5 1.5 2.5 3.5 4.5 5.5 6.5	2,503,636 2,081,640 1,625,680 1,248,560 1,182,693 966,401 961,379 699,313	89,729 63,646 147,181	0.0000 0.0000 0.0000 0.0000 0.0000 0.0928 0.0662 0.2105	1.0000 1.0000 1.0000 1.0000 0.9072 0.9338 0.7895	100.00 100.00 100.00 100.00 100.00 100.00 90.72 84.71
7.5 8.5	626,737 595,359	49,945 206,522	0.0797 0.3469	0.9203 0.6531	66.88 61.55
9.5 10.5 11.5 12.5	388,838 405,530 333,473 314,451	72,057 19,022 46,467	0.0000 0.1777 0.0570 0.1478	1.0000 0.8223 0.9430 0.8522	40.20 40.20 33.06 31.17
13.5 14.5 15.5 16.5	339,544 262,363 79,913 99,453	77,181 182,450 34,320	0.2273 0.6954 0.0000 0.3451	0.7727 0.3046 1.0000 0.6549	26.57 20.53 6.25 6.25
17.5 18.5	65,133 65,133	16 602	0.0000	1.0000	4.09 4.09
19.5 20.5 21.5	65,133 48,441 48,441	16,692	0.2563 0.0000 0.0000	0.7437 1.0000 1.0000	4.09 3.05 3.05
22.5 23.5 24.5	48,441 19,540 19,540	28,900	0.5966 0.0000 0.0000	0.4034 1.0000 1.0000	3.05 1.23 1.23
25.5 26.5 27.5 28.5	36,964 17,424 12,424 12,424	19,540 5,000	0.5286 0.2870 0.0000 0.0000	0.4714 0.7130 1.0000 1.0000	1.23 0.58 0.41 0.41
29.5 30.5 31.5 32.5 33.5 34.5 35.5	12,424 12,424 12,424 12,424 12,424 12,424 12,424		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	0.41 0.41 0.41 0.41 0.41 0.41 0.41

KY American Water Co December 31, 2014



EXPERIENCE BAND 1995-2014

### KENTUCKY AMERICAN WATER COMPANY

# ACCOUNT 341.30 TRANSPORTATION EQUIPMENT - AUTOS

### ORIGINAL LIFE TABLE

PLACEMENT BAND 1981-2011

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0 0.5 1.5 2.5 3.5 4.5 5.5 5.5 6.5 7.5	252,253 252,253 265,152 243,668 322,901 377,445 354,086 303,613	7,185 65,876 33,902 109,996	0.0000 0.0000 0.0000 0.0000 0.0223 0.1745 0.0957 0.3623	1.0000 1.0000 1.0000 1.0000 0.9777 0.8255 0.9043 0.6377	100.00 100.00 100.00 100.00 100.00 100.00 97.77 80.71 72.98
8.5	193,617	30,159	0.1558	0.8442	46.54
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5 19.5	163,458 151,943 115,243 67,402 67,402 67,402 46,909 46,175 46,114 46,114	11,515 36,700 47,841 20,493 734 62 12,899	0.0704 0.2415 0.4151 0.0000 0.0000 0.3040 0.0156 0.0013 0.0000 0.0000 0.2797	0.9296 0.7585 0.5849 1.0000 1.0000 0.6960 0.9844 0.9987 1.0000 1.0000 0.7203	39.29 36.52 27.70 16.20 16.20 16.20 11.28 11.10 11.08 11.08 11.08
20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	33,215 33,215	33,215	0.0000	1.0000	7.98 7.98
29.5 30.5 31.5 32.5	2,270		0.0000		

33.5

# ACCOUNT 341.30 TRANSPORTATION EQUIPMENT - AUTOS

### ORIGINAL LIFE TABLE

#### EXPERIENCE BAND 2005-2014

PLACEMENT BAND 1981-2011

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0 0.5 1.5 2.5 3.5 4.5 5.5 6.5	135,673 151,848 151,848 151,848 120,279 120,279 154,371 89,069	65,876	0.0000 0.0000 0.0000 0.0000 0.0000 0.4267 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 0.5733 1.0000	100.00 100.00 100.00 100.00 100.00 100.00
7.5	125,084 100,405	24,679 30,159	0.1973 0.3004	0.8027	57.33 57.33 46.02
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5 19.5 20.5 21.5 22.5	70,246 70,246 54,113 34,188 34,188 67,402 46,909 46,175 46,114 46,114 33,215 33,215	16,133 32,825 20,493 734 62 12,899 33,215	0.0000 0.2297 0.6066 0.0000 0.3040 0.0156 0.0013 0.0000 0.2797 0.0000 1.0000	1.0000 0.7703 0.3934 1.0000 1.0000 0.6960 0.9844 0.9987 1.0000 1.0000 0.7203 1.0000	32.19 32.19 24.80 9.76 9.76 9.76 6.79 6.68 6.68 6.68 6.68 4.81 4.81
22.5 23.5 24.5 25.5 26.5 27.5 28.5					
29.5 30.5 31.5 32.5 33.5	2,270		0.0000		







### ACCOUNT 341.40 TRANSPORTATION EQUIPMENT - OTHER

### ORIGINAL LIFE TABLE

EXPERIENCE BAND 1995-2014

PLACEMENT BAND 1956-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5	1,076,430 1,003,604 851,370 563,803 527,352 416,106 362,647 210,118 83,287 83,287	972 39,251 54,910 34,081 59,337	$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0017\\ 0.0000\\ 0.0943\\ 0.1514\\ 0.1622\\ 0.0000\\ 0.7124 \end{array}$	1.0000 1.0000 0.9983 1.0000 0.9057 0.8486 0.8378 1.0000 0.2876	100.00 100.00 100.00 99.83 99.83 90.41 76.72 64.28 64.28
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	26,943 26,943 26,943 7,846 2,626 2,626 2,626 2,626 2,626 2,626 2,626 2,626 2,626	19,097 3,384 589	0.0000 0.0000 0.7088 0.4313 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.2241	1.0000 1.0000 0.2912 0.5687 1.0000 1.0000 1.0000 1.0000 1.0000 0.7759	18.48 18.48 18.48 5.38 3.06 3.06 3.06 3.06 3.06 3.06 3.06 3.06
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	2,038 2,038	2,038	0.0000	1.0000	2.38 2.38
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	440		0.0000		

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EXPERIENCE BAND 1995-2014

# KENTUCKY AMERICAN WATER COMPANY

# ACCOUNT 341.40 TRANSPORTATION EQUIPMENT - OTHER

# ORIGINAL LIFE TABLE, CONT.

### PLACEMENT BAND 1956-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5 40.5 41.5 42.5 43.5 44.5 45.5 45.5 46.5 47.5 48.5 49.5 50.5 51.5 52.5	440 220 220 220 220 220 220 220 220 220	220	0.4999 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000		
53.5 54.5 55.5 56.5 57.5 58.5	220 220 220 220 220 220	220	0.0000 0.0000 0.0000 0.0000 1.0000		

### ACCOUNT 341.40 TRANSPORTATION EQUIPMENT - OTHER

### ORIGINAL LIFE TABLE

EXPERIENCE BAND 2005-2014

PLACEMENT BAND 1956-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	994,798 982,280		0.0000 0.0000	1.0000 1.0000	100.00 100.00
1.5	830,046		0.0000	1.0000	100.00
2.5	558,583	972	0.0017	0.9983	100.00
3.5	524,726		0.0000	1.0000	99.83
4.5	413,480	39,251	0.0949	0.9051	99.83
5.5	360,021	54,910	0.1525	0.8475	90,35
6.5	207,492	34,081	0.1643	0.8357	76.57
7.5	80,661		0.0000	1.0000	63.99
8.5	80,661	59,337	0.7356	0.2644	63.99
9.5	21,324		0.0000	1.0000	16.92
10.5	21,324		0.0000	1.0000	16.92
11.5	21,324	16,104	0.7552	0.2448	16.92
12.5	5,220	3,384	0.6482	0.3518	4.14
13.5	2,626		0.0000	1.0000	1.46
14.5	2,626		0.0000	1.0000	1.46
15.5	2,626		0.0000	1.0000	1.46
16.5	2,626		0.0000	1.0000	1.46
17.5	2,626		0.0000	1.0000	1.46
18.5	2,626	589	0.2241	0.7759	1.46
19,5	2,038		0.0000	1.0000	1.13
20.5	2,038	2,038	1.0000		1.13
21.5					
22.5					
23.5					
24.5					
25.5					
26.5					
27.5					
28.5					
29.5					
30.5					
31.5					
32.5					
33.5					

34.5 35.5 36.5

37.5

38.5

# ACCOUNT 341.40 TRANSPORTATION EQUIPMENT - OTHER

# ORIGINAL LIFE TABLE, CONT.

PLACEMENT	BAND 1956-2014	``````````````````````````````````````	EXPER:	IENCE BAN	D 2005-2014
AGE AT	EXPOSURES AT	RETIREMENTS	•		PCT SURV
BEGIN OF	BEGINNING OF	DURING AGE	RETMT	SURV	BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
39.5					
40.5					
41.5					
42.5					
43.5					
44.5					
45.5					
46.5					
47.5					
48.5	220		0.0000		
49.5	220		0.0000		
50.5	220		0.0000		
51.5	220		0.0000		
52.5	220		0.0000		
53.5	220		0.0000		
54.5	220		0.0000		
55.5	220		0.0000		
56.5	220		0.0000		
57.5	220	220	1.0000		
58.5					









### ACCOUNT 345 POWER OPERATED EQUIPMENT

### ORIGINAL LIFE TABLE

PLACEMENT BAND 1941-2014

EXPERIENCE BAND 1995-2014

AGE AT	EXPOSURES AT	RETIREMENTS			PCT SURV
BEGIN OF	BEGINNING OF	DURING AGE	RETMT	SURV	BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
0.0	1,444,926		0.0000	1,0000	100.00
0.5	1,443,272		0.0000	1.0000	100.00
1.5	1,454,975		0.0000	1.0000	100.00
2.5	1,451,034	5,061	0.0035	0.9965	100.00
3.5	1,463,845		0.0000	1.0000	99.65
4.5	1,511,642	4,157	0.0027	0.9973	99.65
5.5	1,525,874		0.0000	1.0000	99.38
6.5	1,553,515		0.0000	1.0000	99.38
7.5	1,558,015		0.0000	1.0000	99.38
8.5	1,559,667	779	0.0005	0.9995	99.38
9.5	576,703		0.0000	1.0000	99.33
10.5	576,703	5,876	0.0102	0.9898	99.33
11.5	555,949	27,605	0.0497	0.9503	98.32
12.5	528,344	92,367	0,1748	0.8252	93.43
13.5	432,573	48,734	0.1127	0.8873	77.10
14,5	383,839	2,620	0.0068	0.9932	68.41
15.5	354,802	8,499	0.0240	0,9760	67.95
16.5	359,266	1,861	0.0052	0.9948	66.32
17.5	291,254	·	0.0000	1.0000	65.98
18.5	263,663	1,883	0.0071	0.9929	65.98
19.5	207,802	1,717	0.0083	0.9917	65.50
20.5	206,085	25,862	0.1255	0.8745	64.96
21.5	180,224		0.0000	1.0000	56.81
22.5	175,784	31,843	0.1811	0.8189	56.81
23.5	142,471	6,421	0.0451	0.9549	46.52
24,5	94,673	1,582	0.0167	0.9833	44.42
25.5	90,443	3,682	0.0407	0.9593	43.68
26.5	30,909	4,500	0.1456	0.8544	41.90
27.5	26,409	1,652	0.0626	0.9374	35.80
28.5	24,757	10,178	0.4111	0.5889	33.56
29.5	14,579		0.0000	1.0000	19.76
30.5	14,579		0.0000	1.0000	19.76
31.5	14,579		0.0000	1.0000	19.76
32.5	14,579				
33.5	14,579		0.0000 0.0000	1.0000 1.0000	19.76 19.76
	•	1 (17			
34.5	14,579	1,617	0.1109	0.8891	19.76
35.5	12,962	12,962	1.0000		17.57
36.5					
37.5					

38.5

# ACCOUNT 345 POWER OPERATED EQUIPMENT

### ORIGINAL LIFE TABLE, CONT.

PLACEMENT H	BAND 1941-2014		EXPER:	IENCE BAN	D 1995-2014
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5 40.5 41.5 42.5 43.5 43.5 45.5 46.5 47.5 48.5					
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5	5,387 5,387 5,387 5,387 5,387 5,387		0.0000 0.0000 0.0000 0.0000 0.0000		
58.5 59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	5,387 5,387 5,387 5,387 5,387 5,387 5,387 5,387 5,387 5,387 5,387 5,387		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000		
69.5 70.5 71.5 72.5 73.5	5,387 5,387 5,387 5,387 5,387	5,387	0.0000 0.0000 0.0000 1.0000		

# PART VIII. NET SALVAGE STATISTICS

# ACCOUNT 304.10 STRUCTURES AND IMPROVEMENTS - SOURCE OF SUPPLY

### SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
1987	450	9,215			0	9,215-	
1988	450	9,215			0	9,215-	
1989							
1990							
1991	5,311		0		0		0
1992							
1993	3,050		0		0		0
1994							
1995							
1996							
1997							
1998							
1999							
2000							
2001							
2002							
2003	24,347	87,305			0	87,305-	
2004	38,923	115,482	297		0	115,482-	297-
2005							
2006	1,100		0		0		0
2007			_				
2008	11,676		0		0		0
2009	6,621		0		0		0
2010							
2011	C 800	505	0		•		~
2012 2013	6,593 6,377	595 BC 110	9		0	595-	9-
2013	168,547	86,112 32,857	10		0 0	86,112- 32,857-	10
2014	100,047	52,057	19		0	34,05/-	19-
TOTAL	273,445	340,781	125		0	340,781-	125-
THREE-YEA	AR MOVING AVERAGES						
87-89	300	6,143			0	6,143-	
88-90	150	3,072			0	3,072-	
89-91	1,770		0		0		0
90-92	1,770		0		0		0
91-93	2,787		0		0		0
92-94	1,017		0		0		0
93-95	1,017		0		0		0
94-96							
95-97							

🖄 Gannett Fleming

# ACCOUNT 304.10 STRUCTURES AND IMPROVEMENTS - SOURCE OF SUPPLY

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT PCT	NET SALVAGE AMOUNT PCT
THREE-YEA	R MOVING AVERAGES				
96-98					
97-99					
98-00					
99-01					
00-02					
01-03	8,116	29,102	359	0	29,102- 359-
02-04	21,090	67,596	321	0	67,596- 321-
03-05	21,090	67,596	321	0	67,596- 321-
04-06	13,341	38,494	289	0	38,494- 289-
05-07	367		0	0	0
06~08	4,259		0	0	0
07-09	6,099		0	0	0
08-10	6,099		0	0	0
09-11	2,207		0	0	0
10-12	2,198	198	9	0	198- 9-
11-13	4,323	28,902	669	0	28,902- 669-
12-14	60,506	39,855	66	0	39,855- 66-
FIVE-YEAR	AVERAGE				
10-14	36,303	23,913	66	0	23,913- 66-

# ACCOUNTS 304.20 AND 304.30 STRUCTURES AND IMPROVEMENTS

### SUMMARY OF BOOK SALVAGE

TEAR    RETIREMENTS    AMOUNT    PCT    AMOUNT    PCT    AMOUNT    PCT      1982    1.19    0    0    0    0      1983    3,903    1.034    26    0    0    0      1985    4,215    0    0    0    0    0      1986    13,945    0    1,628    18    0    1,628    18      1986    45,747    13,140    29    0    13,140    29      1989    27,910    3,615    13    0    3,615    13      1991    79,106    19,652    25    0    18,652    25      1992    28,738    8,163    28    2,436    8    5,727    20      1994    500    0    0    0    0    0    0      1995    1    7,900    46    0    7,900    46      2001    35,834    5,500    15    0    5,500		REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
1983    3,903    1,034    26    0    1,034    26-      1984    4,200    0    0    0    0      1985    4,215    0    0    0    0      1985    1,945    0    0    0    0      1986    13,945    0    1,628-/t8    18    0    1,628-/t8      1989    7,910    3,615    13    0    3,615-/t3    13,140-/t4    29-/t4      1990    27,910    3,615    13    0    3,615-/t3    13,140-/t4    29-/t4      1991    79,308    19,652    25    0    19,652-/t4    25-/t4      1994    500    0    0    0    0    0      1995    -    -    -    -    -    -    -    -    -    0    -    0    0    0    0    0    0    0    0    0    0    0    0    0    -    -	YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT		PCT
1984    4,200    0    0    0      1985    4,215    0    0    0      1986    13,945    0    0    0      1987    9,195    1,628    18    0    1,628    18      1988    45,747    13,140    29    0    13,140    29      1990    27,910    3,615    13    0    3,615    13      1991    79,308    19,652    25    0    19,652    25      1992    28,739    8,163    28    2,436    8    5,727    20      1993    4,601    825    18    0    825    18      1994    500    0    0    0    0    10      1996    17,195    7,900<46	1982	119		0		0		0
1985    4,215    0    0    0      1986    13,945    0    0    0      1987    9,195    1,628    18    0    13,140    29      1889    0    13,140    29    0    13,140    29      1890    7,910    3,615    13    0    3,615    13      1991    79,308    19,652    25    0    19,652    25      1992    28,738    8,163    28    2,436    8    5,727    20      1993    4,601    825    18    0    825    18      1994    500    0    0    0    0    0      1996    1    7,195    7,900    46    0    7,900    46      2000    92,575    38,325    41    0    38,325    41      2001    35,834    5,500    15    0    5,432    12      2001    1,5378    0	1983	3,903	1,034	26		0	1,034-	26-
1986    13,945    0    0    0      1987    9,195    1,628    18    0    1,628    18      1986    45,747    13,140    29    0    13,140    29      1989    0    3,615    13    0    3,615    13      1991    79,308    19,652    25    0    19,652    25      1992    28,738    8,163    28    2,436    8    5,727    20      1993    4,601    825    18    0    825    18      1996    1    79,900    46    0    7,900    46      2001    35,834    5,500    15    0    5,500    15      2002    17,127    70,552    412    0    70,552    412      2001    35,134    5,500    15    0    5,963    111      2002    17,127    70,552    412    0    7,321      2004    200	1984	4,200		0		0		0
1987    9,195    1,628    18    0    1,628-    18-      1988    45,747    13,140    29    0    13,140-    29-      1990    27,910    3,615    13    0    3,615-    13-      1991    79,308    19,652    25    0    19,652-    25-      1992    28,738    8,163    28    2,436    8    5,727-    20-      1993    4,601    825    18    0    825-    18-      1994    500    0    0    825-    18-    0    183,325-    18-      1996    1    7,900    46    0    7,900-    46-      2000    92,575    38,325-    41-    0    38,325-    41-      2001    35,834    5,500    15-    0    5,500-    15-      2002    17,127    7,052    412-    0    70,552-    412-      2003    105    1,378    0 </td <td>1985</td> <td>4,215</td> <td></td> <td>0</td> <td></td> <td>0</td> <td></td> <td>0</td>	1985	4,215		0		0		0
1988    45,747    13,140    29    0    13,140    29-      1989    27,910    3,615    13    0    3,615    13      1991    79,308    19,652    25    0    19,652    25-      1992    28,738    8,163    28    2,436    8    5,727    20-      1993    4,601    825    18    0    825-    18-      1994    500    0    0    0    0    0      1995    -    -    -    -    -    0    -    0    0    0    0    0    1995    -    -    -    -    0    -    0    -    0    -    0    -    0    -    0    -    0    -    0    -    0    -    0    -    0    -    0    -    0    -    0    -    0    -    0    -    0    -	1986	13,945		0		0		0
1989    0    3,615    13    0    3,615    13      1991    79,308    19,652    25    0    19,652    25      1992    28,738    8,163    28    2,436    8    5,727-    20      1993    4,601    B25    18    0    825-    18      1994    500    0    0    0    0    19      1995    1    7,195    7,900    46    0    7,900-    46-      2000    92,575    38,325    41    0    38,325-    41-      2001    35,834    5,500    15    0    5,500-    15      2002    17,127    70,552    412    0    70,552-    412-      2003    105    1,378    0    1,378-    0    0    0      2004    200    0    0    0    0    0    0      2005    5,347    5,943    111    0	1987	9,195	1,628	18		0	1,628-	18-
1990    27,910    3,615    13    0    3,615    13      1991    79,308    19,652    25    0    19,652    25      1992    28,738    8,163    28    2,436    8    5,727    20      1993    4,601    825    18    0    825    18      1994    500    0    0    0    0    0      1995    -    -    -    0    1825    4      1997    -    -    -    -    0    36,325    41      2001    35,834    5,500    15    0    5,500    15      2002    17,127    70,552    412    0    70,552    412      2003    105    1,378    0    1,378    0    1,378      2004    200    0    0    0    0    0      2005    5,347    5,943    111    0    346    0	1988	45,747	13,140	29		0	13,140-	29-
1991    79,308    19,652    25    0    19,652    25-      1992    28,738    8,163    28    2,436    8    5,727-    20-      1993    4,601    825    18    0    825-    18-      1994    500    0    0    0    0      1995    0    0    38,325-    41-      1996    0    38,325-    41-    0    38,325-    41-      2001    35,834    5,500-    15    0    5,500-    15      2002    17,127    70,552    412    0    70,552-    412-      2003    105    1,378    0    1,378-    0    0    0      2004    200    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0 </td <td>1989</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	1989							
1992    28,738    8,163    28    2,436    8    5,727-    20-      1993    4,601    825    18    0    825-    18-      1994    500    0    0    0    0    0      1995    1    996    7,900    46    0    7,900-    46-      2000    92,575    38,325    41    0    38,325-    41-      2001    35,834    5,500    15    0    5,500-    15      2002    17,127    70,552    412    0    70,552-    412-      2003    105    1,378    0    1,378-    2004    200    0    0    0      2004    200    0    0    0    0    0    0      2006    24,500    25-    0    0    0    0    0      2007    5,991    0    0    0    0    0    0    0    2010    8,373	1990	27,910	3,615	13		0	3,615-	13-
1993  4,601  825  18  0  825-  18-    1994  500  0  0  0  0    1995  0  0  0  0  0    1996  1  7,195  7,900  46  0  7,900-  46-    2000  92,575  38,325  41  0  38,325-  41-    2001  35,834  5,500  15  0  5,500-  15-    2002  17,127  70,552  412-  0  70,552-  412-    2003  105  1,378  0  1,378-  0  0    2004  200  0  0  0  0  0    2006  24,500  25-  0  0  0  0    2006  24,500  25-  0  0  0  0    2006  24,500  25-  0  0  0  0    2010  8,373  73  1  0  7.321-  8    2011  92,732  7,321  8 <td>1991</td> <td>79,308</td> <td>19,652</td> <td>25</td> <td></td> <td>0</td> <td>19,652-</td> <td>25-</td>	1991	79,308	19,652	25		0	19,652-	25-
1994    500    0    0    0      1995    1995      1996    1997      1998    1    7,195    7,900    46    0    7,900    46      2000    92,575    38,325    41    0    38,325    41      2001    35,834    5,500    15    0    5,500    15      2002    17,127    70,552    412    0    70,552    412      2003    105    1,378    0    1,378    0    1,378      2004    200    0    0    0    0    0      2005    5,347    5,943    111    0    5,943    111      2006    24,500    25-0    0    0    0    0      2008    391,632    0    0    0    0    0      2010    8,373    73    1    0    7,321    8      2011    92,732    7,321    8    0	1992	28,738	8,163	28	2,436	8	5,727-	20-
1995    1996    1997    1998    1999  17,195  7,900  46  0  7,900  46-    2000  92,575  38,325  41  0  38,325  41-    2001  35,834  5,500  15  0  5,500  15-    2002  17,127  70,552  412  0  70,552  412-    2003  105  1,378  0  1,378  0  1,178    2004  200  0  0  0  0  0    2006  24,500  25-  0  0  0  0    2006  24,500  25-  0  0  0  0    2006  24,500  25-  0  0  0  0    2007  5,991  0  0  0  0  0    2010  8,373  73  1  0  732-  1-    2011  92,732  7,321  8  0  7,32-  8-    2012  164,608	1993	4,601	825	18		0	825-	18-
1996    1997    1998    1999  17,195  7,900  46  0  7,900  46-    2000  92,575  38,325  41  0  38,325  41-    2001  35,834  5,500  15  0  5,500  15-    2002  17,127  70,552  412  0  70,552  412-    2003  105  1,378  0  1,378-  0  1,378-    2004  200  0  0  0  0  0    2005  5,347  5,943  111  0  5,943-  111-    2006  24,500  25-0  0  0  0  0    2007  5,991  0  0  0  0  0    2008  391,632  0  0  0  0  0    2010  8,373  73  1  0  7,321-  8-    2011  92,732  7,321  8  0  7,321-  8-    2013  59,921  9,912	1994	500		0		0		0
1997    1998    1999  17,195  7,900 46  0  7,900 46-    2000  92,575  38,325 41  0  38,325 41-    2001  35,834  5,500 15  0  5,500 15-    2002  17,127  70,552 412  0  70,552 412-    2003  105  1,378  0  1,378-    2004  200  0  0  0    2005  5,347  5,943 111  0  5,943- 111-    2006  24,500  25-0  0  25  0    2007  5,991  0  0  0  0    2008  391,632  0  0  0  0    2010  8,373  73<1	1995							
1998    1999  17,195  7,900  46  0  7,900  46-    2000  92,575  38,325  41  0  38,325  41-    2001  35,834  5,500  15  0  5,500  15-    2002  17,127  70,552  412  0  70,552  412-    2003  105  1,378  0  1,378  0  1,378    2004  200  0  0  0  0  0    2005  5,347  5,943  111  0  5,943-  111-    2006  24,500  25-  0  0  0  0    2007  5,991  0  0  0  0  0    2008  391,632  0  0  346-  0  2010  8,373  73  1  0  7,321-  8    2010  8,373  73  1  0  24,151-  15-  12-    2011  92,732  7,321  8  0  7,321-  8-  2,012	1996							
1999  17,195  7,900  46  0  7,900-  46-    2000  92,575  38,325  41  0  38,325-  41-    2001  35,834  5,500  15  0  5,500-  15-    2002  17,127  70,552  412  0  70,552-  412-    2003  105  1,378  0  1,378-  0  0    2004  200  0  0  0  0  0    2005  5,347  5,943  111  0  5,943-  111-    2006  24,500  25-0  0  0  0  0    2007  5,991  0  0  0  0  0    2010  8,373  73  1  0  7,321-  8    2012  164,608  24,151  15  0  24,151-  15-    2013  59,921  9,912  17  0  9,912-  17-    2014  1,493,901  11,574-  1  0  11,574-  1-    <	1997							
2000  92,575  38,325  41  0  38,325  41-    2001  35,834  5,500  15  0  5,500-  15-    2002  17,127  70,552  412  0  70,552-  412-    2003  105  1,378  0  1,378-  0  0  0    2004  200  0  0  0  0  0  0  0    2005  5,347  5,943  111  0  5,943-  111-    2006  24,500  25-0  0  0  0  0    2007  5,991  0  0  0  0  0    2008  391,632  0  0  0  0  0    2010  8,373  73  1  0  73-1  1  0  11,574-  1    2011  92,732  7,321  8  0  7,321-  8  2  2  15-  15-    2013  59,921  9,912  17  0  9,912-  17-  2  2	1998							
2001  35,834  5,500  15  0  5,500-  15-    2002  17,127  70,552  412  0  70,552-  412-    2003  105  1,378  0  1,378-  0  0  0    2004  200  0  0  0  0  0  0    2005  5,347  5,943  111  0  5,943-  111-    2006  24,500  25-0  0  25  0    2007  5,991  0  0  0  0    2008  391,632  0  0  0  0    2010  8,373  73  1  0  73-  1-    2011  92,732  7,321  8  0  7,321-  8-    2012  164,608  24,151  15  0  24,151-  15-    2013  59,921  9,912  17-  0  9,912-  17-    2014  1,493,901  11,574  1  0  11,574-  1-     0 <td>1999</td> <td>17,195</td> <td>7,900</td> <td>46</td> <td></td> <td>0</td> <td>7,900-</td> <td>46-</td>	1999	17,195	7,900	46		0	7,900-	46-
2001  35,834  5,500  15  0  5,500-  15-    2002  17,127  70,552  412  0  70,552-  412-    2003  105  1,378  0  1,378-  0  0  0    2004  200  0  0  0  0  0  0  0    2005  5,347  5,943  111  0  5,943-  111-    2006  24,500  25-0  0  25  0    2007  5,991  0  0  0  0    2008  391,632  0  0  0  0    2010  8,373  73  1  0  73-  1-    2011  92,732  7,321  8  0  7,321-  8-    2012  164,608  24,151  15  0  24,151-  15-    2013  59,921  9,912  17-  0  9,912-  17-    2014  1,493,901  11,574  1  0  11,574-  1-    T	2000	92,575	38,325	41		0	38,325-	41-
2003  105  1,378  0  1,378-    2004  200  0  0  0    2005  5,347  5,943  111  0  5,943-  111-    2006  24,500  25-  0  0  25  0    2007  5,991  0  0  0  0  0    2008  391,632  0  0  0  0  0    2009  91,226  347  0  1  0  346-  0    2010  8,373  73  1  0  7,321-  8-    2011  92,732  7,321  8  0  7,321-  8-    2012  164,608  24,151  15  0  24,151-  15-    2013  59,921  9,912  17  0  9,912-  17-    2014  1,493,901  11,574  1  0  11,574-  1-    TOTAL  2,723,647  231,009  8  2,437  0  228,572-  8-     0  345	2001	35,834	5,500	15		0	5,500-	15-
2004  200  0  0  0    2005  5,347  5,943  111  0  5,943-  111-    2006  24,500  25-0  0  25  0    2007  5,991  0  0  0  0    2008  391,632  0  0  0  0    2009  91,226  347  0  1  0  346-  0    2010  8,373  73  1  0  73-  1-  2011  92,732  7,321  8  0  7,321-  8-    2012  164,608  24,151  15  0  24,151-  15-    2013  59,921  9,912  17  0  9,912-  17-    2014  1,493,901  11,574  1  0  11,574-  1-    THREE-YEAR  MOVING AVERAGES  8-  2,437  0  228,572-  8-    82-84  2,741  345  13  0  345-  13-    83-85  4,106  345  8  0 <td< td=""><td>2002</td><td>17,127</td><td>70,552</td><td>412</td><td></td><td>0</td><td>70,552-</td><td>412-</td></td<>	2002	17,127	70,552	412		0	70,552-	412-
2005  5,347  5,943  111  0  5,943  111-    2006  24,500  25-0  0  25  0    2007  5,991  0  0  0  0    2008  391,632  0  0  0  0    2009  91,226  347  0  1  0  346-  0    2010  8,373  73  1  0  73-  1-    2011  92,732  7,321  8  0  7,321-  8-    2012  164,608  24,151  15  0  24,151-  15-    2013  59,921  9,912  17  0  9,912-  17-    2014  1,493,901  11,574  1  0  11,574-  1-    TOTAL  2,723,647  231,009  8  2,437  0  228,572-  8-    82-84  2,741  345  13  0  345-  13-    83-85  4,106  345  8  0  345-  8-    84-86  7	2003	105	1,378			0	1,378-	
2006  24,500  25-0  0  25 0    2007  5,991  0  0  0    2008  391,632  0  0  0    2009  91,226  347 0  1  0  346-    2010  8,373  73 1  0  7.3  1-    2011  92,732  7,321  8  0  7,321-  8-    2012  164,608  24,151  15  0  24,151-  15-    2013  59,921  9,912  17  0  9,912-  17-    2014  1,493,901  11,574  0  11,574-  1-    TOTAL  2,723,647  231,009  8  2,437  0  228,572-  8-    THREE-YEAR MOVING AVERAGES    82-84  2,741  345  13  0  345-  13-    83-85  4,106  345  8  0  345-  8-    84-86  7,453  0  0  0  0  0	2004	200		0		0		0
2007  5,991  0  0  0    2008  391,632  0  0  0    2009  91,226  347  0  1  0  346-  0    2010  8,373  73  1  0  73-  1-    2011  92,732  7,321  8  0  7,321-  8-    2012  164,608  24,151  15  0  24,151-  15-    2013  59,921  9,912  17  0  9,912-  17-    2014  1,493,901  11,574  1  0  11,574-  1-    TOTAL  2,723,647  231,009  8  2,437  0  228,572-  8-    THREE-YEAR MOVING AVERAGES    Start 345  13  0  345-  13-    83-85  4,106  345  8  0  345-  8-    84-86  7,453  0  0  0  0  0	2005	5,347	5,943	111		0	5,943-	111-
2008  391,632  0  0  0    2009  91,226  347  0  1  0  346-  0    2010  8,373  73  1  0  73-  1-    2011  92,732  7,321  8  0  7,321-  8-    2012  164,608  24,151  15  0  24,151-  15-    2013  59,921  9,912  17  0  9,912-  17-    2014  1,493,901  11,574  1  0  11,574-  1-    TOTAL  2,723,647  231,009  8  2,437  0  228,572-  8-    THREE-YEAR MOVING AVERAGES    Start 1  345  13  0  345-  13-    83-85  4,106  345  8  0  345-  8-    84-86  7,453  0  0  0  0  0	2006	24,500	25-	0		0	25	0
2009  91,226  347  0  1  0  346-  0    2010  8,373  73  1  0  73-  1-    2011  92,732  7,321  8  0  7,321-  8-    2012  164,608  24,151  15  0  24,151-  15-    2013  59,921  9,912  17  0  9,912-  17-    2014  1,493,901  11,574  1  0  11,574-  1-    TOTAL  2,723,647  231,009  8  2,437  0  228,572-  8-    THREE-YEAR MOVING AVERAGES    82-84  2,741  345  13  0  345-  13-    83-85  4,106  345  8  0  345-  8-    84-86  7,453  0  0  0  0  0	2007	5,991		0		0		0
2010  8,373  73  1  0  73-  1-    2011  92,732  7,321  8  0  7,321-  8-    2012  164,608  24,151  15  0  24,151-  15-    2013  59,921  9,912  17  0  9,912-  17-    2014  1,493,901  11,574  1  0  11,574-  1-    TOTAL  2,723,647  231,009  8  2,437  0  228,572-  8-    THREE-YEAR MOVING AVERAGES    82-84  2,741  345  13  0  345-  13-    83-85  4,106  345  8  0  345-  8-    84-86  7,453  0  0  0  0	2008	391,632		0		0		0
2011  92,732  7,321  8  0  7,321-  8-    2012  164,608  24,151  15  0  24,151-  15-    2013  59,921  9,912  17  0  9,912-  17-    2014  1,493,901  11,574  1  0  11,574-  1-    TOTAL  2,723,647  231,009  8  2,437  0  228,572-  8-    THREE-YEAR  MOVING AVERAGES	2009	91,226	347	0	1	0	346-	0
2012  164,608  24,151  15  0  24,151-  15-    2013  59,921  9,912  17  0  9,912-  17-    2014  1,493,901  11,574  1  0  11,574-  1-    TOTAL  2,723,647  231,009  8  2,437  0  228,572-  8-    THREE-YEAR MOVING AVERAGES    THREE-YEAR MOVING AVERAGES    82-84  2,741  345  13  0  345-  13-    83-85  4,106  345  8  0  345-  8-    84-86  7,453  0  0  0  0  0	2010	8,373	73	1		0	73-	1-
2013  59,921  9,912  17  0  9,912-  17-    2014  1,493,901  11,574  1  0  11,574-  1-    TOTAL  2,723,647  231,009  8  2,437  0  228,572-  8-    THREE-YEAR MOVING AVERAGES  UNING AVERAGES    82-84  2,741  345  13  0  345-  13-    83-85  4,106  345  8  0  345-  8-    84-86  7,453  0  0  0  0  0	2011	92,732	7,321	8		0	7,321-	8 -
2014  1,493,901  11,574  1  0  11,574-  1-    TOTAL  2,723,647  231,009  8  2,437  0  228,572-  8-    THREE-YEAR MOVING AVERAGES    82-84  2,741  345  13  0  345-  13-    83-85  4,106  345  8  0  345-  8-    84-86  7,453  0  0  0  0  0	2012	164,608	24,151	15		0	24,151-	15-
TOTAL  2,723,647  231,009  8  2,437  0  228,572-  8-    THREE-YEAR MOVING AVERAGES	2013	59,921	9,912	17		0	9,912-	17-
THREE-YEAR MOVING AVERAGES    82-84  2,741  345  13  0  345-  13-    83-85  4,106  345  8  0  345-  8-    84-86  7,453  0  0  0  0	2014	1,493,901	11,574	1		0	11,574-	1-
82-84  2,741  345  13  0  345-13-    83-85  4,106  345  8  0  345-8-    84-86  7,453  0  0  0	TOTAL	2,723,647	231,009	8	2,437	0	228,572-	8 -
83-85  4,106  345  8  0  345-8-    84-86  7,453  0  0  0  0	THREE-YEA	AR MOVING AVERAGES						
83-85  4,106  345  8  0  345-8-    84-86  7,453  0  0  0  0	82-84	2,741	345	13		0	345-	13-
84-86 7,453 0 0 0								
			543				543-	

🖄 Gannett Fleming

# ACCOUNTS 304.20 AND 304.30 STRUCTURES AND IMPROVEMENTS

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
			rC1	HIGONI		ANOONT	FCI
THREE-YE	AR MOVING AVERAGE	S					
86-88	22,962	4,923	21		0	4,923-	21-
87-89	18,314	4,923	27		0	4,923-	27-
88-90	24,552	5,585	23		0	5,585-	23-
89-91	35,739	7,756	22		0	7,756-	22-
90-92	45,319	10,477	23	812	2	9,665-	21-
91-93	37,549	9,547	25	812	2	8,735-	23-
92-94	11,280	2,996	27	812	7	2,184-	19-
93-95	1,700	275	16		0	275-	16-
94-96	167		0		0		0
95-97							
96-98							
97-99	5,732	2,633	46		0	2,633-	46-
98-00	36,590	15,408	42		0	15,408-	42-
99-01	48,534	17,242	36		0	17,242-	36-
00-02	48,512	38,126	79		0	38,126-	79-
01-03	17,689	25,810	146		0	25,810-	146-
02-04	5,811	23,977	413		0	23,977-	413-
03-05	1,884	2,441	130		0	2,441-	130-
04-06	10,016	1,973	20		0	1,973-	20-
05-07	11,946	1,973	17		0	1,973-	17-
06-08	140,708	8 -	0		0	8	0
07-09	162,950	116	0		0	115-	0
08-10	163,744	140	0		0	140-	0
09-11	64,110	2,580	4		0	2,580-	4 -
10-12	88,571	10,515	12		0	10,515-	12-
11-13	105,753	13,795	13		0	13,795-	13-
12-14	572,810	15,212	3		0	15,212-	3 -
FIVE-YEA	R AVERAGE						
10-14	363,907	10,606	3		0	10,606-	3-
70 J.J.	100,000	TO'000	ر		v	70,000-	J

# ACCOUNT 304.40 STRUCTURES AND IMPROVEMENTS - TRANSMISSION AND DISTRIBUTION

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT PCT	NET SALVAGE AMOUNT	PCT
2006	2,300		0	0		0
2007						
2008	39,028		0	0		0
2009	708	1,556	220	0	1,556-	220-
2010						
2011						
2012						
2013	53		0	0		0
2014	22,657	110	0	0	110-	0
TOTAL	64,746	1,666	3	0	1,666-	3 -
THREE-YE	AR MOVING AVERAGE	S				
06~08	13,776		0	0		0
07-09	13,245	519	4	0	519-	4 -
08-10	13,245	519	4	0	519-	4 -
09-11	236	519	220	0	519-	220-
10-12						
11-13	18		0	0		0
12-14	7,570	37	0	0	37-	0
FIVE-YEAF	AVERAGE					
10 14	4 540		0	~		0
10-14	4,542	22	0	0	22-	0

### ACCOUNT 304.60 STRUCTURES AND IMPROVEMENTS - OFFICE BUILDINGS

### SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
1980	5,388	2,244	42	9,131	169	6,887	128
1981	0,000	2,211	72	<i>,</i> ,,,,,,	TOD	0,007	420
1982	46,850	9,646	21	50	0	9,596-	20-
1983	385	2,010	0	20	Ő	5,050	0
1984							· ·
1985	660		0		0		0
1986							
1987	16,089	2,000	12		0	2,000-	12-
1988	34,846	2,675	8	3,500	10	825	2
1989							
1990	17,631	7,406	42		0	7,406-	42-
1991	28,515-		0		0		0
1992	5,155	300	6	4,196	81	3,896	76
1993	2,903	361	12	50	2	311-	11-
1994	6,294	502	8		0	502-	8 -
1995							
1996							
1997							
1998							
1999	46,016		0		0		0
2000	1,901	551	29		0	551-	29-
2001							
2002							
2003	33,675		0		0		0
2004							
2005							
2006							
2007	6,099		0		0		0
2008	40,837		0		0		0
2009	13,217	2,605	20		0	2,605-	20-
2010	2,337		0	417	18	417	18
2011	969	1,019	105		0	1,019-	105-
2012	4,057	2,618	65		0	2,618-	65-
2013	79,682	27,982	35		0	27,982-	35-
2014	72,299	21,600	30		0	21,600-	30-
TOTAL	408,773	81,509	20	17,344	4	64,165-	16-
THREE-YEA	R MOVING AVERAGES						
80-82	17,413	3,963	23	3,060	18	903-	5-
81-83	15,745	3,215	20	17	0	3,199-	20-
	20) (T	لت ساد ننک و ات		/	Ŭ	هر ساند و ب	

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# ACCOUNT 304.60 STRUCTURES AND IMPROVEMENTS - OFFICE BUILDINGS

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
THREE-YEA	AR MOVING AVERAGE	S					
82-84	15,745	3,215	20	17	0	3,199-	20-
83-85	348		0		0		0
84-86	220		0		0		0
85-87	5,583	667	12		0	667-	12-
86-88	16,978	1,558	9	1,167	7	392-	2-
87-89	16,978	1,558	9	1,167	7	392-	2 -
88-90	17,492	3,360	19	1,167	7	2,194-	13-
89-91	3,628-	2,469	68-		0	2,469-	68
90-92	1,910-	2,569	135-	1,399	73-	1,170-	61
91-93	6,819-	220	3 -	1,415	21-	1,195	18-
92-94	4,784	388	8	1,415	30	1,028	21
93-95	3,066	288	9	17	1	271-	9-
94-96	2,098	167	8		0	167-	8 -
95-97							
96-98							
97-99	15,339		0		0		0
98-00	15,972	184	1		0	184-	1-
99-01	15,972	184	1		0	184-	1-
00-02	634	184	29		0	184-	29-
01-03	11,225		0		0		O
02-04	11,225		0		0		0
03-05	11,225		0		0		0
04-06							
05-07	2,033		0		0		0
06-08	15,645		0		0		0
07-09	20,051	868	4		0	868-	4 -
08-10	18,797	868	5	139	1	729-	4 -
09-11	5,507	1,208	22	139	3	1,069-	19-
10-12	2,454	1,212	49	139	6	1,073-	44-
11-13	28,236	10,539	37		Ö	10,539-	37-
12-14	52,013	17,400	33		0	17,400-	33-
1					-	_,,100	~ ~
FIVE-YEAR	AVERAGE						
10-14	31,869	10,644	33	83	0	10,560-	33-

# ACCOUNT 304.70 STRUCTURES AND IMPROVEMENTS - STORE, SHOP AND GARAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT PC	ጥ	NET SALVAGE AMOUNT	PCT
						11100212	
2008 2009	29,115		0		0		0
2005	7,226		0		0		0
2011	,,220		Ŭ		°.		Ŭ
2012							
2013							
2014	35,269	174	0		0	174-	0
TOTAL	71,611	174	0		0	174-	0
THREE-YEA	AR MOVING AVERAGES	1					
08-10	12,114		0		0		0
09-11	2,409		0		0		0
10-12	2,409		0		0		0
11-13							
12-14	11,756	58	0		0	58-	0
FIVE-YEAF	RAVERAGE						
10-14	8,499	35	0		0	35-	0

# ACCOUNT 304.80 STRUCTURES AND IMPROVEMENTS - MISCELLANEOUS

	REGULAR	COST OF REMOVAL		GROSS		NET SALVAGE	
YEAR	REGULAR	AMOUNT	PCT	SALVAGE AMOUNT	PCT	AMOUNT	PCT
2001	721		o		0		0
2002	7,539	17,616	234		0	17,616-	234-
2003	5,250		0		0		0
2004	109,674	239	0		0	239-	0
2005	6,000		0		0		0
2006							
2007							
2008	20,629		0		0		0
2009	5,551		0		0		0
2010	2,300		0		0		0
2011	161,507		0		0		0
2012	7,457	1,532	21		0	1,532-	21-
2013	43,417		0		0		0
2014	468,317	501	0		0	501-	0
TOTAL	838,361	19,889	2		0	19,889-	2 -
THREE-YEA	R MOVING AVERAG	ES					
01-03	4,503	5,872	130		0	5,872-	130-
02-04	40,821	5,952	15		0	5,952-	15-
03-05	40,308	80	0		0	80~	0
04-06	38,558	80	0		0	80-	0
05-07	2,000		0		0		0
06-08	6,876		0		0		0
07-09	8,726		0		0		0
08-10	9,493		0		0		0
09-11	56,453		0		0		0
10-12	57,088	511	1		0	511-	1-
11-13	70,794	511	1		0	511-	1-
12-14	173,064	678	0		0	678-	0
FIVE-YEAR	AVERAGE						
10-14	136,600	407	0	2	0	407-	0

# ACCOUNT 305.00 COLLECTING AND IMPOUNDING RESERVOIRS

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT PCT	NET SALVAGE AMOUNT	PCT
2008	11,467		0	0		0
2009						
2010						
2011	9,156	763	8	0	763-	8 -
2012	3,536		0	0		0
2013						
2014	137,748		0	0		0
TOTAL	161,907	763	0	0	763-	0
THREE-YEA	AR MOVING AVERAGES	3				
08-10	3,822		0	0		0
09-11	3,052	254	8	0	254-	8 -
10-12	4,231	254	6	0	254-	6 -
11-13	4,231	254	6	0	254 -	6 -
12-14	47,094		0	Ö		0
FIVE-YEAR	R AVERAGE					
10-14	30,088	153	1	0	153-	1-

# ACCOUNT 306.00 LAKE, RIVER AND OTHER INTAKES

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT PCT	NET SALVAGE AMOUNT PCT
2002	5,189	99,254		0	99,254-
2003					
2004					
2005					
2006	20,500	72,600	354	0	72,600- 354-
2007	3,666		0	0	0
2008					
2009					
2010					
2011	7,977	35,837	449	0	35,837- 449-
2012					
2013		1,065			1,065-
2014	25,154	347	1	0	347- 1-
TOTAL	62,486	209,103	335	0	209,103- 335-
THREE-YEA	R MOVING AVERAGE	S			
02-04	1,730	33,085		0	33,085-
03-05					
04-06	6,833	24,200	354	0	24,200- 354-
05-07	8,055	24,200	300	0	24,200- 300-
06-08	8,055	24,200	300	0	24,200- 300-
07-09	1,222		0	0	0
08-10					
09-11	2,659	11,946		0	11,946- 449-
10-12	2,659	11,946	449	0	11,946- 449-
11-13	2,659	12,301	463	0	12,301- 463-
12-14	8,385	471	6	0	471- 6-

FIVE-YEAR	AVERAGE			
10-14	6,626	7,450 112	0	7,450- 112-

# ACCOUNT 309.00 SUPPLY MAINS

			COST OF		GROSS		NET	
T F TT 1 T 40	REGULA		REMOVAL		SALVAGE		SALVAGE	
YEAR	RETIREME	INTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1980	2	,299	3,756	163		0	3,756-	163-
1981	1	,428	5,618	393		0	5,618-	393-
1982	4	,924	727	15	5,449	111	4,722	96
1983		763	2,069	271		0	2,069-	271-
1984	4	,660	2,519	54	315	7	2,204-	47-
1985		351	1,205	343		0	1,205-	343-
1986	4	,522	3,166	70		0	3,166-	70-
1987	2,	,692	4,189	156	137	5	4,052~	151-
1988	1,	,277	2,686	210		0	2,686-	210-
1989	275,	, 533	191,017	69	203,342	74	12,325	4
1990	2,	425-		0		0		0
1991		45	747			0	747-	
1992		366	1,486	406		0	1,486-	406-
1993								
1994	5,	485	15,413	281	4,879	89	10,534-	192-
1995								
1996								
1997								
1998								
1999								
2000		49	3,000			0	3,000-	
2001								
2002								
2003								
2004					•			
2005								
2006								
2007								
2008		412		Ø		0		0
2009			32		62		29	
2010		1		0		0		0
2011		391	1,177	301		0	1,177-	301-
2012		21		0		0		0
2013		305	879	288		0	879-	288-
2014	15,	497	1	0		0	1 -	0
TOTAL	318,	596	239,687	75	214,184	67	25,503-	8 -
THREE-YEAR	MOVING	AVERAGES						
80-82	2,	884	3,367	117	1,816	63	1,551-	54-
81-83	2,	372	2,805	118	1,816	77	988-	42-

# ACCOUNT 309.00 SUPPLY MAINS

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
THREE-YE.	AR MOVING AVERAGES						
82-84	3,449	1,772	51	1,921	56	150	4
83-85	1,925	1,931	100	105	5	1,826-	95-
84-86	3,178	2,297	72	105	3	2,192-	69-
85-87	2,522	2,853	113	46	2	2,808-	111-
86-88	2,830	3,347	118	46	2	3,301-	117-
87-89	93,167	65,964	71	67,826	73	1,862	2
88-90	91,462	64,568	71	67,781	74	3,213	4
89-91	91,051	63,921	70	67,781	74	3,859	4
90-92	671-	744	111-		0	744-	111
91-93	137	744	543		0	744-	543-
92-94	1,950	5,633	289	1,626	83	4,007-	205-
93-95	1,828	5,138	281	1,626	89	3,511-	192-
94-96	1,828	5,138	281	1,626	89	3,511-	192-
95-97							
96-98							
97-99							
98-00	16	1,000			0	1,000-	
99-01	16	1,000			0	1,000-	
00-02	16	1,000			0	1,000-	
01-03							
02-04							
03-05							
04-06							
05-07							
06-08	137		0		0		0
07-09	137	11	8	21	15	10	7
08-10	138	11	8	21	15	10	7
09-11	131	403	308	21	16	382-	293-
10-12	138	392	285		0	392-	285-
11-13	239	685	287		0	685-	287-
12-14	5,274	293	6		0	293-	6 -
FIVE-YEAR	R AVERAGE						
10-14	3,243	411	13		0	411-	13-

# ACCOUNT 310.10 OTHER POWER GENERATION EQUIPMENT

	REGULAR	COST OF REMOVAL		GROSS SALVAGE	NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT PC1		PCT
2002	9,442	29	0	C	29-	0
2003	27		0	C	1	0
2004						
2005						
2006						
2007						
2008		53,899			53,899-	
2009	14,501		0	a		0
2010	16,447		0	o		0
2011	14,473		0	C		0
2012	7,941	633	8	a	633-	8 -
2013		693			693-	
2014	79,936	24,119	30	0	24,119-	30-
TOTAL,	142,766	79,373	56	0	79,373-	56-
THREE-YE	AR MOVING AVERAG	ES				
02-04	3,156	10	0	0	10-	0
03-05	9		0	0		0
04-06						-
05-07						
06-08		17,966			17,966-	
07-09	4,834	17,966	372	0	17,966-	372-
08-10	10,316	17,966	174	0	17,966-	174-
09-11	15,140		0	0		0
10-12	12,954	211	2	0	211-	2 -
11-13	7,471	442	6	0	442-	6 -
12-14	29,292	8,481	29	0	8,481-	29-
FIVE-YEAR						
10-14	23,759	5,089	21	0	5,089-	21-

# ACCOUNTS 311.20 THRU 311.54 PUMPING EQUIPMENT

### SUMMARY OF BOOK SALVAGE

		COST OF		GROSS		NET	
	REGULAR	REMOVAL		SALVAGE		SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1980	6,846	581	8		0	581-	8 -
1981	111,666	6,609	6		0	6,609-	б-
1982	20,804		0		0		0
1983	8,641	7,893	91		0	7,893-	91-
1984	15,402	28,100	182		0	28,100-	182-
1985	25,509		0		0		0
1986	35,582	1,265	4		0	1,265-	4 -
1987	65,960		0		0		0
1988	117,243	37,346	32		0	37,346-	32-
1989							
1990	53,741	19,720	37		0	19,720-	37-
1991	142,027	1,100	1		0	1,100-	1-
1992	1,502,228	87,842	6	2,000	0	85,842-	6 -
1993	83,349	7,243	9		0	7,243-	9-
1994	54,193	6,368	12		0	6,368-	12-
1995							
1996							
1997							
1998							
1999	51,242	18,591	36		0	18,591-	36-
2000	6,563	265	4		0	265-	4 -
2001	47,961		0		0		0
2002	17,353	5,905	34	3,459	20	2,446-	14-
2003	65,459	11,758	18	133	0	11,626-	18-
2004				1,829		1,829	
2005				5,191		5,191	
2006	10,400	21,530	207	12,361-	119-	33,891-	326-
2007	111,566		0		0		0
2008	124,691	168,362	135		0	168,362-	135-
2009	4,190		0		0		0
2010	20,504	1,045	5		0	1,045-	5-
2011	280,818	107,712	38		ο	107,712-	38-
2012	160,429	8,365	5		0	8,365-	5 -
2013	80,256	17,956	22		0	17,956-	22-
2014	3,925,971	74,635	2		0	74,635-	2 -
TOTAL	7,150,594	640,191	9	250	0	639,941-	9-
THREE-YEA	R MOVING AVERAGES						
80-82	46,439	2,397	5		0	2,397-	5 -
81-83	47,037	4,834	10		õ	4,834-	10-
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KY American Water Co December 31, 2014

# ACCOUNTS 311.20 THRU 311.54 PUMPING EQUIPMENT

	*** *** /*1 * *** *1 **	COST OF		GROSS		NET	
YEAR	REGULAR RETIREMENTS	REMOVAL AMOUNT	PCT	SALVAGE AMOUNT	PCT	SALVAGE AMOUNT	PCT
				*******			
THREE-YEA	R MOVING AVERAGES	i					
82-84	14,949	11,998	80		0	11,998-	80-
83-85	16,517	11,998	73		0	11,998-	73-
84-86	25,498	9,788	38		0	9,788-	38-
85-87	42,350	422	1		0	422-	1-
86-88	72,928	12,870	18		0	12,870-	18-
87-89	61,068	12,449	20		0	12,449-	20-
88-90	56,995	19,022	33		0	19,022-	33-
89-91	65,256	6,940	11		0	6,940-	11-
90-92	565,999	36,221	6	667	0	35,554-	6 -
91-93	575,868	32,062	6	667	0	31,395-	5-
92-94	546,590	33,818	6	667	0	33,151-	б-
93-95	45,847	4,537	10		0	4,537-	10-
94-96	18,064	2,123	12		0	2,123-	12-
95-97							
96-98							
97-99	17,081	6,197	36		0	6,197-	36-
98-00	19,268	6,285	33		0	6,285-	33-
99-01	35,255	6,285	18		0	6,285~	18-
00-02	23,959	2,057	9	1,153	5	904-	4 -
01-03	43,591	5,888	14	1,197	3	4,691-	11-
02-04	27,604	5,888	21	1,807	7	4,081-	15-
03-05	21,820	3,919	18	2,384	11	1,535-	7 -
04-06	3,467	7,177	207	1,780-	51-	8,957-	258-
05-07	40,655	7,177	18	2,390-	6 -	9,567-	24 -
06-08	82,219	63,297	77	4,120-	5 -	67,418-	82-
07-09	80,149	56,121	70		0	56,121-	70-
08-10	49,795	56,469	113		0	56,469-	113-
09-11	101,838	36,252	36		0	36,252-	36-
10-12	153,917	39,041	25		0	39,041-	25-
11-13	173,834	44,678	26		0	44,678-	26-
12-14	1,388,885	33,652	2		0	33,652-	2 -
FIVE-YEAR	AVERAGE						
10-14	893,596	41,943	5		0	41,943-	5-

# ACCOUNTS 320.10 AND 320.11 PURIFICATION SYSTEM

# SUMMARY OF BOOK SALVAGE

		COST OF		GROSS		NET	
1177 7 77	REGULAR	REMOVAL		SALVAGE		SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1980		7,727				7,727-	
1981	26,783	29,727	111		0	29,727-	111-
1982	42,186	23,427	56		0	23,427-	56-
1983	22,018		0		0		0
1984	1,400		0		0		0
1985	69,458	7,000	10		0	7,000-	10-
1986	147,206		0		0		0
1987	22,470	3,622	16	226	1	3,396-	15-
1988	245,366	175,800	72		0	175,800-	72-
1989	132,745	16,258	12		0	16,258-	12-
1990	201,156	30,074	15	175	0	29,899-	15-
1991	317,893	32,773	10	820	0	31,953-	10-
1992	131,590	83,640	64		0	83,640-	64-
1993	253,125	19,185	8	1,068	0	18,117-	7-
1994	359,656	3,997	1		0	3,997-	1-
1995							
1996							
1997							
1998						¢	
1999	84,970	2,423	З		0	2,423-	3 -
2000	298,470	25,131	8		0	25,131-	8 -
2001	26,267	3,765	14		0	3,765-	14-
2002	15,797	2,234	14		0	2,234-	14-
2003	36,944	10,965	30		0	10,965-	30-
2004							
2005	22,500		0		0		0
2006	122,300	4,797	4		0	4,797-	4 -
2007	231,024	4,933	2		0	4,933-	2 -
2008	174,737	110,000	63		0	110,000-	63-
2009	61,811		0		0		0
2010	44,346	1,032	2		0	1,032-	2 -
2011	168,236	5,507	3		0	5,507-	3 -
2012	842,303	36,360	4		0	36,360-	4 -
2013	52,913	37,195	70		0	37,195-	70-
2014	8,586,141	185,731	2		0	185,731-	2 -
TOTAL	12,741,812	863,303	7	2,289	0	861,014-	7-
THREE - YEAI	R MOVING AVERAGES						
80-82	22,990	20,294	88		0	20,294-	88-
81-83	30,329	17,718	58		0	17,718-	58-
	-	• -			-	···· , ·	

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KY American Water Co December 31, 2014

# ACCOUNTS 320.10 AND 320.11 PURIFICATION SYSTEM

	REGULAR	COST OF REMOVAL		GROSS		NET	
YEAR	RETIREMENTS	AMOUNT	PCT	SALVAGE AMOUNT	PCT	SALVAGE AMOUNT	PCT
THREE-YEA	AR MOVING AVERAGE	S					
82-84	21,868	7,809	36		0	7,809-	36-
83-85	30,959	2,333	8		0	2,333-	8-
84-86	72,688	2,333	3		0	2,333-	3 -
85-87	79,711	3,541	4	75	0	3,465-	4 -
86-88	138,347	59,807	43	75	0	59,732-	43-
87-89	133,527	65,227	49	75	0	65,151-	49-
88-90	193,089	74,044	38	58	0	73,986-	38-
89-91	217,265	26,368	12	332	0	26,037-	12-
90-92	216,880	48,829	23	332	0	48,497-	22-
91-93	234,203	45,199	19	629	0	44,570-	19-
92-94	248,124	35,607	14	356	0	35,251-	14-
93-95	204,260	7,727	4	356	0	7,371-	4 -
94-96	119,885	1,332	1		0	1,332-	1-
95-97							
96-98							
97-99	28,323	808	3		0	808-	3 -
98-00	127,813	9,185	7		0	9,185-	7-
99-01	136,569	10,440	8		0	10,440-	8 -
00-02	113,511	10,377	9		0	10,377-	9-
01-03	26,336	5,655	21		0	5,655-	21-
02-04	17,580	4,400	25		0	4,400-	25-
03-05	19,815	3,655	18		0	3,655-	18-
04-06	48,267	1,599	3		0	1,599-	3 -
05-07	125,275	3,243	3		0	3,243-	3 -
06-08	176,020	39,910	23		0	39,910-	23-
07-09	155,857	38,311	25		0	38,311-	25-
08-10	93,631	37,011	40		0	37,011-	40-
09-11	91,465	2,180	2		Ó	2,180-	2 -
10-12	351,628	14,300	4		0	14,300-	4 -
11-13	354,484	26,354	7		0	26,354-	7 -
12-14	3,160,452	86,429	3		0	86,429-	3 -
FIVE-YEAR	AVERAGE						
10-14	1,938,788	53,165	3		0	53,165-	3 -

# ACCOUNTS 330.00 AND 330.10 DISTRIBUTION RESERVOIRS, TANKS AND STANDPIPES

# SUMMARY OF BOOK SALVAGE

	REGULAR	COST OF REMOVAL		GROSS SALVAGE	NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT PCT	AMOUNT	PCT
1980	68,079		0	0		0
1981						
1982	1,509		0	0		0
1983						
1984						
1985						
1986	18,937	8,012	42	0	8,012-	42-
1987	2,755		0	0		0
1988	200	200	100	0	200-	
1989	48,379	21,509	44	0	21,509-	44 -
1990	11,850	1,100	9	0	1,100-	9-
1991	2,000	490	24	0	490-	24-
1992	7,676	249	3	0	249-	3 -
1993	1,060		0	0		0
1994	1,890	285	15	0	285-	15-
1995						
1996						
1997						
1998 1999						
2000	4,223	712	17	0	712-	17-
2000	4,223 5,938	124	- T /	0	112-	0
2001	0,00	3,550	U	v	3,550-	v
2002	29,652	16,831	57	0	16,831-	57-
2003	200	10,051	34	0	67-	34-
2005	2,000	0,	0	ů O	0,	0
2006	2,000		Ŭ	Ţ		•
2007						
2008	10,495	99-	1-	0	99	1
2009	9,520		0	0		0
2010	433		0	0		0
2011	24,996	6,582	26	0	6,582-	26-
2012	20,762	4,706	23	0	4,706-	
2013						
2014	334,469		0	0		0
TOTAL	607,024	64,195	11	0	64,195-	11-
THREE-YEA	AR MOVING AVERAGE	es				
80-82	23,196		0	0		0
81-83	503		0	0		0

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KY American Water Co December 31, 2014

# ACCOUNTS 330.00 AND 330.10 DISTRIBUTION RESERVOIRS, TANKS AND STANDPIPES

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR	MOVING AVERAGES						
82-84	503		0		0		0
83-85							
84-86	6,312	2,671	42		0	2,671-	42-
85-87	7,231	2,671	37		0	2,671-	37-
86-88	7,297	2,737	38		0	2,737-	38-
87-89	17,111	7,236	42		0	7,236-	42-
88-90	20,143	7,603	38		0	7,603-	38-
89-91	20,743	7,700	37		0	7,700-	37-
90-92	7,175	613	9		0	613-	9-
91-93	3,579	246	7		0	246-	7 -
92-94	3,542	178	5		0	178-	5-
93-95	983	95	10		0	95-	10-
94-96	630	95	15		0	95-	15-
95-97							
96-98							
97-99							
98-00	1,408	237	17		0	237-	17-
99-01	3,387	237	7		0	237-	7 -
00-02	3,387	1,421	42		0	1,421-	42-
01-03	11,864	6,794	57		0	6,794-	57-
02-04	9,951	6,816	69		0	6,816-	69~
03-05	10,617	5,633	53		0	5,633-	53-
04-06	733	22	3		0	22-	3 -
05-07	667		0		0		0
06-08	3,498	33-	1-		0	33	1
07-09	6,672	33-	0		0	33	0
08-10	6,816	33-	0		0	33	0
09-11	11,650	2,194	19		0	2,194-	
10-12	15,397	3,763	24		0	3,763-	
11-13	15,253	3,763	25		0	3,763-	
12-14	118,410	1,569	1		0	1,569-	1-
FIVE-YEAR	AVERAGE						
10-14	76,132	2,258	3		0	2,258-	3-

# ACCOUNT 331.00 MAINS AND ACCESSORIES

	REGUL	AR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREM		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1980	84	,507	15,771	19	68,320	81	52,549	62
1981	15	,654	13,716	88	57,659	368	43,943	281
1982	20	,015	16,490	82	4,618	23	11,872-	59-
1983	15	,360	12,703	83	23,029	150	10,326	67
1984	118	,063	30,644	26	42,588	36	11,944	10
1985	12	,019	8,970	75	73,631	613	64,661	538
1986	128	,162	15,362	12	17,937	14	2,575	2
1987	214	,318	30,172	14	36,610	17	6,438	3
1988	416	,905	24,229	6	26,404	6	2,175	1
1989	124	,956	35,816	29	7,693	6	28,123-	23-
1990	211	,528	58,518	28	5,989	3	52,529-	25-
1991	97	,857	51,823	53	15,268	16	36,555-	37-
1992	84	,395	57,593	68	2,024	2	55,569-	66-
1993	117	,879	80,718	68	14,735	13	65,983-	56-
1994	77	,563	45,039	58	28,778	37	16,261-	21-
1995								
1996								
1997								
1998								
1999	235	,231	60,239	26	3,289	1	56,950-	24-
2000	294	,500	55,808	19	500	0	55,308-	19-
2001	74	,947	22,269	30		0	22,269-	30-
2002	426	,067	75,242	18		0	75,242-	18-
2003	48	,141	57,712	120		0	57,712-	120-
2004	123	,602	43,334	35		0	43,334-	35-
2005	254	,241	58,110	23		0	58,110-	23-
2006	31	,765	426	1	6,217	20	5,791	18
2007	189	,780-	1,414	1-		0	1,414-	1
2008		,135	26,733	З		0	26,733-	3 -
2009		,678	24,456	33	3,376	5	21,079-	29-
2010		,670	69,246	71	306	0	68,940-	71-
2011	154	,083	53,430	35		0	53,430-	35-
2012	174	,408	77,094	44		0	77,094-	44-
2013		,835	142,137	340	1,422	3	140,716-	
2014	87	,202	170,711	196	4,031	5	166,680-	191-
TOTAL	4,503	, 905	1,435,926	32	444,424	10	991,502-	22-
THREE-YEAR	MOVING	AVERAGES						
80-82	40	,059	15,326	38	43,532	109	28,207	70
81-83	17	,010	14,303	84	28,435	167	14,132	83
## ACCOUNT 331.00 MAINS AND ACCESSORIES

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
IRRE-IE	AR MOVING AVERAGES						
82-84	51,146	19,946	39	23,412	46	3,466	7
83-85	48,481	17,439	36	46,416	96	28,977	60
84-86	86,081	18,325	21	44,719	52	26,393	31
85-87	118,166	18,168	15	42,726	36	24,558	21
86-88	253,128	23,254	9	26,984	11	3,729	1
87-89	252,060	30,072	12	23,569	9	6,503-	3
88-90	251,130	39,521	16	13,362	5	26,159-	10-
89-91	144,780	48,719	34	9,650	7	39,069-	27-
90-92	131,260	55,978	43	7,760	6	48,218-	37-
91-93	100,044	63,378	63	10,676	11	52,702-	53-
92-94	93,279	61,117	66	15,179	16	45,938-	49-
93-95	65,147	41,919	64	14,504	22	27,415-	42-
94-96	25,854	15,013	58	9,593	37	5,420-	21-
95-97							
96-98							
97-99	78,410	20,080	26	1,096	1	18,983-	24-
98-00	176,577	38,682	22	1,263	1	37,419-	21-
99-01	201,560	46,105	23	1,263	1	44,842-	22-
00-02	265,171	51,106	19	167	0	50,940-	19-
01-03	183,052	51,741	28		0	51,741-	28-
02-04	199,270	58,763	29		0	58,763-	29-
03-05	141,994	53,052	37		0	53,052-	37-
04-06	136,536	33,957	25	2,072	2	31,885-	23-
05-07	32,075	19,983	62	2,072	6	17,911-	56-
06-08	226,373	9,524	4	2,072	1	7,452-	3 -
07-09	240,344	17,534	7	1,125	Ö	16,409-	7 -
08-10	336,161	40,145	12	1,227	0	38,917-	12-
09-11	108,477	49,044	45	1,227	1	47,817-	44-
10-12	142,054	66,590	47	102	0	66,488-	47-
11-13	123,442	90,887	74	474	0	90,413-	73-
12-14	101,148	129,981	129	1,818	2	128,163-	127-
FIVE-YEAD	R AVERAGE						
10-14	111,040	102,524	92	1,152	1	101,372-	91-

#### ACCOUNT 333.00 SERVICES

		COST OF		GROSS		NET	
	REGULAR	REMOVAL	-	SALVAGE		SALVAGE	5.67
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	$\mathbf{PCT}$	AMOUNT	PCT
1980	18,002	24,241	135	3,804	21	20,437-	114-
1981	8,304	25,338	305	197	2	25,141-	303-
1982	11,710	41,944	358	383	3	41,561-	355-
1983	8,341	37,319	447	676	8	36,643-	439-
1984	13,132	25,225	192	5,302	40	19,923-	152-
1985	7,559	21,068	279		0	21,068-	279-
1986	10,241	20,391	199	449	4	19,942-	195-
1987	8,957	14,043	157	312	3	13,731-	
1988	19,616	25,011	128	913	5	24,098-	
1989	32,954	25,566	78		0	25,566-	
1990	29,542	64,239	217		0	64,239-	
1991	46,660	75,225	161		0	75,225-	
1992	50,131	54,400	109		0	54,400-	
1993	43,228		103		0	44,497-	
1994	2,454	8,259	337		0	8,259-	337-
1995							
1996							
1997							
1998							
1999	62,418	54,393	87		0	54,393-	
2000	67,606	97,070	144		0	97,070-	
2001	34,642	232,835	672		0	232,835-	
2002	79,096		226		0	178,730-	
2003	40,216	116,666	290		0	116,666-	290-
2004	2,817	122,957			Ö	122,957-	
2005	15,153	74,724	493		0	74,724-	493-
2006	3,882	42,824			0	42,824-	
2007	295,572	12,130	4		0	12,130-	4 -
2008	570,463	94,867	17		0	94,867-	17-
2009	6,555	63,971	976	7,267	111	56,704-	
2010	92,478	73,276	79	8,284	9	64,993-	70-
2011	298,419	72,559	24	6,652	2	65,907-	22-
2012	303,411	183,802	61	7,277	2	176,525-	58-
2013	262,026	14,364	5	4,393	2	9,971-	4 -
2014	222,876	81,713	37	238	0	81,475-	37-
TOTAL	2,668,464	2,023,649	76	46,147	2	1,977,502-	74-
THREE - YEA	AR MOVING AVERAGE	ES					
80-82	12,672	30,508	241	1,461	12	29,046-	229-
81-83	9,452	34,867		419	4	34,448-	364-

# ACCOUNT 333.00 SERVICES

		COST OF		GROSS		NET	
YEAR	REGULAR RETIREMENTS	REMOVAL AMOUNT	PCT	SALVAGE AMOUNT	PCT	SALVAGE AMOUNT	PCT
			****		101	11/00/11	
THREE-YE	AR MOVING AVERAGES	3					
82-84	11,061	34,829	315	2,120	19	32,709-	
83-85	9,677	27,871	288	1,993	21	25,878-	267-
84-86	10,311	22,228	216	1,917	19	20,311-	197-
85-87	8,919	18,501	207	254	3	18,247-	
86-88	12,938	19,815	153	558	4	19,257-	
87~89	20,509		105	408	2	21,132-	
88-90	27,371	38,272	140	304	1	37,968-	
89-91	36,385		151		0	55,010-	
90-92	42,111		153		0	64,621-	
91-93	46,673	58,041	124		0	58,041-	
92-94	31,938	35,719	112		0	35,719-	
93-95	15,227	17,585	115		0	17,585-	
94-96	818	2,753	337		0	2,753-	337-
95-97							
96-98							
97-99	20,806	18,131	87		0	18,131-	87-
98-00	43,341	50,488	116		0	50,488-	
99-01	54,889	128,099	233		0	128,099-	
00-02	60,448	169,545	280		0	169,545-	
01-03	51,318	176,077	343		0	176,077-	
02-04	40,710	139,451	343		0	139,451-	
03-05	19,396	104,782	540		0	104,782-	540-
04-06	7,284	80,168			0	80,168-	
05-07	104,869	43,226	41		0	43,226-	41-
06-08	289,972	49,940	17		0	49,940-	17-
07-09	290,863	56,989	20	2,422	1	54,567-	19-
08-10	223,166	77,371	35	5,183	2	72,188-	32-
09-11	132,484	69,936	53	7,401	6	62,535-	47-
10-12	231,436	109,879	47	7,404	З	102,475-	44-
11-13	287,952	90,242	31	6,107	2	84,134-	29-
12-14	262,771	93,293	36	3,969	2	89,324-	34-
FIVE-YEA	R AVERAGE						
10-14	235,842	85,143	36	5,369	2	79,774-	34-

# ACCOUNTS 334.10 THRU 334.30 METERS AND METER INSTALLATIONS

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
1980	79,366	1,639	2	11,758	15	10,119	13
1981	107,531	3,502	3	22,687	21	19,185	18
1982	187,562	7,768	4	37,747	20	29,979	16
1983	99,321	11,131	11	13,400	13	2,269	2
1984	87,166	8,975	10	11,775	14	2,800	3
1985	92,668	5,544	6	12,228	13	6,684	7
1986	74,228	7,556	10	2,477	3	5,079-	7 -
1987	123,691	2,332	2	8,519	7	6,187	5
1988	136,124	4,017	3	13,175	10	9,158	7
1989	122,229	3,724	3	16,085	13	12,361	10
1990	133,683	9,475	7	10,960	8	1,485	1
1991	152,174	10,199	7	5,989	4	4,210-	3 -
1992	153,973	6,203	4	13,473	9	7,270	5
1993	120,966	9,754	8	93,364	77	83,610	69
1994	1,227	2,796	228		0	2,796-	
1995							
1996							
1997							
1998							
1999	90,023	46,996	52	804	1	46,192-	51-
2000	84,881	66,757	79	3,265	4	63,492-	75-
2001	59,466	52,230	88	173	0	52,057-	88-
2002	108,243	54,749	51		0	54,749-	51-
2003	578,028	40,090	7		0	40,090-	7-
2004	84,261	72,000	85		0	72,000-	85-
2005	116,511	58,223	50	460-	0	58,682-	50-
2006	184,704	60,264	33	22,491	12	37,773-	20-
2007	496,453	26,955	5	1,869	0	25,086-	5 -
2008	610,344	3,486-	1-		0	3,486	1
2009	345,842	63,612	18	115,168	33	51,556	15
2010	208,579	31,553	15	42,139	20	10,587	5
2011	2,110,264	485,561	23	85,679	4	399,882-	19-
2012	108,231	369,217	341	76,004	70	293,213-	271-
2013	92,675	478,586	516	170,405	184	308,181-	333-
2014	40,425	32,429	80	28,906	72	3,522-	9-
TOTAL	6,990,839	2,030,349	29	820,081	12	1,210,268-	17-
THREE-YEA	R MOVING AVERAGE	S					
80-82	124,820	4,303	3	24,064	19	19,761	16
81-83	131,471	7,467	6	24,611	19	17,144	13

## ACCOUNTS 334.10 THRU 334.30 METERS AND METER INSTALLATIONS

		COST OF		GROSS		NET	
	REGULAR	REMOVAL		SALVAGE		SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
THREE-YEA	R MOVING AVERAGES						
82-84	124,683	9,291	7	20,974	17	11,683	9
83-85	93,052	8,550	9	12,468	13	3,918	4
84-86	84,687	7,358	9	8,827	10	1,468	2
85-87	96,862	5,144	5	7,741	8	2,597	3
86-88	111,348	4,635	4	8,057	7	3,422	3
87-89	127,348	3,358	3	12,593	10	9,235	7
88-90	130,679	5,739	4	13,407	10	7,668	6
89-91	136,029	7,799	6	11,011	8	3,212	2
90-92	146,610	8,626	6	10,141	7	1,515	1
91-93	142,371	8,719	6	37,609	26	28,890	20
92-94	92,055	6,251	7	35,612	39	29,361	32
93-95	40,731	4,183	10	31,121	76	26,938	66
94-96	409	932	228		0	932-	228-
95-97							
96-98							
97-99	30,008	15,665	52	268	1	15,397-	51-
98-00	58,302	37,918	65	1,356	2	36,561-	63-
99-01	78,124	55,328	71	1,414	2	53,914-	69-
00-02	84,197	57,912	69	1,146	1	56,766-	67-
01-03	248,579	49,023	20	58	0	48,965-	20-
02-04	256,844	55,613	22		0	55,613-	22-
03-05	259,600	56,771	22	153-	0	56,924-	22-
04-06	128,492	63,496	49	7,344	6	56,152-	44 -
05-07	265,889	48,481	18	7,967	3	40,514-	15-
06-08	430,500	27,911	6	8,120	2	19,791-	5 -
07-09	484,213	29,027	6	39,012	8	9,985	2
08-10	388,255	30,559	8	52,436	14	21,876	6
09-11	888,228	193,575	22	80,995	9	112,580-	13-
10-12	809,025	295,443	37	67,941	8	227,503-	28-
11-13	770,390	444,454	58	110,696	14	333,758-	43-
12-14	80,444	293,410	365	91,772	114	201,639-	251-
FIVE-YEAR	AVERAGE						
10-14	512,035	279,469	55	80,627	16	198,842-	39-

## ACCOUNT 335.00 FIRE HYDRANTS

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1980	12,294	2,498	20	9,619	78	7,121	58
1981	7,347	4,205	57	6,633	90	2,428	33
1982	8,316	4,213	51	7,109	85	2,896	35
1983	5,859	5,083	87	5,315	91	232	4
1984	9,155	15,650	171	8,870	97	6,780-	74-
1985	5,260	4,828	92	5,692	108	864	16
1986	4,060	6,489	160	6,416	158	73-	2 -
1987	5,248	16,989	324	14,128	269	2,861-	55-
1988	15,368	7,826	51	1,174	8	6,652-	43-
1989	14,725	13,734	93	5,723	39	8,011-	54-
1990	15,761	20,197	128	3,281	21	16,916-	107-
1991	15,953	11,036	69	5,221	33	5,815-	36-
1992	60,190	28,345	47	1,943	З	26,402-	44-
1993	12,448	10,199	82	2,098	17	8,101-	65-
1994	5,440	5,777	106	2,610	48	3,167-	58~
1995							
1996							
1997							
1998							
1999	6,437	1,831	28	685	11	1,147-	18-
2000	8,303	2,385	29	263	3	2,122-	26-
2001	11,529	5,833	51		0	5,833-	51-
2002	19,766	846	4		0	846-	4 -
2003	4,262		0		0		0
2004	10,660		0		0		0
2005	13,469	2,091	16		0	2,091-	16-
2006	17,275	898	5		0	898-	5-
2007	1,716	16	1		0	16-	1-
2008	35,914	1,770	5		0	1,770-	5-
2009	12,061	7,453	62		0	7,453-	62-
2010	5,633	25,354	450		0	25,354-	450-
2011	9,422	38,057	404		0	38,057-	404-
2012	11,285	37,368	331		0	37,368-	331-
2013	5,864	11,977	204	28	0	11,949-	204-
2014	23,546	43,146	183	1,499	6	41,646-	177-
TOTAL	394,566	336,095	85	88,308	22	247,788-	63-
THREE-YEA	AR MOVING AVERAGES						
80-82	9,319	3,639	39	7,787	84	4,148	45
81-83	7,174	4,500	63	6,352	89	1,852	26

## ACCOUNT 335.00 FIRE HYDRANTS

		COST OF		GROSS		NET	
VEND	REGULAR	REMOVAL	200	SALVAGE	-	SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
THREE-YEA	AR MOVING AVERAGES						
82-84	7,777	8,315	107	7,098	91	1,217-	16-
83-85	6,758	8,520	126	6,626	98	1,895-	28-
84-86	6,158	8,989	146	6,993	114	1,996-	32-
85-87	4,856	9,435	194	8,745	180	690-	14-
86-88	8,225	10,435	127	7,239	88	3,195-	39-
87-89	11,780	12,850	109	7,008	59	5,841-	50-
88-90	15,285	13,919	91	3,393	22	10,526-	69-
89-91	15,480	14,989	97	4,742	31	10,247-	66-
90-92	30,635	19,859	65	3,482	11	16,378-	53-
91-93	29,530	16,527	56	3,087	10	13,439-	46~
92-94	26,026	14,774	57	2,217	9	12,557-	48-
93-95	5,963	5,325	89	1,569	26	3,756-	63-
94-96	1,813	1,926	106	870	48	1,056-	58-
95-97							
96-98							
97-99	2,146	610	28	228	11	382-	18-
98-00	4,913	1,405	29	316	6	1,089-	22-
99-01	8,756	3,350	38	316	4	3,034-	35-
00-02	13,199	3,021	23	88	1	2,933-	22-
01-03	11,852	2,226	19		0	2,226-	19-
02-04	11,562	282	2		0	282-	2 -
03-05	9,464	697	7		0	697-	7 -
04-06	13,802	996	7		0	996-	7 -
05-07	10,820	1,002	9		0	1,002-	9-
06-08	18,302	895	5		0	895-	5 -
07-09	16,564	3,080	19		0	3,080-	19-
08-10	17,869	11,526	65		0	11,526-	65-
09-11	9,039	23,622	261		0	23,622-	261-
10-12	8,780	33,593	383		0	33,593-	383-
11-13	8,857	29,134	329	9	0	29,125-	329-
12-14	13,565	30,830	227	509	4	30,321-	224-
FIVE-YEAR	AVERAGE						
10-14	11,150	31,181	280	306	3	30,875-	277-

# ACCOUNT 341.10 TRANSPORTATION EQUIPMENT - LIGHT DUTY TRUCKS

#### SUMMARY OF BOOK SALVAGE

		COST OF		GROSS		NET SALVAGE	
YEAR	REGULAR RETIREMENTS	REMOVAL AMOUNT	PCT	SALVAGE AMOUNT	PCT	AMOUNT	PCT
1982	20 107	140	0	12,200	<b>7</b> E	12,060	25
1983	32,127	100	0	8,100	25 81	8,000	25 81
1984	9,205	275	0	7,500			20
1985	87,029	315	0	17,700	20	17,385 6,444	20 19
1986	33,598		0	6,444	19	10,864	20
1987	53,418	11	0	10,875	20		18
1988	46,179	60	0	8,550	19	8,490	
1989	50,554		0	22,509	45	22,509	45
1990	96,067	1,393	1	27,637	29	26,244	27
1991	118,677		0	36,945	31	36,945	31
1992	96,153		0	32,236	34	32,236	34
1993	72,282		0	23,220	32	23,220	32
1994	60,343	1,498	2	17,716	29	16,218	27
1995							
1996							
1997							
1998							
1999	44,574	2,850	б	11,675	26	8,825	20
2000	94,444	5,440	б	16,729	18	11,289	12
2001	90,536		0		0		0
2002		7,629		30,000		22,371	
2003	52,861	1,010	2	13,321	25	12,311	23
2004	27,211		0		0		0
2005	18,273		0		0		0
2006	197,839	11,832-	б-		0	11,832	6
2007	54,895		0		0		0
2008	130,678		0	26,576	20	26,576	20
2009	75,134		0	10,582	14	10,582	14
2010	65,599		0	7,123	11	7,123	11
2011							
2012	854,991		0	127,917	15	127,917	15
2013	44,078	156-	0	49,340	112	49,496	112
2014	799,297		0	33,914	4	33,914	4
TOTAL	3,306,042	8,458	0	558,809	17	550,351	17
THREE-YE	AR MOVING AVERAGES						
82-84	13,777	80	l	9,267	67	9,187	67
83-85	42,787	138	0	11,100	26	10,962	26
84-86	43,277	105	0	10,548	24	10,443	24
85-87	58,015	109	0	11,673	20	11,564	20

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## ACCOUNT 341.10 TRANSPORTATION EQUIPMENT - LIGHT DUTY TRUCKS

YEAR	REGULAR	COST OF REMOVAL	DOW	GROSS SALVAGE	DOW	NET SALVAGE	DOM
	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
THREE-YE	AR MOVING AVERAGES						
86-88	44,398	24	0	8,623	19	8,599	19
87-89	50,050	24	0	13,978	28	13,954	28
88-90	64,267	484	1	19,565	30	19,081	30
89-91	88,433	464	1	29,030	33	28,566	32
90-92	103,632	464	0	32,273	31	31,808	31
91-93	95,704		0	30,800	32	30,800	32
92-94	76,259	499	1	24,391	32	23,891	31
93-95	44,208	499	1	13,645	31	13,146	30
94-96	20,114	499	2	5,905	29	5,406	27
95-97							
96-98							
97-99	14,858	950	6	3,892	26	2,942	20
98-00	46,340	2,763	6	9,468	20	6,705	14
99-01	76,518	2,763	4	9,468	12	6,705	9
00-02	61,660	4,356	7	15,576	25	11,220	18
01-03	47,799	2,880	6	14,440	30	11,561	24
02-04	26,691	2,880	11	14,440	54	11,561	43
03-05	32,782	337	1	4,440	14	4,104	13
04-06	81,108	3,944-	5-		0	3,944	5
05-07	90,335	3,944-	4 -		0	3,944	4
06-08	127,804	3,944-	3 -	8,859	7	12,803	10
07-09	86,902		0	12,386	14	12,386	14
08-10	90,470		0	14,760	16	14,760	16
09-11	46,911		0	5,901	13	5,901	13
10-12	306,863		0	45,013	15	45,013	15
11-13	299,690	52-	0	59,086	20	59,138	20
12-14	566,122	52-	0	70,390	12	70,442	12
FIVE-YEAD	R AVERAGE						
10-14	352,793	31-	0	43,659	12	43,690	12
		~~~		,		.0,000	

ACCOUNT 341.20 TRANSPORTATION EQUIPMENT - HEAVY DUTY TRUCKS

SUMMARY OF BOOK SALVAGE

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1986	13,756		0	1,900	14	1,900	14
1987	41,200		0	7,300	18	7,300	18
1988	9,955		0	3,200	32	3,200	32
1989	41,315		0	19,767	48	19,767	48
1990							
1991	58,941		0	11,440	19	11,440	19
1992	79,570		0	17,458	22	17,458	22
1993	13,415		0	2,000	15	2,000	15
1994	25,100		0	5,500	22	5,500	22
1995							
1996							
1997							
1998							
1999							
2000	89,605	5,830	7	19,045	21	13,215	15
2001	18,235		Ó		0		0
2002		3,340		6,102		2,762	
2003							
2004							
2005							
2006	47,659	1,060-	2 -		0	1,060	2
2007	65,892		0		0		0
2008				8,613		8,613	
2009	62,521		0	3,870	6	3,870	6
2010			_	4,275	_	4,275	_
2011	33,692		0	1,799	5	1,799	5
2012	108,574		0	9,111	8	9,111	8
2013	105,115		0	40,334	38	40,334	38
2014	635,200		0	78,640	12	78,640	12
TOTAL	1,449,746	8,110	- 1	240,355	17	232,245	16
THREE-YE.	AR MOVING AVERAGE	IS					
86-88	21,637		0	4,133	19	4,133	19
87-89	30,823		õ	10,089	33	10,089	33
88-90	17,090		õ	7,656	45	7,656	45
89-91	33,419		0	10,402	31	10,402	31
90-92	46,170		õ	9,633	21	9,633	21
91-93	50,642		0	10,299	20	10,299	20
92-94	39,362		0	8,319	21	8,319	21
93-95	12,838		0	2,500	19	2,500	19
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KY American Water Co December 31, 2014

ACCOUNT 341.20 TRANSPORTATION EQUIPMENT - HEAVY DUTY TRUCKS

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
				*********		12.00112	
THREE-YE	AR MOVING AVERAGES						
94-96	8,367		0	1,833	22	1,833	22
95-97							
96-98							
97-99							
98-00	29,868	1,943	7	6,348	21	4,405	15
99-01	35,947	1,943	5	6,348	18	4,405	12
00-02	35,947	3,057	9	8,382	23	5,326	15
01-03	6,078	1,113	18	2,034	33	921	15
02-04		1,113		2,034		921	
03-05							
04-06	15,886	353-	2 -		0	353	2
05-07	37,850	353-	1-		0	353	1
06-08	37,850	353-	1-	2,871	8	3,224	9
07-09	42,804		0	4,161	10	4,161	10
08-10	20,840		0	5,586	27	5,586	27
09-11	32,071		0	3,315	10	3,315	10
10-12	47,422		0	5,062	11	5,062	11
11-13	82,460		0	17,082	21	17,082	21
12-14	282,963		0	42,695	15	42,695	15
FIVE-YEA	R AVERAGE						
10-14	176,516		0	26,832	15	26,832	15

ACCOUNT 341.30 TRANSPORTATION EQUIPMENT - AUTOS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
1982	34,922	120	0	4,400	13	4,280	12
1983	33,905	125	0	7,900	23	7,775	23
1984						B (05	
1985	39,613	175	0	7,600	19	7,425	19
1986	38,712		0	1,416	4	1,416	4
1987	49,853		0	16,125	32	16,125	32
1988	46,956		0	10,900	23	10,900	23
1989	57,313	50	0	23,047	40	22,997	40
1990	30,101		0	13,824	46	13,824	46
1991	9,700		0	1,000	10	1,000	10
1992	11,500		0	4,893	43	4,893	43
1993	12,323		0		0		0
1994	36,024	241	1		0	241-	1-
1995			_				
1996	42,288		0		0		0
1997	84,116		0		0		0
1998						F 366	
1999	32,082		0	5,300	17	5,300	17
2000							
2001					~	200	~
2002	12,116	700	6		0	700-	6~
2003	2,900		0		0		0
2004							
2005							
2006			0		0		0
2007	15,016-		0	7 500	0	7 500	0
2008	61,308		0	7,589	12	7,589	12
2009	15,899		0	125	1	125	1
2010	10.000		~	10 107	C 0	10 107	c0
2011	16,926		0	10,107	60	10,107	60
2012	91,285		0	2,070	2	2,070	2
2013	39,466	310-		26,608	67	26,919	68
2014	27,206		0	8,900	33	8,900	33
TOTAL	811,498	1,101	0	151,804	19	150,704	19
THREE-YE	AR MOVING AVERAGES	3					
82-84	22,942	82	0	4,100	18	4,018	18
83-85	24,506	100	0	5,167	21	5,067	21
84-86	26,108	58	0	3,005	12	2,947	11
85-87	42,726	58	0	8,380	20	8,322	19
	2.00 9 7.00 0	50	-	-,	- .		

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ACCOUNT 341.30 TRANSPORTATION EQUIPMENT - AUTOS

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
THREE-YE	AR MOVING AVERAGE	S					
86-88	45,174		0	9,480	21	9,480	21
87-89	51,374	17	0	16,691	32	16,674	32
88~90	44,790	17	0	15,924	36	15,907	36
89-91	32,371	17	0	12,624	39	12,607	39
90-92	17,100		0	6,572	38	6,572	38
91-93	11,174		0	1,964	18	1,964	18
92~94	19,949	80	0	1,631	8	1,551	8
93-95	16,116	80	0		0	80-	0
94-96	26,104	80	0		0	80-	0
95-97	42,135		0		0		0
96-98	42,135		0		0		0
97-99	38,733		0	1,767	5	1,767	5
98-00	10,694		0	1,767	17	1,767	17
99-01	10,694		0	1,767	17	1,767	17
00-02	4,039	233	6		0	233-	6-
01-03	5,005	233	5		0	233-	5 -
02-04	5,005	233	5		0	233-	5-
03-05	967		0		0		0
04-06							
05-07	5,005-		0		0		0
06-08	15,431		0	2,530	16	2,530	16
07-09	20,730		0	2,571	12	2,571	12
08-10	25,736		0	2,571	10	2,571	10
09-11	10,942		0	3,411	31	3,411	31
10-12	36,070		0	4,059	11	4,059	11
11-13	49,226	103-	0	12,928	26	13,032	26
12-14	52,652	103-	0	12,526	24	12,630	24
ang ago ay ga gang ay ga ana ao a							
FIVE-YEA	R AVERAGE						
10-14	34,977	62-	0	9,537	27	9,599	27

ACCOUNT 341.40 TRANSPORTATION EQUIPMENT - OTHER

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
1996	220		0		0		0
1997	2,993		0		0		0
1998			Ŭ		Ũ		Ū
1999							
2000							
2001							
2002							
2003							
2004							
2005							
2006							
2007	972		0		0		0
2008				82		82	
2009				25		25	
2010	588		0	8,055		8,055	
2011							
2012	48,421		0	7,800	16	7,800	16
2013	132,669	1,648	1	56,050	42	54,402	41
2014	58,959		0	32,264	55	32,264	55
TOTAL	244,822	1,648	1	104,275	43	102,628	42
THREE-YE	AR MOVING AVERAG	ES					
96-98	1,071		0		0		0
97-99	998		0		0		0
98-00							
99-01							
00-02							
01-03							
02-04							
03-05							
04-06							
05-07	324		0		0	_	0
06-08	324		0	27	8	27	8
07-09	324		0	36	11	36	11
08-10	196		0	2,721		2,721	
09-11	196		0	2,693	~~	2,693	~~
10-12	16,336		0	5,285	32	5,285	32

🖉 Gannett Fleming

ACCOUNT 341.40 TRANSPORTATION EQUIPMENT - OTHER

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCŤ	NET SALVAGE AMOUNT	PCT		
THREE-YE	AR MOVING AVERAGES	1							
11-13	60,363	549	1	21,283	35	20,734	34		
12-14	80,016	549	1	32,038	40	31,489	39		
FIVE-YEA	FIVE-YEAR AVERAGE								
10-14	48,127	330	1	20,834	43	20,504	43		

December 31, 2014

ACCOUNT 345 POWER OPERATED EQUIPMENT

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
1980	13,957	20	0	10,100	72	10,080	72
1981	10,00	20	v	10,100	1 6	10,000	,
1982	4,745		0		0		0
1983	369-		õ		ō		0
1984	505				-		-
1985	34,721	35	0	18,612	54	18,577	54
1986	3,106		0	,	0	•	0
1987							
1988	7,922		0		0		0
1989							
1990	479-		0		0		0
1991	65,103	٩	0	8,554	13	8,554	13
1992	10,550		0		0		0
1993	4,132		0	152	4	152	4
1994	22,762		0	2,000	9	2,000	9
1995							
1996							
1997							
1998							
1999							
2000							
2001							
2002							
2003							
2004							
2005							
2006							
2007							
2008					_		
2009	99,826		0	8,510	9	8,510	9
2010	23,436		0		0		0
2011	27,605		0		0		0
2012	2,620	525	20		0	525-	20-
2013		C 2 0	~		~	632-	0
2014	153,356	632	0		0	032-	U
TOTAL	472,993	1,212	0	47,928	10	46,716	10
THREE - YEA	AR MOVING AVERAGE	5		,			
80-82	6,234	7	0	3,367	54	3,360	54
81-83	1,459		0		0		0

ACCOUNT 345 POWER OPERATED EQUIPMENT

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
	R MOVING AVERAGE						
82-84	1,459		0		0		0
83-85	11,451	12	0	6,204	54	6,192	54
84-86	12,609	12	0	6,204	49	6,192	49
85-87	12,609	12	0	6,204	49	6,192	49
86-88	3,676		0		0		0
87-89	2,641		0		0		0
88-90	2,481		0		0		0
89-91	21,541		0	2,851	13	2,851	13
90-92	25,058		0	2,851	11	2,851	11
91-93	26,595		0	2,902	11	2,902	11
92-94	12,481		0	717	6	717	6
93-95	8,965		0	717	8	717	8
94-96	7,587		0	667	9	667	9
95-97	1						
96-98							
97-99							
98-00							
99-01							
00-02							
01-03							
02-04							
03-05							
04-06							
05-07							
06-08							
07-09	33,275		0	2,837	9	2,837	9
08-10	41,087		0	2,837	7	2,837	7
09-11	50,289		0	2,837	6	2,837	6
10-12	17,887	175	1		0	175-	1-
11-13	10,075	175	2		0	175-	2 -
12-14	51,992	386	1		0	386-	1-
FIVE-YEAR	AVERAGE						
10-14	41,403	231	1		0	231-	1-

PART IX. DETAILED DEPRECIATION CALCULATIONS

ACCOUNT 304.10 STRUCTURES AND IMPROVEMENTS - SOURCE OF SUPPLY

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA ALVAGE PERCENT					
1984	3,200.00	1,592	1,301	2,219	27.38	81
1988	2,533.00	1,132	925	1,861	29.68	63
1991	23,528.92	9,571	7,821	18,061	31.51	573
2002	-	56,206	45,927	212,372	39.12	5,429
2003	452,890.41	100,732	82,310	415,869	39.89	10,425
2004	57,970.66	11,886	9,712	54,056	40.68	1,329
2006	1,656,129.06	280,184	228,943	1,592,799	42.31	37,646
2007	1,775.08	268	219	1,734	43.14	40
2008	58,979.41	7,785	6,361	58,516	44.00	1,330
2010	14,675,018.78	1,368,886	1,118,539	15,023,982	45.76	328,321
2012	821,586.09	43,560	35,594	868,151	47.59	18,242
2013	169,453.48	5,443	4,448	181,951	48.54	3,748
2014	1,545,048.61	16,656	13,609	1,685,944	49.51	34,053
	19,702,930.67	1,903,901	1,555,709	20,117,515		441,280
	,102,330.07	1,000,001	1,000,700			,230
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAI	, RATE, PERCEN	T 45.6	2.24

ACCOUNT 304.20 STRUCTURES AND IMPROVEMENTS - POWER AND PUMPING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2014

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)		
INTERI PROBAB	KY RIVER STATIO M SURVIVOR CURV LE RETIREMENT Y LVAGE PERCENT	E IOWA 60-R EAR 6-2042						
1951	8,622.60	7,250	6,780	3,136	15.90	197		
1957	92,039.85	73,994	69,201	36,645	17.55	2,088		
1958	26,944.94	21,491	20,099	10,888	17.82	2,088		
1959	51,381.05	40,646	38,013	21,075	18.09	1,165		
1966	2,125.00	1,581	1,479	965	19.86	49		
1967	73,300.89	54,035	50,535	33,762	20.10	1,680		
1970	73,708.15	52,745	49,328	35,436	20.78	1,705		
1971	17,572.79	12,443	11,637	8,572	21.00	4.08		
1972	12,864.02	9,013	8,429	6,365	21.21	300		
1973	3,602.44	2,496	2,334	1,809	21.42	84		
1974	3,168.00	2,170	2,029	1,614	21.62	75		
1978	6,162.43	4,020	3,760	3,327	22.38	149		
1985	743.96	437	409	447	23.50	19		
1988	16,973.46	9,426	8,815	10,704	23.90	448		
1989	6,581,48	3,580	3,348	4,221	24.03	176		
1991	30,518.44	15,881	14,852	20,244	24.26	834		
1992	1,957,414.33	994,278	929,867	1,321,159	24.37	54,213		
1993	21,577.08	10,677	9,985	14,828	24.48	606		
1995	1,752.80	819	766	1,250	24.68	51		
1996	5,317.98	2,408	2,252	3,864	24.78	156		
2006	326,778.28	86,591	80,981	294,814	25.55	11,539		
2007	3,208.80	772	722	2,968	25.61	116		
2008	89,918.76	19,299	18,049	85,358	25.67	3,325		
2009	8,182.42	1,531	1,432	7,978	25.73	310		
2011	23,845.98	3,022	2,826	24,597	25.84	952		
	2,864,305.93	1,430,605	1,337,928	1,956,024		81,256		
FRANKLIN COUNTY TANK AND BOOSTER STATION INTERIM SURVIVOR CURVE IOWA 60-R1.5 PROBABLE RETIREMENT YEAR 6-2065								

NET SALVAGE PERCENT.. -15

2010	4,573,023.70	434,497	406,349	4,852,628	42.97	112,931
2014	147,803.17	1,688	1,579	168,395	43.87	3,839
	4,720,826.87	436,185	407,928	5,021,023		116,770

ACCOUNT 304.20 STRUCTURES AND IMPROVEMENTS - POWER AND PUMPING

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVI	R STRUCTURES IVOR CURVE IOWA SALVAGE PERCENT					
1934	13,004.84	12,126	11,340	3,615	11.35	319
1948		1,809	1,692	799	16.42	49
1949		378	354	172	16.84	10
1951		63	59	31	17.70	2
1955		4,814	4,502	2,633	19.52	135
1962	•	2,986	2,793	2,057	23.06	89
1966	•	4,710	4,405	3,730	25.26	148
1971	•	3,643	3,407	3,468	28.20	123
1972		25,828	24,155	25,530	28.81	886
1974		596	557	637	30.06	21
1975		7,022	6,567	7,808	30.69	254
1987		108,312	101,295	205,250	38.80	5,290
1988	14,556.05	5,717	5,347	11,393	39.51	288
1989	447,765.79	169,670	158,679	356,252	40.23	8,855
1997	852.20	226	211	769	46.15	17
1998	21,873.51	5,488	5,132	20,022	46.91	427
1999	778,890.09	184,071	172,147	723,577	47.67	15,179
2006	110,585.37	14,583	13,638	113,535	53.12	2,137
2007	168,433.96	19,628	18,356	175,343	53.92	3,252
2008	11,071.71	1,120	1,047	11,685	54.72	214
2013	52,732.79	1,243	1,162	59,480	58.77	1,012
2014	1,655.70	13	12	1,892	59.59	32
	1,970,900.24	574,046	536,859	1,729,676	*	38,739
	9,556,033.04	2,440,836	2,282,715	8,706,723		236,765
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAI	L RATE, PERCEN	т 36.8	3 2.48

ACCOUNT 304.30 STRUCTURES AND IMPROVEMENTS - WATER TREATMENT

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
KENTIC	KY RIVER STATIO	NT				
	M SURVIVOR CURV		1.5			
	LE RETIREMENT Y					
	LVAGE PERCENT					
1925	7,032.20	6,921	4,695	3,392	8.65	392
1959	6,925.11	5,478	3,716	4,248	18.09	235
1960	3,833.51	3,008	2,041	2,368	18.35	129
1970	13,665.34	9,779	6,634	9,081	20.78	437
1971	67,314.31	47,665	32,334	45,077	21.00	2,147
1973	526.00	364	247	. 358	21.42	17
1975	723.00	490	332	499	21.82	23
1976	1,114.00	745	505	776	22.01	35
1977	1,434.51	948	643	1,007	22.20	45
1982	152,885.57	94,260	63,943	111,875	23.05	4,854
1984	11,400.01	6,810	4,620	8,490	23.35	364
1987	33,510.51	18,981	12,876	25,661	23.77	1,080
1988	53,593.29	29,763	20,190	41,442	23.90	1,734
1989	19,188.56	10,438	7,081	14,986	24.03	624
1990	112,467.18	59,865	40,611	88,727	24.15	3,674
1991	17,225.55	8,964	6,081	13,728	24.26	566
1992	8,000.00	4,064	2,757	6,443	24.37	264
1993	805,593.09	398,644	270,428	656,004	24.48	26,798
1995	47,316.34	22,116	15,003	39,411	24.68	1,597
1996	1,390,343.32	629,469	427,012	1,171,882	24.78	47,291
1997	6,903.44	3,021	2,049	5,890	24.87	237
1999	128,640.45	52,168	35,389	112,547	25.04	4,495
2000	168,478.81	65,401	44,366	149,385	25.12	5,947
2001	153,164.99	56,691	38,457	137,682	25,20	5,464
2002	11,650.51	4,094	2,777	10,621	25.27	420
2003	11,333.94	3,756	2,548	10,486	25.34	414
2005	228,821.20	65,999	44,772	218,373	25.48	8,570
2006	223,795.95	59,302	40,229	217,137	25.55	8,499
2008	21,152.39	4,540	3,080	21,245	25.67	828
2009	7,399.10	1,384	939	7,570	25.73	294
2011	18,479.46	2,342	1,589	19,663	25.84	761
2013	1,983.30	115	78	2,203	25.94	85
2014	2,169.63	43	29	2,466	25.99	95
	3,738,064.57	1,677,628	1,138,051	3,160,723		128,415

ACCOUNT 304.30 STRUCTURES AND IMPROVEMENTS - WATER TREATMENT

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)				
INTER] PROBAE	CKY RIVER STATION IM SURVIVOR CURVI BLE RETIREMENT YN ALVAGE PERCENT	N II E IOWA 60-R EAR 6-2065								
2010	23,152,774.13	2 100 D1E	1 400 007	05 100 400	40.07					
	4,960,399.43	2,199,815 56,645		25,133,403		584,906				
2014	4,000,000,40	20,042	38,426	5,666,033	43.87	129,155				
	28,113,173.56	2,256,460	1,530,713	30,799,436		714,061				
INTERI PROBAE	RICHMOND ROAD STATION TREATMENT PLANT INTERIM SURVIVOR CURVE IOWA 60-R1.5 PROBABLE RETIREMENT YEAR 6-2038 NET SALVAGE PERCENT15									
1005		F 0.0.7								
1925	5,156.56	5,083	3,448	2,482	8.57	290				
1926 1929	1,939.94	1,903	1,291	940	8.83	106				
1929 1938	563.61	544 8 049	369	279	9.59	29				
	8,725.21	8,049	5,460	4,574	11.82	387				
1941	369.39	335	227	198	12.54	16				
1947	1,334.65	1,173	796	739	13.95	53				
1971	2,328.84	1,726	1,171	1,507	18.86	80				
1972	27,672.99	20,323	13,786	18,037	19.02	948				
1973	221.99	161	109	146	19.18	8				
1974	4,654.28	3,352	2,274	3,079	19.33	159				
1977	50,913.14	35,524	24,098	34,452	19.75	1,744				
1983	1,276.58	826	560	908	20.48	44				
1988	1,452,526.37	867,542	588,514	1,081,892	20.98	51,568				
1989	7,833.76	4,591	3,114	5,894	21.07	280				
1991	69,390.06	39,055	26,494	53,305	21.23	2,511				
1994	10,388.09	5,443	3,692	8,254	21.46	. 385				
1997	580,691.83	278,551	188,960	478,835	21.66	22,107				
1999	10,008.73	4,468	3,031	8,479	21.78	389				
2001	222,917.06	91,357	61,974	194,381	21.89	8,880				
2005	6,719.98	2,173	1,474	6,254	22.09	283				
2006	24,821.65	7,411	5,027		22.13	1,063				
2007	330,949.59	89,907	60,990	319,602	22.18	14,409				
2008	51,557.01	12,557	8,518	50,772	22.22	2,285				
2009	18,757.16	3,995	2,710	18,861	22.26	847				
2010	8,048.90	1,452	985	8,271	22.30	371				
2011	38,975.77	5,677	3,851	40,971	22.34	1,834				
2012	24,932.42	2,705	1,835	26,837	22.37	1,200				
2014	47,237.49	1,091	740	53,583	22.45	2,387				
	3,010,913.05	1,496,974	1,015,501	2,447,049		114,663				

ACCOUNT 304.30 STRUCTURES AND IMPROVEMENTS - WATER TREATMENT

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVI	STRUCTURES VOR CURVE IOWA ALVAGE PERCENT					
1974	1,607.00	922	625	1,223	30.06	41
1996	1,043,366.07	291,965	198,060	1,001,811	45.40	22,066
1997	12,571.95	3,337	2,264	12,194	46.15	264
2006	246,960.18	32,567	22,092	261,912	53.12	4,931
2007	628,598.19	73,250	49,691	673,197	53.92	12,485
2009	14,357.26	1,233	836	15,674	55.52	282
	1,947,460.65	403,274	273,569	1,966,011		40,069
	36,809,611.83	5,834,336	3,957,834	38,373,219		997,208
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	r 38.5	2.71

ACCOUNT 304.40 STRUCTURES AND IMPROVEMENTS - TRANSMISSION AND DISTRIBUTION

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2014

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA AGE PERCENT					
1991	39,397.96	20,953	35,882	5,486	19.74	278
1992	412,979.52	211,502	362,192	71,436	20.49	3,486
1996	7,226.03	3,107	5,321	2,266	23.62	96
1997	26.54	11	19	9	24.43	
1998	139,105.41	53,860	92,234	53,827	25.25	2,132
1999	51,796.46	18,926	32,410	21,976	26.08	843
2000	8,279.36	2,843	4,869	3,824	26.92	142
2002	21,163.70	6,317	10,818	11,404	28.63	398
2005	11,570.17	2,654	4,545	7,604	31.26	243
2006	78,517.51	16,180	27,707	54,736	32.15	1,703
2008	25,387.15	4,025	6,893	19,764	33.96	582
2009	92,187.89	12,414	21,258	75,539	34.87	2,166
2010	25,516.58	2,820	4,829	21,963	35.79	614
2011	4,504.67	388	665	4,065	36.72	111
	917,658.95	356,000	609,642	353,900		12,794

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 27.7 1.39

ACCOUNT 304.60 STRUCTURES AND IMPROVEMENTS - OFFICE BUILDING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2014

	ORIGINAL	CALCULATED	ALLOC. BOOK	FUTURE BOOK	REM.	ANNUAL
YEAR	COST	ACCRUED	RESERVE	ACCRUALS	LIFE	ACCRUAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)
MAIN O	FFTCF					
	M SURVIVOR CURV	E TOWA 60-R	2			
	LE RETIREMENT Y					
	LVAGE PERCENT					
1965	7,142.07	5,501	4,198	4,015	19.11	210
1970	647,194.01	472,755	360,787	383,486	20.63	18,589
1971	2,640.16	1,907	1,455	1,581	20.91	76
1972	19,896.38	14,207	10,842	12,039	21.19	568
1973	5,009.31	3,535	2,698	3,063	21.46	143
1977	4,946.00	3,318	2,532	3,156	22.48	140
1979	5,098.00	3,326	2,538	3,324	22.95	145
1982	72,896.87	45,476	34,705	49,126	23.59	2,082
1984	1,886.00	1,138	868	1,300	23.99	54
1985	1,151.52	683	521	803	24.17	33
1986	27,739.44	16,157	12,330	19,570	24.35	804
1987	136,970.34	78,241	59,710	97,806	24.53	3,987
1988	82,908.88	46,425	35,430	59,916	24.69	2,427
1989	44,800.88	24,556	18,740	32,781	24.86	1,319
1990	32,653.68	17,505	13,359	24,193	25.01	967
1991	3,265.27	1,710	1,305	2,450	25.16	97
1992	16,608.13	8,484	6,475	12,625	25.30	499
1994	27,097.92	13,099	9,997	21,166	25.58	827
1995	26,056.54	12,229	9,333	20,632	25.70	803
2008	1,806,812.15	384,690	293,580	1,784,254	26.98	66,132
2009	7,271.02	1,348	1,029	7,333	27.05	271
2010	2,703,957.36	422,992	322,810	2,786,741	27.12	102,756
2011	499,236.09	62,660	47,820	526,302	27.18	19,364
2013	71,595.70	4,097	3,127	79,208	27.31	2,900
2014	325,425.91	6,452	4,924	369,316	27.37	13,493
	6,580,259.63	1,652,491	1,261,113	6,306,185		238,686
೧ಞಟಕಾ	STRUCTURES					
	OR CURVE IOWA	60-R2				
	LVAGE PERCENT	-15				
1988	780.00	333	254	643	37.70	17
1989	6,617.35	2,731	2,084	5,526	38.47	144
1996	11,220.54	3,437	2,623	10,281	44.02	234
1997	2,091,767.73	607,806	463,852	1,941,681	44.84	43,302
1998	226,122.80	62,106	47,397	212,645	45.67	4,656
1999	167,972.15	43,496	33,194	159,974	46.49	3,441
2000	1,733 16	421	321	1.672	47.33	35

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2000

2001

167,972.15 1,733.16

23,770.83

35

482

1,672 47.33

23,223 48.17

321

4,113

43,496 421

5,390

ACCOUNT 304.60 STRUCTURES AND IMPROVEMENTS - OFFICE BUILDING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2014

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVI	STRUCTURES VOR CURVE IOWA ALVAGE PERCENT					
2003	50,555.36	9,816	7,491	50,648	49.87	1,016
2004	14,508.35	2,581	1,970	14,715	50.72	290
2005	60,598.88	9,779	7,463	62,226	51.58	1,206
2006	59,714.97	8,641	6,594	62,078	52.45	1,184
2007	93,718.41	11,999	9,157	98,619	53.32	1,850
2008	279,837.73	31,110	23,742	298,072	54.20	5,499
2009	14,136.07	1,333	1,017	15,239	55.08	277
2010	88,564.00	6,857	5,233	96,616	55.96	1,727
2011	156,716.02	9,462	7,221	173,002	56.85	3,043
2012	57,151.00	2,465	1,881	63,842	57.75	1,105
2013	106,501.31	2,777	2,119	120,357	58.64	2,052
	3,511,986.66	822,540	627,728	3,411,057		71,560
	10,092,246.29	2,475,031	1,888,841	9,717,242	,	310,246

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 31.3 3.07

ACCOUNT 304.70 STRUCTURES AND IMPROVEMENTS - STORE, SHOP AND GARAGE

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2014

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA AGE PERCENT					
1957	13,694.36	10,194	11,176	2,518	14.06	179
1972	749.00	449	492	257	22.00	12
1977	5,650.00	3,065	3,360	2,290	25.16	91
1987	44,400.17	18,446	20,224	24,176	32.15	752
1988	42,525.48	17,095	18,742	23,783	32.89	723
1990	17,912.83	6,709	7,356	10,557	34.40	307
1993	546,102.20	181,503	198,994	347,108	36.72	9,453
1996	147,253.93	42,543	46,643	100,611	39.11	2,573
1999	70,632.43	17,273	18,937	51,695	41.55	1,244
2001	11,660.81	2,500	2,741	8,920	43.21	206
2002	43,961.08	8,752	9,595	34,366	44.05	780
2005	2,618.00	400	439	2,179	46.60	47
2009	799,355.85	71,502	78,392	720,964	50.08	14,396
2011	7,549.73	432	474	7,076	51.85	136
2014	3,312.34	27	29	3,283	54.55	60
	1,757,378.21	380,890	417,594	1,339,784		30,959

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 43.3 1.76

ACCOUNT 304.80 STRUCTURES AND IMPROVEMENTS - MISCELLANEOUS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2014

	ORIGINAL COST (2) PR CURVE IOWA VAGE PERCENT		ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
1014	0.01 2.0	200	3 ग	254	1.00	254
1934	291.39	280	37			
1985	23,000.00	16,404	2,174	20,826	7.17	2,905
1987	25,030.07	17,071	2,263	22,767	7.95	2,864
1989	67,361.16	43,731	5,796	61,565	8.77	7,020
1990	13,875.00	8,769	1,162	12,713	9.20	1,382
1991	6,522.00	4,010	531	5,991	9.63	622
1992	5,113.58	3,052	405	4,709	10.08	467
1993	4,040.72	2,339	310	3,731	10.53	354
1994	3,145.91	1,762	234	2,912	11.00	265
1997	23,223.35	11,621	1,540	21,683	12.49	1,736
1998	34,995.42	16,784	2,224	32,771	13.01	2,519
2000	9,043.98	3,940	522	8,522	14.11	604
2001	19,040.39	7,852	1,041	17,999	14.69	1,225
2002	34,048.07	13,224	1,753	32,295	15.29	2,112
2003	320,932.31	116,691	15,466	305,466	15.91	19,200
2004	7,875.70	2,662	353	7,523	16.55	455
2005	364,463.48	113,421	15,032	349,431	17.22	20,292
2006	220,090.06	62,418	8,273	211,817	17.91	11,827
2007	78,551.61	20,046	2,657	75,895	18.62	4,076
2011	1,875.00	242	32	1,843	21.78	85
2012	124,046.63	11,611	1,538	122,508	22.66	5,406
	1,386,565.83	477,930	63,343	1,323,222		85,670

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 15.4 6.18

ACCOUNT 305.00 COLLECTING AND IMPOUNDING RESERVOIRS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2014

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	R CURVE IOWA AGE PERCENT					
1934	24,854.61	21,336	18,246	6,609	9.91	667
1972	5,066.11	2,776	2,374	2,692	31.64	85
1988	760,225.13	272,054	232,650	527,575	44.95	11,737
1989	2,284.00	788	674	1,610	45.84	35
1991	14,013.00	4,478	3,829	10,184	47.63	214
1992	9,151.62	2,806	2,400	6,752	48.54	139
1993	3,586.34	1,053	900	2,686	49.45	54
1994	30,591.30	8,583	7,340	23,251	50.36	462
1996	1,591.87	405	346	1,246	52.21	24
2005	3,282.30	435	372	2,910	60.73	48
	854,646.28	314,714	269,131	585,515		13,465

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 43.5 1.58

ACCOUNT 306.00 LAKE, RIVER AND OTHER INTAKES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2014

YEAR (l)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA VAGE PERCENT					
1961	449,15	350	458	36	14.63	2
1966	19,532.24	14,314	18,727	2,758	16.69	165
1970	31,574.52	21,923	28,683	6,049	18.44	328
1971	23,098.06	15,804	20,677	4,731	18.90	250
1991	165,120.57	72,689	95,101	86,532	29.99	2,885
1992	6,000.00	2,552	3,339	3,261	30.67	106
1993	6,985.00	2,864	3,747	3,936	31.36	126
1994	169.67	67	88	99	32.07	3
1997	3,365.94	1,164	1,523	2,180	34.28	64
2002	245,293.78	63,193	82,677	187,146	38.29	4,888
2007	2,378.59	381	498	2,118	42.71	· 50
2010	820,061.67	80,104	104,803	797,265	45.56	17,499
2012	257,591.23	14,111	18,462	264,888	47.51	5,575
2013	49,161.46	1,622	2,122	51,956	48.50	1,071
	1,630,781.88	291,138	380,905	1,412,955		33,012

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 42.8 2.02

ACCOUNT 309.00 SUPPLY MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2014

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA ALVAGE PERCENT					
1934	223,521.48	211,065	227,802	18,072	9.91	1,824
1940	503.19	457	493	61	12.15	5
1941	433.53	391	422	55	12.56	4
1944	41.85	37	40	6	13.89	
1951	218.11	180	194	46	17.46	3
1953	1,629.41	1,316	1,420	372	18.60	20
1956	59,882.73	46,665	50,365	15,506	20.41	760
1959	109,730.59	82,216	88,736	31,968	22.32	1,432
1964	16,403.53	11,414	12,319	5,725	25.72	223
1965	440,490.69	301,592	325,508	159,032	26.43	6,017
1967	2,875.37	1,904	2,055	1,108	27.87	40
1968	5,722.03	3,722	4,017	2,277	28.61	80
1970	3,226.09	2,022	2,182	1,367	30.11	45
1972	10,673.26	6,434	6,944	4,797	31.64	152
1976	127,784.70	70,703	76,310	64,253	34.79	1,847
1980	3,498.25	1,755	1,894	1,954	38.07	51
1981	2,370.70	1,158	1,250	1,358	38.91	35
1982	53,151.82	25,266	27,270	31,197	39.75	785
1983	358.65	166	179	216	40.60	5
1984	14,163.31	6,352	6,856	8,724	41.46	210
1987	96,069.30	39,146	42,250	63,426	44.07	1,439
1988	100,191.76	39,440	42,567	67,644	44.95	1,505
1989	1,976,228.33	750,283	809,779	1,364,072	45.84	29,757
1991	9,330.23	3,280	3,540	6,723	47.63	141
1992	1,765,551.22	595,392	642,605	1,299,501	48.54	26,772
1993	5,475.01	1,768	1,908	4,115	49.45	83
1994	29,331.77	9,053	9,771	22,494	50.36	447
2000	25,261.98	5,573	6,015	21,773	55.96	389
2007	52,178.70	6,010	6,487	50,910	62.67	812
2008	5,454.04	545	588	5,411	63.64	85
2010	13,377,790.18	927,081	1,000,596	13,714,973	65.59	209,102
2012	2,585.07	100	108	2,736	67.54	41
2013	49,211.71	1,144	1,234	52,899	68.52	772
	18,571,338.59	3,153,630	3,403,704	17,024,768		284,883
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAT	L RATE. PERCEN	T. 59.8	1.53

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 59.8 1.53

ACCOUNT 310.10 OTHER POWER GENERATION EQUIPMENT_

YEAR (1)		ALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA 35 SALVAGE PERCENT5					
1981	38,609.55	31,505	28,192	12,348	7.80	1,583
1988	162,035.27	111,853	100,089	70,048	11.99	5,842
1989	55,199.86	36,962	33,075	24,885	12.68	1,963
1996	209,151.84	106,666	95,447	124,162	18.00	6,898
2003	12,785.70	4,204	3,762	9,663	24.04	402
2007	196,041.20	42,698	38,207	167,636	27.74	6,043
2008	133,198.85	25,215	22,563	117,296	28.69	4,088
2009	32,060.10	5,146	4,605	29,058	29.65	980
2010	1,769,672.64	233,069	208,556	1,649,600	30.61	53,891
2011	45,464.46	4,664	4,174	43,564	31.58	1,379
2012	20,101.38	1,477	1,322	19,784	32.55	608
2013	69,396.79	3,060	2,738	70,129	33.53	2,092
2014	53,786.18	791	707	55,768	34.51	1,616
	2,797,503.82	607,310	543,437	2,393,942		87,385
	COMPOSITE REMAINING	G LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	T 27.4	3.12

ACCOUNT 311.20 ELECTRIC PUMPING EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2014

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	DR CURVE IOWA LVAGE PERCENT					
1934	5,904.01	6,483	4,273	2,517	1.94	1,297
1940	2,338.33	2,441	1,609	1,080	3.96	273
1947	282.63	277	183	142	6.31	23
1949	15,991.09	15,400	10,151	8,239	6.99	1,179
1950	465.46	444	293	242	7.34	33
1953	694.17	643	424	374	8.38	45
1954	212.25	195	129	115	8.73	13
1955	113,041.92	102,548	67,597	62,401	9.08	6,872
1956	1,094.13	982	647	611	9.44	65
1958	29,118.81	25,574	16,858	16,629	10.16	1,637
1959	50,458.90	43,818	28,884	29,144	10.53	2,768
1962	5,393.17	4,522	2,981	3,221	11.65	276
1965	3,283.85	2,651	1,747	2,029	12.81	158
1966	55,698.85	44,390	29,261	34,793	13.20	2,636
1967	13,481.70	10,600	6,987	8,517	13.60	626
1970	108,625.30	81,866	53,964	70,955	14.82	4,788
1971	2,476.72	1,839	1,212	1,636	15.24	107
1973	565.00	407	268	382	16.09	24
1974	9,556.37	6,765	4,459	6,531	16.53	395
1976	153,438.04	104,969	69,193	107,261	17.42	6,157
1977	659.56	443	292	466	17.87	26
1979	1,256.95	813	536	909	18.81	48
1981	169,137.91	105,079	69,265	125,244	19.77	6,335
1982	13,658.17	8,306	5,475	10,232	20.26	505
1983	38,571.60	22,942	15,123	29,234	20.76	1,408
1984	14,571.77	8,468	5,582	11,176	21.27	525
1985	68,086.72	38,622	25,459	52,841	21.79	2,425
1986	20,663.26	11,428	7,533	16,230	22.32	727
1987	385,566.74	207,778	136,961	306,441	22.85	13,411
1988	612,070.60	320,836	211,486	492,395	23.40	21,043 13,500
1989	397,193.83	202,254	133,320	323,453	23.96	
1990	76,255.20	37,667	24,829	62,864	24.53 25.11	2,563 273
1991	8,221.11	3,933	2,593	6,861		
1992	2,249,164.63	1,040,642	685,960	1,900,579 24,597	25.70 26.30	73,952 935
1993	28,748.56	12,840 126,427	8,464 83,337		20.30	10,826
1998	350,170.72			319,359	30.19	8,187
1999 2000	267,460.25	91,631 49 360	60,400	247,179 142 728	30.19	4,621
2000	152,404.16	49,360	32,537 24,590	142,728	30.89	3,675
2001	122,352.46 22,474.75	37,304 6,413	24,590	116,115 21,619	32.33	5,675
2002	22,474.75 82,705.48	6,413 21,964	4,227 14,478	80,633	33.07	2,438
2003	3,145.15	21,984 771	14,478	3,109	33.83	2,430
2004	3,140,10	//1	500	3,109	22.03	52

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ACCOUNT 311.20 ELECTRIC PUMPING EQUIPMENT

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
		43-50.5				
NET S	ALVAGE PERCENT	-15				
2005	72,535.83	16,276	10,729	72,687	34.61	2,100
2006	15,944.04	3,236	2,133	16,203	35.41	458
2008	5,842.76	928	612	6,107	37.06	165
2010	6,058,225.77	682,135	449,643	6,517,317	38.79	168,015
2011	129,080.17	11,427	7,532	140,910	39.69	3,550
2012	82,373.44	5,287	3,485	91,244	40.60	2,247
2013	2,342,652.28	91,463	60,290	2,633,760	41.54	63,403
2014	827,346.27	10,847	7,150	944,298	42.51	22,214
	15,190,660.84	3,634,334	2,395,649	15,073,611		459,708
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	T 32.8	3.03

ACCOUNT 311.30 DIESEL PUMPING EQUIPMENT

YEAR (1)		ALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVI	VOR CURVE IOWA 43	3-S0.5				
NET S	ALVAGE PERCENT1	.5				
1965	22,657.13	18,293	13,389	12,667	12.81	989
1972	1,003.12	733	537	617	15.66	39
1981	95,017.92	59,031	43,207	66,064	19.77	3,342
1987	101,246.21	54,561	39,935	76,498	22.85	3,348
1988	1,109.18	581	425	851	23.40	36
1991	1,881.25	900	659	1,504	25.11	60
1993	80,611.31	36,003	26,351	66,352	26.30	2,523
2006	129,930.05	26,374	19,304	130,116	35.41	3,675
	433,456.17	196,476	143,807	354,668		14,012
	COMPOSITE REMAINING	G LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	r 25.3	3.23
ACCOUNT 311.40 HYDRAULIC PUMPING EQUIPMENT

YEAR (1)	ORIGINAL C COST (2)	ALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA 43 ALVAGE PERCENT 3					
1947	20,674.66	20,287	1,707	22,069	6.31	3,497
1995	35,434.40	14,651	1,233	39,517	27.54	1,435
2004	6,712.72	1,646	138	7,582	33.83	224
2005	318,909.77	71,560	6,022	360,724	34.61	10,423
2006	1,015.16	206	17	1,151	35.41	33
	382,746.71	108,350	9,117	431,042		15,612
	COMPOSITE REMAINING	G LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	r 27.6	4.08

ACCOUNT 311.52 SOURCE OF SUPPLY PUMPING EQUIPMENT

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVI	VOR CURVE IOWA	43-50.5				
NET S	ALVAGE PERCENT	-15				
2007	696,220.72	126,055	102,884	697,770	36.23	19,259
2008	3,849,977.61	611,611	499,188	3,928,286	37.06	105,998
2009	3,661,277.60	497,425	405,991	3,804,478	37.92	100,329
2010	740,502.91	83,378	68,052	783,526	38.79	20,199
2011	266,599.30	23,601	19,263	287,326	39.69	7,239
2012	191,866.24	12,314	10,050	210,596	40.60	5,187
2013	1,090,605.48	42,580	34,754	1,219,442	41.54	29,356
2014	1,350,113.57	17,700	14,446	1,538,184	42.51	36,184
	11,847,163.43	1,414,664	1,154,628	12,469,610		323,751
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	T 38.5	2.73

ACCOUNT 311.54 TRANSMISSION AND DISTRIBUTION PUMPING EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2014

YEAR (1)	ORIGINAL C COST (2)	ALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA 43 ALVAGE PERCENT3					
2007	77,063.51	13,953	2,813	85,810	36.23	2,368
2012	17,283.69	1,109	223	19,653	40.60	484
	94,347.20	15,062	3,036	105,463		2,852
	COMPOSITE REMAINING	G LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	2 37.0	3.02

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ACCOUNT 320.10 PURIFICATION SYSTEM - STRUCTURES

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
			(+ /	(0)	(0)	(7)
	KY RIVER STATIO		_			
	M SURVIVOR CURVI					
	LE RETIREMENT Y LVAGE PERCENT					
NEI SA	LEVAGE FERCENT	-10				
1958	76,113.80	71,022	57,440	30,091	10.37	2,902
1959	544,917.94	503,424	407,150	219,506	10.81	20,306
1962	4,219.69	3,776	3,054	1,799	12.18	148
1966	1,143,481.59	975,496	788,943	526,061	14.13	37,230
1970	451,865.93	365,389	295,512	224,134	16.14	13,887
1976	1,013.11	749	606	559	19.04	29
1977	448,939.18	326,532	264,086	252,194	19.49	12,940
1978	747.80	535	433	427	19.93	21
1979	6,198.57	4,362	3,528	3,601	20.35	177
1981	103,631.74	70,442	56,971	62,206	21.15	2,941
1982	85,103.93	56,830	45,962	51,908	21.52	2,412
1984	1,818.96	1,170	946	1,146	22.22	52
1986	20,519.97	12,691	10,264	13,334	22.86	583
1987	219,990.46	133,242	107,761	145,228	23,16	6,271
1988	759,416.61	450,114	364,035	509,295	23.44	21,728
1989	33,996.31	19,703	15,935	23,161	23.70	977
1990	7,568.73	4,285	3,466	5,238	23.95	219
1991	509.01	281	227	358	24.19	15
1992	40,905.39	22,013	17,803	29,238	24.41	1,198
1993	19,390.91	10,153	8,211	14,088	24.62	572
1994	6,318.28	3,213	2,599	4,667	24.82	188
1996	204,724.75	97,641	78,968	156,465	25.19	6,211
1997	108,441.59	49,954	40,401	84,307	25.35	3,326
1999	9,193.35	3,912	3,164	7,408	25.66	289
2002	56,860.87	20,891	16,896	48,494	26.05	1,862
2003	3,474.74	1,203	973	3,023	26.17	116
2007	15,505.81	3,881	3,139	14,693	26.56	553
2008	265,157.05	59,214	47,890	257,041	26.64	9,649
2013	3,684.58	222	180	4,058	26.97	150
	4,643,710.65	3,272,340	2,646,540	2,693,727		146,952

ACCOUNT 320.10 PURIFICATION SYSTEM - STRUCTURES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2014

YEAR (l)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
INTERI PROBAE	CKY RIVER STATION M SURVIVOR CURVI BLE RETIREMENT YN ALVAGE PERCENT	E IOWA 55-R EAR 6-2065				
2010 2014	14,582,554.25 61,462.93	1,514,828 759	1,225,133 614	15,544,804 70,069	44.51 46.04	349,243 1,522
	14,644,017.18	1,515,587	1,225,747	15,614,873		350,765
INTERI PROBAB	ND ROAD STATION M SURVIVOR CURVI LE RETIREMENT YI LVAGE PERCENT	E IOWA 55-R EAR 6-2038				
1900	9,352.92	10,560	8,541	2,215	1.00	2,215
1929	26.49	29	23	7	1.77	4
1934	1,506.01	1,637	1,324	408	3.03	135
1936	342.12	368	298	96	3.55	27
1938	138.71	148	120	4 Ö	4.06	10
1948	4,331.32	4,370	3,534	1,447	6.75	214
1950	27,527.47	27,415	22,173	9,483	7.37	1,287
1953	22,789.91	22,219	17,971	8,238	8.37	984
1960	7,813.41	7,175	5,803	3,182	11.05	288
1964	2,277.79	2,008	1,624	995	12.74	78
1966	1,473.00	1,270	1,027	667	13.61	49
1968	4,540.05	3,824	3,093	2,128	14.47	147
1971	6,312.96	5,126	4,146	3,114	15.73	198
1972	11,330.58	9,084	7,347	5,683	16.14	352
1973	58,045.91	45,945	37,161	29,592	16.53	1,790
1974	39,714.75	31,028	25,096	20,576	16.91	1,217
1988	3,355,917.25	2,107,991	1,704,956	2,154,349	20.82	103,475
1989	9,929.28	6,114	4,945	6,474	21.00	308
1991	1,190.30	702	568	801	21.33	38
1992	18,079.30	10,415	8,424	12,367	21.48	576
1994	8,864.67	4,852	3,924	6,270	21.76	288
1995	3,224.21	1,715	1,387	2,321	21.89	106

664,505.78

981,756.84

624,519.59

2,588.14

3,517.11

1997

1999

2002

2003

2007

22,409

35,770

130 25,150

90

495,677 22.12

2,004 22.32

22.58

22.66

22.92

807,689

2,957

576,428

268,504

321,331

1,088

141,770

972

331,976

397,291

175,283

1,345

1,202

ACCOUNT 320.10 PURIFICATION SYSTEM - STRUCTURES

YEAR (1)	COST	ACCRUED	ALLOC. BOOK RESERVE (4)			
INTER PROBA	OND ROAD STATION IM SURVIVOR CURV BLE RETIREMENT Y ALVAGE PERCENT	E IOWA 55-R EAR 6-2038	.3			
2008	1,068,184.71	268,666	217,299	1,011,114	22.97	44,019
2012	•	823	666	7,839	23.15	339
2014	5,228.25	124	100	5,912	23.22	255
	6,952,424.28	3,480,705	2,815,216	5,180,072		241,948
SURVI	STRUCTURES VOR CURVE IOWA ALVAGE PERCENT					
1996	2,250,651.76	828,706	670,225	1,918,024	37.39	51,298
2005		2,559	2,070	13,178		
2006	10,736.70	1,859	1,503	10,844	46.72	232
2009	153,749.22	17,296	13,988	162,823	49.62	3,281
2010	7,017.03	647	523	7,546	50.59	149
	2,435,413.37	851,067	688,310	2,112,415		55,248
	28,675,565.48	9,119,699	7,375,813	25,601,087		794,913
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAI	L RATE, PERCEN	r 32.2	2.77

ACCOUNT 320.11 PURIFICATION SYSTEM - EQUIPMENT

YEAI (1)	ORIGINAL R COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SUBV	IVOR CURVE IOWA	27.1.2				
	SALVAGE PERCENT					
14101	ONDVAGE FERCENT	-13				
1970	244,452.52	216,359	174,983	106,137	6.22	17,064
1974	108.00	91	74	50	7.17	. 7
1981	. 970,333.34	746,816	603,995	511,888	8.93	57,322
1984	2,181.04	1,610	1,302	1,206	9.67	125
1987	142,933.99	101,121	81,783	82,591	10.39	7,949
1988	257,733.44	179,703	145,337	151,056	10.63	14,210
1989	17,766.81	12,206	9,872	10,560	10.87	971
1990	60,992.04	41,253	33,364	36,777	11.12	3,307
1991	. 348,062.80	231,714	187,401	212,871	11.37	18,722
1992	8,821.95	5,772	4,668	5,477	11.64	471
1993	634,476.96	407,253	329,370	400,279	11.93	33,552
1994	12,064.62	7,590	6,138	7,736	12.23	633
1996	310,024.29	185,790	150,260	206,268	12.93	15,953
1997	20,551.70	11,975	9,685	13,949	13.32	1,047
1998	•	53,426	43,209	65,742	13.76	4,778
1999	964,589.66	523,823	423,647	685,631	14.25	48,114
2000	-	247,114	199,856	346,143	14.78	23,420
2001	-	9,189	7,432	13,902	15.37	904
2002	288,988.50	135,151	109,305	223,032	16.02	13,922
2003	28,240.90	12,365	10,000	22,477	16.72	1,344
2004	,	10,834	8,762	21,934	17.47	1,256
2005	8,054.76	2,998	2,425	6,838	18.26	374
2006		10,783	8,721	28,040	19.08	1,470
2007	1,485,261.31	447,253	361,720	1,346,331	19.93	67,553
2008	• • • • • • • •	67,743	54,788	240,221	20.80	11,549
2009	158,710.46	35,896	29,031	153,486	21.69	7,076
2010		67,981	54,980	363,132	22.61	16,061
2011	544,992.50	79,853	64,582	562,159	23.56	23,861
2012		11,521	9,318	116,111	24.52	4,735
2013		89,590	72,457	1,550,843	25.51	60,794
2014	868,004.06	18,487	14,951	983,254	26.50	37,104
	10,164,816.80	3,973,260	3,213,416	8,476,123		495,648
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	r 17.1	4.88

ACCOUNT 320.20 PURIFICATION SYSTEM - FILTER MEDIA

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2014

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA AGE PERCENT					
2007	27,968.19	18,990	27,968			
2009	140,600.74	74,940	140,601	~~ ~~~	~ ~ ~	
2010	405,450.33	180,020	343,897	61,553	5.56	11,071
2011	168,320.47	58,744	112,220	56,101	6.51	8,618
	742,339.73	332,694	624,686	117,654		19,689

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 6.0 2.65

ACCOUNT 330.00 DISTRIBUTION RESERVOIRS AND STANDPIPES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2014

YEAR (l)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA ALVAGE PERCENT					
2004	1,656,899.71	346,948	331,825	1,490,765	44.53	33,478
2008	11,716.56	1,521	1,455	11,433	48.51	236
2010	102,741.97	9,227	8,825	104,191	50.51	2,063
	1,771,358.24	357,696	342,105	1,606,389		35,777
	COMPOSITE REMAINI	NG LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	T 44.9	2.02

🖄 Gannett Fleming

ACCOUNT 330.10 ELEVATED TANKS AND STANDPIPES

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVI	IVOR CURVE IOWA	55-R4				
	SALVAGE PERCENT					
1949	29,865.15	30,248	32,623	229	4.36	53
1953	31.05	31	33	1	5.55	
1954	86,170.71	84,654	91,300	3,488	5.88	593
1965	367,671.17	323,183	348,557	55,881	11.05	5,057
1966	723.36	627	676	120	11.68	10
1968	174,702.28	146,751	158,273	33,900	13.00	2,608
1970	582,65	473	510	131	14.38	9
1973	1,249.84	962	1,038	337	16.53	20
1974	22,918.00	17,289	18,646	6,564	17.28	380
1975	116,046.57	85,782	92,517	35,134	18,04	1,948
1976	9,768.97	7,071	7,626	3,120	18.81	166
1977	5,027.00	3,559	3,838	1,692	19.60	86
1980	2,486.15	1,639	1,768	967	22.04	44
1985	18,779.50	10,757	11,602	9,055	26.36	344
1987	767,762.54	412,135	444,493	400,046	28.16	14,206
1988	11,180.11	5,796	6,251	6,047	29.08	208
1989	1,070,509.38	535,260	577,284	600,276	30.00	20,009
1990	664,161.54	319,730	344,833	385,745	30.93	12,472
1991	21,644.73	10,013	10,799	13,010	31.87	408
1992	3,704.09	1,643	1,772	2,302	32.82	70
1994	26,620.29	10,792	11,639	17,643	34.73	508
1996	1,021,559.19	374,501	403,904	719,811	36.67	19,629
1998	119,414.51	39,120	42,191	89,165	38.62	2,309
1999	785,425.59	241,911	260,904	603,064	39.60	15,229
2000	32,901.84	9,489	10,234	25,958	40.58	640
2001	908,985.58	244,332	263,515	736,369	41.56	17,718
2002	38,174.00	9,505	10,251	31,740	42.55	746
2005	3,333,636.69	631,384	680,956	2,986,044	45.53	65,584
2006	169,043.00	28,669	30,920	155,027	46.52	3,332
2009	85,427.55	9,380	10,117	83,853	49.51	1,694
2014	1,034,179.58	10,341	11,153	1,126,445	54.50	20,669
	10,930,352.61	3,607,027	3,890,223	8,133,165		206,749
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	т 39.3	1.89

ACCOUNT 330.20 GROUND LEVEL FACILITIES

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA 5 ALVAGE PERCENT (
2007	108,616.26	14,772	13,255	95,361	47.52	2,007
2009	8,939.49	892	800	8,139	49.51	164
2010	2,079,601.48	169,779	152,344	1,927,257	50.51	38,156
2012	141,581.45	6,435	5,774	135,807	52.50	2,587
2013	573,874.81	15,650	14,043	559,832	53.50	10,464
	2,912,613.49	207,528	186,216	2,726,398		53,378
	COMPOSITE REMAININ	NG LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	r 51.1	1.83

ACCOUNT 330.40 CLEARWELLS

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA ALVAGE PERCENT	55-R4 0				
2007	581.91	79	117	465	47.52	10
2010	1,095,733.70	89,456	132,684	963,049	50.51	19,067
	1,096,315.61	89,535	132,801	963,514		19,077
	COMPOSITE REMAINS	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	r 50.5	1.74

ACCOUNT 331.00 MAINS AND ACCESSORIES

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
			(4)	(5)	(0)	(77)
	OR CURVE IOWA					
NET SA	LVAGE PERCENT	-25				
1906	30.00	34	28	10	0 01	7
1933	50,678.07	49,292		10	8.81	1
1934	391,494.70	377,792	40,637 311,453	22,711	18.86 19.38	1,204 9,180
1935	43,013.58	41,179	33,948	177,915 19,819	19.30	996
1936	33,176.74	31,498	25,967	15,504	20.44	759
1937	115,464.56	108,690	89,605	54,726	20.99	2,607
1938	16,677.11	15,564	12,831	8,015	21.54	372
1939	20,212.62	18,694	15,411	9,855	22.11	446
1940	15,915.43	14,584	12,023	7,871	22.69	347
1941	14,359.35	13,033	10,744	7,205	23.28	309
1942	1,840.39	1,654	1,364	936	23.88	39
1943	2,346.40	2,088	1,721	1,212	24.49	49
1944	671.23	591	487	352	25.11	14
1945	9,664.23	8,422	6,943	5,137	25.74	200
1946	14,456.57	12,462	10,274	7,797	26.38	296
1947	23,868.66	20,348	16,775	13,061	27.03	483
1948	120,090.47	101,212	83,440	66,673	27.69	2,408
1949	86,935.84	72,425	59,708	48,962	28.35	1,727
1950	127,031.53	104,558	86,198	72,591	29.03	2,501
1951	35,565.16	28,918	23,840	20,616	29.71	694
1952	151,709.08	121,813	100,423	89,213	30.40	2,935
1953	331,177.99	262,508	216,413	197,559	31.10	6,352
1954	148,706.38	116,318	95,893	89,990	31.81	2,829
1955	573,529.57	442,629	364,905	352,007	32.52	10,824
1956	1,043,958.49	794,635	655,101	649,847	33.24	19,550
1957	441,418.41	331,257	273,090	278,683	33.97	8,204
1958	649,836.25	480,595	396,205	416,090	34.71	11,988
1959	470,214.73	342,563	282,411	305,357	35.46	8,611
1960	433,562.62	311,081	256,457	285,496	36.21	7,884
1961	242,799.20	171,532	141,412	162,087	36.96	4,385
1962	324,893.70	225,850	186,192	219,925	37.73	5,829
1963	322,774.88	220,722	181,964	221,505	38.50	5,753
1964	405,983.82	272,963	225,032	282,448	39.28	7,191
1965	487,722.86	322,330	265,730	343,924	40.06	8,585
1966	4,339,804.83	2,817,673	2,322,902	3,101,854	40.85	75,933
1967	726,807.01	463,339	381,979	526,530	41.65	12,642
1968	588,319.57	368,134	303,491	431,908	42.45	10,175
1969	772,089.47	473,928	390,708	574,404	43.26	13,278
1970	439,680.56	264,583	218,123	331,478	44.08	7,520
1971	585,446.80	345,238	284,616	447,192	44.90	9,960
1972	1,631,005.79	942,150	776,713	1,262,044	45.72	27,604
1973	853,817.29	482,663	397,910	669,362	46.56	14,376

ACCOUNT 331.00 MAINS AND ACCESSORIES

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SUBVE	OR CURVE., IOWA	85-R3				
	ALVAGE PERCENT					
1974	3,092,294.92	1,710,310	1,409,987	2,455,382	47.39	51,812
1975	665,091.81	359,540	296,406	534,959	48,24	11,090
1976	772,093.84	407,733	336,137	628,980	49.09	12,813
1977	1,325,776.99	683,554	563,525	1,093,696	49.94	21,900
1978	1,194,275.07	600,646	495,175	997,669	50.80	19,639
1979	1,459,648.73	715,447	589,818	1,234,743	51.67	23,897
1980	1,009,787.19	482,022	397,381	864,853	52.54	16,461
1981	498,699.75	231,602	190,934	432,441	53.42	8,095
1982	413,597.15	186,729	153,940	363,056	54.30	6,686
1983	551,044.43	241,647	199,215	489,591	55,18	8,873
1984	1,822,100.31	774,939	638,863	1,638,762	56.08	29,222
1985	5,125,964.44	2,112,923	1,741,903	4,665,553	56.97	81,895
1986	1,767,492.20	705,185	581,358	1,628,007	57.87	28,132
1987	8,225,224.84	3,171,544	2,614,635	7,666,896	58.78	130,434
1988	5,354,039.12	1,992,773	1,642,851	5,049,698	59.69	84,599
1989	3,446,442.81	1,236,670	1,019,516	3,288,538	60.60	54,266
1990	3,083,431.64	1,064,709	877,751	2,976,539	61.52	48,383
1991	1,924,313.94	638,415	526,312	1,879,080	62.44	30,094
1992	3,749,244.68	1,192,588	983,175	3,703,381	63.37	58,441
1993	3,234,565.32	984,642	811,743	3,231,464	64.30	50,256
1994	6,719,303.51	1,953,554	1,610,519	6,788,610	65.23	104,072
1995	3,740,617.76	1,035,824	853,938	3,821,834	66.17	57,758
1996	5,488,592.75	1,443,980	1,190,424	5,670,317	67.11	84,493
1997	6,256,369.10	1,559,478	1,285,641	6,534,820	68.05	96,030
1998	5,537,344.17	1,302,937	1,074,147	5,847,533	69.00	84,747
1999	6,902,624.47	1,527,723	1,259,462	7,368,819	69.95	105,344
2000	6,519,375.97	1,351,793	1,114,424	7,034,796	70.90	99,221
2001	6,933,108.02	1,339,736	1,104,485	7,561,900	71.86	105,231
2002	3,170,345.93	567,849	468,137	3,494,795	72.82	47,992
2003	2,774,701.87	457,826	377,434	3,090,943	73.78	41,894
2004	1,523,587.80	229,662	189,334	1,715,151	74.75	22,945
2005	1,201,747.25	164,174	135,346	1,366,838	75.71	18,054
2006	4,912,172.29	601,004	495,471	5,644,744	76.68	73,614
2007	32,533,247.08	3,511,557	2,894,944	37,771,615	77.66	486,372
2008	9,353,141.11	876,155	722,306	10,969,120	78.63	139,503
2009	3,594,309.22	285,433	235,312	4,257,575	79.60	53,487
2010	75,429,968.25	4,902,948	4,042,014	90,245,446	80.58	1,119,948
2011	3,974,038.64	201,037	165,736	4,801,812	81.56	58,875
2012	3,837,418.37	138,819	114,443	4,682,330	82.54	56,728

ACCOUNT 331.00 MAINS AND ACCESSORIES

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA ALVAGE PERCENT					
2013 2014	4,729,498.54 21,993,102.40	102,926 158,350	84,853 130,544	5,827,020 27,360,834	83.52 84.51	69,768 323,759
9999	51,928,355.58-	10,058,646-	8,292,393-	56,618,051-		795,432-
	231,000,140.04	44,745,279	36,888,213	251,861,962		3,538,431
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	71.2	1.53

ACCOUNT 333.00 SERVICES

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
CUDVTVOD	CURVE IOWA	בס				
	AGE PERCENT					
1934	4,399.71	7,439	7,699			
1937	366.80	611	642			
1939	180.50	298	316			
1940	159.49	262	279			
1941	70.77	115	124			
1942	804.00	1,304	1,407			
1946	281.15	446	481	11	4.83	2
1950	1,784.82	2,768	2,988	135	5.91	23
1953	490.46	746	805	53	6.81	8
1954	385.91	583	629	46	7.13	6
1955	1,484.57	2,225	2,402	196	7.46	26
1956	3,391.42	5,044	5,444	491	7.81	63
1957	5,359.47	7,904	8,531	848	8.18	104
1958	15,331.26	22,413	24,191	2,639	8.56	308
1959	37,959.48	54,983	59,346	7,083	8.96	791
1960	37,875.33	54,339	58,651	7,631	9.37	814
1961	25,236.50	35,832	38,675	5,489	9.81	560
1962	88,652.11	124,530	134,411	20,730	10.26	2,020
1963	70,128.00	97,400	105,128	17,596	10.73	1,640
1964	31,927.22	43,817	47,294	8,579	11.22	765
1965	82,512.30	111,852	120,727	23,670	11.72	2,020
1966	106,810.76	142,884	154,222	32,697	12.25	2,669
1967	101,989.63	134,582	145,261	33,221	12.79	2,597
1968	121,583.96	158,147	170,696	42,076	13.35	3,152
1969 1970	129,018.59	165,300	178,416	47,367	13.93 14.52	3,400 2,843
	106,245.32 117,635.96	134,012	144,646	41,283 48,316	14.52 15.13	3,193
1971 1972	163,315.85	145,965 199,182	157,547 214,987	48,316 70,816	15.76	4,493
1973	93,338.31	111,827	120,700	42,642	16.40	2,600
1974	226,185.27	265,962	287,066	108,758	17.06	6,375
1975	137,023.50	158,032	170,571	69,220	17.73	3,904
1976	204,665.37	231,360	249,718	108,446	18.41	5,891
1977	296,703.20	328,413	354,472	164,759	19.11	8,622
1978	311,918.15	337,803	364,607	181,250	19.82	9,145
1979	334,327.27	353,858	381,936	203,137	20.55	9,885
1980	296,023.56	306,043	330,327	187,714	21.28	8,821
1981	173,127.35	174,618	188,474	114,499	22.03	5,197
1982	272,261.84	267,641	288,878	187,580	22.79	8,231
1983	245,011.96	234,503	253,110	175,661	23.56	7,456
1984	334,763.97	311,618	336,344	249,493	24.34	10,250
1985	459,948.33	415,921	448,923	355,987	25.13	14,166
1986	558,052.12	489,614	528,464	448,127	25.93	17,282
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ACCOUNT 333.00 SERVICES

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	IVOR CURVE IOWA SALVAGE PERCENT					
1987	720,904.31	612,839	661,466	600,117	26.74	22,443
1988	739,939.73	608,600	656,891	638,004	27.56	23,150
1989	796,887.93	633,183	683,425	711,129	28.39	25,049
1990	755,929.19	579,261	625,224	697,652	29.23	23,868
1991	756,785.63	558,277	602,575	721,800	30.08	23,996
1992	929,879.08	659,361	711,680	915,608	30.93	29,603
1993	772,840.35	525,381	567,069	785,402	31.80	24,698
1994	860,174.12	559,567	603,967	901,338	32.67	27,589
1995	974,948.93	605,039	653,048	1,053,113	33.56	31,380
1996	1,063,878.96	628,354	678,213	1,183,575	34.45	34,356
1997	976,065.47	546,921	590,318	1,117,797	35.35	31,621
1998	1,440,186.26	763,356	823,927	1,696,399	36.25	46,797
1999	1,665,976.47	832,014	898,032	2,017,427	37.16	54,290
2000		905,062	976,877	2,404,130	38.08	63,134
2001	10,218,579.85	4,467,231	4,821,696	13,060,819	39.01	334,807
2002	735,830.12	298,644	322,341	965,362	39.94	24,170
2003	704,374.60	263,603	284,519	948,137	40.88	23,193
2004	602,367.00	206,169	222,528	831,614	41.83	19,881
2005	802,649.81	249,056	268,818	1,135,819	42.78	26,550
2006	1,211,550.63	337,199	363,955	1,756,259	43.73	40,161
2007	1,160,212.42	285,430	308,078	1,722,294	44.69	38,539
2008	2,533,674.04	541,471	584,435	3,849,495	45.65	84,326
2009	3,860,521.35	698,967	754,429	6,001,483	46.62	128,732
2010	1,917,174.87	284,542	307,120	3,047,936	47.59	64,046
2011	1,702,115.57	196,475	212,065	2,766,637	48.57	56,962
2012	2,351,249.84	194,666	210,112	3,904,575	49.54	78,817
2013	1,093,891.33	54,481	58,804	1,855,506	50.52	36,728
2014	717,788.42	11,833	12,772	1,243,358	51.51	24,138
9999	15,659,736.81-	7,241,200-	7,815,660-	19,588,879-		506,853-
	33,537,375.18	15,507,978	16,738,259	41,952,148		1,085,493
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	r 38.6	3.24

ACCOUNT 334.10 METERS

YEAR (1)		ALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA 40 CALVAGE PERCENT2					
1986	1,458.98	737	1,375-	3,126	23.17	135
1988	2,096.80	990	1,847-	4,363	24.26	180
2002	56,623.00	12,927	24,117-	92,065	32.39	2,842
2003	30,783.47	6,474	12,078-	49,018	32.99	1,486
2006	14,513.75	2,268	4,231-	21,648	34.79	622
2008	1,293,262.80	155,192	289,532-	1,841,447	36.00	51,151
2009	556,641.53	56,610	105,614-	773,584	36.61	21,130
2010	2,288,208.76	190,837	356,032-	3,101,883	37.22	83,339
2011	5,311,507.27	344,186	642,126-	7,015,935	37.84	185,411
2012	2,483,086.64	115,464	215,414-	3,195,118	38.45	83,098
2013	1,933,046.10	53,932	100,617-	2,420,272	39.07	61,947
2014	462,443.21	4,301	8,024-	562,956	39.69	14,184
9999	4,243,349.96-	277,502-	517,717	5,609,737-		148,619-
	10,190,322.35	666,416	1,243,290-	13,471,677		356,906
	COMPOSITE REMAINING	LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	37.7	3.50

ACCOUNT 334.11 METERS - BRONZE CASE

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2014

YEAR (1)		CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA 4 GALVAGE PERCENT:					
2006	37,862.01	5,918	7,574	37,860	34.79	1,088
2007	485,316.25	66,974	85,721	496,658	35.40	14,030
2008	1,482,113.08	177,854	227,636	1,550,900	36.00	43,081
2009	263,744.72	26,823	34,331	282,163	36.61	7,707
9999	667,073.07-	81,602-	104,443-	696,045-		19,376-
	1,601,962.99	195,967	250,819	1,671,536		46,530
	COMPOSITE REMAININ	G LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	35.9	2.90

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ACCOUNT 334.12 METERS - PLASTIC CASE

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2014

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA AGE PERCENT					
1976	303.88	201	119-	484	18.00	27
1977	296.96	192	113-	469	18,49	25
1979	106.98	66	39-	167	19.49	9
1981	465.52	272	160-	719	20.51	35
1983	108.98	60	35-	166	21.56	8
1984	38.00	20	12-	58	22.09	3
1985	3,175.62	1,656	977-	4,788	22.62	212
1986	1,053.79	532	314-	1,579	23.17	68
1987	937.01	458	270-	1,394	23.71	59
1988	1,711.33	808	477-	2,531	24.26	104
1989	3,157.67	1,438	848-	4,637	24.82	187
1990	195.67	86	51-	286	25.38	11
1992	1,940.06	785	463-	2,791	26.52	105
1993	8,037.18	3,113	1,836-	11,481	27.09	424
1994	45,303.92	16,758	9,883~	64,248	27.67	2,322
1995	11,934.36	4,207	2,481-	16,802	28.25	595
1997	9,263.92	2,940	1,734-	12,851	29.42	437
2001	282,382.96	69,551	41,015-	379,875	31.79	11,950
2007	5,884.53	812	479-	7,540	35.40	213
2013	5,815.36	162	96-	7,074	39.07	181
2014	16,242.44	151	89-	19,580	39.69	493
9999	117,112.57-	30,654-	18,078	158,613-		5,135-
	281,243.57	73,614	43,413-	380,905		12,333
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COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 30.9 4.39

ACCOUNT 334.13 METERS - OTHER

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA AGE PERCENT					
1934	221.37	259	11-	277	1.00	277
1935	77.55	91	4 -	97	1.00	97
1936	184.20	216	9-	230	1.00	230
1937	237.68	276	12-	297	1.23	241
1939	69.91	79	3 -	87	2.18	40
1940	50.72	57	2 -	63	2.64	24
1941	274.11	303	13-	342	3.10	110
1944	126.81	135	6-	158	4.42	36
1946	166.54	174	7-	207	5.26	39
1949	21.51	22	1-	27	6.47	4
1950 1951	63.27	63	3-	79	6.87	11
1951	616.69 56.86	606 55	26- 2-	766 70	7.27	105
1952	888.22	851	36-		7.67 8.06	9
1955	628.72	595	25-	1,102 779	8.46	137 92
1956	986.40	910	39-	1,223	9.25	132
1957	566.29	516	22-	702	9.65	73
1958	94.99	85	2 - 4 -	118	10.06	12
1959	828.81	734	31-	1,026	10.46	98
1960	1,132.35	990	42-	1,401	10.87	129
1961	782.01	674	29~	967	11.28	86
1962	333.51	283	12-	412	11.69	35
1963	1,615.14	1,351	57~	1,995	12.11	1.65
1964	554.45	457	19-	684	12.53	55
1965	2,628.95	2,133	91-	3,246	12.96	250
1966	3,086.88	2,464	105-	3,809	13.39	284
1967	3,381.70	2,655	113-	4,171	13.83	302
1971	1,120.46	819	35-	1,380	15.63	88
1974	429.43	296	13~	528	17.03	31
1977	594.85	384	16-	730	18.49	39
1978	1,487.77	938	40-	1,825	18.98	96
1980	1,729.52	1,038	44-	2,119	20.00	106
1981	560.70	328	14-	687	20.51	33
1983	376.27	208	9	461	21.56	21
1985	6,562.14	3,421	145-	8,020	22.62	355
1986	6,691.30	3,378	143-	8,173	23.17	353
1987	157.20	77	3-	192	23.71	8
1988	2,180.02	1,029	44-	2,660	24.26	110
1989	4,247.33	1,934	82-	5,179	24.82	209
1990 1992	2,580.38 9,519.28	1,132 3,850	48- 163-	3,144	25.38	124 437
1992	8,582.94			11,586	26.52	
1993	0,002,94	3,324	141-	10,441	27.09	385

ACCOUNT 334.13 METERS - OTHER

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2014

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	OR CURVE IOWA LVAGE PERCENT					
1994	10,008.78	3,702	157-	12,168	27.67	440
1995	9,026.06	3,182	135-	10,966	28.25	388
1996	91,710.15	30,732	1,305-	111,357	28.83	3,863
1997	126,486.24	40,147	1,705-	153,488	29,42	5,217
1998	172,258.15	51,626	2,192-	208,902	30.01	6,961
1999	102,800.26	28,990	1,231-	124,591	30.60	4,072
2000	298,668.92	78,938	3,352-	361,755	31.19	11,598
2001	857,934.50	211,309	8,973-	1,038,494	31.79	32,667
2002	832,583.35	190,079	8,072-	1,007,172	32.39	31,095
2003	1,015,497.69	213,559	9,069-	1,227,666	32.99	37,213
2004	1,180,860.80	227,080	9,643-	1,426,676	33.59	42,473
2005	451,622.80	78,718	3,343-	545,290	34.19	15,949
2006	1,336,848.87	208,949	8,872-	1,613,091	34.79	46,367
2007	62,174.79	8,580	364-	74,974	35.40	2,118
2008	25,585.96	3,070	130-	30,833	36.00	856
2009	147,426.61	14,993	638-	177,550	36.61	4,850
2011	17,183.36	1,113	47-	20,667	37.84	546
2012	30,826.98	1,433	61-	37,053	38.45	964
2013	688.47	19	1-	827	39.07	21
2014	3,555.04	33	1 -	4,267	39.69	108
9999	2,010,960.50-	422,005-	17,920	2,431,073-		74,448-
	4,829,282.51	1,013,437	43,035-	5,838,174		178,786
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COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 32.7 3.70

ACCOUNT 334.20 METER INSTALLATIONS

YEAR	ORIGINAL COST	CALCULATED ACCRUED	ALLOC. BOOK RESERVE	FUTURE BOOK ACCRUALS	REM. LIFE	ANNUAL ACCRUAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)
SURVIVOR	CURVE IOWA	40-R0.5				
NET SAL	AGE PERCENT	-20				
1934	27,150.30	31,766	32,580			
1935	2,467.85	2,887	2,961			
1936	369.80	433	444			
1938 1939	809.36	930	971			
1939 1940	1,959.54 825.42	2,223	2,351 991			
1940	3,204.62		3,846			
1941	1,000.38	3,548		10	э с е	7
1942	1,000.38 39.59	1,094 43	1,188 47	12	3.55	3
1945	280.47	43 296	321	16	3.99 4.84	3
1946	448.62	468	508	30	4.84 5.26	6
1940	6,623.74	6,822	7,409	539	5.67	95
1948	19,712.77	20,066	21,793	1,862	6.07	307
1949	20,132.24	20,000	21,994	2,165	6.47	335
1950	2,159.26	20,251 2,146	2,331	2,165	6.87	335
1951	8,985.34	8,823	2,331 9,582	1,200	7.27	165
1952	17,950.65	17,410	18,908	2,633	7.67	343
1953	19,638.24	18,817	20,437	3,129	8.06	388
1954	20,592.16	19,484	20,437 21,161	3,550		420
1954	20,392.10	22,718	21,181	4,500	8.46	420 508
1955	22,829.18	22,718 21,060	24,873	4,500	8.85 9.25	489
1957	33,189.72	30,219	32,873	7,008	9.25	726
1958	23,694.07	21,282	23,114	5,319	10.06	529
1959	16,235.19	14,388	15,626	3,856	10.08	369
1960	36,024.13	31,481	34,191	9,038	10.40	831
1961	33,938.17	29,241	31,758	8,968	11.28	795
1962	31,149.88	26,456	28,733	8,647	11.69	740
1963	51,370.76	42,982	46,681	14,964	12.11	1,236
1964	58,659.21	48,341	52,502	17,889	12.53	1,428
1965	73,709.31	59,793	64,939	23,512	12.96	1,814
1966	71,241.50	56,872	61,767	23,723	13.39	1,772
1967	65,483.40	51,411	55,836	22,744	13.83	1,645
1968	57,662.65	44,510	48,341	20,854	14.27	1,461
1969	45,769.46	34,712	37,700	17,223	14.72	1,170
1970	49,970.02	37,223	40,427	19,537	15,17	1,288
1971	56,379.19	41,219	44,767	22,888	15.63	1,464
1972	94,556.12	67,825	73,663	39,804	16.09	2,474
1973	70,105.49	49,298	53,541	30,586	16.56	1,847
1974	149,361.38	102,925	111,784	67,450	17.03	3,961
1975	88,307.84	59,581	64,709	41,260	17.51	2,356
1976	102,881.88	67,902	73,746	49,712	18.00	2,762
1977	151,100.37	97,505	105,897	75,423	18.49	4,079
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ACCOUNT 334.20 METER INSTALLATIONS

YEAF (l)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	IVOR CURVE IOWA SALVAGE PERCENT					
1978	201,142.65	126,841	137,758	103,613	18.98	5,459
1979		128,449	139,505	111,006	19.49	5,696
1980		127,273	138,227	116,318	20.00	5,816
1981		99,398	107,953	96,045	20.51	4,683
1982		114,194	124,023	116,765	21.03	5,552
1983	183,597.83	101,566	110,308	110,009	21.56	5,102
1984	272,822.77	146,588	159,205	168,182	22.09	7,613
1985		200,443	217,695	243,623	22.62	10,770
1986	366,628.21	185,111	201,044	238,910	23.17	10,311
1987	452,906.59	221,335	240,385	303,103	23.71	12,784
1988	386,524.89	182,517	198,226	265,604	24.26	10,948
1989	512,183.54	233,248	253,324	361,296	24.82	14,557
1990	353,665.90	155,118	168,469	255,930	25.38	10,084
1991	408,485.45	172,177	186,996	303,187	25.95	11,684
1992	519,005.06	209,886	227,951	394,855	26.52	14,889
1993	490,162.24	189,840	206,180	382,015	27.09	14,102
1994	429,065.08	158,711	172,371	342,507	27.67	12,378
1995	347,971.51	122,660	133,217	284,349	28.25	10,065
1996	490,664.56	164,422	178,574	410,223	28.83	14,229
1997	697,615.57	221,423	240,481	596,658	29.42	20,281
1998	519,293.39	155,632	169,027	454,125	30.01	15,132
1999	756,093.39	213,218	231,570	675,742	30.60	22,083
2000	541,983.78	143,246	155,575	494,806	31.19	15,864
2001	243,153.56	59,889	65,044	226,740	31.79	7,132
2002	541,068.58	123,526	134,158	515,124	32.39	15,904
2003	781,916.62	164,437	178,590	759,710	32.99	23,028
2004	691,031.06	132,885	144,323	684,914	33.59	20,390
2005	818,293.89	142,629	154,905	827,048	34.19	24,190
2006	1,228,221.19	191,971	208,495	1,265,370	34.79	36,372
2007	164,054.71	22,640	24,589	172,277	35.40	4,867
2008	129,715.27	15,566	16,906	138,752	36.00	3,854
2009	1,163,569.27	118,335	128,520	1,267,763	36.61	34,629
2010	883,141.36	73,654	79,993	979,777	37.22	26,324
2011	•	30,410	33,028	530,122	37.84	14,010
2012		30,550	33,179	755,210	38.45	19,641
2013		92,292	100,236	3,869,310	39.07	99,035
2014		10,314	11,202	1,319,686	39.69	33,250
9999	6,719,290.63-	1,822,668-	1,978,886-	6,084,262-		194,196-
	16,136,245.69	4,377,102	4,752,257	14,611,238		466,359
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	r 31.3	2.89

ACCOUNT 334.30 METER VAULTS

YEAR (1)		ALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA 40 ALVAGE PERCENT2					
2008	39,000.11	4,680	5,365-	52,165	36.00	1,449
2009	64,535.39	6,563	7,524-	84,966	36.61	2,321
2010	6,433.62	537	616-	8,336	37.22	224
2011	236,167.17	15,304	17,544-	300,945	37.84	7,953
2012	205,872.72	9,573	10,974-	258,021	38.45	6,711
2013	123,440.77	3,444	3;948-	152,077	39.07	3,892
2014	76,029.81	707	811-	92,047	39.69	2,319
	751,479.59	40,808	46,782-	948,557		24,869
	COMPOSITE REMAINING	LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	T 38.1	3.31

ACCOUNT 335.00 FIRE HYDRANTS

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR	CURVE. IOWA	70-R4				
	AGE PERCENT					
1934	513.25	653	510	209	6.37	33
1937	15.89	20	16	6	7.31	1
1938	30,93	39	30	13	7.65	2
1939	85.34	106	83	36	8.00	4
1940	31.32	39	30	14	8.36	2
1941	88.25	108	84	40	8.75	5
1942	11.99	15	12	5	9.15	1
1946	37.36	44	34	18	10.97	2
1947	34.35	40	31	17	11.48	l
1948	315.37	366	286	156	12.01	13
1949	548.60	630	492	276	12.57	22
1950	236.61	269	210	121	13.15	9
1951	645.80	726	567	337	13.76	24
1952	3,419.06	3,803	2,973	1,814	14.38	126
1953	7,288.81	8,015	6,265	3,939	15.02	262
1954	3,617.08	3,930	3,072	1,992	15.67	127
1955	17,235.66	18,501	14,461	9,669	16.33	592
1956	15,756.16	16,698	13,052	9,007	17.01	530
1957	19,316.05	20,205	15,793	11,249		636
1958	14,733.45	15,208	11,887	8,740	18.39	475
1959	37,425.48	38,099	29,779	22,617	19.10	1,184
1960	23,616.85	23,707	18,530	14,534	19.81	734
1961	28,414.04	28,107	21,969	17,811	20.54	867
1962	44,317.03	43,183	33,753	28,291	21.28	1,329
1963	27,627.54	26,506	20,718	17,961	22.03	815
1964	43,126.21	40,728	31,834	28,543	22.78	1,253
1965	57,106.20	53,052	41,467	38,482	23.55	1,634
1966	106,204.59	97,007	75,823	72,863	24.33	2,995
1967	61,960.91	55,616	43,471	43,274	25.12	1,723
1968	66,002.96	58,175	45,471	46,933	25.93	1,810
1969	57,006.09	49,322	38,551	41,258	26.74	1,543
1970	67,094.06	56,950	44,514	49,418	27.56	1,793
1971	56,253.73	46,814	36,591	42,164	28.39	1,485
1972	76,621.82	62,478	48,835	58,436	29.23	1,999
1973	135,559.50	108,203	84,575	105,208	30.09	3,496
1974	363,848.55	284,167	222,113	287,275	30.95	9,282
1975	100,785.47	76,960	60,154	80,946	31.82	2,544
1976	71,870.25	53,615	41,907	58,711	32.70	1,795
1977	124,269.05	90,492	70,731	103,246	33.59	3,074
1978	138,945.41	98,707	77,152	117,372	34.48	3,404
1979	149,596.66	103,551	80,938	128,497	35.39	3,631
1980	128,549.58	86,643	67,723	112,246	36.30	3,092

ACCOUNT 335.00 FIRE HYDRANTS

YEAF (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE	FUTURE BOOK ACCRUALS	REM. LIFE	ANNUAL ACCRUAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	IVOR CURVE IOWA					
NET	SALVAGE PERCENT	-40				
1001		40.300	20 447	CC 501	38.00	1
1981 1982		49,188	38,447	66,591	37.22	1,789
1983		49,405	38,616	69,932	38.14	1,834
1984	•	37,270 96,220	29,131 75,208	55,217	39.07	1,413
1985	•	95,049	74,293	149,379 154,741	40.01 40.95	3,734
1986	•	62,550	48,891	106,926	40.95	3,779 2,552
1987	•	120,162	93,922	216,004	42.86	5,040
1988	· · · • • • • • • • •	120,872	94,477	228,590	43.81	5,218
1989	•	112,302	87,778	223,921	44.78	5,000
1990		165,523	129,377	348,226	45.74	7,613
1991	•	94,053	73,515	209,171	46.71	4,478
1992	•	147,749	115,485	347,882	47.68	7,296
1993	,	96,995	75,814	242,349	48.66	4,980
1994	-	112,315	87,789	298,360	49.64	6,010
1995	•	83,736	65,450	237,000	50.62	4,682
1996	·	117,433	91,789	354,961	51.60	6,879
1997	-	91,703	71,678	297,037	52.59	5,648
1998		88,980	69,549	309,556	53.57	5,779
1999	366,272.06	113,104	88,405	424,376	54.56	7,778
2000	255,768.76	73,918	57,776	300,300	55.55	5,406
2001	392,469.84	105,655	82,583	466,875	56.54	8,257
2002	474,071.87	118,139	92,341	571,360	57.54	9,930
2003	558,845.23	128,201	100,206	682,177	58.53	11,655
2004	555,936.45	116,521	91,076	687,235	59.52	11,546
2005	751,818.46	142,546	111,418	941,128	60.52	15,551
2006	990,260.69	167,944	131,270	1,255,095	61.52	20,401
2007	689,102.62	103,228	80,686	884,058	62.51	14,143
2008	507,685.18	65,894	51,504	659,255	63,51	10,380
2009	528,706.82	58,053	45,376	694,814	64.51	10,771
2010	724,166.50	65,027	50,827	963,006	65.51	14,700
2011	490,724.04	34,351	26,850	660,164	66.50	9,927
2012	•	31,918	24,948	868,867	67.50	12,872
2013		35,000	27,357	1,605,889	68.50	23,444
2014	2,374,812.59	23,739	18,555	3,306,183	69.50	47,571
9999	2,442,807.20-	677,823-	529,806-	2,890,125-		52,630-
	14,842,364.09	4,118,417	3,219,068	17,560,241		319,775
	COMPOSITE REMAINI	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	C 54.9	2.15

ACCOUTN 339.60 OTHER P/E COMPANY PLANNING STUDY

YEAR (1)	ORIGINAL (COST (2)	ALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE 10-SQU ALVAGE PERCENT 0	ARE				
2007	63,554.70	47,666	47,666	15,889	2.50	6,356
2008	31,736.46	20,629	20,629	11,107	3.50	3,173
2009	144,403.79	79,422	79,422	64,982	4.50	14,440
2012	78,472.72	19,618	19,618	58,855	7.50	7,847
2013	297,442.08	44,616	44,616	252,826	8.50	29,744
	615,609.75	211,951	211,951	403,659		61,560
	COMPOSITE REMAININ	G LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	6.6	10.00

ACCOUNT 340.10 OFFICE FURNITURE AND EQUIPMENT - FURNITURE

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2014

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE 20-S AGE PERCENT					
1995	19,715.35	18,730	18,730	985	1.00	985
1996	16,689.34	15,438	15,438	1,251	1.50	834
1997	3,242.18	2,837	2,837	405	2.50	162
1998	188,662.31	155,646	155,646	33,016	3.50	9,433
1999	22,561.83	17,485	17,485	5,077	4.50	1,128
2001	7,882.90	5,321	5,321	2,562	6.50	394
2004	4,361.47	2,290	2,290	2,071	9.50	218
2005	14,130.29	6,712	6,712	7,418	10.50	706
2006	20,545.69	8,732	8,732	11,814	11.50	1,027
2007	57,968.53	21,738	21,738	36,231	12.50	2,898
2008	16,838.09	5,472	5,472	11,366	13.50	842
2010	79,677.74	17,927	17,927	61,751	15.50	3,984
2011	14,392.26	2,519	2,519	11,873	16.50	720
2012	160,805.49	20,101	20,101	140,704	17.50	8,040
	627,473.47	300,948	300,948	326,525		31,371

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 10.4 5.00

ACCOUNT 340.15 OFFICE FURNITURE AND EQUIPMENT - COMPUTER SOFTWARE SPECIAL RATE

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE 10-S ALVAGE PERCENT	•				
2010	238,251.50	107,213	107,213	131,038	5.50	23,825
2012	5,028,519.11	1,257,130	1,257,130	3,771,389	7.50	502,852
2013	6,596,154.86	989,423	989,423	5,606,732	8.50	659,616
2014	81,058.45	4,053	4,053	77,005	9.50	8,106
	11,943,983.92	2,357,819	2,357,819	9,586,165		1,194,399
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	8.0	10.00

ACCOUNT 340.21 OFFICE FURNITURE AND EQUIPMENT - MAINFRAME

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2014

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	R CURVE 5-SQ VAGE PERCENT					
2010	38,363.10	30,690	30,690	7,673	1.00	7,673
2011	173.94	122	122	52	1.50	35
2014	28,694.20	2,869	2,869	25,825	4.50	5,739
	67,231.24	33,681	33,681	33,550		13,447

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 2.5 20.00

ACCOUNT 340.22 OFFICE FURNITURE AND EQUIPMENT - PERSONAL

YEAR (1)		CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE 5-SQUA BALVAGE PERCENT 0			ζ = .	(
2010	100,797.76	80,638	80,638	20,160	1.00	20,160
2011	191,210.41	133,847	133,847	57,363	1.50	38,242
2012	170,098.86	85,049	85,049	85,050	2.50	34,020
2013	7,204.52	2,161	2,161	5,044	3.50	1,441
2014	25,411.32	2,541	2,541	22,870	4.50	5,082
	494,722.87	304,236	304,236	190,487		98,945
	COMPOSITE REMAININ	G LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	· 1.9	20.00

ACCOUNT 340.23 OFFICE FURNITURE AND EQUIPMENT - PERIPHERAL OTHER

YEAR (1)	ORIGINAL (COST (2)	ALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE 5-SQUA ALVAGE PERCENT 0	RE				
2010	61,338.82	49,071	49,071	12,268	1.00	12,268
2011	14,538.42	10,177	10,177	4,361	1.50	2,907
2012	406,818.52	203,409	203,409	203,410	2.50	81,364
2013	294,713.22	88,414	88,414	206,299	3.50	58,943
2014	532,143.80	53,214	53,214	478,930	4.50	106,429
	1,309,552.78	404,285	404,285	905,268		261,911
	COMPOSITE REMAININ	G LIFE AND	ANNUAL ACCRUAL	RATE, PERCENI	3.5	20.00

ACCOUNT 340.30 OFFICE FURNITURE AND EQUIPMENT - COMPUTER SOFTWARE

YEAR (1)		ALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE 5-SQUAR ALVAGE PERCENT 0	E				
2010 2012	43,651.13 291,889.15	34,921 145,945	34,921 145,945	8,730 145,944	1.00	8,730 58,378
2013 2014	23,586.10 672,904.99	7,076 67,290	7,076 67,290	16,510 605,615	3.50 4.50	4,717 134,581
	1,032,031.37 COMPOSITE REMAINING	255,232 LIFE AND	255,232 ANNUAL ACCRUAL	776,799 RATE, PERCENT	3.8	206,406 20.00

ACCOUNT 340.32 OFFICE FURNITURE AND EQUIPMENT - COMPUTER SOFTWARE PERSONAL

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE 5-SQU ALVAGE PERCENT					
2010	3,388.42	2,711	2,711	677	1.00	677
2014	294,449.84	29,445	29,445	265,005	4.50	58,890
	297,838.26	32,156	32,156	265,682		59,567
	COMPOSITE REMAINI	NG LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	4.5	20.00

ACCOUNT 340.50 OFFICE FURNITURE AND EQUIPMENT - OTHER

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2014

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE 15-SO AGE PERCENT					
2000	1,008.57	941	941	68	1.00	68
2001	5,166.10	4,649	4,649	517	1.50	345
2005	3,965.82	2,512	2,512	1,454	5.50	264
2006	6,544.92	3,709	3,709	2,836	6.50	436
	16,685.41	11,811	11,811	4,874		1,113

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 4.4 6.67
ACCOUNT 341.10 TRANSPORTATION EQUIPMENT - LIGHT DUTY TRUCKS

YEAR (l)		CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVI	VOR CURVE., IOWA 1	0-L2.5				
NET S	ALVAGE PERCENT +	15				
2001	1,752.14	1,087	1,028	461	2.70	171
2007	•	36,964	34,960	27,480	4.08	6,735
2008	50,892.87	23,663	22,380	20,879	4.53	4,609
2009	139,960.44	58,056	54,909	64,057	5.12	12,511
2010	734,111.37	258,958	244,923	379,072	5,85	64,799
2011	120,499.89	34,107	32,258	70,167	6.67	10,520
2012	558,164.86	115,289	109,041	365,399	7.57	48,269
2014	223,355.41	9,493	8,978	180,874	9.50	19,039
	1,902,195.84	537,617	508,477	1,108,389		166,653
	COMPOSITE REMAININ	G LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	6.7	8.76

ACCOUNT 341.20 TRANSPORTATION EQUIPMENT - HEAVY DUTY TRUCKS

YEAR (l)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVI	VOR CURVE IOWA	11-L2				
NET S	ALVAGE PERCENT	+15				
1979	12,423.75	9,600	8,410	2,150	1.00	2,150
2007	67,512.47	29,841	26,141	31,245	5.28	5,918
2008	198,420.14	81,109	71,051	97,606	5.71	17,094
2010	303,280.50	94,913	83,143	174,645	6.95	25,129
2011	213,147.21	53,693	47,035	134,140	7.74	17,331
2012	377,120.66	69,938	61,265	259,288	8.60	30,150
2013	455,959.49	51,794	45,371	342,195	9.53	35,907
2014	421,996.73	16,303	14,281	344,416	10.50	32,802
	2,049,860.95	407,191	356,697	1,385,685		166,481
	COMPOSITE REMAINI	NG LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	т 8.3	8.12

ACCOUNT 341.30 TRANSPORTATION EQUIPMENT - AUTOS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2014

YEAR (1)	ORIGINAL (COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVI	VOR CURVE IOWA 1	0-S2.5				
NET S	ALVAGE PERCENT "+	20				
1981	2,269.65	1,634	1,322	494	1.00	494
2007	16,571.50	8,683	7,025	6,232	3.45	1,806
2008	13,152.34	6,229	5,039	5,483	4.08	1,344
2011	31,569.25	8,713	7,049	18,206	6.55	2,780
	63,562.74	25,259	20,435	30,415		6,424
	COMPOSITE REMAININ	G LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	4.7	10.11

🖄 Gannett Fleming

ACCOUNT 341.40 TRANSPORTATION EQUIPMENT - OTHER

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA 9 ALVAGE PERCENT +					
2001	1,836.18	1,125	896	573	2.11	272
2007	92,750.78	45,922	36,560	37,641	3.43	10,974
2008	97,618.80	45,382	36,130	41,965	3.77	11,131
2009	14,207.52	5,974	4,756	6,610	4.27	1,548
2010	111,246.36	40,345	32,120	56,877	4.92	11,560
2011	38,104.29	11,144	8,872	21,611	5.71	3,785
2012	287,567.62	61,859	49,248	180,806	6.58	27,478
2013	152,233.28	20,027	15,944	105,843	7.52	14,075
2014	72,826.69	3,237	2,577	55,685	8.50	6,551
	868,391.52	235,015	187,103	507,611		87,374
	COMPOSITE REMAININ	IG LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	5.8	10.06

ACCOUNT 342 STORES EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2014

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	R CURVE 25-S VAGE PERCENT	-				
1997	2,570.59	1,799	1,799	772	7.50	103
2010	23,374.96	4,207	4,207	19,168	20.50	935
2012	4,296.10	430	430	3,866	22.50	172
	30,241.65	6,436	6,436	23,806		1,210

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 19.7 4.00

ACCOUNT 343 TOOLS, SHOP AND GARAGE EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2014

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	R CURVE 20-S VAGE PERCENT					
1995	55,829.32	53,038	53,038	2,791	1.00	2,791
1996	35,091.84	32,460	32,460	2,632	1.50	1,755
1997	79,116.83	69,227	69,227	9,890	2.50	3,956
1998	28,123.68	23,202	23,202	4,922	3.50	1,406
1999	79,394.16	61,530	61,530	17,864	4.50	3,970
2000	87,133.88	63,172	63,172	23,962	5.50	4,357
2001	32,137.66	21,693	21,693	10,445	6.50	1,607
2002	4,442.66	2,777	2,777	1,666	7.50	222
2004	3,052.00	l,602	1,602	1,450	9.50	153
2005	125,610.02	59,665	59,665	65,945	10.50	6,280
2006	585,639.50	248,897	248,897	336,742	11.50	29,282
2007	238,682.81	89,506	89,506	149,177	12.50	11,934
2008	115,398.90	37,505	37,505	77,894	13.50	5,770
2009	36,220.47	9,961	9,961	26,259	14.50	1,811
2010	133,295.37	29,991	29,991	103,304	15.50	6,665
2011	93,034.37	16,281	16,281	76,753	16.50	4,652
2012	193,346.90	24,168	24,168	169,179	17.50	9,667
2013	221,459.18	16,609	16,609	204,850	18.50	11,073
2014	63,002.85	1,575	1,575	61,428	19.50	3,150
	2,210,012.40	862,859	862,859	1,347,153		110,501

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 12.2 5.00

ACCOUNT 344 LABORATORY EQUIPMENT

YEAR (1)		ALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE 15-SQUA ALVAGE PERCENT 0	RE				
2003	2,000.00	1,533	1,533	467	3.50	133
2005	5,800.00	3,673	3,673	2,127	5.50	387
2007	20,166.18	10,083	10,083	10,083	7.50	1,344
2008	15,465.63	6,702	6,702	8,764	8,50	1,031
2009	6,594.63	2,418	2,418	4,177	9.50	440
2010	672,507.35	201,752	201,752	470,755	10.50	44,834
2011	508,655.91	118,685	118,685	389,971	11.50	33,911
2012	9,309.72	1,552	1,552	7,758	12.50	621
2013	15,686.06	1,569	1,569	14,117	13.50	1,046
2014	17,910.62	597	597	17,314	14.50	1,194
	1,274,096.10	348,564	348,564	925,532		84,941
	COMPOSITE REMAINING	LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	r 10.9	6.67

ACCOUNT 345 POWER OPERATED EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2014

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA					
NET SALV	AGE PERCENT	+10				
1988	55,852.00	38,640	50,267			
1989	2,648.67	1,796	2,384			
1990	41,376.70	27,476	37,127	112	6.03	19
1991	1,470.02	954	1,289	34	6.41	5
1992	4,439.80	2,813	3,801	195	6.81	29
1995	53,978.20	31,430	42,470	6,110	8.12	752
1997	66,151.11	35,929	48,549	10,987	9.12	1,205
1999	28,034.41	14,020	18,945	6,286	10.22	615
2001	3,403.44	1,538	2,078	985	11.45	86
2003	14,878.92	5,939	8,025	5,366	12.80	419
2005	992,362.64	337,834	456,500	436,626	14.30	30,533
2008	31,893.02	7,750	10,472	18,232	16.79	1,086
2011	15,441.00	2,079	2,809	11,088	19.56	567
2012	8,380.95	813	1,099	б,444	20.52	314
2014	39,460.19	772	1,043	34,471	22.50	1,532
	1,359,771.07	509,783	686,858	536,936		37,162

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 14.4 2.73

ACCOUNT 346.10 COMMUNICATION EQUIPMENT - NON-TELEPHONE

YEAR (1)	ORIGINAL C COST (2)	ALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE 15-SQUA ALVAGE PERCENT 0	ARE				
2002	9,939.54	8,283	8,283	1,657	2.50	663
2003	45,153.44	34,618	34,618	10,535	3.50	3,010
2005	1,062.69	673	673	390	5.50	71
2008	599.38	260	260	339	8.50	40
2009	16,934.02	6,209	6,209	10,725	9.50	1,129
2010	6,865.25	2,060	2,060	4,805	10,50	458
2012	125,355.92	20,893	20,893	104,463	12.50	8,357
2013	100,676.34	10,068	10,068	90,608	13.50	6,712
2014	3,933.85	131	131	3,803	14.50	262
	310,520.43	83,195	83,195	227,325		20,702
	COMPOSITE REMAINING	G LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	T ., 11.0	6.67

ACCOUNT 346.19 REMOTE CONTROL AND INSTRUMENTATION

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE 15-SQ ALVAGE PERCENT					
2008	22,310.63	9,668	9,668	12,643	8.50	1,487
2010	824,655.96	247,397	247,397	577,259	10.50	54,977
2011	1,026,839.21	239,592	239,592	787,247	11.50	68,456
2012	1,012,043.36	168,677	168,677	843,366	12.50	67,469
2013	2.09			2	13.50	
	2,885,851.25	665,334	665,334	2,220,517		192,389
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	T 11.5	6.67

ACCOUNT 346.20 COMMUNICATION EQUIPMENT - TELEPHONE

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2014

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE 15-S AGE PERCENT	-				
2008	20,843.96	9,032	9,032	11,812	8.50	1,390
2010	27,048.52	8,115	8,115	18,934	10.50	1,803
2012	44,802.17	7,467	7,467	37,335	12.50	2,987
	92,694.65	24,614	24,614	68,081		6,180

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 11.0 6.67

ACCOUNT 347.00 MISCELLANEOUS EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2014

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIV	OR CURVE 20-S	QUARE				
NET SA	LVAGE PERCENT	0				
1995	4,370.33	4,152	4,152	218	1.00	218
1996	6,137.24	5,677	5,677	460	1.50	307
1997	16,853.26	14,747	14,747	2,106	2.50	842
1998	42,103.37	34,735	34,735	7,368	3.50	2,105
1999	71,190.82	55,173	55,173	16,018	4.50	3,560
2001	21,004.47	14,178	14,178	6,826	6.50	1,050
2002	55,127.04	34,454	34,454	20,673	7.50	2,756
2003	65,342.21	37,572	37,572	27,770	8.50	3,267
2004	9,148.98	4,803	4,803	4,346	9.50	457
2005	624,412.10	296,596	296,596	327,816	10.50	31,221
2006	5,015.01	2,131	2,131	2,884	11.50	251
2007	12,596.30	4,724	4,724	7,872	12.50	630
2008	3,044.87	990	990	2,055	13.50	152
2009	7,783.88	2,141	2,141	5,643	14.50	389
2010	173,491.53	39,036	39,036	134,456	15.50	8,675
2011	7,240.21	1,267	1,267	5,973	16.50	362
2012	49,094.10	6,137	6,137	42,957	17.50	2,455
2013	506,012.36	37,951	37,951	468,061	18.50	25,301
2014	7,616.62	190	190	7,427	19.50	381
	1,687,584.70	596,654	596,654	1,090,931		84,379

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 12.9 5.00

ACCOUNT 348.00 OTHER TANGIBLE PROPERTY

YEAR (1)		ALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE 20-SQUA CALVAGE PERCENT 0	RE				
1998	107,321.46	88,540	88,540	18,781	3.50	5,366
2003	5,603.90	3,222	3,222	2,382	8.50	280
2005	4,702.50	2,234	2,234	2,468	10.50	235
	117,627.86	93,996	93,996	23,632		5,881
	COMPOSITE REMAINING	LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	r4.0	5.00

Test Project

Account 334100 -

Actual and Smooth Survivor Curves

Placement Band - 1933 - 2014 Experience Band - 2005 - 2014

Actual - Iowa 18-R2 lowa 60-R0.5 Iowa 40-R0.5 100 80 Percent Surviving 60 40 20 0 -20 40 60 0 80 100 120 Age (Years)

KAW_R_AGDR2_NUM010_031423_Attachment 2 Page 1 of 1

Witness: Andy Lewis

11. Reference the response to AG-DR-1-7 (c). Explain whether the depreciable life of the MIU is separate from the MIU battery's depreciable life. If so, provide the MIU depreciable life.

Response:

No, the depreciable life of the MIU is not separate from the MIU battery's depreciable life.

Witness: Roderick Sherman, Melissa Schwarzell, Andy Lewis, and Kathryn Nash

12. Reference the response to PSC-DR-2-12, and Attachment 1 thereto. Confirm the following figures regarding the total number of expired work orders (pertaining to repairing or installing reading devices, stop consecutive estimate outside, and stop consecutive estimate inside) associated with consecutive estimates vs. the total number of completed work orders associated with consecutive estimates, by year:

2018	23,553 expired / 8,683 completed		
2019	15,630 expired / 5,005 completed		
2020	1,269 expired / 6,235 completed		
2021	9,631 expired / 2,664 completed		
2022	11,035 expired / 4,047 completed		
TOTALS	61,118 expired / 26,634 completed		

- a. Explain whether any expired work orders were re-created and re-worked, and if so, whether any re-expired.
- b. Provide the reason(s) for the increase in expired work orders in 2021-2022.
 - (i) Explain what measures the Company is taking to reduce the number of expired work orders.

Response:

The figures above reflect the total expired orders shown on PSC 2-12 and the total "Worked and Completed" orders on PSC 2-12. They do not show the "Worked but Incompleted" orders specifically, but those are included in the total expired numbers. The Company also notes that the total of expired work orders reflected in PSC 2-13 is now 11,039 for 2022.

a. Expired work orders are not regenerated or reworked. If the problem persists, a new work order would be generated.

b. In 2020 there was a period when KAW suspended non-pay work orders and was no longer working non-pay disconnect orders. This significantly reduced the overall volume of service orders and allowed Field Service Representatives ("FSRs") to complete other order types, including those referenced in this question, at a higher rate. Once non-pay disconnects resumed, the overall workload increased and expirations began to increase as well. There were additional complicating factors, including: the retirement of 5 FSRs between July 2020 and February 2021, resulting in the loss of 125 years of collective experience; supply chain constraints which likely limited the availability of meter

replacement stock; and an uptick in consecutive estimated related service orders in the latter months of 2021. Consecutive estimate order service types also had a lower computer system priority and were not "scheduled" work, and consequently had a much higher expiration rate than other work order types.

(i) To help reduce the number of expired work orders, we are prioritizing Read Consecutive Estimates (REO), Repair/Install Reading Device (RID), Meter for Billing (RBL) and Meter Change Orders (CRM). KAW is utilizing the Field Resource Coordination Center (FRCC) coordinator to schedule and prioritize the orders based on expiration date and necessity. The coordinator manually places these orders in between scheduled customer orders prioritized by order type and expiry date.

KAW is also in the process of replacing meters which have records of multi-month estimates and meters which are requiring manual reads. Through these efforts, KAW aims to drive down the number of service orders generated and increase the completion rate of remaining orders.

Witness: Andy Lewis

13. Discuss how cold weather affects the Company's ability to read meters. Include in your discussion, at a minimum: (i) issues inherent with meter readers obtaining access to roads; and (ii) how cold air affects meters, MIUs, and radio read devices.

Response:

Cold air can affect the meter displays (LCD) and make them sluggish to show a reading when obtaining a manual read. Condensation in the meter display can also become an issue at times in wet and/or cold environments. KAW has not seen an issue with MIUs and radio read devices functioning properly in cold weather.

Weather affects meter reading in different ways. Weather can prevent or hinder access to facilities. Snow, ice, and flooding can prevent or hinder meter readers from being able to access meters at times for both truck or manual reads. Absent an emergency situation, KAW does not open meter boxes during freezing temperatures to avoid the risk of a potential freezing of the customer's service.

Witness: David Hill

- 14. Reference the response to AG-DR-1-20, the confidential attachment entitled KAW_R_AGDR1_NUM020_021023_CONFIDENTIAL
 - a. <u>At pp. 1-2, explain the meaning of the following:</u>
 - b. Explain whether the Company has concluded that

and how they led to consecutive estimates.

- c. Provide a discussion regarding the Company has taken to date, and
- d. Identify the manufacturer of the 2,000 meters discussed in the Company's response to AG-DR-1-13.
- **Response:** Certain information provided below is subject to KAW's February 10, 2023 Petition for Confidential Treatment.
 - a. Explanation
 - i. MIU where it is installed and triggering the data log through software. Typically, meter reads are captured once a month, but data logging can retrieve about 90 days of 15-minute readings. Meter reading data is transmitted through radio frequency (RF) to the meter reading collection unit.
 - are automated and semi-automated validation checks our systems performs on various forms of data. Meter Reading has numerous meter reading validations and resulting if any data is not in line with expectations.

iii.



- c. Please refer to KAW responses to PSC 1-6 and AG 2-9(c).
- d. The manufacturer of the 2,000 meters noted in AG 1-13 is

Witness: David Hill

- 15. Reference the response to AG-DR-1-20, the confidential attachment entitled " , in the following confidential attachment: KAW_R_AGDR1_NUM020_021023_ATTACHMENT_1_CONFIDENTIAL a. Discuss the issues, factors and reasons that led the Company to At p. 2, confirm the following statement: b. If the statement in subpart a., above is confirmed, provide a detailed narrative c. ," and " ,, d. Identify the meaning of the acronyms State whether KAW's e. f. At p. 4, under the heading ", confirm the following statement: f this statement is confirmed At p. 5, in the right column, explain whether the " " will alleviate the g. issue of consecutive meter estimates and any related issues, and if so, how. At p. 9, in the right column, confirm that in were found h. "." Explain what this quoted phrase means, and how it can affect the Company's Explain why the " " for KAW exceed those for (i) both the companies. Confirm that the figure of (ii) Explain whether the increase in expired work orders from 2021-2022 is affecting i. the Company's , and if so, how. Discuss also what actions the Company is taking to address this issue. Explain whether the Company has concluded that based on the j. the
 - k. In the event that the meter issues

performance of the Company's meters

Response:

a. The Company's customer metering process is a core function of the business. Multiple departments within the company contribute to the purchasing, installing, reading, and servicing of customer meters. The Internal Audit department will often include different aspects of the metering process in the yearly plan for internal audits. The purpose of this internal audit was to evaluate the effectiveness of certain controls for American Water's customer meters.

b. Confirmed.

c. KAW assumes this question meant to seek confirmation of the statement in subpart b above, not subpart a. The following is summary of the actions the Company is taking to implement these corrective measures.

Meter Setup Process

The Company uses SAP, an enterprise application software, to support many aspects of its business and operations. For example, we manage information in SAP about our metering assets, our inventory process, our meter reading process, and our billing process. The Meter Set Up process can be described as defining a particular meter with a particular serial number to the correct set of attributes within our SAP system that matches the physical meter. For example, a physical meter may be a 5/8" meter that measures the flow of water in gallons and has a resolution of 100 Gallons represented by the 5th dial. We map the meter serial number and the correct set of attributes through the file upload process into the Company's SAP enterprise software. We accomplish this by uploading the flat file spreadsheets received for every meter shipment from the meter vendors as part of the Goods Receipt Process into our software application. On rare occasions, attributes associated to the meter are inconsistently represented in SAP, and need to be corrected. The Internal Audit Team audited the effectiveness of the controls for this process and found no material deficiencies, but did find areas for improvements. The recommended improvements included: automating the flat file upload and automatically checking submitted data against known values to see if any submitted data is inconsistent with what is expected. Another recommended improvement was to conduct a national review against key data elements within the data set up list establishing a data quality dashboard to prioritize and correct any anomalies.

Monitoring of Key Meter Processes

Meter Reading exception management is a critical process for the Company as well as a "SOX control." SOX controls are generally narrow in scope, targeting financial reporting specifically. Non-SOX controls are generally more comprehensive, covering a variety of areas such as financial and operations security, data integrity, and compliance. Further, SOX controls are mandated by law, while non-SOX controls are not. The Internal Audit team again, *did not find material deficiencies within this process*, but again did find areas

of improvements. The recommended improvements included building an automated dashboard to make visible to key stakeholders and operational leaders when and how many important exceptions are generated within SAP. These exceptions included: (1) Unexpected Zero Consumption – this exception could indicate that a meter is stuck and is not registering water consumption although water consumption could be actually happening; (2) Consecutive Estimates – this exception is triggered when the meter reading could not be obtained during the time of periodic billing; and (3) Inactive with Consumption – this exception is triggered when the meter registers consumption, but the premise or location does not have a customer associated to that location.

Guidance to Testing and Replacement of Large Meters

During the Internal Audit it was observed that American Water affiliates were using slightly different processes to update system information as it pertains to replacing Unitized Measurement Elements (UMEs) for large meters in the field. Unitized Measuring Elements are the parts of the meter that can be independently tested, replaced, and certified to be accurate and when the UME is replaced it can re-certify the meter more efficiently without disconnecting the entire meter body and connecting flanges. This approach allows the unit to be certified accurate in much less time, which means little or no downtime for customers as the Company meets its regulatory testing requirements for large meters. The area identified for improvement was to document a standard process and then map that process to the Work Management System that the Company uses for meter work.

d. Definitions of SAP & SOX:

<u>SAP</u> is an enterprise application software.

SOX is an acronym for Sarbanes Oxley Act, a complex law with 11 sections, each delineating mandates including oversight, auditor independence, and corporate responsibility.

e. The Internal Audit observations and recommendations were applicable to all 3 States sampled by the Internal Audit team.

f. The statement is confirmed. See the response to subpart c above for a summary of the Company's corrective measures.

g. Meter1View is an interactive web-based tool being developed to help Field Operations identify, prioritize and initiate action on meter related issues. At the time of the Audit, Meter1View was identified as the tool to best help operations reduce estimates and get better visibility across the enterprise. Since the conclusion of the Audit, Meter1View has been released to help the business study "inactive with consumption" codes and the Company will evaluate future use cases (like estimates) when the study of "inactive with consumption" concludes.

h. The "Calibration Year Value" is the time in years that a particular meter can be in operation between re-certification tests. This value can change in different states and it can change by Meter Size. It that value is incorrect, then the schedule for retesting or recertification could be incorrect. If it is later than it should be, then the risk is that meter can be measuring water inaccurately and impacting the amount of the bill associated with consumption charges. Typically, however, when meters get older, they tend to slow down, so the charge would be less than expected for a unit of water delivered to the customer which would impact revenues negatively.

(i)At the time of the audit, the process that checks the values before entering them into the system was a completely manual process, and it can be prone to error if people or requirements change. We are without sufficient data to determine why KAW had more exceptions than its Indiana or Pennsylvania affiliates.

(ii)The 1857 exceptions identified in Kentucky were all of those found with the exception out of the "full" meter population.

i. The increase in expired work orders has not been shown to impact the company revenue streams. However, estimating bills for longer than necessary does put added strain on costs and impacts customer satisfaction.

j. As a result of the audit there were no results or observations that would have materially impacted costs. The audit resulted in several recommended improvements that the Company is implementing.

k. KAW does not have insurance that would cover decreases in revenues due to meter issues.

Witness: Jeffrey Newcomb, Kathryn Nash, and Andy Lewis

- 16. Explain whether the Company intends to pass the following costs on to its ratepayers, and if so, provide all justification:
 - a. replacing defective meters, including those with calibration year exceptions;
 - b. meters rendered inoperable or which report inaccurate data due to defective installation.

Response:

At this time, the Company is only recovering the cost of meters that are in current base rates established in Case No. 2018-00358 which was KAW's most recent water rate case. The Company will address the cost recovery of meters in its next general rate case.