

Exhibit No.:  
Issues: Depreciation Study  
Witness: John J. Spanos  
Exhibit Type: Direct  
Sponsoring Party: Missouri-American Water Company  
Case No.: WR-2015-0301  
SR-2015-0302  
Date: July 31, 2015

**MISSOURI PUBLIC SERVICE COMMISSION**

**CASE NO. WR-2015-0301  
CASE NO. SR-2015-0302**

**DIRECT TESTIMONY**

**OF**

**JOHN J. SPANOS**

**ON BEHALF OF**

**MISSOURI-AMERICAN WATER COMPANY**

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

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<b>IN THE MATTER OF MISSOURI-AMERICAN )</b>	
<b>WATER COMPANY FOR AUTHORITY TO )</b>	
<b>FILE TARIFFS REFLECTING INCREASED )</b>	<b>CASE NO. WR-2015-0301</b>
<b>RATES FOR WATER AND SEWER )</b>	<b>CASE NO. SR-2015-0302</b>
<b>SERVICE )</b>	

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**AFFIDAVIT OF JOHN J. SPANOS**

John J. Spanos, being first duly sworn, deposes and says that he is the witness who sponsors the accompanying testimony entitled "Direct Testimony of John J. Spanos"; that said testimony and schedules were prepared by him and/or under his direction and supervision; that if inquiries were made as to the facts in said testimony and schedules, he would respond as therein set forth; and that the aforesaid testimony and schedules are true and correct to the best of his knowledge.

  
\_\_\_\_\_  
John J. Spanos

**Commonwealth of Pennsylvania  
County of Cumberland**

**SUBSCRIBED and sworn to**  
Before me this 15<sup>th</sup> day of July 2015.

  
\_\_\_\_\_  
Notary Public

**My commission expires:** February 20, 2019

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



**DIRECT TESTIMONY  
JOHN J. SPANOS  
MISSOURI-AMERICAN WATER COMPANY  
CASE NO.WR-2015-0301  
CASE NO.SR-2015-0302**

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1 **DIRECT TESTIMONY**

2 **JOHN J. SPANOS**

3  
4 **I. INTRODUCTION**

5 **1. Q. PLEASE STATE YOUR NAME AND ADDRESS.**

6 A. John J. Spanos. My business address is 207 Senate Avenue, Camp Hill,  
7 Pennsylvania.

8  
9 **2. Q. WITH WHAT FIRM ARE YOU ASSOCIATED?**

10 A. I am associated with the firm of Gannett Fleming Valuation and Rate Consultants,  
11 LLC (“Gannett Fleming”).

12  
13 **3. Q. HOW LONG HAVE YOU BEEN ASSOCIATED WITH GANNETT  
14 FLEMING?**

15 A. I have been associated with the firm since college graduation in June 1986.

16  
17 **4. Q. WHAT IS YOUR POSITION IN THE FIRM?**

18 A. I am Senior Vice President.

19  
20 **5. Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?**

21 A. I am testifying on behalf of Missouri-American Water Company (“MAWC” or the  
22 “Company”).

1 **6. Q. PLEASE STATE YOUR QUALIFICATIONS.**

2 A. I have 29 years of depreciation experience, which includes giving expert testimony in  
3 over 200 cases before 40 regulatory commissions, including this Commission. Please  
4 refer to Appendix A for my qualifications.

5  
6 **7. Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

7 A. My testimony is in support of the depreciation studies conducted under my direction  
8 and supervision for MAWC. Based upon these studies, I am recommending that new  
9 depreciation accrual rates be adopted by the Company for water and wastewater  
10 assets.

11

12

## **II. OVERVIEW**

13 **8. Q. PLEASE DESCRIBE WHAT YOU MEAN BY THE TERM**  
14 **“DEPRECIATION”.**

15 A. “Depreciation” refers to the loss in service value not restored by current maintenance,  
16 incurred in connection with the consumption or prospective retirement of utility plant  
17 in the course of service from causes which can be reasonably anticipated or  
18 contemplated, against which the Company is not protected by insurance. Among the  
19 causes to be given consideration are wear and tear, decay, action of the elements,  
20 inadequacy, obsolescence, changes in the art, changes in demand, and the  
21 requirements of public authorities. Depreciation accrual rates are used to allocate, for  
22 accounting purposes, the cost of assets over their service lives.

1           In the studies that I performed and that are the basis for my testimony, I used  
2 the straight line remaining life method of depreciation, with the average service life  
3 procedure to develop recommended depreciation accrual rates. The total annual  
4 depreciation is based on a system of depreciation accounting which aims to distribute  
5 the cost of fixed capital assets over the estimated useful life of the unit, or group of  
6 assets, in a systematic and rational manner.

7           For General Plant Accounts 340.1, 340.2, 340.3, 340.5, 342, 343, 344, 346.1,  
8 346.2, 347, and 348 for water assets; and Accounts 390, 390.2, 393, 394, 396, and  
9 397 for wastewater assets, I used the straight line method of amortization. The annual  
10 amortization is based on amortization accounting which distributes the unrecovered  
11 cost of fixed capital assets over the remaining amortization period selected for each  
12 account and vintage.

13  
14 **9. Q.   HAVE YOU PREPARED EXHIBITS PRESENTING THE RESULTS OF**  
15 **YOUR STUDIES?**

16       A.   Yes. The reports titled, “2015 Depreciation Study – Calculated Annual Depreciation  
17 Accruals Related to Utility Plant at March 31, 2015” and “2015 Depreciation Study -  
18 Calculated Annual Depreciation Accruals Related to Wastewater Plant at March 31,  
19 2015,” which have been marked Schedule JJS-1 and Schedule JJS-2, respectively, set  
20 forth the results of my studies.

21  
22 **10. Q.   HOW DID YOU DETERMINE THE RECOMMENDED ANNUAL**  
23 **DEPRECIATION ACCRUAL RATES?**

1 A. The determination of annual depreciation accrual rates consists of two phases. In the  
2 first phase, service life and net salvage characteristics are estimated for each  
3 depreciable group, that is, each plant account or subaccount identified as having  
4 similar characteristics. In the second phase, the annual depreciation accrual rates are  
5 calculated based on the service life and net salvage estimates determined in the first  
6 phase.

7

8 **III. ESTIMATION OF SERVICE LIFE AND NET SALVAGE**

9 **11. Q. PLEASE DESCRIBE THE FIRST PHASE OF THE STUDY, THAT IS, THE**  
10 **MANNER IN WHICH YOU ESTIMATED THE SERVICE LIFE AND NET**  
11 **SALVAGE CHARACTERISTICS FOR EACH DEPRECIABLE GROUP.**

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

18

19 **12. Q. WHAT HISTORICAL DATA DID YOU ANALYZE FOR THE PURPOSE OF**  
20 **ESTIMATING THE SERVICE LIFE CHARACTERISTICS OF THE**  
21 **COMPANY'S PLANT?**

22 A. The data consisted of the entries made by the Company to record plant transactions  
23 through 2014. The transactions included additions, retirements, transfers and the

1 related balances. The Company, in accordance with my instructions, classified the  
2 data by depreciable group, type of transaction, the year in which the transaction took  
3 place, and the year in which the plant was installed.  
4

5 **13. Q. WHAT METHOD DID YOU USE TO ANALYZE THIS SERVICE LIFE**  
6 **DATA?**

7 A. I used the retirement rate method. That method is the most appropriate when aged  
8 retirement data are available, because it develops the average rates of retirement  
9 actually experienced during the period of study. Other methods of life analysis infer  
10 the rates of retirement based on a selected type survivor curve.  
11

12 **14. Q. PLEASE DESCRIBE THE RESULTS OF YOUR USE OF THE**  
13 **RETIREMENT RATE METHOD.**

14 A. Each retirement rate analysis resulted in a life table which, when plotted, formed an  
15 original survivor curve. Each original survivor curve as plotted from the life table  
16 represents the average survivor pattern experienced by the several vintage groups  
17 during the experience band studied. Inasmuch as this survivor pattern does not  
18 necessarily describe the life characteristics of the property group, interpretation of the  
19 original curves is required in order to use them as valid considerations in service life  
20 estimation. Iowa type survivor curves were used in these interpretations.  
21



1 **15. Q. PLEASE EXPLAIN BRIEFLY WHAT AN “IOWA-TYPE SURVIVOR**  
2 **CURVE” IS AND HOW YOU USE IT IN ESTIMATING SERVICE LIFE**  
3 **CHARACTERISTICS FOR EACH DEPRECIABLE GROUP.**

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

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

13 The estimated survivor curve designations for each depreciable group indicate the  
14 average service life, the family within the Iowa system and the relative height of the  
15 mode. For example, the Iowa 90-R2 indicates an average service life of ninety years;  
16 a right-moded, or R, type curve (the mode occurs after average life for right-moded  
17 curves); and a moderate height, 2, for the mode (possible modes for R type curves  
18 range from 1 to 5).

19  
20 **16. Q. WHAT HISTORICAL DATA DID YOU ANALYZE FOR THE PURPOSE OF**  
21 **ESTIMATING NET SALVAGE CHARACTERISTICS?**

1 A. The data consisted of the entries made by the Company to record retirements, cost of  
2 removal and gross salvage during the period 1974 through 2014 for water assets and  
3 the period 2008 through 2014 for wastewater assets.

4

5 **17. Q. WHAT METHOD DID YOU USE TO ANALYZE THIS NET SALVAGE**  
6 **DATA?**

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

12

13 **18. Q. PLEASE DESCRIBE THE MANNER IN WHICH YOU USED THE**  
14 **ANALYSES OF NET SALVAGE TO ESTIMATE NET SALVAGE**  
15 **PERCENTS.**

16 A. The results of the net salvage analyses provided indications of historical net salvage  
17 levels. The judgments of net salvage incorporated these historical indications and  
18 consideration of estimates made for other water and wastewater companies.

19

20 **IV. CALCULATION OF DEPRECIATION**

21 **19. Q. PLEASE DESCRIBE THE SECOND PHASE OF THE PROCESS THAT YOU**  
22 **USED, THAT IS, THE CALCULATION OF ANNUAL DEPRECIATION**  
23 **ACCRUAL RATES.**

1       A.    After I estimated the service life and net salvage characteristics for each depreciable  
2            group, I calculated annual depreciation accrual rates for each group in accordance  
3            with the straight line remaining life method, using the average service life procedure.  
4

5   **20. Q.    WHAT GROUP PROCEDURE IS BEING USED IN THIS PROCEEDING**  
6            **FOR DEPRECIABLE ACCOUNTS?**

7       A.    The average service life procedure is used in the current proceeding for all  
8            depreciable accounts and installation years. The average service procedure also was  
9            used in the Company’s last rate proceeding.  
10

11   **21. Q.    PLEASE DESCRIBE BRIEFLY THE AMORTIZATION OF CERTAIN**  
12            **GENERAL PLANT ACCOUNTS.**

13       A.    General Plant Accounts 340.1, 340.2, 340.3, 340.5, 342, 343, 344, 346.1, 346.2, 347  
14            and 348 for water assets and Accounts 390, 390.2, 392, 393, 394, 396 and 397 for  
15            wastewater assets include a very large number of units, but represent less than four  
16            percent of depreciable water plant and two percent of depreciable wastewater plant.  
17            Depreciation accounting is difficult for these assets, inasmuch as periodic inventories  
18            are required to properly reflect plant in service. In amortization accounting, units of  
19            property are capitalized in the same manner as they are in depreciation accounting.  
20            However, retirements are recorded when a vintage is fully amortized rather than as  
21            the units are removed from service. That is, there is no dispersion of retirement. All  
22            units are retired when the age of the vintage reaches the amortization period.  
23

1 **V. DESCRIPTION OF REPORT**

2 **22. Q. PLEASE OUTLINE THE CONTENTS OF YOUR REPORT.**

3 A. My report is presented in three parts. Introduction includes statements related to the  
4 scope and basis of the depreciation study. Methods Used in the Estimation of  
5 Depreciation includes descriptions of the estimation of survivor curves and net  
6 salvage and the calculation of annual depreciation accrual rates.

7 Results of Study presents a description of the results, summaries of the  
8 depreciation calculations, graphs and tables which relate to the service life and net  
9 salvage studies, and the detailed depreciation calculations.

10 Schedule JJS-1, Table 1 on pages VI-5 through VI-10 presents the estimated  
11 survivor curve, the net salvage percent, the original cost as of March 31, 2015, the  
12 calculated annual depreciation accrual amount and rate, book reserve, future accruals  
13 and the composite remaining life for each account or subaccount. The section  
14 beginning on page VII-2 presents the results of the retirement rate analyses prepared  
15 as the historical bases for the service life estimates. The section beginning on page  
16 VIII-2 presents the results of the analyses of historical net salvage data. The section  
17 beginning on page IX-2 presents the depreciation calculations related to surviving  
18 original cost a March 31, 2015. Schedule JJS-2 is presented in the same fashion.

19  
20 **23. Q. PLEASE USE AN EXAMPLE TO ILLUSTRATE THE MANNER IN WHICH**  
21 **THE STUDIES ARE PRESENTED FOR EACH REPORT.**

1 A. I will use Schedule JJS-1, Account 331, Mains - Transmission and Distribution, as  
2 my example, inasmuch as it is a large depreciable group and is representative of the  
3 presentation.

4 The retirement rate method was used to analyze the survivor characteristics of  
5 this group. The life tables for the 1939-2014 and 1975-2014 experience bands are  
6 presented on pages VII-103 through VII-110 of Schedule JJS-1. The life tables, or  
7 original survivor curves, are plotted along with the estimated smooth survivor curve,  
8 the 90-R2 on page VII-102. The net salvage analysis for the period 1974 through  
9 2014 is presented on pages VIII-27 through VIII-29 of Schedule JJS-1.

10 The calculation of the annual depreciation accrual rate related to the original  
11 cost at March 31, 2015, of utility plant is presented on pages IX-48 through IX-51 of  
12 Schedule JJS-1. The calculation is based on the 90-R2 survivor curve, negative thirty  
13 percent net salvage and the attained age. The tabulation sets forth the installation  
14 year, the original cost, calculated accrued depreciation, allocated book reserve, future  
15 accruals, remaining life and annual accrual amount. The totals are brought forward to  
16 the table on page VI-7.

17

18 **VI. RECOMMENDATION**

19 **24. Q. WHAT IS YOUR RECOMMENDATION REGARDING ANNUAL**  
20 **DEPRECIATION ACCRUAL RATES FOR THE COMPANY?**

21 A. I recommend that the Company use a composite annual depreciation accrual rate for  
22 each account or subaccount. My recommended depreciation accrual rates, based on  
23 the depreciation studies, are set forth for each account in column 9 of Table 1 on

1 pages VI-5 through VI-10 of Schedule JJS-1 and column 8 of Table 1 on page VI-4  
2 and VI-5 of Schedule JJS-2. In my opinion, these are reasonable and appropriate  
3 depreciation accrual rates for the Company.  
4

5 **25. Q. ARE YOUR RECOMMENDED DEPRECIATION ACCRUAL RATES**  
6 **REASONABLE FOR PLANT ADDED SUBSEQUENT TO MARCH 31, 2015?**

7 A. Yes. The annual depreciation accrual rates calculated at March 31, 2015, can  
8 reasonably be applied to the total balance including new plant additions during the  
9 next several years.  
10

11 **26. Q. ARE THERE ANY ADDITIONAL DEPRECIATION RATES TO**  
12 **RECOMMEND?**

13 A. Yes, there are. I have set forth depreciation rates for new additions in Accounts 341.2  
14 and 341.3.  
15

16 **27. Q. HOW ARE THE PROPOSED RATES ON PAGE VI-10 OF THE**  
17 **DEPRECIATION STUDY DEVELOPED?**

18 A. The rates are developed using the survivor curve and net salvage parameter of each  
19 subaccount based on the theoretical percentage of recovery of these parameters.  
20

21 **28. Q. DOES THIS COMPLETE YOUR DIRECT TESTIMONY?**

22 A. Yes, it does.

## APPENDIX A

**JOHN SPANOS**

**DEPRECIATION EXPERIENCE**

**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; 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; Peoples Gas Light and Coke Company; North Shore Gas Company; Connecticut Light and Power; 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?**

A. Yes. I have submitted testimony to the Pennsylvania Public Utility Commission; the 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.



**MISSOURI**  
**AMERICAN WATER**

## **2015 DEPRECIATION STUDY**

**CALCULATED ANNUAL DEPRECIATION  
ACCRUALS RELATED TO UTILITY PLANT  
AT MARCH 31, 2015**

*Prepared by:*



***Gannett Fleming***

*Excellence Delivered **As Promised***

MISSOURI AMERICAN WATER COMPANY  
St. Louis, Missouri

2015 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION  
ACCRUALS RELATED TO UTILITY PLANT  
AT MARCH 31, 2015

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



*Excellence Delivered **As Promised***

July 29, 2015

Missouri-American Water Company  
727 Craig Road  
St. Louis, MO 63141

Attention Mr. Frank Kartmann, President

Ladies and Gentlemen:

Pursuant to your request, we have conducted a depreciation study related to the utility plant of Missouri American Water Company as of March 31, 2015. 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 depreciation.

Respectfully submitted,

**GANNETT FLEMING VALUATION  
AND RATE CONSULTANTS, LLC**

A handwritten signature in blue ink that reads "John J. Spanos".

**JOHN J. SPANOS**  
Sr. Vice President

JJS:krm

059475

**Gannett Fleming Valuation and Rate Consultants, LLC**

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## EXECUTIVE SUMMARY

Pursuant to Missouri American Water Company's ("MOAWC") request, Gannett Fleming Valuation and Rate Consultants, LLC ("Gannett Fleming") has conducted a depreciation study related to MOAWC plant as of March 31, 2015. 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.

MOAWC'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 remains generally the same at 2.07 percent.

Gannett Fleming recommends the calculated annual depreciation accrual rates proposed herein apply specifically to MOAWC's plant in service as of March 31, 2015 as summarized in Table 1 of the study. The study sets forth a total annual depreciation expense of \$40.1 million as applied to the depreciable original cost of \$1.91 Billion as of March 31, 2015.

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## PART I. INTRODUCTION

# MISSOURI AMERICAN WATER COMPANY DEPRECIATION STUDY

## PART I. INTRODUCTION

### SCOPE

This report presents the results of the depreciation study prepared for the Missouri-American Water Company as applied to utility plant in service as of March 31, 2015. 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.

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**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 Iowa type curves. There are four families in the Iowa 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 Iowa curves were developed at the Iowa 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,

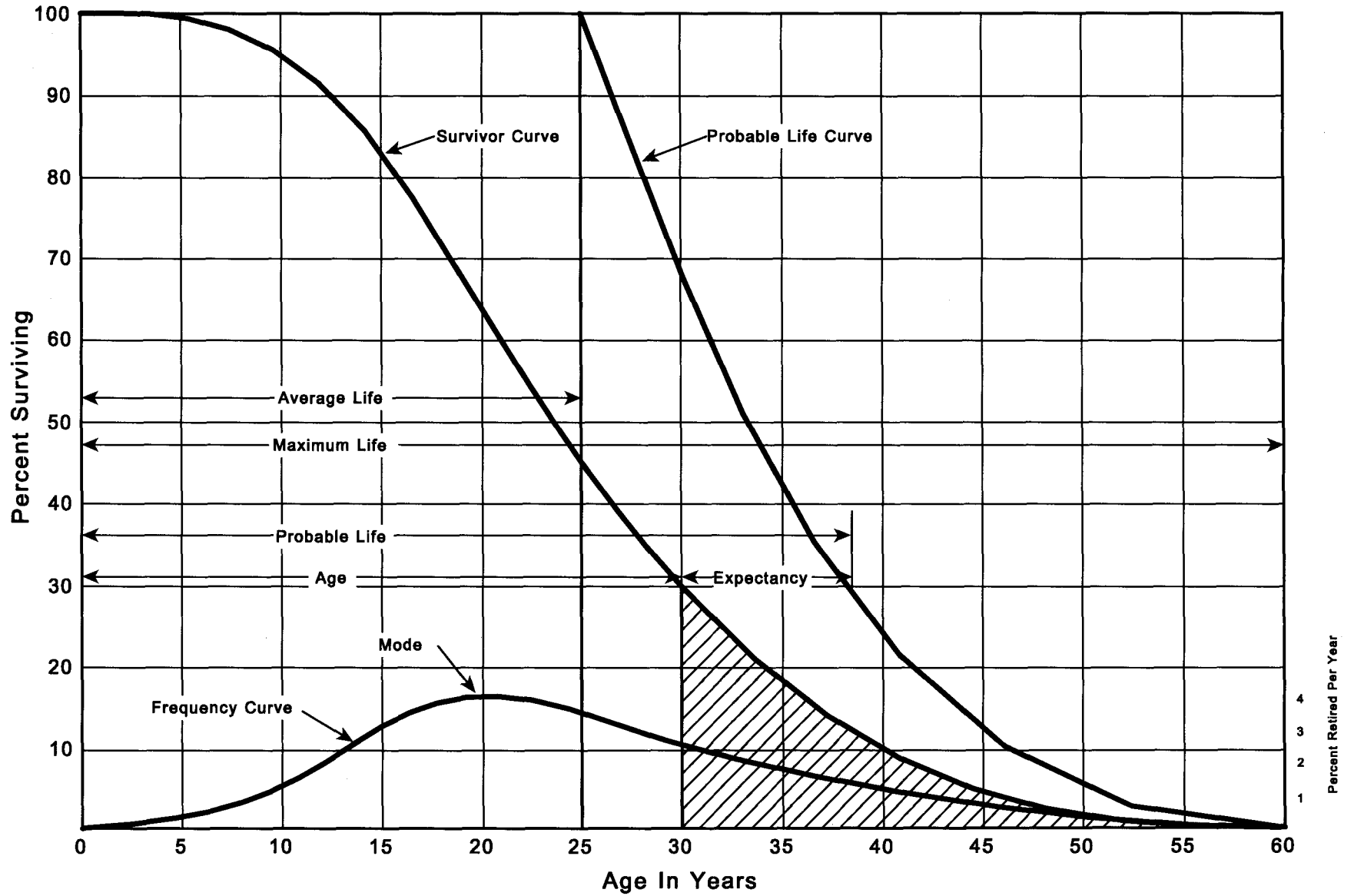


Figure 1. A Typical Survivor Curve and Derived Curves



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March 31, 2015

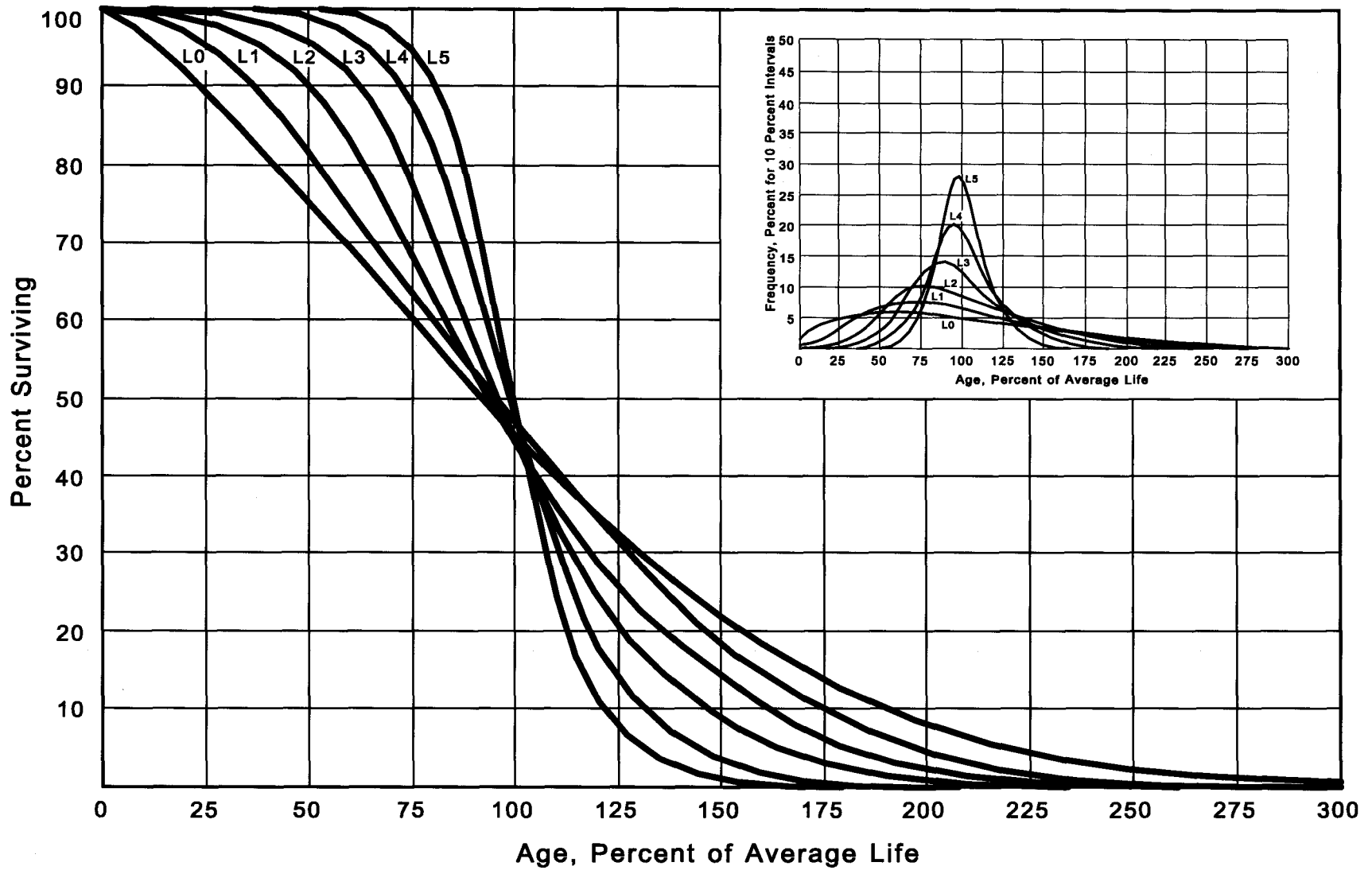


Figure 2. Left Modal or "L" Iowa Type Survivor Curves

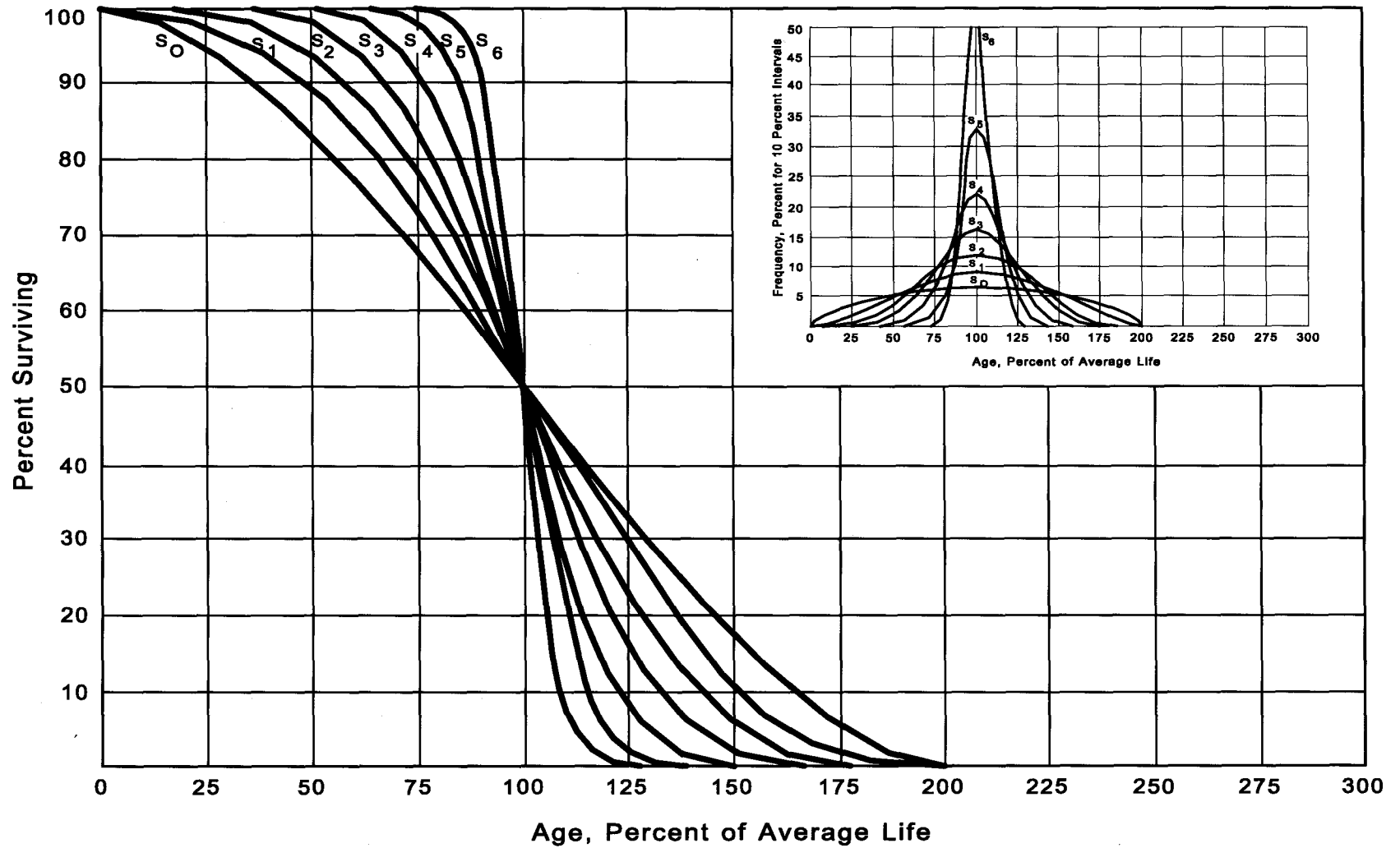


Figure 3. Symmetrical or "S" Iowa Type Survivor Curves

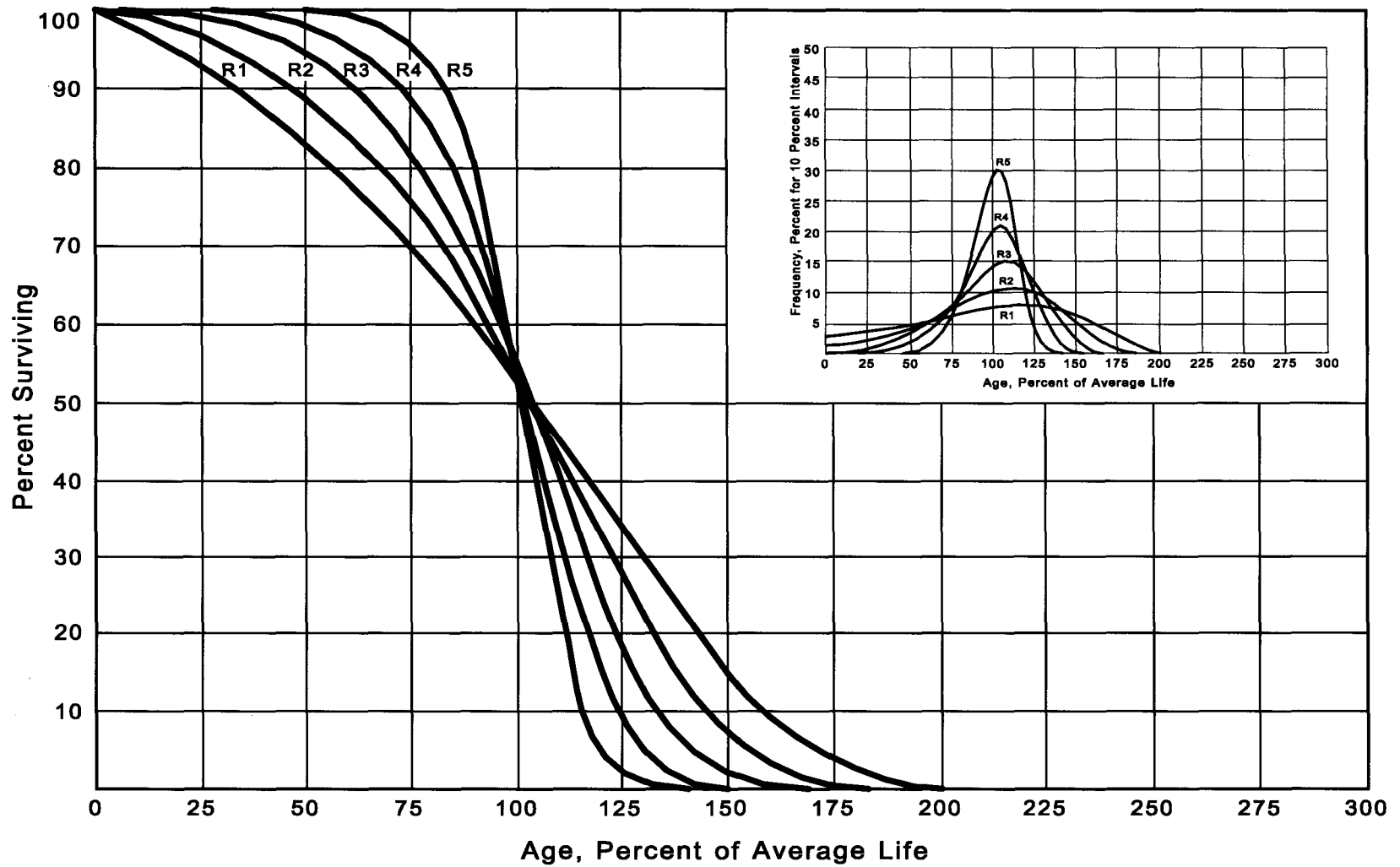


Figure 4. Right Modal or "R" Iowa Type Survivor Curves

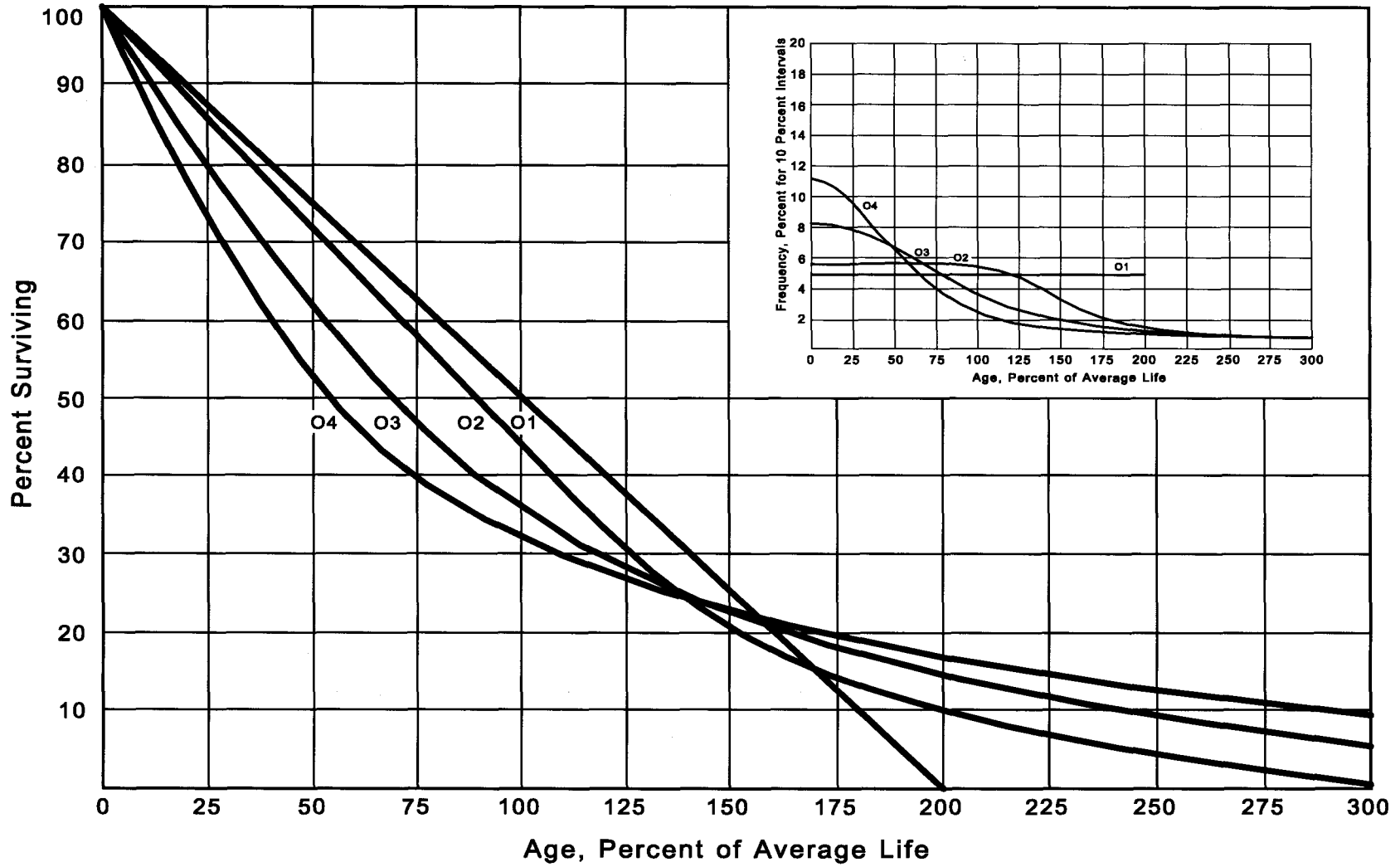


Figure 5. Origin Modal or "O" Iowa Type Survivor Curves

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."<sup>1</sup> 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,"<sup>2</sup> "Engineering Valuation and Depreciation,"<sup>3</sup> and "Depreciation Systems."<sup>4</sup>

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 experience band, 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 placement band. An example of the calculations used in the development of a life table follows. The example includes

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

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

<sup>3</sup>Marston, Anson, Robley Winfrey, and Jean C. Hempstead, Supra Note 1.

<sup>4</sup>Wolf, Frank K. and W. Chester Fitch. Depreciation Systems. 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

Year Placed	Retirements, Thousands of Dollars										Total During Age Interval	Age Interval
	During Year											
(1)	2005 (2)	2006 (3)	2007 (4)	2008 (5)	2009 (6)	2010 (7)	2011 (8)	2012 (9)	2013 (10)	2014 (11)	(12)	(13)
2000	10	11	12	13	14	16	23	24	25	26	26	13½-14½
2001	11	12	13	15	16	18	20	21	22	19	44	12½-13½
2002	11	12	13	14	16	17	19	21	22	18	64	11½-12½
2003	8	9	10	11	11	13	14	15	16	17	83	10½-11½
2004	9	10	11	12	13	14	16	17	19	20	93	9½-10½
2005	4	9	10	11	12	13	14	15	16	20	105	8½-9½
2006		5	11	12	13	14	15	16	18	20	113	7½-8½
2007			6	12	13	15	16	17	19	19	124	6½-7½
2008				6	13	15	16	17	19	19	131	5½-6½
2009					7	14	16	17	19	20	143	4½-5½
2010						8	18	20	22	23	146	3½-4½
2011							9	20	22	25	150	2½-3½
2012								11	23	25	151	1½-2½
2013									11	24	153	½-1½
2014										13	80	0-½
<b>Total</b>	<b>53</b>	<b>68</b>	<b>86</b>	<b>106</b>	<b>128</b>	<b>157</b>	<b>196</b>	<b>231</b>	<b>273</b>	<b>308</b>	<b>1,606</b>	

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

Experience Band 2005-2014

Placement Band 2000-2014

Year Placed	Acquisitions, Transfers and Sales, Thousands of Dollars										Total During Age Interval	Age Interval
	During Year											
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2000	-	-	-	-	-	-	60 <sup>a</sup>	-	-	-	-	13½-14½
2001	-	-	-	-	-	-	-	-	-	-	-	12½-13½
2002	-	-	-	-	-	-	-	-	-	-	-	11½-12½
2003	-	-	-	-	-	-	-	(5) <sup>b</sup>	-	-	60	10½-11½
2004	-	-	-	-	-	-	-	6 <sup>a</sup>	-	-	-	9½-10½
2005	-	-	-	-	-	-	-	-	-	-	(5)	8½-9½
2006	-	-	-	-	-	-	-	-	-	-	6	7½-8½
2007	-	-	-	-	-	-	-	-	-	-	-	6½-7½
2008	-	-	-	-	-	-	-	(12) <sup>b</sup>	-	-	-	5½-6½
2009	-	-	-	-	-	-	-	-	22 <sup>a</sup>	-	-	4½-5½
2010	-	-	-	-	-	-	-	(19) <sup>b</sup>	-	-	10	3½-4½
2011	-	-	-	-	-	-	-	-	-	-	-	2½-3½
2012	-	-	-	-	-	-	-	-	-	(102) <sup>c</sup>	(121)	1½-2½
2013	-	-	-	-	-	-	-	-	-	-	-	½-1½
2014	-	-	-	-	-	-	-	-	-	-	-	0-½
Total	-	-	-	-	-	-	60	(30)	22	(102)	(50)	

<sup>a</sup> Transfer Affecting Exposures at Beginning of Year<sup>b</sup> Transfer Affecting Exposures at End of Year<sup>c</sup> 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 exposed to retirement in this group at the beginning of the year in which they occurred, and the sales and transfers-out are considered to be removed from the plant exposed to retirement at the beginning of the following year. 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 successive transaction year. For example, the exposures for 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

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

Year Placed	Exposures, Thousands of Dollars										Total at Beginning of Age Interval	Age Interval
	Annual Survivors at the Beginning of the Year											
(1)	2005 (2)	2006 (3)	2007 (4)	2008 (5)	2009 (6)	2010 (7)	2011 (8)	2012 (9)	2013 (10)	2014 (11)	(12)	(13)
2000	255	245	234	222	209	195	239	216	192	167	167	13½-14½
2001	279	268	256	243	228	212	194	174	153	131	323	12½-13½
2002	307	296	284	271	257	241	224	205	184	162	531	11½-12½
2003	338	330	321	311	300	289	276	262	242	226	823	10½-11½
2004	376	367	357	346	334	321	307	297	280	261	1,097	9½-10½
2005	420 <sup>a</sup>	416	407	397	386	374	361	347	332	316	1,503	8½-9½
2006		460 <sup>a</sup>	455	444	432	419	405	390	374	356	1,952	7½-8½
2007			510 <sup>a</sup>	504	492	479	464	448	431	412	2,463	6½-7½
2008				580 <sup>a</sup>	574	561	546	530	501	482	3,057	5½-6½
2009					660 <sup>a</sup>	653	639	623	628	609	3,789	4½-5½
2010						750 <sup>a</sup>	742	724	685	663	4,332	3½-4½
2011							850 <sup>a</sup>	841	821	799	4,955	2½-3½
2012								960 <sup>a</sup>	949	926	5,719	1½-2½
2013									1,080 <sup>a</sup>	1,069	6,579	½-1½
2014										1,220 <sup>a</sup>	7,490	0-½
Total	<u>1,975</u>	<u>2,382</u>	<u>2,824</u>	<u>3,318</u>	<u>3,872</u>	<u>4,494</u>	<u>5,247</u>	<u>6,017</u>	<u>6,852</u>	<u>7,799</u>	<u>44,780</u>	

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 4½-5½, 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 4½	=	88.15
Exposures at age 4½	=	3,789,000
Retirements from age 4½ to 5½	=	143,000
Retirement Ratio	=	143,000 ÷ 3,789,000 = 0.0377
Survivor Ratio	=	1.000 - 0.0377 = 0.9623
Percent surviving at age 5½	=	(88.15) x (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	7,490	80	0.0107	0.9893	100.00
0.5	6,579	153	0.0233	0.9767	98.93
1.5	5,719	151	0.0264	0.9736	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	77.11
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	<u>167</u>	<u>26</u>	0.1557	0.8443	42.24
<b>Total</b>	<b><u>44,780</u></b>	<b><u>1,606</u></b>			<b>35.66</b>

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 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

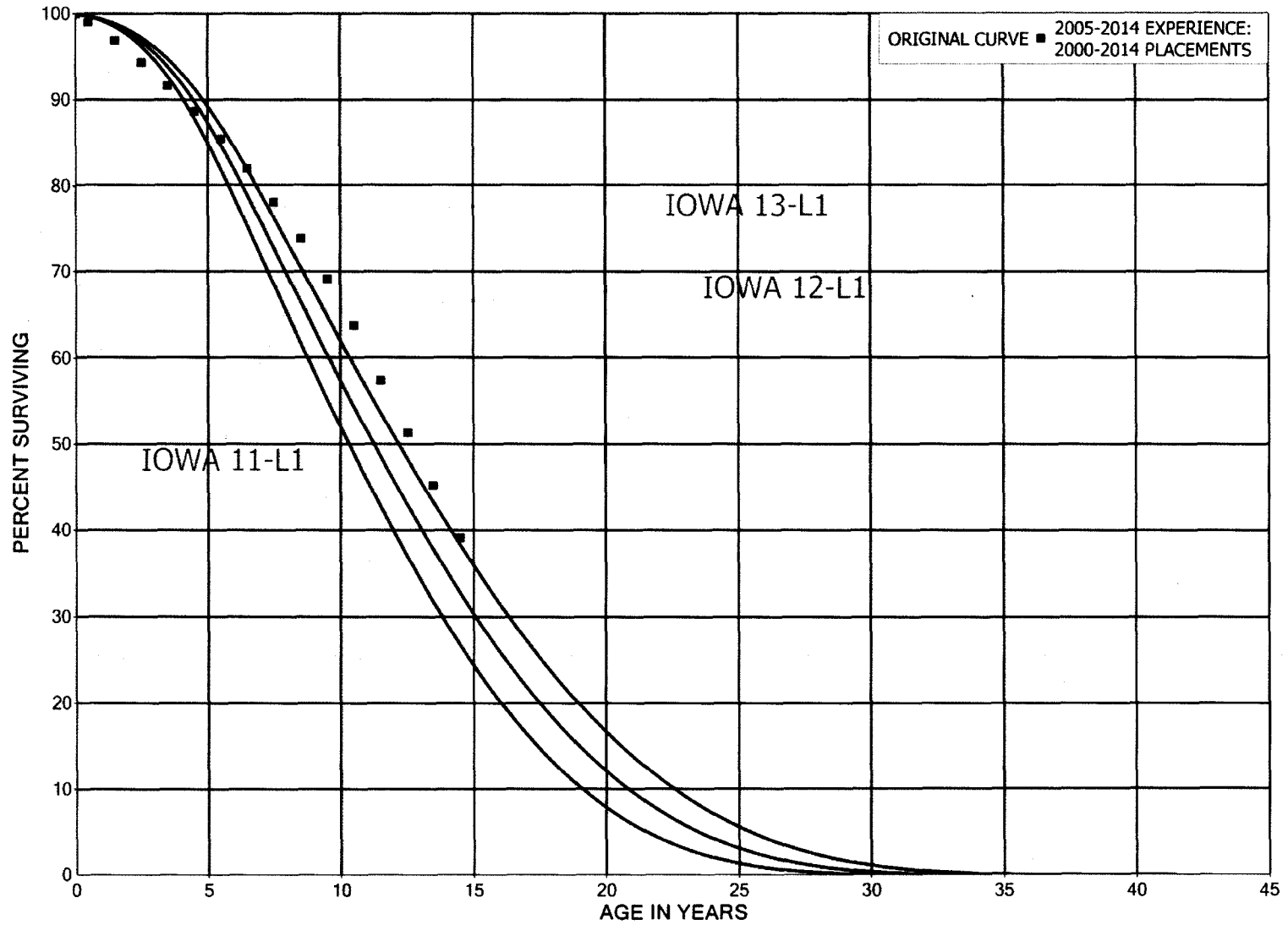


FIGURE 7. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN S0 IOWA TYPE CURVE  
ORIGINAL AND SMOOTH SURVIVOR CURVES

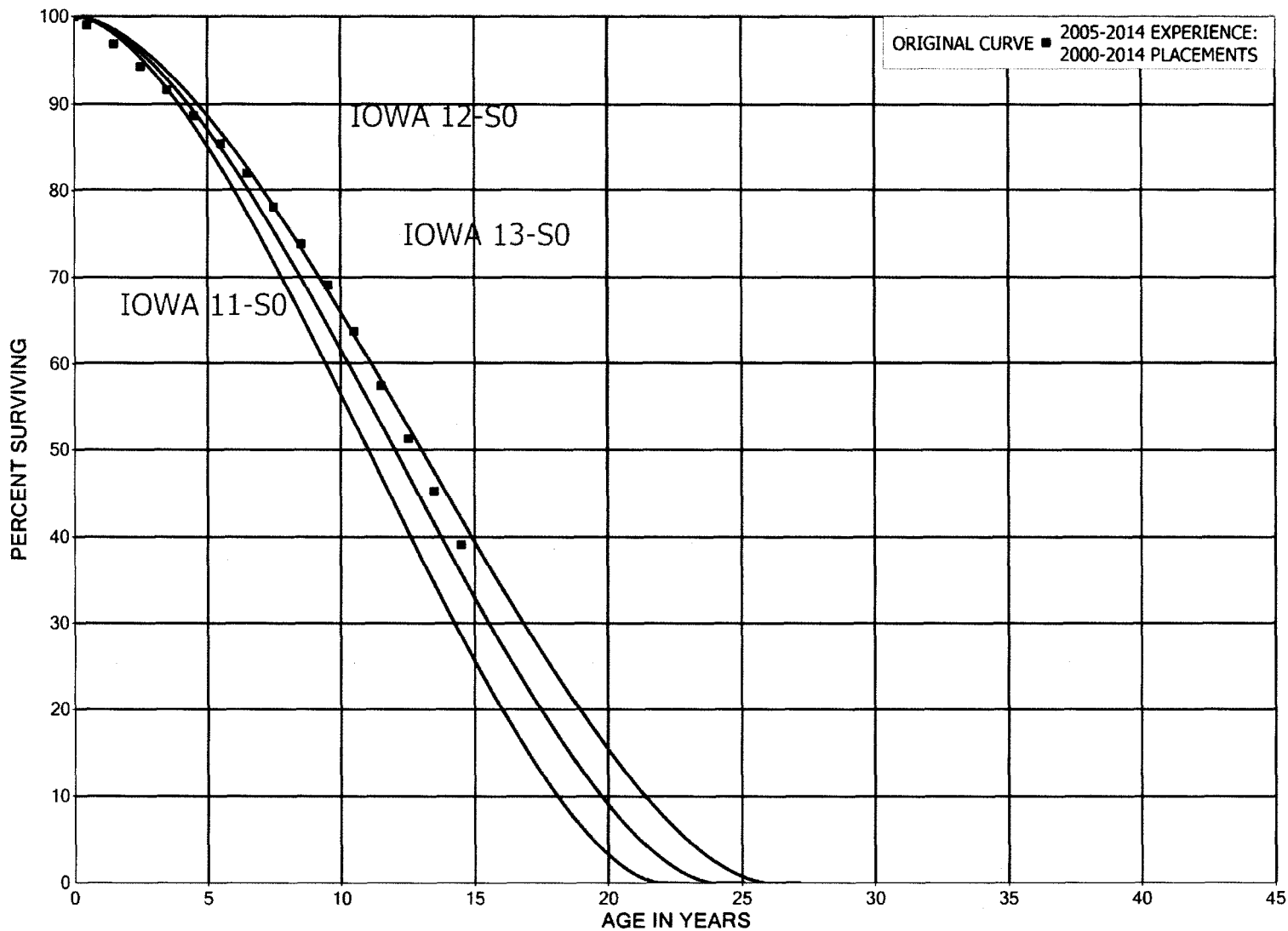


FIGURE 8. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN R1 IOWA TYPE CURVE  
ORIGINAL AND SMOOTH SURVIVOR CURVES

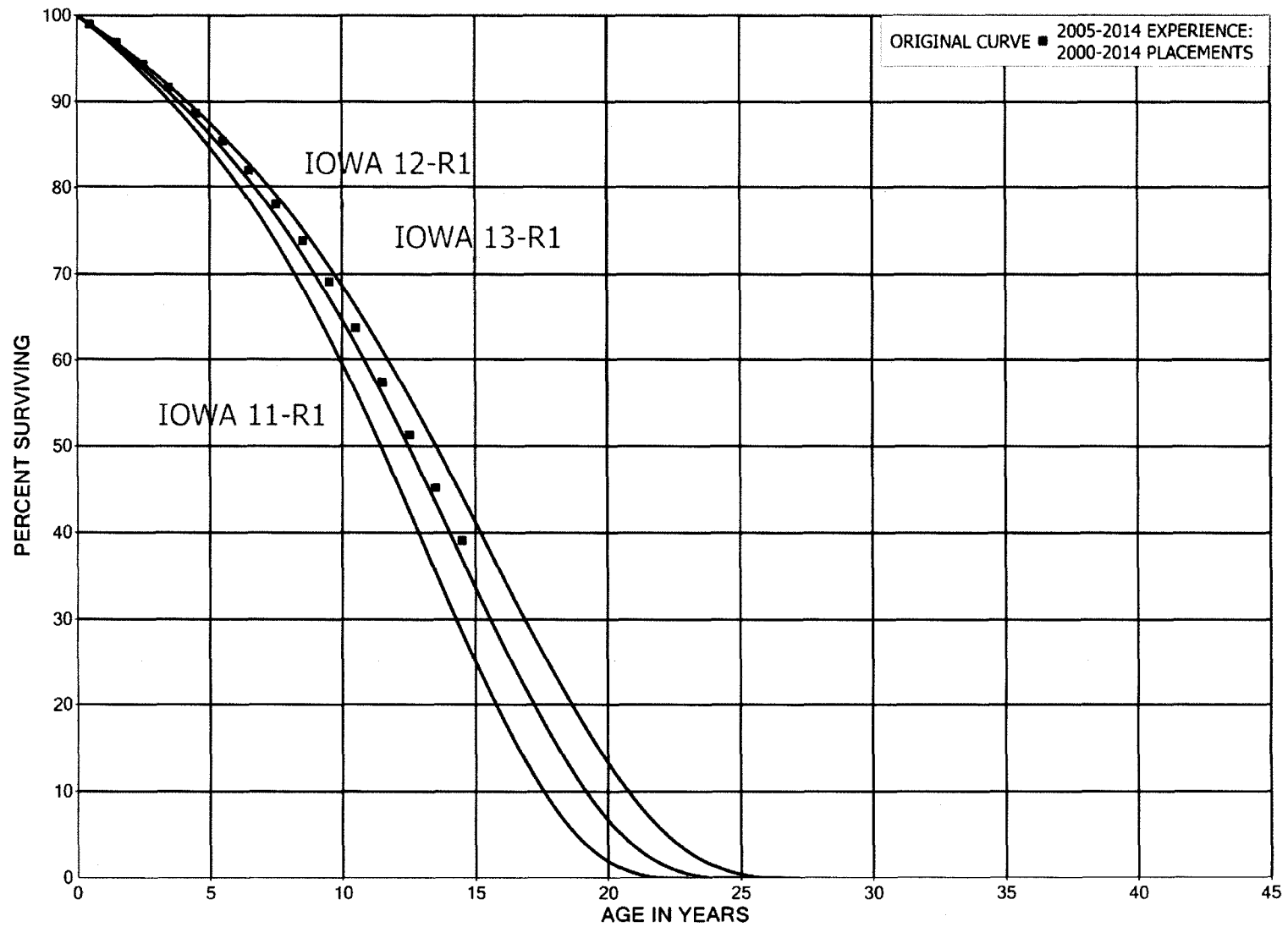
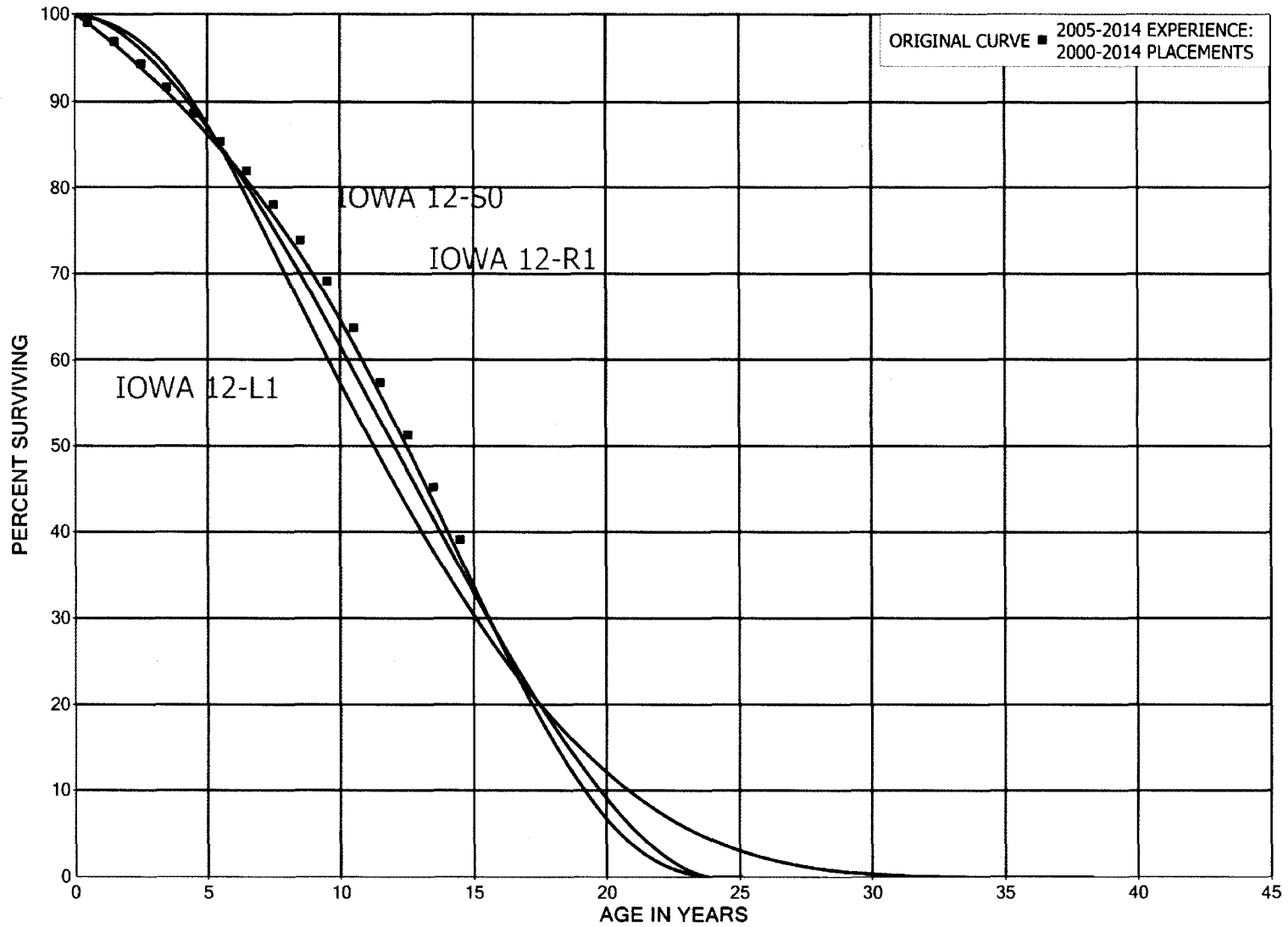




FIGURE 9. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN L1, S0 AND R1 IOWA TYPE CURVE  
ORIGINAL AND SMOOTH SURVIVOR CURVES



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## **PART III. SERVICE LIFE CONSIDERATIONS**

### PART III. SERVICE LIFE CONSIDERATIONS

#### 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 89 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.

<u>Account No.</u>	<u>Account Description</u>
304.10	Structures and Improvements - Source of Supply
304.40	Structures and Improvements - Transmission & Distribution
304.61	Structures and Improvements - Office Building
304.70	Structures and Improvements - Shop and Garage
304.80	Structures and Improvements - Miscellaneous
309	Supply Mains
310.10	Power Generation Equipment
311	Electric Pumping Equipment
320	Water Treatment Equipment
330	Distribution Reservoirs and Standpipes
331	Mains - Transmission and Distribution
333	Services
334	Meters and Meter Installations
335	Fire Hydrants
339.50	Miscellaneous Transmission & Distribution - Other
341.10	Transportation Equipment - Light Trucks
341.20	Transportation Equipment - Heavy Trucks
341.30	Transportation Equipment - Auto
345	Power Operated Equipment

Accounts 331, Mains - Transmission and Distribution, 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 90-R2 and is based on the statistical indication for the period 1939-2014 and 1975-2014. The 90-R2 is an excellent fit of the significant portion of the original survivor curve as set forth on page VII-102, 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 structures and equipment in Accounts 304.20, 304.30 and 306.00 which represent 7 percent of depreciable plant were based on the type construction, attained age, observed features and conditions at the time of the field 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 less than 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 which comprise less than 1 percent of the total depreciable plant in service 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 utility 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 1974 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 93 percent of the depreciable plant balance and are presented below:

304.1	Structures and Improvements - Source of Supply
304.2 & 304.3	Structures and Improvements
304.4, 304.61, 304.7 & 304.8	Structures and Improvements - General
306	Lake, River and Other Intakes
307	Wells and Springs
309	Supply Mains
310.1	Power Generation Equipment
311	Electric Pumping Equipment
320	Water Treatment Equipment
330	Distribution Reservoirs and Standpipes
331	Mains - Transmission and Distribution
333	Services
334	Meters and Meter Installations
335	Fire Hydrants
341.1, 341.2 & 341.3	Transportation Equipment - Vehicles
341.4	Transportation Equipment - Other
345	Power Operated Equipment

Account 335, Fire Hydrants, 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 1974 through 2014. These data include the retirements, cost of removal and gross salvage.

The net salvage estimate for this account is negative 30 percent and is based on the trends in cost of removal and salvage percents as shown in the tabulation on pages VIII-37 through VIII-39. 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 36 and 66 percent removal cost, respectively. Gross salvage has been sporadic, averaging 5 percent for the 41-year period, but trending to 0 percent in recent years. The negative 30 percent net salvage estimate is based primarily on the overall cost of removal and gross salvage percent.

For this account, the experienced removal cost during the last three years is two times the typical level for similar assets in other utilities. These amounts and trends were discounted in determining the net salvage estimate. Future entries will be reviewed in order to determine the significance of recorded cost of removal in the future.

Amortization accounting is proposed for certain General Plant accounts which represent less than 4 percent of depreciable property. Future gross salvage and removal cost for these accounts will be recorded as revenue and expense, respectively. Inasmuch as there will be 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 3 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.

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**PART V. CALCULATION OF ANNUAL AND  
ACCRUED DEPRECIATION**



### **Group Depreciation Procedures**

When more than a single item of property is under consideration, a group procedure for depreciation is appropriate because normally all of 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.

### **Remaining Life Annual Accruals**

For the purpose of calculating remaining life accruals as of March 31, 2015, 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 March 31, 2015, 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:

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

### **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:



<u>Account</u>	<u>Amortization Period, Years</u>
340.10 Office Furniture	20
340.20 Computer Hardware	5
340.30 Computer Software	10
340.50 Office Equipment	15
342.00 Stores Equipment	25
343.00 Tools, Shop & Garage Equipment	20
344.00 Laboratory Equipment	15
346.10 Communication Equip. - Non-Telephone	15
346.20 Communication Equip. - Telephone	10
347.00 Miscellaneous Equipment	15
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.

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## 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 March 31, 2015. For most plant accounts, the application of such rates to future balances that reflect additions subsequent to March 31, 2015, 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 at March 31, 2015, is presented on pages VI-5 through VI-10 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 were 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 March 31, 2015 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.

MISSOURI-AMERICAN WATER COMPANY

TABLE 1. ESTIMATED SURVIVOR CURVE, NET SALVAGE, ORIGINAL COST, BOOK RESERVE, AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO UTILITY PLANT AT MARCH 31, 2015

DEPRECIABLE GROUP (1)	PROBABLE RETIREMENT DATE (2)	SURVIVOR CURVE (3)	NET SALVAGE (4)	ORIGINAL COST AT MARCH 31, 2015 (5)	BOOK RESERVE (6)	FUTURE ACCRUALS (7)	CALCULATED ANNUAL		COMPOSITE REMAINING LIFE (10)	
							ACCRUAL AMOUNT (8)	ACCRUAL RATE (9)=(8)/(5)		
<b>DEPRECIABLE PLANT</b>										
<b>STRUCTURES AND IMPROVEMENTS</b>										
304.10	SOURCE OF SUPPLY		60-R4	(25)	15,910,141.74	5,440,063	14,447,615	312,805	1.97	46.2
304.20	POWER AND PUMPING									
	ST. LOUIS	06-2031	* 75-R2.5	(15)	9,278,495.54	3,699,656	6,970,613	448,016	4.83	15.6
	ST. JOSEPH	06-2058	* 75-R2.5	(15)	4,606,638.76	968,036	4,329,599	109,633	2.38	39.5
	WARRENSBURG	06-2026	* 75-R2.5	(15)	238,114.10	89,365	184,466	16,600	6.97	11.1
	BRUNSWICK	06-2035	* 75-R2.5	(15)	55,168.56	16,001	47,443	2,397	4.34	19.8
	ST. CHARLES	06-2038	* 75-R2.5	(15)	1,732,516.80	498,968	1,493,426	66,320	3.83	22.5
	MEXICO	06-2026	* 75-R2.5	(15)	58,132.12	28,713	38,139	3,526	6.07	10.8
	JOPLIN	06-2068	* 75-R2.5	(15)	694,964.04	136,060	663,149	16,075	2.31	41.3
	JEFFERSON	06-2049	* 75-R2.5	(15)	1,537,656.81	200,803	1,567,502	47,789	3.11	32.8
	RANKIN ACRES	06-2025	* 75-R2.5	(15)	5,337.59	1,365	4,773	470	8.81	10.2
	SPRING VALLEY	06-2030	* 75-R2.5	(15)	5,376.33	1,360	4,823	320	5.95	15.1
	WHITEBRANCH	06-2025	* 75-R2.5	(15)	1,718.79	815	1,161	114	6.63	10.2
	OZARK MOUNTAIN	06-2030	* 75-R2.5	(15)	43,450.25	9,970	39,998	2,653	6.11	15.1
	MAPLE / RIVER / STONE	06-2025	* 75-R2.5	(15)	74,204.53	15,045	70,290	6,907	9.31	10.2
	SADDLEBROOKE	06-2028	* 75-R2.5	(15)	15,000.00	3,736	13,514	1,032	6.88	13.1
	TRI - STATES	06-2022	* 75-R2.5	(15)	10,392.60	2,553	9,398	1,311	12.61	7.2
					<u>18,357,166.82</u>	<u>5,672,447</u>	<u>15,438,294</u>	<u>723,163</u>	3.94	21.3
	PARKVILLE	05-2018	* 75-R2.5	(15)	15,897.77	10,290	7,992	2,544	16.00	3.1
	TOTAL ACCOUNT 304.20				18,373,064.59	5,682,737	15,446,286	725,707	3.95	21.3
304.30	WATER TREATMENT									
	CORPORATE	06-2033	* 80-R2.5	(15)	36,088.70	10,750	30,752	1,706	4.73	18.0
	ST. LOUIS	06-2048	* 80-R2.5	(15)	58,282,375.81	23,355,002	43,669,730	1,398,504	2.40	31.2
	ST. JOSEPH	06-2073	* 80-R2.5	(15)	24,467,560.12	6,388,658	21,749,036	425,306	1.74	51.1
	WARRENSBURG	06-2050	* 80-R2.5	(15)	947,196.40	289,749	799,527	23,707	2.50	33.7
	BRUNSWICK	06-2035	* 80-R2.5	(15)	302,768.02	164,656	183,527	9,323	3.08	19.7
	ST. CHARLES	06-2038	* 80-R2.5	(15)	6,912.93	2,188	5,762	253	3.66	22.8
	MEXICO	06-2060	* 80-R2.5	(15)	3,073,250.37	884,114	2,650,124	63,081	2.05	42.0
	JOPLIN	06-2068	* 80-R2.5	(15)	14,480,181.36	1,990,757	14,661,452	296,286	2.05	49.5
	JEFFERSON	06-2049	* 80-R2.5	(15)	2,322,198.75	843,800	1,826,729	56,332	2.43	32.4
	MAPLE / RIVER / STONE	06-2025	* 80-R2.5	(15)	1,044,064.04	1,401	1,199,272	117,464	11.25	10.2
	TRI - STATES	06-2022	* 80-R2.5	(15)	28,701.00	19,633	13,374	1,852	6.45	7.2
					<u>104,991,297.50</u>	<u>33,950,708</u>	<u>86,789,285</u>	<u>2,393,814</u>	2.28	36.3
	PARKVILLE	05-2018	* 80-R2.5	(15)	883,205.76	738,669	277,018	87,694	9.93	3.2
	TOTAL ACCOUNT 304.30				105,874,503.26	34,689,377	87,066,303	2,481,508	2.34	35.1

## MISSOURI-AMERICAN WATER COMPANY

TABLE 1. ESTIMATED SURVIVOR CURVE, NET SALVAGE, ORIGINAL COST, BOOK RESERVE, AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO UTILITY PLANT AT MARCH 31, 2015

DEPRECIABLE GROUP		PROBABLE RETIREMENT DATE	SURVIVOR CURVE	NET SALVAGE	ORIGINAL COST AT MARCH 31, 2015	BOOK RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT		COMPOSITE REMAINING LIFE
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)=(8)/(5)	(10)
304.40	TRANSMISSION AND DISTRIBUTION		55-R2.5	(20)	8,305,937.91	4,967,644	4,999,481	123,491	1.49	40.5
304.53	LEASEHOLD IMPROVEMENTS		25-R4	0	18,989.32	8,816	10,173	523	2.75	19.5
304.61	OFFICE BUILDINGS									
	ALL OTHER		47-S0	(20)	12,529,572.46	3,714,899	11,320,588	263,580	2.10	42.9
	PARKVILLE	05-2018 *	47-S0	(20)	72,823.33	87,388	0	0	-	-
	TOTAL ACCOUNT 304.61				12,602,395.79	3,802,287	11,320,588	263,580	2.09	42.9
304.70	SHOP AND GARAGE									
	ALL OTHER		55-R2.5	(20)	2,628,470.11	139,152	3,015,012	78,874	3.00	38.2
	PARKVILLE	05-2018 *	55-R2.5	(20)	1,950.00	544	1,796	570	29.23	3.2
	TOTAL ACCOUNT 304.70				2,630,420.11	139,696	3,016,808	79,444	3.02	38.0
	MISCELLANEOUS									
	ALL OTHER		55-R2	(20)	3,382,845.41	729,993	3,329,422	83,692	2.47	39.8
304.80	PARKVILLE	05-2018 *	55-R2	(20)	319,406.53	212,859	170,429	54,104	16.94	3.2
	TOTAL ACCOUNT 304.80				3,702,251.94	942,852	3,499,851	137,796	3.72	25.4
	TOTAL STRUCTURES AND IMPROVEMENTS				167,417,704.66	55,673,472	139,807,105	4,124,854	2.46	33.9
305.00	COLLECTING AND IMPOUNDING RESERVIORS		85-R3	0	119,689.39	96,267	23,422	413	0.35	56.7
306.00	LAKE, RIVER AND OTHER INTAKES									
	ST. JOSEPH	06-2058 *	70-S0.5	(20)	6,326.00	(1,290)	8,881	247	3.90	36.0
	MEXICO	06-2060 *	70-S0.5	(20)	10,775.14	(1,041)	13,971	350	3.25	39.9
	JOPLIN	06-2068 *	70-S0.5	(20)	573,275.62	(58,407)	746,338	17,542	3.06	42.5
	JEFFERSON	06-2049 *	70-S0.5	(20)	6,752,192.67	(455,511)	8,558,142	266,634	3.95	32.1
	TOTAL ACCOUNT 306.00				7,342,569.43	(516,249)	9,327,332	284,773	3.88	32.8
307.00	WELLS AND SPRINGS									
	ALL OTHER		55-R1.5	(5)	7,217,433.32	1,440,102	6,138,203	177,237	2.46	34.6
	PARKVILLE	05-2018 *	55-R1.5	(5)	36,247.49	21,499	16,561	5,274	14.55	3.1
	TOTAL ACCOUNT 307				7,253,680.81	1,461,601	6,154,764	182,511	2.52	33.7
308.00	INFILTRATION GALLERIES AND TUNNELS		60-R2.5	0	1,803.84	218	1,585	32	1.77	49.5
309.00	SUPPLY MAINS		80-R3	(25)	22,278,155.49	7,220,498	20,627,196	323,704	1.45	63.7
310.10	POWER GENERATION EQUIPMENT		37-R3	(5)	2,781,383.98	403,496	2,516,958	84,914	3.05	29.6

MISSOURI-AMERICAN WATER COMPANY

TABLE 1. ESTIMATED SURVIVOR CURVE, NET SALVAGE, ORIGINAL COST, BOOK RESERVE, AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO UTILITY PLANT AT MARCH 31, 2015

DEPRECIABLE GROUP (1)	PROBABLE RETIREMENT DATE (2)	SURVIVOR CURVE (3)	NET SALVAGE (4)	ORIGINAL COST AT MARCH 31, 2015 (5)	BOOK RESERVE (6)	FUTURE ACCRUALS (7)	CALCULATED ANNUAL ACCRUAL AMOUNT (8)		COMPOSITE REMAINING LIFE (10)
								(9)=(8)/(5)	
311.00 ELECTRIC PUMPING EQUIPMENT									
ALL OTHER		47-R1	(10)	59,784,627.84	24,091,273	41,671,817	1,138,501	1.90	36.6
PARKVILLE	05-2018 *	47-R1	(10)	299,029.38	328,932	0	0	-	-
TOTAL ACCOUNT 311				60,083,657.22	24,420,205	41,671,817	1,138,501	1.89	36.6
320.00 WATER TREATMENT EQUIPMENT									
ALL OTHER		48-R1.5	(25)	112,449,830.50	42,543,864	98,018,424	2,655,225	2.36	36.9
PARKVILLE	05-2018 *	48-R1.5	(25)	2,225,086.87	2,632,408	148,951	47,350	2.13	3.1
TOTAL ACCOUNT 320				114,674,917.37	45,176,272	98,167,375	2,702,575	2.36	36.3
330.00 DISTRIBUTION RESERVOIRS AND STANDPIPES		65-R2.5	(30)	29,392,687.85	13,194,856	25,015,638	534,748	1.82	46.8
331.00 MAINS - TRANSMISSION AND DISTRIBUTION		90-R2	(30)	1,173,712,222.45	216,647,757	1,309,178,133	16,907,197	1.44	77.4
332.00 MAINS - FIRE		85-S1	(30)	595,476.92	141,036	633,084	9,208	1.55	68.8
333.00 SERVICES		65-R2	(100)	41,541,363.38	10,270,815	72,811,911	1,366,878	3.29	53.3
334.00 METERS AND METER INSTALLATIONS		42-R1.5	(10)	118,812,034.09	25,003,169	105,690,069	3,142,967	2.65	33.6
335.00 FIRE HYDRANTS		65-R1.5	(30)	75,145,897.09	20,621,732	77,067,934	1,486,613	1.98	51.8
339.10 MISCELLANEOUS INTANGIBLE PLANT - OTHER		25-SQ	0	3,420.81	1,666	1,755	144	4.21	12.2
339.20 MISCELLANEOUS SOUCE OR SUPPLY - OTHER		25-SQ	0	1,729.62	502	1,228	86	4.97	14.3
339.40 MISCELLANEOUS WATER TREATMENT - OTHER		30-SQ	0	1,473,221.20	630,245	842,976	49,120	3.33	17.2
339.50 MISCELLANEOUS TRANSMISSION AND DISTRIBUTION - OTHER		50-R3	0	37,653.09	10,059	27,594	1,114	2.96	24.8
339.60 MISCELLANEOUS INTANGIBLE PLANT - SOFTWARE		30-SQ	0	1,480,794.42	516,279	964,515	44,833	3.03	21.5
TOTAL ACCOUNT 339				2,996,819.14	1,158,751	1,838,068	95,297	3.18	19.3
340.10 OFFICE FURNITURE									
FULLY ACCRUED		FULLY ACCRUED		406,305.59	406,306	0	0	-	-
AMORTIZED		20-SQ	0	937,831.31	448,800	489,031	46,853	5.00	10.4
TOTAL OFFICE FURNITURE AND EQUIPMENT				1,344,136.90	855,105.59	489,031.00	46,853.00	3.49	10.4
340.20 COMPUTER HARDWARE									
FULLY ACCRUED		FULLY ACCRUED		195,629.70	195,630	0	0	-	-
AMORTIZED		5-SQ	0	3,989,478.52	1,479,500	2,509,979	797,877	20.00	3.1
TOTAL COMPUTER HARDWARE				4,185,108.22	1,675,130	2,509,979	797,877	19.06	3.1



## MISSOURI-AMERICAN WATER COMPANY

TABLE 1. ESTIMATED SURVIVOR CURVE, NET SALVAGE, ORIGINAL COST, BOOK RESERVE, AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO UTILITY PLANT AT MARCH 31, 2015

DEPRECIABLE GROUP (1)	PROBABLE RETIREMENT DATE (2)	SURVIVOR CURVE (3)	NET SALVAGE (4)	ORIGINAL COST AT MARCH 31, 2015 (5)	BOOK RESERVE (6)	FUTURE ACCRUALS (7)	CALCULATED ANNUAL		COMPOSITE REMAINING LIFE (10)
							ACCRUAL AMOUNT (8)	ACCRUAL RATE (9)=(8)/(5)	
340.30		FULLY ACCRUED		70,393.03	70,393	0	0	-	-
		10-SQ	0	52,029,494.65	10,900,000	41,129,495	5,205,543	10.00	7.9
				52,099,887.68	10,970,393	41,129,495	5,205,543	9.99	7.9
340.50		15-SQ	0	551,217.01	453,425	97,792	36,748	6.67	2.7
				58,180,349.81	13,954,053	44,226,297	6,087,021	10.46	7.3
341.10		9-L1.5	15	1,569,384.28	780,992	552,985	87,450	5.57	6.3
341.20		10-L1.5	15	4,507,067.03	4,008,914	(177,907)	0	- **	-
341.30		6-L1.5	15	1,298,860.83	2,016,465	(912,434)	0	- **	-
341.40		15-S3	5	3,385,336.07	565,861	2,650,208	208,284	6.15	12.7
				10,760,648.21	7,372,232	2,112,852	295,734	2.75	7.1
342.00		FULLY ACCRUED		21,005.88	21,006	0	0	-	-
		25-SQ	0	690,653.78	207,500	483,154	27,592	4.00	17.5
				711,659.66	228,506	483,154	27,592	3.88	17.5
343.00		FULLY ACCRUED		1,698,608.44	1,698,608	0	0	-	-
		20-SQ	0	4,983,833.32	1,980,000	3,003,833	249,324	5.00	12.0
				6,682,441.76	3,678,608	3,003,833	249,324	3.73	12.0
344.00		FULLY ACCRUED		527,389.31	527,389	0	0	-	-
		15-SQ	0	740,456.33	398,200	342,256	49,425	6.67	6.9
				1,267,845.64	925,589	342,256	49,425	3.90	6.9
345.00		12-L1	20	1,446,782.05	725,412	432,014	54,893	3.79	7.9
346.10		FULLY ACCRUED		73,981.32	73,981	0	0	-	-
		15-SQ	0	3,596,305.82	1,555,500	2,040,806	240,051	6.67	8.5
				5,117,069.19	2,354,893	2,472,820	294,944	5.76	8.4

## MISSOURI-AMERICAN WATER COMPANY

TABLE 1. ESTIMATED SURVIVOR CURVE, NET SALVAGE, ORIGINAL COST, BOOK RESERVE, AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO UTILITY PLANT AT MARCH 31, 2015

DEPRECIABLE GROUP (1)	PROBABLE RETIREMENT DATE (2)	SURVIVOR CURVE (3)	NET SALVAGE (4)	ORIGINAL COST AT MARCH 31, 2015 (5)	BOOK RESERVE (6)	FUTURE ACCRUALS (7)	CALCULATED ANNUAL		COMPOSITE REMAINING LIFE (10)
							ACCRUAL AMOUNT (8)	ACCRUAL RATE (9)=(8)/(5)	
346.20	COMMUNICATION EQUIPMENT - TELEPHONE FULLY ACCRUED AMORTIZED	FULLY ACCRUED 10-SQ	0	7,426.39 <u>62,866.08</u>	7,426 <u>27,900</u>	0 <u>34,966</u>	0 <u>6,287</u>	- 10.00	- 5.6
	TOTAL COMMUNICATION EQUIPMENT - TELEPHONE			<u>70,292.47</u>	<u>35,326</u>	<u>34,966</u>	<u>6,287</u>	<u>8.94</u>	<u>5.6</u>
347.00	MISCELLANEOUS EQUIPMENT FULLY ACCRUED AMORTIZED	FULLY ACCRUED 15-SQ	0	68,143.74 <u>2,331,833.55</u>	68,144 <u>1,033,500</u>	0 <u>1,298,334</u>	0 <u>155,479</u>	- 6.67	- 8.4
	TOTAL MISCELLANEOUS EQUIPMENT			<u>2,399,977.29</u>	<u>1,101,644</u>	<u>1,298,334</u>	<u>155,479</u>	<u>6.48</u>	<u>8.4</u>
348.00	OTHER TANGIBLE PROPERTY FULLY ACCRUED AMORTIZED	FULLY ACCRUED 20-SQ	0	25,888.59 <u>24,545.56</u>	25,889 <u>15,565</u>	0 <u>8,981</u>	0 <u>1,227</u>	- 5.00	- 7.3
	TOTAL OTHER TANGIBLE PROPERTY			<u>50,434.15</u>	<u>41,454</u>	<u>8,981</u>	<u>1,227</u>	<u>2.43</u>	<u>7.3</u>
	<b>TOTAL DEPRECIABLE PLANT</b>			<b><u>1,909,390,781.29</u></b>	<b><u>450,666,204</u></b>	<b><u>1,964,515,884</u></b>	<b><u>39,552,218</u></b>	<b><u>2.07</u></b>	<b><u>49.7</u></b>
	<b>UNRECOVERED RESERVE FOR AMORTIZATION</b>								
340.10	OFFICE FURNITURE				60,586		(12,117) ***		
340.20	COMPUTER HARDWARE				(1,025,636)		205,127 ***		
340.30	COMPUTER SOFTWARE				(827,072)		165,414 ***		
340.50	OTHER EQUIPMENT				(22,009)		4,402 ***		
342.00	STORES EQUIPMENT				(197,638)		39,528 ***		
343.00	TOOLS, SHOP AND GARAGE EQUIPMENT				(161,735)		32,347 ***		
344.00	LABORATORY EQUIPMENT				(189,366)		37,873 ***		
346.10	COMMUNICATION EQUIPMENT - NON-TELEPHONE				(146,066)		29,213 ***		
346.20	COMMUNICATION EQUIPMENT - TELEPHONE				540		(108) ***		
347.00	MISCELLANEOUS EQUIPMENT				(197,239)		39,448 ***		
348.00	OTHER TANGIBLE PROPERTY				(13,025)		2,605 ***		
	<b>TOTAL UNRECOVERED RESERVE FOR AMORTIZATION</b>				<b>(2,718,659)</b>		<b>543,732</b>		

MISSOURI-AMERICAN WATER COMPANY

TABLE 1. ESTIMATED SURVIVOR CURVE, NET SALVAGE, ORIGINAL COST, BOOK RESERVE, AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO UTILITY PLANT AT MARCH 31, 2015

DEPRECIABLE GROUP (1)	PROBABLE RETIREMENT DATE (2)	SURVIVOR CURVE (3)	NET SALVAGE (4)	ORIGINAL COST AT MARCH 31, 2015 (5)	BOOK RESERVE (6)	FUTURE ACCRUALS (7)	CALCULATED ANNUAL		COMPOSITE REMAINING LIFE (10)
							ACCRUAL AMOUNT (8)	ACCRUAL RATE (9)=(8)/(5)	
<b>NONDEPRECIABLE PLANT</b>									
301.00	ORGANIZATION			243,430.28	(17,409)				
302.00	FRANCHISES AND CONSENTS			43,697.89					
303.20	LAND AND LAND RIGHTS - SOURCE OF SUPPLY			1,739,117.93					
303.30	LAND AND LAND RIGHTS - PUMPING			478,681.01					
303.40	LAND AND LAND RIGHTS - WATER TREATMENT			2,316,283.17	(1,084)				
303.50	LAND AND LAND RIGHTS - TRANSMISSION AND DISTRIBUTION			4,802,567.56	186				
303.60	LAND AND LAND RIGHTS - ADMINISTRATIVE			389,178.04					
310.20	BOILER PLANT EQUIPMENT				(298)				
<b>TOTAL NONDEPRECIABLE PLANT</b>				<b>10,012,955.88</b>	<b>(18,605)</b>				
<b>TOTAL UTILITY PLANT</b>				<b>1,919,403,737.17</b>	<b>447,928,939</b>	<b>1,964,515,884</b>	<b>40,095,950</b>		

\* LIFE SPAN PROCEDURE IS USED. SURVIVOR CURVE SHOWN IS INTERIM CURVE.

\*\* ACCRUAL RATE FOR NEW ADDITIONS AS OF APRIL 1, 2015 ARE AS FOLLOWS:

ACCOUNT 341.20 8.71%

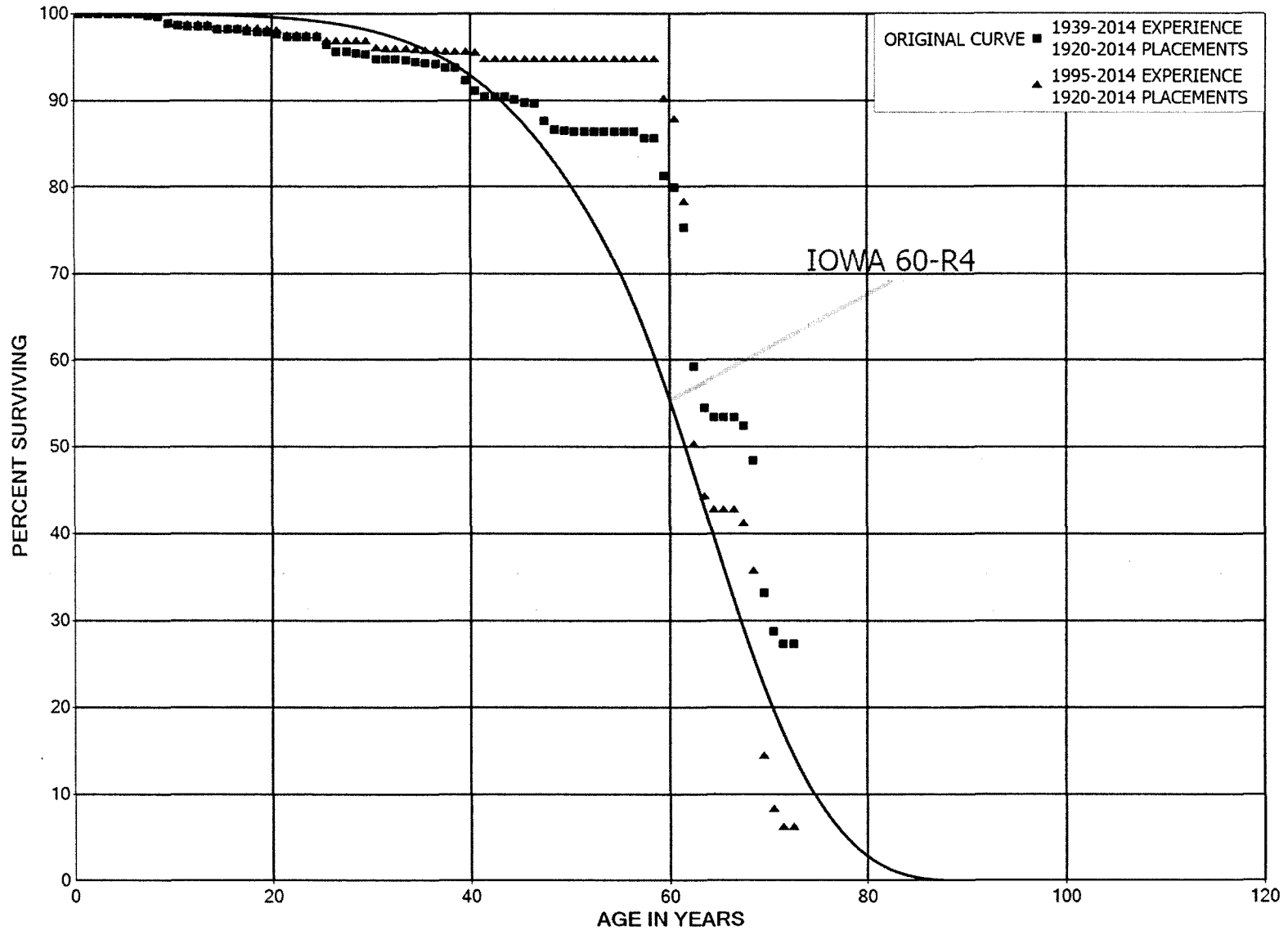
ACCOUNT 341.30 14.76%

\*\*\* 5-YEAR AMORTIZATION OF UNRECOVERED RESERVE RELATED TO UTILIZATION OF AMORTIZATION ACCOUNTING.

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## PART VII. SERVICE LIFE STATISTICS

MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 304.10 STRUCTURES AND IMPROVEMENTS - SOURCE OF SUPPLY  
ORIGINAL AND SMOOTH SURVIVOR CURVES



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.10 STRUCTURES AND IMPROVEMENTS - SOURCE OF SUPPLY

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1920-2014			EXPERIENCE BAND 1939-2014		
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	16,381,634		0.0000	1.0000	100.00
0.5	16,306,060		0.0000	1.0000	100.00
1.5	16,080,574		0.0000	1.0000	100.00
2.5	16,057,919	6,195	0.0004	0.9996	100.00
3.5	14,573,078	2,726	0.0002	0.9998	99.96
4.5	14,465,309	6,078	0.0004	0.9996	99.94
5.5	14,441,576		0.0000	1.0000	99.90
6.5	13,786,466	30,779	0.0022	0.9978	99.90
7.5	10,737,896	3,280	0.0003	0.9997	99.68
8.5	9,851,989	77,657	0.0079	0.9921	99.65
9.5	9,774,332	20,342	0.0021	0.9979	98.86
10.5	8,958,175	9,988	0.0011	0.9989	98.66
11.5	6,807,949	3,674	0.0005	0.9995	98.55
12.5	6,603,697	1,122	0.0002	0.9998	98.49
13.5	6,588,684	18,417	0.0028	0.9972	98.48
14.5	6,566,898	2,450	0.0004	0.9996	98.20
15.5	6,542,800	982	0.0002	0.9998	98.16
16.5	6,332,710	12,243	0.0019	0.9981	98.15
17.5	6,170,929	5,198	0.0008	0.9992	97.96
18.5	6,171,185	2,081	0.0003	0.9997	97.88
19.5	6,124,155	12,769	0.0021	0.9979	97.84
20.5	5,480,539	19,940	0.0036	0.9964	97.64
21.5	2,326,157		0.0000	1.0000	97.28
22.5	2,326,157	4	0.0000	1.0000	97.28
23.5	2,318,195	1,103	0.0005	0.9995	97.28
24.5	2,258,652	20,774	0.0092	0.9908	97.24
25.5	2,228,540	15,813	0.0071	0.9929	96.34
26.5	2,211,941	580	0.0003	0.9997	95.66
27.5	2,210,885	6,618	0.0030	0.9970	95.64
28.5	2,090,717	686	0.0003	0.9997	95.35
29.5	2,086,524	11,779	0.0056	0.9944	95.32
30.5	2,070,816	854	0.0004	0.9996	94.78
31.5	2,067,243	175	0.0001	0.9999	94.74
32.5	2,067,068	1,981	0.0010	0.9990	94.73
33.5	2,063,521	4,227	0.0020	0.9980	94.64
34.5	2,059,295	2,478	0.0012	0.9988	94.45
35.5	2,054,396	2,879	0.0014	0.9986	94.33
36.5	2,000,939	10,651	0.0053	0.9947	94.20
37.5	1,768,042	66	0.0000	1.0000	93.70
38.5	1,762,132	26,039	0.0148	0.9852	93.70

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.10 STRUCTURES AND IMPROVEMENTS - SOURCE OF SUPPLY

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1920-2014			EXPERIENCE BAND 1939-2014			
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	1,735,282	23,378	0.0135	0.9865	92.31	
40.5	1,699,920	11,572	0.0068	0.9932	91.07	
41.5	1,477,231	665	0.0004	0.9996	90.45	
42.5	1,460,828	533	0.0004	0.9996	90.41	
43.5	1,101,102	4,389	0.0040	0.9960	90.38	
44.5	1,092,748	4,000	0.0037	0.9963	90.02	
45.5	1,078,619	1,157	0.0011	0.9989	89.69	
46.5	509,685	10,981	0.0215	0.9785	89.59	
47.5	498,704	6,072	0.0122	0.9878	87.66	
48.5	492,632	355	0.0007	0.9993	86.59	
49.5	489,858	789	0.0016	0.9984	86.53	
50.5	356,889		0.0000	1.0000	86.39	
51.5	331,459		0.0000	1.0000	86.39	
52.5	331,459		0.0000	1.0000	86.39	
53.5	331,459		0.0000	1.0000	86.39	
54.5	327,811		0.0000	1.0000	86.39	
55.5	322,911		0.0000	1.0000	86.39	
56.5	69,142	585	0.0085	0.9915	86.39	
57.5	68,557		0.0000	1.0000	85.66	
58.5	63,634	3,240	0.0509	0.9491	85.66	
59.5	60,391	982	0.0163	0.9837	81.30	
60.5	51,212	3,023	0.0590	0.9410	79.98	
61.5	51,212	10,872	0.2123	0.7877	75.25	
62.5	50,191	4,004	0.0798	0.9202	59.28	
63.5	47,333	959	0.0203	0.9797	54.55	
64.5	46,361		0.0000	1.0000	53.44	
65.5	46,361	2	0.0000	1.0000	53.44	
66.5	46,359	923	0.0199	0.9801	53.44	
67.5	45,434	3,435	0.0756	0.9244	52.38	
68.5	41,727	13,162	0.3154	0.6846	48.42	
69.5	28,541	3,802	0.1332	0.8668	33.15	
70.5	24,732	1,289	0.0521	0.9479	28.73	
71.5	23,409		0.0000	1.0000	27.23	
72.5	23,409	355	0.0152	0.9848	27.23	
73.5	23,054		0.0000	1.0000	26.82	
74.5	23,054		0.0000	1.0000	26.82	
75.5	23,054		0.0000	1.0000	26.82	
76.5	23,054		0.0000	1.0000	26.82	
77.5	23,054	994	0.0431	0.9569	26.82	
78.5	22,058	567	0.0257	0.9743	25.66	

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.10 STRUCTURES AND IMPROVEMENTS - SOURCE OF SUPPLY

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1920-2014			EXPERIENCE BAND 1939-2014		
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	21,374		0.0000	1.0000	25.00
80.5	21,374		0.0000	1.0000	25.00
81.5	21,374		0.0000	1.0000	25.00
82.5	21,374	995	0.0466	0.9534	25.00
83.5	20,053		0.0000	1.0000	23.84
84.5	20,053		0.0000	1.0000	23.84
85.5	20,053		0.0000	1.0000	23.84
86.5	20,053		0.0000	1.0000	23.84
87.5	19,345		0.0000	1.0000	23.84
88.5	19,345		0.0000	1.0000	23.84
89.5	19,345		0.0000	1.0000	23.84
90.5	19,345		0.0000	1.0000	23.84
91.5	19,345	4,453	0.2302	0.7698	23.84
92.5	14,832		0.0000	1.0000	18.35
93.5	14,832	2,347	0.1582	0.8418	18.35
94.5					15.45



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.10 STRUCTURES AND IMPROVEMENTS - SOURCE OF SUPPLY

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1920-2014			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	10,222,665		0.0000	1.0000	100.00
0.5	10,782,744		0.0000	1.0000	100.00
1.5	13,714,501		0.0000	1.0000	100.00
2.5	13,690,264		0.0000	1.0000	100.00
3.5	12,218,249		0.0000	1.0000	100.00
4.5	12,173,607	6,078	0.0005	0.9995	100.00
5.5	12,167,001		0.0000	1.0000	99.95
6.5	11,512,677	28,858	0.0025	0.9975	99.95
7.5	8,461,501		0.0000	1.0000	99.70
8.5	7,691,737	69,452	0.0090	0.9910	99.70
9.5	7,625,792	11,027	0.0014	0.9986	98.80
10.5	6,834,659		0.0000	1.0000	98.66
11.5	4,697,286	1,906	0.0004	0.9996	98.66
12.5	4,494,803	230	0.0001	0.9999	98.62
13.5	4,482,247	17,497	0.0039	0.9961	98.61
14.5	4,463,507	2,450	0.0005	0.9995	98.23
15.5	4,441,830	982	0.0002	0.9998	98.17
16.5	4,277,805		0.0000	1.0000	98.15
17.5	4,356,132		0.0000	1.0000	98.15
18.5	4,350,921	1,961	0.0005	0.9995	98.15
19.5	4,304,822	7,256	0.0017	0.9983	98.11
20.5	3,680,637	19,940	0.0054	0.9946	97.94
21.5	748,944		0.0000	1.0000	97.41
22.5	764,716		0.0000	1.0000	97.41
23.5	1,115,951		0.0000	1.0000	97.41
24.5	1,061,476	7,789	0.0073	0.9927	97.41
25.5	1,054,477		0.0000	1.0000	96.70
26.5	1,621,469		0.0000	1.0000	96.70
27.5	1,620,993		0.0000	1.0000	96.70
28.5	1,507,442		0.0000	1.0000	96.70
29.5	1,506,353	11,779	0.0078	0.9922	96.70
30.5	1,623,216	854	0.0005	0.9995	95.94
31.5	1,621,822		0.0000	1.0000	95.89
32.5	1,621,822		0.0000	1.0000	95.89
33.5	1,620,257	2,126	0.0013	0.9987	95.89
34.5	1,621,779	2,478	0.0015	0.9985	95.76
35.5	1,621,779		0.0000	1.0000	95.62
36.5	1,848,222	3,141	0.0017	0.9983	95.62
37.5	1,622,835		0.0000	1.0000	95.45
38.5	1,621,914		0.0000	1.0000	95.45

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.10 STRUCTURES AND IMPROVEMENTS - SOURCE OF SUPPLY

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1920-2014			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	1,622,914	1,935	0.0012	0.9988	95.45	
40.5	1,618,174	11,572	0.0072	0.9928	95.34	
41.5	1,395,486	33	0.0000	1.0000	94.66	
42.5	1,379,879		0.0000	1.0000	94.66	
43.5	1,022,857		0.0000	1.0000	94.66	
44.5	1,019,864		0.0000	1.0000	94.66	
45.5	1,009,736		0.0000	1.0000	94.66	
46.5	441,961	257	0.0006	0.9994	94.66	
47.5	442,628		0.0000	1.0000	94.60	
48.5	446,336		0.0000	1.0000	94.60	
49.5	457,104	134	0.0003	0.9997	94.60	
50.5	328,598		0.0000	1.0000	94.57	
51.5	304,490		0.0000	1.0000	94.57	
52.5	304,490		0.0000	1.0000	94.57	
53.5	304,490		0.0000	1.0000	94.57	
54.5	300,843		0.0000	1.0000	94.57	
55.5	295,943		0.0000	1.0000	94.57	
56.5	42,174		0.0000	1.0000	94.57	
57.5	42,174		0.0000	1.0000	94.57	
58.5	38,247	1,808	0.0473	0.9527	94.57	
59.5	37,119	982	0.0265	0.9735	90.10	
60.5	27,940	3,023	0.1082	0.8918	87.72	
61.5	27,940	10,016	0.3585	0.6415	78.23	
62.5	27,775	3,317	0.1194	0.8806	50.18	
63.5	26,925	959	0.0356	0.9644	44.19	
64.5	25,953		0.0000	1.0000	42.62	
65.5	25,953	2	0.0001	0.9999	42.62	
66.5	25,951	923	0.0356	0.9644	42.61	
67.5	25,734	3,435	0.1335	0.8665	41.10	
68.5	22,027	13,162	0.5975	0.4025	35.61	
69.5	8,841	3,802	0.4300	0.5700	14.33	
70.5	5,032	1,289	0.2561	0.7439	8.17	
71.5	3,709		0.0000	1.0000	6.08	
72.5	8,221		0.0000	1.0000	6.08	
73.5	8,221		0.0000	1.0000	6.08	
74.5	23,054		0.0000	1.0000	6.08	
75.5	23,054		0.0000	1.0000	6.08	
76.5	23,054		0.0000	1.0000	6.08	
77.5	23,054	994	0.0431	0.9569	6.08	
78.5	22,058	567	0.0257	0.9743	5.81	

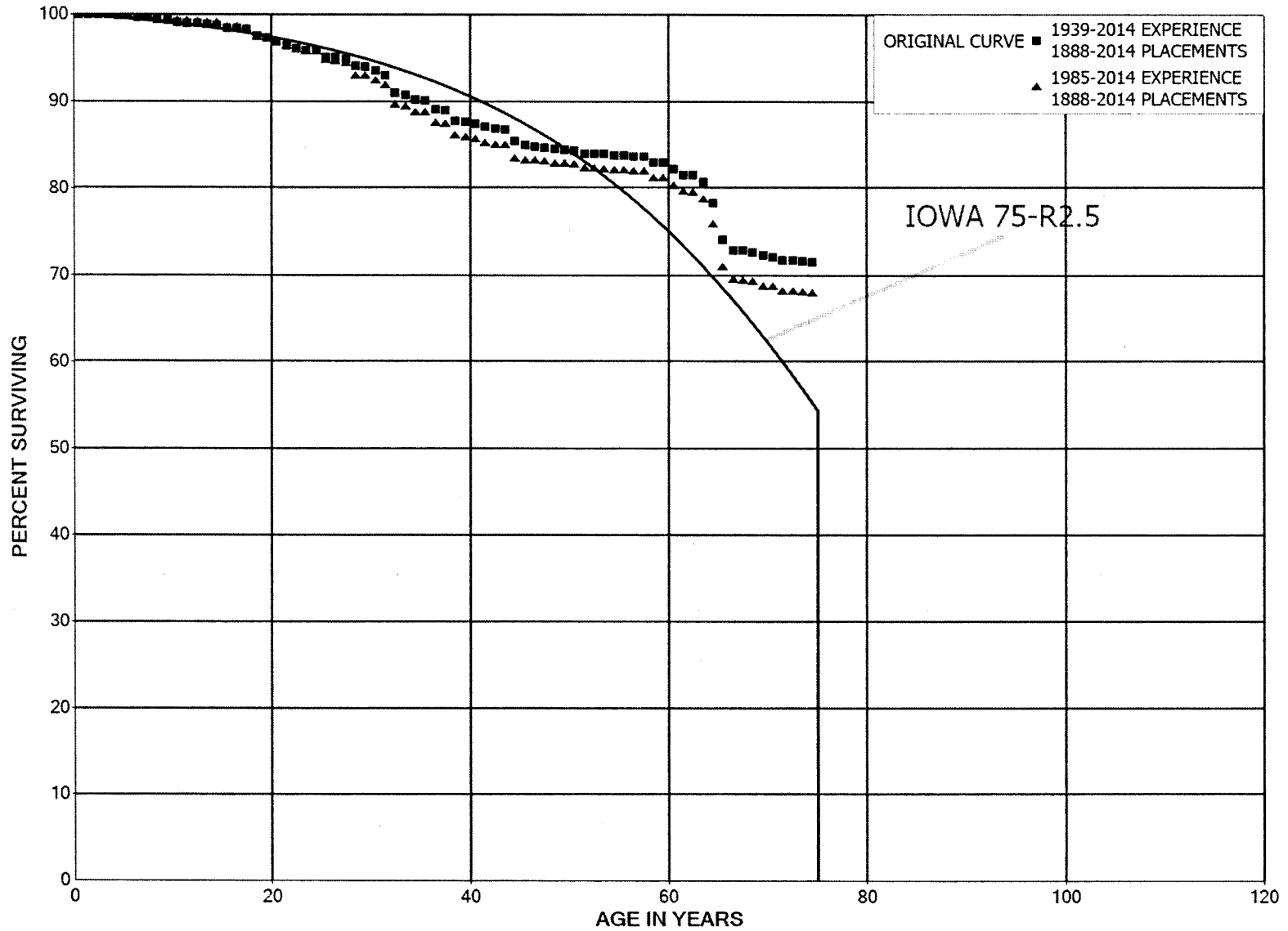
## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.10 STRUCTURES AND IMPROVEMENTS - SOURCE OF SUPPLY

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1920-2014			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
79.5	21,374		0.0000	1.0000	5.67
80.5	21,374		0.0000	1.0000	5.67
81.5	21,374		0.0000	1.0000	5.67
82.5	21,374	995	0.0466	0.9534	5.67
83.5	20,053		0.0000	1.0000	5.40
84.5	20,053		0.0000	1.0000	5.40
85.5	20,053		0.0000	1.0000	5.40
86.5	20,053		0.0000	1.0000	5.40
87.5	19,345		0.0000	1.0000	5.40
88.5	19,345		0.0000	1.0000	5.40
89.5	19,345		0.0000	1.0000	5.40
90.5	19,345		0.0000	1.0000	5.40
91.5	19,345	4,453	0.2302	0.7698	5.40
92.5	14,832		0.0000	1.0000	4.16
93.5	14,832	2,347	0.1582	0.8418	4.16
94.5					3.50

MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 304.20 STRUCTURES AND IMPROVEMENTS - POWER AND PUMPING  
ORIGINAL AND SMOOTH SURVIVOR CURVES



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.20 STRUCTURES AND IMPROVEMENTS - POWER AND PUMPING

## ORIGINAL LIFE TABLE

## PLACEMENT BAND 1888-2014

## EXPERIENCE BAND 1939-2014

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	19,410,347	409	0.0000	1.0000	100.00
0.5	19,389,884	7,661	0.0004	0.9996	100.00
1.5	19,204,146	1,913	0.0001	0.9999	99.96
2.5	18,662,556	2,938	0.0002	0.9998	99.95
3.5	17,670,199	17,059	0.0010	0.9990	99.93
4.5	17,530,353	8,550	0.0005	0.9995	99.84
5.5	17,347,303	24,023	0.0014	0.9986	99.79
6.5	16,508,082	13,691	0.0008	0.9992	99.65
7.5	15,795,007	34,743	0.0022	0.9978	99.57
8.5	15,299,117	13,175	0.0009	0.9991	99.35
9.5	15,255,174	29,784	0.0020	0.9980	99.26
10.5	15,206,058	14,856	0.0010	0.9990	99.07
11.5	15,165,954	6,093	0.0004	0.9996	98.97
12.5	14,581,093	14,791	0.0010	0.9990	98.93
13.5	14,536,351	8,723	0.0006	0.9994	98.83
14.5	9,900,004	32,986	0.0033	0.9967	98.77
15.5	9,463,902	3,562	0.0004	0.9996	98.44
16.5	8,779,404	12,088	0.0014	0.9986	98.41
17.5	7,459,957	60,506	0.0081	0.9919	98.27
18.5	7,359,418	14,656	0.0020	0.9980	97.47
19.5	7,237,218	30,179	0.0042	0.9958	97.28
20.5	7,083,602	34,609	0.0049	0.9951	96.87
21.5	6,101,201	23,074	0.0038	0.9962	96.40
22.5	6,038,881	9,526	0.0016	0.9984	96.04
23.5	4,946,564	3,341	0.0007	0.9993	95.88
24.5	4,725,922	35,075	0.0074	0.9926	95.82
25.5	4,014,048	3,424	0.0009	0.9991	95.11
26.5	3,830,118	5,723	0.0015	0.9985	95.03
27.5	3,665,426	33,766	0.0092	0.9908	94.89
28.5	3,076,501	871	0.0003	0.9997	94.01
29.5	2,911,446	13,236	0.0045	0.9955	93.98
30.5	2,842,169	20,111	0.0071	0.9929	93.56
31.5	2,810,927	57,761	0.0205	0.9795	92.90
32.5	2,687,496	6,847	0.0025	0.9975	90.99
33.5	2,635,948	16,533	0.0063	0.9937	90.75
34.5	2,506,443	2,166	0.0009	0.9991	90.19
35.5	2,385,572	26,972	0.0113	0.9887	90.11
36.5	2,310,506	3,540	0.0015	0.9985	89.09
37.5	2,304,801	31,276	0.0136	0.9864	88.95
38.5	2,188,671	4,102	0.0019	0.9981	87.75

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.20 STRUCTURES AND IMPROVEMENTS - POWER AND PUMPING

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1888-2014			EXPERIENCE BAND 1939-2014			
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	2,150,443	4,997	0.0023	0.9977	87.58	
40.5	2,134,446	8,459	0.0040	0.9960	87.38	
41.5	2,070,590	5,707	0.0028	0.9972	87.03	
42.5	2,058,323	722	0.0004	0.9996	86.79	
43.5	2,039,281	32,435	0.0159	0.9841	86.76	
44.5	1,998,068	11,168	0.0056	0.9944	85.38	
45.5	1,955,946	3,821	0.0020	0.9980	84.90	
46.5	1,906,049	2,092	0.0011	0.9989	84.74	
47.5	1,888,905	3,695	0.0020	0.9980	84.64	
48.5	1,848,565	1,076	0.0006	0.9994	84.48	
49.5	1,820,794	2,520	0.0014	0.9986	84.43	
50.5	1,816,840	6,538	0.0036	0.9964	84.31	
51.5	1,784,502	1,576	0.0009	0.9991	84.01	
52.5	1,761,015	726	0.0004	0.9996	83.94	
53.5	1,720,117	3,353	0.0019	0.9981	83.90	
54.5	1,633,068	693	0.0004	0.9996	83.74	
55.5	1,629,022	1,505	0.0009	0.9991	83.70	
56.5	1,622,407	309	0.0002	0.9998	83.62	
57.5	1,588,711	12,957	0.0082	0.9918	83.61	
58.5	1,377,336	242	0.0002	0.9998	82.93	
59.5	546,475	4,993	0.0091	0.9909	82.91	
60.5	470,329	3,758	0.0080	0.9920	82.15	
61.5	462,724	160	0.0003	0.9997	81.50	
62.5	462,564	3,944	0.0085	0.9915	81.47	
63.5	458,193	14,100	0.0308	0.9692	80.77	
64.5	436,359	23,348	0.0535	0.9465	78.29	
65.5	366,702	6,167	0.0168	0.9832	74.10	
66.5	319,781	236	0.0007	0.9993	72.85	
67.5	296,199	578	0.0020	0.9980	72.80	
68.5	293,522	1,550	0.0053	0.9947	72.66	
69.5	284,714	631	0.0022	0.9978	72.27	
70.5	274,133	1,444	0.0053	0.9947	72.11	
71.5	270,179	157	0.0006	0.9994	71.73	
72.5	269,223	264	0.0010	0.9990	71.69	
73.5	266,757	552	0.0021	0.9979	71.62	
74.5	266,069	1,017	0.0038	0.9962	71.47	
75.5	229,473	3,661	0.0160	0.9840	71.20	
76.5	222,016	5,100	0.0230	0.9770	70.06	
77.5	216,766	236	0.0011	0.9989	68.46	
78.5	216,267	126	0.0006	0.9994	68.38	

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.20 STRUCTURES AND IMPROVEMENTS - POWER AND PUMPING

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1888-2014			EXPERIENCE BAND 1939-2014			
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	216,085	1,722	0.0080	0.9920	68.34	
80.5	214,360	675	0.0031	0.9969	67.80	
81.5	212,385	672	0.0032	0.9968	67.58	
82.5	210,873	7,605	0.0361	0.9639	67.37	
83.5	77,235	302	0.0039	0.9961	64.94	
84.5	76,933	300	0.0039	0.9961	64.69	
85.5	73,249	76	0.0010	0.9990	64.43	
86.5	73,173	27	0.0004	0.9996	64.37	
87.5	73,112	27	0.0004	0.9996	64.34	
88.5	67,333		0.0000	1.0000	64.32	
89.5	67,333	1,005	0.0149	0.9851	64.32	
90.5	66,328		0.0000	1.0000	63.36	
91.5	66,328	232	0.0035	0.9965	63.36	
92.5	58,574	508	0.0087	0.9913	63.14	
93.5	53,269		0.0000	1.0000	62.59	
94.5	53,269	1,667	0.0313	0.9687	62.59	
95.5	51,603		0.0000	1.0000	60.63	
96.5	51,603		0.0000	1.0000	60.63	
97.5	51,603		0.0000	1.0000	60.63	
98.5	51,603		0.0000	1.0000	60.63	
99.5	51,283	2,875	0.0561	0.9439	60.63	
100.5	48,408		0.0000	1.0000	57.23	
101.5	48,408	5,036	0.1040	0.8960	57.23	
102.5	41,585		0.0000	1.0000	51.28	
103.5	40,464	2,715	0.0671	0.9329	51.28	
104.5	33,508	546	0.0163	0.9837	47.84	
105.5	32,891		0.0000	1.0000	47.06	
106.5	32,891		0.0000	1.0000	47.06	
107.5	32,891		0.0000	1.0000	47.06	
108.5	32,891		0.0000	1.0000	47.06	
109.5	26,389		0.0000	1.0000	47.06	
110.5	26,389	2,509	0.0951	0.9049	47.06	
111.5	16,514		0.0000	1.0000	42.58	
112.5	16,514		0.0000	1.0000	42.58	
113.5	16,514		0.0000	1.0000	42.58	
114.5	10,478		0.0000	1.0000	42.58	
115.5	10,478		0.0000	1.0000	42.58	
116.5	6,726		0.0000	1.0000	42.58	
117.5	6,726		0.0000	1.0000	42.58	
118.5	6,726		0.0000	1.0000	42.58	

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.20 STRUCTURES AND IMPROVEMENTS - POWER AND PUMPING

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1888-2014			EXPERIENCE BAND 1939-2014		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
119.5	6,726		0.0000	1.0000	42.58
120.5	6,726		0.0000	1.0000	42.58
121.5	6,726	181	0.0270	0.9730	42.58
122.5	2,100		0.0000	1.0000	41.44
123.5	2,100		0.0000	1.0000	41.44
124.5	2,100		0.0000	1.0000	41.44
125.5	2,100	2,100	1.0000		41.44
126.5					



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.20 STRUCTURES AND IMPROVEMENTS - POWER AND PUMPING

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1888-2014			EXPERIENCE BAND 1985-2014		
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	16,406,458	15	0.0000	1.0000	100.00
0.5	16,513,773	6,499	0.0004	0.9996	100.00
1.5	16,362,554	773	0.0000	1.0000	99.96
2.5	15,944,153	2,938	0.0002	0.9998	99.96
3.5	15,002,088	9,334	0.0006	0.9994	99.94
4.5	15,042,031	7,814	0.0005	0.9995	99.88
5.5	15,026,069	5,379	0.0004	0.9996	99.82
6.5	14,256,960	12,985	0.0009	0.9991	99.79
7.5	13,409,129	31,387	0.0023	0.9977	99.70
8.5	12,925,761	1,394	0.0001	0.9999	99.46
9.5	12,932,345	29,702	0.0023	0.9977	99.45
10.5	12,918,861	12,399	0.0010	0.9990	99.22
11.5	12,952,212	4,467	0.0003	0.9997	99.13
12.5	12,371,781	14,141	0.0011	0.9989	99.09
13.5	12,334,638	8,086	0.0007	0.9993	98.98
14.5	7,709,956	31,021	0.0040	0.9960	98.92
15.5	7,313,380	2,757	0.0004	0.9996	98.52
16.5	6,674,840	12,088	0.0018	0.9982	98.48
17.5	5,381,359	53,232	0.0099	0.9901	98.30
18.5	5,327,104	4,226	0.0008	0.9992	97.33
19.5	5,245,876	24,037	0.0046	0.9954	97.25
20.5	5,111,299	30,502	0.0060	0.9940	96.81
21.5	4,167,406	18,603	0.0045	0.9955	96.23
22.5	4,216,267	8,444	0.0020	0.9980	95.80
23.5	3,147,369	1,439	0.0005	0.9995	95.61
24.5	3,019,808	28,587	0.0095	0.9905	95.57
25.5	2,322,603	3,374	0.0015	0.9985	94.66
26.5	2,146,448	4,171	0.0019	0.9981	94.52
27.5	2,017,903	32,980	0.0163	0.9837	94.34
28.5	1,678,838	312	0.0002	0.9998	92.80
29.5	2,395,726	12,377	0.0052	0.9948	92.78
30.5	2,398,304	13,608	0.0057	0.9943	92.30
31.5	2,376,810	57,461	0.0242	0.9758	91.78
32.5	2,253,695	6,697	0.0030	0.9970	89.56
33.5	2,206,522	16,190	0.0073	0.9927	89.29
34.5	2,103,549	1,521	0.0007	0.9993	88.64
35.5	2,030,688	26,871	0.0132	0.9868	88.57
36.5	2,006,916	3,540	0.0018	0.9982	87.40
37.5	2,024,812	31,276	0.0154	0.9846	87.25
38.5	1,904,992	4,102	0.0022	0.9978	85.90

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.20 STRUCTURES AND IMPROVEMENTS - POWER AND PUMPING

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1888-2014			EXPERIENCE BAND 1985-2014			
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	1,874,488	4,997	0.0027	0.9973	85.71	
40.5	1,863,166	8,420	0.0045	0.9955	85.49	
41.5	1,803,303	5,707	0.0032	0.9968	85.10	
42.5	1,791,992	722	0.0004	0.9996	84.83	
43.5	1,776,109	32,315	0.0182	0.9818	84.80	
44.5	1,735,540	4,426	0.0025	0.9975	83.25	
45.5	1,701,287	209	0.0001	0.9999	83.04	
46.5	1,654,155	1,732	0.0010	0.9990	83.03	
47.5	1,631,019	3,695	0.0023	0.9977	82.94	
48.5	1,591,053	1,076	0.0007	0.9993	82.76	
49.5	1,563,464	2,520	0.0016	0.9984	82.70	
50.5	1,554,186	6,538	0.0042	0.9958	82.57	
51.5	1,523,823	1,576	0.0010	0.9990	82.22	
52.5	1,502,888	726	0.0005	0.9995	82.13	
53.5	1,596,607	2,763	0.0017	0.9983	82.09	
54.5	1,510,149	693	0.0005	0.9995	81.95	
55.5	1,509,534	1,505	0.0010	0.9990	81.91	
56.5	1,502,919	91	0.0001	0.9999	81.83	
57.5	1,469,502	12,957	0.0088	0.9912	81.83	
58.5	1,263,905	242	0.0002	0.9998	81.11	
59.5	468,621	4,993	0.0107	0.9893	81.09	
60.5	392,474	3,758	0.0096	0.9904	80.23	
61.5	384,869	160	0.0004	0.9996	79.46	
62.5	384,709	3,944	0.0103	0.9897	79.43	
63.5	385,460	14,100	0.0366	0.9634	78.61	
64.5	363,626	23,348	0.0642	0.9358	75.74	
65.5	293,970	6,167	0.0210	0.9790	70.87	
66.5	247,048	236	0.0010	0.9990	69.39	
67.5	223,466	578	0.0026	0.9974	69.32	
68.5	220,789	1,550	0.0070	0.9930	69.14	
69.5	212,301	237	0.0011	0.9989	68.66	
70.5	207,251	1,444	0.0070	0.9930	68.58	
71.5	203,297	157	0.0008	0.9992	68.10	
72.5	202,341	264	0.0013	0.9987	68.05	
73.5	200,996	254	0.0013	0.9987	67.96	
74.5	207,842	1,017	0.0049	0.9951	67.87	
75.5	171,864	2,478	0.0144	0.9856	67.54	
76.5	173,112		0.0000	1.0000	66.57	
77.5	172,962	236	0.0014	0.9986	66.57	
78.5	172,463	126	0.0007	0.9993	66.48	

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.20 STRUCTURES AND IMPROVEMENTS - POWER AND PUMPING

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1888-2014			EXPERIENCE BAND 1985-2014			
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	172,581	1,722	0.0100	0.9900	66.43	
80.5	170,856	675	0.0039	0.9961	65.76	
81.5	181,936	672	0.0037	0.9963	65.50	
82.5	180,424	7,605	0.0422	0.9578	65.26	
83.5	46,786		0.0000	1.0000	62.51	
84.5	52,822	300	0.0057	0.9943	62.51	
85.5	49,138		0.0000	1.0000	62.16	
86.5	54,677	27	0.0005	0.9995	62.16	
87.5	54,616	27	0.0005	0.9995	62.13	
88.5	48,838		0.0000	1.0000	62.10	
89.5	48,838	1,005	0.0206	0.9794	62.10	
90.5	47,833		0.0000	1.0000	60.82	
91.5	47,833		0.0000	1.0000	60.82	
92.5	44,936	508	0.0113	0.9887	60.82	
93.5	46,133		0.0000	1.0000	60.13	
94.5	46,133	1,667	0.0361	0.9639	60.13	
95.5	44,467		0.0000	1.0000	57.96	
96.5	51,603		0.0000	1.0000	57.96	
97.5	51,603		0.0000	1.0000	57.96	
98.5	51,603		0.0000	1.0000	57.96	
99.5	51,283	2,875	0.0561	0.9439	57.96	
100.5	48,408		0.0000	1.0000	54.71	
101.5	48,408	5,036	0.1040	0.8960	54.71	
102.5	41,585		0.0000	1.0000	49.02	
103.5	40,464	2,715	0.0671	0.9329	49.02	
104.5	33,508	546	0.0163	0.9837	45.73	
105.5	32,891		0.0000	1.0000	44.98	
106.5	32,891		0.0000	1.0000	44.98	
107.5	32,891		0.0000	1.0000	44.98	
108.5	32,891		0.0000	1.0000	44.98	
109.5	26,389		0.0000	1.0000	44.98	
110.5	26,389	2,509	0.0951	0.9049	44.98	
111.5	16,514		0.0000	1.0000	40.71	
112.5	16,514		0.0000	1.0000	40.71	
113.5	16,514		0.0000	1.0000	40.71	
114.5	10,478		0.0000	1.0000	40.71	
115.5	10,478		0.0000	1.0000	40.71	
116.5	6,726		0.0000	1.0000	40.71	
117.5	6,726		0.0000	1.0000	40.71	
118.5	6,726		0.0000	1.0000	40.71	

## MISSOURI AMERICAN WATER COMPANY

ACCOUNT 304.20 STRUCTURES AND IMPROVEMENTS - POWER AND PUMPING

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1888-2014			EXPERIENCE BAND 1985-2014		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
119.5	6,726		0.0000	1.0000	40.71
120.5	6,726		0.0000	1.0000	40.71
121.5	6,726	181	0.0270	0.9730	40.71
122.5	2,100		0.0000	1.0000	39.61
123.5	2,100		0.0000	1.0000	39.61
124.5	2,100		0.0000	1.0000	39.61
125.5	2,100	2,100	1.0000		39.61
126.5					

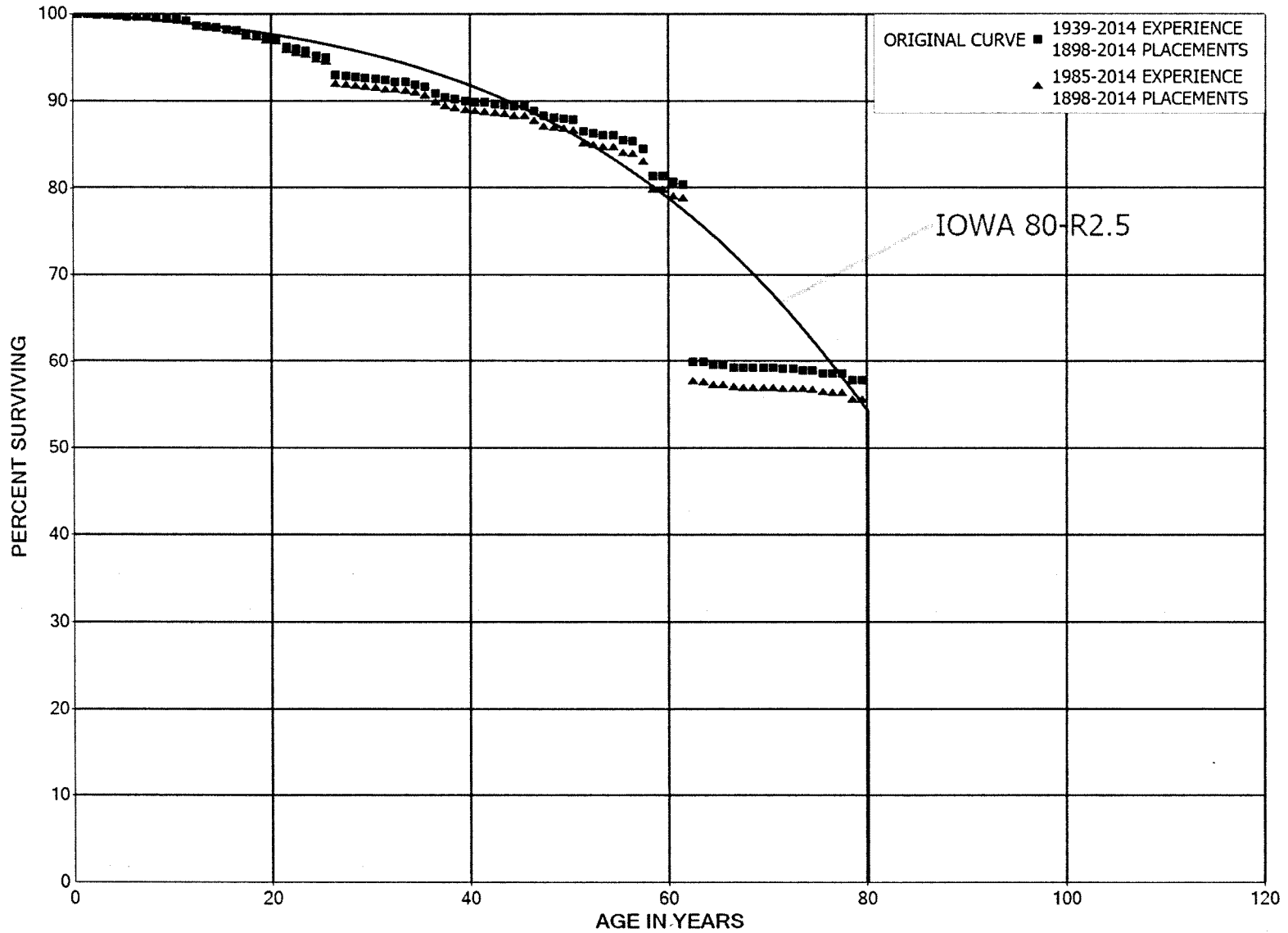


Gannett Fleming

VII-18

MO American Water Co - Water  
March 31, 2015

MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 304.30 STRUCTURES AND IMPROVEMENTS - WATER TREATMENT  
ORIGINAL AND SMOOTH SURVIVOR CURVES



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.30 STRUCTURES AND IMPROVEMENTS - WATER TREATMENT

## ORIGINAL LIFE TABLE

## PLACEMENT BAND 1898-2014

## EXPERIENCE BAND 1939-2014

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	108,502,317	303	0.0000	1.0000	100.00
0.5	106,228,132	1,789	0.0000	1.0000	100.00
1.5	105,777,490	216,414	0.0020	0.9980	100.00
2.5	104,651,117	9,016	0.0001	0.9999	99.79
3.5	102,730,601	29,582	0.0003	0.9997	99.78
4.5	101,766,083	97,451	0.0010	0.9990	99.76
5.5	100,762,388	62,287	0.0006	0.9994	99.66
6.5	83,656,349	20,498	0.0002	0.9998	99.60
7.5	76,156,897	73,845	0.0010	0.9990	99.57
8.5	74,773,243	63,866	0.0009	0.9991	99.48
9.5	74,633,180	65,214	0.0009	0.9991	99.39
10.5	73,785,782	91,156	0.0012	0.9988	99.31
11.5	73,401,629	442,402	0.0060	0.9940	99.18
12.5	67,153,769	23,618	0.0004	0.9996	98.59
13.5	65,246,541	88,605	0.0014	0.9986	98.55
14.5	38,552,876	74,366	0.0019	0.9981	98.42
15.5	38,358,228	60,966	0.0016	0.9984	98.23
16.5	35,545,742	179,449	0.0050	0.9950	98.07
17.5	34,015,500	32,254	0.0009	0.9991	97.58
18.5	32,973,501	87,521	0.0027	0.9973	97.48
19.5	30,993,759	38,371	0.0012	0.9988	97.22
20.5	29,508,330	273,138	0.0093	0.9907	97.10
21.5	21,785,535	58,998	0.0027	0.9973	96.21
22.5	21,323,528	50,361	0.0024	0.9976	95.95
23.5	20,832,548	110,946	0.0053	0.9947	95.72
24.5	20,566,142	46,282	0.0023	0.9977	95.21
25.5	17,724,871	379,962	0.0214	0.9786	94.99
26.5	17,215,899	31,562	0.0018	0.9982	92.96
27.5	16,928,448	19,009	0.0011	0.9989	92.79
28.5	16,125,160	14,758	0.0009	0.9991	92.68
29.5	13,971,571	11,556	0.0008	0.9992	92.60
30.5	13,946,619	25,021	0.0018	0.9982	92.52
31.5	13,739,936	19,819	0.0014	0.9986	92.36
32.5	13,705,195	8,823	0.0006	0.9994	92.22
33.5	13,685,413	42,694	0.0031	0.9969	92.16
34.5	13,625,723	38,012	0.0028	0.9972	91.88
35.5	13,592,936	118,929	0.0087	0.9913	91.62
36.5	13,444,584	57,552	0.0043	0.9957	90.82
37.5	12,397,308	30,973	0.0025	0.9975	90.43
38.5	12,363,885	33,804	0.0027	0.9973	90.20

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.30 STRUCTURES AND IMPROVEMENTS - WATER TREATMENT

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1898-2014			EXPERIENCE BAND 1939-2014		
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	12,321,898	9,499	0.0008	0.9992	89.96
40.5	12,264,870	9,592	0.0008	0.9992	89.89
41.5	11,292,064	23,523	0.0021	0.9979	89.82
42.5	11,258,916	12,637	0.0011	0.9989	89.63
43.5	8,203,102	15,957	0.0019	0.9981	89.53
44.5	8,144,191	184	0.0000	1.0000	89.36
45.5	8,132,693	50,588	0.0062	0.9938	89.35
46.5	4,869,394	30,090	0.0062	0.9938	88.80
47.5	4,515,499	10,265	0.0023	0.9977	88.25
48.5	4,502,638	4,648	0.0010	0.9990	88.05
49.5	4,449,695	8,916	0.0020	0.9980	87.96
50.5	3,538,597	50,216	0.0142	0.9858	87.78
51.5	3,487,743	10,040	0.0029	0.9971	86.54
52.5	3,472,264	6,833	0.0020	0.9980	86.29
53.5	3,465,748	219	0.0001	0.9999	86.12
54.5	3,127,464	22,941	0.0073	0.9927	86.11
55.5	3,010,424	2,892	0.0010	0.9990	85.48
56.5	3,006,278	30,306	0.0101	0.9899	85.40
57.5	2,975,871	109,405	0.0368	0.9632	84.54
58.5	2,610,221	912	0.0003	0.9997	81.43
59.5	1,798,994	15,670	0.0087	0.9913	81.40
60.5	1,777,576	6,447	0.0036	0.9964	80.69
61.5	875,941	222,355	0.2538	0.7462	80.40
62.5	653,566	497	0.0008	0.9992	59.99
63.5	652,545	3,421	0.0052	0.9948	59.94
64.5	648,688		0.0000	1.0000	59.63
65.5	648,687	3,285	0.0051	0.9949	59.63
66.5	645,402	41	0.0001	0.9999	59.33
67.5	602,994	100	0.0002	0.9998	59.32
68.5	602,895	186	0.0003	0.9997	59.31
69.5	602,611	7	0.0000	1.0000	59.30
70.5	601,860	1,084	0.0018	0.9982	59.30
71.5	600,776	192	0.0003	0.9997	59.19
72.5	600,397	1,751	0.0029	0.9971	59.17
73.5	598,643	691	0.0012	0.9988	59.00
74.5	619,945	2,847	0.0046	0.9954	58.93
75.5	266,275	129	0.0005	0.9995	58.66
76.5	264,283	116	0.0004	0.9996	58.63
77.5	261,964	3,342	0.0128	0.9872	58.60
78.5	223,097		0.0000	1.0000	57.86

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.30 STRUCTURES AND IMPROVEMENTS - WATER TREATMENT

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1898-2014			EXPERIENCE BAND 1939-2014			
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	222,745	477	0.0021	0.9979	57.86	
80.5	222,111		0.0000	1.0000	57.73	
81.5	221,581	773	0.0035	0.9965	57.73	
82.5	218,723	663	0.0030	0.9970	57.53	
83.5	218,059		0.0000	1.0000	57.36	
84.5	218,059		0.0000	1.0000	57.36	
85.5	196,065		0.0000	1.0000	57.36	
86.5	196,027		0.0000	1.0000	57.36	
87.5	121,243	184	0.0015	0.9985	57.36	
88.5	98,282	172	0.0018	0.9982	57.27	
89.5	70,641	342	0.0048	0.9952	57.17	
90.5	70,299	395	0.0056	0.9944	56.89	
91.5	40,523		0.0000	1.0000	56.57	
92.5	40,523		0.0000	1.0000	56.57	
93.5	40,523		0.0000	1.0000	56.57	
94.5	40,523		0.0000	1.0000	56.57	
95.5	40,523		0.0000	1.0000	56.57	
96.5	40,523	85	0.0021	0.9979	56.57	
97.5	40,438		0.0000	1.0000	56.45	
98.5	40,438		0.0000	1.0000	56.45	
99.5	40,438		0.0000	1.0000	56.45	
100.5	40,438		0.0000	1.0000	56.45	
101.5	33,068		0.0000	1.0000	56.45	
102.5	31,024		0.0000	1.0000	56.45	
103.5	31,024		0.0000	1.0000	56.45	
104.5	31,024		0.0000	1.0000	56.45	
105.5	31,024		0.0000	1.0000	56.45	
106.5	31,024		0.0000	1.0000	56.45	
107.5	31,024		0.0000	1.0000	56.45	
108.5	31,024	37	0.0012	0.9988	56.45	
109.5	30,987		0.0000	1.0000	56.39	
110.5	30,987		0.0000	1.0000	56.39	
111.5	1,819	1,210	0.6648	0.3352	56.39	
112.5					18.90	



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.30 STRUCTURES AND IMPROVEMENTS - WATER TREATMENT

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1898-2014			EXPERIENCE BAND 1985-2014		
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	94,546,126		0.0000	1.0000	100.00
0.5	92,303,584	468	0.0000	1.0000	100.00
1.5	91,901,219	215,020	0.0023	0.9977	100.00
2.5	90,762,612	8,805	0.0001	0.9999	99.77
3.5	88,862,658	23,325	0.0003	0.9997	99.76
4.5	88,038,628	97,221	0.0011	0.9989	99.73
5.5	87,100,633	62,110	0.0007	0.9993	99.62
6.5	70,064,001	19,011	0.0003	0.9997	99.55
7.5	63,394,638	69,771	0.0011	0.9989	99.52
8.5	62,038,700	15,943	0.0003	0.9997	99.41
9.5	61,957,369	60,727	0.0010	0.9990	99.39
10.5	61,170,277	82,976	0.0014	0.9986	99.29
11.5	61,706,917	440,021	0.0071	0.9929	99.15
12.5	55,458,857	23,296	0.0004	0.9996	98.45
13.5	56,593,201	87,102	0.0015	0.9985	98.41
14.5	29,933,341	72,298	0.0024	0.9976	98.25
15.5	29,903,782	57,899	0.0019	0.9981	98.02
16.5	30,349,016	177,146	0.0058	0.9942	97.83
17.5	29,171,047	28,554	0.0010	0.9990	97.26
18.5	28,139,904	83,055	0.0030	0.9970	97.16
19.5	26,217,678	36,020	0.0014	0.9986	96.87
20.5	25,664,120	272,363	0.0106	0.9894	96.74
21.5	17,945,495	58,394	0.0033	0.9967	95.71
22.5	17,501,246	44,919	0.0026	0.9974	95.40
23.5	17,018,471	106,145	0.0062	0.9938	95.16
24.5	17,159,151	40,717	0.0024	0.9976	94.56
25.5	14,438,408	377,330	0.0261	0.9739	94.34
26.5	13,935,332	29,089	0.0021	0.9979	91.87
27.5	13,683,520	16,250	0.0012	0.9988	91.68
28.5	13,287,887	13,876	0.0010	0.9990	91.57
29.5	12,053,993	10,037	0.0008	0.9992	91.48
30.5	12,048,492	24,765	0.0021	0.9979	91.40
31.5	12,822,971	7,048	0.0005	0.9995	91.21
32.5	12,812,113	8,823	0.0007	0.9993	91.16
33.5	12,795,891	42,144	0.0033	0.9967	91.10
34.5	12,741,573	36,912	0.0029	0.9971	90.80
35.5	12,680,000	118,929	0.0094	0.9906	90.54
36.5	12,530,916	57,552	0.0046	0.9954	89.69
37.5	11,526,889	28,065	0.0024	0.9976	89.28
38.5	11,497,556	33,804	0.0029	0.9971	89.06

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.30 STRUCTURES AND IMPROVEMENTS - WATER TREATMENT

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1898-2014			EXPERIENCE BAND 1985-2014		
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	11,457,440	9,499	0.0008	0.9992	88.80
40.5	11,398,190	9,561	0.0008	0.9992	88.72
41.5	10,425,631	23,523	0.0023	0.9977	88.65
42.5	10,393,047	12,637	0.0012	0.9988	88.45
43.5	7,338,950	15,831	0.0022	0.9978	88.34
44.5	7,280,637	184	0.0000	1.0000	88.15
45.5	7,606,458	50,588	0.0067	0.9933	88.15
46.5	4,346,469	27,798	0.0064	0.9936	87.56
47.5	4,014,646	10,265	0.0026	0.9974	87.00
48.5	4,051,478	4,648	0.0011	0.9989	86.78
49.5	3,999,239	8,916	0.0022	0.9978	86.68
50.5	3,088,775	50,216	0.0163	0.9837	86.49
51.5	3,038,451	10,040	0.0033	0.9967	85.08
52.5	3,027,521	6,547	0.0022	0.9978	84.80
53.5	3,232,522	219	0.0001	0.9999	84.62
54.5	2,894,237	22,941	0.0079	0.9921	84.61
55.5	2,777,197	2,392	0.0009	0.9991	83.94
56.5	2,773,590	30,306	0.0109	0.9891	83.87
57.5	2,820,366	109,405	0.0388	0.9612	82.95
58.5	2,473,712	912	0.0004	0.9996	79.73
59.5	1,722,709	15,670	0.0091	0.9909	79.71
60.5	1,701,291	6,447	0.0038	0.9962	78.98
61.5	829,037	222,355	0.2682	0.7318	78.68
62.5	606,662	497	0.0008	0.9992	57.58
63.5	605,641	3,421	0.0056	0.9944	57.53
64.5	601,784		0.0000	1.0000	57.21
65.5	601,783	3,285	0.0055	0.9945	57.21
66.5	598,498	41	0.0001	0.9999	56.89
67.5	556,090	100	0.0002	0.9998	56.89
68.5	556,075	186	0.0003	0.9997	56.88
69.5	555,791	7	0.0000	1.0000	56.86
70.5	555,040	1,084	0.0020	0.9980	56.86
71.5	561,326	192	0.0003	0.9997	56.75
72.5	565,069	413	0.0007	0.9993	56.73
73.5	564,653	691	0.0012	0.9988	56.69
74.5	585,955	2,847	0.0049	0.9951	56.62
75.5	232,285	129	0.0006	0.9994	56.34
76.5	230,293	116	0.0005	0.9995	56.31
77.5	227,974	3,342	0.0147	0.9853	56.28
78.5	189,107		0.0000	1.0000	55.46

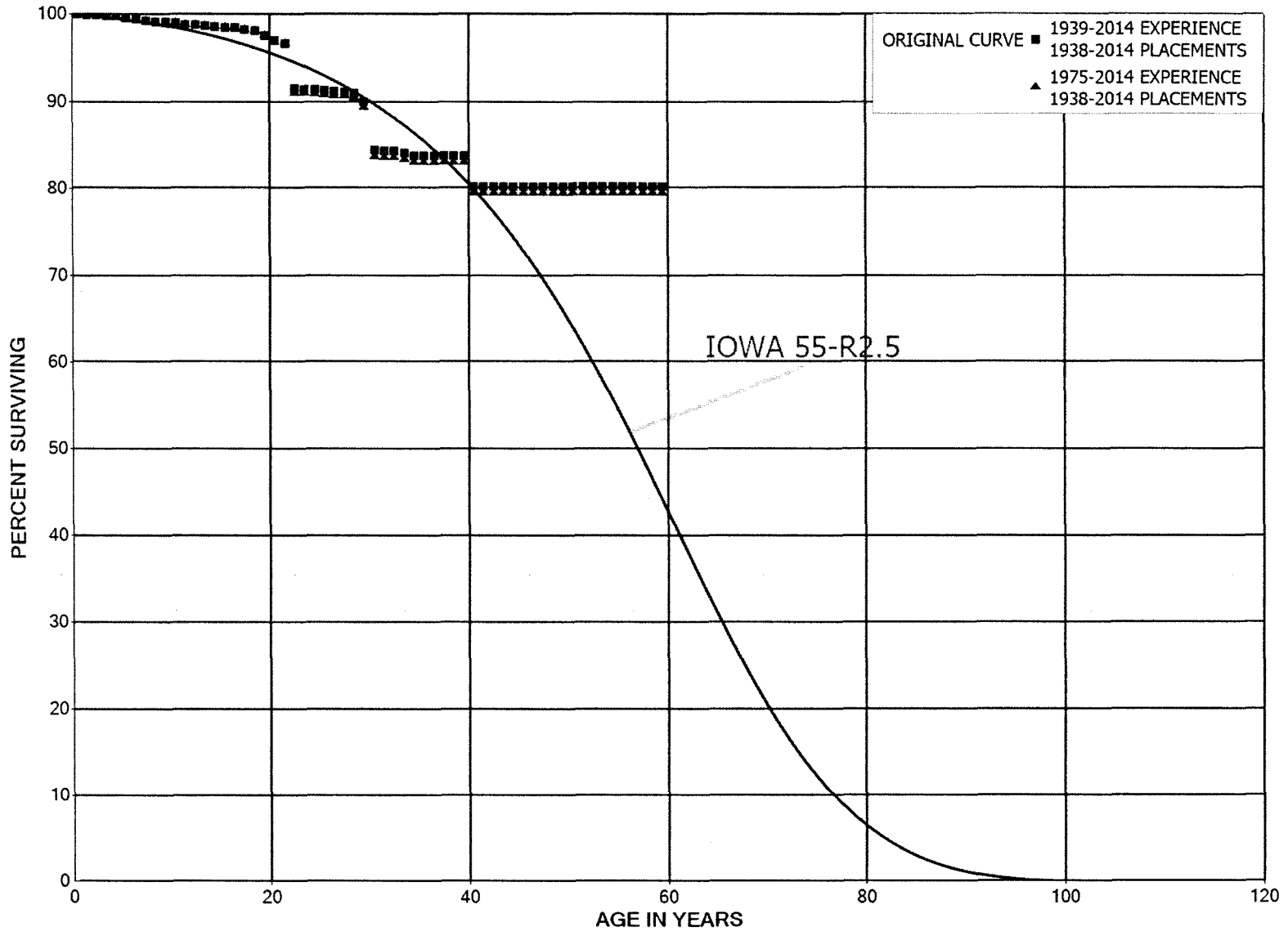
## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.30 STRUCTURES AND IMPROVEMENTS - WATER TREATMENT

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1898-2014			EXPERIENCE BAND 1985-2014			
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	188,756	477	0.0025	0.9975	55.46	
80.5	188,122		0.0000	1.0000	55.32	
81.5	216,759	773	0.0036	0.9964	55.32	
82.5	215,758	663	0.0031	0.9969	55.12	
83.5	215,094		0.0000	1.0000	54.95	
84.5	215,094		0.0000	1.0000	54.95	
85.5	193,100		0.0000	1.0000	54.95	
86.5	196,027		0.0000	1.0000	54.95	
87.5	121,243	184	0.0015	0.9985	54.95	
88.5	98,282	172	0.0018	0.9982	54.87	
89.5	70,641	342	0.0048	0.9952	54.77	
90.5	70,299	395	0.0056	0.9944	54.51	
91.5	40,523		0.0000	1.0000	54.20	
92.5	40,523		0.0000	1.0000	54.20	
93.5	40,523		0.0000	1.0000	54.20	
94.5	40,523		0.0000	1.0000	54.20	
95.5	40,523		0.0000	1.0000	54.20	
96.5	40,523	85	0.0021	0.9979	54.20	
97.5	40,438		0.0000	1.0000	54.09	
98.5	40,438		0.0000	1.0000	54.09	
99.5	40,438		0.0000	1.0000	54.09	
100.5	40,438		0.0000	1.0000	54.09	
101.5	33,068		0.0000	1.0000	54.09	
102.5	31,024		0.0000	1.0000	54.09	
103.5	31,024		0.0000	1.0000	54.09	
104.5	31,024		0.0000	1.0000	54.09	
105.5	31,024		0.0000	1.0000	54.09	
106.5	31,024		0.0000	1.0000	54.09	
107.5	31,024		0.0000	1.0000	54.09	
108.5	31,024	37	0.0012	0.9988	54.09	
109.5	30,987		0.0000	1.0000	54.02	
110.5	30,987		0.0000	1.0000	54.02	
111.5	1,819	1,210	0.6648	0.3352	54.02	
112.5					18.11	

MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 304.40 STRUCTURES AND IMPROVEMENTS - TRANSMISSION AND DISTRIBUTION  
ORIGINAL AND SMOOTH SURVIVOR CURVES



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.40 STRUCTURES AND IMPROVEMENTS - TRANSMISSION AND DISTRIBUTION

## ORIGINAL LIFE TABLE

## PLACEMENT BAND 1938-2014

## EXPERIENCE BAND 1939-2014

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	8,792,525		0.0000	1.0000	100.00
0.5	8,873,057	15,488	0.0017	0.9983	100.00
1.5	8,853,843	1,321	0.0001	0.9999	99.83
2.5	8,852,523	7,594	0.0009	0.9991	99.81
3.5	8,867,007	1,219	0.0001	0.9999	99.72
4.5	8,862,988	22,529	0.0025	0.9975	99.71
5.5	8,662,756	3,843	0.0004	0.9996	99.46
6.5	8,658,913	23,245	0.0027	0.9973	99.41
7.5	7,692,195	6,978	0.0009	0.9991	99.15
8.5	7,659,459	3,383	0.0004	0.9996	99.06
9.5	7,655,516	7,003	0.0009	0.9991	99.01
10.5	7,660,066	12,732	0.0017	0.9983	98.92
11.5	7,132,758	4,200	0.0006	0.9994	98.76
12.5	5,293,154	6,687	0.0013	0.9987	98.70
13.5	5,275,138	4,327	0.0008	0.9992	98.58
14.5	5,219,969	3,139	0.0006	0.9994	98.49
15.5	5,161,234	2,155	0.0004	0.9996	98.44
16.5	5,102,204	10,772	0.0021	0.9979	98.39
17.5	5,061,018	5,679	0.0011	0.9989	98.19
18.5	5,038,929	26,777	0.0053	0.9947	98.08
19.5	4,148,218	27,483	0.0066	0.9934	97.55
20.5	3,481,016	10,214	0.0029	0.9971	96.91
21.5	3,434,259	183,359	0.0534	0.9466	96.62
22.5	3,237,813	2,369	0.0007	0.9993	91.47
23.5	2,886,532	997	0.0003	0.9997	91.40
24.5	2,864,554	2,535	0.0009	0.9991	91.37
25.5	2,849,415	3,758	0.0013	0.9987	91.29
26.5	2,783,192	1,982	0.0007	0.9993	91.17
27.5	2,781,209	4,622	0.0017	0.9983	91.10
28.5	2,741,902	31,804	0.0116	0.9884	90.95
29.5	2,710,098	166,439	0.0614	0.9386	89.89
30.5	2,542,664	3,975	0.0016	0.9984	84.37
31.5	2,536,751		0.0000	1.0000	84.24
32.5	2,528,041	6,302	0.0025	0.9975	84.24
33.5	2,470,320	8,920	0.0036	0.9964	84.03
34.5	2,461,295	516	0.0002	0.9998	83.73
35.5	2,437,439		0.0000	1.0000	83.71
36.5	316,957		0.0000	1.0000	83.71
37.5	316,957	70	0.0002	0.9998	83.71
38.5	316,887		0.0000	1.0000	83.69

## MISSOURI AMERICAN WATER COMPANY

ACCOUNT 304.40 STRUCTURES AND IMPROVEMENTS - TRANSMISSION AND DISTRIBUTION

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1938-2014			EXPERIENCE BAND 1939-2014			
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	316,887	13,306	0.0420	0.9580	83.69	
40.5	299,071		0.0000	1.0000	80.18	
41.5	157,897		0.0000	1.0000	80.18	
42.5	97,897		0.0000	1.0000	80.18	
43.5	97,897		0.0000	1.0000	80.18	
44.5	91,411		0.0000	1.0000	80.18	
45.5	91,411		0.0000	1.0000	80.18	
46.5	91,411		0.0000	1.0000	80.18	
47.5	91,411		0.0000	1.0000	80.18	
48.5	91,411		0.0000	1.0000	80.18	
49.5	91,411		0.0000	1.0000	80.18	
50.5	91,411		0.0000	1.0000	80.18	
51.5	91,411		0.0000	1.0000	80.18	
52.5	91,411		0.0000	1.0000	80.18	
53.5	91,411		0.0000	1.0000	80.18	
54.5	91,411		0.0000	1.0000	80.18	
55.5	91,411		0.0000	1.0000	80.18	
56.5	91,411		0.0000	1.0000	80.18	
57.5	91,411		0.0000	1.0000	80.18	
58.5	91,411		0.0000	1.0000	80.18	
59.5	91,411		0.0000	1.0000	80.18	
60.5	91,411		0.0000	1.0000	80.18	
61.5	91,411		0.0000	1.0000	80.18	
62.5	91,411		0.0000	1.0000	80.18	
63.5	91,411		0.0000	1.0000	80.18	
64.5	91,411		0.0000	1.0000	80.18	
65.5	91,411		0.0000	1.0000	80.18	
66.5	91,411		0.0000	1.0000	80.18	
67.5	91,411		0.0000	1.0000	80.18	
68.5	91,411		0.0000	1.0000	80.18	
69.5	91,411		0.0000	1.0000	80.18	
70.5	91,411		0.0000	1.0000	80.18	
71.5	91,411		0.0000	1.0000	80.18	
72.5	91,411		0.0000	1.0000	80.18	
73.5	91,411		0.0000	1.0000	80.18	
74.5	91,411		0.0000	1.0000	80.18	
75.5	91,411		0.0000	1.0000	80.18	
76.5					80.18	

## MISSOURI AMERICAN WATER COMPANY

ACCOUNT 304.40 STRUCTURES AND IMPROVEMENTS - TRANSMISSION AND DISTRIBUTION

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1938-2014			EXPERIENCE BAND 1975-2014		
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	8,180,332		0.0000	1.0000	100.00
0.5	8,161,049	15,000	0.0018	0.9982	100.00
1.5	8,284,671	1,321	0.0002	0.9998	99.82
2.5	8,345,321	7,594	0.0009	0.9991	99.80
3.5	8,363,231	819	0.0001	0.9999	99.71
4.5	8,369,646	22,529	0.0027	0.9973	99.70
5.5	8,172,768	2,745	0.0003	0.9997	99.43
6.5	8,171,012	21,087	0.0026	0.9974	99.40
7.5	7,207,190	6,518	0.0009	0.9991	99.14
8.5	7,174,913	2,554	0.0004	0.9996	99.05
9.5	7,171,800	6,446	0.0009	0.9991	99.02
10.5	7,179,643	12,626	0.0018	0.9982	98.93
11.5	6,653,330	4,023	0.0006	0.9994	98.75
12.5	4,814,163	5,757	0.0012	0.9988	98.69
13.5	4,801,890	3,727	0.0008	0.9992	98.58
14.5	4,748,189	1,989	0.0004	0.9996	98.50
15.5	4,698,925	1,200	0.0003	0.9997	98.46
16.5	4,643,404	10,772	0.0023	0.9977	98.43
17.5	4,604,383	5,424	0.0012	0.9988	98.20
18.5	4,760,177	26,777	0.0056	0.9944	98.09
19.5	3,869,821	27,458	0.0071	0.9929	97.54
20.5	3,203,640	8,982	0.0028	0.9972	96.85
21.5	3,158,116	183,359	0.0581	0.9419	96.57
22.5	2,961,818	2,369	0.0008	0.9992	90.97
23.5	2,611,892	997	0.0004	0.9996	90.89
24.5	2,590,289	2,535	0.0010	0.9990	90.86
25.5	2,577,693	3,758	0.0015	0.9985	90.77
26.5	2,678,405	1,982	0.0007	0.9993	90.64
27.5	2,676,423	4,622	0.0017	0.9983	90.57
28.5	2,637,116	31,804	0.0121	0.9879	90.41
29.5	2,605,312	166,439	0.0639	0.9361	89.32
30.5	2,437,877	3,975	0.0016	0.9984	83.62
31.5	2,431,965		0.0000	1.0000	83.48
32.5	2,423,254	6,302	0.0026	0.9974	83.48
33.5	2,365,534	8,920	0.0038	0.9962	83.26
34.5	2,356,578	516	0.0002	0.9998	82.95
35.5	2,332,722		0.0000	1.0000	82.93
36.5	316,957		0.0000	1.0000	82.93
37.5	316,957	70	0.0002	0.9998	82.93
38.5	316,887		0.0000	1.0000	82.91

## MISSOURI AMERICAN WATER COMPANY

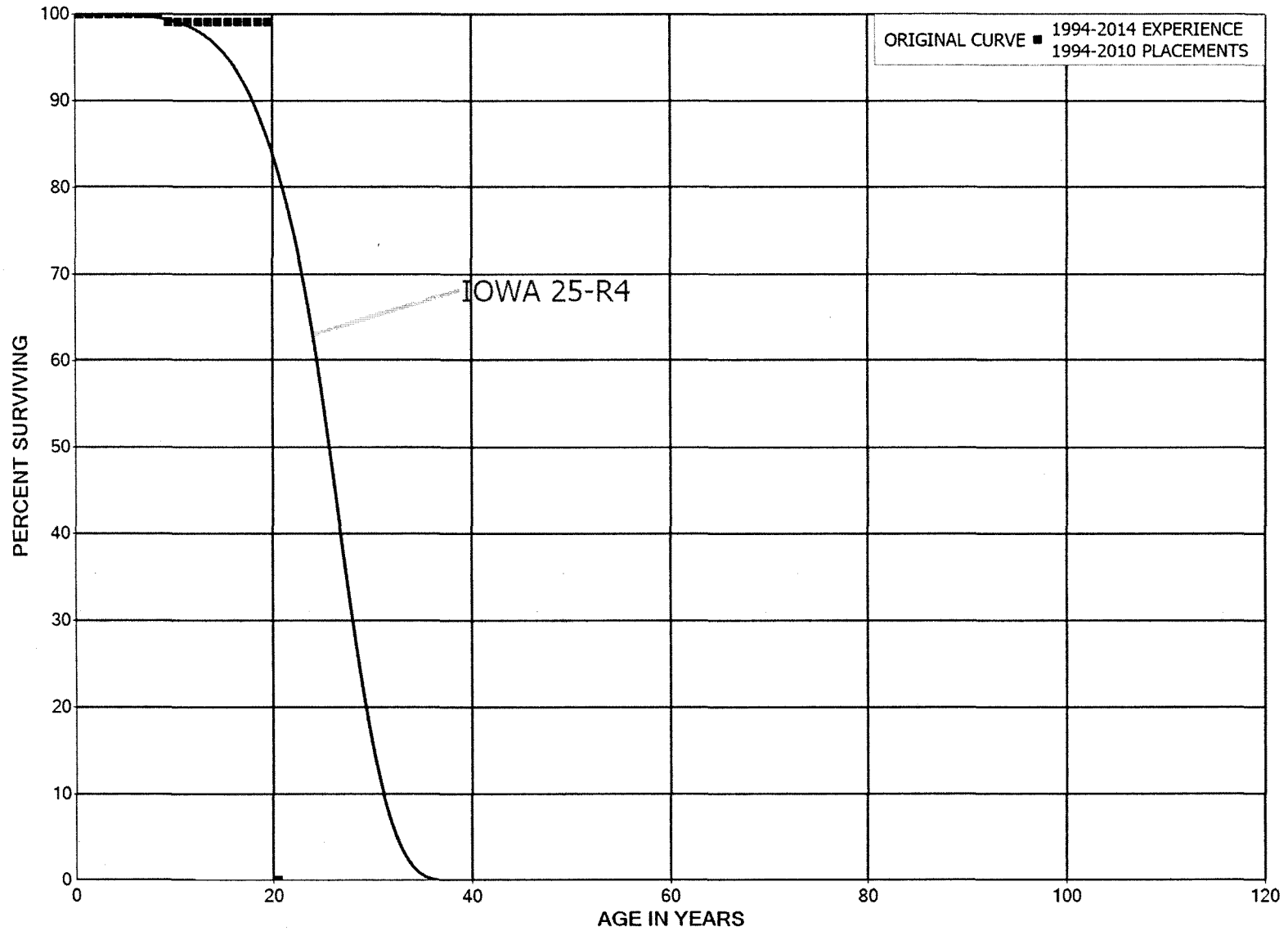
ACCOUNT 304.40 STRUCTURES AND IMPROVEMENTS - TRANSMISSION AND DISTRIBUTION

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1938-2014			EXPERIENCE BAND 1975-2014			
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	316,887	13,306	0.0420	0.9580	82.91	
40.5	299,071		0.0000	1.0000	79.43	
41.5	157,897		0.0000	1.0000	79.43	
42.5	97,897		0.0000	1.0000	79.43	
43.5	97,897		0.0000	1.0000	79.43	
44.5	91,411		0.0000	1.0000	79.43	
45.5	91,411		0.0000	1.0000	79.43	
46.5	91,411		0.0000	1.0000	79.43	
47.5	91,411		0.0000	1.0000	79.43	
48.5	91,411		0.0000	1.0000	79.43	
49.5	91,411		0.0000	1.0000	79.43	
50.5	91,411		0.0000	1.0000	79.43	
51.5	91,411		0.0000	1.0000	79.43	
52.5	91,411		0.0000	1.0000	79.43	
53.5	91,411		0.0000	1.0000	79.43	
54.5	91,411		0.0000	1.0000	79.43	
55.5	91,411		0.0000	1.0000	79.43	
56.5	91,411		0.0000	1.0000	79.43	
57.5	91,411		0.0000	1.0000	79.43	
58.5	91,411		0.0000	1.0000	79.43	
59.5	91,411		0.0000	1.0000	79.43	
60.5	91,411		0.0000	1.0000	79.43	
61.5	91,411		0.0000	1.0000	79.43	
62.5	91,411		0.0000	1.0000	79.43	
63.5	91,411		0.0000	1.0000	79.43	
64.5	91,411		0.0000	1.0000	79.43	
65.5	91,411		0.0000	1.0000	79.43	
66.5	91,411		0.0000	1.0000	79.43	
67.5	91,411		0.0000	1.0000	79.43	
68.5	91,411		0.0000	1.0000	79.43	
69.5	91,411		0.0000	1.0000	79.43	
70.5	91,411		0.0000	1.0000	79.43	
71.5	91,411		0.0000	1.0000	79.43	
72.5	91,411		0.0000	1.0000	79.43	
73.5	91,411		0.0000	1.0000	79.43	
74.5	91,411		0.0000	1.0000	79.43	
75.5	91,411		0.0000	1.0000	79.43	
76.5					79.43	



MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 304.53 STRUCTURES AND IMPROVEMENTS - LEASEHOLD  
ORIGINAL AND SMOOTH SURVIVOR CURVES



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.53 STRUCTURES AND IMPROVEMENTS - LEASEHOLD

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1994-2010			EXPERIENCE BAND 1994-2014		
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	810,480		0.0000	1.0000	100.00
0.5	810,480		0.0000	1.0000	100.00
1.5	810,480		0.0000	1.0000	100.00
2.5	810,480		0.0000	1.0000	100.00
3.5	810,480		0.0000	1.0000	100.00
4.5	644,274		0.0000	1.0000	100.00
5.5	644,274		0.0000	1.0000	100.00
6.5	644,274		0.0000	1.0000	100.00
7.5	637,688		0.0000	1.0000	100.00
8.5	637,688	5,796	0.0091	0.9909	100.00
9.5	631,892		0.0000	1.0000	99.09
10.5	631,892		0.0000	1.0000	99.09
11.5	631,892		0.0000	1.0000	99.09
12.5	339,728		0.0000	1.0000	99.09
13.5	339,728		0.0000	1.0000	99.09
14.5	339,728		0.0000	1.0000	99.09
15.5	339,728		0.0000	1.0000	99.09
16.5	339,728		0.0000	1.0000	99.09
17.5	339,728		0.0000	1.0000	99.09
18.5	339,728		0.0000	1.0000	99.09
19.5	339,728	339,728	1.0000		99.09
20.5					

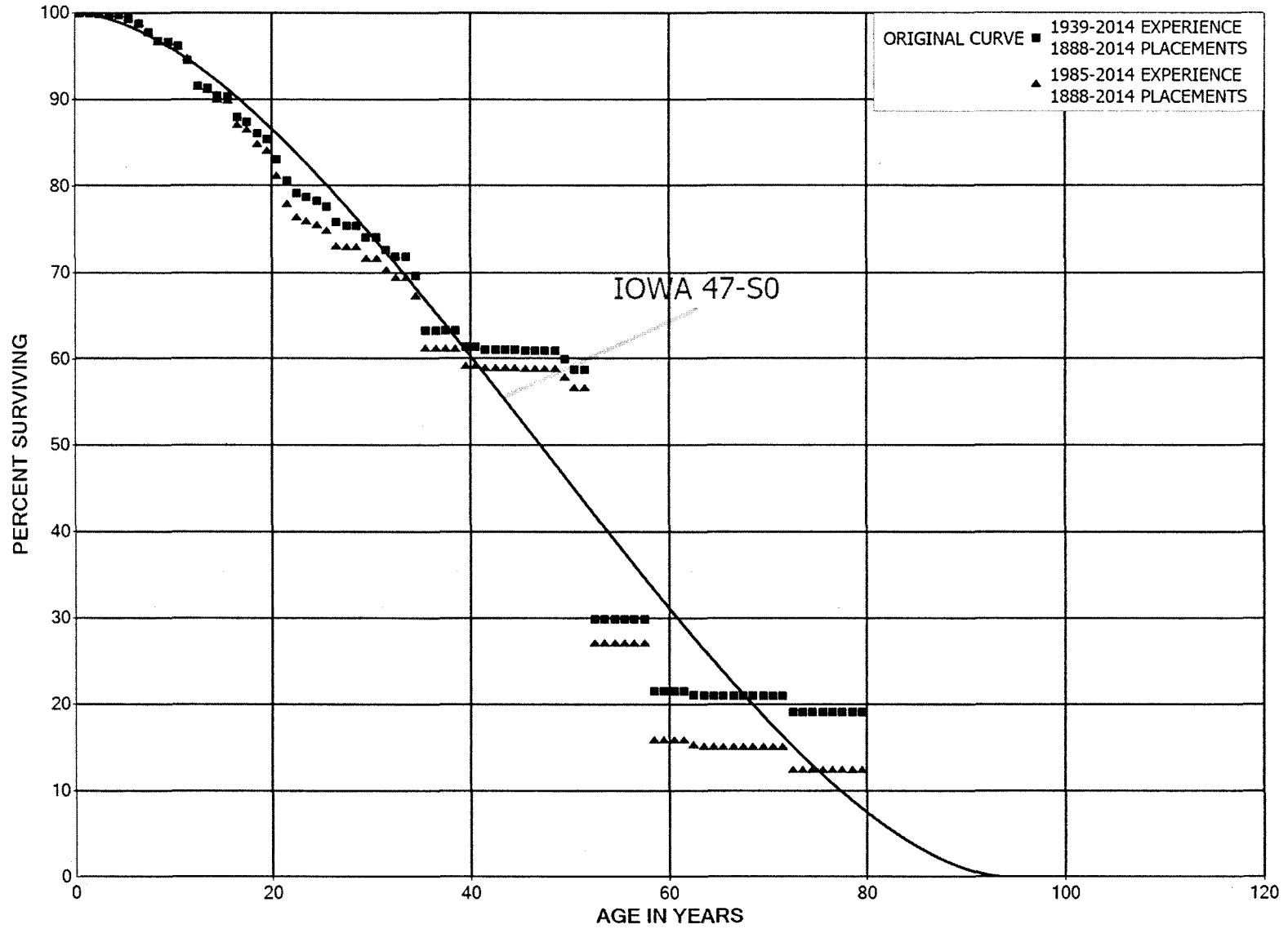


Gannett Fleming

VII-32

MO American Water Co - Water  
March 31, 2015

MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 304.61 STRUCTURES AND IMPROVEMENTS - OFFICE BUILDINGS  
ORIGINAL AND SMOOTH SURVIVOR CURVES



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.61 STRUCTURES AND IMPROVEMENTS - OFFICE BUILDINGS

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1888-2014			EXPERIENCE BAND 1939-2014		
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	13,873,000		0.0000	1.0000	100.00
0.5	12,285,024		0.0000	1.0000	100.00
1.5	10,807,276	21,731	0.0020	0.9980	100.00
2.5	9,370,646	7,808	0.0008	0.9992	99.80
3.5	8,640,394	2,325	0.0003	0.9997	99.72
4.5	8,410,449	34,022	0.0040	0.9960	99.69
5.5	8,216,818	46,386	0.0056	0.9944	99.29
6.5	2,954,092	28,886	0.0098	0.9902	98.73
7.5	2,020,242	20,916	0.0104	0.9896	97.76
8.5	1,944,685	1,662	0.0009	0.9991	96.75
9.5	1,930,952	8,714	0.0045	0.9955	96.66
10.5	1,918,169	35,366	0.0184	0.9816	96.23
11.5	1,866,625	57,218	0.0307	0.9693	94.45
12.5	1,786,938	5,732	0.0032	0.9968	91.56
13.5	919,713	8,886	0.0097	0.9903	91.27
14.5	902,229	882	0.0010	0.9990	90.38
15.5	894,675	23,406	0.0262	0.9738	90.30
16.5	822,788	4,767	0.0058	0.9942	87.93
17.5	779,483	12,098	0.0155	0.9845	87.42
18.5	653,107	4,939	0.0076	0.9924	86.07
19.5	617,824	16,816	0.0272	0.9728	85.42
20.5	532,968	16,026	0.0301	0.9699	83.09
21.5	490,324	8,348	0.0170	0.9830	80.59
22.5	474,634	3,227	0.0068	0.9932	79.22
23.5	464,494	2,516	0.0054	0.9946	78.68
24.5	381,984	3,195	0.0084	0.9916	78.26
25.5	378,789	8,822	0.0233	0.9767	77.60
26.5	357,115	1,660	0.0046	0.9954	75.79
27.5	355,455	443	0.0012	0.9988	75.44
28.5	298,118	4,967	0.0167	0.9833	75.35
29.5	291,623		0.0000	1.0000	74.09
30.5	289,477	5,708	0.0197	0.9803	74.09
31.5	309,639	3,594	0.0116	0.9884	72.63
32.5	272,208		0.0000	1.0000	71.79
33.5	271,284	8,378	0.0309	0.9691	71.79
34.5	262,907	23,633	0.0899	0.9101	69.57
35.5	231,691	61	0.0003	0.9997	63.32
36.5	219,706		0.0000	1.0000	63.30
37.5	219,706		0.0000	1.0000	63.30
38.5	219,706	6,769	0.0308	0.9692	63.30

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.61 STRUCTURES AND IMPROVEMENTS - OFFICE BUILDINGS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1888-2014			EXPERIENCE BAND 1939-2014		
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	212,510		0.0000	1.0000	61.35
40.5	212,510	917	0.0043	0.9957	61.35
41.5	210,289		0.0000	1.0000	61.09
42.5	210,289		0.0000	1.0000	61.09
43.5	131,068		0.0000	1.0000	61.09
44.5	131,068	229	0.0017	0.9983	61.09
45.5	130,542		0.0000	1.0000	60.98
46.5	130,542		0.0000	1.0000	60.98
47.5	130,542		0.0000	1.0000	60.98
48.5	130,430	2,311	0.0177	0.9823	60.98
49.5	118,152	2,365	0.0200	0.9800	59.90
50.5	116,572		0.0000	1.0000	58.70
51.5	65,992	32,433	0.4915	0.5085	58.70
52.5	32,197		0.0000	1.0000	29.85
53.5	32,197		0.0000	1.0000	29.85
54.5	7,347		0.0000	1.0000	29.85
55.5	7,347		0.0000	1.0000	29.85
56.5	7,051		0.0000	1.0000	29.85
57.5	7,002	1,946	0.2780	0.7220	29.85
58.5	5,056		0.0000	1.0000	21.55
59.5	4,492		0.0000	1.0000	21.55
60.5	4,492		0.0000	1.0000	21.55
61.5	4,492	95	0.0211	0.9789	21.55
62.5	4,397	27	0.0061	0.9939	21.10
63.5	4,370		0.0000	1.0000	20.97
64.5	4,370		0.0000	1.0000	20.97
65.5	4,370		0.0000	1.0000	20.97
66.5	4,370		0.0000	1.0000	20.97
67.5	4,370		0.0000	1.0000	20.97
68.5	4,370		0.0000	1.0000	20.97
69.5	4,370		0.0000	1.0000	20.97
70.5	4,370		0.0000	1.0000	20.97
71.5	4,370	407	0.0931	0.9069	20.97
72.5	3,963		0.0000	1.0000	19.02
73.5	3,963		0.0000	1.0000	19.02
74.5	3,963		0.0000	1.0000	19.02
75.5	3,963		0.0000	1.0000	19.02
76.5	3,963		0.0000	1.0000	19.02
77.5	3,963		0.0000	1.0000	19.02
78.5	3,963		0.0000	1.0000	19.02

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.61 STRUCTURES AND IMPROVEMENTS - OFFICE BUILDINGS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1888-2014			EXPERIENCE BAND 1939-2014		
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	3,879		0.0000	1.0000	19.02
80.5	3,879		0.0000	1.0000	19.02
81.5	3,879		0.0000	1.0000	19.02
82.5	3,879		0.0000	1.0000	19.02
83.5	3,879		0.0000	1.0000	19.02
84.5	3,879		0.0000	1.0000	19.02
85.5	3,879		0.0000	1.0000	19.02
86.5	3,173		0.0000	1.0000	19.02
87.5	2,306		0.0000	1.0000	19.02
88.5	2,306		0.0000	1.0000	19.02
89.5	2,306		0.0000	1.0000	19.02
90.5	2,306		0.0000	1.0000	19.02
91.5	2,084		0.0000	1.0000	19.02
92.5	2,074		0.0000	1.0000	19.02
93.5	2,074		0.0000	1.0000	19.02
94.5	2,074		0.0000	1.0000	19.02
95.5	2,074		0.0000	1.0000	19.02
96.5	2,074		0.0000	1.0000	19.02
97.5	2,074		0.0000	1.0000	19.02
98.5	2,074		0.0000	1.0000	19.02
99.5	2,074		0.0000	1.0000	19.02
100.5	2,074		0.0000	1.0000	19.02
101.5	2,074		0.0000	1.0000	19.02
102.5	2,074		0.0000	1.0000	19.02
103.5	2,074		0.0000	1.0000	19.02
104.5	2,074		0.0000	1.0000	19.02
105.5	1,176		0.0000	1.0000	19.02
106.5	1,176		0.0000	1.0000	19.02
107.5	1,176		0.0000	1.0000	19.02
108.5	1,176		0.0000	1.0000	19.02
109.5	1,176		0.0000	1.0000	19.02
110.5	1,176		0.0000	1.0000	19.02
111.5	1,176		0.0000	1.0000	19.02
112.5	1,176		0.0000	1.0000	19.02
113.5	1,176		0.0000	1.0000	19.02
114.5	1,176		0.0000	1.0000	19.02
115.5	1,176		0.0000	1.0000	19.02
116.5	1,176		0.0000	1.0000	19.02
117.5	945		0.0000	1.0000	19.02
118.5	945		0.0000	1.0000	19.02

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.61 STRUCTURES AND IMPROVEMENTS - OFFICE BUILDINGS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1888-2014			EXPERIENCE BAND 1939-2014		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
119.5	945		0.0000	1.0000	19.02
120.5	945		0.0000	1.0000	19.02
121.5	945		0.0000	1.0000	19.02
122.5	945		0.0000	1.0000	19.02
123.5	945		0.0000	1.0000	19.02
124.5	945		0.0000	1.0000	19.02
125.5	945		0.0000	1.0000	19.02
126.5					19.02

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.61 STRUCTURES AND IMPROVEMENTS - OFFICE BUILDINGS

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1888-2014			EXPERIENCE BAND 1985-2014		
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	13,482,818		0.0000	1.0000	100.00
0.5	11,897,404		0.0000	1.0000	100.00
1.5	10,459,004	21,731	0.0021	0.9979	100.00
2.5	9,064,222	7,808	0.0009	0.9991	99.79
3.5	8,340,916	2,176	0.0003	0.9997	99.71
4.5	8,113,002	33,932	0.0042	0.9958	99.68
5.5	7,929,297	46,386	0.0058	0.9942	99.26
6.5	2,678,495	28,886	0.0108	0.9892	98.68
7.5	1,746,747	19,134	0.0110	0.9890	97.62
8.5	1,674,462	1,203	0.0007	0.9993	96.55
9.5	1,662,521	8,385	0.0050	0.9950	96.48
10.5	1,653,713	23,874	0.0144	0.9856	95.99
11.5	1,616,126	57,218	0.0354	0.9646	94.61
12.5	1,538,205	5,732	0.0037	0.9963	91.26
13.5	759,872	8,886	0.0117	0.9883	90.92
14.5	742,470	882	0.0012	0.9988	89.85
15.5	735,081	23,406	0.0318	0.9682	89.75
16.5	663,479	4,001	0.0060	0.9940	86.89
17.5	628,124	12,098	0.0193	0.9807	86.37
18.5	501,859	4,483	0.0089	0.9911	84.70
19.5	479,372	16,238	0.0339	0.9661	83.95
20.5	397,322	16,026	0.0403	0.9597	81.10
21.5	410,164	8,348	0.0204	0.9796	77.83
22.5	437,728	2,539	0.0058	0.9942	76.25
23.5	428,276	2,516	0.0059	0.9941	75.80
24.5	373,061	3,195	0.0086	0.9914	75.36
25.5	369,866	8,822	0.0239	0.9761	74.71
26.5	348,488	284	0.0008	0.9992	72.93
27.5	352,315	443	0.0013	0.9987	72.87
28.5	295,136	4,967	0.0168	0.9832	72.78
29.5	288,307		0.0000	1.0000	71.56
30.5	286,161	5,708	0.0199	0.9801	71.56
31.5	306,323	3,594	0.0117	0.9883	70.13
32.5	268,892		0.0000	1.0000	69.31
33.5	267,995	8,378	0.0313	0.9687	69.31
34.5	259,618	23,633	0.0910	0.9090	67.14
35.5	228,402	61	0.0003	0.9997	61.03
36.5	216,417		0.0000	1.0000	61.01
37.5	216,417		0.0000	1.0000	61.01
38.5	216,417	6,769	0.0313	0.9687	61.01



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.61 STRUCTURES AND IMPROVEMENTS - OFFICE BUILDINGS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1888-2014			EXPERIENCE BAND 1985-2014		
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	209,221		0.0000	1.0000	59.10
40.5	209,221	917	0.0044	0.9956	59.10
41.5	206,769		0.0000	1.0000	58.84
42.5	207,176		0.0000	1.0000	58.84
43.5	127,955		0.0000	1.0000	58.84
44.5	127,955	229	0.0018	0.9982	58.84
45.5	127,429		0.0000	1.0000	58.74
46.5	127,429		0.0000	1.0000	58.74
47.5	127,429		0.0000	1.0000	58.74
48.5	127,317	2,311	0.0182	0.9818	58.74
49.5	115,123	2,365	0.0205	0.9795	57.67
50.5	112,598		0.0000	1.0000	56.49
51.5	62,018	32,433	0.5230	0.4770	56.49
52.5	28,223		0.0000	1.0000	26.95
53.5	28,223		0.0000	1.0000	26.95
54.5	3,373		0.0000	1.0000	26.95
55.5	3,373		0.0000	1.0000	26.95
56.5	3,878		0.0000	1.0000	26.95
57.5	4,696	1,946	0.4144	0.5856	26.95
58.5	2,750		0.0000	1.0000	15.78
59.5	2,186		0.0000	1.0000	15.78
60.5	2,186		0.0000	1.0000	15.78
61.5	2,408	95	0.0395	0.9605	15.78
62.5	2,323	27	0.0116	0.9884	15.16
63.5	2,296		0.0000	1.0000	14.98
64.5	2,296		0.0000	1.0000	14.98
65.5	2,296		0.0000	1.0000	14.98
66.5	2,296		0.0000	1.0000	14.98
67.5	2,296		0.0000	1.0000	14.98
68.5	2,296		0.0000	1.0000	14.98
69.5	2,296		0.0000	1.0000	14.98
70.5	2,296		0.0000	1.0000	14.98
71.5	2,296	407	0.1773	0.8227	14.98
72.5	1,889		0.0000	1.0000	12.33
73.5	1,889		0.0000	1.0000	12.33
74.5	1,889		0.0000	1.0000	12.33
75.5	2,787		0.0000	1.0000	12.33
76.5	2,787		0.0000	1.0000	12.33
77.5	2,787		0.0000	1.0000	12.33
78.5	2,787		0.0000	1.0000	12.33

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.61 STRUCTURES AND IMPROVEMENTS - OFFICE BUILDINGS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1888-2014			EXPERIENCE BAND 1985-2014		
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	2,703		0.0000	1.0000	12.33
80.5	2,703		0.0000	1.0000	12.33
81.5	2,703		0.0000	1.0000	12.33
82.5	2,703		0.0000	1.0000	12.33
83.5	2,703		0.0000	1.0000	12.33
84.5	2,703		0.0000	1.0000	12.33
85.5	2,703		0.0000	1.0000	12.33
86.5	1,997		0.0000	1.0000	12.33
87.5	1,361		0.0000	1.0000	12.33
88.5	1,361		0.0000	1.0000	12.33
89.5	1,361		0.0000	1.0000	12.33
90.5	1,361		0.0000	1.0000	12.33
91.5	1,139		0.0000	1.0000	12.33
92.5	1,129		0.0000	1.0000	12.33
93.5	1,129		0.0000	1.0000	12.33
94.5	1,129		0.0000	1.0000	12.33
95.5	1,129		0.0000	1.0000	12.33
96.5	2,074		0.0000	1.0000	12.33
97.5	2,074		0.0000	1.0000	12.33
98.5	2,074		0.0000	1.0000	12.33
99.5	2,074		0.0000	1.0000	12.33
100.5	2,074		0.0000	1.0000	12.33
101.5	2,074		0.0000	1.0000	12.33
102.5	2,074		0.0000	1.0000	12.33
103.5	2,074		0.0000	1.0000	12.33
104.5	2,074		0.0000	1.0000	12.33
105.5	1,176		0.0000	1.0000	12.33
106.5	1,176		0.0000	1.0000	12.33
107.5	1,176		0.0000	1.0000	12.33
108.5	1,176		0.0000	1.0000	12.33
109.5	1,176		0.0000	1.0000	12.33
110.5	1,176		0.0000	1.0000	12.33
111.5	1,176		0.0000	1.0000	12.33
112.5	1,176		0.0000	1.0000	12.33
113.5	1,176		0.0000	1.0000	12.33
114.5	1,176		0.0000	1.0000	12.33
115.5	1,176		0.0000	1.0000	12.33
116.5	1,176		0.0000	1.0000	12.33
117.5	945		0.0000	1.0000	12.33
118.5	945		0.0000	1.0000	12.33

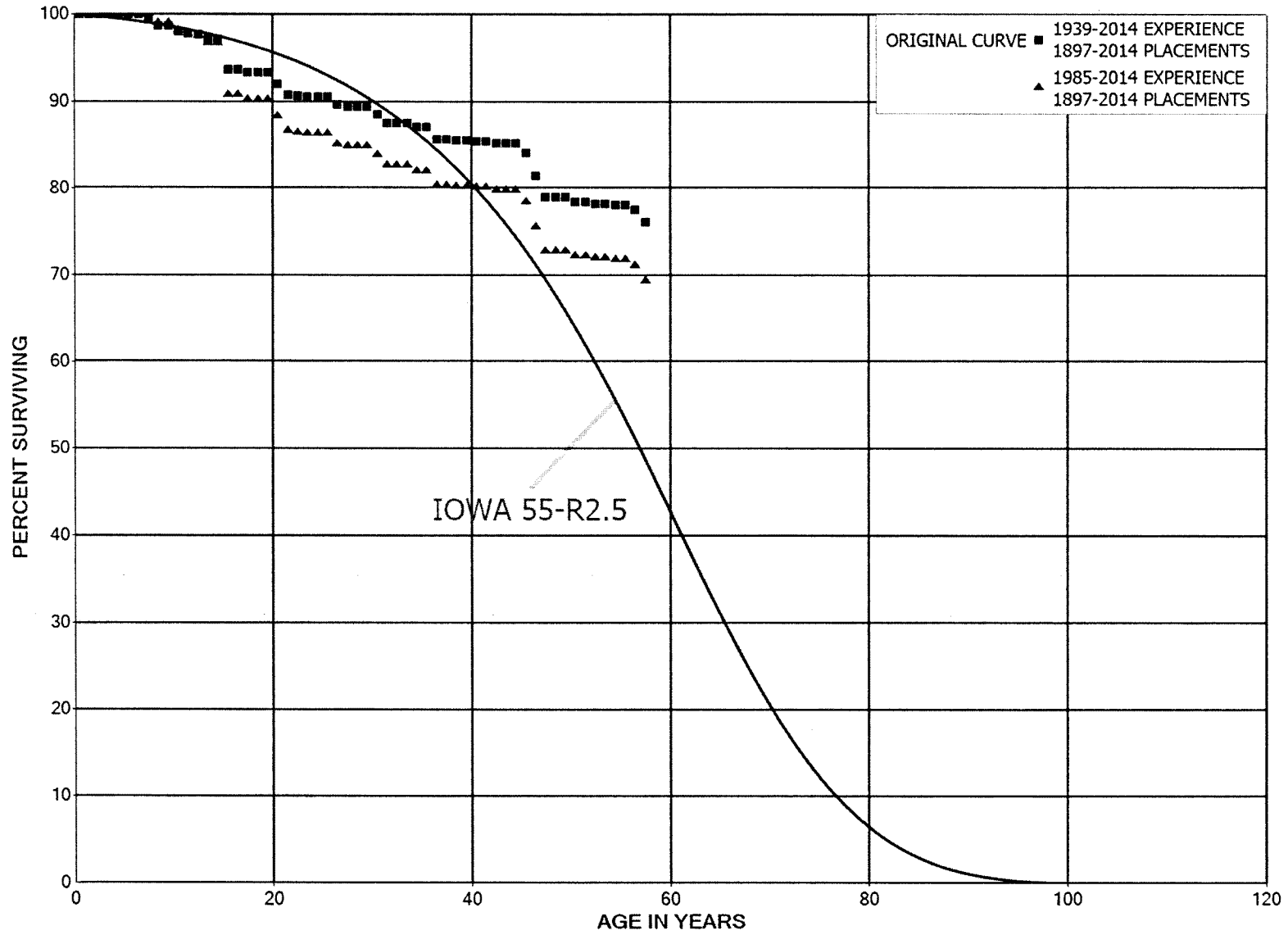
## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.61 STRUCTURES AND IMPROVEMENTS - OFFICE BUILDINGS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1888-2014			EXPERIENCE BAND 1985-2014		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
119.5	945		0.0000	1.0000	12.33
120.5	945		0.0000	1.0000	12.33
121.5	945		0.0000	1.0000	12.33
122.5	945		0.0000	1.0000	12.33
123.5	945		0.0000	1.0000	12.33
124.5	945		0.0000	1.0000	12.33
125.5	945		0.0000	1.0000	12.33
126.5					12.33

MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 304.70 STRUCTURES AND IMPROVEMENTS - SHOP AND GARAGE  
ORIGINAL AND SMOOTH SURVIVOR CURVES



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.70 STRUCTURES AND IMPROVEMENTS - SHOP AND GARAGE

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1897-2014			EXPERIENCE BAND 1939-2014		
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	3,110,826		0.0000	1.0000	100.00
0.5	3,110,750		0.0000	1.0000	100.00
1.5	3,107,870		0.0000	1.0000	100.00
2.5	2,270,725		0.0000	1.0000	100.00
3.5	2,251,322		0.0000	1.0000	100.00
4.5	2,042,386		0.0000	1.0000	100.00
5.5	2,024,290	164	0.0001	0.9999	100.00
6.5	604,546	4,154	0.0069	0.9931	99.99
7.5	599,443	4,282	0.0071	0.9929	99.30
8.5	583,094	112	0.0002	0.9998	98.60
9.5	582,982	3,690	0.0063	0.9937	98.58
10.5	542,085	1,188	0.0022	0.9978	97.95
11.5	480,469	564	0.0012	0.9988	97.74
12.5	443,640	2,556	0.0058	0.9942	97.62
13.5	453,363		0.0000	1.0000	97.06
14.5	427,787	15,066	0.0352	0.9648	97.06
15.5	412,722		0.0000	1.0000	93.64
16.5	404,034	1,612	0.0040	0.9960	93.64
17.5	394,932		0.0000	1.0000	93.27
18.5	356,322	34	0.0001	0.9999	93.27
19.5	350,721	4,942	0.0141	0.9859	93.26
20.5	344,671	4,630	0.0134	0.9866	91.95
21.5	328,076	429	0.0013	0.9987	90.71
22.5	287,113	425	0.0015	0.9985	90.59
23.5	244,316		0.0000	1.0000	90.46
24.5	244,316		0.0000	1.0000	90.46
25.5	225,049	2,072	0.0092	0.9908	90.46
26.5	222,854	456	0.0020	0.9980	89.63
27.5	222,149		0.0000	1.0000	89.44
28.5	218,496		0.0000	1.0000	89.44
29.5	214,992	2,133	0.0099	0.9901	89.44
30.5	209,493	2,396	0.0114	0.9886	88.55
31.5	204,374		0.0000	1.0000	87.54
32.5	202,841		0.0000	1.0000	87.54
33.5	202,720	1,134	0.0056	0.9944	87.54
34.5	201,586		0.0000	1.0000	87.05
35.5	201,550	3,390	0.0168	0.9832	87.05
36.5	186,223		0.0000	1.0000	85.59
37.5	186,223	227	0.0012	0.9988	85.59
38.5	185,996		0.0000	1.0000	85.48

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.70 STRUCTURES AND IMPROVEMENTS - SHOP AND GARAGE

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1897-2014			EXPERIENCE BAND 1939-2014			
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	185,996	79	0.0004	0.9996	85.48	
40.5	185,917		0.0000	1.0000	85.45	
41.5	186,434	662	0.0035	0.9965	85.45	
42.5	185,111		0.0000	1.0000	85.14	
43.5	185,111		0.0000	1.0000	85.14	
44.5	184,649	2,295	0.0124	0.9876	85.14	
45.5	118,311	3,747	0.0317	0.9683	84.09	
46.5	114,565	3,545	0.0309	0.9691	81.42	
47.5	111,019		0.0000	1.0000	78.90	
48.5	111,019		0.0000	1.0000	78.90	
49.5	111,019	673	0.0061	0.9939	78.90	
50.5	104,841		0.0000	1.0000	78.42	
51.5	92,177	284	0.0031	0.9969	78.42	
52.5	90,422		0.0000	1.0000	78.18	
53.5	73,730	161	0.0022	0.9978	78.18	
54.5	73,568		0.0000	1.0000	78.01	
55.5	72,105	465	0.0065	0.9935	78.01	
56.5	71,601	1,370	0.0191	0.9809	77.51	
57.5	49,389		0.0000	1.0000	76.03	
58.5	47,820		0.0000	1.0000	76.03	
59.5	47,820		0.0000	1.0000	76.03	
60.5	46,379	323	0.0070	0.9930	76.03	
61.5	46,055	0	0.0000	1.0000	75.50	
62.5	46,038		0.0000	1.0000	75.50	
63.5	46,038	102	0.0022	0.9978	75.50	
64.5	45,613		0.0000	1.0000	75.33	
65.5	44,162		0.0000	1.0000	75.33	
66.5	44,162	1,399	0.0317	0.9683	75.33	
67.5	42,679		0.0000	1.0000	72.94	
68.5	42,679	22	0.0005	0.9995	72.94	
69.5	42,657	1,034	0.0242	0.9758	72.90	
70.5	41,622		0.0000	1.0000	71.14	
71.5	41,622		0.0000	1.0000	71.14	
72.5	41,622		0.0000	1.0000	71.14	
73.5	41,602		0.0000	1.0000	71.14	
74.5	41,400	28	0.0007	0.9993	71.14	
75.5	17,909		0.0000	1.0000	71.09	
76.5	17,909		0.0000	1.0000	71.09	
77.5	17,909		0.0000	1.0000	71.09	
78.5	17,909		0.0000	1.0000	71.09	

## MISSOURI AMERICAN WATER COMPANY

ACCOUNT 304.70 STRUCTURES AND IMPROVEMENTS - SHOP AND GARAGE

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1897-2014			EXPERIENCE BAND 1939-2014		
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	17,909		0.0000	1.0000	71.09
80.5	17,909		0.0000	1.0000	71.09
81.5	17,909		0.0000	1.0000	71.09
82.5	17,909		0.0000	1.0000	71.09
83.5	17,909		0.0000	1.0000	71.09
84.5	17,909		0.0000	1.0000	71.09
85.5	17,909		0.0000	1.0000	71.09
86.5	17,909		0.0000	1.0000	71.09
87.5	17,909		0.0000	1.0000	71.09
88.5	16,650		0.0000	1.0000	71.09
89.5	4,695		0.0000	1.0000	71.09
90.5	4,695		0.0000	1.0000	71.09
91.5	4,695		0.0000	1.0000	71.09
92.5	4,695		0.0000	1.0000	71.09
93.5	4,695		0.0000	1.0000	71.09
94.5	4,695		0.0000	1.0000	71.09
95.5	4,695		0.0000	1.0000	71.09
96.5	4,695		0.0000	1.0000	71.09
97.5	4,695		0.0000	1.0000	71.09
98.5	4,695		0.0000	1.0000	71.09
99.5	4,695		0.0000	1.0000	71.09
100.5	4,695		0.0000	1.0000	71.09
101.5	4,695		0.0000	1.0000	71.09
102.5	4,695		0.0000	1.0000	71.09
103.5	4,695		0.0000	1.0000	71.09
104.5	4,695		0.0000	1.0000	71.09
105.5	4,695		0.0000	1.0000	71.09
106.5	4,695		0.0000	1.0000	71.09
107.5	4,695		0.0000	1.0000	71.09
108.5	4,695		0.0000	1.0000	71.09
109.5	4,695		0.0000	1.0000	71.09
110.5	4,695		0.0000	1.0000	71.09
111.5	4,695		0.0000	1.0000	71.09
112.5	4,695		0.0000	1.0000	71.09
113.5	4,695		0.0000	1.0000	71.09
114.5	4,695		0.0000	1.0000	71.09
115.5	4,695		0.0000	1.0000	71.09
116.5	4,695		0.0000	1.0000	71.09
117.5					71.09

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.70 STRUCTURES AND IMPROVEMENTS - SHOP AND GARAGE

## ORIGINAL LIFE TABLE

## PLACEMENT BAND 1897-2014

## EXPERIENCE BAND 1985-2014

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	2,899,995		0.0000	1.0000	100.00
0.5	2,907,491		0.0000	1.0000	100.00
1.5	2,907,333		0.0000	1.0000	100.00
2.5	2,071,722		0.0000	1.0000	100.00
3.5	2,053,004		0.0000	1.0000	100.00
4.5	1,846,492		0.0000	1.0000	100.00
5.5	1,828,431	164	0.0001	0.9999	100.00
6.5	424,015		0.0000	1.0000	99.99
7.5	423,178	4,282	0.0101	0.9899	99.99
8.5	406,829	112	0.0003	0.9997	98.98
9.5	406,717	3,690	0.0091	0.9909	98.95
10.5	365,820	1,188	0.0032	0.9968	98.05
11.5	308,381	564	0.0018	0.9982	97.74
12.5	271,617	2,556	0.0094	0.9906	97.56
13.5	269,061		0.0000	1.0000	96.64
14.5	244,405	15,066	0.0616	0.9384	96.64
15.5	298,047		0.0000	1.0000	90.68
16.5	289,359	1,612	0.0056	0.9944	90.68
17.5	283,803		0.0000	1.0000	90.18
18.5	245,192	34	0.0001	0.9999	90.18
19.5	239,592	4,942	0.0206	0.9794	90.16
20.5	239,720	4,630	0.0193	0.9807	88.30
21.5	235,789	429	0.0018	0.9982	86.60
22.5	200,044	425	0.0021	0.9979	86.44
23.5	173,939		0.0000	1.0000	86.26
24.5	174,101		0.0000	1.0000	86.26
25.5	156,298	2,072	0.0133	0.9867	86.26
26.5	154,606	456	0.0030	0.9970	85.11
27.5	175,583		0.0000	1.0000	84.86
28.5	173,499		0.0000	1.0000	84.86
29.5	169,996	2,133	0.0125	0.9875	84.86
30.5	165,938	2,396	0.0144	0.9856	83.80
31.5	160,819		0.0000	1.0000	82.59
32.5	159,303		0.0000	1.0000	82.59
33.5	159,182	1,134	0.0071	0.9929	82.59
34.5	158,418		0.0000	1.0000	82.00
35.5	159,933	3,390	0.0212	0.9788	82.00
36.5	144,606		0.0000	1.0000	80.26
37.5	146,145	227	0.0016	0.9984	80.26
38.5	145,918		0.0000	1.0000	80.14



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.70 STRUCTURES AND IMPROVEMENTS - SHOP AND GARAGE

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1897-2014			EXPERIENCE BAND 1985-2014			
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	145,940	79	0.0005	0.9995	80.14	
40.5	147,506		0.0000	1.0000	80.09	
41.5	143,328	662	0.0046	0.9954	80.09	
42.5	142,005		0.0000	1.0000	79.72	
43.5	143,004		0.0000	1.0000	79.72	
44.5	142,743	2,295	0.0161	0.9839	79.72	
45.5	100,080	3,747	0.0374	0.9626	78.44	
46.5	96,333	3,545	0.0368	0.9632	75.51	
47.5	92,787		0.0000	1.0000	72.73	
48.5	92,787		0.0000	1.0000	72.73	
49.5	92,787	673	0.0073	0.9927	72.73	
50.5	86,609		0.0000	1.0000	72.20	
51.5	73,945	284	0.0038	0.9962	72.20	
52.5	72,190		0.0000	1.0000	71.92	
53.5	55,498	161	0.0029	0.9971	71.92	
54.5	55,336		0.0000	1.0000	71.71	
55.5	53,873	465	0.0086	0.9914	71.71	
56.5	53,369	1,370	0.0257	0.9743	71.09	
57.5	31,157		0.0000	1.0000	69.27	
58.5	30,847		0.0000	1.0000	69.27	
59.5	43,125		0.0000	1.0000	69.27	
60.5	41,684	323	0.0078	0.9922	69.27	
61.5	41,360	0	0.0000	1.0000	68.73	
62.5	41,344		0.0000	1.0000	68.73	
63.5	41,344	102	0.0025	0.9975	68.73	
64.5	40,918		0.0000	1.0000	68.56	
65.5	39,467		0.0000	1.0000	68.56	
66.5	39,467	1,399	0.0355	0.9645	68.56	
67.5	37,984		0.0000	1.0000	66.13	
68.5	37,984	22	0.0006	0.9994	66.13	
69.5	37,963	1,034	0.0272	0.9728	66.09	
70.5	36,927		0.0000	1.0000	64.29	
71.5	36,927		0.0000	1.0000	64.29	
72.5	36,927		0.0000	1.0000	64.29	
73.5	36,907		0.0000	1.0000	64.29	
74.5	36,705	28	0.0008	0.9992	64.29	
75.5	13,214		0.0000	1.0000	64.24	
76.5	13,214		0.0000	1.0000	64.24	
77.5	13,214		0.0000	1.0000	64.24	
78.5	13,214		0.0000	1.0000	64.24	

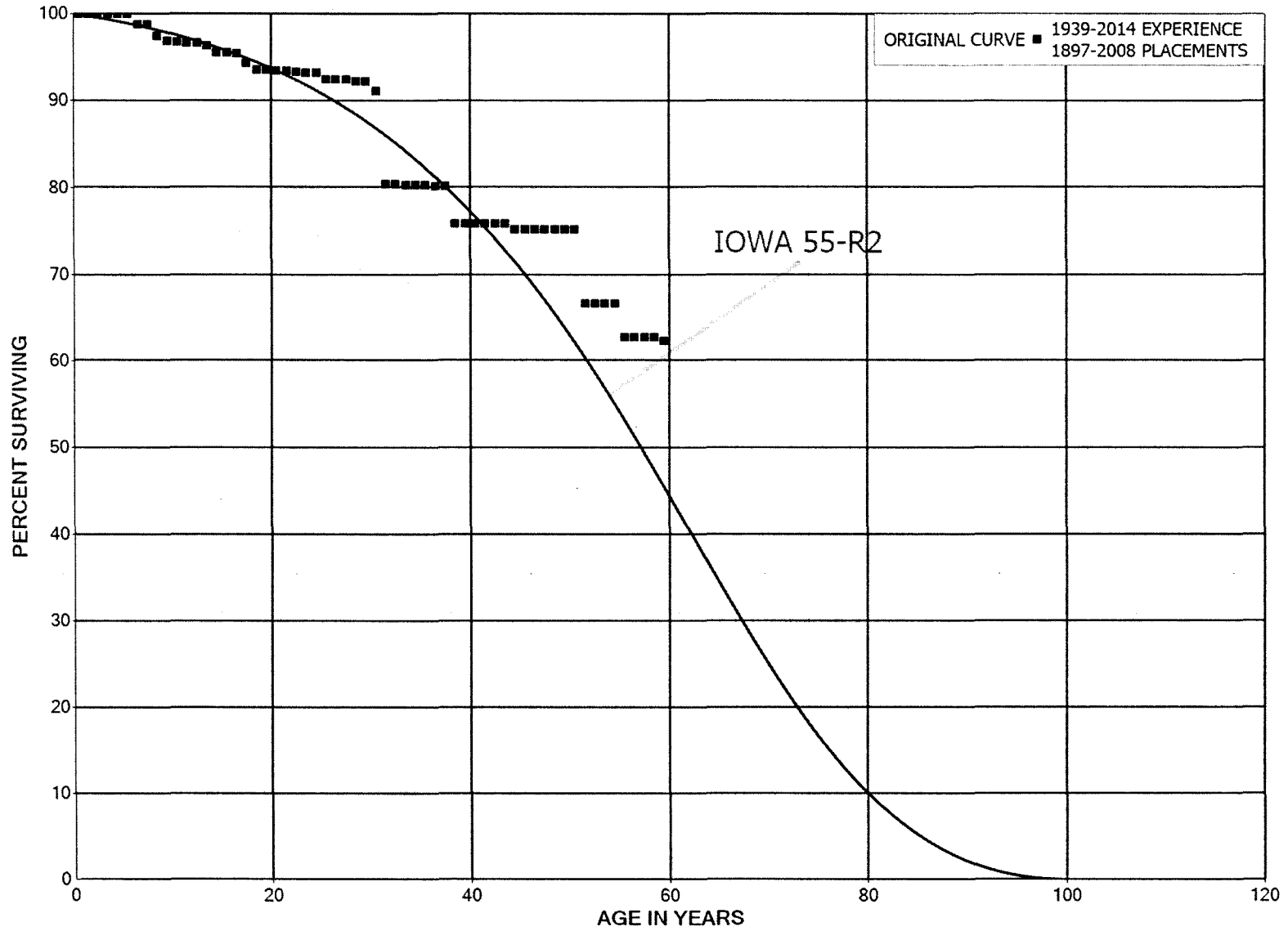
## MISSOURI AMERICAN WATER COMPANY

ACCOUNT 304.70 STRUCTURES AND IMPROVEMENTS - SHOP AND GARAGE

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1897-2014			EXPERIENCE BAND 1985-2014		
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	13,214		0.0000	1.0000	64.24
80.5	13,214		0.0000	1.0000	64.24
81.5	13,214		0.0000	1.0000	64.24
82.5	13,214		0.0000	1.0000	64.24
83.5	13,214		0.0000	1.0000	64.24
84.5	13,214		0.0000	1.0000	64.24
85.5	13,214		0.0000	1.0000	64.24
86.5	13,214		0.0000	1.0000	64.24
87.5	17,909		0.0000	1.0000	64.24
88.5	16,650		0.0000	1.0000	64.24
89.5	4,695		0.0000	1.0000	64.24
90.5	4,695		0.0000	1.0000	64.24
91.5	4,695		0.0000	1.0000	64.24
92.5	4,695		0.0000	1.0000	64.24
93.5	4,695		0.0000	1.0000	64.24
94.5	4,695		0.0000	1.0000	64.24
95.5	4,695		0.0000	1.0000	64.24
96.5	4,695		0.0000	1.0000	64.24
97.5	4,695		0.0000	1.0000	64.24
98.5	4,695		0.0000	1.0000	64.24
99.5	4,695		0.0000	1.0000	64.24
100.5	4,695		0.0000	1.0000	64.24
101.5	4,695		0.0000	1.0000	64.24
102.5	4,695		0.0000	1.0000	64.24
103.5	4,695		0.0000	1.0000	64.24
104.5	4,695		0.0000	1.0000	64.24
105.5	4,695		0.0000	1.0000	64.24
106.5	4,695		0.0000	1.0000	64.24
107.5	4,695		0.0000	1.0000	64.24
108.5	4,695		0.0000	1.0000	64.24
109.5	4,695		0.0000	1.0000	64.24
110.5	4,695		0.0000	1.0000	64.24
111.5	4,695		0.0000	1.0000	64.24
112.5	4,695		0.0000	1.0000	64.24
113.5	4,695		0.0000	1.0000	64.24
114.5	4,695		0.0000	1.0000	64.24
115.5	4,695		0.0000	1.0000	64.24
116.5	4,695		0.0000	1.0000	64.24
117.5					64.24

MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 304.80 STRUCTURES AND IMPROVEMENTS - MISCELLANEOUS  
ORIGINAL AND SMOOTH SURVIVOR CURVES



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.80 STRUCTURES AND IMPROVEMENTS - MISCELLANEOUS

## ORIGINAL LIFE TABLE

## PLACEMENT BAND 1897-2008

## EXPERIENCE BAND 1939-2014

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	4,999,249		0.0000	1.0000	100.00
0.5	5,000,368	690	0.0001	0.9999	100.00
1.5	4,963,035	1,647	0.0003	0.9997	99.99
2.5	4,962,205	510	0.0001	0.9999	99.95
3.5	4,922,040	10	0.0000	1.0000	99.94
4.5	4,894,934	2,025	0.0004	0.9996	99.94
5.5	4,800,760	55,305	0.0115	0.9885	99.90
6.5	4,704,316	1,496	0.0003	0.9997	98.75
7.5	4,629,325	62,402	0.0135	0.9865	98.72
8.5	4,416,670	24,148	0.0055	0.9945	97.39
9.5	4,344,055	4,742	0.0011	0.9989	96.86
10.5	4,301,437	7,909	0.0018	0.9982	96.75
11.5	4,261,310	211	0.0000	1.0000	96.57
12.5	4,234,926	14,133	0.0033	0.9967	96.57
13.5	3,897,623	29,162	0.0075	0.9925	96.25
14.5	2,039,306	1,242	0.0006	0.9994	95.52
15.5	1,830,024	2,303	0.0013	0.9987	95.47
16.5	1,834,303	19,532	0.0106	0.9894	95.35
17.5	1,812,893	14,854	0.0082	0.9918	94.33
18.5	1,854,000	320	0.0002	0.9998	93.56
19.5	1,497,692	1,702	0.0011	0.9989	93.54
20.5	661,304	261	0.0004	0.9996	93.44
21.5	660,837	951	0.0014	0.9986	93.40
22.5	651,140	297	0.0005	0.9995	93.26
23.5	642,900		0.0000	1.0000	93.22
24.5	582,910	5,486	0.0094	0.9906	93.22
25.5	577,501		0.0000	1.0000	92.34
26.5	549,770	12	0.0000	1.0000	92.34
27.5	151,293	215	0.0014	0.9986	92.34
28.5	151,117	30	0.0002	0.9998	92.21
29.5	150,087	1,754	0.0117	0.9883	92.19
30.5	148,333	17,511	0.1181	0.8819	91.12
31.5	132,112		0.0000	1.0000	80.36
32.5	112,382	150	0.0013	0.9987	80.36
33.5	112,206		0.0000	1.0000	80.25
34.5	112,206		0.0000	1.0000	80.25
35.5	112,206	106	0.0009	0.9991	80.25
36.5	80,056		0.0000	1.0000	80.18
37.5	80,056	4,370	0.0546	0.9454	80.18
38.5	75,686		0.0000	1.0000	75.80

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.80 STRUCTURES AND IMPROVEMENTS - MISCELLANEOUS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1897-2008			EXPERIENCE BAND 1939-2014		
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	75,686		0.0000	1.0000	75.80
40.5	75,686		0.0000	1.0000	75.80
41.5	76,468		0.0000	1.0000	75.80
42.5	76,468		0.0000	1.0000	75.80
43.5	76,468	602	0.0079	0.9921	75.80
44.5	75,866		0.0000	1.0000	75.20
45.5	75,866		0.0000	1.0000	75.20
46.5	75,866		0.0000	1.0000	75.20
47.5	75,866		0.0000	1.0000	75.20
48.5	70,594		0.0000	1.0000	75.20
49.5	67,056		0.0000	1.0000	75.20
50.5	67,056	7,692	0.1147	0.8853	75.20
51.5	59,364		0.0000	1.0000	66.58
52.5	59,364		0.0000	1.0000	66.58
53.5	59,364		0.0000	1.0000	66.58
54.5	54,353	3,181	0.0585	0.9415	66.58
55.5	48,569		0.0000	1.0000	62.68
56.5	48,569		0.0000	1.0000	62.68
57.5	48,569		0.0000	1.0000	62.68
58.5	48,569	296	0.0061	0.9939	62.68
59.5	48,273	28	0.0006	0.9994	62.30
60.5	48,206	11	0.0002	0.9998	62.26
61.5	48,154		0.0000	1.0000	62.25
62.5	48,075		0.0000	1.0000	62.25
63.5	39,414	133	0.0034	0.9966	62.25
64.5	39,281		0.0000	1.0000	62.04
65.5	39,281		0.0000	1.0000	62.04
66.5	39,281	197	0.0050	0.9950	62.04
67.5	39,084		0.0000	1.0000	61.73
68.5	38,358		0.0000	1.0000	61.73
69.5	38,358	580	0.0151	0.9849	61.73
70.5	37,779	38	0.0010	0.9990	60.79
71.5	22,414		0.0000	1.0000	60.73
72.5	22,414	250	0.0112	0.9888	60.73
73.5	22,164		0.0000	1.0000	60.06
74.5	22,164	237	0.0107	0.9893	60.06
75.5	10,228	32	0.0031	0.9969	59.41
76.5	9,140		0.0000	1.0000	59.23
77.5	9,140		0.0000	1.0000	59.23
78.5	8,603		0.0000	1.0000	59.23

## MISSOURI AMERICAN WATER COMPANY

ACCOUNT 304.80 STRUCTURES AND IMPROVEMENTS - MISCELLANEOUS

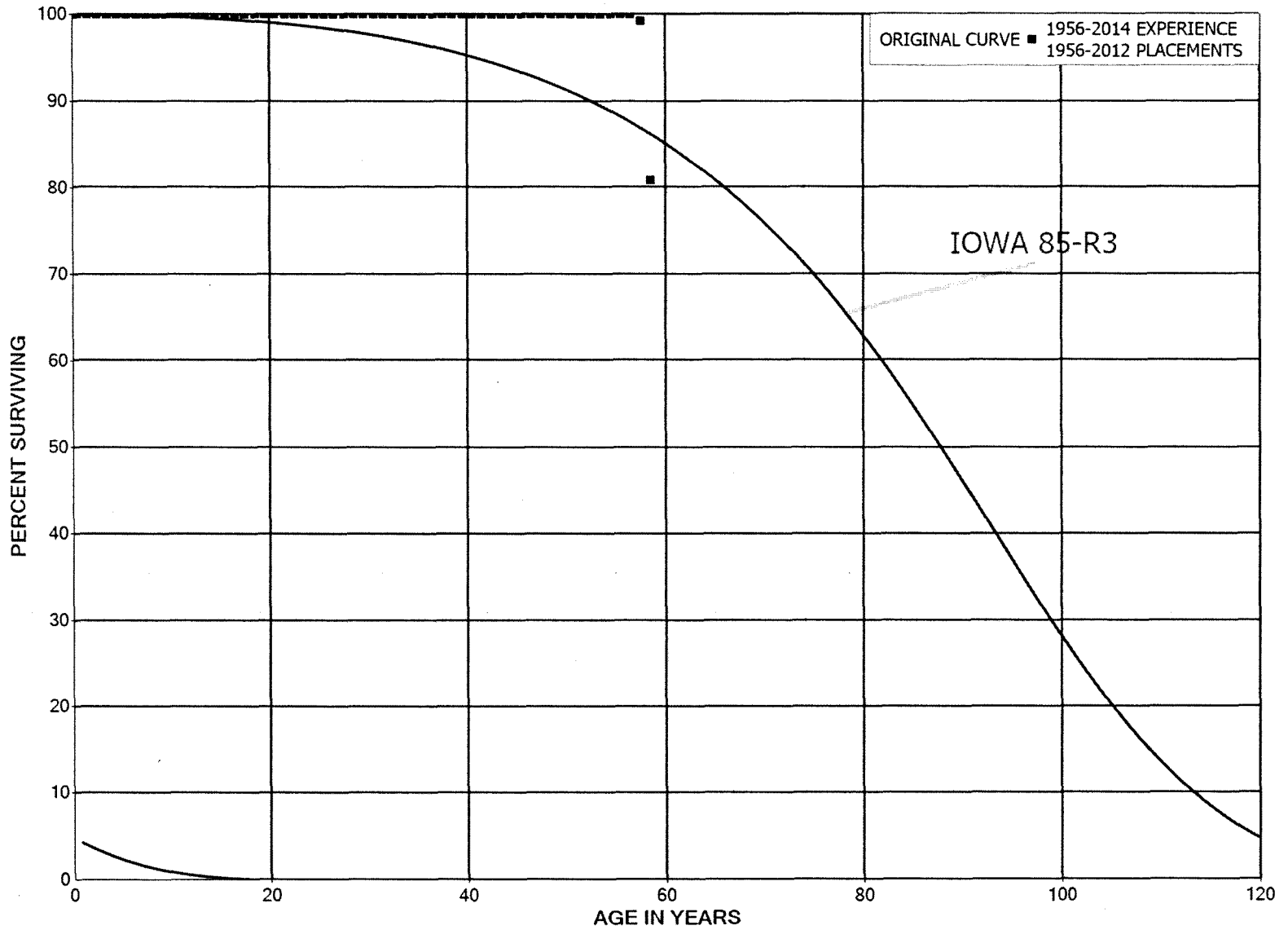
## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1897-2008			EXPERIENCE BAND 1939-2014		
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	8,603		0.0000	1.0000	59.23
80.5	8,603		0.0000	1.0000	59.23
81.5	8,603		0.0000	1.0000	59.23
82.5	8,603		0.0000	1.0000	59.23
83.5	8,509		0.0000	1.0000	59.23
84.5	8,509		0.0000	1.0000	59.23
85.5	8,157		0.0000	1.0000	59.23
86.5	8,052		0.0000	1.0000	59.23
87.5	6,488	237	0.0365	0.9635	59.23
88.5	4,349		0.0000	1.0000	57.06
89.5	4,349		0.0000	1.0000	57.06
90.5	4,349		0.0000	1.0000	57.06
91.5	4,349		0.0000	1.0000	57.06
92.5	4,349		0.0000	1.0000	57.06
93.5	4,349		0.0000	1.0000	57.06
94.5	4,349		0.0000	1.0000	57.06
95.5	4,349		0.0000	1.0000	57.06
96.5	4,349		0.0000	1.0000	57.06
97.5	4,349		0.0000	1.0000	57.06
98.5	4,349	1,635	0.3759	0.6241	57.06
99.5	2,714		0.0000	1.0000	35.61
100.5	2,714		0.0000	1.0000	35.61
101.5	2,617		0.0000	1.0000	35.61
102.5	2,254		0.0000	1.0000	35.61
103.5	1,472		0.0000	1.0000	35.61
104.5	1,451		0.0000	1.0000	35.61
105.5	1,451		0.0000	1.0000	35.61
106.5	1,451		0.0000	1.0000	35.61
107.5	160		0.0000	1.0000	35.61
108.5	160		0.0000	1.0000	35.61
109.5	160		0.0000	1.0000	35.61
110.5	160		0.0000	1.0000	35.61
111.5	160		0.0000	1.0000	35.61
112.5					35.61



Gannett Fleming

MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 305 COLLECTING AND IMPOUNDING RESERVOIRS  
ORIGINAL AND SMOOTH SURVIVOR CURVES



VII-52

MO American Water Co - Water  
March 31, 2015

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 305 COLLECTING AND IMPOUNDING RESERVOIRS

## ORIGINAL LIFE TABLE

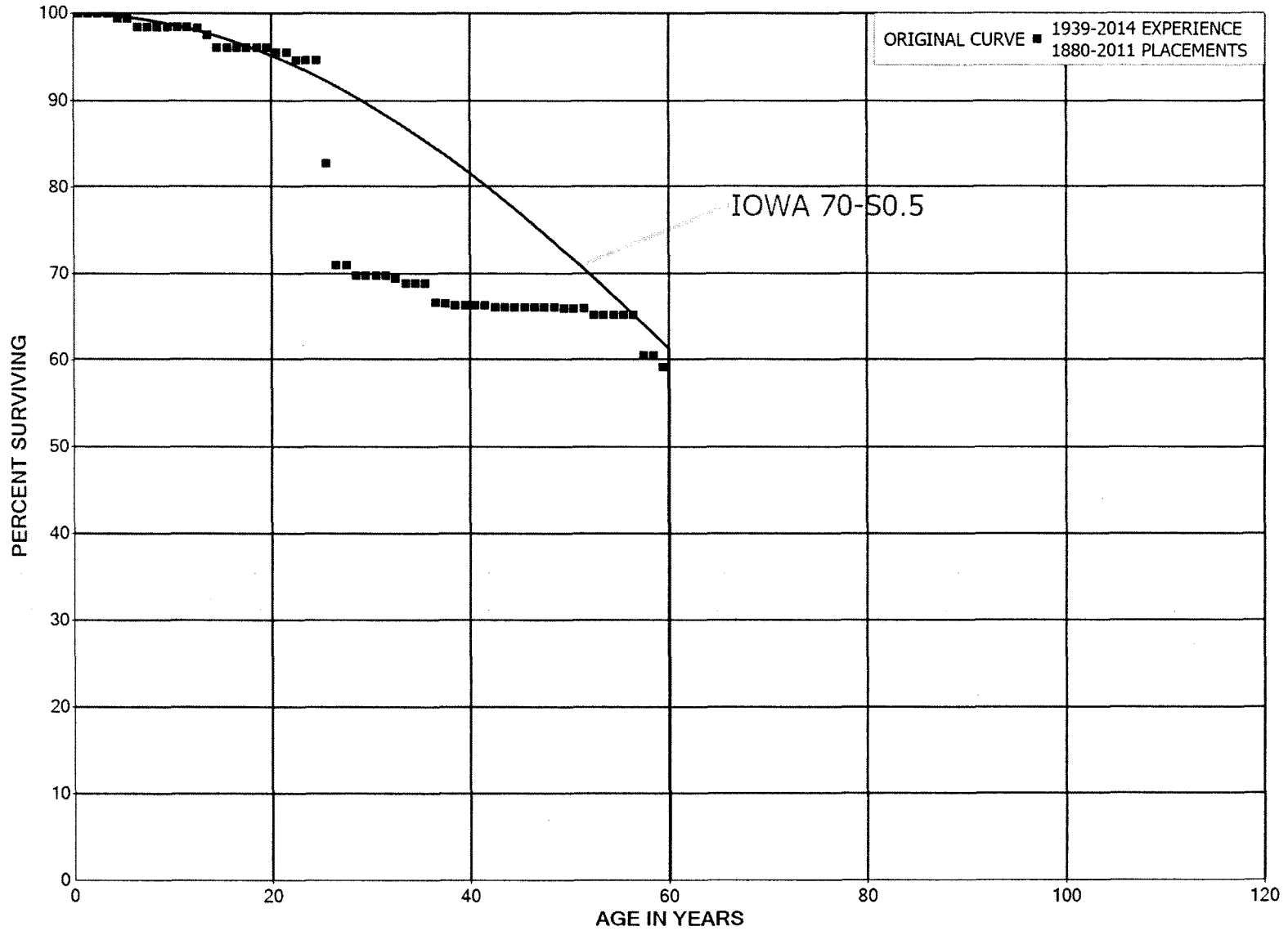
PLACEMENT BAND 1956-2012			EXPERIENCE BAND 1956-2014		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	121,998		0.0000	1.0000	100.00
0.5	121,998		0.0000	1.0000	100.00
1.5	121,998		0.0000	1.0000	100.00
2.5	111,066		0.0000	1.0000	100.00
3.5	112,682		0.0000	1.0000	100.00
4.5	112,682		0.0000	1.0000	100.00
5.5	112,682		0.0000	1.0000	100.00
6.5	112,682		0.0000	1.0000	100.00
7.5	111,066		0.0000	1.0000	100.00
8.5	111,066		0.0000	1.0000	100.00
9.5	111,066		0.0000	1.0000	100.00
10.5	111,066		0.0000	1.0000	100.00
11.5	111,066		0.0000	1.0000	100.00
12.5	111,066		0.0000	1.0000	100.00
13.5	111,066		0.0000	1.0000	100.00
14.5	111,066		0.0000	1.0000	100.00
15.5	111,066		0.0000	1.0000	100.00
16.5	111,066		0.0000	1.0000	100.00
17.5	111,066		0.0000	1.0000	100.00
18.5	111,066		0.0000	1.0000	100.00
19.5	110,400		0.0000	1.0000	100.00
20.5	110,400		0.0000	1.0000	100.00
21.5	110,400		0.0000	1.0000	100.00
22.5	110,400		0.0000	1.0000	100.00
23.5	110,400		0.0000	1.0000	100.00
24.5	110,400		0.0000	1.0000	100.00
25.5	110,400		0.0000	1.0000	100.00
26.5	110,400		0.0000	1.0000	100.00
27.5	110,400		0.0000	1.0000	100.00
28.5	110,400		0.0000	1.0000	100.00
29.5	110,400		0.0000	1.0000	100.00
30.5	110,400		0.0000	1.0000	100.00
31.5	110,400		0.0000	1.0000	100.00
32.5	110,400		0.0000	1.0000	100.00
33.5	110,400		0.0000	1.0000	100.00
34.5	110,400		0.0000	1.0000	100.00
35.5	110,400		0.0000	1.0000	100.00
36.5	110,400		0.0000	1.0000	100.00
37.5	110,400		0.0000	1.0000	100.00
38.5	107,967		0.0000	1.0000	100.00



MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 305 COLLECTING AND IMPOUNDING RESERVOIRS  
ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1956-2012			EXPERIENCE 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	107,967		0.0000	1.0000	100.00
40.5	107,967		0.0000	1.0000	100.00
41.5	80,487		0.0000	1.0000	100.00
42.5	80,487		0.0000	1.0000	100.00
43.5	80,487		0.0000	1.0000	100.00
44.5	80,487		0.0000	1.0000	100.00
45.5	80,487		0.0000	1.0000	100.00
46.5	80,487		0.0000	1.0000	100.00
47.5	80,487		0.0000	1.0000	100.00
48.5	80,487		0.0000	1.0000	100.00
49.5	80,487		0.0000	1.0000	100.00
50.5	80,487		0.0000	1.0000	100.00
51.5	80,487		0.0000	1.0000	100.00
52.5	80,487		0.0000	1.0000	100.00
53.5	21,092		0.0000	1.0000	100.00
54.5	21,092		0.0000	1.0000	100.00
55.5	21,092		0.0000	1.0000	100.00
56.5	21,092	183	0.0087	0.9913	100.00
57.5	20,331	3,741	0.1840	0.8160	99.13
58.5					80.89

MISSOURI AMERICAN WATER COMPANY  
 ACCOUNT 306 LAKE, RIVER AND OTHER INTAKES  
 ORIGINAL AND SMOOTH SURVIVOR CURVES



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 306 LAKE, RIVER AND OTHER INTAKES

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1880-2011			EXPERIENCE BAND 1939-2014		
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	8,602,842		0.0000	1.0000	100.00
0.5	8,602,842		0.0000	1.0000	100.00
1.5	8,602,842	1,811	0.0002	0.9998	100.00
2.5	8,592,567	1,900	0.0002	0.9998	99.98
3.5	2,144,721	11,144	0.0052	0.9948	99.96
4.5	2,133,577		0.0000	1.0000	99.44
5.5	2,108,732	21,193	0.0101	0.9899	99.44
6.5	2,022,771	553	0.0003	0.9997	98.44
7.5	1,528,170		0.0000	1.0000	98.41
8.5	1,528,170		0.0000	1.0000	98.41
9.5	1,530,325		0.0000	1.0000	98.41
10.5	463,308		0.0000	1.0000	98.41
11.5	428,500	473	0.0011	0.9989	98.41
12.5	428,108	3,268	0.0076	0.9924	98.30
13.5	449,395	6,790	0.0151	0.9849	97.55
14.5	419,630		0.0000	1.0000	96.08
15.5	418,630		0.0000	1.0000	96.08
16.5	328,223		0.0000	1.0000	96.08
17.5	328,223		0.0000	1.0000	96.08
18.5	328,223		0.0000	1.0000	96.08
19.5	328,223	1,884	0.0057	0.9943	96.08
20.5	326,339		0.0000	1.0000	95.53
21.5	326,339	3,240	0.0099	0.9901	95.53
22.5	324,808		0.0000	1.0000	94.58
23.5	275,842		0.0000	1.0000	94.58
24.5	275,876	34,435	0.1248	0.8752	94.58
25.5	241,441	34,435	0.1426	0.8574	82.77
26.5	208,800		0.0000	1.0000	70.97
27.5	209,032	3,635	0.0174	0.9826	70.97
28.5	209,166		0.0000	1.0000	69.73
29.5	201,731		0.0000	1.0000	69.73
30.5	201,834	147	0.0007	0.9993	69.73
31.5	201,956	784	0.0039	0.9961	69.68
32.5	210,932	1,617	0.0077	0.9923	69.41
33.5	200,865		0.0000	1.0000	68.88
34.5	200,865		0.0000	1.0000	68.88
35.5	216,714	7,268	0.0335	0.9665	68.88
36.5	231,476	100	0.0004	0.9996	66.57
37.5	243,668	954	0.0039	0.9961	66.54
38.5	244,320		0.0000	1.0000	66.28

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 306 LAKE, RIVER AND OTHER INTAKES

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1880-2011			EXPERIENCE BAND 1939-2014		
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	239,716		0.0000	1.0000	66.28
40.5	245,052		0.0000	1.0000	66.28
41.5	250,485	1,000	0.0040	0.9960	66.28
42.5	260,121		0.0000	1.0000	66.02
43.5	260,121		0.0000	1.0000	66.02
44.5	258,255		0.0000	1.0000	66.02
45.5	258,255		0.0000	1.0000	66.02
46.5	196,684		0.0000	1.0000	66.02
47.5	196,703		0.0000	1.0000	66.02
48.5	196,703	166	0.0008	0.9992	66.02
49.5	195,110		0.0000	1.0000	65.96
50.5	195,693		0.0000	1.0000	65.96
51.5	195,693	2,183	0.0112	0.9888	65.96
52.5	191,233		0.0000	1.0000	65.22
53.5	193,382		0.0000	1.0000	65.22
54.5	194,582		0.0000	1.0000	65.22
55.5	194,582		0.0000	1.0000	65.22
56.5	194,582	13,985	0.0719	0.9281	65.22
57.5	150,316		0.0000	1.0000	60.54
58.5	165,962	3,755	0.0226	0.9774	60.54
59.5	162,207		0.0000	1.0000	59.17
60.5	162,207		0.0000	1.0000	59.17
61.5	162,207		0.0000	1.0000	59.17
62.5	162,207		0.0000	1.0000	59.17
63.5	162,207		0.0000	1.0000	59.17
64.5	162,207		0.0000	1.0000	59.17
65.5	162,207		0.0000	1.0000	59.17
66.5	162,207		0.0000	1.0000	59.17
67.5	162,207	2,036	0.0126	0.9874	59.17
68.5	160,171	830	0.0052	0.9948	58.42
69.5	159,341		0.0000	1.0000	58.12
70.5	159,341	1,989	0.0125	0.9875	58.12
71.5	155,197		0.0000	1.0000	57.40
72.5	155,197		0.0000	1.0000	57.40
73.5	155,197	82	0.0005	0.9995	57.40
74.5	155,035		0.0000	1.0000	57.37
75.5	127,909		0.0000	1.0000	57.37
76.5	127,909		0.0000	1.0000	57.37
77.5	127,909		0.0000	1.0000	57.37
78.5	127,909		0.0000	1.0000	57.37

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 306 LAKE, RIVER AND OTHER INTAKES

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1880-2011			EXPERIENCE BAND 1939-2014		
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	127,909		0.0000	1.0000	57.37
80.5	127,909		0.0000	1.0000	57.37
81.5	127,909		0.0000	1.0000	57.37
82.5	127,909		0.0000	1.0000	57.37
83.5	127,909		0.0000	1.0000	57.37
84.5	127,909		0.0000	1.0000	57.37
85.5	127,909		0.0000	1.0000	57.37
86.5	127,909		0.0000	1.0000	57.37
87.5	127,909	992	0.0078	0.9922	57.37
88.5	125,153		0.0000	1.0000	56.92
89.5	125,153		0.0000	1.0000	56.92
90.5	125,153	399	0.0032	0.9968	56.92
91.5	124,362	983	0.0079	0.9921	56.74
92.5	123,276		0.0000	1.0000	56.29
93.5	123,007		0.0000	1.0000	56.29
94.5	113,246		0.0000	1.0000	56.29
95.5	113,246		0.0000	1.0000	56.29
96.5	113,246		0.0000	1.0000	56.29
97.5	97,397	1,508	0.0155	0.9845	56.29
98.5	77,633		0.0000	1.0000	55.42
99.5	65,342	34	0.0005	0.9995	55.42
100.5	63,702		0.0000	1.0000	55.39
101.5	62,273	29	0.0005	0.9995	55.39
102.5	58,786	232	0.0039	0.9961	55.36
103.5	46,948	3,769	0.0803	0.9197	55.15
104.5	32,543	212	0.0065	0.9935	50.72
105.5	32,331	22	0.0007	0.9993	50.39
106.5	25,508		0.0000	1.0000	50.35
107.5	25,508		0.0000	1.0000	50.35
108.5	25,492		0.0000	1.0000	50.35
109.5	25,326	709	0.0280	0.9720	50.35
110.5	24,617		0.0000	1.0000	48.94
111.5	24,617	380	0.0154	0.9846	48.94
112.5	21,159		0.0000	1.0000	48.19
113.5	21,159		0.0000	1.0000	48.19
114.5	21,159		0.0000	1.0000	48.19
115.5	19,010		0.0000	1.0000	48.19
116.5	17,810	167	0.0094	0.9906	48.19
117.5	17,643		0.0000	1.0000	47.74
118.5	17,643		0.0000	1.0000	47.74

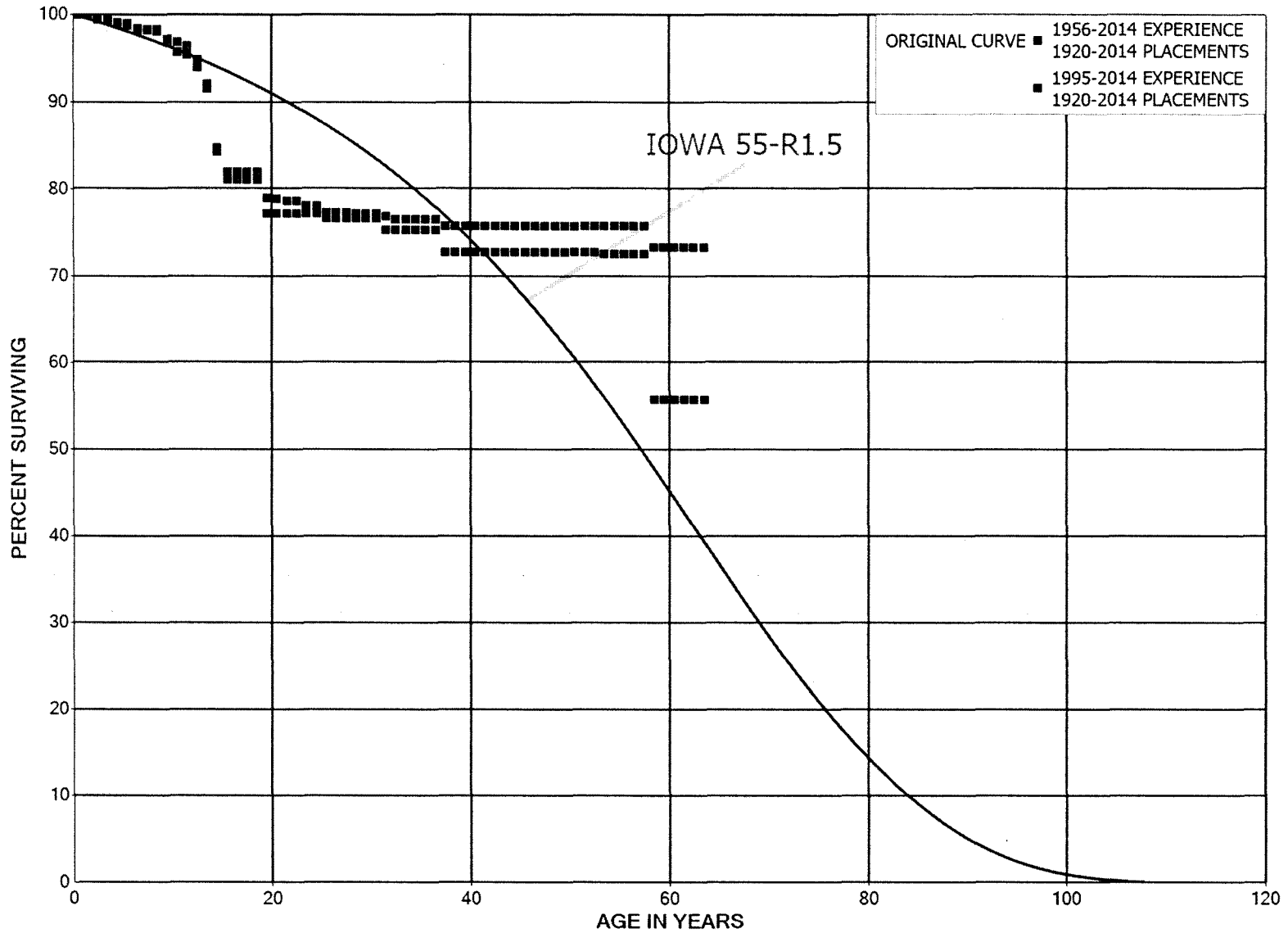
## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 306 LAKE, RIVER AND OTHER INTAKES

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1880-2011			EXPERIENCE BAND 1939-2014		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
119.5	17,643		0.0000	1.0000	47.74
120.5	2,706		0.0000	1.0000	47.74
121.5	2,706	2,112	0.7806	0.2194	47.74
122.5	583		0.0000	1.0000	10.47
123.5	583		0.0000	1.0000	10.47
124.5	583		0.0000	1.0000	10.47
125.5	583	561	0.9623	0.0377	10.47
126.5					0.40

MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 307 WELLS AND SPRINGS  
ORIGINAL AND SMOOTH SURVIVOR CURVES



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 307 WELLS AND SPRINGS

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1920-2014			EXPERIENCE 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	7,157,329		0.0000	1.0000	100.00
0.5	7,128,199		0.0000	1.0000	100.00
1.5	6,989,188	36,139	0.0052	0.9948	100.00
2.5	6,738,110	7,874	0.0012	0.9988	99.48
3.5	6,876,218	22,282	0.0032	0.9968	99.37
4.5	6,667,468	5,743	0.0009	0.9991	99.04
5.5	6,706,091	36,881	0.0055	0.9945	98.96
6.5	5,852,701	5,750	0.0010	0.9990	98.42
7.5	5,589,098	1,288	0.0002	0.9998	98.32
8.5	4,963,580	74,443	0.0150	0.9850	98.30
9.5	4,839,306	56,225	0.0116	0.9884	96.82
10.5	4,564,988	15,964	0.0035	0.9965	95.70
11.5	4,294,508	61,786	0.0144	0.9856	95.36
12.5	3,498,779	91,919	0.0263	0.9737	93.99
13.5	3,291,500	244,478	0.0743	0.9257	91.52
14.5	2,203,893	72,702	0.0330	0.9670	84.72
15.5	1,812,207		0.0000	1.0000	81.93
16.5	1,469,236		0.0000	1.0000	81.93
17.5	1,488,543		0.0000	1.0000	81.93
18.5	1,349,304	49,260	0.0365	0.9635	81.93
19.5	1,234,832	1,044	0.0008	0.9992	78.94
20.5	1,233,788	4,186	0.0034	0.9966	78.87
21.5	1,179,143		0.0000	1.0000	78.60
22.5	1,178,932	7,741	0.0066	0.9934	78.60
23.5	1,263,230		0.0000	1.0000	78.09
24.5	1,060,586	11,141	0.0105	0.9895	78.09
25.5	765,992	103	0.0001	0.9999	77.27
26.5	793,991		0.0000	1.0000	77.26
27.5	729,183	795	0.0011	0.9989	77.26
28.5	728,388		0.0000	1.0000	77.17
29.5	1,047,580		0.0000	1.0000	77.17
30.5	814,579	3,483	0.0043	0.9957	77.17
31.5	792,008	3,795	0.0048	0.9952	76.84
32.5	714,782		0.0000	1.0000	76.47
33.5	714,207		0.0000	1.0000	76.47
34.5	664,990		0.0000	1.0000	76.47
35.5	827,421		0.0000	1.0000	76.47
36.5	827,421	7,793	0.0094	0.9906	76.47
37.5	819,628		0.0000	1.0000	75.75
38.5	793,453		0.0000	1.0000	75.75



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 307 WELLS AND SPRINGS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1920-2014			EXPERIENCE 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	793,453		0.0000	1.0000	75.75
40.5	793,453		0.0000	1.0000	75.75
41.5	793,453		0.0000	1.0000	75.75
42.5	793,353	8	0.0000	1.0000	75.75
43.5	793,345		0.0000	1.0000	75.75
44.5	793,345		0.0000	1.0000	75.75
45.5	793,345		0.0000	1.0000	75.75
46.5	768,132		0.0000	1.0000	75.75
47.5	768,132		0.0000	1.0000	75.75
48.5	768,091		0.0000	1.0000	75.75
49.5	768,091		0.0000	1.0000	75.75
50.5	768,091	6	0.0000	1.0000	75.75
51.5	748,940	241	0.0003	0.9997	75.75
52.5	643,919	322	0.0005	0.9995	75.73
53.5	643,597		0.0000	1.0000	75.69
54.5	639,618		0.0000	1.0000	75.69
55.5	595,254		0.0000	1.0000	75.69
56.5	595,254		0.0000	1.0000	75.69
57.5	595,254	19,005	0.0319	0.9681	75.69
58.5	532,477		0.0000	1.0000	73.27
59.5	532,477		0.0000	1.0000	73.27
60.5	532,477		0.0000	1.0000	73.27
61.5	532,477		0.0000	1.0000	73.27
62.5	525,726		0.0000	1.0000	73.27
63.5	513,136		0.0000	1.0000	73.27
64.5	513,136		0.0000	1.0000	73.27
65.5	513,136		0.0000	1.0000	73.27
66.5	513,136		0.0000	1.0000	73.27
67.5	513,136		0.0000	1.0000	73.27
68.5	513,136		0.0000	1.0000	73.27
69.5	513,136		0.0000	1.0000	73.27
70.5	513,136		0.0000	1.0000	73.27
71.5	513,136		0.0000	1.0000	73.27
72.5	513,136		0.0000	1.0000	73.27
73.5	513,136		0.0000	1.0000	73.27
74.5	513,136		0.0000	1.0000	73.27
75.5	513,136		0.0000	1.0000	73.27
76.5	513,136		0.0000	1.0000	73.27
77.5	513,136		0.0000	1.0000	73.27
78.5	513,136		0.0000	1.0000	73.27

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 307 WELLS AND SPRINGS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1920-2014			EXPERIENCE 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
79.5	513,136		0.0000	1.0000	73.27
80.5	513,136		0.0000	1.0000	73.27
81.5	510,643		0.0000	1.0000	73.27
82.5	510,643		0.0000	1.0000	73.27
83.5	510,643		0.0000	1.0000	73.27
84.5	510,643		0.0000	1.0000	73.27
85.5	481,989		0.0000	1.0000	73.27
86.5	481,989		0.0000	1.0000	73.27
87.5	481,989		0.0000	1.0000	73.27
88.5	162,432		0.0000	1.0000	73.27
89.5	162,432		0.0000	1.0000	73.27
90.5	162,432		0.0000	1.0000	73.27
91.5	162,432		0.0000	1.0000	73.27
92.5	162,432		0.0000	1.0000	73.27
93.5	162,432		0.0000	1.0000	73.27
94.5					73.27

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 307 WELLS AND SPRINGS

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1920-2014			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	5,847,795		0.0000	1.0000	100.00
0.5	5,818,665		0.0000	1.0000	100.00
1.5	5,749,618	35,095	0.0061	0.9939	100.00
2.5	5,538,271	7,874	0.0014	0.9986	99.39
3.5	5,679,189	22,282	0.0039	0.9961	99.25
4.5	5,523,993	5,668	0.0010	0.9990	98.86
5.5	5,920,307	36,881	0.0062	0.9938	98.76
6.5	5,067,468		0.0000	1.0000	98.14
7.5	4,818,200	1,288	0.0003	0.9997	98.14
8.5	4,192,682	39,147	0.0093	0.9907	98.12
9.5	4,104,069	17,264	0.0042	0.9958	97.20
10.5	4,101,713	15,964	0.0039	0.9961	96.79
11.5	3,834,299	61,786	0.0161	0.9839	96.41
12.5	3,112,000	91,919	0.0295	0.9705	94.86
13.5	2,905,296	244,478	0.0841	0.9159	92.06
14.5	1,866,906	72,366	0.0388	0.9612	84.31
15.5	1,475,557		0.0000	1.0000	81.04
16.5	1,132,585		0.0000	1.0000	81.04
17.5	1,159,685		0.0000	1.0000	81.04
18.5	1,046,621	49,260	0.0471	0.9529	81.04
19.5	932,149	1,044	0.0011	0.9989	77.23
20.5	931,105		0.0000	1.0000	77.14
21.5	880,647		0.0000	1.0000	77.14
22.5	878,043		0.0000	1.0000	77.14
23.5	970,082		0.0000	1.0000	77.14
24.5	767,438	5,397	0.0070	0.9930	77.14
25.5	478,588		0.0000	1.0000	76.60
26.5	503,259		0.0000	1.0000	76.60
27.5	438,450		0.0000	1.0000	76.60
28.5	438,491		0.0000	1.0000	76.60
29.5	438,126		0.0000	1.0000	76.60
30.5	205,124	3,483	0.0170	0.9830	76.60
31.5	201,698		0.0000	1.0000	75.30
32.5	233,047		0.0000	1.0000	75.30
33.5	232,794		0.0000	1.0000	75.30
34.5	187,562		0.0000	1.0000	75.30
35.5	231,926		0.0000	1.0000	75.30
36.5	231,926	7,793	0.0336	0.9664	75.30
37.5	224,133		0.0000	1.0000	72.77
38.5	260,976		0.0000	1.0000	72.77

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 307 WELLS AND SPRINGS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1920-2014			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	260,976		0.0000	1.0000	72.77
40.5	260,976		0.0000	1.0000	72.77
41.5	260,976		0.0000	1.0000	72.77
42.5	267,627	8	0.0000	1.0000	72.77
43.5	280,209		0.0000	1.0000	72.77
44.5	280,209		0.0000	1.0000	72.77
45.5	280,209		0.0000	1.0000	72.77
46.5	254,996		0.0000	1.0000	72.77
47.5	254,996		0.0000	1.0000	72.77
48.5	254,956		0.0000	1.0000	72.77
49.5	254,956		0.0000	1.0000	72.77
50.5	254,956	6	0.0000	1.0000	72.77
51.5	235,804	241	0.0010	0.9990	72.77
52.5	130,784	322	0.0025	0.9975	72.69
53.5	130,462		0.0000	1.0000	72.51
54.5	126,482		0.0000	1.0000	72.51
55.5	82,118		0.0000	1.0000	72.51
56.5	82,118		0.0000	1.0000	72.51
57.5	82,118	19,005	0.2314	0.7686	72.51
58.5	19,342		0.0000	1.0000	55.73
59.5	19,342		0.0000	1.0000	55.73
60.5	19,342		0.0000	1.0000	55.73
61.5	21,835		0.0000	1.0000	55.73
62.5	15,083		0.0000	1.0000	55.73
63.5	2,493		0.0000	1.0000	55.73
64.5	2,493		0.0000	1.0000	55.73
65.5	31,146		0.0000	1.0000	55.73
66.5	31,146		0.0000	1.0000	55.73
67.5	31,146		0.0000	1.0000	55.73
68.5	350,704		0.0000	1.0000	55.73
69.5	350,704		0.0000	1.0000	55.73
70.5	350,704		0.0000	1.0000	55.73
71.5	350,704		0.0000	1.0000	55.73
72.5	350,704		0.0000	1.0000	55.73
73.5	350,704		0.0000	1.0000	55.73
74.5	513,136		0.0000	1.0000	55.73
75.5	513,136		0.0000	1.0000	55.73
76.5	513,136		0.0000	1.0000	55.73
77.5	513,136		0.0000	1.0000	55.73
78.5	513,136		0.0000	1.0000	55.73

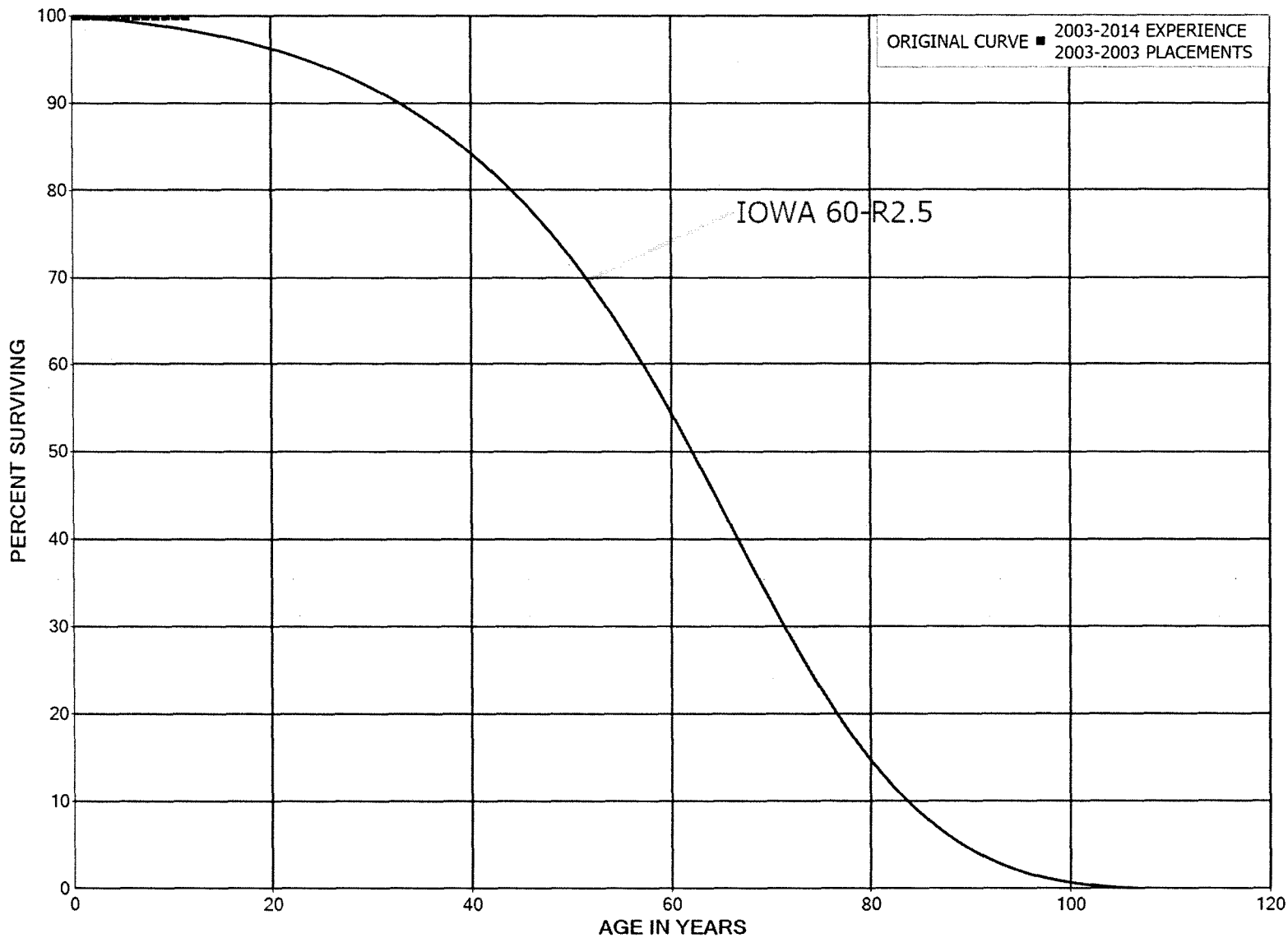
## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 307 WELLS AND SPRINGS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1920-2014			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
79.5	513,136		0.0000	1.0000	55.73
80.5	513,136		0.0000	1.0000	55.73
81.5	510,643		0.0000	1.0000	55.73
82.5	510,643		0.0000	1.0000	55.73
83.5	510,643		0.0000	1.0000	55.73
84.5	510,643		0.0000	1.0000	55.73
85.5	481,989		0.0000	1.0000	55.73
86.5	481,989		0.0000	1.0000	55.73
87.5	481,989		0.0000	1.0000	55.73
88.5	162,432		0.0000	1.0000	55.73
89.5	162,432		0.0000	1.0000	55.73
90.5	162,432		0.0000	1.0000	55.73
91.5	162,432		0.0000	1.0000	55.73
92.5	162,432		0.0000	1.0000	55.73
93.5	162,432		0.0000	1.0000	55.73
94.5					55.73

MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 308 INFILTRATION GALLERIES AND TUNNELS  
ORIGINAL AND SMOOTH SURVIVOR CURVES



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 308 INFILTRATION GALLERIES AND TUNNELS

## ORIGINAL LIFE TABLE

PLACEMENT BAND 2003-2003			EXPERIENCE BAND 2003-2014		
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	1,804		0.0000	1.0000	100.00
0.5	1,804		0.0000	1.0000	100.00
1.5	1,804		0.0000	1.0000	100.00
2.5	1,804		0.0000	1.0000	100.00
3.5	1,804		0.0000	1.0000	100.00
4.5	1,804		0.0000	1.0000	100.00
5.5	1,804		0.0000	1.0000	100.00
6.5	1,804		0.0000	1.0000	100.00
7.5	1,804		0.0000	1.0000	100.00
8.5	1,804		0.0000	1.0000	100.00
9.5	1,804		0.0000	1.0000	100.00
10.5	1,804		0.0000	1.0000	100.00
11.5					100.00

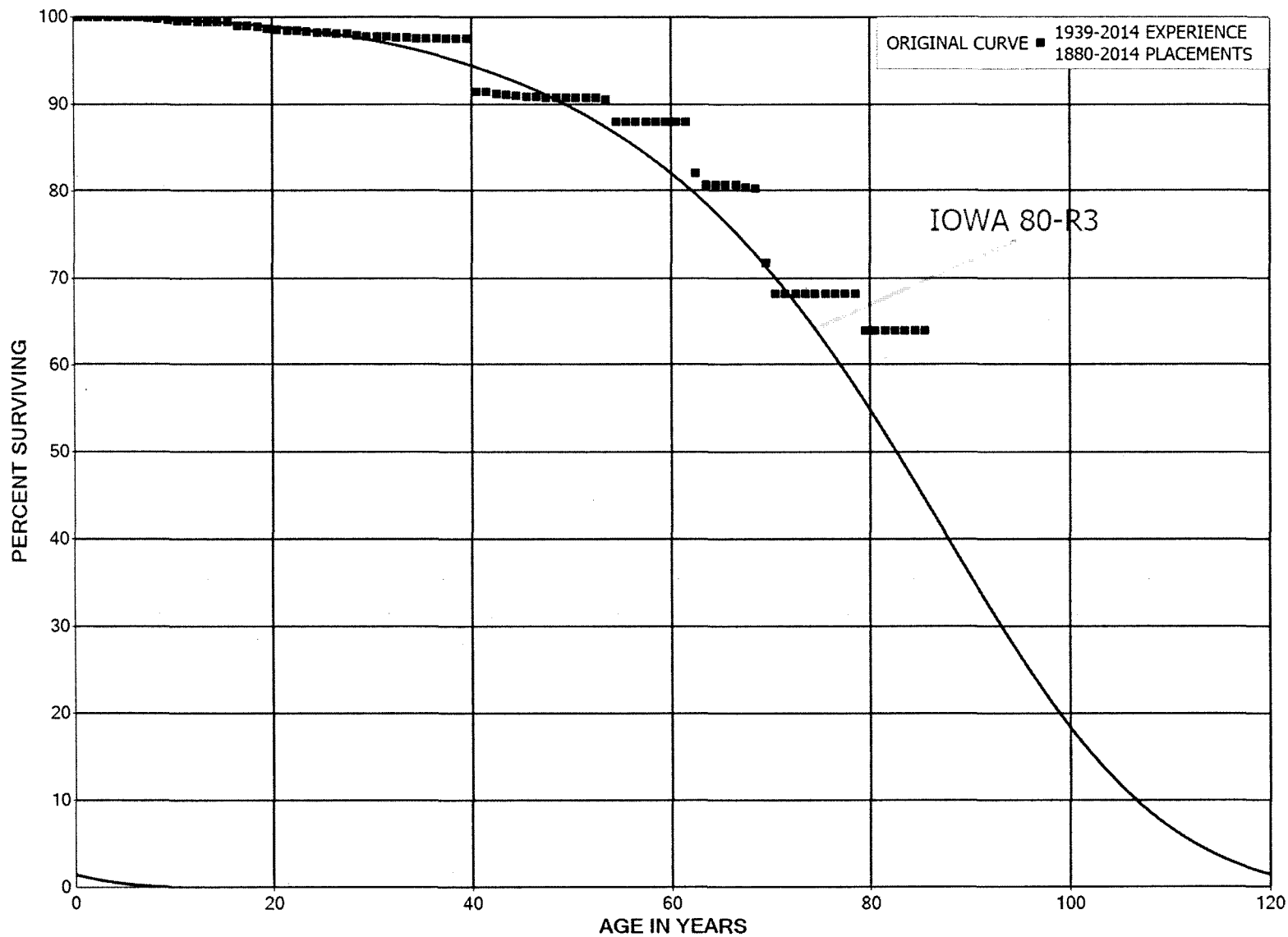


Gannett Fleming

VII-69

MO American Water Co - Water  
March 31, 2015

MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 309 SUPPLY MAINS  
ORIGINAL AND SMOOTH SURVIVOR CURVES





## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 309 SUPPLY MAINS

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1880-2014			EXPERIENCE BAND 1939-2014		
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	22,438,182	846	0.0000	1.0000	100.00
0.5	22,318,696		0.0000	1.0000	100.00
1.5	22,309,504	134	0.0000	1.0000	100.00
2.5	22,309,371	1,157	0.0001	0.9999	100.00
3.5	21,529,863	2,020	0.0001	0.9999	99.99
4.5	21,496,565	840	0.0000	1.0000	99.98
5.5	21,280,587	5,982	0.0003	0.9997	99.98
6.5	21,147,222	13,110	0.0006	0.9994	99.95
7.5	17,296,884	30,763	0.0018	0.9982	99.89
8.5	17,289,854	11,476	0.0007	0.9993	99.71
9.5	17,253,504	26,892	0.0016	0.9984	99.64
10.5	17,260,663	9	0.0000	1.0000	99.49
11.5	17,236,375	16,824	0.0010	0.9990	99.49
12.5	17,100,811	900	0.0001	0.9999	99.39
13.5	17,100,164	983	0.0001	0.9999	99.39
14.5	7,213,921	2,071	0.0003	0.9997	99.38
15.5	7,208,446	27,178	0.0038	0.9962	99.35
16.5	7,120,792	3,685	0.0005	0.9995	98.98
17.5	7,086,052	9,709	0.0014	0.9986	98.93
18.5	7,076,226	12,057	0.0017	0.9983	98.79
19.5	7,026,900	9,535	0.0014	0.9986	98.62
20.5	6,957,279	2,948	0.0004	0.9996	98.49
21.5	4,379,408	1,124	0.0003	0.9997	98.45
22.5	4,338,215	7,617	0.0018	0.9982	98.42
23.5	4,127,367	3,032	0.0007	0.9993	98.25
24.5	4,101,685	1,611	0.0004	0.9996	98.18
25.5	4,069,991	2,219	0.0005	0.9995	98.14
26.5	4,044,976	1,244	0.0003	0.9997	98.08
27.5	3,914,714	10,138	0.0026	0.9974	98.05
28.5	3,873,560	2,709	0.0007	0.9993	97.80
29.5	3,068,851		0.0000	1.0000	97.73
30.5	2,735,888	862	0.0003	0.9997	97.73
31.5	2,733,142	1,000	0.0004	0.9996	97.70
32.5	2,649,686	296	0.0001	0.9999	97.66
33.5	2,680,394	2,866	0.0011	0.9989	97.65
34.5	2,609,114		0.0000	1.0000	97.55
35.5	2,605,286	1,115	0.0004	0.9996	97.55
36.5	2,603,789		0.0000	1.0000	97.51
37.5	2,546,497	368	0.0001	0.9999	97.51
38.5	2,540,558	985	0.0004	0.9996	97.49

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 309 SUPPLY MAINS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1880-2014			EXPERIENCE BAND 1939-2014			
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	2,537,701	156,814	0.0618	0.9382	97.46	
40.5	2,377,793	998	0.0004	0.9996	91.43	
41.5	2,167,670	3,919	0.0018	0.9982	91.40	
42.5	2,121,798	4,026	0.0019	0.9981	91.23	
43.5	1,645,251	2,467	0.0015	0.9985	91.06	
44.5	1,640,941	1,753	0.0011	0.9989	90.92	
45.5	1,637,989		0.0000	1.0000	90.82	
46.5	1,133,315	633	0.0006	0.9994	90.82	
47.5	1,114,205		0.0000	1.0000	90.77	
48.5	1,031,407	38	0.0000	1.0000	90.77	
49.5	1,031,301	366	0.0004	0.9996	90.77	
50.5	926,915		0.0000	1.0000	90.74	
51.5	910,705	356	0.0004	0.9996	90.74	
52.5	895,868	2,236	0.0025	0.9975	90.70	
53.5	772,261	21,053	0.0273	0.9727	90.48	
54.5	689,115		0.0000	1.0000	88.01	
55.5	612,923	102	0.0002	0.9998	88.01	
56.5	612,821		0.0000	1.0000	87.99	
57.5	608,918		0.0000	1.0000	87.99	
58.5	527,075	91	0.0002	0.9998	87.99	
59.5	355,698		0.0000	1.0000	87.98	
60.5	349,082		0.0000	1.0000	87.98	
61.5	349,082	23,519	0.0674	0.9326	87.98	
62.5	315,875	5,138	0.0163	0.9837	82.05	
63.5	310,737		0.0000	1.0000	80.72	
64.5	310,737		0.0000	1.0000	80.72	
65.5	310,737		0.0000	1.0000	80.72	
66.5	310,737	1,444	0.0046	0.9954	80.72	
67.5	279,842	253	0.0009	0.9991	80.34	
68.5	279,589	29,667	0.1061	0.8939	80.27	
69.5	248,983	12,300	0.0494	0.9506	71.75	
70.5	236,684		0.0000	1.0000	68.21	
71.5	236,684		0.0000	1.0000	68.21	
72.5	236,684		0.0000	1.0000	68.21	
73.5	236,684	59	0.0002	0.9998	68.21	
74.5	236,625		0.0000	1.0000	68.19	
75.5	236,625		0.0000	1.0000	68.19	
76.5	236,625	117	0.0005	0.9995	68.19	
77.5	236,507		0.0000	1.0000	68.16	
78.5	236,507	14,628	0.0619	0.9381	68.16	

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 309 SUPPLY MAINS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1880-2014			EXPERIENCE BAND 1939-2014		
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	221,879		0.0000	1.0000	63.94
80.5	221,879		0.0000	1.0000	63.94
81.5	221,879		0.0000	1.0000	63.94
82.5	221,879		0.0000	1.0000	63.94
83.5	221,879		0.0000	1.0000	63.94
84.5	221,321	43	0.0002	0.9998	63.94
85.5	163,057		0.0000	1.0000	63.93
86.5	163,057		0.0000	1.0000	63.93
87.5	163,057		0.0000	1.0000	63.93
88.5	163,057		0.0000	1.0000	63.93
89.5	163,027	3,205	0.0197	0.9803	63.93
90.5	159,822		0.0000	1.0000	62.67
91.5	159,822		0.0000	1.0000	62.67
92.5	159,678		0.0000	1.0000	62.67
93.5	159,678		0.0000	1.0000	62.67
94.5	159,678		0.0000	1.0000	62.67
95.5	125,577		0.0000	1.0000	62.67
96.5	125,577		0.0000	1.0000	62.67
97.5	125,577		0.0000	1.0000	62.67
98.5	125,577		0.0000	1.0000	62.67
99.5	125,577		0.0000	1.0000	62.67
100.5	124,848		0.0000	1.0000	62.67
101.5	124,848		0.0000	1.0000	62.67
102.5	105,799		0.0000	1.0000	62.67
103.5	105,799		0.0000	1.0000	62.67
104.5	105,799		0.0000	1.0000	62.67
105.5	75,467	39	0.0005	0.9995	62.67
106.5	75,428	3,575	0.0474	0.9526	62.64
107.5	71,853		0.0000	1.0000	59.67
108.5	71,853		0.0000	1.0000	59.67
109.5	71,561		0.0000	1.0000	59.67
110.5	71,561		0.0000	1.0000	59.67
111.5	71,561		0.0000	1.0000	59.67
112.5	71,561	42	0.0006	0.9994	59.67
113.5	45,432		0.0000	1.0000	59.63
114.5	45,432		0.0000	1.0000	59.63
115.5	41,521		0.0000	1.0000	59.63
116.5	41,521	70	0.0017	0.9983	59.63
117.5	41,451		0.0000	1.0000	59.53
118.5	41,451		0.0000	1.0000	59.53

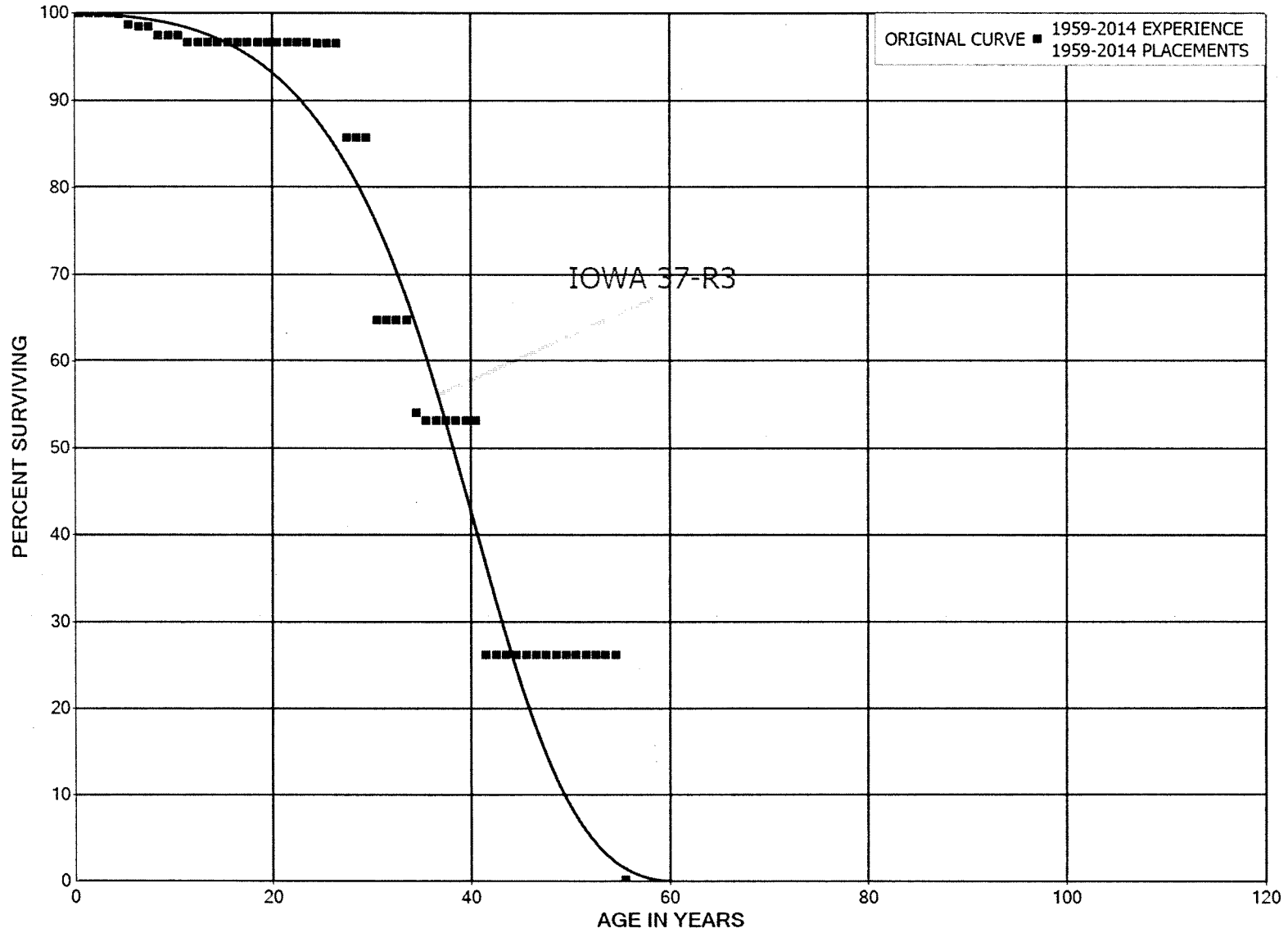
## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 309 SUPPLY MAINS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1880-2014			EXPERIENCE BAND 1939-2014		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
119.5	41,451		0.0000	1.0000	59.53
120.5	12,083		0.0000	1.0000	59.53
121.5	12,083		0.0000	1.0000	59.53
122.5	12,083		0.0000	1.0000	59.53
123.5	5,215		0.0000	1.0000	59.53
124.5	5,215		0.0000	1.0000	59.53
125.5	5,215		0.0000	1.0000	59.53
126.5	5,215		0.0000	1.0000	59.53
127.5	5,215	52	0.0100	0.9900	59.53
128.5	5,162		0.0000	1.0000	58.94
129.5	5,162	4	0.0007	0.9993	58.94
130.5	5,159		0.0000	1.0000	58.89
131.5	5,159		0.0000	1.0000	58.89
132.5	5,159	82	0.0158	0.9842	58.89
133.5	5,077		0.0000	1.0000	57.96
134.5					57.96

MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 310.10 POWER GENERATION EQUIPMENT  
ORIGINAL AND SMOOTH SURVIVOR CURVES



Gannett Fleming

VII-74

MO American Water Co - Water  
March 31, 2015

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 310.10 POWER GENERATION EQUIPMENT

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1959-2014			EXPERIENCE BAND 1959-2014			
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	3,222,831		0.0000	1.0000	100.00	
0.5	3,051,311	3,107	0.0010	0.9990	100.00	
1.5	3,004,080		0.0000	1.0000	99.90	
2.5	3,002,314		0.0000	1.0000	99.90	
3.5	2,637,143	2,242	0.0009	0.9991	99.90	
4.5	2,577,719	29,970	0.0116	0.9884	99.81	
5.5	2,540,026	5,906	0.0023	0.9977	98.65	
6.5	747,510		0.0000	1.0000	98.42	
7.5	334,671	3,537	0.0106	0.9894	98.42	
8.5	325,795		0.0000	1.0000	97.38	
9.5	325,795		0.0000	1.0000	97.38	
10.5	325,795	2,565	0.0079	0.9921	97.38	
11.5	323,230		0.0000	1.0000	96.62	
12.5	323,230		0.0000	1.0000	96.62	
13.5	323,230		0.0000	1.0000	96.62	
14.5	317,346		0.0000	1.0000	96.62	
15.5	317,346		0.0000	1.0000	96.62	
16.5	317,346		0.0000	1.0000	96.62	
17.5	67,334		0.0000	1.0000	96.62	
18.5	67,334		0.0000	1.0000	96.62	
19.5	67,334		0.0000	1.0000	96.62	
20.5	67,334		0.0000	1.0000	96.62	
21.5	67,334		0.0000	1.0000	96.62	
22.5	67,334		0.0000	1.0000	96.62	
23.5	67,334	57	0.0008	0.9992	96.62	
24.5	67,277		0.0000	1.0000	96.54	
25.5	67,277		0.0000	1.0000	96.54	
26.5	67,277	7,500	0.1115	0.8885	96.54	
27.5	59,777		0.0000	1.0000	85.77	
28.5	59,777		0.0000	1.0000	85.77	
29.5	58,877	14,434	0.2452	0.7548	85.77	
30.5	36,623		0.0000	1.0000	64.75	
31.5	36,623		0.0000	1.0000	64.75	
32.5	36,623		0.0000	1.0000	64.75	
33.5	36,623	6,013	0.1642	0.8358	64.75	
34.5	30,610	541	0.0177	0.9823	54.11	
35.5	30,069		0.0000	1.0000	53.16	
36.5	30,069		0.0000	1.0000	53.16	
37.5	30,069		0.0000	1.0000	53.16	
38.5	30,069		0.0000	1.0000	53.16	

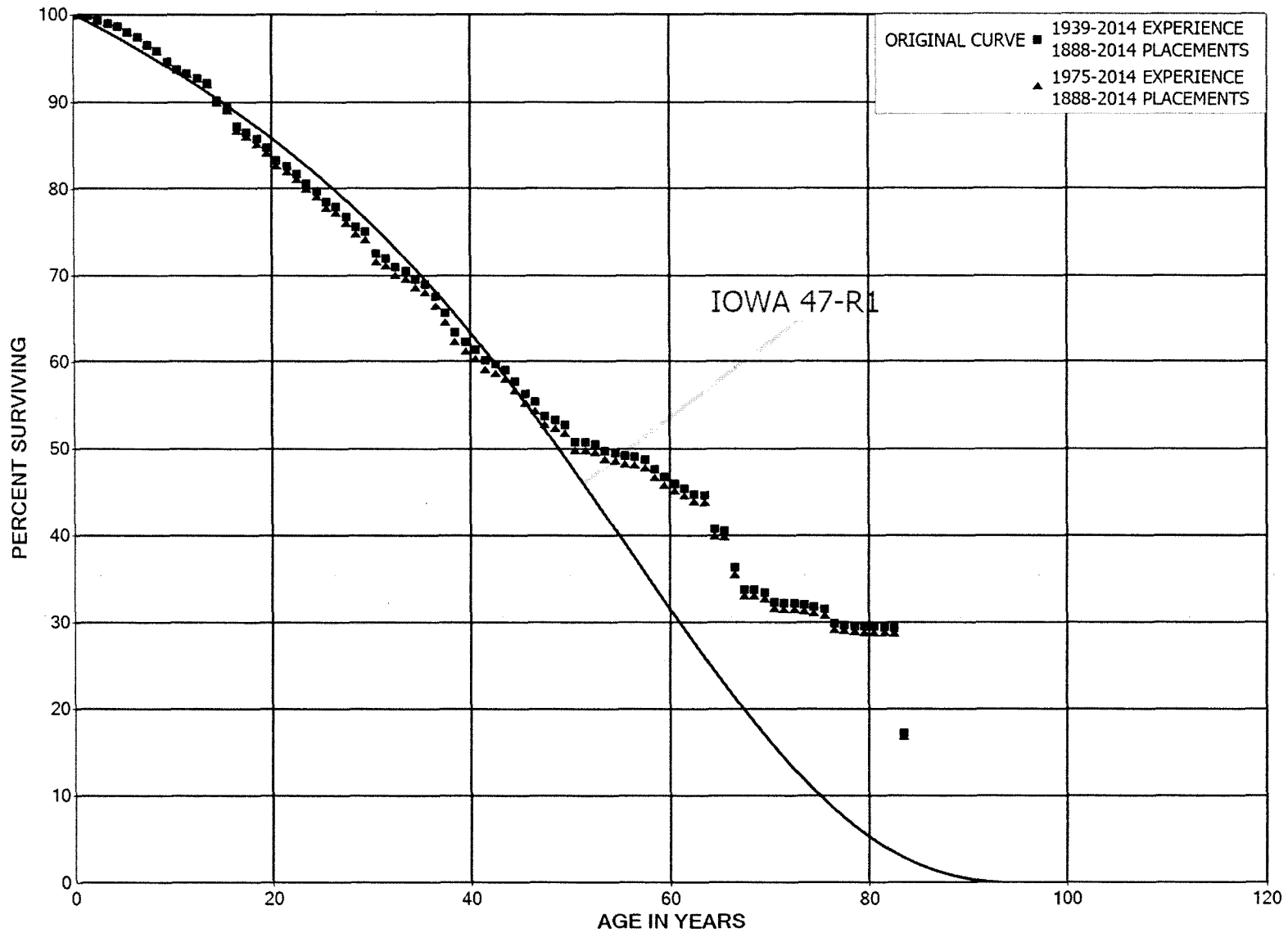
## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 310.10 POWER GENERATION EQUIPMENT

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1959-2014			EXPERIENCE BAND 1959-2014		
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	30,069		0.0000	1.0000	53.16
40.5	30,069	15,240	0.5068	0.4932	53.16
41.5	14,829		0.0000	1.0000	26.22
42.5	14,829		0.0000	1.0000	26.22
43.5	14,829		0.0000	1.0000	26.22
44.5	14,829		0.0000	1.0000	26.22
45.5	14,829		0.0000	1.0000	26.22
46.5	14,829		0.0000	1.0000	26.22
47.5	14,829		0.0000	1.0000	26.22
48.5	14,829		0.0000	1.0000	26.22
49.5	14,829		0.0000	1.0000	26.22
50.5	14,829		0.0000	1.0000	26.22
51.5	14,829		0.0000	1.0000	26.22
52.5	14,829		0.0000	1.0000	26.22
53.5	14,829		0.0000	1.0000	26.22
54.5	14,829	14,730	0.9933	0.0067	26.22
55.5					0.17

MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 311 ELECTRIC PUMPING EQUIPMENT  
ORIGINAL AND SMOOTH SURVIVOR CURVES



Gannett Fleming

VII-77

MO American Water Co - Water  
March 31, 2015



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 311 ELECTRIC PUMPING EQUIPMENT

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1888-2014			EXPERIENCE BAND 1939-2014			
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	70,860,519	22,615	0.0003	0.9997	100.00	
0.5	69,660,152	101,316	0.0015	0.9985	99.97	
1.5	68,681,425	333,415	0.0049	0.9951	99.82	
2.5	68,246,577	307,333	0.0045	0.9955	99.34	
3.5	65,996,372	205,676	0.0031	0.9969	98.89	
4.5	64,251,235	444,813	0.0069	0.9931	98.58	
5.5	62,246,312	343,102	0.0055	0.9945	97.90	
6.5	57,375,916	487,207	0.0085	0.9915	97.36	
7.5	49,933,916	383,041	0.0077	0.9923	96.53	
8.5	48,483,738	618,531	0.0128	0.9872	95.79	
9.5	47,534,790	419,241	0.0088	0.9912	94.57	
10.5	47,025,547	217,520	0.0046	0.9954	93.74	
11.5	46,356,758	300,831	0.0065	0.9935	93.30	
12.5	45,389,773	278,209	0.0061	0.9939	92.70	
13.5	44,128,907	941,009	0.0213	0.9787	92.13	
14.5	37,309,952	354,598	0.0095	0.9905	90.17	
15.5	34,801,714	823,951	0.0237	0.9763	89.31	
16.5	32,597,342	263,307	0.0081	0.9919	87.19	
17.5	29,765,078	271,839	0.0091	0.9909	86.49	
18.5	28,865,764	331,506	0.0115	0.9885	85.70	
19.5	27,608,723	451,725	0.0164	0.9836	84.72	
20.5	26,199,077	215,219	0.0082	0.9918	83.33	
21.5	23,165,855	249,484	0.0108	0.9892	82.64	
22.5	22,454,552	301,172	0.0134	0.9866	81.75	
23.5	18,552,287	202,024	0.0109	0.9891	80.66	
24.5	17,562,197	285,208	0.0162	0.9838	79.78	
25.5	15,539,497	102,786	0.0066	0.9934	78.48	
26.5	14,893,930	228,131	0.0153	0.9847	77.97	
27.5	14,176,654	214,549	0.0151	0.9849	76.77	
28.5	12,821,416	100,849	0.0079	0.9921	75.61	
29.5	11,751,688	397,233	0.0338	0.9662	75.01	
30.5	11,056,181	76,005	0.0069	0.9931	72.48	
31.5	10,849,142	156,020	0.0144	0.9856	71.98	
32.5	10,104,071	61,351	0.0061	0.9939	70.95	
33.5	9,869,605	145,357	0.0147	0.9853	70.51	
34.5	9,615,828	70,814	0.0074	0.9926	69.48	
35.5	9,320,461	198,310	0.0213	0.9787	68.96	
36.5	8,977,199	257,530	0.0287	0.9713	67.50	
37.5	8,285,025	275,024	0.0332	0.9668	65.56	
38.5	7,800,667	133,327	0.0171	0.9829	63.38	

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 311 ELECTRIC PUMPING EQUIPMENT

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1888-2014			EXPERIENCE BAND 1939-2014		
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	7,595,239	113,471	0.0149	0.9851	62.30
40.5	7,494,116	144,801	0.0193	0.9807	61.37
41.5	6,957,427	50,005	0.0072	0.9928	60.18
42.5	6,747,459	71,660	0.0106	0.9894	59.75
43.5	5,726,921	131,487	0.0230	0.9770	59.12
44.5	5,349,867	135,561	0.0253	0.9747	57.76
45.5	5,146,714	82,568	0.0160	0.9840	56.30
46.5	4,006,705	119,139	0.0297	0.9703	55.39
47.5	3,719,609	28,837	0.0078	0.9922	53.75
48.5	3,590,385	38,353	0.0107	0.9893	53.33
49.5	3,474,908	130,594	0.0376	0.9624	52.76
50.5	3,070,502	2,910	0.0009	0.9991	50.78
51.5	3,053,073	13,667	0.0045	0.9955	50.73
52.5	3,025,689	46,178	0.0153	0.9847	50.50
53.5	2,784,485	14,601	0.0052	0.9948	49.73
54.5	2,656,622	14,001	0.0053	0.9947	49.47
55.5	2,640,805	6,961	0.0026	0.9974	49.21
56.5	2,630,488	20,649	0.0078	0.9922	49.08
57.5	2,569,126	59,363	0.0231	0.9769	48.69
58.5	2,222,475	41,657	0.0187	0.9813	47.57
59.5	1,411,972	21,933	0.0155	0.9845	46.68
60.5	1,170,104	14,462	0.0124	0.9876	45.95
61.5	888,464	12,573	0.0142	0.9858	45.38
62.5	875,546	1,448	0.0017	0.9983	44.74
63.5	662,526	59,048	0.0891	0.9109	44.67
64.5	587,648	2,086	0.0035	0.9965	40.69
65.5	533,699	56,679	0.1062	0.8938	40.54
66.5	422,662	29,194	0.0691	0.9309	36.24
67.5	370,721	245	0.0007	0.9993	33.73
68.5	370,205	3,326	0.0090	0.9910	33.71
69.5	366,062	12,461	0.0340	0.9660	33.41
70.5	353,171	819	0.0023	0.9977	32.27
71.5	352,153	61	0.0002	0.9998	32.20
72.5	351,656	1,653	0.0047	0.9953	32.19
73.5	349,708	2,015	0.0058	0.9942	32.04
74.5	347,478	4,005	0.0115	0.9885	31.86
75.5	282,828	15,116	0.0534	0.9466	31.49
76.5	194,717	1,209	0.0062	0.9938	29.81
77.5	193,310	694	0.0036	0.9964	29.62
78.5	192,616	341	0.0018	0.9982	29.51

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 311 ELECTRIC PUMPING EQUIPMENT

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1888-2014			EXPERIENCE BAND 1939-2014			
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	192,150	40	0.0002	0.9998	29.46	
80.5	191,132	300	0.0016	0.9984	29.46	
81.5	190,812	529	0.0028	0.9972	29.41	
82.5	189,616	78,352	0.4132	0.5868	29.33	
83.5	28,437		0.0000	1.0000	17.21	
84.5	28,437		0.0000	1.0000	17.21	
85.5	28,437		0.0000	1.0000	17.21	
86.5	28,437		0.0000	1.0000	17.21	
87.5	18,790		0.0000	1.0000	17.21	
88.5	8,800		0.0000	1.0000	17.21	
89.5	8,800		0.0000	1.0000	17.21	
90.5	8,800	37	0.0042	0.9958	17.21	
91.5	8,763		0.0000	1.0000	17.14	
92.5	8,763		0.0000	1.0000	17.14	
93.5	8,763		0.0000	1.0000	17.14	
94.5	8,763		0.0000	1.0000	17.14	
95.5	8,763		0.0000	1.0000	17.14	
96.5	8,763		0.0000	1.0000	17.14	
97.5	8,763		0.0000	1.0000	17.14	
98.5	8,763		0.0000	1.0000	17.14	
99.5	8,763		0.0000	1.0000	17.14	
100.5	8,234		0.0000	1.0000	17.14	
101.5	8,234		0.0000	1.0000	17.14	
102.5	8,234	1,099	0.1335	0.8665	17.14	
103.5	7,135	2,589	0.3629	0.6371	14.85	
104.5	4,137		0.0000	1.0000	9.46	
105.5	4,023		0.0000	1.0000	9.46	
106.5	4,023		0.0000	1.0000	9.46	
107.5	4,023		0.0000	1.0000	9.46	
108.5	4,023		0.0000	1.0000	9.46	
109.5	4,023	1,626	0.4041	0.5959	9.46	
110.5	2,397		0.0000	1.0000	5.64	
111.5	2,397		0.0000	1.0000	5.64	
112.5	2,397	2,326	0.9704	0.0296	5.64	
113.5	71		0.0000	1.0000	0.17	
114.5	71		0.0000	1.0000	0.17	
115.5	71		0.0000	1.0000	0.17	
116.5	71		0.0000	1.0000	0.17	
117.5	71		0.0000	1.0000	0.17	
118.5	71		0.0000	1.0000	0.17	

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 311 ELECTRIC PUMPING EQUIPMENT

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1888-2014			EXPERIENCE BAND 1939-2014		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
119.5	71		0.0000	1.0000	0.17
120.5	71		0.0000	1.0000	0.17
121.5	71		0.0000	1.0000	0.17
122.5	71		0.0000	1.0000	0.17
123.5	71		0.0000	1.0000	0.17
124.5	71		0.0000	1.0000	0.17
125.5	71		0.0000	1.0000	0.17
126.5					0.17

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 311 ELECTRIC PUMPING EQUIPMENT

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1888-2014			EXPERIENCE BAND 1975-2014		
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	60,912,779	5,818	0.0001	0.9999	100.00
0.5	59,673,350	93,242	0.0016	0.9984	99.99
1.5	59,385,195	323,426	0.0054	0.9946	99.83
2.5	59,322,061	214,624	0.0036	0.9964	99.29
3.5	58,297,715	181,777	0.0031	0.9969	98.93
4.5	56,867,807	432,798	0.0076	0.9924	98.62
5.5	54,995,763	297,745	0.0054	0.9946	97.87
6.5	51,565,565	442,977	0.0086	0.9914	97.34
7.5	44,159,526	341,774	0.0077	0.9923	96.51
8.5	42,884,124	601,748	0.0140	0.9860	95.76
9.5	42,058,856	404,990	0.0096	0.9904	94.42
10.5	42,148,425	198,258	0.0047	0.9953	93.51
11.5	41,606,991	274,473	0.0066	0.9934	93.07
12.5	41,090,504	265,915	0.0065	0.9935	92.45
13.5	40,091,150	934,546	0.0233	0.9767	91.85
14.5	33,520,489	310,041	0.0092	0.9908	89.71
15.5	31,072,805	814,450	0.0262	0.9738	88.88
16.5	28,892,471	253,844	0.0088	0.9912	86.55
17.5	26,174,402	250,902	0.0096	0.9904	85.79
18.5	25,737,532	323,738	0.0126	0.9874	84.97
19.5	25,488,569	414,629	0.0163	0.9837	83.90
20.5	24,555,524	196,811	0.0080	0.9920	82.54
21.5	22,022,731	247,813	0.0113	0.9887	81.88
22.5	21,321,436	299,206	0.0140	0.9860	80.95
23.5	17,525,024	201,997	0.0115	0.9885	79.82
24.5	16,684,172	282,154	0.0169	0.9831	78.90
25.5	14,742,270	102,415	0.0069	0.9931	77.56
26.5	14,278,096	227,726	0.0159	0.9841	77.03
27.5	13,645,253	214,293	0.0157	0.9843	75.80
28.5	12,303,996	100,636	0.0082	0.9918	74.61
29.5	11,238,739	388,611	0.0346	0.9654	74.00
30.5	10,552,432	74,495	0.0071	0.9929	71.44
31.5	10,347,204	156,020	0.0151	0.9849	70.93
32.5	9,603,090	61,156	0.0064	0.9936	69.86
33.5	9,388,607	144,107	0.0153	0.9847	69.42
34.5	9,138,361	70,770	0.0077	0.9923	68.35
35.5	8,905,918	196,334	0.0220	0.9780	67.82
36.5	8,691,914	251,716	0.0290	0.9710	66.33
37.5	8,004,043	272,577	0.0341	0.9659	64.41
38.5	7,524,284	133,088	0.0177	0.9823	62.21

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 311 ELECTRIC PUMPING EQUIPMENT

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1888-2014			EXPERIENCE BAND 1975-2014			
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	7,320,218	113,471	0.0155	0.9845	61.11	
40.5	7,220,074	144,801	0.0201	0.9799	60.17	
41.5	6,683,310	50,005	0.0075	0.9925	58.96	
42.5	6,486,403	71,660	0.0110	0.9890	58.52	
43.5	5,677,039	131,487	0.0232	0.9768	57.87	
44.5	5,310,273	135,561	0.0255	0.9745	56.53	
45.5	5,107,518	82,568	0.0162	0.9838	55.09	
46.5	3,967,646	119,139	0.0300	0.9700	54.20	
47.5	3,690,197	28,837	0.0078	0.9922	52.57	
48.5	3,573,135	38,353	0.0107	0.9893	52.16	
49.5	3,460,692	130,594	0.0377	0.9623	51.60	
50.5	3,056,215	2,910	0.0010	0.9990	49.65	
51.5	3,038,823	13,667	0.0045	0.9955	49.61	
52.5	3,011,439	46,178	0.0153	0.9847	49.38	
53.5	2,770,308	14,601	0.0053	0.9947	48.63	
54.5	2,642,537	14,001	0.0053	0.9947	48.37	
55.5	2,626,720	6,907	0.0026	0.9974	48.11	
56.5	2,616,457	20,649	0.0079	0.9921	47.99	
57.5	2,558,754	59,363	0.0232	0.9768	47.61	
58.5	2,212,103	41,657	0.0188	0.9812	46.50	
59.5	1,402,764	21,933	0.0156	0.9844	45.63	
60.5	1,161,870	14,462	0.0124	0.9876	44.91	
61.5	880,230	12,573	0.0143	0.9857	44.35	
62.5	867,312	1,448	0.0017	0.9983	43.72	
63.5	654,292	59,048	0.0902	0.9098	43.65	
64.5	582,412	2,086	0.0036	0.9964	39.71	
65.5	528,576	56,679	0.1072	0.8928	39.57	
66.5	417,540	29,194	0.0699	0.9301	35.32	
67.5	365,599	245	0.0007	0.9993	32.85	
68.5	365,083	3,326	0.0091	0.9909	32.83	
69.5	360,940	12,461	0.0345	0.9655	32.53	
70.5	348,049	819	0.0024	0.9976	31.41	
71.5	347,031	61	0.0002	0.9998	31.34	
72.5	346,534	1,653	0.0048	0.9952	31.33	
73.5	346,912	2,015	0.0058	0.9942	31.18	
74.5	344,682	4,005	0.0116	0.9884	31.00	
75.5	280,032	15,116	0.0540	0.9460	30.64	
76.5	191,921	1,209	0.0063	0.9937	28.99	
77.5	191,613	694	0.0036	0.9964	28.80	
78.5	190,920	341	0.0018	0.9982	28.70	

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 311 ELECTRIC PUMPING EQUIPMENT

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1888-2014			EXPERIENCE BAND 1975-2014			
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	190,453	40	0.0002	0.9998	28.65	
80.5	189,435	300	0.0016	0.9984	28.64	
81.5	189,115	529	0.0028	0.9972	28.60	
82.5	187,920	78,352	0.4169	0.5831	28.52	
83.5	26,740		0.0000	1.0000	16.63	
84.5	28,366		0.0000	1.0000	16.63	
85.5	28,366		0.0000	1.0000	16.63	
86.5	28,437		0.0000	1.0000	16.63	
87.5	18,790		0.0000	1.0000	16.63	
88.5	8,800		0.0000	1.0000	16.63	
89.5	8,800		0.0000	1.0000	16.63	
90.5	8,800	37	0.0042	0.9958	16.63	
91.5	8,763		0.0000	1.0000	16.56	
92.5	8,763		0.0000	1.0000	16.56	
93.5	8,763		0.0000	1.0000	16.56	
94.5	8,763		0.0000	1.0000	16.56	
95.5	8,763		0.0000	1.0000	16.56	
96.5	8,763		0.0000	1.0000	16.56	
97.5	8,763		0.0000	1.0000	16.56	
98.5	8,763		0.0000	1.0000	16.56	
99.5	8,763		0.0000	1.0000	16.56	
100.5	8,234		0.0000	1.0000	16.56	
101.5	8,234		0.0000	1.0000	16.56	
102.5	8,234	1,099	0.1335	0.8665	16.56	
103.5	7,135	2,589	0.3629	0.6371	14.35	
104.5	4,137		0.0000	1.0000	9.14	
105.5	4,023		0.0000	1.0000	9.14	
106.5	4,023		0.0000	1.0000	9.14	
107.5	4,023		0.0000	1.0000	9.14	
108.5	4,023		0.0000	1.0000	9.14	
109.5	4,023	1,626	0.4041	0.5959	9.14	
110.5	2,397		0.0000	1.0000	5.45	
111.5	2,397		0.0000	1.0000	5.45	
112.5	2,397	2,326	0.9704	0.0296	5.45	
113.5	71		0.0000	1.0000	0.16	
114.5	71		0.0000	1.0000	0.16	
115.5	71		0.0000	1.0000	0.16	
116.5	71		0.0000	1.0000	0.16	
117.5	71		0.0000	1.0000	0.16	
118.5	71		0.0000	1.0000	0.16	

## MISSOURI AMERICAN WATER COMPANY

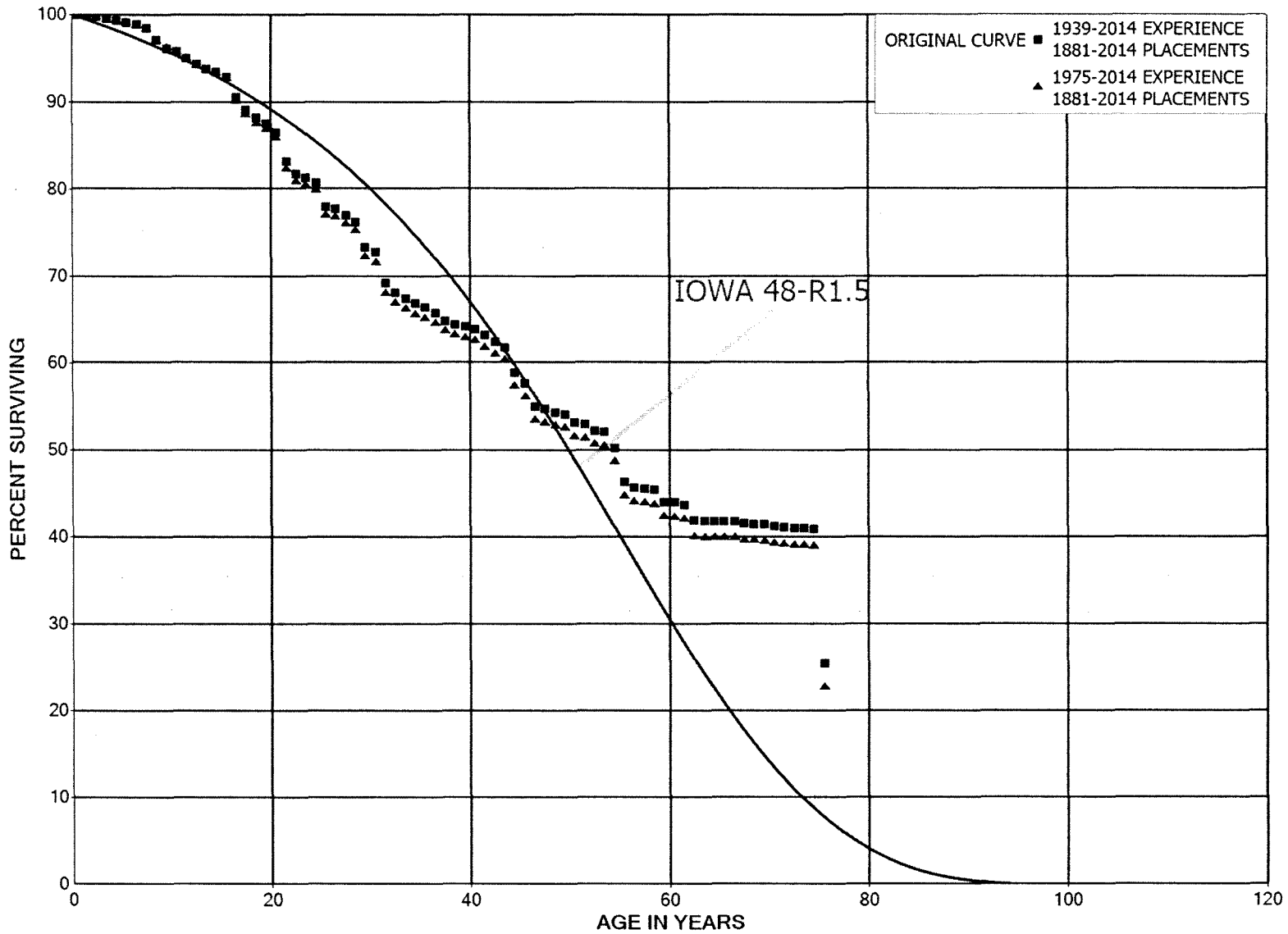
## ACCOUNT 311 ELECTRIC PUMPING EQUIPMENT

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1888-2014			EXPERIENCE BAND 1975-2014		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
119.5	71		0.0000	1.0000	0.16
120.5	71		0.0000	1.0000	0.16
121.5	71		0.0000	1.0000	0.16
122.5	71		0.0000	1.0000	0.16
123.5	71		0.0000	1.0000	0.16
124.5	71		0.0000	1.0000	0.16
125.5	71		0.0000	1.0000	0.16
126.5					0.16



MISSOURI AMERICAN WATER COMPANY  
 ACCOUNT 320 WATER TREATMENT EQUIPMENT  
 ORIGINAL AND SMOOTH SURVIVOR CURVES



Gannett Fleming

VII-86

MO American Water Co - Water  
 March 31, 2015

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 320 WATER TREATMENT EQUIPMENT

## ORIGINAL LIFE TABLE

## PLACEMENT BAND 1881-2014

## EXPERIENCE BAND 1939-2014

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	130,895,015	6,472	0.0000	1.0000	100.00
0.5	129,445,382	87,654	0.0007	0.9993	100.00
1.5	128,154,561	284,486	0.0022	0.9978	99.93
2.5	124,731,261	297,752	0.0024	0.9976	99.71
3.5	123,282,984	162,954	0.0013	0.9987	99.47
4.5	121,510,912	274,952	0.0023	0.9977	99.34
5.5	119,743,220	313,813	0.0026	0.9974	99.11
6.5	91,921,444	447,137	0.0049	0.9951	98.85
7.5	86,036,753	1,100,308	0.0128	0.9872	98.37
8.5	84,002,582	896,656	0.0107	0.9893	97.11
9.5	81,927,257	303,497	0.0037	0.9963	96.08
10.5	80,650,928	672,325	0.0083	0.9917	95.72
11.5	79,423,879	561,463	0.0071	0.9929	94.92
12.5	78,132,184	446,714	0.0057	0.9943	94.25
13.5	77,455,720	221,261	0.0029	0.9971	93.71
14.5	52,116,957	365,652	0.0070	0.9930	93.44
15.5	49,840,796	1,230,132	0.0247	0.9753	92.79
16.5	45,651,849	718,170	0.0157	0.9843	90.50
17.5	42,202,530	429,915	0.0102	0.9898	89.08
18.5	39,734,137	306,702	0.0077	0.9923	88.17
19.5	37,981,515	413,931	0.0109	0.9891	87.49
20.5	35,954,034	1,400,932	0.0390	0.9610	86.53
21.5	24,249,108	412,678	0.0170	0.9830	83.16
22.5	23,060,805	126,953	0.0055	0.9945	81.75
23.5	21,713,406	149,977	0.0069	0.9931	81.30
24.5	21,112,345	716,789	0.0340	0.9660	80.74
25.5	18,235,801	57,633	0.0032	0.9968	77.99
26.5	17,958,998	174,196	0.0097	0.9903	77.75
27.5	17,578,392	185,533	0.0106	0.9894	76.99
28.5	17,384,509	665,884	0.0383	0.9617	76.18
29.5	14,810,315	116,856	0.0079	0.9921	73.26
30.5	14,530,713	698,724	0.0481	0.9519	72.68
31.5	13,748,882	220,645	0.0160	0.9840	69.19
32.5	13,497,356	130,632	0.0097	0.9903	68.08
33.5	13,281,749	122,493	0.0092	0.9908	67.42
34.5	13,052,694	68,767	0.0053	0.9947	66.80
35.5	12,732,122	136,357	0.0107	0.9893	66.45
36.5	12,510,986	162,115	0.0130	0.9870	65.74
37.5	11,000,370	75,661	0.0069	0.9931	64.88
38.5	10,912,048	46,482	0.0043	0.9957	64.44

MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 320 WATER TREATMENT EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1881-2014			EXPERIENCE BAND 1939-2014			
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	10,873,438	48,971	0.0045	0.9955	64.16	
40.5	10,803,853	125,996	0.0117	0.9883	63.87	
41.5	9,859,144	120,384	0.0122	0.9878	63.13	
42.5	9,699,088	102,145	0.0105	0.9895	62.36	
43.5	8,045,608	378,453	0.0470	0.9530	61.70	
44.5	7,639,109	155,457	0.0204	0.9796	58.80	
45.5	7,421,493	337,316	0.0455	0.9545	57.60	
46.5	6,201,375	29,479	0.0048	0.9952	54.98	
47.5	6,162,931	43,664	0.0071	0.9929	54.72	
48.5	6,097,991	25,966	0.0043	0.9957	54.34	
49.5	5,456,318	98,441	0.0180	0.9820	54.10	
50.5	4,630,971	18,323	0.0040	0.9960	53.13	
51.5	4,601,588	62,602	0.0136	0.9864	52.92	
52.5	4,721,346	11,040	0.0023	0.9977	52.20	
53.5	4,688,701	167,429	0.0357	0.9643	52.08	
54.5	4,264,072	331,992	0.0779	0.9221	50.22	
55.5	3,371,810	48,725	0.0145	0.9855	46.31	
56.5	3,312,002	10,912	0.0033	0.9967	45.64	
57.5	3,261,045	8,974	0.0028	0.9972	45.49	
58.5	2,775,726	83,011	0.0299	0.9701	45.36	
59.5	2,221,519	2,774	0.0012	0.9988	44.00	
60.5	1,836,466	12,016	0.0065	0.9935	43.95	
61.5	1,570,835	67,046	0.0427	0.9573	43.66	
62.5	1,053,740	1,796	0.0017	0.9983	41.80	
63.5	739,265	243	0.0003	0.9997	41.73	
64.5	616,352		0.0000	1.0000	41.71	
65.5	615,912	95	0.0002	0.9998	41.71	
66.5	615,817	3,693	0.0060	0.9940	41.71	
67.5	612,123	834	0.0014	0.9986	41.46	
68.5	610,333	700	0.0011	0.9989	41.40	
69.5	609,633	3,032	0.0050	0.9950	41.35	
70.5	606,600	1,807	0.0030	0.9970	41.15	
71.5	604,793	853	0.0014	0.9986	41.02	
72.5	603,939	182	0.0003	0.9997	40.97	
73.5	603,757	1,727	0.0029	0.9971	40.95	
74.5	601,945	227,089	0.3773	0.6227	40.84	
75.5	374,818	4,972	0.0133	0.9867	25.43	
76.5	290,825	977	0.0034	0.9966	25.09	
77.5	282,390		0.0000	1.0000	25.01	
78.5	282,304		0.0000	1.0000	25.01	

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 320 WATER TREATMENT EQUIPMENT

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1881-2014			EXPERIENCE BAND 1939-2014			
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	282,169	1,112	0.0039	0.9961	25.01	
80.5	270,959		0.0000	1.0000	24.91	
81.5	270,842		0.0000	1.0000	24.91	
82.5	270,513	37,738	0.1395	0.8605	24.91	
83.5	232,705		0.0000	1.0000	21.44	
84.5	230,581		0.0000	1.0000	21.44	
85.5	230,581		0.0000	1.0000	21.44	
86.5	230,570	6,769	0.0294	0.9706	21.44	
87.5	174,650	27,872	0.1596	0.8404	20.81	
88.5	146,778		0.0000	1.0000	17.49	
89.5	146,778		0.0000	1.0000	17.49	
90.5	146,200		0.0000	1.0000	17.49	
91.5	146,200	48,231	0.3299	0.6701	17.49	
92.5	97,970	305	0.0031	0.9969	11.72	
93.5	97,263	215	0.0022	0.9978	11.68	
94.5	96,956		0.0000	1.0000	11.66	
95.5	96,956		0.0000	1.0000	11.66	
96.5	96,956		0.0000	1.0000	11.66	
97.5	96,874		0.0000	1.0000	11.66	
98.5	81,367		0.0000	1.0000	11.66	
99.5	81,197		0.0000	1.0000	11.66	
100.5	81,197	25,185	0.3102	0.6898	11.66	
101.5	56,012	774	0.0138	0.9862	8.04	
102.5	55,238	747	0.0135	0.9865	7.93	
103.5	54,491		0.0000	1.0000	7.82	
104.5	54,471		0.0000	1.0000	7.82	
105.5	54,139		0.0000	1.0000	7.82	
106.5	51,553		0.0000	1.0000	7.82	
107.5	51,353		0.0000	1.0000	7.82	
108.5	42,437		0.0000	1.0000	7.82	
109.5	37,827		0.0000	1.0000	7.82	
110.5	37,827		0.0000	1.0000	7.82	
111.5	37,827		0.0000	1.0000	7.82	
112.5	37,827		0.0000	1.0000	7.82	
113.5	25,691		0.0000	1.0000	7.82	
114.5	25,691		0.0000	1.0000	7.82	
115.5	25,691		0.0000	1.0000	7.82	
116.5	25,691		0.0000	1.0000	7.82	
117.5	25,691		0.0000	1.0000	7.82	
118.5	25,691		0.0000	1.0000	7.82	

MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 320 WATER TREATMENT EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1881-2014			EXPERIENCE BAND 1939-2014		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
119.5	25,691		0.0000	1.0000	7.82
120.5	25,691		0.0000	1.0000	7.82
121.5	25,691		0.0000	1.0000	7.82
122.5	25,691		0.0000	1.0000	7.82
123.5	25,691		0.0000	1.0000	7.82
124.5	25,624		0.0000	1.0000	7.82
125.5	24,923		0.0000	1.0000	7.82
126.5	575		0.0000	1.0000	7.82
127.5	575		0.0000	1.0000	7.82
128.5	575		0.0000	1.0000	7.82
129.5	575		0.0000	1.0000	7.82
130.5	575		0.0000	1.0000	7.82
131.5	575		0.0000	1.0000	7.82
132.5	575		0.0000	1.0000	7.82
133.5					7.82

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 320 WATER TREATMENT EQUIPMENT

## ORIGINAL LIFE TABLE

## PLACEMENT BAND 1881-2014

## EXPERIENCE BAND 1975-2014

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	117,406,768	6,472	0.0001	0.9999	100.00
0.5	115,806,750	86,447	0.0007	0.9993	99.99
1.5	115,547,689	269,079	0.0023	0.9977	99.92
2.5	112,214,587	293,578	0.0026	0.9974	99.69
3.5	112,855,110	152,978	0.0014	0.9986	99.43
4.5	111,131,448	265,245	0.0024	0.9976	99.29
5.5	110,104,832	310,392	0.0028	0.9972	99.05
6.5	83,436,320	442,383	0.0053	0.9947	98.78
7.5	77,540,672	1,057,066	0.0136	0.9864	98.25
8.5	75,645,978	607,351	0.0080	0.9920	96.91
9.5	74,551,555	289,460	0.0039	0.9961	96.13
10.5	74,519,136	664,823	0.0089	0.9911	95.76
11.5	73,392,329	556,138	0.0076	0.9924	94.91
12.5	72,168,034	442,260	0.0061	0.9939	94.19
13.5	71,312,397	207,034	0.0029	0.9971	93.61
14.5	46,500,765	349,069	0.0075	0.9925	93.34
15.5	45,138,463	1,226,796	0.0272	0.9728	92.64
16.5	41,001,677	711,622	0.0174	0.9826	90.12
17.5	37,625,322	425,091	0.0113	0.9887	88.56
18.5	36,207,476	304,626	0.0084	0.9916	87.56
19.5	35,230,099	413,045	0.0117	0.9883	86.82
20.5	33,950,792	1,399,752	0.0412	0.9588	85.80
21.5	22,655,175	393,676	0.0174	0.9826	82.26
22.5	21,933,955	126,792	0.0058	0.9942	80.83
23.5	20,773,503	147,824	0.0071	0.9929	80.37
24.5	20,327,401	714,849	0.0352	0.9648	79.79
25.5	17,479,666	57,630	0.0033	0.9967	76.99
26.5	17,235,257	173,933	0.0101	0.9899	76.73
27.5	16,855,503	184,702	0.0110	0.9890	75.96
28.5	16,665,469	662,427	0.0397	0.9603	75.13
29.5	14,096,382	115,080	0.0082	0.9918	72.14
30.5	13,770,361	695,036	0.0505	0.9495	71.55
31.5	12,992,045	218,883	0.0168	0.9832	67.94
32.5	12,733,921	128,429	0.0101	0.9899	66.80
33.5	12,517,368	122,451	0.0098	0.9902	66.12
34.5	12,290,080	68,148	0.0055	0.9945	65.48
35.5	11,971,474	121,351	0.0101	0.9899	65.11
36.5	11,975,364	162,115	0.0135	0.9865	64.45
37.5	10,465,638	75,589	0.0072	0.9928	63.58
38.5	10,382,827	46,482	0.0045	0.9955	63.12

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 320 WATER TREATMENT EQUIPMENT

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1881-2014			EXPERIENCE BAND 1975-2014			
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	10,323,606	48,971	0.0047	0.9953	62.84	
40.5	10,263,919	125,996	0.0123	0.9877	62.54	
41.5	9,312,117	120,384	0.0129	0.9871	61.77	
42.5	9,153,948	102,145	0.0112	0.9888	60.97	
43.5	7,597,024	373,590	0.0492	0.9508	60.29	
44.5	7,197,512	155,457	0.0216	0.9784	57.33	
45.5	6,979,896	337,316	0.0483	0.9517	56.09	
46.5	5,759,789	29,479	0.0051	0.9949	53.38	
47.5	5,775,312	42,385	0.0073	0.9927	53.11	
48.5	5,711,710	25,966	0.0045	0.9955	52.72	
49.5	5,298,160	98,441	0.0186	0.9814	52.48	
50.5	4,449,042	18,323	0.0041	0.9959	51.50	
51.5	4,419,660	62,602	0.0142	0.9858	51.29	
52.5	4,539,418	11,040	0.0024	0.9976	50.56	
53.5	4,507,175	167,429	0.0371	0.9629	50.44	
54.5	4,082,638	331,992	0.0813	0.9187	48.57	
55.5	3,190,377	48,725	0.0153	0.9847	44.62	
56.5	3,130,568	10,912	0.0035	0.9965	43.94	
57.5	3,079,119	8,974	0.0029	0.9971	43.78	
58.5	2,609,307	83,011	0.0318	0.9682	43.66	
59.5	2,055,270	2,774	0.0013	0.9987	42.27	
60.5	1,670,216	12,016	0.0072	0.9928	42.21	
61.5	1,404,585	67,046	0.0477	0.9523	41.91	
62.5	913,747	1,796	0.0020	0.9980	39.91	
63.5	599,273	243	0.0004	0.9996	39.83	
64.5	476,380		0.0000	1.0000	39.81	
65.5	476,272	95	0.0002	0.9998	39.81	
66.5	526,993	3,693	0.0070	0.9930	39.80	
67.5	523,804	834	0.0016	0.9984	39.52	
68.5	531,144	700	0.0013	0.9987	39.46	
69.5	535,055	3,032	0.0057	0.9943	39.41	
70.5	532,022	1,807	0.0034	0.9966	39.19	
71.5	530,215	853	0.0016	0.9984	39.05	
72.5	532,638	182	0.0003	0.9997	38.99	
73.5	544,591	1,727	0.0032	0.9968	38.98	
74.5	542,780	227,089	0.4184	0.5816	38.85	
75.5	340,837	4,972	0.0146	0.9854	22.60	
76.5	257,618	977	0.0038	0.9962	22.27	
77.5	256,699		0.0000	1.0000	22.18	
78.5	256,613		0.0000	1.0000	22.18	

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 320 WATER TREATMENT EQUIPMENT

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1881-2014			EXPERIENCE BAND 1975-2014			
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	256,478	1,112	0.0043	0.9957	22.18	
80.5	245,268		0.0000	1.0000	22.09	
81.5	245,151		0.0000	1.0000	22.09	
82.5	244,822	37,738	0.1541	0.8459	22.09	
83.5	207,014		0.0000	1.0000	18.68	
84.5	204,957		0.0000	1.0000	18.68	
85.5	205,658		0.0000	1.0000	18.68	
86.5	229,995	6,769	0.0294	0.9706	18.68	
87.5	174,075	27,872	0.1601	0.8399	18.13	
88.5	146,203		0.0000	1.0000	15.23	
89.5	146,203		0.0000	1.0000	15.23	
90.5	145,625		0.0000	1.0000	15.23	
91.5	145,625	48,231	0.3312	0.6688	15.23	
92.5	97,395	305	0.0031	0.9969	10.19	
93.5	97,263	215	0.0022	0.9978	10.15	
94.5	96,956		0.0000	1.0000	10.13	
95.5	96,956		0.0000	1.0000	10.13	
96.5	96,956		0.0000	1.0000	10.13	
97.5	96,874		0.0000	1.0000	10.13	
98.5	81,367		0.0000	1.0000	10.13	
99.5	81,197		0.0000	1.0000	10.13	
100.5	81,197	25,185	0.3102	0.6898	10.13	
101.5	56,012	774	0.0138	0.9862	6.99	
102.5	55,238	747	0.0135	0.9865	6.89	
103.5	54,491		0.0000	1.0000	6.80	
104.5	54,471		0.0000	1.0000	6.80	
105.5	54,139		0.0000	1.0000	6.80	
106.5	51,553		0.0000	1.0000	6.80	
107.5	51,353		0.0000	1.0000	6.80	
108.5	42,437		0.0000	1.0000	6.80	
109.5	37,827		0.0000	1.0000	6.80	
110.5	37,827		0.0000	1.0000	6.80	
111.5	37,827		0.0000	1.0000	6.80	
112.5	37,827		0.0000	1.0000	6.80	
113.5	25,691		0.0000	1.0000	6.80	
114.5	25,691		0.0000	1.0000	6.80	
115.5	25,691		0.0000	1.0000	6.80	
116.5	25,691		0.0000	1.0000	6.80	
117.5	25,691		0.0000	1.0000	6.80	
118.5	25,691		0.0000	1.0000	6.80	

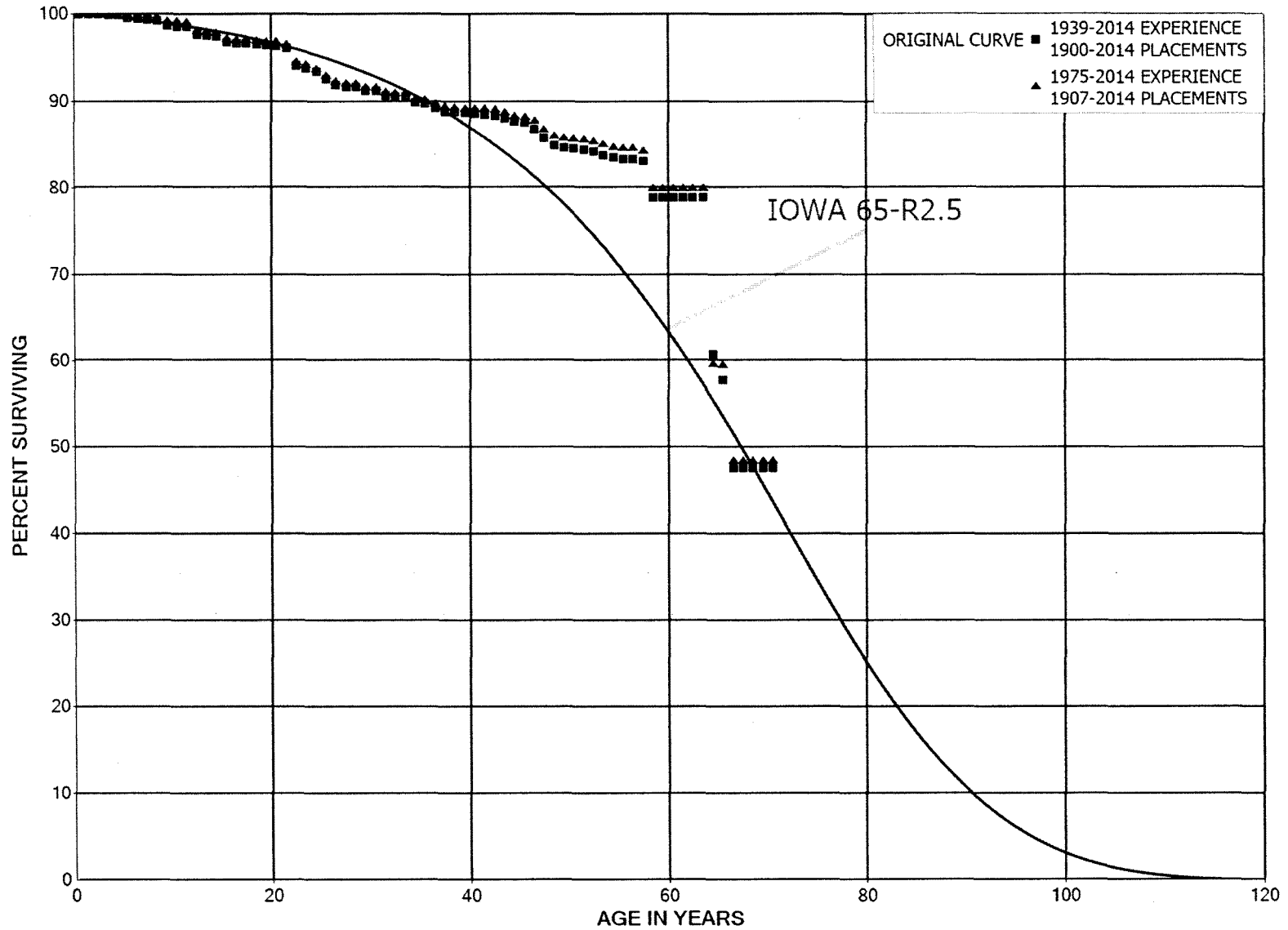


MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 320 WATER TREATMENT EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1881-2014			EXPERIENCE BAND 1975-2014		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
119.5	25,691		0.0000	1.0000	6.80
120.5	25,691		0.0000	1.0000	6.80
121.5	25,691		0.0000	1.0000	6.80
122.5	25,691		0.0000	1.0000	6.80
123.5	25,691		0.0000	1.0000	6.80
124.5	25,624		0.0000	1.0000	6.80
125.5	24,923		0.0000	1.0000	6.80
126.5	575		0.0000	1.0000	6.80
127.5	575		0.0000	1.0000	6.80
128.5	575		0.0000	1.0000	6.80
129.5	575		0.0000	1.0000	6.80
130.5	575		0.0000	1.0000	6.80
131.5	575		0.0000	1.0000	6.80
132.5	575		0.0000	1.0000	6.80
133.5					6.80

MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 330 DISTRIBUTION RESERVOIRS AND STANDPIPES  
ORIGINAL AND SMOOTH SURVIVOR CURVES



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 330 DISTRIBUTION RESERVOIRS AND STANDPIPES

## ORIGINAL LIFE TABLE

## PLACEMENT BAND 1900-2014

## EXPERIENCE BAND 1939-2014

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	28,068,409		0.0000	1.0000	100.00
0.5	27,943,040	3,839	0.0001	0.9999	100.00
1.5	28,016,962	10,889	0.0004	0.9996	99.99
2.5	27,893,311	19,868	0.0007	0.9993	99.95
3.5	28,222,553	7,875	0.0003	0.9997	99.88
4.5	27,971,347	82,838	0.0030	0.9970	99.85
5.5	27,723,481	54,715	0.0020	0.9980	99.55
6.5	28,242,479	20,536	0.0007	0.9993	99.36
7.5	25,248,889	38,710	0.0015	0.9985	99.28
8.5	24,976,567	139,189	0.0056	0.9944	99.13
9.5	23,204,868	10,970	0.0005	0.9995	98.58
10.5	23,512,368	6,350	0.0003	0.9997	98.53
11.5	23,152,899	215,929	0.0093	0.9907	98.51
12.5	19,811,245	15,095	0.0008	0.9992	97.59
13.5	19,719,309	27,849	0.0014	0.9986	97.51
14.5	18,342,373	128,553	0.0070	0.9930	97.38
15.5	17,991,240	16,927	0.0009	0.9991	96.69
16.5	16,979,698	2,420	0.0001	0.9999	96.60
17.5	15,514,445	16,676	0.0011	0.9989	96.59
18.5	14,529,136	13,396	0.0009	0.9991	96.48
19.5	13,755,989	8,565	0.0006	0.9994	96.40
20.5	13,746,361	36,722	0.0027	0.9973	96.34
21.5	13,667,142	281,465	0.0206	0.9794	96.08
22.5	13,143,711	53,511	0.0041	0.9959	94.10
23.5	12,427,399	48,094	0.0039	0.9961	93.72
24.5	11,040,369	100,697	0.0091	0.9909	93.35
25.5	9,851,066	70,359	0.0071	0.9929	92.50
26.5	9,778,731	21,116	0.0022	0.9978	91.84
27.5	9,722,648	4,836	0.0005	0.9995	91.64
28.5	9,683,800	41,252	0.0043	0.9957	91.60
29.5	9,642,548	2,543	0.0003	0.9997	91.21
30.5	9,658,023	58,176	0.0060	0.9940	91.18
31.5	9,563,725	18,317	0.0019	0.9981	90.63
32.5	9,543,862	892	0.0001	0.9999	90.46
33.5	8,798,853	57,742	0.0066	0.9934	90.45
34.5	8,458,093	16,448	0.0019	0.9981	89.86
35.5	7,834,830	40,390	0.0052	0.9948	89.68
36.5	7,555,800	40,043	0.0053	0.9947	89.22
37.5	7,472,539	3,297	0.0004	0.9996	88.75
38.5	7,466,909	8,210	0.0011	0.9989	88.71

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 330 DISTRIBUTION RESERVOIRS AND STANDPIPES

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1900-2014			EXPERIENCE BAND 1939-2014			
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	7,089,278	11,985	0.0017	0.9983	88.61	
40.5	7,224,060	7,220	0.0010	0.9990	88.46	
41.5	7,184,241	7,035	0.0010	0.9990	88.37	
42.5	7,150,042	22,929	0.0032	0.9968	88.29	
43.5	6,750,456	32,394	0.0048	0.9952	88.00	
44.5	6,322,146	8,386	0.0013	0.9987	87.58	
45.5	6,172,845	51,620	0.0084	0.9916	87.47	
46.5	5,525,518	64,871	0.0117	0.9883	86.73	
47.5	5,320,853	47,497	0.0089	0.9911	85.72	
48.5	4,791,887	17,433	0.0036	0.9964	84.95	
49.5	4,057,478	8,047	0.0020	0.9980	84.64	
50.5	2,859,079	1,833	0.0006	0.9994	84.47	
51.5	2,720,218	7,673	0.0028	0.9972	84.42	
52.5	2,294,810	11,306	0.0049	0.9951	84.18	
53.5	1,645,027	5,562	0.0034	0.9966	83.77	
54.5	1,549,263	2,875	0.0019	0.9981	83.48	
55.5	1,546,388		0.0000	1.0000	83.33	
56.5	1,545,371	5,331	0.0034	0.9966	83.33	
57.5	1,345,139	67,570	0.0502	0.9498	83.04	
58.5	1,155,102		0.0000	1.0000	78.87	
59.5	761,624		0.0000	1.0000	78.87	
60.5	249,302	210	0.0008	0.9992	78.87	
61.5	209,883		0.0000	1.0000	78.80	
62.5	209,883		0.0000	1.0000	78.80	
63.5	209,883	48,141	0.2294	0.7706	78.80	
64.5	161,742	7,945	0.0491	0.9509	60.73	
65.5	140,175	24,801	0.1769	0.8231	57.74	
66.5	110,189		0.0000	1.0000	47.53	
67.5	106,966		0.0000	1.0000	47.53	
68.5	81,399		0.0000	1.0000	47.53	
69.5	80,188		0.0000	1.0000	47.53	
70.5	80,188		0.0000	1.0000	47.53	
71.5	80,188		0.0000	1.0000	47.53	
72.5	80,049		0.0000	1.0000	47.53	
73.5	80,011		0.0000	1.0000	47.53	
74.5	79,859		0.0000	1.0000	47.53	
75.5	65,796		0.0000	1.0000	47.53	
76.5	65,796		0.0000	1.0000	47.53	
77.5	65,796		0.0000	1.0000	47.53	
78.5	42,200		0.0000	1.0000	47.53	

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 330 DISTRIBUTION RESERVOIRS AND STANDPIPES

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1900-2014			EXPERIENCE BAND 1939-2014		
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	42,200		0.0000	1.0000	47.53
80.5	42,200		0.0000	1.0000	47.53
81.5	42,200		0.0000	1.0000	47.53
82.5	38,081		0.0000	1.0000	47.53
83.5	12,103		0.0000	1.0000	47.53
84.5	12,103		0.0000	1.0000	47.53
85.5	12,103		0.0000	1.0000	47.53
86.5	12,103		0.0000	1.0000	47.53
87.5	12,103		0.0000	1.0000	47.53
88.5	12,103		0.0000	1.0000	47.53
89.5	12,103		0.0000	1.0000	47.53
90.5	12,103		0.0000	1.0000	47.53
91.5	12,103		0.0000	1.0000	47.53
92.5	12,103		0.0000	1.0000	47.53
93.5	12,103		0.0000	1.0000	47.53
94.5	12,103		0.0000	1.0000	47.53
95.5	12,103		0.0000	1.0000	47.53
96.5	12,103		0.0000	1.0000	47.53
97.5	12,103		0.0000	1.0000	47.53
98.5	12,103		0.0000	1.0000	47.53
99.5	12,103		0.0000	1.0000	47.53
100.5	12,103		0.0000	1.0000	47.53
101.5	12,103		0.0000	1.0000	47.53
102.5	12,103		0.0000	1.0000	47.53
103.5	12,103		0.0000	1.0000	47.53
104.5	12,103		0.0000	1.0000	47.53
105.5	12,103		0.0000	1.0000	47.53
106.5	12,103		0.0000	1.0000	47.53
107.5					47.53

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 330 DISTRIBUTION RESERVOIRS AND STANDPIPES

## ORIGINAL LIFE TABLE

## PLACEMENT BAND 1907-2014

## EXPERIENCE BAND 1975-2014

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	20,413,001		0.0000	1.0000	100.00
0.5	20,291,709	3,839	0.0002	0.9998	100.00
1.5	20,403,785	10,815	0.0005	0.9995	99.98
2.5	20,290,006	14,469	0.0007	0.9993	99.93
3.5	21,023,471	6,541	0.0003	0.9997	99.86
4.5	21,175,263	6,188	0.0003	0.9997	99.83
5.5	21,141,198	4,327	0.0002	0.9998	99.80
6.5	22,336,690	9,054	0.0004	0.9996	99.78
7.5	19,723,734	36,461	0.0018	0.9982	99.74
8.5	19,956,162	92,699	0.0046	0.9954	99.55
9.5	19,024,983	10,132	0.0005	0.9995	99.09
10.5	20,528,725	6,033	0.0003	0.9997	99.04
11.5	20,323,204	213,779	0.0105	0.9895	99.01
12.5	17,423,031	14,448	0.0008	0.9992	97.97
13.5	17,951,249	23,101	0.0013	0.9987	97.88
14.5	16,695,009	124,706	0.0075	0.9925	97.76
15.5	16,347,748	11,905	0.0007	0.9993	97.03
16.5	15,345,724	414	0.0000	1.0000	96.96
17.5	14,114,850	14,030	0.0010	0.9990	96.95
18.5	13,342,370	13,109	0.0010	0.9990	96.86
19.5	12,968,936	8,483	0.0007	0.9993	96.76
20.5	13,424,130	36,386	0.0027	0.9973	96.70
21.5	13,401,182	281,430	0.0210	0.9790	96.44
22.5	12,877,788	52,805	0.0041	0.9959	94.41
23.5	12,154,064	48,094	0.0040	0.9960	94.03
24.5	10,815,347	95,945	0.0089	0.9911	93.65
25.5	9,635,978	70,359	0.0073	0.9927	92.82
26.5	9,568,828	21,116	0.0022	0.9978	92.14
27.5	9,515,968	4,425	0.0005	0.9995	91.94
28.5	9,503,700	41,252	0.0043	0.9957	91.90
29.5	9,463,659	2,113	0.0002	0.9998	91.50
30.5	9,458,697	58,004	0.0061	0.9939	91.48
31.5	9,352,468	8,476	0.0009	0.9991	90.92
32.5	9,355,176	892	0.0001	0.9999	90.84
33.5	8,611,310	56,867	0.0066	0.9934	90.83
34.5	8,271,597	16,430	0.0020	0.9980	90.23
35.5	7,650,804	39,515	0.0052	0.9948	90.05
36.5	7,372,657	28,818	0.0039	0.9961	89.58
37.5	7,301,093	2,442	0.0003	0.9997	89.23
38.5	7,316,352	6,908	0.0009	0.9991	89.20

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 330 DISTRIBUTION RESERVOIRS AND STANDPIPES

## ORIGINAL LIFE TABLE, CONT.

## PLACEMENT BAND 1907-2014

## EXPERIENCE BAND 1975-2014

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	6,940,183	17	0.0000	1.0000	89.12
40.5	7,086,968	7,220	0.0010	0.9990	89.12
41.5	7,047,269	7,035	0.0010	0.9990	89.03
42.5	7,067,564	22,929	0.0032	0.9968	88.94
43.5	6,694,454	32,394	0.0048	0.9952	88.65
44.5	6,266,144	8,386	0.0013	0.9987	88.22
45.5	6,116,843	32,489	0.0053	0.9947	88.10
46.5	5,488,647	64,871	0.0118	0.9882	87.64
47.5	5,283,982	41,640	0.0079	0.9921	86.60
48.5	4,760,872	9,316	0.0020	0.9980	85.92
49.5	4,034,581	8,047	0.0020	0.9980	85.75
50.5	2,836,182	1,833	0.0006	0.9994	85.58
51.5	2,697,321	5,779	0.0021	0.9979	85.52
52.5	2,273,807	11,306	0.0050	0.9950	85.34
53.5	1,624,024	5,562	0.0034	0.9966	84.92
54.5	1,528,260	2,875	0.0019	0.9981	84.62
55.5	1,525,385		0.0000	1.0000	84.47
56.5	1,524,368	5,331	0.0035	0.9965	84.47
57.5	1,324,136	67,570	0.0510	0.9490	84.17
58.5	1,134,099		0.0000	1.0000	79.87
59.5	740,621		0.0000	1.0000	79.87
60.5	228,299	210	0.0009	0.9991	79.87
61.5	188,880		0.0000	1.0000	79.80
62.5	188,880		0.0000	1.0000	79.80
63.5	188,880	48,141	0.2549	0.7451	79.80
64.5	140,739	63	0.0004	0.9996	59.46
65.5	127,054	23,783	0.1872	0.8128	59.44
66.5	98,087		0.0000	1.0000	48.31
67.5	106,966		0.0000	1.0000	48.31
68.5	81,399		0.0000	1.0000	48.31
69.5	80,188		0.0000	1.0000	48.31
70.5	80,188		0.0000	1.0000	48.31
71.5	80,188		0.0000	1.0000	48.31
72.5	80,049		0.0000	1.0000	48.31
73.5	80,011		0.0000	1.0000	48.31
74.5	79,859		0.0000	1.0000	48.31
75.5	65,796		0.0000	1.0000	48.31
76.5	65,796		0.0000	1.0000	48.31
77.5	65,796		0.0000	1.0000	48.31
78.5	42,200		0.0000	1.0000	48.31

## MISSOURI AMERICAN WATER COMPANY

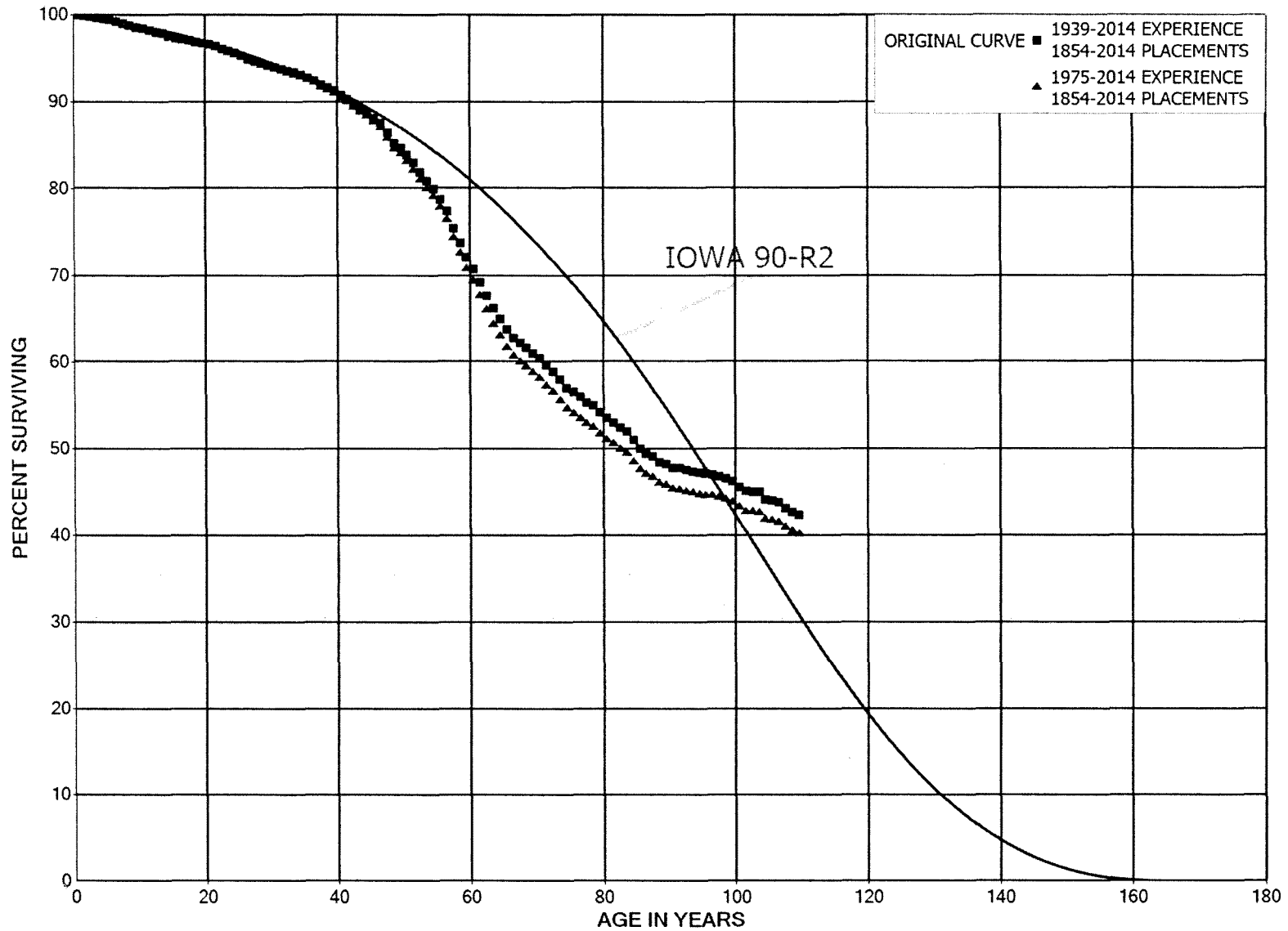
## ACCOUNT 330 DISTRIBUTION RESERVOIRS AND STANDPIPES

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1907-2014			EXPERIENCE BAND 1975-2014		
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	42,200		0.0000	1.0000	48.31
80.5	42,200		0.0000	1.0000	48.31
81.5	42,200		0.0000	1.0000	48.31
82.5	38,081		0.0000	1.0000	48.31
83.5	12,103		0.0000	1.0000	48.31
84.5	12,103		0.0000	1.0000	48.31
85.5	12,103		0.0000	1.0000	48.31
86.5	12,103		0.0000	1.0000	48.31
87.5	12,103		0.0000	1.0000	48.31
88.5	12,103		0.0000	1.0000	48.31
89.5	12,103		0.0000	1.0000	48.31
90.5	12,103		0.0000	1.0000	48.31
91.5	12,103		0.0000	1.0000	48.31
92.5	12,103		0.0000	1.0000	48.31
93.5	12,103		0.0000	1.0000	48.31
94.5	12,103		0.0000	1.0000	48.31
95.5	12,103		0.0000	1.0000	48.31
96.5	12,103		0.0000	1.0000	48.31
97.5	12,103		0.0000	1.0000	48.31
98.5	12,103		0.0000	1.0000	48.31
99.5	12,103		0.0000	1.0000	48.31
100.5	12,103		0.0000	1.0000	48.31
101.5	12,103		0.0000	1.0000	48.31
102.5	12,103		0.0000	1.0000	48.31
103.5	12,103		0.0000	1.0000	48.31
104.5	12,103		0.0000	1.0000	48.31
105.5	12,103		0.0000	1.0000	48.31
106.5	12,103		0.0000	1.0000	48.31
107.5					48.31



MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 331 MAINS - TRANSMISSION AND DISTRIBUTION  
ORIGINAL AND SMOOTH SURVIVOR CURVES



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 331 MAINS - TRANSMISSION AND DISTRIBUTION

## ORIGINAL LIFE TABLE

## PLACEMENT BAND 1854-2014

## EXPERIENCE BAND 1939-2014

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	1,176,613,602	419,674	0.0004	0.9996	100.00
0.5	1,086,986,503	1,410,690	0.0013	0.9987	99.96
1.5	1,031,493,412	830,373	0.0008	0.9992	99.83
2.5	948,201,692	1,143,690	0.0012	0.9988	99.75
3.5	900,362,861	1,154,423	0.0013	0.9987	99.63
4.5	834,385,809	1,325,854	0.0016	0.9984	99.51
5.5	780,944,371	1,347,220	0.0017	0.9983	99.35
6.5	712,486,223	1,544,026	0.0022	0.9978	99.18
7.5	653,798,954	1,747,419	0.0027	0.9973	98.96
8.5	598,253,744	945,234	0.0016	0.9984	98.70
9.5	589,463,062	1,190,874	0.0020	0.9980	98.54
10.5	572,690,341	1,009,707	0.0018	0.9982	98.34
11.5	546,638,799	937,262	0.0017	0.9983	98.17
12.5	496,727,080	693,649	0.0014	0.9986	98.00
13.5	421,935,454	1,486,812	0.0035	0.9965	97.86
14.5	386,057,159	722,922	0.0019	0.9981	97.52
15.5	369,152,041	755,984	0.0020	0.9980	97.34
16.5	349,517,614	425,951	0.0012	0.9988	97.14
17.5	325,113,847	581,088	0.0018	0.9982	97.02
18.5	307,034,831	467,217	0.0015	0.9985	96.85
19.5	292,777,636	350,707	0.0012	0.9988	96.70
20.5	277,761,803	600,674	0.0022	0.9978	96.58
21.5	264,771,989	822,998	0.0031	0.9969	96.37
22.5	255,492,889	736,420	0.0029	0.9971	96.07
23.5	239,149,149	576,632	0.0024	0.9976	95.80
24.5	227,655,952	591,133	0.0026	0.9974	95.57
25.5	211,647,689	1,043,219	0.0049	0.9951	95.32
26.5	195,187,094	384,387	0.0020	0.9980	94.85
27.5	181,392,282	514,986	0.0028	0.9972	94.66
28.5	169,151,496	403,274	0.0024	0.9976	94.39
29.5	155,617,208	363,430	0.0023	0.9977	94.17
30.5	148,704,756	392,421	0.0026	0.9974	93.95
31.5	143,385,316	287,943	0.0020	0.9980	93.70
32.5	139,559,302	249,593	0.0018	0.9982	93.51
33.5	134,820,309	373,473	0.0028	0.9972	93.34
34.5	129,329,074	501,796	0.0039	0.9961	93.09
35.5	121,513,862	408,494	0.0034	0.9966	92.72
36.5	112,864,401	557,532	0.0049	0.9951	92.41
37.5	107,237,193	393,756	0.0037	0.9963	91.96
38.5	103,226,185	428,970	0.0042	0.9958	91.62

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 331 MAINS - TRANSMISSION AND DISTRIBUTION

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1854-2014			EXPERIENCE BAND 1939-2014		
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	98,842,406	510,756	0.0052	0.9948	91.24
40.5	93,091,847	509,173	0.0055	0.9945	90.77
41.5	89,363,667	576,706	0.0065	0.9935	90.27
42.5	86,096,209	453,951	0.0053	0.9947	89.69
43.5	81,569,452	415,040	0.0051	0.9949	89.21
44.5	78,481,187	573,920	0.0073	0.9927	88.76
45.5	74,033,037	525,225	0.0071	0.9929	88.11
46.5	70,233,010	905,846	0.0129	0.9871	87.49
47.5	66,289,232	883,169	0.0133	0.9867	86.36
48.5	61,308,168	400,933	0.0065	0.9935	85.21
49.5	56,776,418	572,546	0.0101	0.9899	84.65
50.5	52,004,327	546,929	0.0105	0.9895	83.80
51.5	48,641,480	628,711	0.0129	0.9871	82.91
52.5	45,661,841	556,153	0.0122	0.9878	81.84
53.5	42,831,723	449,087	0.0105	0.9895	80.85
54.5	39,302,943	617,569	0.0157	0.9843	80.00
55.5	34,994,672	604,982	0.0173	0.9827	78.74
56.5	31,987,419	819,480	0.0256	0.9744	77.38
57.5	29,259,085	665,929	0.0228	0.9772	75.40
58.5	25,628,487	579,226	0.0226	0.9774	73.68
59.5	21,395,496	399,749	0.0187	0.9813	72.02
60.5	18,499,941	396,656	0.0214	0.9786	70.67
61.5	15,949,556	348,878	0.0219	0.9781	69.16
62.5	14,969,141	322,150	0.0215	0.9785	67.64
63.5	14,044,490	253,305	0.0180	0.9820	66.19
64.5	13,143,316	262,700	0.0200	0.9800	64.99
65.5	11,849,044	178,413	0.0151	0.9849	63.69
66.5	11,022,989	100,238	0.0091	0.9909	62.74
67.5	10,398,548	85,233	0.0082	0.9918	62.17
68.5	10,039,096	108,996	0.0109	0.9891	61.66
69.5	9,729,051	92,523	0.0095	0.9905	60.99
70.5	9,604,864	129,173	0.0134	0.9866	60.41
71.5	9,402,339	113,377	0.0121	0.9879	59.59
72.5	9,208,813	135,499	0.0147	0.9853	58.88
73.5	8,900,450	154,810	0.0174	0.9826	58.01
74.5	8,569,483	78,497	0.0092	0.9908	57.00
75.5	8,478,202	80,709	0.0095	0.9905	56.48
76.5	8,663,404	93,757	0.0108	0.9892	55.94
77.5	8,429,077	62,908	0.0075	0.9925	55.33
78.5	8,078,474	116,896	0.0145	0.9855	54.92

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 331 MAINS - TRANSMISSION AND DISTRIBUTION

## ORIGINAL LIFE TABLE, CONT.

## PLACEMENT BAND 1854-2014

## EXPERIENCE BAND 1939-2014

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	7,529,083	89,935	0.0119	0.9881	54.13
80.5	7,458,763	67,767	0.0091	0.9909	53.48
81.5	7,308,147	88,346	0.0121	0.9879	52.99
82.5	7,124,759	56,747	0.0080	0.9920	52.35
83.5	6,666,455	132,918	0.0199	0.9801	51.94
84.5	5,628,151	104,604	0.0186	0.9814	50.90
85.5	5,401,672	61,089	0.0113	0.9887	49.96
86.5	5,093,683	34,771	0.0068	0.9932	49.39
87.5	4,599,174	60,451	0.0131	0.9869	49.05
88.5	3,807,451	18,958	0.0050	0.9950	48.41
89.5	3,445,966	29,688	0.0086	0.9914	48.17
90.5	3,121,249	5,310	0.0017	0.9983	47.75
91.5	2,850,577	11,808	0.0041	0.9959	47.67
92.5	2,561,387	8,407	0.0033	0.9967	47.47
93.5	2,269,892	8,771	0.0039	0.9961	47.32
94.5	2,236,233	5,875	0.0026	0.9974	47.14
95.5	2,225,584	1,940	0.0009	0.9991	47.01
96.5	2,221,186	10,976	0.0049	0.9951	46.97
97.5	2,183,951	13,260	0.0061	0.9939	46.74
98.5	2,128,051	12,379	0.0058	0.9942	46.45
99.5	2,001,064	28,387	0.0142	0.9858	46.18
100.5	1,941,840	21,552	0.0111	0.9889	45.53
101.5	1,743,298	1,751	0.0010	0.9990	45.02
102.5	1,597,758	3,115	0.0019	0.9981	44.98
103.5	1,482,073	28,768	0.0194	0.9806	44.89
104.5	1,243,599	2,515	0.0020	0.9980	44.02
105.5	1,220,888	6,311	0.0052	0.9948	43.93
106.5	1,128,220	16,413	0.0145	0.9855	43.70
107.5	1,084,383	10,096	0.0093	0.9907	43.07
108.5	1,015,489	8,218	0.0081	0.9919	42.67
109.5	963,460	2,626	0.0027	0.9973	42.32
110.5	938,207	8,838	0.0094	0.9906	42.21
111.5	799,476	9,554	0.0120	0.9880	41.81
112.5	772,810	11,516	0.0149	0.9851	41.31
113.5	722,733	3,000	0.0042	0.9958	40.69
114.5	441,766	769	0.0017	0.9983	40.52
115.5	398,603	508	0.0013	0.9987	40.45
116.5	366,678	1,131	0.0031	0.9969	40.40
117.5	357,416	798	0.0022	0.9978	40.28
118.5	355,294	31	0.0001	0.9999	40.19

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 331 MAINS - TRANSMISSION AND DISTRIBUTION

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1854-2014			EXPERIENCE BAND 1939-2014			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
119.5	336,576	41	0.0001	0.9999	40.18	
120.5	303,327	96	0.0003	0.9997	40.18	
121.5	276,736	5,032	0.0182	0.9818	40.17	
122.5	265,591	35	0.0001	0.9999	39.44	
123.5	245,516	89	0.0004	0.9996	39.43	
124.5	220,646	1,902	0.0086	0.9914	39.42	
125.5	195,610	660	0.0034	0.9966	39.08	
126.5	179,057		0.0000	1.0000	38.94	
127.5	174,956	280	0.0016	0.9984	38.94	
128.5	173,837	925	0.0053	0.9947	38.88	
129.5	172,513	937	0.0054	0.9946	38.68	
130.5	169,146	4,047	0.0239	0.9761	38.47	
131.5	165,099	34	0.0002	0.9998	37.55	
132.5	161,525	1,451	0.0090	0.9910	37.54	
133.5	89,481	33	0.0004	0.9996	37.20	
134.5	88		0.0000	1.0000	37.19	
135.5	88		0.0000	1.0000	37.19	
136.5	88		0.0000	1.0000	37.19	
137.5	88		0.0000	1.0000	37.19	
138.5	88		0.0000	1.0000	37.19	
139.5	88		0.0000	1.0000	37.19	
140.5	88		0.0000	1.0000	37.19	
141.5	88		0.0000	1.0000	37.19	
142.5	30		0.0000	1.0000	37.19	
143.5	30		0.0000	1.0000	37.19	
144.5	30		0.0000	1.0000	37.19	
145.5	30		0.0000	1.0000	37.19	
146.5	30		0.0000	1.0000	37.19	
147.5	30		0.0000	1.0000	37.19	
148.5	30		0.0000	1.0000	37.19	
149.5	30		0.0000	1.0000	37.19	
150.5	30		0.0000	1.0000	37.19	
151.5	30		0.0000	1.0000	37.19	
152.5	30		0.0000	1.0000	37.19	
153.5	30		0.0000	1.0000	37.19	
154.5	30		0.0000	1.0000	37.19	
155.5	30		0.0000	1.0000	37.19	
156.5	30		0.0000	1.0000	37.19	
157.5	30		0.0000	1.0000	37.19	
158.5	30		0.0000	1.0000	37.19	
159.5	30		0.0000	1.0000	37.19	
160.5					37.19	

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 331 MAINS - TRANSMISSION AND DISTRIBUTION

## ORIGINAL LIFE TABLE

## PLACEMENT BAND 1854-2014

## EXPERIENCE BAND 1975-2014

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	1,082,955,559	407,200	0.0004	0.9996	100.00
0.5	999,267,705	1,361,313	0.0014	0.9986	99.96
1.5	947,956,366	802,961	0.0008	0.9992	99.83
2.5	868,637,857	1,105,098	0.0013	0.9987	99.74
3.5	825,600,503	1,084,653	0.0013	0.9987	99.61
4.5	762,838,591	1,268,441	0.0017	0.9983	99.48
5.5	714,131,649	1,270,051	0.0018	0.9982	99.32
6.5	649,986,790	1,472,923	0.0023	0.9977	99.14
7.5	594,598,164	1,638,537	0.0028	0.9972	98.92
8.5	542,635,581	908,970	0.0017	0.9983	98.64
9.5	537,968,323	1,129,599	0.0021	0.9979	98.48
10.5	524,998,885	952,308	0.0018	0.9982	98.27
11.5	501,788,345	899,061	0.0018	0.9982	98.09
12.5	454,208,037	557,340	0.0012	0.9988	97.92
13.5	382,247,013	1,420,393	0.0037	0.9963	97.80
14.5	348,947,961	676,920	0.0019	0.9981	97.43
15.5	334,990,838	726,413	0.0022	0.9978	97.25
16.5	317,687,031	398,205	0.0013	0.9987	97.04
17.5	295,165,884	526,560	0.0018	0.9982	96.91
18.5	280,857,290	452,050	0.0016	0.9984	96.74
19.5	270,329,437	317,818	0.0012	0.9988	96.58
20.5	258,676,672	538,585	0.0021	0.9979	96.47
21.5	248,608,631	813,995	0.0033	0.9967	96.27
22.5	240,472,377	723,713	0.0030	0.9970	95.96
23.5	225,269,253	572,390	0.0025	0.9975	95.67
24.5	214,919,356	581,164	0.0027	0.9973	95.42
25.5	200,134,655	1,036,617	0.0052	0.9948	95.17
26.5	184,592,037	374,837	0.0020	0.9980	94.67
27.5	171,594,361	508,650	0.0030	0.9970	94.48
28.5	159,592,041	398,190	0.0025	0.9975	94.20
29.5	146,195,363	359,728	0.0025	0.9975	93.97
30.5	139,278,459	378,192	0.0027	0.9973	93.73
31.5	134,020,753	279,557	0.0021	0.9979	93.48
32.5	130,287,867	239,284	0.0018	0.9982	93.28
33.5	125,956,063	361,788	0.0029	0.9971	93.11
34.5	121,024,635	477,589	0.0039	0.9961	92.85
35.5	113,416,394	404,116	0.0036	0.9964	92.48
36.5	104,982,854	550,529	0.0052	0.9948	92.15
37.5	99,561,241	377,133	0.0038	0.9962	91.67
38.5	95,507,833	421,205	0.0044	0.9956	91.32

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 331 MAINS - TRANSMISSION AND DISTRIBUTION

## ORIGINAL LIFE TABLE, CONT.

## PLACEMENT BAND 1854-2014

## EXPERIENCE BAND 1975-2014

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	91,250,504	501,449	0.0055	0.9945	90.92
40.5	85,608,208	498,010	0.0058	0.9942	90.42
41.5	82,042,444	569,311	0.0069	0.9931	89.89
42.5	78,972,805	443,421	0.0056	0.9944	89.27
43.5	74,972,322	407,408	0.0054	0.9946	88.77
44.5	72,860,167	570,228	0.0078	0.9922	88.28
45.5	68,703,038	520,564	0.0076	0.9924	87.59
46.5	65,319,078	901,063	0.0138	0.9862	86.93
47.5	61,753,629	871,601	0.0141	0.9859	85.73
48.5	57,389,058	397,591	0.0069	0.9931	84.52
49.5	53,236,725	570,801	0.0107	0.9893	83.93
50.5	48,828,089	544,438	0.0112	0.9888	83.03
51.5	45,804,105	626,618	0.0137	0.9863	82.11
52.5	43,095,736	552,099	0.0128	0.9872	80.99
53.5	40,583,808	440,238	0.0108	0.9892	79.95
54.5	37,100,171	606,755	0.0164	0.9836	79.08
55.5	32,811,529	598,216	0.0182	0.9818	77.79
56.5	29,810,315	815,693	0.0274	0.9726	76.37
57.5	27,035,211	664,852	0.0246	0.9754	74.28
58.5	23,352,293	574,078	0.0246	0.9754	72.45
59.5	19,246,600	391,178	0.0203	0.9797	70.67
60.5	16,401,170	395,705	0.0241	0.9759	69.24
61.5	14,074,675	347,837	0.0247	0.9753	67.56
62.5	13,269,648	321,992	0.0243	0.9757	65.89
63.5	12,464,875	252,260	0.0202	0.9798	64.30
64.5	11,831,206	259,906	0.0220	0.9780	62.99
65.5	10,563,621	177,677	0.0168	0.9832	61.61
66.5	9,821,106	99,754	0.0102	0.9898	60.57
67.5	9,229,227	84,111	0.0091	0.9909	59.96
68.5	8,933,695	106,523	0.0119	0.9881	59.41
69.5	8,670,866	91,650	0.0106	0.9894	58.70
70.5	8,574,214	126,893	0.0148	0.9852	58.08
71.5	8,540,243	112,955	0.0132	0.9868	57.22
72.5	8,364,582	134,903	0.0161	0.9839	56.47
73.5	8,096,239	153,635	0.0190	0.9810	55.56
74.5	8,105,156	78,497	0.0097	0.9903	54.50
75.5	8,059,782	80,709	0.0100	0.9900	53.97
76.5	8,282,108	93,757	0.0113	0.9887	53.43
77.5	8,056,104	62,908	0.0078	0.9922	52.83
78.5	7,706,870	116,896	0.0152	0.9848	52.42

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 331 MAINS - TRANSMISSION AND DISTRIBUTION

## ORIGINAL LIFE TABLE, CONT.

## PLACEMENT BAND 1854-2014

## EXPERIENCE BAND 1975-2014

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	7,177,851	89,935	0.0125	0.9875	51.62
80.5	7,143,358	67,767	0.0095	0.9905	50.97
81.5	7,020,114	88,346	0.0126	0.9874	50.49
82.5	6,843,244	56,747	0.0083	0.9917	49.86
83.5	6,405,220	132,918	0.0208	0.9792	49.44
84.5	5,391,801	104,604	0.0194	0.9806	48.42
85.5	5,188,676	61,089	0.0118	0.9882	47.48
86.5	4,900,937	34,771	0.0071	0.9929	46.92
87.5	4,410,529	60,451	0.0137	0.9863	46.59
88.5	3,619,645	18,958	0.0052	0.9948	45.95
89.5	3,258,559	29,688	0.0091	0.9909	45.71
90.5	2,940,560	5,310	0.0018	0.9982	45.29
91.5	2,669,888	11,808	0.0044	0.9956	45.21
92.5	2,384,337	8,407	0.0035	0.9965	45.01
93.5	2,174,276	8,771	0.0040	0.9960	44.85
94.5	2,236,145	5,875	0.0026	0.9974	44.67
95.5	2,225,496	1,940	0.0009	0.9991	44.55
96.5	2,221,098	10,976	0.0049	0.9951	44.51
97.5	2,183,863	13,260	0.0061	0.9939	44.29
98.5	2,127,963	12,379	0.0058	0.9942	44.02
99.5	2,000,976	28,387	0.0142	0.9858	43.77
100.5	1,941,752	21,552	0.0111	0.9889	43.15
101.5	1,743,210	1,751	0.0010	0.9990	42.67
102.5	1,597,728	3,115	0.0019	0.9981	42.62
103.5	1,482,043	28,768	0.0194	0.9806	42.54
104.5	1,243,569	2,515	0.0020	0.9980	41.72
105.5	1,220,858	6,311	0.0052	0.9948	41.63
106.5	1,128,191	16,413	0.0145	0.9855	41.42
107.5	1,084,353	10,096	0.0093	0.9907	40.81
108.5	1,015,459	8,218	0.0081	0.9919	40.43
109.5	963,430	2,626	0.0027	0.9973	40.11
110.5	938,177	8,838	0.0094	0.9906	40.00
111.5	799,446	9,554	0.0120	0.9880	39.62
112.5	772,780	11,516	0.0149	0.9851	39.15
113.5	722,703	3,000	0.0042	0.9958	38.56
114.5	441,736	769	0.0017	0.9983	38.40
115.5	398,573	508	0.0013	0.9987	38.34
116.5	366,648	1,131	0.0031	0.9969	38.29
117.5	357,386	798	0.0022	0.9978	38.17
118.5	355,264	31	0.0001	0.9999	38.08



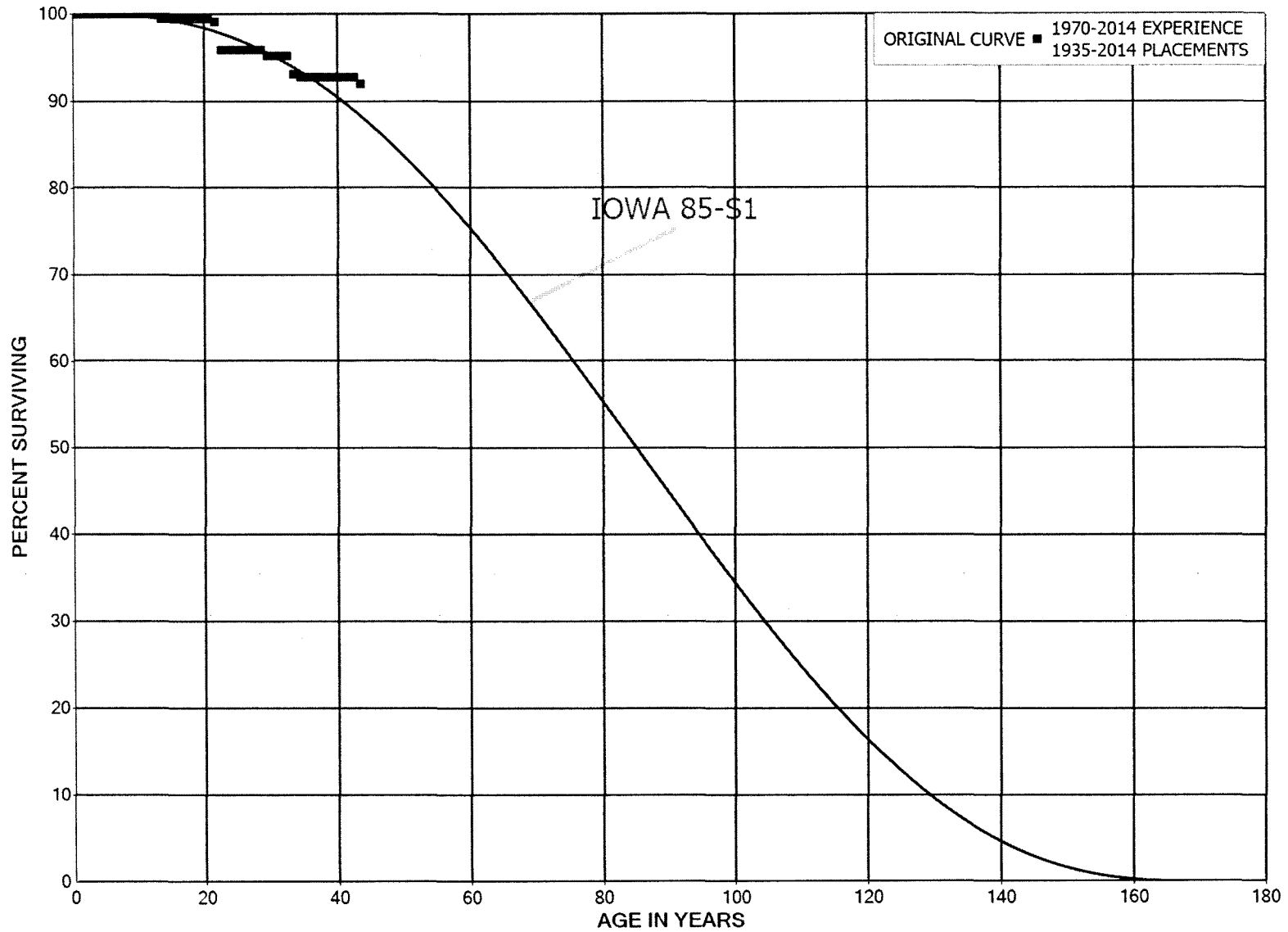
## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 331 MAINS - TRANSMISSION AND DISTRIBUTION

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1854-2014			EXPERIENCE BAND 1975-2014		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
119.5	336,546	41	0.0001	0.9999	38.08
120.5	303,327	96	0.0003	0.9997	38.08
121.5	276,736	5,032	0.0182	0.9818	38.06
122.5	265,591	35	0.0001	0.9999	37.37
123.5	245,516	89	0.0004	0.9996	37.37
124.5	220,646	1,902	0.0086	0.9914	37.35
125.5	195,610	660	0.0034	0.9966	37.03
126.5	179,057		0.0000	1.0000	36.91
127.5	174,956	280	0.0016	0.9984	36.91
128.5	173,837	925	0.0053	0.9947	36.85
129.5	172,513	937	0.0054	0.9946	36.65
130.5	169,146	4,047	0.0239	0.9761	36.45
131.5	165,099	34	0.0002	0.9998	35.58
132.5	161,525	1,451	0.0090	0.9910	35.57
133.5	89,481	33	0.0004	0.9996	35.25
134.5	88		0.0000	1.0000	35.24
135.5	88		0.0000	1.0000	35.24
136.5	88		0.0000	1.0000	35.24
137.5	88		0.0000	1.0000	35.24
138.5	88		0.0000	1.0000	35.24
139.5	88		0.0000	1.0000	35.24
140.5	88		0.0000	1.0000	35.24
141.5	88		0.0000	1.0000	35.24
142.5	30		0.0000	1.0000	35.24
143.5	30		0.0000	1.0000	35.24
144.5	30		0.0000	1.0000	35.24
145.5	30		0.0000	1.0000	35.24
146.5	30		0.0000	1.0000	35.24
147.5	30		0.0000	1.0000	35.24
148.5	30		0.0000	1.0000	35.24
149.5	30		0.0000	1.0000	35.24
150.5	30		0.0000	1.0000	35.24
151.5	30		0.0000	1.0000	35.24
152.5	30		0.0000	1.0000	35.24
153.5	30		0.0000	1.0000	35.24
154.5	30		0.0000	1.0000	35.24
155.5	30		0.0000	1.0000	35.24
156.5	30		0.0000	1.0000	35.24
157.5	30		0.0000	1.0000	35.24
158.5	30		0.0000	1.0000	35.24
159.5	30		0.0000	1.0000	35.24
160.5					35.24

MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 332 MAINS - FIRE  
ORIGINAL AND SMOOTH SURVIVOR CURVES



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 332 MAINS - FIRE

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1935-2014			EXPERIENCE 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
0.0	602,900		0.0000	1.0000	100.00
0.5	602,647		0.0000	1.0000	100.00
1.5	602,647		0.0000	1.0000	100.00
2.5	602,647		0.0000	1.0000	100.00
3.5	602,647		0.0000	1.0000	100.00
4.5	596,602		0.0000	1.0000	100.00
5.5	578,989		0.0000	1.0000	100.00
6.5	554,549		0.0000	1.0000	100.00
7.5	529,522		0.0000	1.0000	100.00
8.5	485,271		0.0000	1.0000	100.00
9.5	463,341		0.0000	1.0000	100.00
10.5	447,032		0.0000	1.0000	100.00
11.5	429,620	688	0.0016	0.9984	100.00
12.5	408,365	1,709	0.0042	0.9958	99.84
13.5	370,895		0.0000	1.0000	99.42
14.5	315,252		0.0000	1.0000	99.42
15.5	296,478		0.0000	1.0000	99.42
16.5	279,568		0.0000	1.0000	99.42
17.5	233,312		0.0000	1.0000	99.42
18.5	225,021		0.0000	1.0000	99.42
19.5	196,427		0.0000	1.0000	99.42
20.5	174,878	578	0.0033	0.9967	99.42
21.5	153,804	5,010	0.0326	0.9674	99.09
22.5	139,043		0.0000	1.0000	95.87
23.5	110,996		0.0000	1.0000	95.87
24.5	100,842		0.0000	1.0000	95.87
25.5	92,639		0.0000	1.0000	95.87
26.5	82,099		0.0000	1.0000	95.87
27.5	66,716		0.0000	1.0000	95.87
28.5	53,972	394	0.0073	0.9927	95.87
29.5	42,576		0.0000	1.0000	95.17
30.5	24,070		0.0000	1.0000	95.17
31.5	24,070		0.0000	1.0000	95.17
32.5	22,030	491	0.0223	0.9777	95.17
33.5	20,770	81	0.0039	0.9961	93.04
34.5	4,613		0.0000	1.0000	92.68
35.5	3,595		0.0000	1.0000	92.68
36.5	2,888		0.0000	1.0000	92.68
37.5	2,888		0.0000	1.0000	92.68
38.5	2,888		0.0000	1.0000	92.68

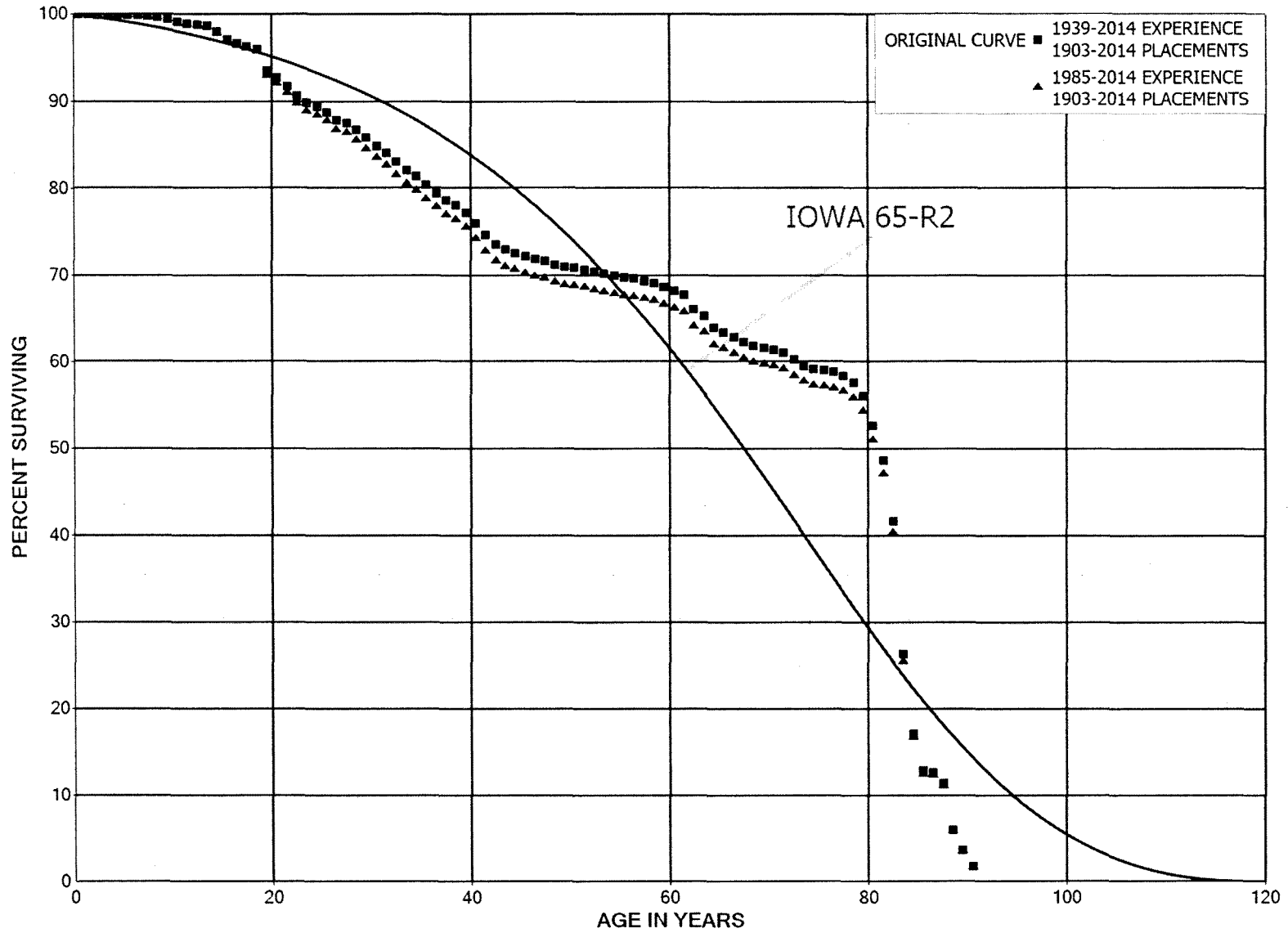
## MISSOURI AMERICAN WATER COMPANY

ACCOUNT 332 MAINS - FIRE

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1935-2014			EXPERIENCE 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	2,888		0.0000	1.0000	92.68
40.5	2,888		0.0000	1.0000	92.68
41.5	2,888		0.0000	1.0000	92.68
42.5	2,231	18	0.0081	0.9919	92.68
43.5	2,190		0.0000	1.0000	91.93
44.5	1,546		0.0000	1.0000	91.93
45.5	1,546		0.0000	1.0000	91.93
46.5	1,546		0.0000	1.0000	91.93
47.5	1,546		0.0000	1.0000	91.93
48.5	1,546		0.0000	1.0000	91.93
49.5	1,546		0.0000	1.0000	91.93
50.5	1,546		0.0000	1.0000	91.93
51.5	1,546		0.0000	1.0000	91.93
52.5	1,546		0.0000	1.0000	91.93
53.5	1,546		0.0000	1.0000	91.93
54.5	1,546		0.0000	1.0000	91.93
55.5	1,546		0.0000	1.0000	91.93
56.5	1,546		0.0000	1.0000	91.93
57.5	1,546		0.0000	1.0000	91.93
58.5	1,546		0.0000	1.0000	91.93
59.5	1,546		0.0000	1.0000	91.93
60.5	1,546		0.0000	1.0000	91.93
61.5	1,546		0.0000	1.0000	91.93
62.5	1,546		0.0000	1.0000	91.93
63.5	1,546		0.0000	1.0000	91.93
64.5	1,546		0.0000	1.0000	91.93
65.5	1,546		0.0000	1.0000	91.93
66.5	1,546		0.0000	1.0000	91.93
67.5	1,546		0.0000	1.0000	91.93
68.5	1,546		0.0000	1.0000	91.93
69.5	1,546		0.0000	1.0000	91.93
70.5	1,546		0.0000	1.0000	91.93
71.5	1,546		0.0000	1.0000	91.93
72.5	1,546		0.0000	1.0000	91.93
73.5	1,546		0.0000	1.0000	91.93
74.5	1,546		0.0000	1.0000	91.93
75.5	1,546		0.0000	1.0000	91.93
76.5	1,546		0.0000	1.0000	91.93
77.5	1,546		0.0000	1.0000	91.93
78.5	1,546		0.0000	1.0000	91.93
79.5					91.93

MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 333 SERVICES  
ORIGINAL AND SMOOTH SURVIVOR CURVES



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 333 SERVICES

## ORIGINAL LIFE TABLE

## PLACEMENT BAND 1903-2014

## EXPERIENCE BAND 1939-2014

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	42,009,767	8,455	0.0002	0.9998	100.00
0.5	39,228,869	13,648	0.0003	0.9997	99.98
1.5	37,023,729	21,193	0.0006	0.9994	99.95
2.5	34,885,982	4,924	0.0001	0.9999	99.89
3.5	32,958,751	5,498	0.0002	0.9998	99.87
4.5	30,441,904	10,480	0.0003	0.9997	99.86
5.5	27,959,786	7,305	0.0003	0.9997	99.82
6.5	25,974,253	15,303	0.0006	0.9994	99.80
7.5	23,981,005	26,830	0.0011	0.9989	99.74
8.5	21,960,954	41,207	0.0019	0.9981	99.63
9.5	21,617,919	93,257	0.0043	0.9957	99.44
10.5	21,591,801	28,695	0.0013	0.9987	99.01
11.5	21,489,281	23,122	0.0011	0.9989	98.88
12.5	20,076,691	28,698	0.0014	0.9986	98.77
13.5	18,777,967	136,797	0.0073	0.9927	98.63
14.5	17,411,083	145,936	0.0084	0.9916	97.91
15.5	12,322,473	55,426	0.0045	0.9955	97.09
16.5	11,354,027	41,579	0.0037	0.9963	96.66
17.5	10,391,496	31,822	0.0031	0.9969	96.30
18.5	9,376,874	245,124	0.0261	0.9739	96.01
19.5	8,495,557	70,793	0.0083	0.9917	93.50
20.5	7,654,576	82,517	0.0108	0.9892	92.72
21.5	6,845,668	81,773	0.0119	0.9881	91.72
22.5	6,154,677	56,932	0.0093	0.9907	90.62
23.5	5,620,475	26,113	0.0046	0.9954	89.78
24.5	5,200,553	34,358	0.0066	0.9934	89.37
25.5	4,915,129	54,760	0.0111	0.9889	88.78
26.5	4,493,433	12,703	0.0028	0.9972	87.79
27.5	4,094,732	40,548	0.0099	0.9901	87.54
28.5	3,649,606	37,196	0.0102	0.9898	86.67
29.5	3,305,635	34,979	0.0106	0.9894	85.79
30.5	3,073,246	30,594	0.0100	0.9900	84.88
31.5	2,886,197	33,111	0.0115	0.9885	84.04
32.5	2,744,823	31,941	0.0116	0.9884	83.07
33.5	2,614,592	22,657	0.0087	0.9913	82.11
34.5	2,477,949	30,417	0.0123	0.9877	81.39
35.5	2,287,846	28,531	0.0125	0.9875	80.40
36.5	2,133,090	21,368	0.0100	0.9900	79.39
37.5	1,994,102	14,513	0.0073	0.9927	78.60
38.5	1,885,848	20,556	0.0109	0.9891	78.03

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 333 SERVICES

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1903-2014			EXPERIENCE BAND 1939-2014			
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	1,785,284	28,238	0.0158	0.9842	77.17	
40.5	1,677,393	30,704	0.0183	0.9817	75.95	
41.5	1,550,852	21,841	0.0141	0.9859	74.56	
42.5	1,434,691	11,343	0.0079	0.9921	73.51	
43.5	1,328,405	7,318	0.0055	0.9945	72.93	
44.5	1,198,674	6,749	0.0056	0.9944	72.53	
45.5	1,137,654	4,260	0.0037	0.9963	72.12	
46.5	1,095,478	3,489	0.0032	0.9968	71.85	
47.5	1,033,266	6,290	0.0061	0.9939	71.62	
48.5	962,628	3,814	0.0040	0.9960	71.19	
49.5	897,373	1,281	0.0014	0.9986	70.91	
50.5	808,592	2,021	0.0025	0.9975	70.80	
51.5	737,858	2,966	0.0040	0.9960	70.63	
52.5	682,868	1,886	0.0028	0.9972	70.34	
53.5	640,227	2,080	0.0032	0.9968	70.15	
54.5	604,688	1,927	0.0032	0.9968	69.92	
55.5	543,623	799	0.0015	0.9985	69.70	
56.5	490,233	2,023	0.0041	0.9959	69.60	
57.5	445,569	1,590	0.0036	0.9964	69.31	
58.5	399,831	2,469	0.0062	0.9938	69.06	
59.5	348,238	2,181	0.0063	0.9937	68.63	
60.5	309,795	2,236	0.0072	0.9928	68.20	
61.5	277,716	6,725	0.0242	0.9758	67.71	
62.5	245,574	2,908	0.0118	0.9882	66.07	
63.5	222,190	4,748	0.0214	0.9786	65.29	
64.5	198,194	1,415	0.0071	0.9929	63.90	
65.5	181,189	1,742	0.0096	0.9904	63.44	
66.5	161,205	1,521	0.0094	0.9906	62.83	
67.5	142,625	891	0.0062	0.9938	62.24	
68.5	121,965	492	0.0040	0.9960	61.85	
69.5	114,853	442	0.0038	0.9962	61.60	
70.5	114,111	585	0.0051	0.9949	61.36	
71.5	112,836	1,493	0.0132	0.9868	61.05	
72.5	108,071	1,237	0.0114	0.9886	60.24	
73.5	100,668	714	0.0071	0.9929	59.55	
74.5	89,517	175	0.0020	0.9980	59.13	
75.5	83,758	297	0.0035	0.9965	59.01	
76.5	76,905	588	0.0077	0.9923	58.80	
77.5	70,268	937	0.0133	0.9867	58.35	
78.5	59,037	1,584	0.0268	0.9732	57.57	

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 333 SERVICES

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1903-2014			EXPERIENCE BAND 1939-2014			
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	45,534	2,749	0.0604	0.9396	56.03	
80.5	40,358	3,103	0.0769	0.9231	52.65	
81.5	34,725	5,014	0.1444	0.8556	48.60	
82.5	27,954	10,308	0.3688	0.6312	41.58	
83.5	16,732	5,827	0.3482	0.6518	26.25	
84.5	10,881	2,739	0.2517	0.7483	17.11	
85.5	8,092	102	0.0126	0.9874	12.80	
86.5	7,789	740	0.0949	0.9051	12.64	
87.5	6,991	3,320	0.4749	0.5251	11.44	
88.5	3,557	1,427	0.4011	0.5989	6.01	
89.5	2,130	1,139	0.5347	0.4653	3.60	
90.5	871		0.0000	1.0000	1.67	
91.5	816		0.0000	1.0000	1.67	
92.5	816		0.0000	1.0000	1.67	
93.5	816		0.0000	1.0000	1.67	
94.5	816		0.0000	1.0000	1.67	
95.5	816		0.0000	1.0000	1.67	
96.5	816		0.0000	1.0000	1.67	
97.5	816		0.0000	1.0000	1.67	
98.5	816	816	1.0000		1.67	
99.5						



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 333 SERVICES

## ORIGINAL LIFE TABLE

## PLACEMENT BAND 1903-2014

## EXPERIENCE BAND 1985-2014

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	38,392,886	5,876	0.0002	0.9998	100.00
0.5	35,831,663	13,104	0.0004	0.9996	99.98
1.5	33,827,690	19,256	0.0006	0.9994	99.95
2.5	31,808,533	3,480	0.0001	0.9999	99.89
3.5	29,998,788	4,978	0.0002	0.9998	99.88
4.5	27,654,806	9,213	0.0003	0.9997	99.86
5.5	25,392,210	6,635	0.0003	0.9997	99.83
6.5	23,572,314	14,345	0.0006	0.9994	99.80
7.5	21,744,906	25,315	0.0012	0.9988	99.74
8.5	19,867,086	40,169	0.0020	0.9980	99.63
9.5	19,634,723	92,100	0.0047	0.9953	99.43
10.5	19,702,397	27,937	0.0014	0.9986	98.96
11.5	19,719,553	22,319	0.0011	0.9989	98.82
12.5	18,425,682	27,815	0.0015	0.9985	98.71
13.5	17,231,841	131,606	0.0076	0.9924	98.56
14.5	16,001,225	144,767	0.0090	0.9910	97.81
15.5	10,994,966	54,326	0.0049	0.9951	96.92
16.5	10,106,153	39,811	0.0039	0.9961	96.44
17.5	9,230,963	29,796	0.0032	0.9968	96.06
18.5	8,303,630	244,548	0.0295	0.9705	95.75
19.5	7,498,684	70,381	0.0094	0.9906	92.93
20.5	6,758,963	81,701	0.0121	0.9879	92.06
21.5	6,028,368	81,356	0.0135	0.9865	90.95
22.5	5,396,677	53,876	0.0100	0.9900	89.72
23.5	4,912,593	24,326	0.0050	0.9950	88.82
24.5	4,545,718	32,598	0.0072	0.9928	88.38
25.5	4,327,236	52,064	0.0120	0.9880	87.75
26.5	3,968,683	12,208	0.0031	0.9969	86.69
27.5	3,618,052	39,962	0.0110	0.9890	86.43
28.5	3,223,433	36,267	0.0113	0.9887	85.47
29.5	2,932,445	34,330	0.0117	0.9883	84.51
30.5	2,741,806	30,303	0.0111	0.9889	83.52
31.5	2,590,166	32,622	0.0126	0.9874	82.60
32.5	2,481,175	31,284	0.0126	0.9874	81.56
33.5	2,374,711	22,359	0.0094	0.9906	80.53
34.5	2,260,640	29,969	0.0133	0.9867	79.77
35.5	2,090,587	23,518	0.0112	0.9888	78.71
36.5	1,961,062	21,270	0.0108	0.9892	77.83
37.5	1,840,445	14,439	0.0078	0.9922	76.99
38.5	1,747,111	20,556	0.0118	0.9882	76.38

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 333 SERVICES

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1903-2014			EXPERIENCE BAND 1985-2014			
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	1,654,041	28,208	0.0171	0.9829	75.48	
40.5	1,547,260	30,704	0.0198	0.9802	74.20	
41.5	1,421,618	21,841	0.0154	0.9846	72.72	
42.5	1,310,858	11,304	0.0086	0.9914	71.61	
43.5	1,210,959	7,250	0.0060	0.9940	70.99	
44.5	1,092,673	6,713	0.0061	0.9939	70.56	
45.5	1,037,796	4,242	0.0041	0.9959	70.13	
46.5	1,002,651	3,454	0.0034	0.9966	69.84	
47.5	947,759	6,201	0.0065	0.9935	69.60	
48.5	889,039	3,772	0.0042	0.9958	69.15	
49.5	836,589	1,281	0.0015	0.9985	68.85	
50.5	750,825	2,021	0.0027	0.9973	68.75	
51.5	683,109	2,940	0.0043	0.9957	68.56	
52.5	631,939	1,886	0.0030	0.9970	68.27	
53.5	593,982	1,961	0.0033	0.9967	68.06	
54.5	565,994	1,927	0.0034	0.9966	67.84	
55.5	511,200	777	0.0015	0.9985	67.61	
56.5	468,528	1,628	0.0035	0.9965	67.51	
57.5	427,255	1,590	0.0037	0.9963	67.27	
58.5	388,874	2,469	0.0063	0.9937	67.02	
59.5	342,807	2,146	0.0063	0.9937	66.60	
60.5	308,543	2,236	0.0072	0.9928	66.18	
61.5	276,728	6,725	0.0243	0.9757	65.70	
62.5	244,585	2,908	0.0119	0.9881	64.10	
63.5	221,202	4,748	0.0215	0.9785	63.34	
64.5	197,205	1,415	0.0072	0.9928	61.98	
65.5	180,200	1,742	0.0097	0.9903	61.54	
66.5	160,216	1,521	0.0095	0.9905	60.94	
67.5	141,637	891	0.0063	0.9937	60.36	
68.5	121,020	492	0.0041	0.9959	59.98	
69.5	113,908	442	0.0039	0.9961	59.74	
70.5	113,166	585	0.0052	0.9948	59.51	
71.5	111,892	1,493	0.0133	0.9867	59.20	
72.5	107,127	1,237	0.0115	0.9885	58.41	
73.5	99,723	714	0.0072	0.9928	57.74	
74.5	88,572	175	0.0020	0.9980	57.32	
75.5	82,814	297	0.0036	0.9964	57.21	
76.5	75,961	588	0.0077	0.9923	57.00	
77.5	69,323	937	0.0135	0.9865	56.56	
78.5	58,135	1,584	0.0272	0.9728	55.80	

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 333 SERVICES

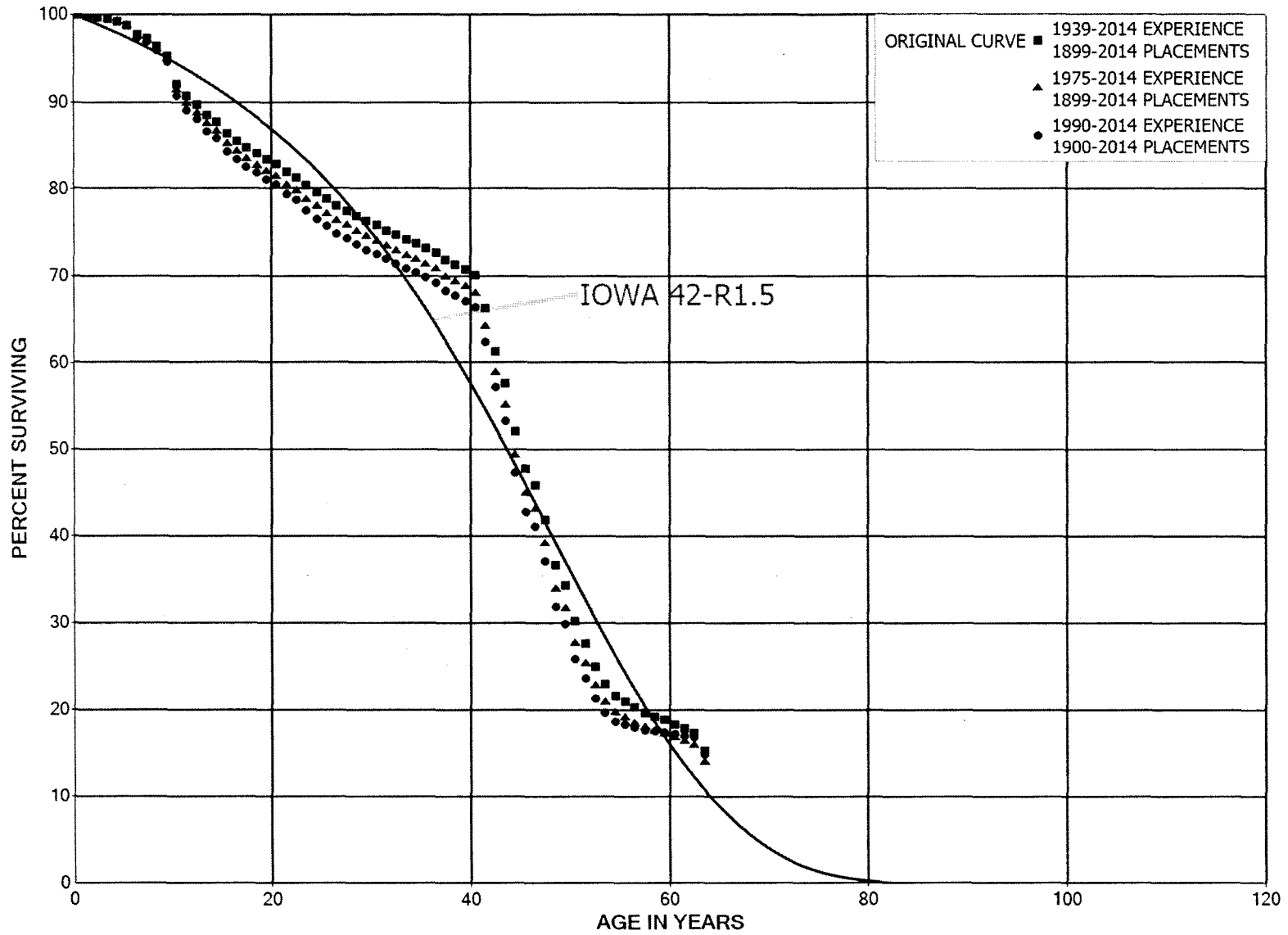
## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1903-2014			EXPERIENCE BAND 1985-2014			
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	45,447	2,749	0.0605	0.9395	54.28	
80.5	40,271	3,103	0.0771	0.9229	50.99	
81.5	34,725	5,014	0.1444	0.8556	47.06	
82.5	27,954	10,308	0.3688	0.6312	40.27	
83.5	16,732	5,827	0.3482	0.6518	25.42	
84.5	10,881	2,739	0.2517	0.7483	16.57	
85.5	8,092	102	0.0126	0.9874	12.40	
86.5	7,789	740	0.0949	0.9051	12.24	
87.5	6,991	3,320	0.4749	0.5251	11.08	
88.5	3,557	1,427	0.4011	0.5989	5.82	
89.5	2,130	1,139	0.5347	0.4653	3.48	
90.5	871		0.0000	1.0000	1.62	
91.5	816		0.0000	1.0000	1.62	
92.5	816		0.0000	1.0000	1.62	
93.5	816		0.0000	1.0000	1.62	
94.5	816		0.0000	1.0000	1.62	
95.5	816		0.0000	1.0000	1.62	
96.5	816		0.0000	1.0000	1.62	
97.5	816		0.0000	1.0000	1.62	
98.5	816	816	1.0000		1.62	
99.5						



Gannett Fleming

MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 334 METERS AND METER INSTALLATIONS  
ORIGINAL AND SMOOTH SURVIVOR CURVES



VII-121

MO American Water Co - Water  
March 31, 2015

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 334 METERS AND METER INSTALLATIONS

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1899-2014			EXPERIENCE BAND 1939-2014			
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	127,190,013	63,339	0.0005	0.9995	100.00	
0.5	120,345,697	95,508	0.0008	0.9992	99.95	
1.5	113,045,507	253,390	0.0022	0.9978	99.87	
2.5	106,875,309	111,701	0.0010	0.9990	99.65	
3.5	101,715,258	337,384	0.0033	0.9967	99.54	
4.5	95,351,884	445,578	0.0047	0.9953	99.21	
5.5	67,421,773	709,006	0.0105	0.9895	98.75	
6.5	65,709,944	286,370	0.0044	0.9956	97.71	
7.5	62,391,015	588,187	0.0094	0.9906	97.28	
8.5	54,516,997	600,090	0.0110	0.9890	96.37	
9.5	53,979,972	1,826,423	0.0338	0.9662	95.31	
10.5	49,393,464	752,790	0.0152	0.9848	92.08	
11.5	48,101,095	532,773	0.0111	0.9889	90.68	
12.5	44,629,982	604,054	0.0135	0.9865	89.67	
13.5	40,964,708	357,305	0.0087	0.9913	88.46	
14.5	38,835,544	568,821	0.0146	0.9854	87.69	
15.5	32,000,931	314,771	0.0098	0.9902	86.40	
16.5	30,544,762	279,611	0.0092	0.9908	85.55	
17.5	28,496,788	242,400	0.0085	0.9915	84.77	
18.5	26,563,299	197,378	0.0074	0.9926	84.05	
19.5	24,706,739	166,482	0.0067	0.9933	83.43	
20.5	21,895,778	243,780	0.0111	0.9889	82.86	
21.5	20,556,343	152,962	0.0074	0.9926	81.94	
22.5	19,455,342	225,769	0.0116	0.9884	81.33	
23.5	18,391,200	177,823	0.0097	0.9903	80.39	
24.5	17,397,213	179,778	0.0103	0.9897	79.61	
25.5	16,532,533	161,676	0.0098	0.9902	78.79	
26.5	15,517,283	114,206	0.0074	0.9926	78.02	
27.5	14,725,294	118,080	0.0080	0.9920	77.44	
28.5	13,868,192	99,887	0.0072	0.9928	76.82	
29.5	13,023,464	81,608	0.0063	0.9937	76.27	
30.5	12,375,216	96,269	0.0078	0.9922	75.79	
31.5	11,739,853	78,568	0.0067	0.9933	75.20	
32.5	11,349,300	85,975	0.0076	0.9924	74.70	
33.5	10,769,748	62,965	0.0058	0.9942	74.13	
34.5	10,022,498	67,104	0.0067	0.9933	73.70	
35.5	9,447,597	76,577	0.0081	0.9919	73.21	
36.5	8,872,845	96,246	0.0108	0.9892	72.61	
37.5	8,309,451	63,664	0.0077	0.9923	71.82	
38.5	7,792,134	62,585	0.0080	0.9920	71.27	

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 334 METERS AND METER INSTALLATIONS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1899-2014			EXPERIENCE BAND 1939-2014			
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	7,389,777	69,768	0.0094	0.9906	70.70	
40.5	7,005,030	371,890	0.0531	0.9469	70.03	
41.5	6,243,716	471,043	0.0754	0.9246	66.32	
42.5	5,538,226	333,649	0.0602	0.9398	61.31	
43.5	5,084,979	489,435	0.0963	0.9037	57.62	
44.5	4,493,379	372,966	0.0830	0.9170	52.07	
45.5	4,017,365	157,672	0.0392	0.9608	47.75	
46.5	3,768,801	330,049	0.0876	0.9124	45.88	
47.5	3,369,923	423,747	0.1257	0.8743	41.86	
48.5	2,868,923	179,673	0.0626	0.9374	36.60	
49.5	2,604,696	314,862	0.1209	0.8791	34.30	
50.5	2,211,503	184,296	0.0833	0.9167	30.16	
51.5	1,965,842	187,384	0.0953	0.9047	27.64	
52.5	1,730,324	140,456	0.0812	0.9188	25.01	
53.5	1,542,219	88,868	0.0576	0.9424	22.98	
54.5	1,392,093	44,204	0.0318	0.9682	21.65	
55.5	1,277,472	41,865	0.0328	0.9672	20.97	
56.5	1,154,163	35,536	0.0308	0.9692	20.28	
57.5	1,048,336	24,359	0.0232	0.9768	19.66	
58.5	951,871	19,843	0.0208	0.9792	19.20	
59.5	823,807	20,581	0.0250	0.9750	18.80	
60.5	717,201	20,179	0.0281	0.9719	18.33	
61.5	569,576	16,374	0.0287	0.9713	17.81	
62.5	486,072	56,648	0.1165	0.8835	17.30	
63.5	366,556	8,274	0.0226	0.9774	15.28	
64.5	304,039	7,608	0.0250	0.9750	14.94	
65.5	246,576	5,908	0.0240	0.9760	14.57	
66.5	210,060	4,237	0.0202	0.9798	14.22	
67.5	189,012	4,048	0.0214	0.9786	13.93	
68.5	169,907	1,666	0.0098	0.9902	13.63	
69.5	162,303	1,511	0.0093	0.9907	13.50	
70.5	158,027	1,559	0.0099	0.9901	13.37	
71.5	153,627	8,472	0.0551	0.9449	13.24	
72.5	139,562	991	0.0071	0.9929	12.51	
73.5	127,571	555	0.0044	0.9956	12.42	
74.5	116,106	915	0.0079	0.9921	12.37	
75.5	106,534	838	0.0079	0.9921	12.27	
76.5	104,440	269	0.0026	0.9974	12.17	
77.5	97,532	218	0.0022	0.9978	12.14	
78.5	90,690	3,305	0.0364	0.9636	12.12	

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 334 METERS AND METER INSTALLATIONS

## ORIGINAL LIFE TABLE, CONT.

## PLACEMENT BAND 1899-2014

## EXPERIENCE BAND 1939-2014

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	83,295	365	0.0044	0.9956	11.67
80.5	76,867	668	0.0087	0.9913	11.62
81.5	73,273	163	0.0022	0.9978	11.52
82.5	70,519	597	0.0085	0.9915	11.50
83.5	63,799	1,679	0.0263	0.9737	11.40
84.5	52,543	171	0.0033	0.9967	11.10
85.5	45,170	779	0.0172	0.9828	11.06
86.5	34,962	432	0.0124	0.9876	10.87
87.5	27,296	1,266	0.0464	0.9536	10.74
88.5	19,481	341	0.0175	0.9825	10.24
89.5	10,907	42	0.0039	0.9961	10.06
90.5	6,235	165	0.0264	0.9736	10.02
91.5	3,361	73	0.0216	0.9784	9.76
92.5	1,856	60	0.0323	0.9677	9.55
93.5	1,796	19	0.0105	0.9895	9.24
94.5	1,746	20	0.0115	0.9885	9.14
95.5	1,726	18	0.0107	0.9893	9.04
96.5	1,707	7	0.0043	0.9957	8.94
97.5	1,700	136	0.0800	0.9200	8.90
98.5	1,564	308	0.1968	0.8032	8.19
99.5	1,256		0.0000	1.0000	6.58
100.5	1,256	128	0.1017	0.8983	6.58
101.5	1,128		0.0000	1.0000	5.91
102.5	1,128	550	0.4877	0.5123	5.91
103.5	578	287	0.4958	0.5042	3.03
104.5	291	291	1.0000		1.53
105.5					

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 334 METERS AND METER INSTALLATIONS

## ORIGINAL LIFE TABLE

## PLACEMENT BAND 1899-2014

## EXPERIENCE BAND 1975-2014

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	119,026,963	62,638	0.0005	0.9995	100.00
0.5	112,520,517	92,714	0.0008	0.9992	99.95
1.5	105,669,426	252,516	0.0024	0.9976	99.87
2.5	99,850,234	110,324	0.0011	0.9989	99.63
3.5	94,922,650	336,226	0.0035	0.9965	99.52
4.5	88,916,425	442,346	0.0050	0.9950	99.16
5.5	61,355,377	707,053	0.0115	0.9885	98.67
6.5	59,928,141	284,010	0.0047	0.9953	97.53
7.5	56,926,803	585,279	0.0103	0.9897	97.07
8.5	49,422,925	596,990	0.0121	0.9879	96.07
9.5	49,168,364	1,822,512	0.0371	0.9629	94.91
10.5	44,881,736	750,881	0.0167	0.9833	91.39
11.5	43,844,358	530,986	0.0121	0.9879	89.87
12.5	40,567,846	601,702	0.0148	0.9852	88.78
13.5	37,085,199	354,131	0.0095	0.9905	87.46
14.5	35,205,017	568,293	0.0161	0.9839	86.63
15.5	28,641,580	313,737	0.0110	0.9890	85.23
16.5	27,444,878	278,643	0.0102	0.9898	84.29
17.5	25,652,719	240,930	0.0094	0.9906	83.44
18.5	24,039,970	194,417	0.0081	0.9919	82.65
19.5	22,497,751	166,027	0.0074	0.9926	81.99
20.5	19,929,621	243,154	0.0122	0.9878	81.38
21.5	18,829,582	152,621	0.0081	0.9919	80.39
22.5	17,880,212	225,500	0.0126	0.9874	79.74
23.5	16,966,094	177,221	0.0104	0.9896	78.73
24.5	16,114,338	171,551	0.0106	0.9894	77.91
25.5	15,362,042	155,811	0.0101	0.9899	77.08
26.5	14,450,823	113,848	0.0079	0.9921	76.30
27.5	13,728,027	115,172	0.0084	0.9916	75.70
28.5	12,938,499	99,475	0.0077	0.9923	75.06
29.5	12,114,582	81,363	0.0067	0.9933	74.48
30.5	11,475,258	96,085	0.0084	0.9916	73.98
31.5	10,899,451	78,044	0.0072	0.9928	73.36
32.5	10,528,102	84,675	0.0080	0.9920	72.84
33.5	10,007,982	60,995	0.0061	0.9939	72.25
34.5	9,320,834	65,283	0.0070	0.9930	71.81
35.5	8,790,381	76,404	0.0087	0.9913	71.31
36.5	8,248,061	96,047	0.0116	0.9884	70.69
37.5	7,720,644	62,932	0.0082	0.9918	69.87
38.5	7,226,859	62,478	0.0086	0.9914	69.30



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 334 METERS AND METER INSTALLATIONS

## ORIGINAL LIFE TABLE, CONT.

## PLACEMENT BAND 1899-2014

## EXPERIENCE BAND 1975-2014

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	6,841,674	69,237	0.0101	0.9899	68.70
40.5	6,470,824	368,683	0.0570	0.9430	68.00
41.5	5,730,899	469,825	0.0820	0.9180	64.13
42.5	5,034,899	326,633	0.0649	0.9351	58.87
43.5	4,614,962	485,432	0.1052	0.8948	55.05
44.5	4,058,538	365,852	0.0901	0.9099	49.26
45.5	3,642,697	147,017	0.0404	0.9596	44.82
46.5	3,443,752	320,268	0.0930	0.9070	43.01
47.5	3,093,622	412,652	0.1334	0.8666	39.01
48.5	2,645,409	170,771	0.0646	0.9354	33.81
49.5	2,440,318	308,724	0.1265	0.8735	31.63
50.5	2,081,513	179,872	0.0864	0.9136	27.62
51.5	1,861,165	183,854	0.0988	0.9012	25.24
52.5	1,647,879	137,912	0.0837	0.9163	22.74
53.5	1,474,671	84,729	0.0575	0.9425	20.84
54.5	1,333,846	41,327	0.0310	0.9690	19.64
55.5	1,233,050	38,896	0.0315	0.9685	19.03
56.5	1,117,101	31,898	0.0286	0.9714	18.43
57.5	1,024,018	22,756	0.0222	0.9778	17.91
58.5	933,477	18,918	0.0203	0.9797	17.51
59.5	810,156	19,781	0.0244	0.9756	17.16
60.5	708,862	19,689	0.0278	0.9722	16.74
61.5	565,392	16,338	0.0289	0.9711	16.27
62.5	482,210	56,617	0.1174	0.8826	15.80
63.5	362,731	8,219	0.0227	0.9773	13.95
64.5	300,608	7,577	0.0252	0.9748	13.63
65.5	243,333	5,908	0.0243	0.9757	13.29
66.5	206,882	4,237	0.0205	0.9795	12.96
67.5	185,863	4,048	0.0218	0.9782	12.70
68.5	166,770	1,666	0.0100	0.9900	12.42
69.5	159,464	1,463	0.0092	0.9908	12.30
70.5	155,363	1,551	0.0100	0.9900	12.18
71.5	150,991	8,403	0.0557	0.9443	12.06
72.5	137,558	893	0.0065	0.9935	11.39
73.5	125,976	555	0.0044	0.9956	11.32
74.5	116,077	915	0.0079	0.9921	11.27
75.5	106,534	838	0.0079	0.9921	11.18
76.5	104,440	269	0.0026	0.9974	11.09
77.5	97,532	218	0.0022	0.9978	11.06
78.5	90,690	3,305	0.0364	0.9636	11.04

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 334 METERS AND METER INSTALLATIONS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1899-2014			EXPERIENCE BAND 1975-2014			
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	83,295	365	0.0044	0.9956	10.64	
80.5	76,867	668	0.0087	0.9913	10.59	
81.5	73,273	163	0.0022	0.9978	10.50	
82.5	70,519	597	0.0085	0.9915	10.47	
83.5	63,799	1,679	0.0263	0.9737	10.39	
84.5	52,543	171	0.0033	0.9967	10.11	
85.5	45,170	779	0.0172	0.9828	10.08	
86.5	34,962	432	0.0124	0.9876	9.91	
87.5	27,296	1,266	0.0464	0.9536	9.78	
88.5	19,481	341	0.0175	0.9825	9.33	
89.5	10,907	42	0.0039	0.9961	9.17	
90.5	6,235	165	0.0264	0.9736	9.13	
91.5	3,361	73	0.0216	0.9784	8.89	
92.5	1,856	60	0.0323	0.9677	8.70	
93.5	1,796	19	0.0105	0.9895	8.42	
94.5	1,746	20	0.0115	0.9885	8.33	
95.5	1,726	18	0.0107	0.9893	8.23	
96.5	1,707	7	0.0043	0.9957	8.14	
97.5	1,700	136	0.0800	0.9200	8.11	
98.5	1,564	308	0.1968	0.8032	7.46	
99.5	1,256		0.0000	1.0000	5.99	
100.5	1,256	128	0.1017	0.8983	5.99	
101.5	1,128		0.0000	1.0000	5.38	
102.5	1,128	550	0.4877	0.5123	5.38	
103.5	578	287	0.4958	0.5042	2.76	
104.5	291	291	1.0000		1.39	
105.5						

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 334 METERS AND METER INSTALLATIONS

## ORIGINAL LIFE TABLE

## PLACEMENT BAND 1900-2014

## EXPERIENCE BAND 1990-2014

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	107,122,914	60,841	0.0006	0.9994	100.00
0.5	101,178,466	84,121	0.0008	0.9992	99.94
1.5	94,968,862	210,191	0.0022	0.9978	99.86
2.5	89,900,297	75,416	0.0008	0.9992	99.64
3.5	85,797,091	312,230	0.0036	0.9964	99.56
4.5	80,458,003	403,944	0.0050	0.9950	99.19
5.5	53,355,865	684,364	0.0128	0.9872	98.70
6.5	52,439,493	249,281	0.0048	0.9952	97.43
7.5	49,793,951	529,572	0.0106	0.9894	96.97
8.5	42,606,559	580,742	0.0136	0.9864	95.93
9.5	42,882,090	1,787,864	0.0417	0.9583	94.63
10.5	38,941,812	675,897	0.0174	0.9826	90.68
11.5	38,248,649	446,583	0.0117	0.9883	89.11
12.5	35,314,022	564,801	0.0160	0.9840	88.07
13.5	32,087,055	321,923	0.0100	0.9900	86.66
14.5	30,272,054	513,975	0.0170	0.9830	85.79
15.5	23,798,255	267,216	0.0112	0.9888	84.33
16.5	22,813,576	228,065	0.0100	0.9900	83.39
17.5	21,141,561	193,209	0.0091	0.9909	82.55
18.5	19,472,861	169,630	0.0087	0.9913	81.80
19.5	17,973,153	136,473	0.0076	0.9924	81.09
20.5	15,528,914	204,706	0.0132	0.9868	80.47
21.5	14,478,520	132,018	0.0091	0.9909	79.41
22.5	13,701,524	206,708	0.0151	0.9849	78.69
23.5	13,014,230	161,491	0.0124	0.9876	77.50
24.5	12,339,395	134,760	0.0109	0.9891	76.54
25.5	11,815,172	133,735	0.0113	0.9887	75.70
26.5	11,097,615	90,215	0.0081	0.9919	74.84
27.5	10,559,611	93,855	0.0089	0.9911	74.24
28.5	9,961,404	78,682	0.0079	0.9921	73.58
29.5	9,382,029	67,651	0.0072	0.9928	72.99
30.5	9,028,112	68,863	0.0076	0.9924	72.47
31.5	8,676,599	60,385	0.0070	0.9930	71.92
32.5	8,550,504	72,221	0.0084	0.9916	71.41
33.5	8,276,952	54,105	0.0065	0.9935	70.81
34.5	7,844,933	57,344	0.0073	0.9927	70.35
35.5	7,516,419	69,502	0.0092	0.9908	69.83
36.5	7,178,112	89,507	0.0125	0.9875	69.19
37.5	6,767,540	59,977	0.0089	0.9911	68.33
38.5	6,400,441	59,627	0.0093	0.9907	67.72

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 334 METERS AND METER INSTALLATIONS

## ORIGINAL LIFE TABLE, CONT.

## PLACEMENT BAND 1900-2014

## EXPERIENCE BAND 1990-2014

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	6,141,160	66,162	0.0108	0.9892	67.09
40.5	5,868,552	348,980	0.0595	0.9405	66.37
41.5	5,219,964	442,875	0.0848	0.9152	62.42
42.5	4,600,760	312,715	0.0680	0.9320	57.12
43.5	4,205,631	471,933	0.1122	0.8878	53.24
44.5	3,648,008	352,224	0.0966	0.9034	47.27
45.5	3,199,850	123,214	0.0385	0.9615	42.70
46.5	3,041,888	292,981	0.0963	0.9037	41.06
47.5	2,693,890	384,672	0.1428	0.8572	37.10
48.5	2,271,033	138,825	0.0611	0.9389	31.81
49.5	2,082,829	279,796	0.1343	0.8657	29.86
50.5	1,748,776	149,685	0.0856	0.9144	25.85
51.5	1,555,633	155,220	0.0998	0.9002	23.64
52.5	1,368,203	109,773	0.0802	0.9198	21.28
53.5	1,223,852	60,275	0.0493	0.9507	19.57
54.5	1,108,738	21,539	0.0194	0.9806	18.61
55.5	1,024,865	18,470	0.0180	0.9820	18.25
56.5	930,385	13,038	0.0140	0.9860	17.92
57.5	851,049	7,983	0.0094	0.9906	17.67
58.5	781,602	6,198	0.0079	0.9921	17.50
59.5	682,271	6,921	0.0101	0.9899	17.36
60.5	602,362	7,314	0.0121	0.9879	17.19
61.5	478,217	4,032	0.0084	0.9916	16.98
62.5	416,235	48,188	0.1158	0.8842	16.83
63.5	314,491	1,699	0.0054	0.9946	14.89
64.5	269,505	3,259	0.0121	0.9879	14.80
65.5	222,398	2,095	0.0094	0.9906	14.63
66.5	193,927	1,892	0.0098	0.9902	14.49
67.5	177,733	2,616	0.0147	0.9853	14.35
68.5	160,538	1,007	0.0063	0.9937	14.14
69.5	153,797	932	0.0061	0.9939	14.05
70.5	150,462	1,003	0.0067	0.9933	13.96
71.5	148,160	7,796	0.0526	0.9474	13.87
72.5	135,011	618	0.0046	0.9954	13.14
73.5	123,720	320	0.0026	0.9974	13.08
74.5	112,627	846	0.0075	0.9925	13.04
75.5	103,219	730	0.0071	0.9929	12.95
76.5	101,283	210	0.0021	0.9979	12.86
77.5	94,492	136	0.0014	0.9986	12.83
78.5	87,732	3,305	0.0377	0.9623	12.81

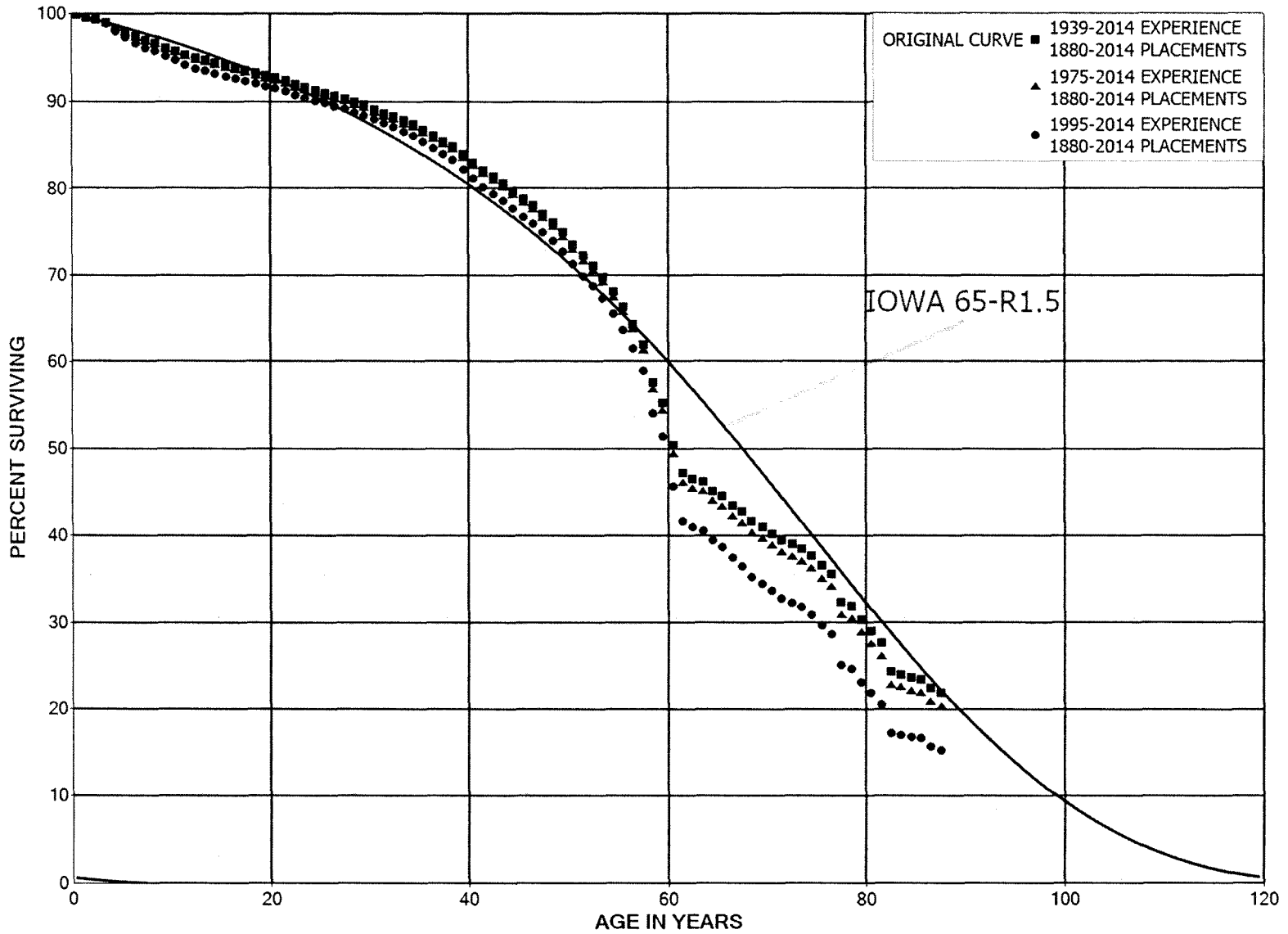
## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 334 METERS AND METER INSTALLATIONS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1900-2014			EXPERIENCE BAND 1990-2014			
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	80,421	355	0.0044	0.9956	12.33	
80.5	74,002	571	0.0077	0.9923	12.27	
81.5	70,512	143	0.0020	0.9980	12.18	
82.5	67,779	573	0.0084	0.9916	12.15	
83.5	61,095	1,642	0.0269	0.9731	12.05	
84.5	50,174	143	0.0028	0.9972	11.73	
85.5	42,958	779	0.0181	0.9819	11.69	
86.5	32,770	432	0.0132	0.9868	11.48	
87.5	25,666	202	0.0079	0.9921	11.33	
88.5	19,202	341	0.0178	0.9822	11.24	
89.5	10,907	42	0.0039	0.9961	11.04	
90.5	6,235	165	0.0264	0.9736	11.00	
91.5	3,361	73	0.0216	0.9784	10.71	
92.5	1,856	60	0.0323	0.9677	10.48	
93.5	1,796	19	0.0105	0.9895	10.14	
94.5	1,746	20	0.0115	0.9885	10.03	
95.5	1,726	18	0.0107	0.9893	9.92	
96.5	1,707	7	0.0043	0.9957	9.81	
97.5	1,700	136	0.0800	0.9200	9.77	
98.5	1,564	308	0.1968	0.8032	8.99	
99.5	1,256		0.0000	1.0000	7.22	
100.5	1,256	128	0.1017	0.8983	7.22	
101.5	1,128		0.0000	1.0000	6.48	
102.5	1,128	550	0.4877	0.5123	6.48	
103.5	578	287	0.4958	0.5042	3.32	
104.5	291	291	1.0000		1.67	
105.5						

MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 335 FIRE HYDRANTS  
ORIGINAL AND SMOOTH SURVIVOR CURVES



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 335 FIRE HYDRANTS

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1880-2014			EXPERIENCE BAND 1939-2014		
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	79,944,267	137,224	0.0017	0.9983	100.00
0.5	75,915,509	217,472	0.0029	0.9971	99.83
1.5	71,898,019	195,962	0.0027	0.9973	99.54
2.5	67,387,295	230,086	0.0034	0.9966	99.27
3.5	64,075,383	385,303	0.0060	0.9940	98.93
4.5	60,405,506	315,737	0.0052	0.9948	98.34
5.5	56,236,921	277,482	0.0049	0.9951	97.82
6.5	52,559,916	217,567	0.0041	0.9959	97.34
7.5	50,174,633	187,814	0.0037	0.9963	96.94
8.5	47,275,388	224,438	0.0047	0.9953	96.57
9.5	46,065,890	168,558	0.0037	0.9963	96.12
10.5	44,291,566	204,946	0.0046	0.9954	95.76
11.5	42,584,800	161,150	0.0038	0.9962	95.32
12.5	40,632,112	100,682	0.0025	0.9975	94.96
13.5	38,049,499	133,592	0.0035	0.9965	94.73
14.5	36,565,729	100,861	0.0028	0.9972	94.39
15.5	35,945,774	108,066	0.0030	0.9970	94.13
16.5	34,535,348	113,911	0.0033	0.9967	93.85
17.5	32,767,190	92,034	0.0028	0.9972	93.54
18.5	31,239,130	117,312	0.0038	0.9962	93.28
19.5	29,565,624	78,733	0.0027	0.9973	92.93
20.5	28,137,706	94,849	0.0034	0.9966	92.68
21.5	26,628,936	127,023	0.0048	0.9952	92.37
22.5	25,715,674	90,379	0.0035	0.9965	91.93
23.5	24,557,604	84,680	0.0034	0.9966	91.60
24.5	23,098,220	86,384	0.0037	0.9963	91.29
25.5	21,770,293	84,191	0.0039	0.9961	90.95
26.5	20,164,250	59,868	0.0030	0.9970	90.59
27.5	18,536,199	80,701	0.0044	0.9956	90.33
28.5	17,170,822	68,564	0.0040	0.9960	89.93
29.5	15,966,741	83,413	0.0052	0.9948	89.57
30.5	14,865,162	72,775	0.0049	0.9951	89.11
31.5	14,104,668	69,700	0.0049	0.9951	88.67
32.5	13,462,766	68,483	0.0051	0.9949	88.23
33.5	12,741,724	63,497	0.0050	0.9950	87.78
34.5	12,014,400	85,515	0.0071	0.9929	87.34
35.5	11,106,526	80,585	0.0073	0.9927	86.72
36.5	10,251,228	79,818	0.0078	0.9922	86.09
37.5	9,467,649	64,509	0.0068	0.9932	85.42
38.5	8,777,824	95,011	0.0108	0.9892	84.84

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 335 FIRE HYDRANTS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1880-2014			EXPERIENCE BAND 1939-2014			
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	8,125,706	92,896	0.0114	0.9886	83.92	
40.5	7,511,276	77,504	0.0103	0.9897	82.96	
41.5	6,921,755	61,579	0.0089	0.9911	82.11	
42.5	6,501,897	63,415	0.0098	0.9902	81.38	
43.5	6,106,524	67,232	0.0110	0.9890	80.58	
44.5	5,833,199	64,083	0.0110	0.9890	79.70	
45.5	5,474,603	53,721	0.0098	0.9902	78.82	
46.5	5,143,681	62,229	0.0121	0.9879	78.05	
47.5	4,836,896	64,091	0.0133	0.9867	77.10	
48.5	4,514,275	68,897	0.0153	0.9847	76.08	
49.5	4,160,426	77,192	0.0186	0.9814	74.92	
50.5	3,811,990	67,354	0.0177	0.9823	73.53	
51.5	3,494,737	53,752	0.0154	0.9846	72.23	
52.5	3,215,847	64,209	0.0200	0.9800	71.12	
53.5	2,893,881	69,125	0.0239	0.9761	69.70	
54.5	2,565,420	64,963	0.0253	0.9747	68.03	
55.5	2,248,468	67,756	0.0301	0.9699	66.31	
56.5	1,974,851	71,955	0.0364	0.9636	64.31	
57.5	1,742,227	122,700	0.0704	0.9296	61.97	
58.5	1,437,404	58,646	0.0408	0.9592	57.61	
59.5	1,055,301	93,060	0.0882	0.9118	55.26	
60.5	832,831	53,791	0.0646	0.9354	50.38	
61.5	735,675	9,646	0.0131	0.9869	47.13	
62.5	699,884	5,734	0.0082	0.9918	46.51	
63.5	661,837	14,605	0.0221	0.9779	46.13	
64.5	531,799	7,794	0.0147	0.9853	45.11	
65.5	450,987	10,269	0.0228	0.9772	44.45	
66.5	404,051	6,743	0.0167	0.9833	43.44	
67.5	370,397	9,408	0.0254	0.9746	42.71	
68.5	341,004	5,165	0.0151	0.9849	41.63	
69.5	326,540	6,363	0.0195	0.9805	41.00	
70.5	309,671	5,791	0.0187	0.9813	40.20	
71.5	303,069	3,975	0.0131	0.9869	39.45	
72.5	283,733	3,580	0.0126	0.9874	38.93	
73.5	270,018	5,644	0.0209	0.9791	38.44	
74.5	258,523	8,115	0.0314	0.9686	37.64	
75.5	252,413	6,576	0.0261	0.9739	36.45	
76.5	232,470	20,842	0.0897	0.9103	35.50	
77.5	204,759	2,981	0.0146	0.9854	32.32	
78.5	191,024	9,256	0.0485	0.9515	31.85	



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 335 FIRE HYDRANTS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1880-2014			EXPERIENCE BAND 1939-2014			
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	179,784	7,736	0.0430	0.9570	30.31	
80.5	165,676	8,093	0.0489	0.9511	29.00	
81.5	155,260	18,589	0.1197	0.8803	27.59	
82.5	132,288	1,574	0.0119	0.9881	24.28	
83.5	123,449	1,745	0.0141	0.9859	23.99	
84.5	116,211	1,071	0.0092	0.9908	23.66	
85.5	100,739	4,517	0.0448	0.9552	23.44	
86.5	87,345	2,147	0.0246	0.9754	22.39	
87.5	73,324	303	0.0041	0.9959	21.84	
88.5	68,250	1,116	0.0164	0.9836	21.75	
89.5	66,435	756	0.0114	0.9886	21.39	
90.5	65,043	895	0.0138	0.9862	21.15	
91.5	63,712	909	0.0143	0.9857	20.86	
92.5	60,711	2,186	0.0360	0.9640	20.56	
93.5	55,627	254	0.0046	0.9954	19.82	
94.5	52,138	1,994	0.0382	0.9618	19.73	
95.5	49,852	156	0.0031	0.9969	18.97	
96.5	49,696	81	0.0016	0.9984	18.91	
97.5	49,213	6	0.0001	0.9999	18.88	
98.5	38,086	34	0.0009	0.9991	18.88	
99.5	36,826	220	0.0060	0.9940	18.86	
100.5	35,804	296	0.0083	0.9917	18.75	
101.5	33,134	84	0.0025	0.9975	18.60	
102.5	32,224	1,194	0.0371	0.9629	18.55	
103.5	28,369	250	0.0088	0.9912	17.86	
104.5	26,091	197	0.0075	0.9925	17.70	
105.5	25,174	1,114	0.0443	0.9557	17.57	
106.5	23,288	1,904	0.0818	0.9182	16.79	
107.5	21,142	719	0.0340	0.9660	15.42	
108.5	19,110	691	0.0362	0.9638	14.90	
109.5	17,676	248	0.0141	0.9859	14.36	
110.5	16,512	667	0.0404	0.9596	14.15	
111.5	15,145	645	0.0426	0.9574	13.58	
112.5	13,023	345	0.0265	0.9735	13.00	
113.5	9,254	339	0.0366	0.9634	12.66	
114.5	7,400	184	0.0249	0.9751	12.20	
115.5	7,192		0.0000	1.0000	11.89	
116.5	6,506	284	0.0436	0.9564	11.89	
117.5	6,031	113	0.0188	0.9812	11.37	
118.5	5,878	57	0.0097	0.9903	11.16	

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 335 FIRE HYDRANTS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1880-2014			EXPERIENCE BAND 1939-2014		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
119.5	5,641		0.0000	1.0000	11.05
120.5	5,513		0.0000	1.0000	11.05
121.5	5,136		0.0000	1.0000	11.05
122.5	4,864	175	0.0359	0.9641	11.05
123.5	4,390	82	0.0187	0.9813	10.66
124.5	4,018		0.0000	1.0000	10.46
125.5	3,569	40	0.0113	0.9887	10.46
126.5	3,236		0.0000	1.0000	10.34
127.5	3,168	2	0.0006	0.9994	10.34
128.5	3,167	62	0.0197	0.9803	10.33
129.5	3,083		0.0000	1.0000	10.13
130.5	3,037		0.0000	1.0000	10.13
131.5	3,037		0.0000	1.0000	10.13
132.5	2,939		0.0000	1.0000	10.13
133.5	1,816		0.0000	1.0000	10.13
134.5					10.13

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 335 FIRE HYDRANTS

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1880-2014

EXPERIENCE BAND 1975-2014

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	71,021,290	130,704	0.0018	0.9982	100.00
0.5	67,645,515	198,198	0.0029	0.9971	99.82
1.5	64,279,326	186,214	0.0029	0.9971	99.52
2.5	60,219,124	216,998	0.0036	0.9964	99.24
3.5	57,304,536	374,527	0.0065	0.9935	98.88
4.5	53,902,819	304,884	0.0057	0.9943	98.23
5.5	50,109,847	268,459	0.0054	0.9946	97.68
6.5	46,810,823	206,384	0.0044	0.9956	97.15
7.5	44,747,201	175,952	0.0039	0.9961	96.72
8.5	42,144,487	217,141	0.0052	0.9948	96.34
9.5	41,269,539	157,011	0.0038	0.9962	95.85
10.5	39,878,404	196,769	0.0049	0.9951	95.48
11.5	38,526,185	155,694	0.0040	0.9960	95.01
12.5	36,850,395	95,512	0.0026	0.9974	94.63
13.5	34,576,909	127,356	0.0037	0.9963	94.38
14.5	33,400,255	94,023	0.0028	0.9972	94.03
15.5	33,112,445	103,761	0.0031	0.9969	93.77
16.5	31,975,222	110,272	0.0034	0.9966	93.48
17.5	30,403,357	86,964	0.0029	0.9971	93.15
18.5	29,160,943	113,222	0.0039	0.9961	92.89
19.5	27,938,095	74,603	0.0027	0.9973	92.53
20.5	26,786,241	91,503	0.0034	0.9966	92.28
21.5	25,500,250	124,005	0.0049	0.9951	91.96
22.5	24,783,007	88,569	0.0036	0.9964	91.52
23.5	23,757,091	83,387	0.0035	0.9965	91.19
24.5	22,448,073	85,551	0.0038	0.9962	90.87
25.5	21,233,367	83,574	0.0039	0.9961	90.52
26.5	19,686,277	59,252	0.0030	0.9970	90.17
27.5	18,096,645	79,159	0.0044	0.9956	89.90
28.5	16,761,431	67,851	0.0040	0.9960	89.50
29.5	15,574,309	82,779	0.0053	0.9947	89.14
30.5	14,485,657	71,904	0.0050	0.9950	88.67
31.5	13,734,280	68,529	0.0050	0.9950	88.23
32.5	13,110,851	67,603	0.0052	0.9948	87.79
33.5	12,412,904	62,395	0.0050	0.9950	87.33
34.5	11,703,988	83,520	0.0071	0.9929	86.89
35.5	10,814,352	80,345	0.0074	0.9926	86.27
36.5	9,965,617	79,328	0.0080	0.9920	85.63
37.5	9,197,341	62,612	0.0068	0.9932	84.95
38.5	8,514,015	93,975	0.0110	0.9890	84.37

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 335 FIRE HYDRANTS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1880-2014			EXPERIENCE BAND 1975-2014			
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	7,874,912	92,267	0.0117	0.9883	83.44	
40.5	7,275,064	76,521	0.0105	0.9895	82.46	
41.5	6,690,119	61,236	0.0092	0.9908	81.60	
42.5	6,277,796	62,760	0.0100	0.9900	80.85	
43.5	5,898,299	66,689	0.0113	0.9887	80.04	
44.5	5,643,221	63,761	0.0113	0.9887	79.14	
45.5	5,312,567	53,531	0.0101	0.9899	78.24	
46.5	4,992,534	61,972	0.0124	0.9876	77.45	
47.5	4,701,046	64,059	0.0136	0.9864	76.49	
48.5	4,403,485	68,676	0.0156	0.9844	75.45	
49.5	4,058,769	76,831	0.0189	0.9811	74.27	
50.5	3,728,462	67,183	0.0180	0.9820	72.87	
51.5	3,417,075	53,319	0.0156	0.9844	71.56	
52.5	3,145,197	63,731	0.0203	0.9797	70.44	
53.5	2,826,325	68,537	0.0242	0.9758	69.01	
54.5	2,502,209	64,851	0.0259	0.9741	67.34	
55.5	2,186,000	67,237	0.0308	0.9692	65.59	
56.5	1,913,246	71,840	0.0375	0.9625	63.58	
57.5	1,678,903	122,520	0.0730	0.9270	61.19	
58.5	1,386,988	58,646	0.0423	0.9577	56.72	
59.5	1,006,882	93,060	0.0924	0.9076	54.32	
60.5	785,341	53,791	0.0685	0.9315	49.30	
61.5	692,886	9,646	0.0139	0.9861	45.93	
62.5	659,730	5,734	0.0087	0.9913	45.29	
63.5	625,242	14,605	0.0234	0.9766	44.89	
64.5	497,942	7,794	0.0157	0.9843	43.84	
65.5	418,089	10,269	0.0246	0.9754	43.16	
66.5	371,968	6,743	0.0181	0.9819	42.10	
67.5	338,962	9,408	0.0278	0.9722	41.34	
68.5	311,356	5,034	0.0162	0.9838	40.19	
69.5	298,078	6,325	0.0212	0.9788	39.54	
70.5	282,664	5,751	0.0203	0.9797	38.70	
71.5	277,227	3,830	0.0138	0.9862	37.91	
72.5	259,935	3,515	0.0135	0.9865	37.39	
73.5	250,766	5,644	0.0225	0.9775	36.88	
74.5	244,689	8,009	0.0327	0.9673	36.05	
75.5	238,714	6,408	0.0268	0.9732	34.87	
76.5	220,532	20,784	0.0942	0.9058	33.94	
77.5	193,070	2,981	0.0154	0.9846	30.74	
78.5	179,375	9,139	0.0509	0.9491	30.26	

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 335 FIRE HYDRANTS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1880-2014			EXPERIENCE BAND 1975-2014			
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	168,452	7,736	0.0459	0.9541	28.72	
80.5	154,775	8,093	0.0523	0.9477	27.40	
81.5	144,742	18,589	0.1284	0.8716	25.97	
82.5	122,114	1,574	0.0129	0.9871	22.63	
83.5	113,737	1,745	0.0153	0.9847	22.34	
84.5	106,789	1,071	0.0100	0.9900	22.00	
85.5	91,766	4,517	0.0492	0.9508	21.78	
86.5	79,010	2,147	0.0272	0.9728	20.71	
87.5	65,078	303	0.0047	0.9953	20.14	
88.5	60,005	1,116	0.0186	0.9814	20.05	
89.5	58,211	756	0.0130	0.9870	19.68	
90.5	56,865	895	0.0157	0.9843	19.42	
91.5	55,533	909	0.0164	0.9836	19.12	
92.5	52,631	2,186	0.0415	0.9585	18.80	
93.5	50,003	254	0.0051	0.9949	18.02	
94.5	52,138	1,994	0.0382	0.9618	17.93	
95.5	49,852	156	0.0031	0.9969	17.25	
96.5	49,696	81	0.0016	0.9984	17.19	
97.5	49,213	6	0.0001	0.9999	17.16	
98.5	38,086	34	0.0009	0.9991	17.16	
99.5	36,826	220	0.0060	0.9940	17.15	
100.5	35,804	296	0.0083	0.9917	17.04	
101.5	33,134	84	0.0025	0.9975	16.90	
102.5	32,224	1,194	0.0371	0.9629	16.86	
103.5	28,369	250	0.0088	0.9912	16.23	
104.5	26,091	197	0.0075	0.9925	16.09	
105.5	25,174	1,114	0.0443	0.9557	15.97	
106.5	23,288	1,904	0.0818	0.9182	15.26	
107.5	21,142	719	0.0340	0.9660	14.02	
108.5	19,110	691	0.0362	0.9638	13.54	
109.5	17,676	248	0.0141	0.9859	13.05	
110.5	16,512	667	0.0404	0.9596	12.87	
111.5	15,145	645	0.0426	0.9574	12.35	
112.5	13,023	345	0.0265	0.9735	11.82	
113.5	9,254	339	0.0366	0.9634	11.51	
114.5	7,400	184	0.0249	0.9751	11.09	
115.5	7,192		0.0000	1.0000	10.81	
116.5	6,506	284	0.0436	0.9564	10.81	
117.5	6,031	113	0.0188	0.9812	10.34	
118.5	5,878	57	0.0097	0.9903	10.14	

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 335 FIRE HYDRANTS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1880-2014			EXPERIENCE BAND 1975-2014		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
119.5	5,641		0.0000	1.0000	10.05
120.5	5,513		0.0000	1.0000	10.05
121.5	5,136		0.0000	1.0000	10.05
122.5	4,864	175	0.0359	0.9641	10.05
123.5	4,390	82	0.0187	0.9813	9.68
124.5	4,018		0.0000	1.0000	9.50
125.5	3,569	40	0.0113	0.9887	9.50
126.5	3,236		0.0000	1.0000	9.40
127.5	3,168	2	0.0006	0.9994	9.40
128.5	3,167	62	0.0197	0.9803	9.39
129.5	3,083		0.0000	1.0000	9.21
130.5	3,037		0.0000	1.0000	9.21
131.5	3,037		0.0000	1.0000	9.21
132.5	2,939		0.0000	1.0000	9.21
133.5	1,816		0.0000	1.0000	9.21
134.5					9.21

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 335 FIRE HYDRANTS

## ORIGINAL LIFE TABLE

## PLACEMENT BAND 1880-2014

## 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	49,141,797	73,193	0.0015	0.9985	100.00
0.5	46,658,823	137,394	0.0029	0.9971	99.85
1.5	44,244,319	138,316	0.0031	0.9969	99.56
2.5	40,664,280	184,482	0.0045	0.9955	99.25
3.5	38,535,509	314,523	0.0082	0.9918	98.80
4.5	36,453,654	254,231	0.0070	0.9930	97.99
5.5	33,734,202	231,518	0.0069	0.9931	97.31
6.5	31,707,695	178,345	0.0056	0.9944	96.64
7.5	30,984,628	131,649	0.0042	0.9958	96.09
8.5	29,518,043	170,733	0.0058	0.9942	95.69
9.5	29,518,324	133,058	0.0045	0.9955	95.13
10.5	28,835,396	173,181	0.0060	0.9940	94.70
11.5	27,868,273	109,487	0.0039	0.9961	94.14
12.5	26,561,679	76,143	0.0029	0.9971	93.77
13.5	24,682,417	92,387	0.0037	0.9963	93.50
14.5	23,913,456	68,345	0.0029	0.9971	93.15
15.5	24,187,487	74,894	0.0031	0.9969	92.88
16.5	23,621,991	77,730	0.0033	0.9967	92.59
17.5	22,640,690	63,014	0.0028	0.9972	92.29
18.5	21,818,650	83,614	0.0038	0.9962	92.03
19.5	20,771,542	49,222	0.0024	0.9976	91.68
20.5	19,984,372	57,041	0.0029	0.9971	91.46
21.5	19,128,069	101,615	0.0053	0.9947	91.20
22.5	18,643,299	66,607	0.0036	0.9964	90.72
23.5	17,883,889	57,754	0.0032	0.9968	90.39
24.5	16,710,590	56,886	0.0034	0.9966	90.10
25.5	15,759,634	64,514	0.0041	0.9959	89.79
26.5	14,520,276	45,680	0.0031	0.9969	89.43
27.5	13,207,605	60,283	0.0046	0.9954	89.14
28.5	12,145,405	47,764	0.0039	0.9961	88.74
29.5	11,291,334	61,246	0.0054	0.9946	88.39
30.5	10,563,238	49,198	0.0047	0.9953	87.91
31.5	10,157,862	54,503	0.0054	0.9946	87.50
32.5	9,803,463	54,517	0.0056	0.9944	87.03
33.5	9,385,354	54,896	0.0058	0.9942	86.55
34.5	8,958,393	71,958	0.0080	0.9920	86.04
35.5	8,363,558	67,180	0.0080	0.9920	85.35
36.5	7,772,701	69,985	0.0090	0.9910	84.66
37.5	7,180,047	56,309	0.0078	0.9922	83.90
38.5	6,754,754	83,759	0.0124	0.9876	83.24

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 335 FIRE HYDRANTS

## ORIGINAL LIFE TABLE, CONT.

## PLACEMENT BAND 1880-2014

## 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	6,544,965	83,919	0.0128	0.9872	82.21
40.5	6,191,487	70,776	0.0114	0.9886	81.16
41.5	5,811,117	56,586	0.0097	0.9903	80.23
42.5	5,592,106	59,184	0.0106	0.9894	79.45
43.5	5,323,656	62,503	0.0117	0.9883	78.61
44.5	5,193,404	61,439	0.0118	0.9882	77.68
45.5	4,944,469	50,352	0.0102	0.9898	76.76
46.5	4,670,343	61,073	0.0131	0.9869	75.98
47.5	4,401,103	63,035	0.0143	0.9857	74.99
48.5	4,107,159	67,799	0.0165	0.9835	73.92
49.5	3,766,598	75,216	0.0200	0.9800	72.70
50.5	3,432,024	65,725	0.0192	0.9808	71.24
51.5	3,122,825	51,662	0.0165	0.9835	69.88
52.5	2,864,357	61,552	0.0215	0.9785	68.72
53.5	2,567,036	67,291	0.0262	0.9738	67.25
54.5	2,258,055	63,793	0.0283	0.9717	65.48
55.5	1,958,516	66,271	0.0338	0.9662	63.63
56.5	1,693,934	70,916	0.0419	0.9581	61.48
57.5	1,477,576	121,269	0.0821	0.9179	58.91
58.5	1,178,091	57,319	0.0487	0.9513	54.07
59.5	808,851	92,031	0.1138	0.8862	51.44
60.5	600,519	52,474	0.0874	0.9126	45.59
61.5	507,997	8,158	0.0161	0.9839	41.60
62.5	479,643	4,698	0.0098	0.9902	40.94
63.5	456,692	12,713	0.0278	0.9722	40.54
64.5	344,523	7,051	0.0205	0.9795	39.41
65.5	289,977	9,387	0.0324	0.9676	38.60
66.5	253,628	6,189	0.0244	0.9756	37.35
67.5	234,655	8,341	0.0355	0.9645	36.44
68.5	228,164	4,527	0.0198	0.9802	35.14
69.5	222,097	5,527	0.0249	0.9751	34.45
70.5	223,656	5,637	0.0252	0.9748	33.59
71.5	221,994	3,634	0.0164	0.9836	32.74
72.5	208,994	3,308	0.0158	0.9842	32.21
73.5	197,698	5,405	0.0273	0.9727	31.70
74.5	190,189	7,673	0.0403	0.9597	30.83
75.5	185,018	6,080	0.0329	0.9671	29.59
76.5	166,013	20,660	0.1245	0.8755	28.61
77.5	138,997	2,652	0.0191	0.9809	25.05
78.5	142,804	8,519	0.0597	0.9403	24.58



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 335 FIRE HYDRANTS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1880-2014			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	
79.5	134,007	7,418	0.0554	0.9446	23.11	
80.5	120,852	7,640	0.0632	0.9368	21.83	
81.5	115,345	18,223	0.1580	0.8420	20.45	
82.5	95,052	1,230	0.0129	0.9871	17.22	
83.5	89,494	1,371	0.0153	0.9847	17.00	
84.5	84,959	616	0.0073	0.9927	16.74	
85.5	70,603	4,049	0.0574	0.9426	16.61	
86.5	58,199	1,880	0.0323	0.9677	15.66	
87.5	44,739	188	0.0042	0.9958	15.16	
88.5	41,123	849	0.0206	0.9794	15.09	
89.5	40,410	202	0.0050	0.9950	14.78	
90.5	40,703	742	0.0182	0.9818	14.71	
91.5	40,419	564	0.0140	0.9860	14.44	
92.5	39,393	1,919	0.0487	0.9513	14.24	
93.5	38,189	174	0.0046	0.9954	13.54	
94.5	39,076	1,994	0.0510	0.9490	13.48	
95.5	36,820	101	0.0027	0.9973	12.79	
96.5	38,101	81	0.0021	0.9979	12.76	
97.5	37,809	6	0.0001	0.9999	12.73	
98.5	26,721	34	0.0013	0.9987	12.73	
99.5	25,661	220	0.0086	0.9914	12.71	
100.5	25,070	296	0.0118	0.9882	12.60	
101.5	22,777	62	0.0027	0.9973	12.46	
102.5	22,162	122	0.0055	0.9945	12.42	
103.5	19,800	38	0.0019	0.9981	12.35	
104.5	18,025	38	0.0021	0.9979	12.33	
105.5	17,715	353	0.0199	0.9801	12.30	
106.5	17,178	1,117	0.0650	0.9350	12.06	
107.5	15,887	276	0.0174	0.9826	11.27	
108.5	14,298	460	0.0322	0.9678	11.08	
109.5	13,117	193	0.0147	0.9853	10.72	
110.5	12,054	443	0.0368	0.9632	10.56	
111.5	10,911	193	0.0177	0.9823	10.18	
112.5	9,339	232	0.0248	0.9752	10.00	
113.5	6,816	282	0.0414	0.9586	9.75	
114.5	7,400	184	0.0249	0.9751	9.34	
115.5	7,192		0.0000	1.0000	9.11	
116.5	6,506	284	0.0436	0.9564	9.11	
117.5	6,031	113	0.0188	0.9812	8.71	
118.5	5,878	57	0.0097	0.9903	8.55	

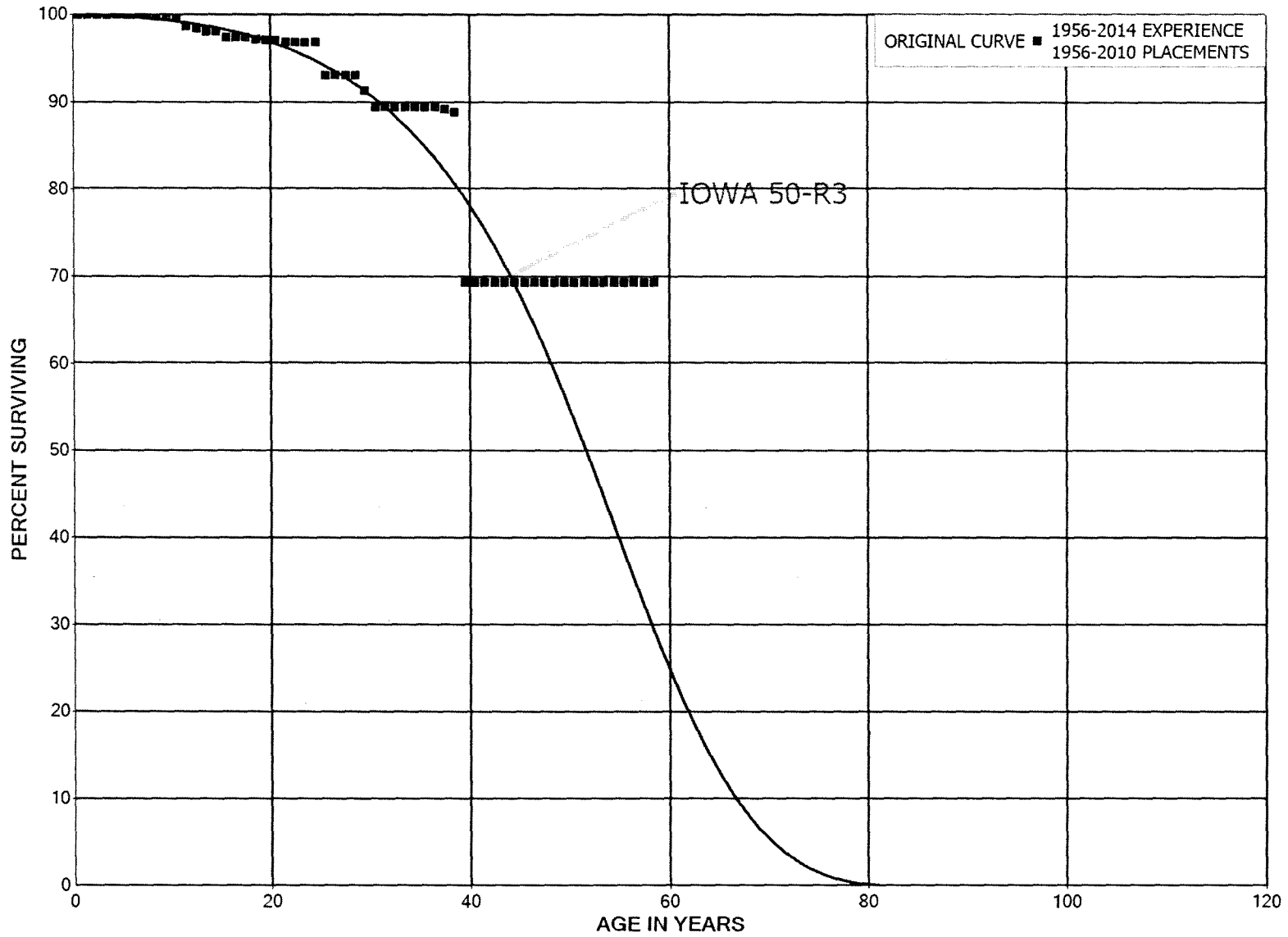
## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 335 FIRE HYDRANTS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1880-2014			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
119.5	5,641		0.0000	1.0000	8.47
120.5	5,513		0.0000	1.0000	8.47
121.5	5,136		0.0000	1.0000	8.47
122.5	4,864	175	0.0359	0.9641	8.47
123.5	4,390	82	0.0187	0.9813	8.16
124.5	4,018		0.0000	1.0000	8.01
125.5	3,569	40	0.0113	0.9887	8.01
126.5	3,236		0.0000	1.0000	7.92
127.5	3,168	2	0.0006	0.9994	7.92
128.5	3,167	62	0.0197	0.9803	7.92
129.5	3,083		0.0000	1.0000	7.76
130.5	3,037		0.0000	1.0000	7.76
131.5	3,037		0.0000	1.0000	7.76
132.5	2,939		0.0000	1.0000	7.76
133.5	1,816		0.0000	1.0000	7.76
134.5					7.76

MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 339.50 MISCELLANEOUS TRANSMISSION AND DISTRIBUTION - OTHER  
ORIGINAL AND SMOOTH SURVIVOR CURVES



Gannett Fleming

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MO American Water Co - Water  
March 31, 2015

## MISSOURI AMERICAN WATER COMPANY

ACCOUNT 339.50 MISCELLANEOUS TRANSMISSION AND DISTRIBUTION - OTHER

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1956-2010			EXPERIENCE 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	37,684		0.0000	1.0000	100.00
0.5	37,684		0.0000	1.0000	100.00
1.5	37,684		0.0000	1.0000	100.00
2.5	37,709		0.0000	1.0000	100.00
3.5	46,051		0.0000	1.0000	100.00
4.5	46,092	41	0.0009	0.9991	100.00
5.5	35,505		0.0000	1.0000	99.91
6.5	35,439		0.0000	1.0000	99.91
7.5	35,371	41	0.0012	0.9988	99.91
8.5	20,777		0.0000	1.0000	99.80
9.5	20,777	41	0.0020	0.9980	99.80
10.5	20,736	208	0.0100	0.9900	99.60
11.5	20,528	41	0.0020	0.9980	98.60
12.5	20,487	65	0.0031	0.9969	98.40
13.5	20,423		0.0000	1.0000	98.09
14.5	20,423	140	0.0069	0.9931	98.09
15.5	20,283		0.0000	1.0000	97.42
16.5	20,283		0.0000	1.0000	97.42
17.5	20,283	41	0.0020	0.9980	97.42
18.5	20,242	41	0.0020	0.9980	97.22
19.5	20,201		0.0000	1.0000	97.03
20.5	20,201	41	0.0020	0.9980	97.03
21.5	20,160		0.0000	1.0000	96.83
22.5	20,160		0.0000	1.0000	96.83
23.5	20,160		0.0000	1.0000	96.83
24.5	20,160	776	0.0385	0.9615	96.83
25.5	19,384		0.0000	1.0000	93.10
26.5	19,384		0.0000	1.0000	93.10
27.5	19,384		0.0000	1.0000	93.10
28.5	19,382	387	0.0200	0.9800	93.10
29.5	18,996	387	0.0204	0.9796	91.24
30.5	18,609		0.0000	1.0000	89.39
31.5	17,919		0.0000	1.0000	89.39
32.5	17,919		0.0000	1.0000	89.39
33.5	17,919		0.0000	1.0000	89.39
34.5	17,919		0.0000	1.0000	89.39
35.5	17,919		0.0000	1.0000	89.39
36.5	17,919	47	0.0026	0.9974	89.39
37.5	17,765	66	0.0037	0.9963	89.15
38.5	17,700	3,898	0.2203	0.7797	88.82

## MISSOURI AMERICAN WATER COMPANY

ACCOUNT 339.50 MISCELLANEOUS TRANSMISSION AND DISTRIBUTION - OTHER

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1956-2010			EXPERIENCE 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	13,801		0.0000	1.0000	69.26
40.5	13,801		0.0000	1.0000	69.26
41.5	13,801		0.0000	1.0000	69.26
42.5	13,801		0.0000	1.0000	69.26
43.5	13,203		0.0000	1.0000	69.26
44.5	10,565		0.0000	1.0000	69.26
45.5	8,832		0.0000	1.0000	69.26
46.5	7,325		0.0000	1.0000	69.26
47.5	5,741		0.0000	1.0000	69.26
48.5	4,934		0.0000	1.0000	69.26
49.5	4,934		0.0000	1.0000	69.26
50.5	3,611		0.0000	1.0000	69.26
51.5	3,433		0.0000	1.0000	69.26
52.5	2,509		0.0000	1.0000	69.26
53.5	1,608		0.0000	1.0000	69.26
54.5	1,336		0.0000	1.0000	69.26
55.5	994		0.0000	1.0000	69.26
56.5	88		0.0000	1.0000	69.26
57.5	88		0.0000	1.0000	69.26
58.5					69.26

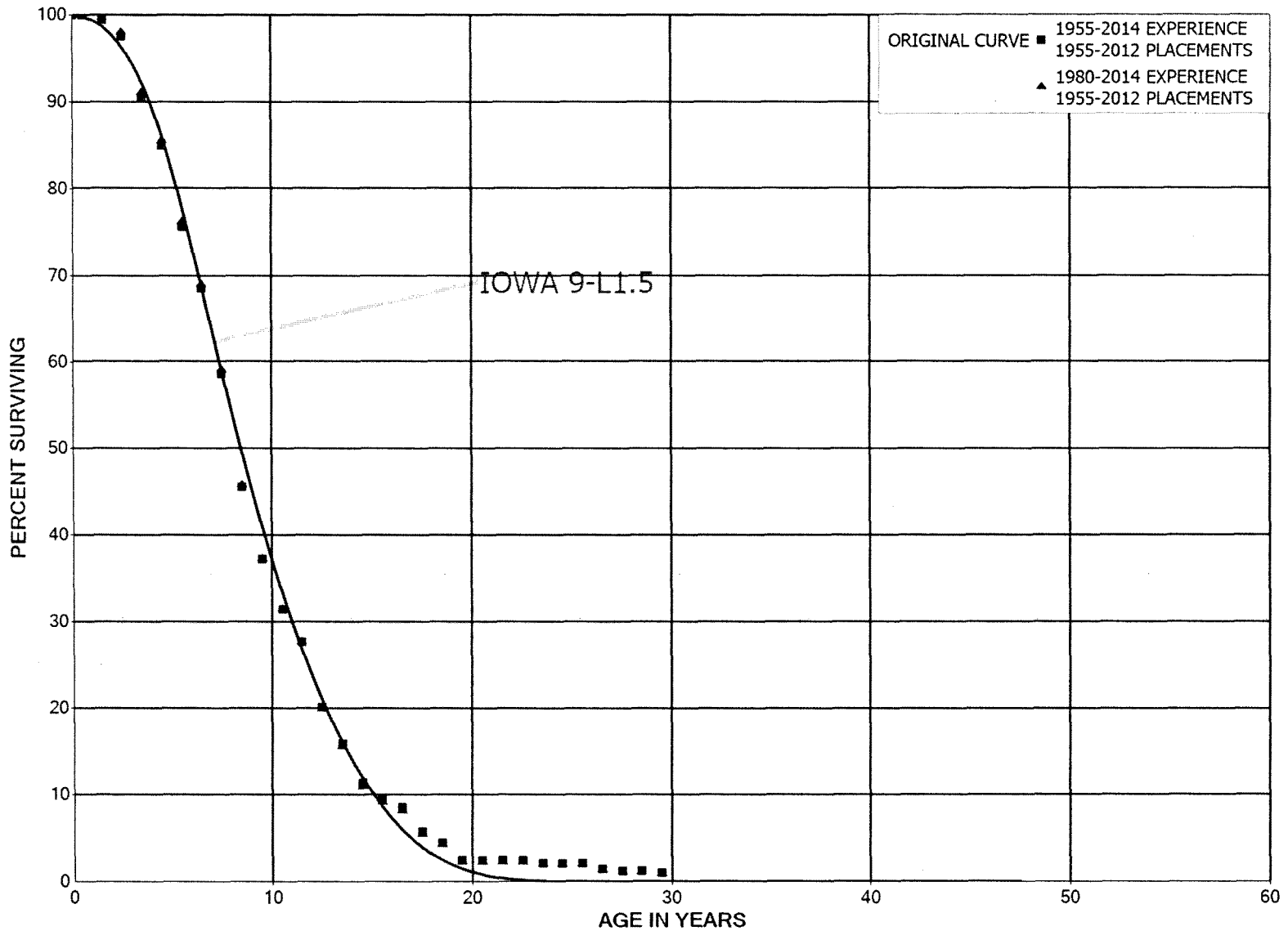


Gannett Fleming

VII-147

MO American Water Co - Water  
March 31, 2015

MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 341.10 TRANSPORTATION EQUIPMENT - LIGHT TRUCKS  
ORIGINAL AND SMOOTH SURVIVOR CURVES



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 341.10 TRANSPORTATION EQUIPMENT - LIGHT TRUCKS

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1955-2012			EXPERIENCE BAND 1955-2014		
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	3,913,063	312	0.0001	0.9999	100.00
0.5	3,912,671	23,071	0.0059	0.9941	99.99
1.5	3,904,350	72,771	0.0186	0.9814	99.40
2.5	3,073,924	222,351	0.0723	0.9277	97.55
3.5	2,721,399	167,440	0.0615	0.9385	90.49
4.5	2,233,317	243,523	0.1090	0.8910	84.93
5.5	1,989,795	189,559	0.0953	0.9047	75.67
6.5	1,617,373	232,974	0.1440	0.8560	68.46
7.5	1,364,761	305,014	0.2235	0.7765	58.60
8.5	1,025,546	188,119	0.1834	0.8166	45.50
9.5	837,427	130,203	0.1555	0.8445	37.15
10.5	723,301	86,213	0.1192	0.8808	31.38
11.5	636,872	175,167	0.2750	0.7250	27.64
12.5	460,994	97,065	0.2106	0.7894	20.04
13.5	363,929	105,237	0.2892	0.7108	15.82
14.5	237,521	37,860	0.1594	0.8406	11.24
15.5	199,589	20,667	0.1035	0.8965	9.45
16.5	184,640	58,750	0.3182	0.6818	8.47
17.5	125,890	29,484	0.2342	0.7658	5.78
18.5	95,354	44,026	0.4617	0.5383	4.42
19.5	47,881		0.0000	1.0000	2.38
20.5	47,881		0.0000	1.0000	2.38
21.5	41,011	429	0.0105	0.9895	2.38
22.5	40,582	4,644	0.1144	0.8856	2.36
23.5	35,462		0.0000	1.0000	2.09
24.5	35,462	189	0.0053	0.9947	2.09
25.5	35,273	12,302	0.3488	0.6512	2.08
26.5	13,312	1,950	0.1465	0.8535	1.35
27.5	11,362		0.0000	1.0000	1.15
28.5	11,362	2,221	0.1955	0.8045	1.15
29.5	9,141		0.0000	1.0000	0.93
30.5	9,141	5,885	0.6438	0.3562	0.93
31.5	3,256		0.0000	1.0000	0.33
32.5	3,256	1	0.0003	0.9997	0.33
33.5	3,170		0.0000	1.0000	0.33
34.5	3,170		0.0000	1.0000	0.33
35.5	3,170		0.0000	1.0000	0.33
36.5	3,170	588	0.1854	0.8146	0.33
37.5	2,582		0.0000	1.0000	0.27
38.5	2,582		0.0000	1.0000	0.27

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 341.10 TRANSPORTATION EQUIPMENT - LIGHT TRUCKS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1955-2012			EXPERIENCE BAND 1955-2014		
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	2,582		0.0000	1.0000	0.27
40.5	2,582		0.0000	1.0000	0.27
41.5	2,582		0.0000	1.0000	0.27
42.5	2,582		0.0000	1.0000	0.27
43.5	2,582		0.0000	1.0000	0.27
44.5	2,582	475	0.1839	0.8161	0.27
45.5	2,107		0.0000	1.0000	0.22
46.5	2,107		0.0000	1.0000	0.22
47.5	2,107		0.0000	1.0000	0.22
48.5	2,107		0.0000	1.0000	0.22
49.5	1,414		0.0000	1.0000	0.22
50.5	1,414		0.0000	1.0000	0.22
51.5	1,414		0.0000	1.0000	0.22
52.5	1,414		0.0000	1.0000	0.22
53.5	1,414		0.0000	1.0000	0.22
54.5	1,414		0.0000	1.0000	0.22
55.5	1,414		0.0000	1.0000	0.22
56.5	1,414	159	0.1128	0.8872	0.22
57.5	1,255	1,154	0.9195	0.0805	0.19
58.5	101	101	1.0000		0.02
59.5					



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 341.10 TRANSPORTATION EQUIPMENT - LIGHT TRUCKS

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1955-2012			EXPERIENCE BAND 1980-2014			
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	3,772,383	312	0.0001	0.9999	100.00	
0.5	3,837,414	13,562	0.0035	0.9965	99.99	
1.5	3,856,088	65,463	0.0170	0.9830	99.64	
2.5	3,033,557	213,438	0.0704	0.9296	97.95	
3.5	2,694,635	162,690	0.0604	0.9396	91.06	
4.5	2,211,303	243,523	0.1101	0.8899	85.56	
5.5	1,967,781	185,803	0.0944	0.9056	76.14	
6.5	1,599,116	229,158	0.1433	0.8567	68.95	
7.5	1,350,332	305,014	0.2259	0.7741	59.07	
8.5	1,011,116	188,119	0.1861	0.8139	45.72	
9.5	822,997	129,314	0.1571	0.8429	37.22	
10.5	710,236	86,213	0.1214	0.8786	31.37	
11.5	623,806	175,167	0.2808	0.7192	27.56	
12.5	447,929	97,065	0.2167	0.7833	19.82	
13.5	351,292	105,237	0.2996	0.7004	15.53	
14.5	230,222	37,860	0.1645	0.8355	10.88	
15.5	192,290	20,667	0.1075	0.8925	9.09	
16.5	177,341	58,750	0.3313	0.6687	8.11	
17.5	124,475	29,484	0.2369	0.7631	5.42	
18.5	93,940	44,026	0.4687	0.5313	4.14	
19.5	46,467		0.0000	1.0000	2.20	
20.5	46,467		0.0000	1.0000	2.20	
21.5	39,597	429	0.0108	0.9892	2.20	
22.5	39,328	4,644	0.1181	0.8819	2.18	
23.5	35,361		0.0000	1.0000	1.92	
24.5	35,462	189	0.0053	0.9947	1.92	
25.5	35,273	12,302	0.3488	0.6512	1.91	
26.5	13,312	1,950	0.1465	0.8535	1.24	
27.5	11,362		0.0000	1.0000	1.06	
28.5	11,362	2,221	0.1955	0.8045	1.06	
29.5	9,141		0.0000	1.0000	0.85	
30.5	9,141	5,885	0.6438	0.3562	0.85	
31.5	3,256		0.0000	1.0000	0.30	
32.5	3,256	1	0.0003	0.9997	0.30	
33.5	3,170		0.0000	1.0000	0.30	
34.5	3,170		0.0000	1.0000	0.30	
35.5	3,170		0.0000	1.0000	0.30	
36.5	3,170	588	0.1854	0.8146	0.30	
37.5	2,582		0.0000	1.0000	0.25	
38.5	2,582		0.0000	1.0000	0.25	

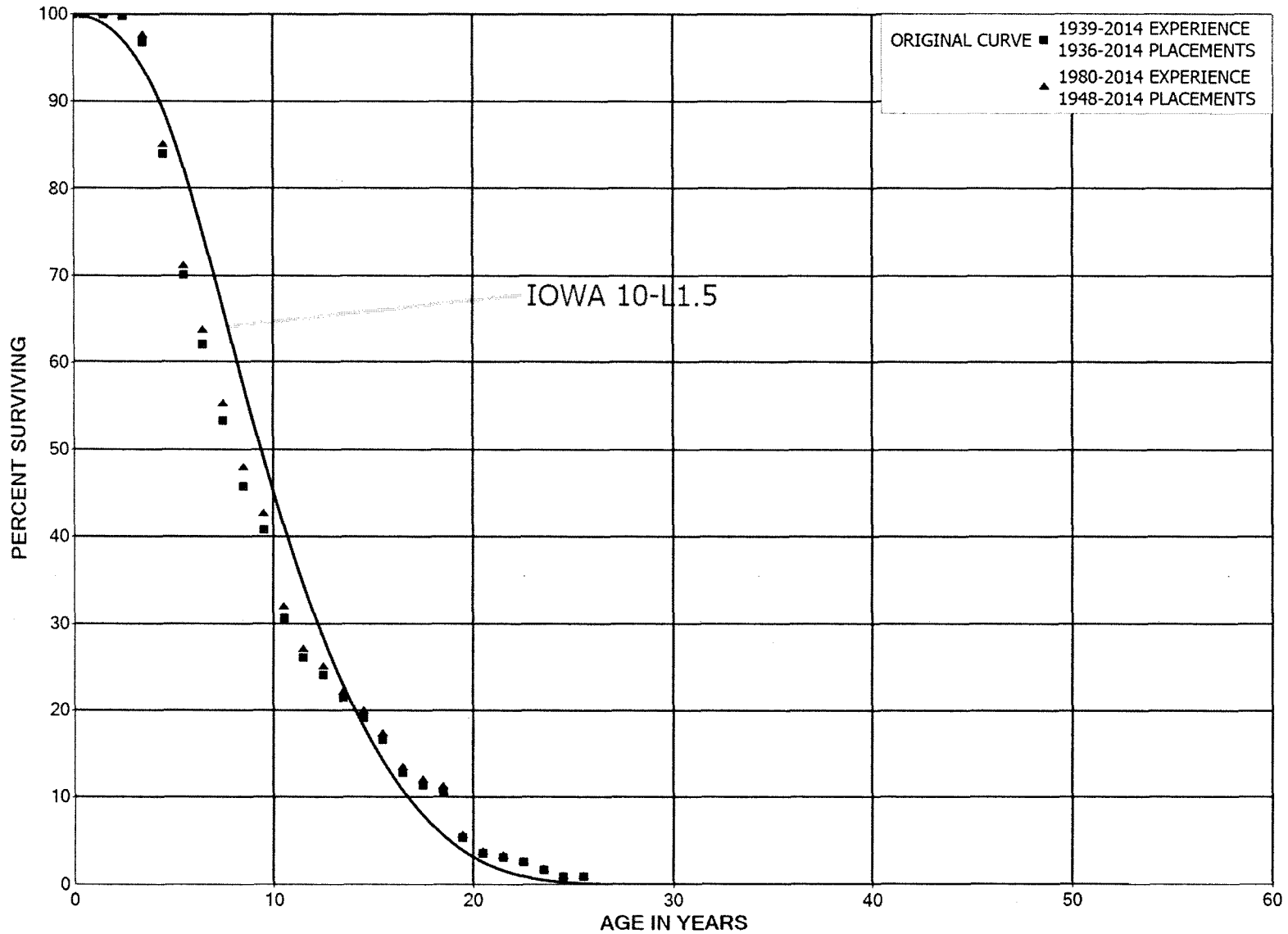
## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 341.10 TRANSPORTATION EQUIPMENT - LIGHT TRUCKS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1955-2012			EXPERIENCE BAND 1980-2014		
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	2,582		0.0000	1.0000	0.25
40.5	2,582		0.0000	1.0000	0.25
41.5	2,582		0.0000	1.0000	0.25
42.5	2,582		0.0000	1.0000	0.25
43.5	2,582		0.0000	1.0000	0.25
44.5	2,582	475	0.1839	0.8161	0.25
45.5	2,107		0.0000	1.0000	0.20
46.5	2,107		0.0000	1.0000	0.20
47.5	2,107		0.0000	1.0000	0.20
48.5	2,107		0.0000	1.0000	0.20
49.5	1,414		0.0000	1.0000	0.20
50.5	1,414		0.0000	1.0000	0.20
51.5	1,414		0.0000	1.0000	0.20
52.5	1,414		0.0000	1.0000	0.20
53.5	1,414		0.0000	1.0000	0.20
54.5	1,414		0.0000	1.0000	0.20
55.5	1,414		0.0000	1.0000	0.20
56.5	1,414	159	0.1128	0.8872	0.20
57.5	1,255	1,154	0.9195	0.0805	0.18
58.5	101	101	1.0000		0.01
59.5					

MISSOURI AMERICAN WATER COMPANY  
 ACCOUNT 341.20 TRANSPORTATION EQUIPMENT - HEAVY TRUCKS  
 ORIGINAL AND SMOOTH SURVIVOR CURVES



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 341.20 TRANSPORTATION EQUIPMENT - HEAVY TRUCKS

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1936-2014			EXPERIENCE BAND 1939-2014		
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	17,162,213	7,999	0.0005	0.9995	100.00
0.5	16,184,872	4,527	0.0003	0.9997	99.95
1.5	16,180,345	25,976	0.0016	0.9984	99.93
2.5	15,326,870	471,780	0.0308	0.9692	99.77
3.5	14,490,722	1,909,063	0.1317	0.8683	96.69
4.5	11,600,914	1,922,321	0.1657	0.8343	83.96
5.5	9,665,863	1,104,985	0.1143	0.8857	70.04
6.5	7,660,756	1,076,862	0.1406	0.8594	62.04
7.5	6,547,787	926,885	0.1416	0.8584	53.32
8.5	5,591,779	620,946	0.1110	0.8890	45.77
9.5	4,970,833	1,226,419	0.2467	0.7533	40.69
10.5	3,744,414	559,370	0.1494	0.8506	30.65
11.5	3,185,044	241,173	0.0757	0.9243	26.07
12.5	2,871,744	324,937	0.1131	0.8869	24.10
13.5	2,468,178	265,911	0.1077	0.8923	21.37
14.5	2,147,490	292,532	0.1362	0.8638	19.07
15.5	1,851,457	418,087	0.2258	0.7742	16.47
16.5	1,433,370	161,600	0.1127	0.8873	12.75
17.5	1,267,898	76,409	0.0603	0.9397	11.31
18.5	1,188,650	596,476	0.5018	0.4982	10.63
19.5	592,173	196,703	0.3322	0.6678	5.30
20.5	395,471	51,987	0.1315	0.8685	3.54
21.5	343,484	67,685	0.1971	0.8029	3.07
22.5	275,799	101,039	0.3664	0.6336	2.47
23.5	174,759	80,204	0.4589	0.5411	1.56
24.5	94,556	778	0.0082	0.9918	0.85
25.5	86,806	4,476	0.0516	0.9484	0.84
26.5	74,883	209	0.0028	0.9972	0.80
27.5	64,820	1,669	0.0257	0.9743	0.79
28.5	57,397		0.0000	1.0000	0.77
29.5	34,397		0.0000	1.0000	0.77
30.5	15,015		0.0000	1.0000	0.77
31.5	15,015		0.0000	1.0000	0.77
32.5	15,015		0.0000	1.0000	0.77
33.5	15,015		0.0000	1.0000	0.77
34.5	15,015		0.0000	1.0000	0.77
35.5	15,015		0.0000	1.0000	0.77
36.5	15,015	476	0.0317	0.9683	0.77
37.5	14,538		0.0000	1.0000	0.75
38.5	14,538		0.0000	1.0000	0.75

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 341.20 TRANSPORTATION EQUIPMENT - HEAVY TRUCKS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1936-2014			EXPERIENCE BAND 1939-2014		
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	14,538		0.0000	1.0000	0.75
40.5	14,538		0.0000	1.0000	0.75
41.5	14,538	11,327	0.7791	0.2209	0.75
42.5	3,211		0.0000	1.0000	0.17
43.5	3,211		0.0000	1.0000	0.17
44.5	3,211		0.0000	1.0000	0.17
45.5	3,211		0.0000	1.0000	0.17
46.5	3,211		0.0000	1.0000	0.17
47.5	3,211	3,211	1.0000		0.17
48.5					

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 341.20 TRANSPORTATION EQUIPMENT - HEAVY TRUCKS

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1948-2014			EXPERIENCE BAND 1980-2014		
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	15,188,576	7,999	0.0005	0.9995	100.00
0.5	14,562,028	401	0.0000	1.0000	99.95
1.5	14,738,774	24,997	0.0017	0.9983	99.94
2.5	14,050,968	314,931	0.0224	0.9776	99.78
3.5	13,421,170	1,732,321	0.1291	0.8709	97.54
4.5	10,768,700	1,763,455	0.1638	0.8362	84.95
5.5	9,030,233	947,784	0.1050	0.8950	71.04
6.5	7,259,239	959,783	0.1322	0.8678	63.58
7.5	6,292,730	840,327	0.1335	0.8665	55.18
8.5	5,423,279	603,594	0.1113	0.8887	47.81
9.5	4,819,685	1,206,128	0.2503	0.7497	42.49
10.5	3,623,055	556,842	0.1537	0.8463	31.85
11.5	3,093,685	233,699	0.0755	0.9245	26.96
12.5	2,787,860	315,092	0.1130	0.8870	24.92
13.5	2,411,548	250,855	0.1040	0.8960	22.11
14.5	2,105,916	280,911	0.1334	0.8666	19.81
15.5	1,832,830	416,915	0.2275	0.7725	17.16
16.5	1,415,915	154,389	0.1090	0.8910	13.26
17.5	1,257,655	76,409	0.0608	0.9392	11.81
18.5	1,178,406	595,798	0.5056	0.4944	11.10
19.5	582,609	196,210	0.3368	0.6632	5.49
20.5	386,399	47,641	0.1233	0.8767	3.64
21.5	341,968	67,655	0.1978	0.8022	3.19
22.5	274,313	101,015	0.3682	0.6318	2.56
23.5	173,298	80,204	0.4628	0.5372	1.62
24.5	93,094		0.0000	1.0000	0.87
25.5	86,123	4,476	0.0520	0.9480	0.87
26.5	74,200	2	0.0000	1.0000	0.82
27.5	64,343	1,669	0.0259	0.9741	0.82
28.5	56,921		0.0000	1.0000	0.80
29.5	33,920		0.0000	1.0000	0.80
30.5	14,538		0.0000	1.0000	0.80
31.5	14,541		0.0000	1.0000	0.80
32.5	14,541		0.0000	1.0000	0.80
33.5	14,541		0.0000	1.0000	0.80
34.5	14,541		0.0000	1.0000	0.80
35.5	14,541		0.0000	1.0000	0.80
36.5	14,541	3	0.0002	0.9998	0.80
37.5	14,538		0.0000	1.0000	0.80
38.5	14,538		0.0000	1.0000	0.80

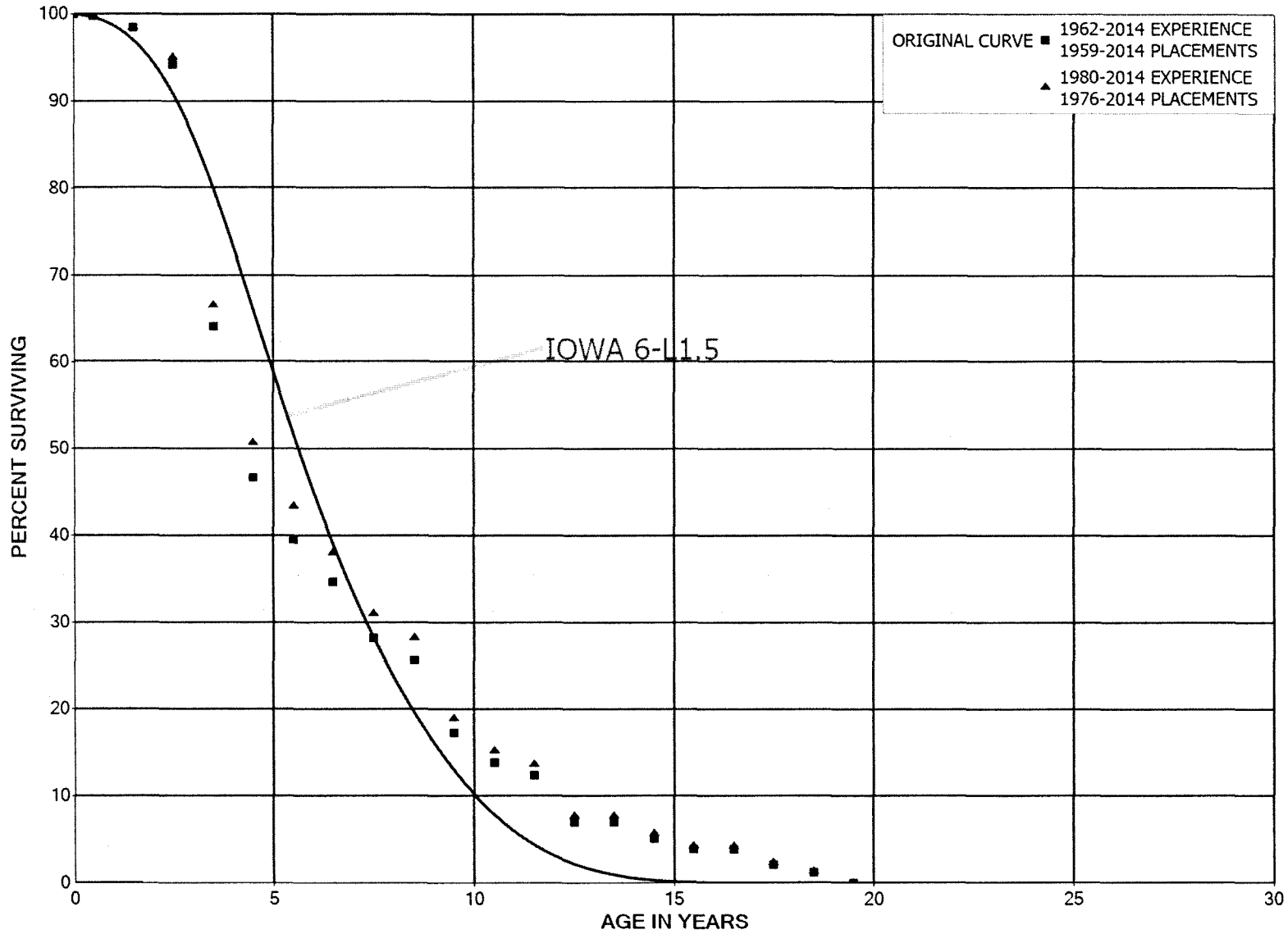
## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 341.20 TRANSPORTATION EQUIPMENT - HEAVY TRUCKS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1948-2014			EXPERIENCE BAND 1980-2014		
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	14,538		0.0000	1.0000	0.80
40.5	14,538		0.0000	1.0000	0.80
41.5	14,538	11,327	0.7791	0.2209	0.80
42.5	3,211		0.0000	1.0000	0.18
43.5	3,211		0.0000	1.0000	0.18
44.5	3,211		0.0000	1.0000	0.18
45.5	3,211		0.0000	1.0000	0.18
46.5	3,211		0.0000	1.0000	0.18
47.5	3,211	3,211	1.0000		0.18
48.5					

MISSOURI AMERICAN WATER COMPANY  
 ACCOUNT 341.30 TRANSPORTATION EQUIPMENT - AUTOS  
 ORIGINAL AND SMOOTH SURVIVOR CURVES





## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 341.30 TRANSPORTATION EQUIPMENT - AUTOS

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1959-2014			EXPERIENCE 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	5,015,836	11,612	0.0023	0.9977	100.00
0.5	4,943,752	69,825	0.0141	0.9859	99.77
1.5	4,897,026	206,707	0.0422	0.9578	98.36
2.5	4,570,292	1,463,270	0.3202	0.6798	94.21
3.5	3,059,750	831,883	0.2719	0.7281	64.05
4.5	2,120,900	325,129	0.1533	0.8467	46.63
5.5	1,777,679	220,811	0.1242	0.8758	39.48
6.5	816,685	150,310	0.1840	0.8160	34.58
7.5	624,192	57,515	0.0921	0.9079	28.22
8.5	513,342	169,637	0.3305	0.6695	25.62
9.5	343,705	68,953	0.2006	0.7994	17.15
10.5	268,731	27,342	0.1017	0.8983	13.71
11.5	222,799	97,869	0.4393	0.5607	12.31
12.5	124,930		0.0000	1.0000	6.91
13.5	124,930	32,856	0.2630	0.7370	6.91
14.5	92,044	23,343	0.2536	0.7464	5.09
15.5	67,716		0.0000	1.0000	3.80
16.5	56,697	25,102	0.4427	0.5573	3.80
17.5	30,805	13,150	0.4269	0.5731	2.12
18.5	17,655	17,655	1.0000		1.21
19.5					

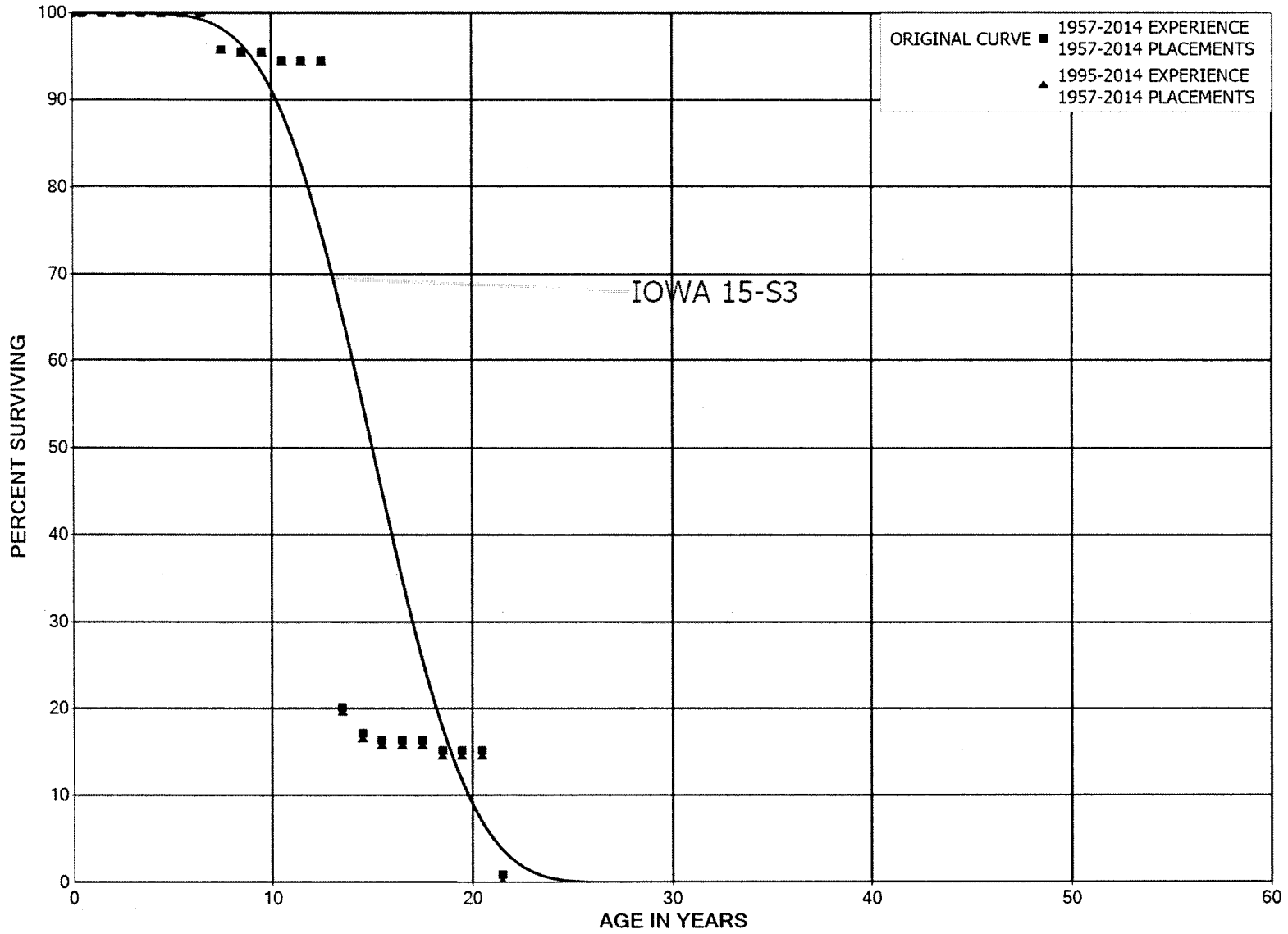
## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 341.30 TRANSPORTATION EQUIPMENT - AUTOS

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1976-2014			EXPERIENCE BAND 1980-2014		
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	4,474,497	9,466	0.0021	0.9979	100.00
0.5	4,441,946	62,961	0.0142	0.9858	99.79
1.5	4,431,408	153,208	0.0346	0.9654	98.37
2.5	4,180,461	1,251,682	0.2994	0.7006	94.97
3.5	2,895,037	692,127	0.2391	0.7609	66.54
4.5	2,095,944	302,396	0.1443	0.8557	50.63
5.5	1,775,456	218,589	0.1231	0.8769	43.32
6.5	816,685	150,310	0.1840	0.8160	37.99
7.5	624,192	57,515	0.0921	0.9079	31.00
8.5	513,342	169,637	0.3305	0.6695	28.14
9.5	343,705	68,953	0.2006	0.7994	18.84
10.5	268,731	27,342	0.1017	0.8983	15.06
11.5	222,799	97,869	0.4393	0.5607	13.53
12.5	124,930		0.0000	1.0000	7.59
13.5	124,930	32,856	0.2630	0.7370	7.59
14.5	92,044	23,343	0.2536	0.7464	5.59
15.5	67,716		0.0000	1.0000	4.17
16.5	56,697	25,102	0.4427	0.5573	4.17
17.5	30,805	13,150	0.4269	0.5731	2.33
18.5	17,655	17,655	1.0000		1.33
19.5					

MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 341.40 TRANSPORTATION EQUIPMENT - OTHER  
ORIGINAL AND SMOOTH SURVIVOR CURVES



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 341.40 TRANSPORTATION EQUIPMENT - OTHER

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1957-2014			EXPERIENCE 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	3,619,677		0.0000	1.0000	100.00
0.5	1,636,901	993	0.0006	0.9994	100.00
1.5	1,629,962		0.0000	1.0000	99.94
2.5	882,497		0.0000	1.0000	99.94
3.5	753,350		0.0000	1.0000	99.94
4.5	443,871		0.0000	1.0000	99.94
5.5	433,217		0.0000	1.0000	99.94
6.5	178,392	7,519	0.0422	0.9578	99.94
7.5	66,029	181	0.0027	0.9973	95.73
8.5	65,849		0.0000	1.0000	95.46
9.5	65,849	675	0.0102	0.9898	95.46
10.5	65,174		0.0000	1.0000	94.49
11.5	65,174		0.0000	1.0000	94.49
12.5	65,174	51,325	0.7875	0.2125	94.49
13.5	13,849	2,067	0.1493	0.8507	20.08
14.5	11,782	535	0.0454	0.9546	17.08
15.5	11,247		0.0000	1.0000	16.31
16.5	11,247		0.0000	1.0000	16.31
17.5	11,247	860	0.0764	0.9236	16.31
18.5	10,387		0.0000	1.0000	15.06
19.5	10,387		0.0000	1.0000	15.06
20.5	10,387	9,812	0.9446	0.0554	15.06
21.5	575		0.0000	1.0000	0.83
22.5	575		0.0000	1.0000	0.83
23.5	575		0.0000	1.0000	0.83
24.5	575		0.0000	1.0000	0.83
25.5	575		0.0000	1.0000	0.83
26.5	575		0.0000	1.0000	0.83
27.5	575		0.0000	1.0000	0.83
28.5	575		0.0000	1.0000	0.83
29.5	575		0.0000	1.0000	0.83
30.5	575		0.0000	1.0000	0.83
31.5	575		0.0000	1.0000	0.83
32.5	575		0.0000	1.0000	0.83
33.5	575		0.0000	1.0000	0.83
34.5	575		0.0000	1.0000	0.83
35.5	575		0.0000	1.0000	0.83
36.5	575	366	0.6365	0.3635	0.83
37.5	209		0.0000	1.0000	0.30
38.5	209		0.0000	1.0000	0.30

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 341.40 TRANSPORTATION EQUIPMENT - OTHER

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1957-2014			EXPERIENCE 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	209		0.0000	1.0000	0.30
40.5	209		0.0000	1.0000	0.30
41.5	209		0.0000	1.0000	0.30
42.5	209	209	1.0000		0.30
43.5					

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 341.40 TRANSPORTATION EQUIPMENT - OTHER

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1957-2014			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	3,607,899		0.0000	1.0000	100.00
0.5	1,625,123	993	0.0006	0.9994	100.00
1.5	1,618,185		0.0000	1.0000	99.94
2.5	870,901		0.0000	1.0000	99.94
3.5	742,963		0.0000	1.0000	99.94
4.5	433,483		0.0000	1.0000	99.94
5.5	422,830		0.0000	1.0000	99.94
6.5	168,005	7,519	0.0448	0.9552	99.94
7.5	55,642	181	0.0032	0.9968	95.47
8.5	55,462		0.0000	1.0000	95.16
9.5	65,274	675	0.0103	0.9897	95.16
10.5	64,599		0.0000	1.0000	94.17
11.5	64,599		0.0000	1.0000	94.17
12.5	64,599	51,325	0.7945	0.2055	94.17
13.5	13,274	2,067	0.1557	0.8443	19.35
14.5	11,207	535	0.0477	0.9523	16.34
15.5	10,672		0.0000	1.0000	15.56
16.5	10,672		0.0000	1.0000	15.56
17.5	10,672	860	0.0806	0.9194	15.56
18.5	9,812		0.0000	1.0000	14.30
19.5	9,812		0.0000	1.0000	14.30
20.5	9,812	9,812	1.0000		14.30
21.5					
22.5					
23.5					
24.5					
25.5					
26.5					
27.5					
28.5					
29.5					
30.5					
31.5	366		0.0000		
32.5	366		0.0000		
33.5	366		0.0000		
34.5	366		0.0000		
35.5	366		0.0000		
36.5	366	366	1.0000		
37.5	209		0.0000		
38.5	209		0.0000		

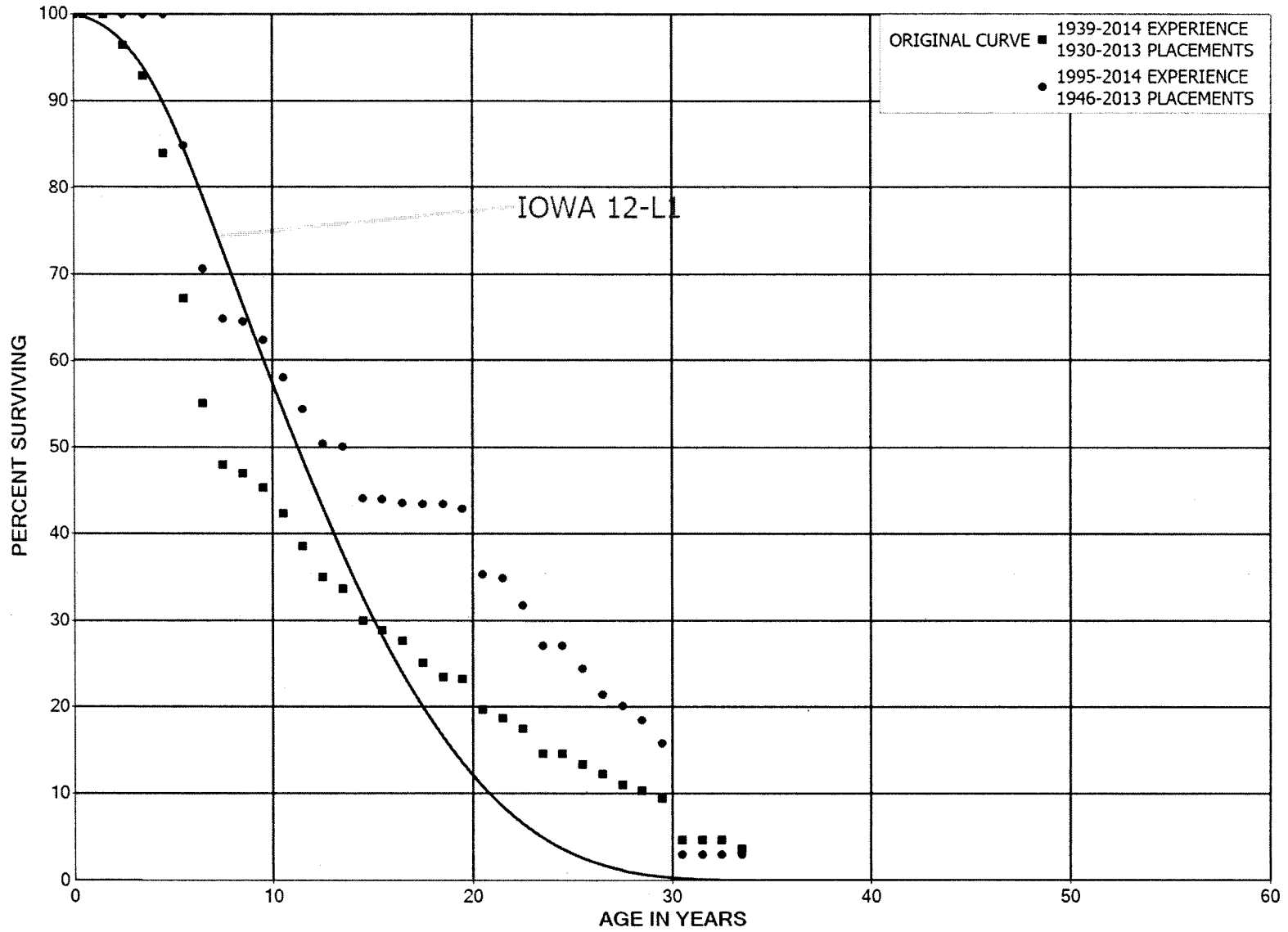
## MISSOURI AMERICAN WATER COMPANY

ACCOUNT 341.40 TRANSPORTATION EQUIPMENT - OTHER

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1957-2014			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	209		0.0000		
40.5	209		0.0000		
41.5	209		0.0000		
42.5	209	209	1.0000		
43.5					

MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 345 POWER OPERATED EQUIPMENT  
ORIGINAL AND SMOOTH SURVIVOR CURVES





## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 345 POWER OPERATED EQUIPMENT

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1930-2013			EXPERIENCE BAND 1939-2014		
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	5,899,497	860	0.0001	0.9999	100.00
0.5	5,903,081	1,059	0.0002	0.9998	99.99
1.5	5,697,508	205,605	0.0361	0.9639	99.97
2.5	5,547,225	205,592	0.0371	0.9629	96.36
3.5	5,341,633	506,891	0.0949	0.9051	92.79
4.5	4,637,486	929,437	0.2004	0.7996	83.98
5.5	3,708,381	669,955	0.1807	0.8193	67.15
6.5	2,938,168	380,411	0.1295	0.8705	55.02
7.5	2,306,359	47,223	0.0205	0.9795	47.90
8.5	2,221,383	74,750	0.0337	0.9663	46.92
9.5	2,128,487	143,556	0.0674	0.9326	45.34
10.5	1,960,114	177,105	0.0904	0.9096	42.28
11.5	1,767,076	161,104	0.0912	0.9088	38.46
12.5	1,596,893	61,073	0.0382	0.9618	34.95
13.5	1,520,671	165,629	0.1089	0.8911	33.62
14.5	1,270,851	47,819	0.0376	0.9624	29.95
15.5	1,222,050	52,871	0.0433	0.9567	28.83
16.5	1,159,771	107,600	0.0928	0.9072	27.58
17.5	1,052,171	66,743	0.0634	0.9366	25.02
18.5	961,948	8,944	0.0093	0.9907	23.43
19.5	947,640	144,904	0.1529	0.8471	23.22
20.5	788,792	40,395	0.0512	0.9488	19.67
21.5	505,442	34,393	0.0680	0.9320	18.66
22.5	397,879	64,764	0.1628	0.8372	17.39
23.5	333,114	631	0.0019	0.9981	14.56
24.5	332,484	29,531	0.0888	0.9112	14.53
25.5	265,653	22,282	0.0839	0.9161	13.24
26.5	243,371	24,151	0.0992	0.9008	12.13
27.5	202,587	11,241	0.0555	0.9445	10.93
28.5	187,169	16,764	0.0896	0.9104	10.32
29.5	170,406	86,125	0.5054	0.4946	9.40
30.5	84,281		0.0000	1.0000	4.65
31.5	84,281	621	0.0074	0.9926	4.65
32.5	83,660	17,468	0.2088	0.7912	4.61
33.5	61,347		0.0000	1.0000	3.65
34.5	59,202		0.0000	1.0000	3.65
35.5	59,202		0.0000	1.0000	3.65
36.5	58,725		0.0000	1.0000	3.65
37.5	58,725	3	0.0001	0.9999	3.65
38.5	58,722	22,056	0.3756	0.6244	3.65

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 345 POWER OPERATED EQUIPMENT

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1930-2013			EXPERIENCE BAND 1939-2014			
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	36,666	14,177	0.3866	0.6134	2.28	
40.5	22,490	438	0.0195	0.9805	1.40	
41.5	22,052		0.0000	1.0000	1.37	
42.5	21,605	9,225	0.4270	0.5730	1.37	
43.5	12,380		0.0000	1.0000	0.79	
44.5	7,639		0.0000	1.0000	0.79	
45.5	7,639		0.0000	1.0000	0.79	
46.5	6,517		0.0000	1.0000	0.79	
47.5	2,091		0.0000	1.0000	0.79	
48.5	2,091		0.0000	1.0000	0.79	
49.5	2,091		0.0000	1.0000	0.79	
50.5	2,091		0.0000	1.0000	0.79	
51.5	2,091		0.0000	1.0000	0.79	
52.5	2,091	1,443	0.6901	0.3099	0.79	
53.5	648		0.0000	1.0000	0.24	
54.5	648	401	0.6195	0.3805	0.24	
55.5	247		0.0000	1.0000	0.09	
56.5	247		0.0000	1.0000	0.09	
57.5	247	247	1.0000		0.09	
58.5						

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 345 POWER OPERATED EQUIPMENT

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1946-2013			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
0.0	1,281,573		0.0000	1.0000	100.00
0.5	1,488,045		0.0000	1.0000	100.00
1.5	1,576,705		0.0000	1.0000	100.00
2.5	1,773,052	969	0.0005	0.9995	100.00
3.5	2,055,958		0.0000	1.0000	99.95
4.5	2,076,408	313,155	0.1508	0.8492	99.95
5.5	2,009,573	338,842	0.1686	0.8314	84.87
6.5	1,592,873	130,124	0.0817	0.9183	70.56
7.5	1,273,253	5,953	0.0047	0.9953	64.80
8.5	1,276,862	41,600	0.0326	0.9674	64.49
9.5	1,234,513	86,438	0.0700	0.9300	62.39
10.5	1,137,125	70,945	0.0624	0.9376	58.02
11.5	1,050,247	77,757	0.0740	0.9260	54.40
12.5	963,412	6,933	0.0072	0.9928	50.38
13.5	1,039,051	124,451	0.1198	0.8802	50.01
14.5	832,700	1,185	0.0014	0.9986	44.02
15.5	839,662	8,057	0.0096	0.9904	43.96
16.5	822,673	2,318	0.0028	0.9972	43.54
17.5	820,355	926	0.0011	0.9989	43.42
18.5	795,950	8,944	0.0112	0.9888	43.37
19.5	781,642	138,982	0.1778	0.8222	42.88
20.5	628,716	6,933	0.0110	0.9890	35.26
21.5	379,265	34,377	0.0906	0.9094	34.87
22.5	272,165	39,913	0.1467	0.8533	31.71
23.5	232,252		0.0000	1.0000	27.06
24.5	236,993	23,475	0.0991	0.9009	27.06
25.5	176,219	21,664	0.1229	0.8771	24.38
26.5	155,677	9,836	0.0632	0.9368	21.38
27.5	133,633	11,241	0.0841	0.9159	20.03
28.5	118,216	16,535	0.1399	0.8601	18.34
29.5	101,681	83,040	0.8167	0.1833	15.78
30.5	18,641		0.0000	1.0000	2.89
31.5	18,641		0.0000	1.0000	2.89
32.5	18,641		0.0000	1.0000	2.89
33.5	15,239		0.0000	1.0000	2.89
34.5	13,594		0.0000	1.0000	2.89
35.5	13,594		0.0000	1.0000	2.89
36.5	13,117		0.0000	1.0000	2.89
37.5	13,117		0.0000	1.0000	2.89
38.5	13,363		0.0000	1.0000	2.89

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 345 POWER OPERATED EQUIPMENT

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1946-2013			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	
39.5	13,363	500	0.0374	0.9626	2.89	
40.5	12,863	438	0.0340	0.9660	2.78	
41.5	12,426		0.0000	1.0000	2.69	
42.5	11,979		0.0000	1.0000	2.69	
43.5	11,979		0.0000	1.0000	2.69	
44.5	7,238		0.0000	1.0000	2.69	
45.5	7,238		0.0000	1.0000	2.69	
46.5	6,115		0.0000	1.0000	2.69	
47.5	1,690		0.0000	1.0000	2.69	
48.5	2,091		0.0000	1.0000	2.69	
49.5	2,091		0.0000	1.0000	2.69	
50.5	2,091		0.0000	1.0000	2.69	
51.5	2,091		0.0000	1.0000	2.69	
52.5	2,091	1,443	0.6901	0.3099	2.69	
53.5	648		0.0000	1.0000	0.83	
54.5	648	401	0.6195	0.3805	0.83	
55.5	247		0.0000	1.0000	0.32	
56.5	247		0.0000	1.0000	0.32	
57.5	247	247	1.0000		0.32	
58.5						

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**PART VIII. NET SALVAGE STATISTICS**

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.10 STRUCTURES AND IMPROVEMENTS - SOURCE OF SUPPLY

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1977	175		0		0		0
1978							
1979	3,692		0		0		0
1980	355	306	86		0	306-	86-
1981							
1982							
1983	66	153	233		0	153-	233-
1984	1,886		0		0		0
1985							
1986							
1987							
1988	632	2,095	331		0	2,095-	331-
1989							
1990	21,921	5,763	26		0	5,763-	26-
1991							
1992	758	1,500	198		0	1,500-	198-
1993	150,450	55,992	37		0	55,992-	37-
1994	8,240	5,309	64	6,346	77	1,037	13
1995				831		831	
1996							
1997							
1998							
1999							
2000							
2001							
2002							
2003							
2004							
2005							
2006							
2007	230		0		0		0
2008	6,259		0		0		0
2009	1,961	4,600	235		0	4,600-	235-
2010	28,744		0	55	0	55	0
2011	2,268	233	10		0	233-	10-
2012	2,478	142	6		0	142-	6-
2013	6,240	29,360	471	2,732	44	26,627-	427-
2014	213,628	19,601	9	208	0	19,393-	9-
TOTAL	449,984	125,054	28	10,173	2	114,881-	26-

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.10 STRUCTURES AND IMPROVEMENTS - SOURCE OF SUPPLY

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
77-79	1,289		0		0		0
78-80	1,349	102	8		0	102-	8-
79-81	1,349	102	8		0	102-	8-
80-82	118	102	86		0	102-	86-
81-83	22	51	233		0	51-	233-
82-84	651	51	8		0	51-	8-
83-85	651	51	8		0	51-	8-
84-86	629		0		0		0
85-87							
86-88	211	698	331		0	698-	331-
87-89	211	698	331		0	698-	331-
88-90	7,518	2,619	35		0	2,619-	35-
89-91	7,307	1,921	26		0	1,921-	26-
90-92	7,560	2,421	32		0	2,421-	32-
91-93	50,403	19,164	38		0	19,164-	38-
92-94	53,150	20,933	39	2,115	4	18,818-	35-
93-95	52,897	20,433	39	2,392	5	18,041-	34-
94-96	2,747	1,770	64	2,392	87	623	23
95-97				277		277	
96-98							
97-99							
98-00							
99-01							
00-02							
01-03							
02-04							
03-05							
04-06							
05-07	77		0		0		0
06-08	2,163		0		0		0
07-09	2,817	1,533	54		0	1,533-	54-
08-10	12,321	1,533	12	18	0	1,515-	12-
09-11	10,991	1,611	15	18	0	1,593-	14-
10-12	11,164	125	1	18	0	107-	1-
11-13	3,662	9,912	271	911	25	9,001-	246-
12-14	74,115	16,368	22	980	1	15,388-	21-
FIVE-YEAR AVERAGE							
10-14	50,672	9,867	19	599	1	9,268-	18-

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNTS 304.20 AND 304.30 STRUCTURES AND IMPROVEMENTS

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1974	10,603	573	5	119	1	454-	4-
1975	937		0		0		0
1976	8,173	165	2		0	165-	2-
1977	6,502	611	9	1,873	29	1,262	19
1978	10,875	880	8	200	2	680-	6-
1979	17,953	936	5	466	3	470-	3-
1980	19,892	8,984	45		0	8,984-	45-
1981	2,298	19	1		0	19-	1-
1982	2,995	619	21		0	619-	21-
1983	6,215	1,058	17		0	1,058-	17-
1984	21,490	7,558	35	161	1	7,396-	34-
1985	10,377	1,100	11	23	0	1,077-	10-
1986	8,050	2,690	33	301	4	2,389-	30-
1987	11,424	10,987	96	631	6	10,356-	91-
1988	27,391	3,560	13		0	3,560-	13-
1989	22,365	16,291	73		0	16,291-	73-
1990	50,404	24,712	49		0	24,712-	49-
1991	75,895	12,606	17		0	12,606-	17-
1992	35,893	41,022	114		0	41,022-	114-
1993	335,044	144,971	43		0	144,971-	43-
1994	199,102	25,494	13		0	25,494-	13-
1995	42,058	25,961	62	210	0	25,751-	61-
1996	56,923	51,328	90		0	51,328-	90-
1997	81,045	120,571	149		0	120,571-	149-
1998	25,529	50,464	198		0	50,464-	198-
1999	9,319	6,532	70		0	6,532-	70-
2000	839,686	152,189	18		0	152,189-	18-
2001	112,723	32,000	28		0	32,000-	28-
2002	4,753	1,247	26		0	1,247-	26-
2003	7,134		0	360	5	360	5
2004	73,589		0		0		0
2005	1,726		0		0		0
2006	11,177		0		0		0
2007	9,717		0		0		0
2008	66,476	32,375	49		0	32,375-	49-
2009	19,435	3,469	18		0	3,469-	18-
2010	93,616	17,596	19	47	0	17,549-	19-
2011	69,444	10,073	15		0	10,073-	15-
2012	155,869	98,787	63	387	0	98,400-	63-



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNTS 304.20 AND 304.30 STRUCTURES AND IMPROVEMENTS

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2013	176,453	25,236	14	1,249	1	23,987-	14-
2014	2,267,199	69,063	3	180,413	8	111,351	5
TOTAL	5,007,750	1,001,728	20	186,442	4	815,286-	16-

## THREE-YEAR MOVING AVERAGES

74-76	6,571	246	4	40	1	206-	3-
75-77	5,204	259	5	624	12	366	7
76-78	8,516	552	6	691	8	139	2
77-79	11,777	809	7	847	7	37	0
78-80	16,240	3,600	22	222	1	3,378-	21-
79-81	13,381	3,313	25	156	1	3,158-	24-
80-82	8,395	3,207	38		0	3,207-	38-
81-83	3,836	565	15		0	565-	15-
82-84	10,233	3,078	30	54	1	3,024-	30-
83-85	12,694	3,238	26	61	0	3,177-	25-
84-86	13,306	3,782	28	162	1	3,621-	27-
85-87	9,951	4,926	50	318	3	4,607-	46-
86-88	15,622	5,746	37	311	2	5,435-	35-
87-89	20,393	10,279	50	210	1	10,069-	49-
88-90	33,387	14,854	44		0	14,854-	44-
89-91	49,555	17,870	36		0	17,870-	36-
90-92	54,064	26,113	48		0	26,113-	48-
91-93	148,944	66,199	44		0	66,199-	44-
92-94	190,013	70,496	37		0	70,496-	37-
93-95	192,068	65,475	34	70	0	65,405-	34-
94-96	99,361	34,261	34	70	0	34,191-	34-
95-97	60,009	65,953	110	70	0	65,883-	110-
96-98	54,499	74,121	136		0	74,121-	136-
97-99	38,631	59,189	153		0	59,189-	153-
98-00	291,511	69,729	24		0	69,729-	24-
99-01	320,576	63,574	20		0	63,574-	20-
00-02	319,054	61,812	19		0	61,812-	19-
01-03	41,537	11,082	27	120	0	10,962-	26-
02-04	28,492	416	1	120	0	296-	1-
03-05	27,483		0	120	0	120	0
04-06	28,831		0		0		0
05-07	7,540		0		0		0
06-08	29,123	10,792	37		0	10,792-	37-
07-09	31,876	11,948	37		0	11,948-	37-
08-10	59,842	17,814	30	16	0	17,798-	30-

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNTS 304.20 AND 304.30 STRUCTURES AND IMPROVEMENTS

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
09-11	60,832	10,379	17	16	0	10,364-	17-
10-12	106,310	42,152	40	145	0	42,007-	40-
11-13	133,922	44,699	33	545	0	44,153-	33-
12-14	866,507	64,362	7	60,683	7	3,679-	0
FIVE-YEAR AVERAGE							
10-14	552,516	44,151	8	36,419	7	7,732-	1-

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNTS 304.4, 304.6, 304.7 AND 304.8 STRUCTURES - GENERAL

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1974	12,160	893	7	96	1	797-	7-
1975	1,102	46	4		0	46-	4-
1976	1,730	236	14		0	236-	14-
1977	4,500	548	12	1,500	33	952	21
1978	404,883	26,100	6	262,600	65	236,500	58
1979	250		0	188	75	188	75
1980	3,119	434	14	23	1	412-	13-
1981	23,335	3,543	15		0	3,543-	15-
1982	5,025	119	2	2	0	117-	2-
1983	1,018,298	55,889	5	927,976	91	872,088	86
1984							
1985							
1986							
1987	2,827		0		0		0
1988	21,238	3,115	15		0	3,115-	15-
1989	7,432	2,000	27		0	2,000-	27-
1990	32,754		0		0		0
1991	19,211	250	1		0	250-	1-
1992	8,319	5,120	62		0	5,120-	62-
1993	25,272		0		0		0
1994	44,971	7,608	17	500	1	7,108-	16-
1995	58,566	3,250	6	500	1	2,750-	5-
1996	13,279	1,000	8		0	1,000-	8-
1997	1,100	223	20		0	223-	20-
1998	14,023	180	1	6	0	174-	1-
1999	6,817		0		0		0
2000	43,459	2,853	7		0	2,853-	7-
2001	65,159	12,489	19		0	12,489-	19-
2002	33,884	28,648	85		0	28,648-	85-
2003	127,854	2,186	2		0	2,186-	2-
2004	4,000		0		0		0
2005							
2006	36,122		0		0		0
2007	33,224		0		0		0
2008	9,129	23,628	259		0	23,628-	259-
2009	29,901	5,830	19		0	5,830-	19-
2010	32,353	6,715	21	109	0	6,607-	20-
2011	22,472	988	4		0	988-	4-
2012	33,339	65,032	195		0	65,032-	195-

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNTS 304.4, 304.6, 304.7 AND 304.8 STRUCTURES - GENERAL

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
2013	92,989	4,849	5		0	4,849-	5-
2014	301,575	54,405	18	755	0	53,651-	18-
TOTAL	2,595,672	318,178	12	1,194,255	46	876,077	34

## THREE-YEAR MOVING AVERAGES

74-76	4,997	392	8	32	1	360-	7-
75-77	2,444	277	11	500	20	223	9
76-78	137,038	8,961	7	88,033	64	79,072	58
77-79	136,544	8,883	7	88,096	65	79,214	58
78-80	136,084	8,845	6	87,604	64	78,759	58
79-81	8,901	1,326	15	70	1	1,256-	14-
80-82	10,493	1,366	13	8	0	1,357-	13-
81-83	348,886	19,850	6	309,326	89	289,476	83
82-84	341,108	18,669	5	309,326	91	290,657	85
83-85	339,433	18,630	5	309,326	91	290,696	86
84-86							
85-87	942		0		0		0
86-88	8,022	1,038	13		0	1,038-	13-
87-89	10,499	1,705	16		0	1,705-	16-
88-90	20,475	1,705	8		0	1,705-	8-
89-91	19,799	750	4		0	750-	4-
90-92	20,095	1,790	9		0	1,790-	9-
91-93	17,601	1,790	10		0	1,790-	10-
92-94	26,187	4,243	16	167	1	4,076-	16-
93-95	42,936	3,619	8	333	1	3,286-	8-
94-96	38,939	3,953	10	333	1	3,619-	9-
95-97	24,315	1,491	6	167	1	1,324-	5-
96-98	9,467	468	5	2	0	466-	5-
97-99	7,313	134	2	2	0	132-	2-
98-00	21,433	1,011	5	2	0	1,009-	5-
99-01	38,478	5,114	13		0	5,114-	13-
00-02	47,501	14,663	31		0	14,663-	31-
01-03	75,632	14,441	19		0	14,441-	19-
02-04	55,246	10,278	19		0	10,278-	19-
03-05	43,951	729	2		0	729-	2-
04-06	13,374		0		0		0
05-07	23,115		0		0		0
06-08	26,158	7,876	30		0	7,876-	30-
07-09	24,085	9,819	41		0	9,819-	41-
08-10	23,794	12,058	51	36	0	12,021-	51-

## MISSOURI AMERICAN WATER COMPANY

ACCOUNTS 304.4, 304.6, 304.7 AND 304.8 STRUCTURES - GENERAL

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
09-11	28,242	4,511	16	36	0	4,475-	16-
10-12	29,388	24,245	82	36	0	24,209-	82-
11-13	49,600	23,623	48		0	23,623-	48-
12-14	142,635	41,429	29	252	0	41,177-	29-
FIVE-YEAR AVERAGE							
10-14	96,546	26,398	27	173	0	26,225-	27-

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 306 LAKE, RIVER AND OTHER INTAKES

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1989	2,016	1,991	99		0	1,991-	99-
1990	12,888	5,417	42		0	5,417-	42-
1991	553		0		0		0
1992							
1993	3,240		0		0		0
1994	100		0		0		0
1995	752		0		0		0
1996	21,193		0		0		0
1997							
1998	6,326	933	15		0	933-	15-
1999							
2000							
2001							
2002							
2003							
2004							
2005							
2006							
2007							
2008	22	180	819		0	180-	819-
2009	167		0		0		0
2010							
2011							
2012							
2013	34,435	35,843	104	845	2	34,998-	102-
2014	69,897		0		0		0
TOTAL	151,590	44,364	29	845	1	43,519-	29-

## THREE-YEAR MOVING AVERAGES

89-91	5,152	2,469	48		0	2,469-	48-
90-92	4,480	1,806	40		0	1,806-	40-
91-93	1,264		0		0		0
92-94	1,113		0		0		0
93-95	1,364		0		0		0
94-96	7,348		0		0		0
95-97	7,315		0		0		0
96-98	9,173	311	3		0	311-	3-
97-99	2,109	311	15		0	311-	15-
98-00	2,109	311	15		0	311-	15-
99-01							

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 306 LAKE, RIVER AND OTHER INTAKES

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
00-02							
01-03							
02-04							
03-05							
04-06							
05-07							
06-08	7	60	819		0	60-	819-
07-09	63	60	95		0	60-	95-
08-10	63	60	95		0	60-	95-
09-11	56		0		0		0
10-12							
11-13	11,478	11,948	104	282	2	11,666-	102-
12-14	34,777	11,948	34	282	1	11,666-	34-
FIVE-YEAR AVERAGE							
10-14	20,866	7,169	34	169	1	7,000-	34-

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 307 WELLS AND SPRINGS

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1991	1,044		0		0		0
1992	103	200	194		0	200-	194-
1993							
1994							
1995							
1996							
1997							
1998							
1999							
2000							
2001	20,939		0		0		0
2002	42,031	1,085	3		0	1,085-	3-
2003	25,000		0		0		0
2004	1,545		0		0		0
2005							
2006							
2007							
2008	34,007		0		0		0
2009	7,800		0		0		0
2010	12,584	8,586	68		0	8,586-	68-
2011	66,093	17,285	26		0	17,285-	26-
2012	3,854	8,355	217		0	8,355-	217-
2013	79,071	236	0		0	236-	0
2014	445,648	6,505	1		0	6,505-	1-
TOTAL	739,719	42,252	6		0	42,252-	6-

## THREE-YEAR MOVING AVERAGES

91-93	382	67	17		0	67-	17-
92-94	34	67	194		0	67-	194-
93-95							
94-96							
95-97							
96-98							
97-99							
98-00							
99-01	6,980		0		0		0
00-02	20,990	362	2		0	362-	2-
01-03	29,323	362	1		0	362-	1-
02-04	22,858	362	2		0	362-	2-
03-05	8,848		0		0		0



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 307 WELLS AND SPRINGS

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
04-06	515		0		0		0
05-07							
06-08	11,336		0		0		0
07-09	13,936		0		0		0
08-10	18,130	2,862	16		0	2,862-	16-
09-11	28,826	8,624	30		0	8,624-	30-
10-12	27,510	11,408	41		0	11,408-	41-
11-13	49,673	8,625	17		0	8,625-	17-
12-14	176,191	5,032	3		0	5,032-	3-
FIVE-YEAR AVERAGE							
10-14	121,450	8,193	7		0	8,193-	7-

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 309 SUPPLY MAINS

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1974	2,756	8,604	312		0	8,604-	312-
1975							
1976							
1977	2,020	272	13		0	272-	13-
1978							
1979							
1980	900		0		0		0
1981							
1982	80		0		0		0
1983	3,945	267	7		0	267-	7-
1984	33,352	8,124	24		0	8,124-	24-
1985							
1986	860	804	93		0	804-	93-
1987	10,907	3,432	31		0	3,432-	31-
1988	7,400	2,625	35		0	2,625-	35-
1989							
1990							
1991							
1992	1,000	513	51		0	513-	51-
1993	258,414	63,198	24		0	63,198-	24-
1994	4,044	251	6		0	251-	6-
1995	32,596	6,985	21		0	6,985-	21-
1996							
1997							
1998	2,611	470	18		0	470-	18-
1999	271	452	167		0	452-	167-
2000	9,660	594	6		0	594-	6-
2001	2,926		0		0		0
2002							
2003							
2004	16,670		0		0		0
2005							
2006							
2007	2,994		0		0		0
2008	8,490	4,629	55		0	4,629-	55-
2009	3,210	329	10		0	329-	10-
2010	7,042	6,754	96	477	7	6,277-	89-
2011	7,896	4,949	63	256	3	4,693-	59-
2012	3,712	9,775	263		0	9,775-	263-

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 309 SUPPLY MAINS

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
2013	2,873	2,339	81		0	2,339-	81-
2014	32,035	165	1		0	165-	1-
TOTAL	458,666	125,531	27	734	0	124,798-	27-

## THREE-YEAR MOVING AVERAGES

74-76	919	2,868	312		0	2,868-	312-
75-77	673	90	13		0	90-	13-
76-78	673	90	13		0	90-	13-
77-79	673	90	13		0	90-	13-
78-80	300		0		0		0
79-81	300		0		0		0
80-82	327		0		0		0
81-83	1,342	89	7		0	89-	7-
82-84	12,459	2,797	22		0	2,797-	22-
83-85	12,432	2,797	22		0	2,797-	22-
84-86	11,404	2,976	26		0	2,976-	26-
85-87	3,922	1,412	36		0	1,412-	36-
86-88	6,389	2,287	36		0	2,287-	36-
87-89	6,102	2,019	33		0	2,019-	33-
88-90	2,467	875	35		0	875-	35-
89-91							
90-92	333	171	51		0	171-	51-
91-93	86,471	21,237	25		0	21,237-	25-
92-94	87,819	21,321	24		0	21,321-	24-
93-95	98,352	23,478	24		0	23,478-	24-
94-96	12,213	2,412	20		0	2,412-	20-
95-97	10,865	2,328	21		0	2,328-	21-
96-98	870	157	18		0	157-	18-
97-99	961	307	32		0	307-	32-
98-00	4,181	505	12		0	505-	12-
99-01	4,286	349	8		0	349-	8-
00-02	4,195	198	5		0	198-	5-
01-03	975		0		0		0
02-04	5,557		0		0		0
03-05	5,557		0		0		0
04-06	5,557		0		0		0
05-07	998		0		0		0
06-08	3,828	1,543	40		0	1,543-	40-
07-09	4,898	1,653	34		0	1,653-	34-
08-10	6,248	3,904	62	159	3	3,745-	60-

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 309 SUPPLY MAINS

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
09-11	6,050	4,011	66	245	4	3,766-	62-
10-12	6,217	7,159	115	245	4	6,915-	111-
11-13	4,827	5,688	118	86	2	5,602-	116-
12-14	12,873	4,093	32		0	4,093-	32-
FIVE-YEAR AVERAGE							
10-14	10,712	4,796	45	147	1	4,650-	43-

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 310.10 POWER GENERATION EQUIPMENT

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
2008	3,705		0		0		0
2009							
2010							
2011		2,309				2,309-	
2012							
2013	29,970	5,219	17		0	5,219-	17-
2014	69,603		0		0		0
TOTAL	103,278	7,528	7		0	7,528-	7-

## THREE-YEAR MOVING AVERAGES

08-10	1,235		0		0		0
09-11		770				770-	
10-12		770				770-	
11-13	9,990	2,509	25		0	2,509-	25-
12-14	33,191	1,740	5		0	1,740-	5-

## FIVE-YEAR AVERAGE

10-14	19,915	1,506	8		0	1,506-	8-
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## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 311 ELECTRIC PUMPING EQUIPMENT

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1974	66,724	4,336	6	421	1	3,915-	6-
1975	11,504	2,970	26	684	6	2,286-	20-
1976	140,150	21,285	15	217	0	21,067-	15-
1977	22,432	2,594	12	103	0	2,491-	11-
1978	39,996	12,499	31	996	2	11,503-	29-
1979	274,672	9,715	4	2,338	1	7,377-	3-
1980	14,912	2,274	15		0	2,274-	15-
1981	132,030	13,142	10	10,216	8	2,926-	2-
1982	148,510	14,689	10	6,150	4	8,539-	6-
1983	76,546	11,193	15	100	0	11,093-	14-
1984	225,626	24,369	11	24,774	11	405	0
1985	248,390	24,934	10	921	0	24,013-	10-
1986	517,609	56,710	11	7,442	1	49,268-	10-
1987	190,372	23,900	13	9,871	5	14,028-	7-
1988	282,411	42,880	15	1,273	0	41,607-	15-
1989	316,927	22,837	7		0	22,837-	7-
1990	392,591	38,456	10		0	38,456-	10-
1991	685,659	107,072	16		0	107,072-	16-
1992	239,023	48,792	20	16,200	7	32,592-	14-
1993	1,076,932	110,681	10	250	0	110,431-	10-
1994	294,816	78,606	27	203,903	69	125,297	43
1995	262,547	98,133	37	29	0	98,105-	37-
1996	185,029	41,585	22		0	41,585-	22-
1997	139,311	31,027	22		0	31,027-	22-
1998	438,927	83,959	19		0	83,959-	19-
1999	226,264	41,236	18	1,082	0	40,154-	18-
2000	1,368,195	2,488	0		0	2,488-	0
2001	156,150	29,469	19		0	29,469-	19-
2002	4,599		0		0		0
2003	64,751	20,324	31	723	1	19,601-	30-
2004	193,740		0		0		0
2005	29,867		0		0		0
2006	101,517		0		0		0
2007	43,293		0		0		0
2008	358,624	152,190	42		0	152,190-	42-
2009	318,642	87,714	28	46	0	87,668-	28-
2010	139,727	68,495	49	319	0	68,177-	49-
2011	142,904	17,969	13	755	1	17,214-	12-
2012	56,547	94,793	168	1,804	3	92,988-	164-

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 311 ELECTRIC PUMPING EQUIPMENT

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2013	125,891	73,997	59	16,090	13	57,907-	46-
2014	3,955,961	49,498	1	2,462	0	47,036-	1-
TOTAL	13,710,316	1,566,809	11	309,169	2	1,257,640-	9-

## THREE-YEAR MOVING AVERAGES

74-76	72,793	9,530	13	441	1	9,089-	12-
75-77	58,028	8,950	15	335	1	8,615-	15-
76-78	67,526	12,126	18	439	1	11,687-	17-
77-79	112,367	8,269	7	1,146	1	7,124-	6-
78-80	109,860	8,162	7	1,111	1	7,051-	6-
79-81	140,538	8,377	6	4,185	3	4,192-	3-
80-82	98,484	10,035	10	5,455	6	4,579-	5-
81-83	119,029	13,008	11	5,489	5	7,519-	6-
82-84	150,227	16,750	11	10,342	7	6,409-	4-
83-85	183,520	20,165	11	8,599	5	11,567-	6-
84-86	330,542	35,338	11	11,046	3	24,292-	7-
85-87	318,790	35,181	11	6,078	2	29,103-	9-
86-88	330,131	41,163	12	6,195	2	34,968-	11-
87-89	263,237	29,872	11	3,715	1	26,158-	10-
88-90	330,643	34,724	11	424	0	34,300-	10-
89-91	465,059	56,122	12		0	56,122-	12-
90-92	439,091	64,774	15	5,400	1	59,374-	14-
91-93	667,204	88,848	13	5,483	1	83,365-	12-
92-94	536,923	79,360	15	73,451	14	5,909-	1-
93-95	544,765	95,807	18	68,061	12	27,746-	5-
94-96	247,464	72,775	29	67,977	27	4,797-	2-
95-97	195,629	56,915	29	10	0	56,905-	29-
96-98	254,422	52,190	21		0	52,190-	21-
97-99	268,167	52,074	19	361	0	51,713-	19-
98-00	677,795	42,561	6	361	0	42,200-	6-
99-01	583,536	24,398	4	361	0	24,037-	4-
00-02	509,648	10,652	2		0	10,652-	2-
01-03	75,167	16,598	22	241	0	16,357-	22-
02-04	87,697	6,775	8	241	0	6,534-	7-
03-05	96,119	6,775	7	241	0	6,534-	7-
04-06	108,374		0		0		0
05-07	58,225		0		0		0
06-08	167,811	50,730	30		0	50,730-	30-
07-09	240,186	79,968	33	15	0	79,953-	33-
08-10	272,331	102,800	38	122	0	102,678-	38-

MISSOURI AMERICAN WATER COMPANY  
ACCOUNT 311 ELECTRIC PUMPING EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
09-11	200,424	58,060	29	373	0	57,686-	29-
10-12	113,059	60,419	53	959	1	59,460-	53-
11-13	108,447	62,253	57	6,216	6	56,036-	52-
12-14	1,379,466	72,763	5	6,785	0	65,977-	5-
FIVE-YEAR AVERAGE							
10-14	884,206	60,950	7	4,286	0	56,665-	6-



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 320 WATER TREATMENT EQUIPMENT

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1974	18,073	5,853	32	523	3	5,330-	29-
1975	56,281	1,193	2		0	1,193-	2-
1976	19,376	1,310	7	104	1	1,205-	6-
1977	19,055	1,416	7	438	2	978-	5-
1978	41,887	6,556	16		0	6,556-	16-
1979	32,180	6,200	19		0	6,200-	19-
1980	66,222	7,635	12		0	7,635-	12-
1981	32,072	4,926	15		0	4,926-	15-
1982	19,553	6,872	35		0	6,872-	35-
1983	77,999	6,906	9	375	0	6,531-	8-
1984	66,059	10,099	15	11,921	18	1,822	3
1985	73,929	39,245	53	502	1	38,743-	52-
1986	110,994	20,572	19	250	0	20,322-	18-
1987	49,592	10,230	21	1	0	10,229-	21-
1988	114,392	9,080	8		0	9,080-	8-
1989	31,543	6,923	22	268	1	6,655-	21-
1990	83,728	30,492	36		0	30,492-	36-
1991	172,694	25,193	15		0	25,193-	15-
1992	217,071	18,961	9		0	18,961-	9-
1993	1,043,307	326,484	31		0	326,484-	31-
1994	250,931	37,073	15		0	37,073-	15-
1995	162,945	165,390	102	398	0	164,992-	101-
1996	220,821	175,667	80		0	175,667-	80-
1997	212,526	316,918	149		0	316,918-	149-
1998	68,819	31,742	46		0	31,742-	46-
1999	11,493	17,977	156		0	17,977-	156-
2000	598,442		0		0		0
2001	27,352	38,178	140		0	38,178-	140-
2002	29,232	79,169	271		0	79,169-	271-
2003	250,204	39,973	16		0	39,973-	16-
2004	592,827	15,403-	3-		0	15,403	3
2005	115,652		0		0		0
2006	48,666		0		0		0
2007	4,607		0		0		0
2008	275,651	186,955	68		0	186,955-	68-
2009	288,011	113,454	39	4,977	2	108,476-	38-
2010	341,034	272,516	80	447	0	272,069-	80-
2011	604,435	522,328	86	318	0	522,010-	86-
2012	260,317	303,197	116	1,604	1	301,593-	116-

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 320 WATER TREATMENT EQUIPMENT

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2013	499,593	226,965	45	2,825	1	224,139-	45-
2014	6,423,850	504,725	8	206,792	3	297,932-	5-
TOTAL	13,633,413	3,562,968	26	231,743	2	3,331,225-	24-

## THREE-YEAR MOVING AVERAGES

74-76	31,243	2,785	9	209	1	2,576-	8-
75-77	31,571	1,306	4	181	1	1,125-	4-
76-78	26,773	3,094	12	181	1	2,913-	11-
77-79	31,041	4,724	15	146	0	4,578-	15-
78-80	46,763	6,797	15		0	6,797-	15-
79-81	43,492	6,254	14		0	6,254-	14-
80-82	39,282	6,478	16		0	6,478-	16-
81-83	43,208	6,234	14	125	0	6,109-	14-
82-84	54,537	7,959	15	4,099	8	3,860-	7-
83-85	72,662	18,750	26	4,266	6	14,484-	20-
84-86	83,661	23,305	28	4,224	5	19,081-	23-
85-87	78,172	23,349	30	251	0	23,098-	30-
86-88	91,659	13,294	15	84	0	13,211-	14-
87-89	65,175	8,745	13	90	0	8,655-	13-
88-90	76,554	15,499	20	89	0	15,409-	20-
89-91	95,988	20,869	22	89	0	20,780-	22-
90-92	157,831	24,882	16		0	24,882-	16-
91-93	477,691	123,546	26		0	123,546-	26-
92-94	503,770	127,506	25		0	127,506-	25-
93-95	485,728	176,315	36	133	0	176,183-	36-
94-96	211,566	126,043	60	133	0	125,911-	60-
95-97	198,764	219,325	110	133	0	219,192-	110-
96-98	167,389	174,776	104		0	174,776-	104-
97-99	97,613	122,212	125		0	122,212-	125-
98-00	226,251	16,573	7		0	16,573-	7-
99-01	212,429	18,718	9		0	18,718-	9-
00-02	218,342	39,116	18		0	39,116-	18-
01-03	102,263	52,440	51		0	52,440-	51-
02-04	290,754	34,580	12		0	34,580-	12-
03-05	319,561	8,190	3		0	8,190-	3-
04-06	252,382	5,134-	2-		0	5,134	2
05-07	56,308		0		0		0
06-08	109,641	62,318	57		0	62,318-	57-
07-09	189,423	100,136	53	1,659	1	98,477-	52-
08-10	301,565	190,975	63	1,808	1	189,167-	63-

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 320 WATER TREATMENT EQUIPMENT

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
09-11	411,160	302,766	74	1,914	0	300,852-	73-
10-12	401,929	366,014	91	789	0	365,224-	91-
11-13	454,782	350,830	77	1,582	0	349,248-	77-
12-14	2,394,587	344,962	14	70,407	3	274,555-	11-
FIVE-YEAR AVERAGE							
10-14	1,625,846	365,946	23	42,397	3	323,549-	20-

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 330 DISTRIBUTION RESERVOIRS AND STANDPIPES

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1974	3,219		0		0		0
1975	34,312	650	2		0	650-	2-
1976	1,341		0		0		0
1977	46,872	2,905	6		0	2,905-	6-
1978	21,700	1,187	5		0	1,187-	5-
1979	221,759	38,440	17	3,000	1	35,440-	16-
1980	96,319	37,405	39	1,556	2	35,849-	37-
1981	41,687	40	0		0	40-	0
1982	50		0		0		0
1983	32,390	201	1		0	201-	1-
1984							
1985							
1986							
1987	39,732	6,310	16		0	6,310-	16-
1988	5,100		0		0		0
1989	18,111	3,514	19		0	3,514-	19-
1990	50,774	152,910	301	1,339	3	151,571-	299-
1991	387,103	556,164	144		0	556,164-	144-
1992	13,484	9,358	69		0	9,358-	69-
1993	3,791		0		0		0
1994	2,524	30	1		0	30-	1-
1995	83,105	74,478	90		0	74,478-	90-
1996	2,837	147	5		0	147-	5-
1997	885	1,950	220		0	1,950-	220-
1998	194,360	419,180	216		0	419,180-	216-
1999	91,630	122,160	133		0	122,160-	133-
2000	11,560		0		0		0
2001	30,448		0		0		0
2002	1,115		0		0		0
2003	10,202	46,000	451		0	46,000-	451-
2004				30,371		30,371	
2005							
2006	6,174		0		0		0
2007	923		0		0		0
2008	30,858	6,409	21		0	6,409-	21-
2009	2,687	514	19		0	514-	19-
2010	10,065	4,817	48		0	4,817-	48-
2011	93,736	30,844	33		0	30,844-	33-
2012	3,087	10,767	349		0	10,767-	349-

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 330 DISTRIBUTION RESERVOIRS AND STANDPIPES

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2013	21,536	5,982	28		0	5,982-	28-
2014	914,187	29,534	3	43,414	5	13,880	2
TOTAL	2,529,663	1,561,895	62	79,680	3	1,482,215-	59-

## THREE-YEAR MOVING AVERAGES

74-76	12,957	217	2		0	217-	2-
75-77	27,508	1,185	4		0	1,185-	4-
76-78	23,304	1,364	6		0	1,364-	6-
77-79	96,777	14,177	15	1,000	1	13,177-	14-
78-80	113,259	25,677	23	1,519	1	24,158-	21-
79-81	119,922	25,295	21	1,519	1	23,776-	20-
80-82	46,019	12,482	27	519	1	11,963-	26-
81-83	24,709	80	0		0	80-	0
82-84	10,813	67	1		0	67-	1-
83-85	10,797	67	1		0	67-	1-
84-86							
85-87	13,244	2,103	16		0	2,103-	16-
86-88	14,944	2,103	14		0	2,103-	14-
87-89	20,981	3,274	16		0	3,274-	16-
88-90	24,661	52,141	211	446	2	51,695-	210-
89-91	151,996	237,529	156	446	0	237,083-	156-
90-92	150,454	239,477	159	446	0	239,031-	159-
91-93	134,792	188,507	140		0	188,507-	140-
92-94	6,600	3,129	47		0	3,129-	47-
93-95	29,807	24,836	83		0	24,836-	83-
94-96	29,489	24,885	84		0	24,885-	84-
95-97	28,942	25,525	88		0	25,525-	88-
96-98	66,028	140,426	213		0	140,426-	213-
97-99	95,625	181,097	189		0	181,097-	189-
98-00	99,184	180,447	182		0	180,447-	182-
99-01	44,546	40,720	91		0	40,720-	91-
00-02	14,374		0		0		0
01-03	13,922	15,333	110		0	15,333-	110-
02-04	3,772	15,333	406	10,124	268	5,210-	138-
03-05	3,401	15,333	451	10,124	298	5,210-	153-
04-06	2,058		0	10,124	492	10,124	492
05-07	2,366		0		0		0
06-08	12,652	2,136	17		0	2,136-	17-
07-09	11,489	2,308	20		0	2,308-	20-
08-10	14,537	3,913	27		0	3,913-	27-

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 330 DISTRIBUTION RESERVOIRS AND STANDPIPES

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
09-11	35,496	12,058	34		0	12,058-	34-
10-12	35,629	15,476	43		0	15,476-	43-
11-13	39,453	15,864	40		0	15,864-	40-
12-14	312,937	15,428	5	14,471	5	956-	0
FIVE-YEAR AVERAGE							
10-14	208,522	16,389	8	8,683	4	7,706-	4-

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 331 MAINS - TRANSMISSION AND DISTRIBUTION

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1974	56,556	16,980	30	3,409	6	13,571-	24-
1975	39,930	20,063	50	3,213	8	16,850-	42-
1976	37,968	15,960	42	2,218	6	13,742-	36-
1977	40,815	25,200	62	3,220	8	21,980-	54-
1978	89,098	19,967	22	2,429	3	17,538-	20-
1979	121,708	37,588	31	2,761	2	34,827-	29-
1980	88,338	63,046	71	10,985	12	52,062-	59-
1981	229,655	62,924	27	4,244	2	58,680-	26-
1982	114,613	49,020	43	5,052	4	43,968-	38-
1983	297,327	76,705	26	2,715	1	73,990-	25-
1984	123,212	66,618	54	3,308	3	63,310-	51-
1985	337,250	97,814	29	6,079	2	91,734-	27-
1986	156,938	81,591	52	2,660	2	78,931-	50-
1987	329,690	164,284	50	3,427	1	160,857-	49-
1988	418,887	152,959	37	7,293	2	145,667-	35-
1989	480,746	179,075	37	19,166	4	159,909-	33-
1990	372,647	155,997	42	2,503	1	153,494-	41-
1991	598,747	198,583	33	2,778	0	195,805-	33-
1992	398,614	228,613	57	9,265	2	219,347-	55-
1993	909,929	362,412	40	6,844	1	355,568-	39-
1994	522,281	378,525	72	36,042	7	342,484-	66-
1995	436,187	384,195	88	4,862	1	379,332-	87-
1996	691,879	427,704	62	8,960	1	418,745-	61-
1997	496,435	330,656	67	4,943	1	325,713-	66-
1998	1,386,437	664,022	48	24,186	2	639,836-	46-
1999	1,486,634	463,688	31	299,986	20	163,703-	11-
2000	126,009	25,724	20	1,669	1	24,055-	19-
2001	2,795,226	828,808	30	7,226	0	821,582-	29-
2002	1,819,510	1,064,198	58		0	1,064,198-	58-
2003	1,272,575	577,209	45	1,475-	0	578,684-	45-
2004	1,479,188	8,449	1		0	8,449-	1-
2005	1,865,307		0		0		0
2006	1,046,485		0	1,808	0	1,808	0
2007	577,409		0		0		0
2008	5,781,111	65,415	1	894	0	64,521-	1-
2009	2,637,693	102,846	4	3,611	0	99,235-	4-
2010	2,400,196	790,762	33	2,775	0	787,987-	33-
2011	5,012,751	1,369,195	27	2,745	0	1,366,450-	27-
2012	3,525,428	2,353,756	67	2,726	0	2,351,030-	67-

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 331 MAINS - TRANSMISSION AND DISTRIBUTION

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2013	3,450,562	2,012,421	58	600	0	2,011,821-	58-
2014	1,091,793	1,101,506	101	15,181	1	1,086,325-	99-
TOTAL	45,143,761	15,024,478	33	520,304	1	14,504,174-	32-

## THREE-YEAR MOVING AVERAGES

74-76	44,818	17,668	39	2,947	7	14,721-	33-
75-77	39,571	20,408	52	2,884	7	17,524-	44-
76-78	55,960	20,376	36	2,622	5	17,753-	32-
77-79	83,874	27,585	33	2,803	3	24,782-	30-
78-80	99,715	40,200	40	5,392	5	34,809-	35-
79-81	146,567	54,519	37	5,996	4	48,523-	33-
80-82	144,202	58,330	40	6,760	5	51,570-	36-
81-83	213,865	62,883	29	4,004	2	58,879-	28-
82-84	178,384	64,114	36	3,692	2	60,423-	34-
83-85	252,596	80,379	32	4,034	2	76,345-	30-
84-86	205,800	82,008	40	4,016	2	77,992-	38-
85-87	274,626	114,563	42	4,055	1	110,508-	40-
86-88	301,838	132,945	44	4,460	1	128,485-	43-
87-89	409,774	165,439	40	9,962	2	155,478-	38-
88-90	424,093	162,677	38	9,654	2	153,023-	36-
89-91	484,047	177,885	37	8,149	2	169,736-	35-
90-92	456,669	194,397	43	4,849	1	189,549-	42-
91-93	635,763	263,203	41	6,296	1	256,907-	40-
92-94	610,274	323,183	53	17,383	3	305,800-	50-
93-95	622,799	375,044	60	15,916	3	359,128-	58-
94-96	550,116	396,808	72	16,621	3	380,187-	69-
95-97	541,501	380,852	70	6,255	1	374,597-	69-
96-98	858,250	474,127	55	12,696	1	461,431-	54-
97-99	1,123,169	486,122	43	109,705	10	376,417-	34-
98-00	999,693	384,478	38	108,614	11	275,865-	28-
99-01	1,469,290	439,407	30	102,960	7	336,447-	23-
00-02	1,580,248	639,577	40	2,965	0	636,612-	40-
01-03	1,962,437	823,405	42	1,917	0	821,488-	42-
02-04	1,523,757	549,952	36	492-	0	550,444-	36-
03-05	1,539,023	195,219	13	492-	0	195,711-	13-
04-06	1,463,660	2,816	0	603	0	2,214-	0
05-07	1,163,067		0	603	0	603	0
06-08	2,468,335	21,805	1	901	0	20,904-	1-
07-09	2,998,738	56,087	2	1,502	0	54,586-	2-
08-10	3,606,333	319,674	9	2,426	0	317,248-	9-



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 331 MAINS - TRANSMISSION AND DISTRIBUTION

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
09-11	3,350,213	754,268	23	3,043	0	751,224-	22-
10-12	3,646,125	1,504,571	41	2,748	0	1,501,823-	41-
11-13	3,996,247	1,911,791	48	2,023	0	1,909,767-	48-
12-14	2,689,261	1,822,561	68	6,169	0	1,816,392-	68-
FIVE-YEAR AVERAGE							
10-14	3,096,146	1,525,528	49	4,805	0	1,520,723-	49-

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 332 MAINS - FIRE

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2007	578		0		0		0
2008	5,698		0		0		0
2009	394		6	2		6-	2-
2010		3,858				3,858-	
2011							
2012							
2013	18		1		0		1-
2014	573	4,270-	746-		0	4,270	746
TOTAL	7,260	407-	6-		0	407	6

## THREE-YEAR MOVING AVERAGES

07-09	2,223	2	0		0	2-	0
08-10	2,031	1,288	63		0	1,288-	63-
09-11	131	1,288	981		0	1,288-	981-
10-12		1,286				1,286-	
11-13	6		1		0		1-
12-14	197	1,423-	723-		0	1,423	723

## FIVE-YEAR AVERAGE

10-14	118	82-	70-		0	82	70
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## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 333 SERVICES

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1974	264	169	64	37	14	132-	50-
1975							
1976	688	517	75	76	11	441-	64-
1977							
1978							
1979							
1980	204	20	10		0	20-	10-
1981							
1982							
1983	2,533	101	4		0	101-	4-
1984							
1985							
1986							
1987	6,818	6,290	92		0	6,290-	92-
1988	10,560	5,622	53	381	4	5,241-	50-
1989	10,990	12,364	112		0	12,364-	112-
1990	18,943	5,212	28		0	5,212-	28-
1991	28,454	12,046	42		0	12,046-	42-
1992	23,403	5,432	23		0	5,432-	23-
1993	37,907	8,602	23	750	2	7,852-	21-
1994	22,559	9,029	40		0	9,029-	40-
1995	21,475	7,932	37	1,700	8	6,232-	29-
1996	43,363	32,845	76	3,459	8	29,385-	68-
1997	29,525	47,521	161		0	47,521-	161-
1998	30,752	30,926	101		0	30,926-	101-
1999	8,556	80,642	943	3,345	39	77,297-	903-
2000	18,985	127,129	670	9,507	50	117,622-	620-
2001	61,575	120,680	196	3,812	6	116,868-	190-
2002	4,796	150,711		795	17	149,916-	
2003	16,350	175,161		1,500	9	173,661-	
2004	40,944	8,171	20	9,022	22	851	2
2005	4,327		0	3,322	77	3,322	77
2006	12,105		0	5,049	42	5,049	42
2007	14,092		0		0		0
2008	616,903	159,262	26		0	159,262-	26-
2009	286,483	66,252	23	2,458	1	63,794-	22-
2010	50,318	103,200	205	640	1	102,560-	204-
2011	60,973	198,750	326	5,219	9	193,531-	317-
2012	37,085	250,959	677	175	0	250,784-	676-

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 333 SERVICES

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2013	134,757	217,563	161	118	0	217,446-	161-
2014	184,897	233,970	127	1,603	1	232,367-	126-
TOTAL	1,841,582	2,077,074	113	52,967	3	2,024,106-	110-

## THREE-YEAR MOVING AVERAGES

74-76	317	229	72	38	12	191-	60-
75-77	229	172	75	25	11	147-	64-
76-78	229	172	75	25	11	147-	64-
77-79							
78-80	68	7	10		0	7-	10-
79-81	68	7	10		0	7-	10-
80-82	68	7	10		0	7-	10-
81-83	844	34	4		0	34-	4-
82-84	844	34	4		0	34-	4-
83-85	844	34	4		0	34-	4-
84-86							
85-87	2,273	2,097	92		0	2,097-	92-
86-88	5,793	3,971	69	127	2	3,844-	66-
87-89	9,456	8,092	86	127	1	7,965-	84-
88-90	13,498	7,733	57	127	1	7,605-	56-
89-91	19,462	9,874	51		0	9,874-	51-
90-92	23,600	7,563	32		0	7,563-	32-
91-93	29,921	8,693	29	250	1	8,443-	28-
92-94	27,956	7,688	27	250	1	7,438-	27-
93-95	27,314	8,521	31	817	3	7,704-	28-
94-96	29,132	16,602	57	1,720	6	14,882-	51-
95-97	31,454	29,432	94	1,720	5	27,713-	88-
96-98	34,546	37,097	107	1,153	3	35,944-	104-
97-99	22,944	53,029	231	1,115	5	51,915-	226-
98-00	19,431	79,565	409	4,284	22	75,282-	387-
99-01	29,705	109,484	369	5,555	19	103,929-	350-
00-02	28,452	132,840	467	4,705	17	128,135-	450-
01-03	27,573	148,851	540	2,036	7	146,815-	532-
02-04	20,697	111,348	538	3,772	18	107,575-	520-
03-05	20,540	61,110	298	4,615	22	56,496-	275-
04-06	19,125	2,724	14	5,798	30	3,074	16
05-07	10,174		0	2,791	27	2,791	27
06-08	214,366	53,087	25	1,683	1	51,404-	24-
07-09	305,826	75,171	25	819	0	74,352-	24-
08-10	317,901	109,571	34	1,032	0	108,539-	34-

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 333 SERVICES

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
09-11	132,591	122,734	93	2,772	2	119,962-	90-
10-12	49,459	184,303	373	2,011	4	182,291-	369-
11-13	77,605	222,424	287	1,837	2	220,587-	284-
12-14	118,913	234,164	197	632	1	233,532-	196-
FIVE-YEAR AVERAGE							
10-14	93,606	200,888	215	1,551	2	199,337-	213-

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 334 METERS AND METER INSTALLATIONS

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1974	29,055	1,206	4	13,096	45	11,890	41
1975	30,543	1,534	5	11,190	37	9,656	32
1976	34,298	1,452	4	1,306	4	147-	0
1977	27,843	2,230	8	9,255	33	7,026	25
1978	51,453	3,761	7	15,354	30	11,593	23
1979	45,951	5,986	13	21,012	46	15,026	33
1980	47,161	4,168	9	17,122	36	12,954	27
1981	30,480	4,300	14	12,140	40	7,840	26
1982	33,104	4,493	14	9,455	29	4,963	15
1983	24,065	4,442	18	7,393	31	2,951	12
1984	21,174	4,215	20	125	1	4,090-	19-
1985	19,809	2,184	11	4,663	24	2,479	13
1986	23,325	2,383	10	4,797	21	2,414	10
1987	176,508	11,370	6	16,563	9	5,192	3
1988	156,233	11,002	7	13,043	8	2,041	1
1989	170,981	12,727	7	15,522	9	2,795	2
1990	179,941	15,806	9	29,359	16	13,552	8
1991	215,854	22,009	10	23,973	11	1,964	1
1992	218,302	18,369	8	34,965	16	16,596	8
1993	345,768	12,344	4	33,732	10	21,387	6
1994	240,277	20,950	9	19,178	8	1,772-	1-
1995	295,466	20,202	7	33,742	11	13,541	5
1996	383,320	33,563	9	33,052	9	511-	0
1997	415,177	27,075	7	30,026	7	2,951	1
1998	347,568	27,613	8	28,412	8	798	0
1999	221,045	13,404	6	23,123	10	9,719	4
2000	73,018	1-	0		0	1	0
2001	52,634	4,061	8	20,233	38	16,172	31
2002	765,044	536	0	24,951	3	24,415	3
2003	1,033,741	371	0	9,336	1	8,965	1
2004	689,607		0	22,078	3	22,078	3
2005	217,728		0	21,286	10	21,286	10
2006	635,415		0	51,610	8	51,610	8
2007	314,184		0	71,755	23	71,755	23
2008	1,669,285	15,292	1	36,599	2	21,307	1
2009	933,193	75,481	8	505,970	54	430,489	46
2010	775,319	127,671	16	127,253	16	419-	0
2011	866,618	1,262,765	146	153,531	18	1,109,235-	128-
2012	1,015,097	1,003,130	99	162,473	16	840,657-	83-

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 334 METERS AND METER INSTALLATIONS

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2013	737,926	673,285	91	96,545	13	576,740-	78-
2014	969,634	1,122,517	116	191,773	20	930,744-	96-
TOTAL	14,533,143	4,573,899	31	1,956,991	13	2,616,907-	18-

## THREE-YEAR MOVING AVERAGES

74-76	31,298	1,397	4	8,531	27	7,133	23
75-77	30,895	1,739	6	7,250	23	5,512	18
76-78	37,865	2,481	7	8,638	23	6,157	16
77-79	41,749	3,992	10	15,207	36	11,215	27
78-80	48,188	4,638	10	17,830	37	13,191	27
79-81	41,197	4,818	12	16,758	41	11,940	29
80-82	36,915	4,320	12	12,906	35	8,586	23
81-83	29,216	4,412	15	9,663	33	5,251	18
82-84	26,114	4,383	17	5,658	22	1,275	5
83-85	21,682	3,614	17	4,060	19	447	2
84-86	21,436	2,928	14	3,195	15	268	1
85-87	73,214	5,313	7	8,674	12	3,362	5
86-88	118,688	8,252	7	11,468	10	3,216	3
87-89	167,907	11,700	7	15,043	9	3,343	2
88-90	169,051	13,179	8	19,308	11	6,129	4
89-91	188,925	16,847	9	22,951	12	6,104	3
90-92	204,699	18,728	9	29,432	14	10,704	5
91-93	259,975	17,574	7	30,890	12	13,316	5
92-94	268,116	17,221	6	29,291	11	12,070	5
93-95	293,837	17,832	6	28,884	10	11,052	4
94-96	306,354	24,905	8	28,657	9	3,752	1
95-97	364,654	26,947	7	32,273	9	5,327	1
96-98	382,022	29,417	8	30,497	8	1,079	0
97-99	327,930	22,697	7	27,187	8	4,490	1
98-00	213,877	13,672	6	17,178	8	3,506	2
99-01	115,566	5,821	5	14,452	13	8,631	7
00-02	296,899	1,532	1	15,061	5	13,529	5
01-03	617,140	1,656	0	18,173	3	16,517	3
02-04	829,464	302	0	18,788	2	18,486	2
03-05	647,025	124	0	17,567	3	17,443	3
04-06	514,250		0	31,658	6	31,658	6
05-07	389,109		0	48,217	12	48,217	12
06-08	872,962	5,097	1	53,321	6	48,224	6
07-09	972,221	30,258	3	204,775	21	174,517	18
08-10	1,125,932	72,815	6	223,274	20	150,459	13

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 334 METERS AND METER INSTALLATIONS

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
09-11	858,377	488,639	57	262,251	31	226,388-	26-
10-12	885,678	797,855	90	147,752	17	650,103-	73-
11-13	873,214	979,727	112	137,516	16	842,210-	96-
12-14	907,552	932,977	103	150,264	17	782,714-	86-
FIVE-YEAR AVERAGE							
10-14	872,919	837,874	96	146,315	17	691,559-	79-



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 335 FIRE HYDRANTS

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1974	34,923	13,390	38	10,537	30	2,853-	8-
1975	27,286	15,952	58	9,205	34	6,747-	25-
1976	18,047	9,690	54	5,881	33	3,809-	21-
1977	30,195	18,939	63	11,516	38	7,423-	25-
1978	29,980	15,697	52	6,864	23	8,833-	29-
1979	22,142	13,705	62	5,327	24	8,378-	38-
1980	27,564	17,785	65	9,489	34	8,297-	30-
1981	50,878	25,618	50	16,262	32	9,355-	18-
1982	31,808	27,752	87	8,343	26	19,409-	61-
1983	50,237	27,807	55	8,944	18	18,863-	38-
1984	56,839	24,500	43	13,847	24	10,653-	19-
1985	47,528	44,542	94	10,614	22	33,928-	71-
1986	41,091	28,826	70	10,173	25	18,652-	45-
1987	76,991	74,723	97	17,523	23	57,200-	74-
1988	93,984	60,869	65	16,236	17	44,632-	47-
1989	96,775	53,495	55	22,778	24	30,716-	32-
1990	67,619	65,264	97	16,619	25	48,645-	72-
1991	126,720	67,165	53	18,068	14	49,097-	39-
1992	50,826	55,972	110	10,097	20	45,875-	90-
1993	117,535	96,526	82	14,989	13	81,537-	69-
1994	71,742	69,593	97	13,693	19	55,900-	78-
1995	96,860	92,356	95	18,265	19	74,091-	76-
1996	96,927	89,680	93	17,393	18	72,287-	75-
1997	137,821	62,984	46	19,017	14	43,966-	32-
1998	195,548	95,185	49	25,575	13	69,609-	36-
1999	230,021	72,094	31	16,542	7	55,552-	24-
2000	15,128	7,566	50	10,659	70	3,093	20
2001	470,084	119,173	25	10,480	2	108,693-	23-
2002	521,830	72,865	14	4,041	1	68,824-	13-
2003	472,321	55,134	12	41	0	55,094-	12-
2004	372,438	12,456	3		0	12,456-	3-
2005	347,581		0		0		0
2006	390,133		0		0		0
2007	225,555		0		0		0
2008	464,682	19,725	4	11	0	19,714-	4-
2009	365,498	36,378	10	3,092	1	33,286-	9-
2010	301,204	92,658	31		0	92,658-	31-
2011	393,551	204,180	52		0	204,180-	52-
2012	265,993	295,633	111		0	295,633-	111-

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 335 FIRE HYDRANTS

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2013	341,837	261,292	76		0	261,292-	76-
2014	159,987	110,605	69	123	0	110,481-	69-
TOTAL	7,035,707	2,527,772	36	382,245	5	2,145,527-	30-

## THREE-YEAR MOVING AVERAGES

74-76	26,752	13,011	49	8,541	32	4,470-	17-
75-77	25,176	14,861	59	8,867	35	5,993-	24-
76-78	26,074	14,775	57	8,087	31	6,688-	26-
77-79	27,439	16,113	59	7,902	29	8,211-	30-
78-80	26,562	15,729	59	7,227	27	8,502-	32-
79-81	33,528	19,036	57	10,359	31	8,677-	26-
80-82	36,750	23,718	65	11,365	31	12,354-	34-
81-83	44,308	27,059	61	11,183	25	15,876-	36-
82-84	46,295	26,686	58	10,378	22	16,308-	35-
83-85	51,535	32,283	63	11,135	22	21,148-	41-
84-86	48,486	32,623	67	11,544	24	21,078-	43-
85-87	55,203	49,363	89	12,770	23	36,594-	66-
86-88	70,689	54,806	78	14,644	21	40,162-	57-
87-89	89,250	63,029	71	18,846	21	44,183-	50-
88-90	86,126	59,876	70	18,545	22	41,331-	48-
89-91	97,038	61,974	64	19,155	20	42,819-	44-
90-92	81,722	62,800	77	14,928	18	47,872-	59-
91-93	98,360	73,221	74	14,385	15	58,836-	60-
92-94	80,034	74,030	92	12,926	16	61,104-	76-
93-95	95,379	86,158	90	15,649	16	70,509-	74-
94-96	88,510	83,876	95	16,450	19	67,426-	76-
95-97	110,536	81,673	74	18,225	16	63,448-	57-
96-98	143,432	82,616	58	20,662	14	61,954-	43-
97-99	187,796	76,754	41	20,378	11	56,376-	30-
98-00	146,899	58,282	40	17,592	12	40,690-	28-
99-01	238,411	66,278	28	12,560	5	53,717-	23-
00-02	335,681	66,535	20	8,393	3	58,142-	17-
01-03	488,078	82,391	17	4,854	1	77,537-	16-
02-04	455,530	46,819	10	1,361	0	45,458-	10-
03-05	397,446	22,530	6	14	0	22,517-	6-
04-06	370,050	4,152	1		0	4,152-	1-
05-07	321,089		0		0		0
06-08	360,123	6,575	2	4	0	6,571-	2-
07-09	351,912	18,701	5	1,034	0	17,667-	5-
08-10	377,128	49,587	13	1,034	0	48,553-	13-

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 335 FIRE HYDRANTS

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
09-11	353,418	111,072	31	1,031	0	110,041-	31-
10-12	320,249	197,490	62		0	197,490-	62-
11-13	333,794	253,702	76		0	253,702-	76-
12-14	255,939	222,510	87	41	0	222,469-	87-
FIVE-YEAR AVERAGE							
10-14	292,514	192,873	66	25	0	192,849-	66-

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNTS 341.1, 341.2 AND 341.3 TRANSPORTATION EQUIPMENT

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1974	92,812	347	0	25,992	28	25,646	28
1975	83,861	41	0	27,149	32	27,107	32
1976	71,097		0	26,543	37	26,543	37
1977	66,585		0	25,590	38	25,590	38
1978	123,376	109	0	32,089	26	31,980	26
1979	210,203	69	0	50,566	24	50,497	24
1980	155,150	113	0	36,665	24	36,552	24
1981	145,264		0	40,896	28	40,896	28
1982	162,619		0	60,448	37	60,448	37
1983	96,484		0	29,337	30	29,337	30
1984	204,033		0	70,150	34	70,150	34
1985	199,386		0	55,953	28	55,953	28
1986	214,282		0	62,949	29	62,949	29
1987	303,161	676	0	86,321	28	85,645	28
1988	194,722	1,113	1	39,477	20	38,364	20
1989	444,524	163	0	97,857	22	97,694	22
1990	480,135		0	100,181	21	100,181	21
1991	505,462	120	0	118,208	23	118,088	23
1992	443,435	197	0	121,683	27	121,486	27
1993	398,324	219	0	133,875	34	133,656	34
1994	801,693	378	0	299,968	37	299,590	37
1995	768,620	263	0	211,301	27	211,038	27
1996	565,145	498	0	196,230	35	195,732	35
1997	601,593	123	0	223,731	37	223,608	37
1998	545,495	3,902	1	162,149	30	158,247	29
1999	204,858	236	0	54,030	26	53,794	26
2000	118,071		0	7,205	6	7,205	6
2001	308,921	446	0	216,359	70	215,913	70
2002	907,525	27,133-	3-	144,335	16	171,468	19
2003	91,725	8,907	10	4,440	5	4,467-	5-
2004	674,909		0	14,140	2	14,140	2
2005	590,628		0	35,588	6	35,588	6
2006	951,331		0	13,396	1	13,396	1
2007	17,913		0	2,307	13	2,307	13
2008	1,210,032	173-	0	158,895	13	159,068	13
2009	814,027	14,011	2	184,148	23	170,137	21
2010	275,733	8,440	3	39,029	14	30,588	11
2011	36,577		0	49,678	136	49,678	136
2012	5,000		0	3,165	63	3,165	63

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNTS 341.1, 341.2 AND 341.3 TRANSPORTATION EQUIPMENT

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2013	79,570		0	47,787	60	47,787	60
2014	2,650,606	21,191-	1-	141,112	5	162,304	6
TOTAL	16,814,888	8,125-	0	3,450,927	21	3,459,053	21

## THREE-YEAR MOVING AVERAGES

74-76	82,590	129	0	26,561	32	26,432	32
75-77	73,848	14	0	26,427	36	26,414	36
76-78	87,019	36	0	28,074	32	28,038	32
77-79	133,388	59	0	36,082	27	36,023	27
78-80	162,910	97	0	39,774	24	39,677	24
79-81	170,205	61	0	42,709	25	42,649	25
80-82	154,344	38	0	46,003	30	45,966	30
81-83	134,789		0	43,561	32	43,561	32
82-84	154,379		0	53,312	35	53,312	35
83-85	166,635		0	51,814	31	51,814	31
84-86	205,900		0	63,018	31	63,018	31
85-87	238,943	225	0	68,408	29	68,183	29
86-88	237,389	596	0	62,916	27	62,319	26
87-89	314,136	651	0	74,552	24	73,901	24
88-90	373,127	425	0	79,172	21	78,746	21
89-91	476,707	95	0	105,415	22	105,321	22
90-92	476,344	106	0	113,358	24	113,252	24
91-93	449,073	179	0	124,589	28	124,410	28
92-94	547,817	265	0	185,176	34	184,911	34
93-95	656,212	287	0	215,048	33	214,761	33
94-96	711,820	380	0	235,833	33	235,453	33
95-97	645,120	295	0	210,421	33	210,126	33
96-98	570,745	1,508	0	194,037	34	192,529	34
97-99	450,649	1,420	0	146,636	33	145,216	32
98-00	289,474	1,379	0	74,461	26	73,082	25
99-01	210,616	227	0	92,531	44	92,304	44
00-02	444,839	8,896-	2-	122,633	28	131,529	30
01-03	436,057	5,927-	1-	121,712	28	127,638	29
02-04	558,053	6,075-	1-	54,305	10	60,381	11
03-05	452,421	2,969	1	18,056	4	15,087	3
04-06	738,956		0	21,042	3	21,042	3
05-07	519,957		0	17,097	3	17,097	3
06-08	726,425	58-	0	58,200	8	58,257	8
07-09	680,657	4,613	1	115,117	17	110,504	16
08-10	766,597	7,426	1	127,357	17	119,931	16

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNTS 341.1, 341.2 AND 341.3 TRANSPORTATION EQUIPMENT

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
09-11	375,446	7,484	2	90,952	24	83,468	22
10-12	105,770	2,813	3	30,624	29	27,810	26
11-13	40,382		0	33,543	83	33,543	83
12-14	911,725	7,064-	1-	64,022	7	71,085	8
FIVE-YEAR AVERAGE							
10-14	609,497	2,550-	0	56,154	9	58,704	10

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 341.40 TRANSPORTATION EQUIPMENT - OTHER

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
2000	756		0		0		0
2001	675		0		0		0
2002							
2003				2,500		2,500	
2004							
2005							
2006	10,347		0		0		0
2007							
2008	8,307		0	624	8	624	8
2009				1,074		1,074	
2010			7-	7-			
2011							
2012							
2013							
2014	54,458		0	2,312	4	2,312	4
TOTAL	74,542		7- 0	6,503	9	6,510	9

## THREE-YEAR MOVING AVERAGES

00-02	477		0		0		0
01-03	225		0	833	371	833	371
02-04				833		833	
03-05				833		833	
04-06	3,449		0		0		0
05-07	3,449		0		0		0
06-08	6,218		0	208	3	208	3
07-09	2,769		0	566	20	566	20
08-10	2,769		2- 0	564	20	566	20
09-11			2-	355		358	
10-12			2-	2-			
11-13							
12-14	18,152		0	771	4	771	4

## FIVE-YEAR AVERAGE

10-14	10,892		1- 0	461	4	462	4
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## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 345 POWER OPERATED EQUIPMENT

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1974	104,335		0	53,287	51	53,287	51
1975	592		0		0		0
1976							
1977							
1978	41,870		0	14,576	35	14,576	35
1979	91,295	38	0	36,201	40	36,163	40
1980	40,846		0	19,600	48	19,600	48
1981	238,332	62	0	91,300	38	91,238	38
1982	132,157		0	75,400	57	75,400	57
1983	109,351		0	40,625	37	40,625	37
1984	63,151		0	12,109	19	12,109	19
1985	74,553		0	31,695	43	31,695	43
1986	126,091		0	45,000	36	45,000	36
1987	110,242		0	300	0	300	0
1988	54,304		0	36,100	66	36,100	66
1989	166,117		0	80,199	48	80,199	48
1990	159,435		0	61,873	39	61,873	39
1991	118,560		0	60,042	51	60,042	51
1992	108,498		0	35,251	32	35,251	32
1993	153,427		0	48,355	32	48,355	32
1994	268,801	69	0	91,505	34	91,435	34
1995	258,942		0	10,468	4	10,468	4
1996	227,536		0	14,855	7	14,855	7
1997	124,143	820	1		0	820-	1-
1998	136,293		0		0		0
1999	68,804		0	55,867	81	55,867	81
2000	45,690		0		0		0
2001	43,816		0		0		0
2002	18,972		0	2,231	12	2,231	12
2003	736		0		0		0
2004	1,384		0		0		0
2005							
2006	103,085		0		0		0
2007							
2008	66,100		0		0		0
2009							
2010				1,633		1,633	
2011	103,132		0	9,005	9	9,005	9
2012							



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 345 POWER OPERATED EQUIPMENT

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2013	4,614		0	36	1	36	1
2014	398,622	1,947	0	46,470	12	44,523	11
TOTAL	3,763,827	2,936	0	973,983	26	971,046	26

## THREE-YEAR MOVING AVERAGES

74-76	34,976		0	17,762	51	17,762	51
75-77	197		0		0		0
76-78	13,957		0	4,859	35	4,859	35
77-79	44,388	13	0	16,926	38	16,913	38
78-80	58,004	13	0	23,459	40	23,446	40
79-81	123,491	33	0	49,034	40	49,000	40
80-82	137,112	21	0	62,100	45	62,079	45
81-83	159,947	21	0	69,108	43	69,088	43
82-84	101,553		0	42,711	42	42,711	42
83-85	82,352		0	28,143	34	28,143	34
84-86	87,932		0	29,601	34	29,601	34
85-87	103,629		0	25,665	25	25,665	25
86-88	96,879		0	27,133	28	27,133	28
87-89	110,221		0	38,866	35	38,866	35
88-90	126,618		0	59,391	47	59,391	47
89-91	148,037		0	67,371	46	67,371	46
90-92	128,831		0	52,388	41	52,388	41
91-93	126,829		0	47,883	38	47,883	38
92-94	176,909	23	0	58,370	33	58,347	33
93-95	227,057	23	0	50,109	22	50,086	22
94-96	251,760	23	0	38,943	15	38,919	15
95-97	203,540	273	0	8,441	4	8,168	4
96-98	162,657	273	0	4,952	3	4,678	3
97-99	109,747	273	0	18,622	17	18,349	17
98-00	83,596		0	18,622	22	18,622	22
99-01	52,770		0	18,622	35	18,622	35
00-02	36,160		0	744	2	744	2
01-03	21,175		0	744	4	744	4
02-04	7,031		0	744	11	744	11
03-05	707		0		0		0
04-06	34,823		0		0		0
05-07	34,362		0		0		0
06-08	56,395		0		0		0
07-09	22,033		0		0		0
08-10	22,033		0	544	2	544	2

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 345 POWER OPERATED EQUIPMENT

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
09-11	34,377		0	3,546	10	3,546	10
10-12	34,377		0	3,546	10	3,546	10
11-13	35,915		0	3,014	8	3,014	8
12-14	134,412	649	0	15,502	12	14,853	11
FIVE-YEAR AVERAGE							
10-14	101,274	389	0	11,429	11	11,039	11

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**PART IX. DETAILED DEPRECIATION  
CALCULATIONS**

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.10 STRUCTURES AND IMPROVEMENTS - SOURCE OF SUPPLY

## CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL

## RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 60-R4						
NET SALVAGE PERCENT.. -25						
1922	50.99	63	64			
1956	4,922.95	5,192	5,859	295	9.38	31
1959	4,899.25	5,001	5,644	480	11.00	44
1963	2,179.00	2,111	2,382	342	13.50	25
1964	131,935.11	125,970	142,154	22,765	14.17	1,607
1965	110.43	104	117	21	14.85	1
1968	309,195.32	277,244	312,864	73,630	16.96	4,341
1969	10,128.43	8,928	10,075	2,586	17.69	146
1970	3,965.30	3,435	3,876	1,081	18.42	59
1971	359,192.96	305,462	344,707	104,284	19.18	5,437
1972	15,739.15	13,136	14,824	4,850	19.94	243
1973	207,066.41	169,450	191,221	67,612	20.72	3,263
1974	9,484.97	7,606	8,583	3,273	21.51	152
1975	811.39	637	719	295	22.31	13
1976	5,843.87	4,490	5,067	2,238	23.12	97
1977	222,246.16	166,915	188,360	89,448	23.95	3,735
1978	50,576.97	37,100	41,867	21,354	24.79	861
1979	2,421.22	1,733	1,956	1,071	25.64	42
1981	1,565.04	1,064	1,201	755	27.37	28
1983	2,719.29	1,748	1,973	1,426	29.14	49
1984	954.96	596	673	521	30.04	17
1988	786.00	430	485	498	33.73	15
1989	9,337.55	4,929	5,562	6,110	34.66	176
1990	56,519.98	28,719	32,409	38,241	35.61	1,074
1991	7,957.77	3,886	4,385	5,562	36.56	152
1993	3,134,339.94	1,405,242	1,585,784	2,332,141	38.48	60,607
1994	630,949.18	270,125	304,830	483,856	39.45	12,265
1995	44,949.56	18,335	20,691	35,496	40.42	878
1996	11,055.00	4,286	4,837	8,982	41.39	217
1997	160,162.96	58,826	66,384	133,820	42.37	3,158
1998	216,477.68	75,091	84,738	185,859	43.35	4,287
1999	24,389.71	7,957	8,979	21,508	44.34	485
2000	1,432.89	438	494	1,297	45.32	29
2001	24,099.95	6,874	7,757	22,368	46.31	483
2002	188,618.80	49,906	56,318	179,456	47.30	3,794
2003	2,837,277.85	692,189	781,120	2,765,477	48.29	57,268
2004	793,120.08	177,133	199,891	791,509	49.28	16,061
2006	800,584.16	145,606	164,313	836,417	51.27	16,314
2007	3,654,958.08	588,585	664,205	3,904,493	52.27	74,699
2008	35,595.98	4,998	5,640	38,855	53.26	730
2009	18,155.23	2,171	2,450	20,244	54.26	373
2010	105,968.87	10,464	11,808	120,653	55.26	2,183

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.10 STRUCTURES AND IMPROVEMENTS - SOURCE OF SUPPLY

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 60-R4						
NET SALVAGE PERCENT.. -25						
2011	1,479,973.06	115,623	130,478	1,719,488	56.25	30,569
2012	26,426.46	1,514	1,709	31,324	57.25	547
2013	225,485.72	8,222	9,278	272,579	58.25	4,679
2014	75,510.11	1,180	1,332	93,056	59.25	1,571
	15,910,141.74	4,820,714	5,440,063	14,447,615		312,805
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						46.2 1.97

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.20 STRUCTURES AND IMPROVEMENTS - POWER AND PUMPING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
ST. LOUIS						
INTERIM SURVIVOR CURVE.. IOWA 75-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2031						
NET SALVAGE PERCENT.. -15						
1903	7,348.13	7,700	4,887	3,563	6.66	535
1915	318.90	325	206	160	8.51	19
1921	4,787.04	4,814	3,055	2,450	9.36	262
1926	11,382.10	11,315	7,182	5,908	10.06	587
1929	597.84	590	374	313	10.49	30
1931	123,383.24	121,090	76,855	65,036	10.79	6,027
1932	1,143.35	1,119	710	605	10.93	55
1933	1,297.02	1,266	804	688	11.08	62
1934	0.27		0			
1935	55.36	54	34	29	11.38	3
1936	261.74	253	161	140	11.53	12
1937	149.82	145	92	80	11.68	7
1938	3,788.76	3,644	2,313	2,044	11.83	173
1939	0.15		0			
1940	135.66	130	83	73	12.12	6
1941	2,152.11	2,050	1,301	1,174	12.26	96
1942	797.24	757	480	436	12.41	35
1943	2,501.81	2,368	1,503	1,374	12.55	109
1944	9,931.64	9,369	5,946	5,475	12.68	432
1945	6,039.07	5,677	3,603	3,342	12.82	261
1946	2,015.20	1,888	1,198	1,119	12.95	86
1947	4,485.03	4,187	2,657	2,500	13.08	191
1948	40,503.92	37,670	23,909	22,671	13.21	1,716
1949	45,553.94	42,215	26,794	25,594	13.33	1,920
1950	1,258.75	1,162	738	710	13.45	53
1951	197.35	182	116	111	13.56	8
1953	3,839.08	3,504	2,224	2,191	13.78	159
1954	58,156.35	52,870	33,556	33,324	13.89	2,399
1955	747,669.24	676,979	429,673	430,147	13.99	30,747
1956	204,604.99	184,486	117,092	118,204	14.09	8,389
1957	33,323.07	29,923	18,992	19,330	14.18	1,363
1958	5,074.19	4,537	2,880	2,956	14.27	207
1959	2,477.39	2,206	1,400	1,449	14.35	101
1960	83,480.50	73,981	46,955	49,047	14.44	3,397
1961	21,672.25	19,122	12,137	12,787	14.51	881
1962	14,676.60	12,888	8,180	8,698	14.59	596
1963	11,422.45	9,982	6,335	6,800	14.66	464
1964	6,746.08	5,866	3,723	4,035	14.73	274
1965	26,689.64	23,088	14,654	16,039	14.80	1,084
1966	27,284.54	23,481	14,903	16,474	14.86	1,109

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.20 STRUCTURES AND IMPROVEMENTS - POWER AND PUMPING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
ST. LOUIS						
INTERIM SURVIVOR CURVE.. IOWA 75-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2031						
NET SALVAGE PERCENT.. -15						
1967	31,430.49	26,903	17,075	19,070	14.92	1,278
1968	42,909.93	36,522	23,180	26,166	14.98	1,747
1969	1,155.56	978	621	708	15.03	47
1970	2,180.80	1,834	1,164	1,344	15.09	89
1971	18,192.86	15,208	9,652	11,269	15.14	744
1972	6,353.25	5,277	3,349	3,957	15.19	261
1973	8,411.90	6,941	4,405	5,268	15.23	346
1974	26,506.11	21,717	13,784	16,698	15.28	1,093
1975	31,189.42	25,373	16,104	19,764	15.32	1,290
1976	2,917.04	2,355	1,495	1,860	15.36	121
1977	298.89	239	152	192	15.40	12
1978	22,878.21	18,176	11,536	14,774	15.44	957
1979	92,139.94	72,590	46,072	59,889	15.47	3,871
1980	37,670.44	29,407	18,664	24,657	15.51	1,590
1981	44,185.08	34,172	21,689	29,124	15.54	1,874
1982	22,349.24	17,114	10,862	14,840	15.57	953
1983	9,684.50	7,340	4,659	6,479	15.60	415
1984	3,484.35	2,612	1,658	2,349	15.63	150
1985	86,189.31	63,857	40,529	58,588	15.66	3,741
1986	470,674.25	344,457	218,624	322,651	15.69	20,564
1987	142,808.08	103,192	65,495	98,734	15.71	6,285
1988	125,360.33	89,327	56,695	87,469	15.74	5,557
1989	573,107.89	402,543	255,491	403,583	15.76	25,608
1990	126,217.17	87,295	55,405	89,744	15.78	5,687
1991	1,044,830.86	710,564	450,989	750,567	15.81	47,474
1992	35,810.41	23,927	15,186	25,996	15.83	1,642
1993	880,622.13	577,359	366,445	646,271	15.85	40,774
1994	109,255.82	70,179	44,542	81,102	15.87	5,110
1995	100,572.99	63,227	40,130	75,529	15.88	4,756
1996	41,075.29	25,211	16,001	31,235	15.90	1,964
1997	230,333.02	137,752	87,430	177,453	15.92	11,147
1998	694,612.58	403,740	256,250	542,554	15.94	34,037
1999	396,103.61	223,318	141,738	313,781	15.95	19,673
2000	240,730.09	131,169	83,252	193,588	15.97	12,122
2001	100,307.06	52,676	33,433	81,920	15.98	5,126
2002	162,142.67	81,701	51,855	134,609	15.99	8,418
2003	6,678.70	3,209	2,037	5,644	16.01	353
2004	8,934.69	4,075	2,586	7,689	16.02	480
2005	26,340.76	11,316	7,182	23,110	16.03	1,442
2006	29,578.00	11,863	7,529	26,485	16.04	1,651

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.20 STRUCTURES AND IMPROVEMENTS - POWER AND PUMPING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
ST. LOUIS						
INTERIM SURVIVOR CURVE.. IOWA 75-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2031						
NET SALVAGE PERCENT.. -15						
2007	368,228.34	136,325	86,524	336,938	16.05	20,993
2008	638,157.65	214,668	136,248	597,633	16.06	37,213
2009	127,255.51	38,118	24,193	122,151	16.07	7,601
2010	83,234.37	21,578	13,695	82,024	16.08	5,101
2011	128,690.38	27,669	17,561	130,433	16.09	8,106
2012	364,041.15	60,315	38,281	380,366	16.10	23,625
2014	15,462.61	791	502	17,280	16.11	1,073
	9,278,495.54	5,829,062	3,699,656	6,970,613		448,016
ST. JOSEPH						
INTERIM SURVIVOR CURVE.. IOWA 75-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2058						
NET SALVAGE PERCENT.. -15						
1909	70.78	72	46	36	8.23	4
1950	4,031.09	3,239	2,056	2,580	22.43	115
1955	10,093.47	7,704	4,890	6,718	24.88	270
1956	77.73	59	37	52	25.37	2
1958	18.47	14	9	12	26.34	
1966	8,747.57	5,857	3,717	6,342	30.09	211
1969	21,341.62	13,725	8,711	15,832	31.38	505
1973	207.32	126	80	158	32.99	5
1980	24,421.53	13,195	8,375	19,710	35.42	556
1986	1,867.16	893	567	1,580	37.13	43
1989	4,000.00	1,779	1,129	3,471	37.85	92
1992	653.72	267	169	582	38.50	15
1993	1,462.59	579	367	1,314	38.71	34
1998	4,450,715.34	1,461,435	927,560	4,190,762	39.61	105,801
2002	33,604.89	8,968	5,692	32,954	40.21	820
2006	6,220.48	1,222	776	6,378	40.73	157
2007	714.30	127	81	741	40.85	18
2008	33,933.69	5,338	3,388	35,636	40.96	870
2009	4,457.01	608	386	4,740	41.07	115
	4,606,638.76	1,525,207	968,036	4,329,599		109,633



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.20 STRUCTURES AND IMPROVEMENTS - POWER AND PUMPING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
<b>PARKVILLE</b>						
INTERIM SURVIVOR CURVE.. IOWA 75-R2.5						
PROBABLE RETIREMENT YEAR.. 5-2018						
NET SALVAGE PERCENT.. -15						
1969	8,456.17	9,070	5,757	3,968	3.13	1,268
1989	1,385.74	1,417	899	694	3.15	220
1990	3,544.28	3,608	2,290	1,786	3.15	567
2006	2,511.58	2,118	1,344	1,544	3.16	489
	15,897.77	16,213	10,290	7,992		2,544
<b>WARRENSBURG</b>						
INTERIM SURVIVOR CURVE.. IOWA 75-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2026						
NET SALVAGE PERCENT.. -15						
1963	7,838.26	7,367	4,676	4,338	10.53	412
1973	6,001.71	5,409	3,433	3,469	10.80	321
1974	125.76	113	72	73	10.82	7
1978	319.73	280	178	190	10.89	17
1983	1,151.48	973	618	707	10.96	65
1984	179.64	151	96	111	10.98	10
1990	15,559.19	12,254	7,778	10,116	11.04	916
1991	37,832.40	29,409	18,666	24,842	11.05	2,248
1995	8,452.26	6,168	3,915	5,805	11.09	523
2006	104,724.25	52,518	33,333	87,100	11.16	7,805
2007	55,929.42	26,158	16,602	47,716	11.16	4,276
	238,114.10	140,800	89,365	184,466		16,600
<b>BRUNSWICK</b>						
INTERIM SURVIVOR CURVE.. IOWA 75-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2035						
NET SALVAGE PERCENT.. -15						
2000	39,236.61	18,962	12,035	33,087	19.77	1,674
2003	3,847.81	1,619	1,028	3,397	19.84	171
2004	8,926.56	3,548	2,252	8,014	19.86	404
2006	2,772.54	959	609	2,580	19.90	130
2007	385.04	122	77	365	19.92	18
	55,168.56	25,210	16,001	47,443		2,397

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.20 STRUCTURES AND IMPROVEMENTS - POWER AND PUMPING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
ST. CHARLES						
INTERIM SURVIVOR CURVE.. IOWA 75-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2038						
NET SALVAGE PERCENT.. -15						
1975	9,004.59	6,556	4,161	6,194	21.15	293
1978	23,283.47	16,436	10,432	16,344	21.41	763
1979	31,728.69	22,150	14,058	22,430	21.49	1,044
1983	1,591.73	1,058	672	1,159	21.77	53
1989	76,449.67	46,166	29,301	58,616	22.13	2,649
1990	20,022.99	11,863	7,529	15,497	22.18	699
1991	307.17	178	113	240	22.23	11
1993	64,572.03	35,846	22,751	51,507	22.32	2,308
1994	4,079.83	2,210	1,403	3,289	22.36	147
1997	977,553.52	485,851	308,365	815,821	22.48	36,291
1998	24,711.47	11,877	7,538	20,880	22.52	927
2001	15,976.86	6,813	4,324	14,049	22.62	621
2002	12,802.87	5,203	3,302	11,421	22.65	504
2006	146,503.72	45,929	29,151	139,329	22.76	6,122
2007	268,228.94	76,835	48,766	259,697	22.79	11,395
2008	5,609.55	1,448	919	5,532	22.81	243
2010	50,089.70	9,740	6,182	51,421	22.85	2,250
	1,732,516.80	786,159	498,968	1,493,426		66,320

## MEXICO

INTERIM SURVIVOR CURVE.. IOWA 75-R2.5

PROBABLE RETIREMENT YEAR.. 6-2026

NET SALVAGE PERCENT.. -15

1956	21,654.02	20,800	13,201	11,701	10.27	1,139
1978	1,544.01	1,353	859	917	10.89	84
1984	9,423.33	7,898	5,013	5,824	10.98	530
1986	8,957.47	7,372	4,679	5,622	11.00	511
1996	2,094.10	1,499	951	1,457	11.10	131
2001	9,456.23	5,961	3,783	7,091	11.13	637
2014	5,002.96	357	227	5,527	11.19	494
	58,132.12	45,240	28,713	38,139		3,526

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.20 STRUCTURES AND IMPROVEMENTS - POWER AND PUMPING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
JOPLIN						
INTERIM SURVIVOR CURVE.. IOWA 75-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2068						
NET SALVAGE PERCENT.. -15						
1892	4,444.10	4,812	3,054	2,057	4.38	470
1898	3,752.58	3,982	2,527	1,788	5.79	309
1900	6,035.52	6,364	4,039	2,902	6.23	466
1910	5,366.37	5,475	3,475	2,696	8.46	319
1911	120.93	123	78	61	8.69	7
1926	50.27	48	30	27	12.67	2
1927	34.54	33	21	19	12.99	1
1941	44.94	39	25	27	18.48	1
1945	1,038.64	869	552	643	20.42	31
1946	24.02	20	13	15	20.93	1
1948	167.42	136	86	106	21.98	5
1949	626.85	504	320	401	22.51	18
1950	2,412.27	1,920	1,219	1,556	23.05	68
1951	225.31	177	112	147	23.60	6
1954	3,326.97	2,532	1,607	2,219	25.28	88
1956	2,756.27	2,048	1,300	1,870	26.43	71
1958	174.22	126	80	120	27.59	4
1961	807.33	562	357	572	29.34	19
1963	4,904.49	3,321	2,108	3,532	30.51	116
1970	4,399.03	2,675	1,698	3,361	34.54	97
1973	40,084.24	23,150	14,693	31,404	36.20	868
1976	3,077.61	1,682	1,068	2,472	37.79	65
1980	50,880.82	25,661	16,287	42,226	39.79	1,061
1982	43,320.68	20,914	13,274	36,545	40.73	897
1984	50,631.15	23,329	14,807	43,419	41.63	1,043
1985	4,985.65	2,242	1,423	4,311	42.06	102
1986	22,204.47	9,734	6,178	19,357	42.48	456
1989	1,402.86	566	359	1,254	43.67	29
1991	730.53	277	176	664	44.41	15
1992	2,095.50	770	489	1,921	44.76	43
1997	85,192.02	25,835	16,397	81,574	46.35	1,760
1998	295.21	85	54	286	46.64	6
2001	7,100.00	1,753	1,113	7,052	47.44	149
2002	99,454.01	23,054	14,632	99,740	47.69	2,091
2005	10,495.42	1,939	1,231	10,839	48.38	224
2006	6,185.94	1,040	660	6,454	48.60	133
2007	31,973.27	4,836	3,069	33,700	48.80	691

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.20 STRUCTURES AND IMPROVEMENTS - POWER AND PUMPING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
JOPLIN						
INTERIM SURVIVOR CURVE.. IOWA 75-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2068						
NET SALVAGE PERCENT.. -15						
2009	11,584.11	1,340	850	12,471	49.19	254
2012	178,049.12	10,324	6,553	198,204	49.72	3,986
2014	4,509.36	75	48	5,138	50.03	103
	694,964.04	214,372	136,060	663,149		16,075
JEFFERSON						
INTERIM SURVIVOR CURVE.. IOWA 75-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2049						
NET SALVAGE PERCENT.. -15						
1947	18,852.00	15,860	10,066	11,614	19.83	586
1964	1,809.00	1,306	829	1,251	26.01	48
1966	618.00	437	277	433	26.61	16
1990	72,224.00	35,280	22,392	60,666	31.46	1,928
1993	1,135.00	512	325	980	31.81	31
1994	10,102.00	4,425	2,809	8,809	31.92	276
1997	3,921.00	1,551	984	3,525	32.22	109
1999	9,282.55	3,386	2,149	8,526	32.40	263
2002	457,065.45	143,322	90,965	434,660	32.65	13,313
2007	7,077.85	1,508	957	7,182	32.99	218
2011	955,569.96	108,792	69,049	1,029,856	33.22	31,001
	1,537,656.81	316,379	200,803	1,567,502		47,789
RANKIN ACRES						
INTERIM SURVIVOR CURVE.. IOWA 75-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2025						
NET SALVAGE PERCENT.. -15						
2000	4,980.47	3,367	1,290	4,437	10.15	437
2005	280.33	157	60	262	10.17	26
2007	76.79	38	15	74	10.18	7
	5,337.59	3,562	1,365	4,773		470

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.20 STRUCTURES AND IMPROVEMENTS - POWER AND PUMPING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SPRING VALLEY						
INTERIM SURVIVOR CURVE.. IOWA 75-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2030						
NET SALVAGE PERCENT.. -15						
2005	280.33	125	81	241	15.06	16
2007	5,096.00	1,967	1,278	4,582	15.08	304
	5,376.33	2,092	1,360	4,823		320
WHITEBRANCH						
INTERIM SURVIVOR CURVE.. IOWA 75-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2025						
NET SALVAGE PERCENT.. -15						
2000	1,713.00	1,158	813	1,157	10.15	114
2007	5.79	3	2	5	10.18	
	1,718.79	1,161	815	1,161		114
OZARK MOUNTAIN						
INTERIM SURVIVOR CURVE.. IOWA 75-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2030						
NET SALVAGE PERCENT.. -15						
2005	967.33	432	253	860	15.06	57
2006	6,800.00	2,841	1,661	6,159	15.07	409
2007	35,682.92	13,775	8,056	32,979	15.08	2,187
	43,450.25	17,048	9,970	39,998		2,653
MAPLE/RIVER/STONE						
INTERIM SURVIVOR CURVE.. IOWA 75-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2025						
NET SALVAGE PERCENT.. -15						
2000	9,481.15	6,410	2,524	8,380	10.15	826
2005	143.43	80	31	133	10.17	13
2007	62,859.13	31,015	12,211	60,077	10.18	5,901
2009	1,720.82	708	279	1,700	10.19	167
	74,204.53	38,213	15,045	70,290		6,907

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.20 STRUCTURES AND IMPROVEMENTS - POWER AND PUMPING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SADDLEBROOKE						
INTERIM SURVIVOR CURVE.. IOWA 75-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2028						
NET SALVAGE PERCENT.. -15						
2003	15,000.00	8,075	3,736	13,514	13.10	1,032
	15,000.00	8,075	3,736	13,514		1,032
TRI-STATES						
INTERIM SURVIVOR CURVE.. IOWA 75-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2022						
NET SALVAGE PERCENT.. -15						
1987	8,599.60	7,813	2,266	7,624	7.16	1,065
2008	1,793.00	992	288	1,774	7.22	246
	10,392.60	8,805	2,553	9,398		1,311
	18,373,064.59	8,977,598	5,682,737	15,446,286		725,707
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						21.3 3.95

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.30 STRUCTURES AND IMPROVEMENTS - WATER TREATMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
CORPORATE						
INTERIM SURVIVOR CURVE.. IOWA 80-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2033						
NET SALVAGE PERCENT.. -15						
2006	3,157.11	1,172	1,166	2,464	18.01	137
2007	4,949.48	1,690	1,682	4,010	18.02	223
2008	23,519.86	7,272	7,236	19,812	18.03	1,099
2012	4,462.25	669	666	4,466	18.07	247
	36,088.70	10,803	10,750	30,752		1,706
ST. LOUIS						
INTERIM SURVIVOR CURVE.. IOWA 80-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2048						
NET SALVAGE PERCENT.. -15						
1903	29,117.73	29,710	29,563	3,922	9.02	435
1913	7,355.95	7,254	7,218	1,241	11.40	109
1926	1,570.25	1,468	1,461	345	14.93	23
1927	27,793.11	25,857	25,729	6,233	15.23	409
1932	2,075.07	1,881	1,872	515	16.83	31
1933	529.59	477	475	134	17.16	8
1934	155.49	139	138	41	17.50	2
1935	350.60	312	310	93	17.84	5
1936	35,452.47	31,405	31,250	9,520	18.18	524
1937	2,198.84	1,936	1,926	602	18.52	33
1938	1,856.80	1,625	1,617	518	18.87	27
1939	249,190.20	216,689	215,619	70,950	19.22	3,691
1944	742.29	624	621	233	20.97	11
1949	1.41	1	1	1	22.68	
1953	893,857.06	703,386	699,911	328,024	23.98	13,679
1954	5,467.14	4,268	4,247	2,040	24.29	84
1955	795,454.09	616,127	613,083	301,689	24.59	12,269
1956	250,198.30	192,202	191,253	96,476	24.89	3,876
1957	66.89	51	51	26	25.18	1
1958	1,322.32	999	994	527	25.47	21
1960	244,245.49	181,416	180,520	100,362	26.01	3,859
1962	6,820.52	4,977	4,952	2,891	26.53	109
1963	287.27	208	207	123	26.78	5
1964	897,626.56	642,991	639,815	392,456	27.02	14,525
1965	525.93	373	371	234	27.25	9
1966	1,824.30	1,282	1,276	822	27.48	30
1967	1,001.46	697	694	458	27.70	17
1968	3,156,898.81	2,174,593	2,163,851	1,466,583	27.91	52,547

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.30 STRUCTURES AND IMPROVEMENTS - WATER TREATMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
ST. LOUIS						
INTERIM SURVIVOR CURVE.. IOWA 80-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2048						
NET SALVAGE PERCENT.. -15						
1969	7,950.62	5,421	5,394	3,749	28.11	133
1970	20,484.28	13,820	13,752	9,805	28.31	346
1971	3,032,977.58	2,023,938	2,013,940	1,473,984	28.50	51,719
1972	15,141.22	9,993	9,944	7,469	28.68	260
1973	967,761.11	631,385	628,266	484,659	28.86	16,793
1974	23,925.12	15,425	15,349	12,165	29.03	419
1975	3,024.47	1,927	1,917	1,561	29.19	53
1976	1,632.08	1,027	1,022	855	29.35	29
1977	1,001,373.89	621,588	618,517	533,063	29.51	18,064
1978	29,084.42	17,815	17,727	15,720	29.65	530
1979	13,789.89	8,329	8,288	7,571	29.80	254
1980	15,570.31	9,269	9,223	8,683	29.93	290
1981	10,959.70	6,425	6,393	6,210	30.07	207
1982	12,004.74	6,930	6,896	6,910	30.19	229
1983	294.60	167	166	173	30.32	6
1984	10,892.71	6,079	6,049	6,478	30.44	213
1985	1,915,180.09	1,049,911	1,044,725	1,157,733	30.55	37,896
1986	755,602.58	406,570	404,562	464,381	30.66	15,146
1987	239,431.31	126,290	125,666	149,680	30.77	4,864
1988	131,457.86	67,930	67,594	83,582	30.87	2,708
1989	2,732,223.36	1,381,123	1,374,300	1,767,757	30.97	57,080
1990	154,092.30	76,140	75,764	101,442	31.06	3,266
1991	434,147.97	209,294	208,260	291,010	31.16	9,339
1992	375,006.69	176,242	175,371	255,886	31.24	8,191
1993	7,417,239.87	3,391,629	3,374,875	5,154,951	31.33	164,537
1994	1,429,297.27	634,728	631,592	1,012,099	31.41	32,222
1995	1,877,179.83	808,087	804,095	1,354,662	31.49	43,019
1996	998,897.08	415,795	413,741	734,991	31.57	23,281
1997	1,300,444.37	522,487	519,906	975,605	31.64	30,835
1998	782,570.90	302,556	301,061	598,895	31.71	18,887
1999	245,196.64	90,906	90,457	191,519	31.78	6,026
2000	1,222,769.48	433,288	431,148	975,037	31.84	30,623
2001	1,288,904.28	434,756	432,608	1,049,632	31.90	32,904
2002	4,777,960.78	1,526,965	1,519,422	3,975,233	31.96	124,382
2003	330,642.56	99,509	99,017	281,222	32.02	8,783
2004	637,496.65	179,351	178,465	554,656	32.08	17,290
2005	149,125.90	38,945	38,753	132,742	32.13	4,131
2006	1,206,323.72	289,330	287,901	1,099,372	32.18	34,163
2007	5,396,838.13	1,174,120	1,168,320	5,038,044	32.23	156,315
2008	5,180,596.27	1,006,253	1,001,282	4,956,404	32.28	153,544



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.30 STRUCTURES AND IMPROVEMENTS - WATER TREATMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
ST. LOUIS						
INTERIM SURVIVOR CURVE.. IOWA 80-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2048						
NET SALVAGE PERCENT.. -15						
2009	25,528.74	4,336	4,315	25,043	32.32	775
2010	434,648.24	62,431	62,123	437,723	32.37	13,522
2011	1,685,118.29	196,153	195,184	1,742,702	32.41	53,771
2012	869,312.52	76,268	75,891	923,818	32.45	28,469
2013	150,139.80	8,585	8,543	164,118	32.49	5,051
2014	2,269,800.73	58,079	57,792	2,552,479	32.52	78,490
2015	88,348.92	404	402	101,199	32.54	3,110
	58,282,375.81	23,470,947	23,355,002	43,669,730		1,398,504

ST. JOSEPH						
INTERIM SURVIVOR CURVE.. IOWA 80-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2073						
NET SALVAGE PERCENT.. -15						
1992	2,359.51	815	811	1,902	49.06	39
1998	22,852,157.68	6,193,666	6,163,070	20,116,911	50.98	394,604
2000	94,970.78	23,182	23,067	86,149	51.55	1,671
2002	458,753.95	99,146	98,656	428,911	52.07	8,237
2007	198,424.58	27,818	27,681	200,508	53.23	3,767
2008	232,790.95	28,792	28,650	239,060	53.44	4,473
2009	270,485.20	28,928	28,785	282,273	53.64	5,262
2010	101,146.15	9,046	9,001	107,317	53.84	1,993
2011	3,791.90	272	271	4,090	54.02	76
2013	252,679.42	8,709	8,666	281,915	54.38	5,184
	24,467,560.12	6,420,374	6,388,658	21,749,036		425,306

PARKVILLE						
INTERIM SURVIVOR CURVE.. IOWA 80-R2.5						
PROBABLE RETIREMENT YEAR.. 5-2018						
NET SALVAGE PERCENT.. -15						
1960	93,019.79	100,838	100,340	6,633	3.12	2,126
1977	468.82	496	494	46	3.14	15
1978	1,872.67	1,979	1,969	184	3.15	58
1979	11,522.97	12,148	12,088	1,163	3.15	369
1980	816.99	859	855	85	3.15	27
1982	2,916.83	3,053	3,038	316	3.15	100

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.30 STRUCTURES AND IMPROVEMENTS - WATER TREATMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
<b>PARKVILLE</b>						
INTERIM SURVIVOR CURVE.. IOWA 80-R2.5						
PROBABLE RETIREMENT YEAR.. 5-2018						
NET SALVAGE PERCENT.. -15						
1983	3,269.25	3,413	3,396	363	3.15	115
1984	4,178.10	4,349	4,328	477	3.15	151
1985	2,210.21	2,293	2,282	260	3.15	83
1990	285.13	290	289	39	3.15	12
1991	2,999.85	3,040	3,025	425	3.15	135
1993	4,135.48	4,144	4,124	632	3.16	200
1994	1,784.00	1,777	1,768	283	3.16	90
1997	887.38	865	861	160	3.16	51
1998	312,124.79	301,426	299,937	59,006	3.16	18,673
2001	10,832.52	10,113	10,063	2,394	3.16	758
2002	3,236.71	2,978	2,963	759	3.16	240
2006	7,526.12	6,349	6,318	2,337	3.16	740
2008	18,217.75	14,250	14,180	6,771	3.16	2,143
2010	382,320.70	263,577	262,275	177,394	3.16	56,137
2014	18,579.70	4,099	4,079	17,288	3.16	5,471
	883,205.76	742,336	738,669	277,018		87,694
<b>WARRENSBURG</b>						
INTERIM SURVIVOR CURVE.. IOWA 80-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2050						
NET SALVAGE PERCENT.. -15						
1983	420.25	232	231	252	31.86	8
1991	4,209.77	1,966	1,956	2,885	32.82	88
1996	1,100.00	442	440	825	33.29	25
2000	772,237.06	263,242	261,942	626,131	33.61	18,629
2001	1,276.04	414	412	1,055	33.68	31
2004	5,166.91	1,394	1,387	4,555	33.88	134
2006	70,800.74	16,238	16,158	65,263	34.00	1,920
2008	3,191.19	590	587	3,083	34.12	90
2009	3,474.67	561	558	3,438	34.17	101
2012	50,963.30	4,246	4,225	54,383	34.31	1,585
2013	34,356.47	1,862	1,853	37,657	34.36	1,096
	947,196.40	291,187	289,749	799,527		23,707

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.30 STRUCTURES AND IMPROVEMENTS - WATER TREATMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
BRUNSWICK						
INTERIM SURVIVOR CURVE.. IOWA 80-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2035						
NET SALVAGE PERCENT.. -15						
1985	199,081.40	135,823	135,152	93,791	19.43	4,827
1989	1,352.34	868	864	691	19.56	35
1990	1,082.43	683	680	565	19.59	29
1992	657.33	399	397	359	19.65	18
1993	1,563.09	928	923	874	19.67	44
2001	6,394.60	2,965	2,950	4,403	19.85	222
2003	42,763.67	17,997	17,908	31,270	19.89	1,572
2006	1,191.79	412	410	961	19.94	48
2008	518.77	149	148	448	19.97	22
2010	7,229.74	1,575	1,567	6,747	19.99	338
2011	408.57	73	73	397	20.01	20
2013	38,842.99	3,532	3,515	41,155	20.03	2,055
2014	1,681.30	69	69	1,865	20.04	93
	302,768.02	165,473	164,656	183,527		9,323

## ST. CHARLES

INTERIM SURVIVOR CURVE.. IOWA 80-R2.5

PROBABLE RETIREMENT YEAR.. 6-2038

NET SALVAGE PERCENT.. -15

1998	1,063.94	511	508	715	22.62	32
2006	4,166.49	1,306	1,299	3,492	22.82	153
2009	1,682.50	382	380	1,555	22.88	68
	6,912.93	2,199	2,188	5,762		253

## MEXICO

INTERIM SURVIVOR CURVE.. IOWA 80-R2.5

PROBABLE RETIREMENT YEAR.. 6-2060

NET SALVAGE PERCENT.. -15

1984	1,620.81	783	779	1,085	39.02	28
1989	38,404.06	16,510	16,428	27,736	40.15	691
1992	9,721.28	3,839	3,820	7,359	40.74	181
1994	9,738.55	3,608	3,590	7,609	41.09	185
1999	6,265.00	1,895	1,886	5,319	41.89	127
2000	2,784,050.25	801,279	797,321	2,404,337	42.03	57,205

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.30 STRUCTURES AND IMPROVEMENTS - WATER TREATMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
MEXICO						
INTERIM SURVIVOR CURVE.. IOWA 80-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2060						
NET SALVAGE PERCENT.. -15						
2001	215,767.86	58,822	58,531	189,602	42.16	4,497
2003	2,747.00	661	658	2,501	42.42	59
2004	4,935.56	1,106	1,101	4,575	42.54	108
	3,073,250.37	888,503	884,114	2,650,124		63,081
JOPLIN						
INTERIM SURVIVOR CURVE.. IOWA 80-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2068						
NET SALVAGE PERCENT.. -15						
1902	609.83	624	621	80	8.79	9
1945	97.73	78	78	35	24.09	1
1959	91,769.46	62,997	62,686	42,849	31.77	1,349
1968	497.77	301	300	273	36.58	7
1970	347.83	204	203	197	37.58	5
1973	228.91	128	127	136	39.03	3
1974	26,569.61	14,603	14,531	16,024	39.49	406
1975	5,159.37	2,787	2,773	3,160	39.94	79
1984	2,478.56	1,116	1,110	1,740	43.59	40
1985	2,073.50	912	907	1,477	43.95	34
1986	311.52	134	133	225	44.29	5
1989	27,004.34	10,699	10,646	20,409	45.26	451
1995	30,620.00	9,949	9,900	25,313	46.95	539
1997	39,492.95	11,815	11,757	33,660	47.44	710
2003	4,110.59	881	877	3,851	48.72	79
2004	109,727.99	21,828	21,720	104,467	48.91	2,136
2006	32,303.13	5,390	5,363	31,785	49.26	645
2007	14,299.53	2,144	2,133	14,311	49.43	290
2008	13,477,745.98	1,785,997	1,777,173	13,722,234	49.60	276,658
2009	567,621.11	65,087	64,765	587,999	49.75	11,819
2011	13,207.32	1,019	1,014	14,174	50.05	283
2012	33,904.33	1,948	1,938	37,052	50.19	738
	14,480,181.36	2,000,641	1,990,757	14,661,452		296,286

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.30 STRUCTURES AND IMPROVEMENTS - WATER TREATMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
JEFFERSON						
INTERIM SURVIVOR CURVE.. IOWA 80-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2049						
NET SALVAGE PERCENT.. -15						
1927	47,178.00	43,833	43,616	10,638	15.32	694
1942	186.00	158	157	57	20.50	3
1950	107.00	86	86	37	23.35	2
1951	523.00	416	414	188	23.69	8
1959	2,329.00	1,732	1,723	955	26.22	36
1964	2,065.00	1,467	1,460	915	27.57	33
1965	51,008.00	35,883	35,706	22,953	27.82	825
1966	729.00	508	505	333	28.06	12
1970	1,807.95	1,208	1,202	877	28.94	30
1976	817.00	508	505	434	30.06	14
1977	3,968.00	2,435	2,423	2,140	30.22	71
1985	20,286.00	10,966	10,912	12,417	31.34	396
1987	13,244.00	6,883	6,849	8,382	31.58	265
1988	1,060.00	539	536	683	31.69	22
1989	785.00	391	389	514	31.79	16
1992	8,791.00	4,063	4,043	6,067	32.09	189
1999	1,577,658.80	573,884	571,049	1,243,259	32.66	38,067
2001	107,605.64	35,549	35,373	88,373	32.80	2,694
2002	318,353.19	99,596	99,104	267,002	32.86	8,125
2003	25,850.17	7,617	7,579	22,148	32.92	673
2005	1,431.33	365	363	1,283	33.04	39
2006	22,632.63	5,303	5,277	20,751	33.10	627
2007	18,920.29	4,019	3,999	17,759	33.15	536
2010	8,891.09	1,248	1,242	8,983	33.29	270
2011	76,367.52	8,666	8,623	79,199	33.34	2,375
2012	4,370.02	373	371	4,654	33.38	139
2013	5,234.12	293	292	5,728	33.42	171
	2,322,198.75	847,989	843,800	1,826,729		56,332

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.30 STRUCTURES AND IMPROVEMENTS - WATER TREATMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
MAPLE/RIVER/STONE						
INTERIM SURVIVOR CURVE.. IOWA 80-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2025						
NET SALVAGE PERCENT.. -15						
2003	1,826.00	1,118	89	2,011	10.17	198
2007	5.63	3	0	6	10.19	1
2013	16,177.72	2,711	217	18,388	10.20	1,803
2015	1,026,054.69	13,711	1,095	1,178,868	10.21	115,462
	1,044,064.04	17,543	1,401	1,199,272		117,464
TRI-STATES						
INTERIM SURVIVOR CURVE.. IOWA 80-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2022						
NET SALVAGE PERCENT.. -15						
2004	28,701.00	19,656	19,633	13,374	7.22	1,852
	28,701.00	19,656	19,633	13,374		1,852
	105,874,503.26	34,877,651	34,689,377	87,066,303		2,481,508
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						35.1 2.34

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.40 STRUCTURES AND IMPROVEMENTS - TRANSMISSION AND DISTRIBUTION

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 55-R2.5						
NET SALVAGE PERCENT.. -20						
1978	2,113,015.04	1,432,852	2,222,339	313,279	23.92	13,097
1979	23,340.15	15,466	23,988	4,020	24.63	163
1980	105.52	68	105	22	25.35	1
1981	1,737.64	1,096	1,700	385	26.08	15
1982	8,710.49	5,357	8,309	2,144	26.81	80
1983	1,937.65	1,160	1,799	526	27.56	19
1984	995.55	580	900	295	28.31	10
1986	34,684.39	19,032	29,518	12,103	29.85	405
1988	62,465.26	32,137	49,844	25,114	31.42	799
1989	12,604.47	6,265	9,717	5,408	32.22	168
1990	20,981.10	10,057	15,598	9,579	33.03	290
1991	67,697.47	31,254	48,475	32,762	33.84	968
1992	13,087.07	5,808	9,008	6,696	34.66	193
1993	319,757.02	136,113	211,110	172,598	35.49	4,863
1994	639,720.00	260,584	404,163	363,501	36.33	10,006
1995	863,934.02	336,084	521,263	515,458	37.17	13,868
1996	16,409.92	6,079	9,428	10,264	38.02	270
1997	30,414.33	10,697	16,591	19,906	38.88	512
1998	45,438.76	15,128	23,463	31,064	39.74	782
1999	60,995.20	19,151	29,703	43,491	40.61	1,071
2000	50,842.48	14,987	23,245	37,766	41.49	910
2001	15,554.14	4,286	6,648	12,017	42.37	284
2002	1,831,178.52	469,038	727,473	1,469,941	43.26	33,979
2003	869,907.63	205,928	319,392	724,497	44.15	16,410
2005	17,274.40	3,411	5,290	15,439	45.95	336
2007	507,625.53	79,963	124,022	485,129	47.78	10,153
2008	251,856.22	34,620	53,695	248,532	48.70	5,103
2009	373,694.29	43,866	68,036	380,397	49.62	7,666
2010	2,800.15	272	422	2,938	50.55	58
2011	9,215.87	708	1,098	9,961	51.48	193
2013	12,316.53	443	687	14,093	53.35	264
2014	25,641.10	397	615	30,154	54.29	555
	8,305,937.91	3,202,887	4,967,644	4,999,481		123,491

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 40.5 1.49

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.53 STRUCTURES AND IMPROVEMENTS - LEASEHOLD

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 25-R4						
NET SALVAGE PERCENT.. 0						
2007	6,585.39	2,026	4,085	2,500	17.31	144
2010	12,403.93	2,347	4,731	7,673	20.27	379
	18,989.32	4,373	8,816	10,173		523
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						19.5 2.75



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.61 STRUCTURES AND IMPROVEMENTS - OFFICE BUILDINGS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
ALL OTHER OFFICE BUILDINGS						
SURVIVOR CURVE.. IOWA 47-S0						
NET SALVAGE PERCENT.. -20						
1888	945.00	1,110	1,134			
1897	231.00	271	277			
1909	898.00	1,055	1,078			
1922	10.00	12	12			
1923	222.00	261	266			
1927	867.00	989	1,040			
1928	706.00	799	847			
1935	84.00	89	101			
1955	564.00	487	677			
1957	49.00	41	59			
1958	296.00	246	355			
1962	556.00	438	667			
1963	50,579.94	39,259	60,696			
1964	160.10	123	192			
1965	9,988.10	7,531	11,986			
1966	91.00	68	109			
1969	297.00	210	356			
1971	79,220.29	54,287	95,064			
1973	1,535.00	1,016	1,842			
1979	3,748.25	2,207	4,498			
1981	924.00	521	1,109			
1982	33,837.46	18,635	40,605			
1983	2,198.45	1,182	2,638			
1984	2,146.00	1,126	2,575			
1985	2,425.24	1,240	2,910			
1986	56,893.41	28,340	68,172	100	27.49	4
1988	13,658.02	6,430	15,467	922	28.56	32
1990	256,202.39	113,493	273,007	34,436	29.65	1,161
1991	11,913.73	5,110	12,292	2,004	30.20	66
1992	5,294.35	2,194	5,278	1,076	30.77	35
1993	25,754.70	10,297	24,769	6,136	31.34	196
1994	17,459.09	6,722	16,170	4,781	31.92	150
1995	4,537.00	1,679	4,039	1,406	32.51	43
1996	10,657.26	3,782	9,098	3,691	33.10	112
1997	2,693.36	914	2,199	1,033	33.71	31
1999	37,916.24	11,665	28,060	17,439	34.95	499
2000	8,597.74	2,505	6,026	4,292	35.59	121
2001	8,255.15	2,268	5,456	4,451	36.24	123
2002	5,057.55	1,303	3,134	2,935	36.91	80
2003	17,045.00	4,100	9,863	10,591	37.58	282
2004	4,870.64	1,086	2,612	3,232	38.27	84

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.61 STRUCTURES AND IMPROVEMENTS - OFFICE BUILDINGS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
ALL OTHER OFFICE BUILDINGS						
SURVIVOR CURVE.. IOWA 47-S0						
NET SALVAGE PERCENT.. -20						
2005	12,070.86	2,472	5,946	8,539	38.98	219
2006	54,622.36	10,181	24,490	41,056	39.70	1,034
2007	1,554,667.59	260,382	626,349	1,239,253	40.44	30,644
2008	4,558,964.71	675,091	1,623,931	3,846,827	41.20	93,370
2009	172,608.80	22,124	53,219	153,911	41.98	3,666
2010	245,891.45	26,494	63,731	231,338	42.78	5,408
2011	745,667.86	64,730	155,708	739,093	43.60	16,952
2012	1,432,091.80	92,868	223,394	1,495,116	44.46	33,628
2013	1,482,463.28	62,459	150,245	1,628,711	45.35	35,914
2014	1,586,409.78	29,564	71,116	1,832,576	46.27	39,606
2015	4,729.51	14	34	5,642	46.88	120
	12,529,572.46	1,581,470	3,714,899	11,320,588		263,580

PARKVILLE  
INTERIM SURVIVOR CURVE.. IOWA 47-S0  
PROBABLE RETIREMENT YEAR.. 5-2018  
NET SALVAGE PERCENT.. -20

1960	24,849.92	27,716	29,820			
1975	427.24	469	513			
1979	1,793.88	1,954	2,153			
1992	4,088.62	4,272	4,906			
1993	863.25	897	1,036			
1994	2,625.08	2,712	3,150			
1996	26,315.33	26,833	31,578			
1998	0.22		0			
2008	4,145.40	3,374	4,974			
2010	7,714.39	5,545	9,257			
	72,823.33	73,772	87,388			
	12,602,395.79	1,655,242	3,802,287	11,320,588		263,580

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 42.9 2.09

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.70 STRUCTURES AND IMPROVEMENTS - SHOP AND GARAGE

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
ALL OTHER SHOP AND GARAGE						
SURVIVOR CURVE.. IOWA 55-R2.5						
NET SALVAGE PERCENT.. -20						
1897	4,694.94	5,532	1,564	4,069	1.00	4,069
1925	11,955.11	13,491	3,815	10,531	3.28	3,211
1926	1,258.46	1,413	400	1,111	3.53	315
1939	23,491.89	24,884	7,037	21,153	6.45	3,280
1940	201.34	212	60	182	6.69	27
1941	19.84	21	6	18	6.93	3
1943	338.94	352	100	307	7.43	41
1949	1,450.68	1,453	411	1,330	9.09	146
1950	323.75	322	91	297	9.40	32
1951	16,195.07	15,999	4,524	14,910	9.72	1,534
1952	16.85	17	5	15	10.05	1
1954	1,441.55	1,391	393	1,336	10.76	124
1956	1,568.34	1,487	421	1,461	11.53	127
1957	14,560.65	13,680	3,869	13,604	11.94	1,139
1958	37.73	35	10	35	12.36	3
1959	1,462.67	1,347	381	1,374	12.80	107
1961	16,661.40	15,002	4,243	15,751	13.73	1,147
1962	1,469.19	1,308	370	1,393	14.21	98
1963	12,664.26	11,130	3,148	12,050	14.72	819
1964	5,505.18	4,776	1,351	5,256	15.24	345
1969	64,042.17	51,630	14,601	62,250	18.05	3,449
1970	462.41	367	104	451	18.65	24
1972	661.59	507	143	651	19.90	33
1973	4,177.21	3,141	888	4,124	20.54	201
1978	11,936.96	8,095	2,289	12,035	23.92	503
1979	36.06	24	7	36	24.63	1
1981	121.10	76	21	124	26.08	5
1982	1,533.00	943	267	1,573	26.81	59
1983	2,722.47	1,630	461	2,806	27.56	102
1984	3,366.68	1,960	554	3,486	28.31	123
1985	3,503.42	1,981	560	3,644	29.08	125
1986	3,652.68	2,004	567	3,816	29.85	128
1987	248.86	132	37	261	30.63	9
1988	123.26	63	18	130	31.42	4
1989	19,266.17	9,576	2,708	20,411	32.22	633
1991	47,001.69	21,700	6,137	50,265	33.84	1,485
1992	1,591.90	706	200	1,711	34.66	49
1993	11,964.82	5,093	1,440	12,918	35.49	364
1994	220.80	90	25	240	36.33	7
1995	5,567.04	2,166	613	6,068	37.17	163
1996	10,012.85	3,710	1,049	10,966	38.02	288

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.70 STRUCTURES AND IMPROVEMENTS - SHOP AND GARAGE

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
ALL OTHER SHOP AND GARAGE						
SURVIVOR CURVE.. IOWA 55-R2.5						
NET SALVAGE PERCENT.. -20						
1997	10,044.92	3,533	999	11,055	38.88	284
1998	66.38	22	6	73	39.74	2
1999	5,761.07	1,809	512	6,402	40.61	158
2000	23,625.33	6,964	1,969	26,381	41.49	636
2002	43,813.81	11,222	3,174	49,403	43.26	1,142
2003	99,458.53	23,544	6,658	112,692	44.15	2,552
2004	37,216.14	8,079	2,285	42,375	45.05	941
2006	12,125.13	2,153	609	13,941	46.86	298
2007	55,283.89	8,709	2,463	63,878	47.78	1,337
2008	910,601.24	125,171	35,398	1,057,324	48.70	21,711
2009	18,096.31	2,124	601	21,115	49.62	426
2010	208,935.79	20,286	5,737	244,986	50.55	4,846
2011	19,403.28	1,490	421	22,863	51.48	444
2012	837,144.76	47,305	13,378	991,196	52.41	18,912
2013	2,879.93	104	29	3,427	53.35	64
2014	76.30	1	0	91	54.29	2
2015	36,406.32	95	27	43,661	54.88	796
	2,628,470.11	492,057	139,152	3,015,012		78,874

## PARKVILLE

INTERIM SURVIVOR CURVE.. IOWA 55-R2.5

PROBABLE RETIREMENT YEAR.. 5-2018

NET SALVAGE PERCENT.. -20

2000	1,950.00	1,923	544	1,796	3.15	570
	1,950.00	1,923	544	1,796		570
	2,630,420.11	493,980	139,696	3,016,808		79,444

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 38.0 3.02

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.80 STRUCTURES AND IMPROVEMENTS - MISCELLANEOUS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
ALL OTHER MISCELLANEOUS						
SURVIVOR CURVE.. IOWA 55-R2						
NET SALVAGE PERCENT.. -20						
1902	160.15	189	130	63	1.00	63
1907	1,290.47	1,520	1,042	506	1.00	506
1910	21.71	26	26			
1912	363.07	428	293	142	1.00	142
1913	97.42	115	79	38	1.00	38
1926	448.32	503	345	193	3.60	54
1927	1,564.53	1,745	1,197	681	3.89	175
1928	104.95	116	80	46	4.18	11
1929	352.00	388	266	156	4.47	35
1931	93.64	102	70	42	5.05	8
1936	537.02	568	389	255	6.51	39
1938	1,056.04	1,104	757	510	7.10	72
1943	15,254.69	15,427	10,579	7,727	8.65	893
1946	726.10	719	493	378	9.64	39
1952	79.29	75	51	44	11.85	4
1959	2,602.75	2,279	1,563	1,561	14.86	105
1960	5,010.96	4,337	2,974	3,039	15.33	198
1966	680.00	543	372	444	18.40	24
1981	26.52	16	11	21	27.68	1
1982	19,730.22	11,464	7,861	15,815	28.37	557
1985	1,000.00	535	367	833	30.50	27
1994	1,149,870.42	443,813	304,331	1,075,514	37.31	28,826
1995	8,361.50	3,081	2,113	7,921	38.11	208
1997	976.58	326	224	948	39.71	24
2000	1,831,224.34	512,604	351,502	1,845,967	42.17	43,774
2001	20,349.66	5,328	3,654	20,766	43.00	483
2002	13,461.37	3,278	2,248	13,906	43.84	317
2003	49,294.29	11,099	7,611	51,542	44.68	1,154
2005	40,228.10	7,557	5,182	43,092	46.39	929
2006	134,092.95	22,674	15,548	145,364	47.25	3,076
2007	83,786.35	12,595	8,637	91,907	48.11	1,910
	3,382,845.41	1,064,554	729,993	3,329,422		83,692

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 304.80 STRUCTURES AND IMPROVEMENTS - MISCELLANEOUS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
PARKVILLE						
INTERIM SURVIVOR CURVE.. IOWA 55-R2						
PROBABLE RETIREMENT YEAR.. 5-2018						
NET SALVAGE PERCENT.. -20						
2001	319,406.53	310,425	212,859	170,429	3.15	54,104
	319,406.53	310,425	212,859	170,429		54,104
	3,702,251.94	1,374,979	942,852	3,499,851		137,796
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 25.4						3.72

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 305 COLLECTING AND IMPOUNDING RESERVOIRS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 85-R3						
NET SALVAGE PERCENT.. 0						
1956	16,589.73	10,137	16,590			
1957	577.43	348	575	2	33.79	
1961	59,395.27	33,701	55,689	3,706	36.77	101
1973	27,479.34	12,495	20,647	6,832	46.35	147
1976	2,433.52	1,034	1,709	725	48.88	15
1995	665.87	149	246	420	65.93	6
2007	1,616.04	144	238	1,378	77.41	18
2012	10,932.19	347	573	10,359	82.30	126
	119,689.39	58,355	96,267	23,422		413

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 56.7 0.35

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 306 LAKE, RIVER AND OTHER INTAKES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
ST. JOSEPH						
INTERIM SURVIVOR CURVE.. IOWA 70-S0.5						
PROBABLE RETIREMENT YEAR.. 6-2058						
NET SALVAGE PERCENT.. -20						
1995	6,326.00	2,511	1,290-	8,881	35.90	247
	6,326.00	2,511	1,290-	8,881		247
MEXICO						
INTERIM SURVIVOR CURVE.. IOWA 70-S0.5						
PROBABLE RETIREMENT YEAR.. 6-2060						
NET SALVAGE PERCENT.. -20						
2007	10,775.14	2,026	1,041-	13,971	39.88	350
	10,775.14	2,026	1,041-	13,971		350
JOPLIN						
INTERIM SURVIVOR CURVE.. IOWA 70-S0.5						
PROBABLE RETIREMENT YEAR.. 6-2068						
NET SALVAGE PERCENT.. -20						
1892	10.79	12	6-	19	5.96	3
1902	3,100.30	3,226	1,657-	5,377	9.31	578
1916	200.87	192	99-	340	14.12	24
1957	26,992.58	18,739	9,626-	42,017	29.09	1,444
2007	542,971.08	91,538	47,020-	698,585	45.09	15,493
	573,275.62	113,707	58,407-	746,338		17,542



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 306 LAKE, RIVER AND OTHER INTAKES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
JEFFERSON						
INTERIM SURVIVOR CURVE.. IOWA 70-S0.5						
PROBABLE RETIREMENT YEAR.. 6-2049						
NET SALVAGE PERCENT.. -20						
1957	3,288.00	2,509	1,289-	5,234	23.92	219
2004	302,958.60	89,811	46,132-	409,683	31.21	13,127
2011	6,445,946.07	794,476	408,090-	8,143,225	32.15	253,288
	6,752,192.67	886,796	455,511-	8,558,142		266,634
	7,342,569.43	1,005,040	516,249-	9,327,332		284,773
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 32.8						3.88

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 307 WELLS AND SPRINGS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
ALL OTHER WELLS AND SPRINGS						
SURVIVOR CURVE.. IOWA 55-R1.5						
NET SALVAGE PERCENT.. -5						
1920	162,431.84	155,947	109,012	61,542	4.71	13,066
1926	319,557.57	298,140	208,409	127,127	6.13	20,738
1929	28,653.40	26,306	18,389	11,697	6.91	1,693
1933	2,492.80	2,236	1,563	1,054	8.02	131
1951	12,590.18	9,872	6,901	6,319	13.93	454
1952	6,751.68	5,244	3,666	3,424	14.32	239
1956	43,771.22	32,598	22,787	23,173	15.99	1,449
1959	44,364.04	31,905	22,303	24,280	17.33	1,401
1960	3,979.30	2,826	1,975	2,203	17.80	124
1962	104,779.58	72,492	50,674	59,344	18.76	3,163
1963	19,145.07	13,063	9,131	10,971	19.26	570
1966	40.34	26	18	24	20.80	1
1968	25,213.00	15,942	11,144	15,330	21.88	701
1972	100.86	59	41	65	24.14	3
1976	26,174.69	14,221	9,941	17,543	26.54	661
1980	49,217.60	24,364	17,031	34,647	29.07	1,192
1981	574.81	277	194	410	29.72	14
1982	73,430.32	34,514	24,126	52,976	30.38	1,744
1983	19,088.66	8,728	6,101	13,942	31.05	449
1984	233,001.41	103,554	72,387	172,264	31.72	5,431
1985	364.95	157	110	273	32.40	8
1987	64,808.44	26,255	18,353	49,696	33.78	1,471
1988	550.64	216	151	427	34.48	12
1989	339,676.64	128,526	89,844	266,817	35.18	7,584
1990	202,644.04	73,929	51,679	161,098	35.89	4,489
1991	44,461.76	15,610	10,912	35,773	36.61	977
1992	2,703.94	912	638	2,202	37.33	59
1993	69,964.01	22,626	15,816	57,646	38.06	1,515
1995	100,112.97	29,567	20,668	84,450	39.53	2,136
1996	139,239.00	39,156	27,371	118,830	40.27	2,951
1997	209,684.05	55,962	39,119	181,049	41.02	4,414
1998	351,015.36	88,659	61,975	306,591	41.77	7,340
1999	318,983.51	75,939	53,084	281,849	42.53	6,627
2000	843,129.05	188,486	131,757	753,528	43.29	17,407
2001	79,112.64	16,538	11,561	71,508	44.05	1,623
2002	733,942.71	142,638	99,708	670,932	44.82	14,969
2003	273,803.99	49,187	34,383	253,111	45.59	5,552
2004	412,178.75	67,909	47,470	385,317	46.37	8,310
2005	49,831.23	7,468	5,220	47,102	47.15	999
2006	726,101.89	97,863	68,409	693,998	47.94	14,476
2007	281,990.67	33,754	23,595	272,495	48.73	5,592

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 307 WELLS AND SPRINGS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
ALL OTHER WELLS AND SPRINGS						
SURVIVOR CURVE.. IOWA 55-R1.5						
NET SALVAGE PERCENT.. -5						
2008	115,071.21	12,039	8,416	112,409	49.52	2,270
2009	29,120.17	2,602	1,819	28,757	50.32	571
2010	204,081.53	15,077	10,539	203,746	51.13	3,985
2011	79,177.70	4,641	3,244	79,892	51.93	1,538
2012	178,955.97	7,687	5,373	182,530	52.75	3,460
2013	138,011.48	3,794	2,652	142,260	53.56	2,656
2014	53,356.65	631	441	55,583	54.38	1,022
	7,217,433.32	2,060,142	1,440,102	6,138,203		177,237
PARKVILLE						
INTERIM SURVIVOR CURVE.. IOWA 55-R1.5						
PROBABLE RETIREMENT YEAR.. 5-2018						
NET SALVAGE PERCENT.. -5						
2001	36,247.49	30,755	21,499	16,561	3.14	5,274
	36,247.49	30,755	21,499	16,561		5,274
	7,253,680.81	2,090,897	1,461,601	6,154,764		182,511
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						33.7 2.52

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 308 INFILTRATION GALLERIES AND TUNNELS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 60-R2.5						
NET SALVAGE PERCENT.. 0						
2003	1,803.84	327	218	1,585	49.13	32
	1,803.84	327	218	1,585		32
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						49.5 1.77

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 309 SUPPLY MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 80-R3						
NET SALVAGE PERCENT.. -25						
1880	5,076.88	6,267	6,346			
1891	6,868.42	8,293	8,586			
1901	26,086.40	30,460	32,608			
1912	19,049.54	21,392	23,812			
1930	558.05	575	695	3	14.04	
1945	938.98	857	1,036	138	21.57	6
1947	29,449.62	26,335	31,838	4,974	22.77	218
1952	9,636.00	8,138	9,839	2,206	25.95	85
1954	6,391.26	5,264	6,364	1,625	27.29	60
1955	171,286.09	139,251	168,350	45,758	27.97	1,636
1956	116,291.74	93,288	112,782	32,583	28.66	1,137
1957	4,036.65	3,194	3,861	1,185	29.36	40
1959	76,192.53	58,584	70,826	24,415	30.79	793
1960	62,093.84	47,045	56,876	20,741	31.51	658
1961	125,281.65	93,473	113,006	43,596	32.25	1,352
1962	7,984.52	5,865	7,091	2,890	32.99	88
1963	16,210.10	11,719	14,168	6,095	33.73	181
1964	104,020.93	73,969	89,426	40,600	34.49	1,177
1965	67.99	48	58	27	35.25	1
1967	19,012.38	12,836	15,518	8,247	36.79	224
1968	450,469.54	298,577	360,970	202,117	37.58	5,378
1969	988.96	643	777	459	38.37	12
1970	1,842.66	1,176	1,422	881	39.16	22
1971	462,698.51	289,406	349,882	228,491	39.97	5,717
1972	41,952.37	25,709	31,081	21,359	40.78	524
1973	209,195.15	125,548	151,783	109,711	41.59	2,638
1974	3,093.38	1,817	2,197	1,670	42.41	39
1975	1,698.02	975	1,179	944	43.24	22
1976	6,299.57	3,536	4,275	3,599	44.08	82
1977	86,446.56	47,384	57,286	50,772	44.92	1,130
1978	382.84	205	248	231	45.76	5
1979	7,032.84	3,668	4,434	4,357	46.62	93
1980	68,413.20	34,773	42,039	43,478	47.47	916
1981	3,097.94	1,533	1,853	2,019	48.34	42
1982	82,455.59	39,669	47,959	55,110	49.21	1,120
1983	1,883.18	880	1,064	1,290	50.08	26
1984	333,106.85	151,147	182,732	233,652	50.96	4,585
1985	802,000.29	352,760	426,475	576,025	51.85	11,109
1986	31,016.38	13,211	15,972	22,798	52.74	432
1987	129,047.83	53,171	64,282	97,028	53.63	1,809
1988	41,904.20	16,677	20,162	32,218	54.53	591
1989	143,093.39	54,912	66,387	112,480	55.44	2,029

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 309 SUPPLY MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 80-R3						
NET SALVAGE PERCENT.. -25						
1990	49,678.64	18,357	22,193	39,905	56.35	708
1991	261,451.56	92,897	112,309	214,505	57.26	3,746
1992	40,069.07	13,661	16,516	33,570	58.18	577
1993	2,574,924.14	840,455	1,016,082	2,202,573	59.11	37,262
1994	60,085.98	18,739	22,655	52,452	60.04	874
1995	37,268.50	11,082	13,398	33,188	60.97	544
1996	116.75	33	40	106	61.90	2
1997	31,055.26	8,327	10,067	28,752	62.84	458
1998	60,475.86	15,317	18,518	57,077	63.79	895
1999	3,404.33	812	982	3,273	64.73	51
2000	9,885,260.26	2,211,827	2,674,025	9,682,550	65.68	147,420
2002	118,740.31	23,024	27,835	120,590	67.59	1,784
2003	24,279.31	4,344	5,252	25,097	68.55	366
2005	24,874.00	3,700	4,473	26,620	70.48	378
2006	3,133.37	419	507	3,410	71.45	48
2007	3,861,281.95	457,321	552,886	4,273,716	72.42	59,013
2008	127,382.86	13,155	15,904	143,325	73.39	1,953
2009	229,510.78	20,226	24,452	262,436	74.36	3,529
2010	31,277.94	2,277	2,753	36,344	75.34	482
2011	1,007,163.62	57,912	70,013	1,188,942	76.32	15,578
2013	13,375.45	359	434	16,285	78.28	208
2014	118,692.73	1,372	1,659	146,707	79.26	1,851
	22,278,155.49	5,979,846	7,220,498	20,627,196		323,704

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 63.7 1.45

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 310.10 POWER GENERATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 37-R3						
NET SALVAGE PERCENT.. -5						
1959	98.90	99	71	33	1.63	20
1984	7,820.00	5,794	4,136	4,075	10.89	374
1985	900.00	651	465	480	11.53	42
1997	250,012.02	116,855	83,419	179,094	20.53	8,724
2000	5,884.20	2,321	1,657	4,521	23.10	196
2006	338.89	81	58	298	28.56	10
2007	412,838.91	87,867	62,725	370,756	29.50	12,568
2008	1,786,610.21	332,098	237,072	1,638,869	30.45	53,822
2009	7,722.99	1,227	876	7,233	31.40	230
2010	57,238.08	7,537	5,380	54,720	32.36	1,691
2011	45,237.63	4,711	3,363	44,137	33.33	1,324
2012	5,593.51	429	306	5,567	34.30	162
2013	47,983.24	2,342	1,672	48,710	35.28	1,381
2014	153,105.40	3,215	2,296	158,465	36.26	4,370
	2,781,383.98	565,227	403,496	2,516,958		84,914
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..					29.6	3.05

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 311 ELECTRIC PUMPING EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
ALL OTHER ELECTRIC PUMPING EQUIPMENT						
SURVIVOR CURVE.. IOWA 47-R1						
NET SALVAGE PERCENT.. -10						
1888	71.00	76	78			
1909	113.99	123	125			
1910	408.63	440	449			
1914	529.00	570	582			
1926	9,990.18	10,545	10,989			
1927	9,646.79	10,106	10,611			
1931	82,827.19	84,344	91,110			
1932	667.10	675	734			
1933	19.80	20	22			
1934	978.56	976	1,076			
1935	125.00	124	138			
1937	197.80	193	218			
1938	72,994.79	70,744	80,294			
1939	60,645.10	58,322	66,710			
1940	214.02	204	235			
1941	295.65	280	325			
1942	436.13	410	480			
1943	198.39	185	218			
1944	429.65	397	473			
1945	817.02	748	899			
1946	270.67	246	298			
1947	22,747.68	20,449	25,022			
1948	54,357.63	48,407	59,793			
1949	51,864.25	45,738	57,051			
1950	15,830.12	13,823	17,413			
1951	211,571.03	182,915	232,728			
1952	345.19	295	380			
1953	267,178.63	226,174	293,896			
1954	219,935.48	184,176	241,929			
1955	768,846.05	636,641	845,731			
1956	287,788.38	235,608	316,567			
1957	34,172.00	27,648	37,589			
1958	3,356.24	2,683	3,679	12	12.85	1
1959	1,816.77	1,434	1,967	32	13.27	2
1960	110,151.69	85,848	117,732	3,435	13.70	251
1961	195,025.48	149,987	205,693	8,835	14.14	625
1962	146,805.53	111,391	152,762	8,724	14.58	598
1963	14,519.73	10,864	14,899	1,073	15.03	71
1964	273,882.92	201,981	276,997	24,274	15.49	1,567
1965	77,123.76	56,046	76,862	7,974	15.95	500
1966	101,549.22	72,679	99,672	12,032	16.42	733



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 311 ELECTRIC PUMPING EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
ALL OTHER ELECTRIC PUMPING EQUIPMENT						
SURVIVOR CURVE.. IOWA 47-R1						
NET SALVAGE PERCENT.. -10						
1967	176,650.86	124,446	170,666	23,650	16.90	1,399
1968	1,052,712.43	729,773	1,000,813	157,170	17.38	9,043
1969	67,592.79	46,083	63,198	11,154	17.87	624
1970	245,566.95	164,546	225,659	44,465	18.37	2,421
1971	948,877.25	624,485	856,421	187,344	18.88	9,923
1972	159,962.13	103,367	141,758	34,200	19.39	1,764
1973	387,288.47	245,548	336,745	89,272	19.91	4,484
1974	24,019.69	14,931	20,476	5,945	20.44	291
1975	66,893.13	40,737	55,867	17,716	20.98	844
1976	206,570.76	123,187	168,939	58,289	21.52	2,709
1977	429,610.38	250,666	343,764	128,807	22.07	5,836
1978	137,231.33	78,271	107,341	43,613	22.63	1,927
1979	224,553.23	125,135	171,611	75,398	23.19	3,251
1980	108,419.30	58,946	80,839	38,422	23.77	1,616
1981	172,456.59	91,419	125,372	64,330	24.35	2,642
1982	586,448.37	302,916	415,420	229,673	24.93	9,213
1983	154,379.96	77,575	106,387	63,431	25.53	2,485
1984	297,698.16	145,409	199,414	128,054	26.13	4,901
1985	968,044.17	459,014	629,493	435,355	26.74	16,281
1986	1,142,413.83	525,395	720,528	536,127	27.35	19,602
1987	468,922.89	208,848	286,415	229,400	27.97	8,202
1988	541,293.73	233,102	319,677	275,746	28.60	9,641
1989	1,767,849.07	735,247	1,008,320	936,314	29.23	32,033
1990	779,069.08	312,342	428,347	428,629	29.87	14,350
1991	3,675,096.15	1,418,348	1,945,127	2,097,478	30.51	68,747
1992	458,776.64	170,079	233,247	271,407	31.16	8,710
1993	2,834,049.24	1,006,875	1,380,832	1,736,622	31.82	54,576
1994	916,031.09	311,299	426,917	580,718	32.48	17,879
1995	881,056.22	285,796	391,942	577,220	33.14	17,418
1996	708,425.89	218,694	299,918	479,351	33.81	14,178
1997	2,670,535.52	782,515	1,073,144	1,864,445	34.48	54,073
1998	1,453,333.53	403,072	552,774	1,045,893	35.15	29,755
1999	2,157,699.15	564,079	773,580	1,599,889	35.83	44,652
2000	5,878,829.56	1,443,306	1,979,355	4,487,358	36.51	122,908
2001	1,009,316.71	231,498	317,477	792,771	37.20	21,311
2002	675,794.39	144,088	197,603	545,771	37.89	14,404
2003	469,422.77	92,507	126,864	389,501	38.58	10,096
2004	245,479.92	44,411	60,905	209,123	39.27	5,325
2005	341,808.43	56,237	77,124	298,866	39.97	7,477
2006	1,086,325.98	160,937	220,710	974,249	40.67	23,955
2007	7,338,499.94	965,211	1,323,694	6,748,656	41.38	163,090

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 311 ELECTRIC PUMPING EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
ALL OTHER ELECTRIC PUMPING EQUIPMENT						
SURVIVOR CURVE.. IOWA 47-R1						
NET SALVAGE PERCENT.. -10						
2008	4,556,693.31	523,642	718,124	4,294,238	42.09	102,025
2009	1,510,320.79	148,458	203,596	1,457,757	42.80	34,060
2010	1,580,465.95	128,719	176,526	1,561,987	43.52	35,891
2011	2,397,659.01	154,316	211,629	2,425,795	44.25	54,820
2012	151,520.33	7,199	9,873	156,800	44.97	3,487
2013	870,708.24	26,291	36,056	921,723	45.71	20,165
2014	1,422,397.73	18,635	25,556	1,539,081	46.44	33,141
2015	279,112.56	586	804	306,220	46.91	6,528
	59,784,627.84	17,682,701	24,091,273	41,671,817		1,138,501

## PARKVILLE

INTERIM SURVIVOR CURVE.. IOWA 47-R1

PROBABLE RETIREMENT YEAR.. 5-2018

NET SALVAGE PERCENT.. -10

1960	3,055.25	3,128	3,361
1968	4,728.45	4,802	5,201
1973	5,699.07	5,750	6,269
1975	7,263.89	7,305	7,990
1976	2,763.64	2,774	3,040
1978	7,721.19	7,721	8,493
1982	2,602.59	2,579	2,863
1985	947.99	932	1,043
1990	9,762.22	9,417	10,738
1993	24,505.81	23,280	26,956
1994	41,889.58	39,562	46,079
1995	38,734.33	36,345	42,608
1998	21.50	20	24
2001	4,587.35	4,062	5,046
2003	6,137.08	5,265	6,751
2005	18,387.21	15,121	20,226
2007	1,972.74	1,527	2,170
2009	85,995.18	60,484	94,595

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 311 ELECTRIC PUMPING EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
PARKVILLE						
INTERIM SURVIVOR CURVE.. IOWA 47-R1						
PROBABLE RETIREMENT YEAR.. 5-2018						
NET SALVAGE PERCENT.. -10						
2011	19,723.10	11,680	21,695			
2014	10,858.15	2,253	11,944			
2015	1,673.06	68	1,840			
	299,029.38	244,075	328,932			
	60,083,657.22	17,926,776	24,420,205	41,671,817		1,138,501
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						36.6 1.89

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 320 WATER TREATMENT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
ALL OTHER WATER TREATMENT EQUIPMENT						
SURVIVOR CURVE.. IOWA 48-R1.5						
NET SALVAGE PERCENT.. -25						
1881	575.10	704	719			
1901	12,135.60	14,854	15,170			
1905	153.58	188	192			
1916	15,506.97	18,980	19,384			
1924	52.00	62	65			
1927	40,531.00	47,624	50,664			
1932	260.13	297	325			
1933	104.36	119	130			
1934	111.76	126	140			
1935	134.40	151	168			
1936	86.15	96	108			
1937	7,457.10	8,296	9,321			
1938	87,386.95	96,649	109,234			
1939	38.78	43	48			
1949	439.91	451	540	10	8.66	1
1950	105,061.33	106,784	127,866	3,460	8.97	386
1951	114,606.70	115,532	138,342	4,917	9.29	529
1952	414,137.35	413,920	495,640	22,031	9.62	2,290
1953	254,787.20	252,465	302,309	16,175	9.95	1,626
1954	612,180.42	601,176	719,866	45,359	10.29	4,408
1955	170,793.16	166,167	198,973	14,518	10.64	1,364
1956	460,262.55	443,601	531,181	44,147	10.99	4,017
1957	40,535.87	38,678	46,314	4,356	11.36	383
1958	8,878.34	8,386	10,042	1,056	11.73	90
1959	560,855.79	524,197	627,689	73,380	12.11	6,059
1960	182,830.03	168,976	202,337	26,201	12.51	2,094
1961	19,048.34	17,406	20,842	2,968	12.91	230
1962	15,422.67	13,929	16,679	2,599	13.32	195
1963	10,128.54	9,034	10,818	1,843	13.75	134
1964	769,805.51	677,987	811,842	150,415	14.18	10,608
1965	551,406.55	479,179	573,784	115,475	14.63	7,893
1966	16,631.86	14,258	17,073	3,717	15.08	246
1967	1,498.69	1,266	1,516	357	15.55	23
1968	669,933.04	557,753	667,870	169,546	16.03	10,577
1969	60,989.35	50,014	59,888	16,348	16.51	990
1970	28,043.81	22,632	27,100	7,955	17.01	468
1971	1,684,772.79	1,337,288	1,601,309	504,657	17.52	28,805
1972	36,629.00	28,569	34,209	11,577	18.05	641
1973	826,815.66	633,465	758,530	274,989	18.58	14,800
1974	37,020.68	27,843	33,340	12,936	19.12	677
1975	11,487.36	8,475	10,148	4,211	19.67	214

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 320 WATER TREATMENT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
ALL OTHER WATER TREATMENT EQUIPMENT						
SURVIVOR CURVE.. IOWA 48-R1.5						
NET SALVAGE PERCENT.. -25						
1976	12,347.19	8,926	10,688	4,746	20.24	234
1977	1,202,051.52	851,143	1,019,185	483,380	20.81	23,228
1978	19,455.26	13,482	16,144	8,175	21.39	382
1979	197,830.77	134,001	160,457	86,832	21.99	3,949
1980	71,336.20	47,205	56,525	32,646	22.59	1,445
1981	85,761.95	55,388	66,323	40,879	23.20	1,762
1982	38,408.01	24,175	28,948	19,062	23.83	800
1983	91,976.28	56,384	67,516	47,454	24.46	1,940
1984	215,579.03	128,561	153,943	115,531	25.10	4,603
1985	1,911,534.38	1,107,591	1,326,263	1,063,155	25.75	41,288
1986	37,202.14	20,926	25,057	21,445	26.40	812
1987	229,951.67	125,335	150,080	137,360	27.07	5,074
1988	242,512.99	127,950	153,211	149,930	27.74	5,405
1989	2,157,853.66	1,100,290	1,317,521	1,379,796	28.42	48,550
1990	426,254.55	209,685	251,083	281,735	29.11	9,678
1991	1,255,252.79	594,613	712,008	857,058	29.81	28,751
1992	617,683.12	281,339	336,884	435,220	30.51	14,265
1993	10,205,813.68	4,459,685	5,340,162	7,417,105	31.22	237,575
1994	1,501,229.04	628,246	752,281	1,124,255	31.93	35,210
1995	1,430,540.50	571,465	684,290	1,103,886	32.66	33,799
1996	2,021,528.44	769,646	921,598	1,605,313	33.38	48,092
1997	2,578,961.62	932,198	1,116,242	2,107,460	34.12	61,766
1998	22,546,212.29	7,715,032	9,238,214	18,944,552	34.86	543,447
1999	2,822,340.53	911,369	1,091,301	2,436,625	35.60	68,445
2000	4,580,486.55	1,389,662	1,664,024	4,061,585	36.35	111,735
2001	275,427.90	78,111	93,532	250,752	37.11	6,757
2002	577,207.84	152,267	182,329	539,181	37.87	14,238
2003	758,346.65	184,847	221,341	726,592	38.64	18,804
2004	911,524.33	203,908	244,166	895,240	39.41	22,716
2005	1,051,524.38	214,143	256,421	1,057,984	40.18	26,331
2006	890,360.11	163,236	195,464	917,486	40.96	22,400
2007	4,851,466.79	789,637	945,535	5,118,798	41.75	122,606
2008	27,660,524.96	3,932,981	4,709,471	29,866,185	42.54	702,073
2009	1,282,615.24	155,982	186,778	1,416,491	43.33	32,691
2010	1,561,598.06	157,370	188,440	1,763,558	44.13	39,963
2011	1,169,609.36	93,203	111,604	1,350,408	44.94	30,049
2012	2,990,405.97	175,238	209,835	3,528,172	45.75	77,119

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 320 WATER TREATMENT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
ALL OTHER WATER TREATMENT EQUIPMENT						
SURVIVOR CURVE.. IOWA 48-R1.5						
NET SALVAGE PERCENT.. -25						
2013	1,057,908.21	39,672	47,504	1,274,881	46.56	27,381
2014	1,860,290.64	30,044	35,976	2,289,388	47.38	48,320
2015	1,221,379.52	3,176	3,803	1,522,921	47.90	31,794
	112,449,830.50	35,545,732	42,543,864	98,018,424		2,655,225

## PARKVILLE

INTERIM SURVIVOR CURVE.. IOWA 48-R1.5

PROBABLE RETIREMENT YEAR.. 5-2018

NET SALVAGE PERCENT.. -25

1960	29,521.08	34,450	36,901			
1968	138,062.90	159,870	172,579			
1969	1,055.48	1,221	1,319			
1975	5,825.91	6,679	7,282			
1976	314.01	359	393			
1977	158,585.25	181,154	198,232			
1978	981.33	1,119	1,227			
1979	305.82	348	382			
1984	17,843.54	20,051	22,304			
1986	2,716.77	3,033	3,396			
1988	10,634.43	11,787	13,293			
1989	2,501.66	2,762	3,127			
1991	2,798.69	3,063	3,498			
1993	4,298.61	4,655	5,373			
1994	96,154.97	103,512	120,194			
1995	15,141.96	16,195	18,927			
1996	17,584.97	18,675	21,981			
1997	19,197.19	20,215	23,996			
1998	987,119.48	1,030,306	1,233,899			
2001	12,982.69	13,104	16,228			
2002	9,449.94	9,402	11,812			
2003	89,984.43	87,988	112,481			
2004	16,011.85	15,356	19,742	273	3.14	87
2005	74,730.68	70,041	90,045	3,369	3.14	1,073
2006	8,417.11	7,676	9,868	653	3.14	208
2007	68,756.00	60,653	77,975	7,970	3.14	2,538
2008	206,376.32	174,548	224,398	33,572	3.14	10,692
2009	7,156.02	5,735	7,373	1,572	3.14	501

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 320 WATER TREATMENT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
PARKVILLE						
INTERIM SURVIVOR CURVE.. IOWA 48-R1.5						
PROBABLE RETIREMENT YEAR.. 5-2018						
NET SALVAGE PERCENT.. -25						
2010	56,141.41	41,890	53,854	16,323	3.14	5,198
2012	155,045.61	89,450	114,997	78,810	3.15	25,019
2013	9,390.76	4,146	5,330	6,408	3.15	2,034
	2,225,086.87	2,199,443	2,632,408	148,951		47,350
	114,674,917.37	37,745,175	45,176,272	98,167,375		2,702,575
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						36.3 2.36

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 330 DISTRIBUTION RESERVOIRS AND STANDPIPES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 65-R2.5						
NET SALVAGE PERCENT.. -30						
1900	186,684.00	236,976	242,689			
1907	12,102.71	14,901	15,734			
1931	2,977.91	3,332	3,819	52	9.05	6
1936	11,700.74	12,772	14,640	571	10.42	55
1939	14,246.08	15,286	17,522	998	11.35	88
1940	151.23	161	185	12	11.68	1
1941	37.62	40	46	3	12.02	
1942	139.66	147	169	13	12.37	1
1953	49.86	48	55	10	17.09	1
1954	322,044.43	305,298	349,961	68,697	17.60	3,903
1955	49,063.92	46,002	52,732	11,051	18.12	610
1956	92,093.52	85,352	97,838	21,884	18.66	1,173
1957	199,891.42	183,060	209,840	50,019	19.21	2,604
1958	1,016.87	920	1,055	267	19.77	14
1960	89,245.46	78,678	90,188	25,831	20.92	1,235
1961	488,227.77	424,561	486,671	148,025	21.52	6,878
1962	411,134.17	352,507	404,076	130,398	22.13	5,892
1963	143,691.59	121,447	139,214	47,585	22.74	2,093
1964	4,137.76	3,445	3,949	1,430	23.37	61
1965	717,398.16	588,127	674,165	258,453	24.01	10,764
1966	482,701.82	389,447	446,420	181,092	24.66	7,344
1967	318,161.57	252,492	289,430	124,180	25.32	4,904
1968	595,898.18	464,917	532,931	241,737	25.99	9,301
1969	137,428.19	105,381	120,797	57,860	26.66	2,170
1970	395,916.56	298,125	341,738	172,954	27.35	6,324
1971	376,656.63	278,348	319,068	170,586	28.05	6,081
1972	27,163.87	19,694	22,575	12,738	28.75	443
1973	32,599.24	23,165	26,554	15,825	29.47	537
1974	2,630.84	1,832	2,100	1,320	30.19	44
1975	369,421.44	251,799	288,635	191,613	30.92	6,197
1976	10,083.36	6,726	7,710	5,398	31.65	171
1977	43,217.36	28,178	32,300	23,883	32.40	737
1978	238,639.93	152,014	174,252	135,980	33.15	4,102
1979	548,816.66	341,256	391,179	322,283	33.91	9,504
1980	294,302.88	178,465	204,573	178,021	34.68	5,133
1981	503,731.79	297,604	341,141	313,710	35.46	8,847
1982	1,546.67	890	1,020	991	36.24	27
1983	48,224.73	26,977	30,924	31,768	37.03	858
1984	2,848.99	1,549	1,776	1,928	37.82	51
1986	99,857.43	51,047	58,515	71,300	39.44	1,808
1987	32,936.03	16,303	18,688	24,129	40.25	599
1988	1,975.78	945	1,083	1,486	41.08	36



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 330 DISTRIBUTION RESERVOIRS AND STANDPIPES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 65-R2.5						
NET SALVAGE PERCENT.. -30						
1989	1,088,606.45	502,717	576,261	838,927	41.91	20,017
1990	1,152,251.17	512,980	588,025	909,902	42.74	21,289
1991	871,055.19	373,162	427,753	704,619	43.58	16,168
1992	243,242.45	100,069	114,708	201,507	44.43	4,535
1993	61,936.67	24,427	28,000	52,518	45.28	1,160
1994	1,063.38	401	460	922	46.14	20
1995	1,000,135.89	359,850	412,493	887,684	47.01	18,883
1996	968,632.53	331,654	380,172	879,050	47.88	18,359
1997	1,976,299.14	642,297	736,260	1,832,929	48.75	37,599
1998	1,168,325.61	359,141	411,681	1,107,142	49.63	22,308
1999	279,781.32	81,025	92,878	270,838	50.52	5,361
2000	1,229,477.00	334,177	383,065	1,215,255	51.41	23,638
2001	374,427.89	95,102	109,015	377,741	52.30	7,223
2002	3,432,464.68	810,069	928,576	3,533,628	53.20	66,422
2003	1,953,063.22	425,762	488,047	2,050,935	54.10	37,910
2004	79,873.83	15,959	18,294	85,542	55.01	1,555
2005	1,852,478.21	336,404	385,617	2,022,605	55.92	36,170
2006	321,335.63	52,443	60,115	357,621	56.84	6,292
2007	2,998,549.93	434,172	497,688	3,400,427	57.76	58,872
2008	188,651.09	23,845	27,333	217,913	58.68	3,714
2009	255,128.97	27,502	31,525	300,143	59.61	5,035
2010	244,651.18	21,824	25,017	293,030	60.54	4,840
2011	32,676.39	2,307	2,645	39,834	61.47	648
2012	141,347.73	7,323	8,394	175,358	62.41	2,810
2013	7,834.73	258	296	9,889	63.35	156
2014	158,602.74	2,252	2,581	203,602	64.29	3,167
	29,392,687.85	11,537,336	13,194,856	25,015,638		534,748
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						46.8 1.82

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 331 MAINS - TRANSMISSION AND DISTRIBUTION

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 90-R2						
NET SALVAGE PERCENT.. -30						
1854	29.81	38	38	1	1.64	1
1872	58.32	70	71	5	6.61	1
1880	89,360.36	104,642	106,012	10,156	8.93	1,137
1881	70,592.21	82,369	83,448	8,322	9.22	903
1882	3,540.15	4,116	4,170	432	9.51	45
1884	2,430.43	2,805	2,842	318	10.09	32
1885	398.74	459	465	53	10.39	5
1886	839.15	961	974	117	10.68	11
1887	4,100.97	4,681	4,742	589	10.98	54
1888	15,645.48	17,790	18,023	2,316	11.28	205
1889	23,134.35	26,208	26,551	3,524	11.57	305
1890	24,780.83	27,966	28,332	3,883	11.87	327
1891	20,040.79	22,527	22,822	3,231	12.18	265
1892	6,113.03	6,845	6,935	1,012	12.48	81
1893	26,485.72	29,538	29,925	4,506	12.79	352
1894	33,189.87	36,866	37,349	5,798	13.10	443
1895	18,686.87	20,673	20,944	3,349	13.41	250
1896	1,323.49	1,458	1,477	244	13.73	18
1897	8,011.37	8,790	8,905	1,510	14.04	108
1898	31,417.31	34,321	34,770	6,073	14.37	423
1899	42,394.06	46,117	46,721	8,391	14.69	571
1900	277,701.24	300,762	304,700	56,312	15.02	3,749
1901	38,561.52	41,574	42,118	8,012	15.36	522
1902	17,111.40	18,364	18,604	3,641	15.70	232
1903	125,796.66	134,390	136,150	27,386	16.04	1,707
1904	22,627.26	24,059	24,374	5,041	16.39	308
1905	43,811.27	46,361	46,968	9,987	16.74	597
1906	58,796.83	61,913	62,724	13,712	17.10	802
1907	27,424.86	28,736	29,112	6,540	17.46	375
1908	86,357.26	90,024	91,203	21,061	17.83	1,181
1909	20,195.63	20,945	21,219	5,035	18.20	277
1910	209,705.46	216,338	219,171	53,446	18.58	2,877
1911	112,559.44	115,484	116,996	29,331	18.97	1,546
1912	142,048.13	144,940	146,838	37,825	19.36	1,954
1913	176,643.74	179,218	181,565	48,072	19.76	2,433
1914	30,824.86	31,096	31,503	8,569	20.16	425
1915	113,339.40	113,665	115,153	32,188	20.57	1,565
1916	42,639.93	42,504	43,061	12,371	20.99	589
1917	26,229.08	25,986	26,326	7,772	21.41	363
1918	2,458.53	2,420	2,452	744	21.84	34
1919	5,719.70	5,596	5,669	1,767	22.27	79
1920	24,887.12	24,190	24,507	7,846	22.71	345

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 331 MAINS - TRANSMISSION AND DISTRIBUTION

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 90-R2						
NET SALVAGE PERCENT.. -30						
1921	286,959.39	277,051	280,679	92,368	23.16	3,988
1922	274,230.56	262,979	266,422	90,078	23.61	3,815
1923	277,771.37	264,529	267,993	93,110	24.07	3,868
1924	272,656.55	257,805	261,181	93,273	24.54	3,801
1925	346,583.97	325,304	329,564	120,995	25.02	4,836
1926	718,007.51	668,947	677,706	255,704	25.50	10,028
1927	460,575.10	425,907	431,484	167,264	25.98	6,438
1928	237,954.50	218,327	221,186	88,155	26.48	3,329
1929	107,466.93	97,826	99,107	40,600	26.98	1,505
1930	907,794.45	819,673	830,406	349,727	27.49	12,722
1931	393,506.46	352,407	357,021	154,537	28.00	5,519
1932	75,607.05	67,142	68,021	30,268	28.52	1,061
1933	82,301.34	72,457	73,406	33,586	29.05	1,156
1934	45,105.83	39,365	39,880	18,758	29.58	634
1935	419,820.84	363,115	367,870	177,897	30.12	5,906
1936	325,687.14	279,109	282,764	140,629	30.67	4,585
1937	131,933.39	112,017	113,484	58,029	31.22	1,859
1938	86,649.79	72,869	73,823	38,822	31.78	1,222
1939	214,258.98	178,419	180,755	97,782	32.35	3,023
1940	301,472.76	248,560	251,815	140,100	32.92	4,256
1941	200,859.11	163,924	166,070	95,047	33.50	2,837
1942	61,379.46	49,578	50,227	29,566	34.08	868
1943	51,824.70	41,419	41,961	25,411	34.67	733
1944	43,010.62	34,002	34,447	21,467	35.27	609
1945	199,764.06	156,190	158,235	101,458	35.87	2,828
1946	272,888.50	210,962	213,724	141,031	36.48	3,866
1947	523,880.14	400,304	405,546	275,498	37.10	7,426
1948	631,804.08	477,111	483,358	337,987	37.72	8,960
1949	1,112,168.41	829,741	840,606	605,213	38.35	15,781
1950	584,369.73	430,655	436,294	323,387	38.98	8,296
1951	589,380.86	428,901	434,517	331,678	39.62	8,371
1952	626,044.17	449,795	455,685	358,172	40.26	8,896
1953	1,948,628.28	1,381,718	1,399,810	1,133,407	40.91	27,705
1954	2,337,713.29	1,635,331	1,656,744	1,382,283	41.57	33,252
1955	3,546,291.61	2,446,991	2,479,032	2,131,147	42.23	50,465
1956	2,979,095.62	2,026,765	2,053,304	1,819,520	42.90	42,413
1957	1,929,589.57	1,294,093	1,311,038	1,197,428	43.57	27,483
1958	2,407,814.51	1,591,154	1,611,989	1,518,170	44.25	34,309
1959	3,703,078.44	2,410,756	2,442,323	2,371,679	44.93	52,786
1960	3,072,475.16	1,969,589	1,995,379	1,998,839	45.62	43,815
1961	2,322,033.27	1,465,038	1,484,221	1,534,422	46.32	33,127
1962	2,341,770.40	1,453,837	1,472,874	1,571,428	47.02	33,420

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 331 MAINS - TRANSMISSION AND DISTRIBUTION

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 90-R2						
NET SALVAGE PERCENT.. -30						
1963	2,808,570.09	1,715,233	1,737,692	1,913,449	47.72	40,097
1964	4,281,518.70	2,570,868	2,604,531	2,961,443	48.43	61,149
1965	4,222,421.25	2,491,469	2,524,093	2,965,055	49.15	60,327
1966	4,486,528.42	2,601,289	2,635,351	3,197,136	49.86	64,122
1967	3,543,188.41	2,016,985	2,043,396	2,562,749	50.59	50,657
1968	4,096,574.71	2,288,814	2,318,784	3,006,763	51.32	58,589
1969	4,307,668.14	2,361,339	2,392,259	3,207,710	52.05	61,627
1970	3,130,408.29	1,682,507	1,704,538	2,364,993	52.79	44,800
1971	4,447,046.17	2,342,006	2,372,672	3,408,488	53.54	63,662
1972	3,785,242.09	1,953,022	1,978,595	2,942,220	54.28	54,204
1973	3,970,003.34	2,004,741	2,030,991	3,130,013	55.04	56,868
1974	5,715,866.97	2,824,456	2,861,440	4,569,187	55.79	81,900
1975	4,212,255.75	2,034,637	2,061,279	3,414,653	56.56	60,372
1976	4,499,140.76	2,123,788	2,151,597	3,697,286	57.32	64,503
1977	5,694,094.33	2,624,568	2,658,934	4,743,389	58.09	81,656
1978	8,606,484.77	3,869,966	3,920,640	7,267,790	58.87	123,455
1979	7,968,811.14	3,493,415	3,539,158	6,820,296	59.65	114,339
1980	5,358,654.98	2,288,832	2,318,802	4,647,449	60.43	76,906
1981	4,764,770.53	1,980,782	2,006,719	4,187,483	61.22	68,401
1982	3,999,932.11	1,617,173	1,638,348	3,561,564	62.01	57,435
1983	5,297,158.69	2,080,422	2,107,663	4,778,643	62.81	76,081
1984	6,822,163.90	2,600,513	2,634,564	6,234,249	63.61	98,007
1985	13,250,534.22	4,895,887	4,959,994	12,265,700	64.42	190,402
1986	12,700,586.78	4,545,908	4,605,433	11,905,330	65.22	182,541
1987	14,092,048.66	4,877,061	4,940,922	13,378,741	66.04	202,585
1988	16,335,391.19	5,462,326	5,533,850	15,702,159	66.85	234,886
1989	16,353,832.72	5,274,814	5,343,883	15,916,100	67.67	235,202
1990	11,733,722.25	3,643,990	3,691,705	11,562,134	68.50	168,790
1991	16,928,033.06	5,054,220	5,120,401	16,886,042	69.33	243,560
1992	9,147,724.15	2,621,482	2,655,808	9,236,233	70.16	131,645
1993	13,393,835.42	3,677,760	3,725,917	13,686,069	70.99	192,789
1994	14,887,915.49	3,907,438	3,958,602	15,395,688	71.83	214,335
1995	13,845,361.97	3,463,722	3,509,076	14,489,895	72.68	199,366
1996	17,606,935.07	4,191,208	4,246,088	18,642,928	73.52	253,576
1997	24,564,076.27	5,545,856	5,618,474	26,314,825	74.37	353,837
1998	19,378,734.91	4,134,317	4,188,452	21,003,903	75.23	279,196
1999	16,426,328.31	3,302,858	3,346,106	18,008,121	76.08	236,700
2000	35,137,000.94	6,628,349	6,715,142	38,962,959	76.94	506,407
2001	74,620,721.95	13,138,620	13,310,659	83,696,280	77.81	1,075,649
2002	50,099,928.81	8,199,204	8,306,565	56,823,342	78.67	722,300
2003	25,484,937.80	3,850,417	3,900,835	29,229,584	79.54	367,483
2004	16,684,070.03	2,308,608	2,338,837	19,350,454	80.42	240,617

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 331 MAINS - TRANSMISSION AND DISTRIBUTION

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 90-R2									
NET SALVAGE PERCENT.. -30									
2005	8,263,885.43	1,039,712	1,053,326	9,689,725	81.29	119,199			
2006	56,457,117.92	6,385,300	6,468,910	66,925,343	82.17	814,474			
2007	58,665,649.57	5,880,821	5,957,825	70,307,519	83.06	846,467			
2008	67,784,814.54	5,933,137	6,010,827	82,109,432	83.94	978,192			
2009	52,940,759.49	3,953,192	4,004,956	64,818,031	84.83	764,093			
2010	65,209,105.31	4,031,749	4,084,541	80,687,296	85.72	941,289			
2011	47,222,746.99	2,305,792	2,335,984	59,053,587	86.62	681,755			
2012	82,307,557.89	2,948,915	2,987,529	104,012,296	87.52	1,188,440			
2013	55,192,398.84	1,259,932	1,276,430	70,473,688	88.42	797,033			
2014	91,937,458.97	903,561	915,392	118,603,305	89.32	1,327,847			
2015	9,560,283.43	15,163	15,362	12,413,007	89.89	138,091			
1,173,712,222.45						213,847,611	216,647,757	1,309,178,133	16,907,197
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						77.4	1.44		

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 332 MAINS - FIRE

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 85-S1						
NET SALVAGE PERCENT.. -30						
1935	1,546.00	1,312	1,253	757	29.53	26
1970	643.95	366	350	487	47.86	10
1971	23.30	13	12	18	48.50	
1972	656.23	360	344	509	49.14	10
1978	707.89	345	330	590	53.17	11
1979	1,018.06	485	463	860	53.88	16
1980	17,621.13	8,195	7,830	15,077	54.59	276
1981	769.12	349	333	667	55.31	12
1982	2,039.39	903	863	1,788	56.04	32
1984	18,506.33	7,778	7,431	16,627	57.52	289
1985	11,002.10	4,496	4,295	10,008	58.28	172
1986	12,743.34	5,060	4,834	11,732	59.04	199
1987	15,383.48	5,924	5,660	14,339	59.82	240
1988	10,540.41	3,933	3,758	9,945	60.60	164
1989	8,202.47	2,961	2,829	7,834	61.40	128
1990	10,153.92	3,541	3,383	9,817	62.20	158
1991	28,047.23	9,433	9,012	27,449	63.01	436
1992	9,750.19	3,155	3,014	9,661	63.84	151
1993	20,496.58	6,373	6,089	20,557	64.67	318
1994	21,549.23	6,420	6,134	21,880	65.52	334
1995	28,593.97	8,147	7,784	29,388	66.37	443
1996	8,291.00	2,253	2,153	8,625	67.23	128
1997	46,256.12	11,949	11,416	48,717	68.11	715
1998	16,909.37	4,140	3,955	18,027	68.99	261
1999	18,774.64	4,342	4,148	20,259	69.88	290
2000	55,642.73	12,101	11,561	60,775	70.78	859
2001	35,760.75	7,280	6,956	39,533	71.69	551
2002	20,567.53	3,894	3,720	23,018	72.62	317
2003	17,412.44	3,049	2,913	19,723	73.55	268
2004	16,308.31	2,624	2,507	18,694	74.48	251
2005	21,930.14	3,210	3,067	25,442	75.43	337
2006	44,251.61	5,827	5,567	51,960	76.39	680
2007	25,027.10	2,928	2,798	29,737	77.35	384
2008	24,439.72	2,497	2,386	29,386	78.32	375
2009	17,612.95	1,538	1,469	21,428	79.29	270
2010	6,045.07	436	417	7,442	80.28	93
2014	253.12	3	2	327	84.25	4
	595,476.92	147,620	141,036	633,084		9,208

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 68.8 1.55

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 333 SERVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 65-R2						
NET SALVAGE PERCENT.. -100						
1923	55.69	98	72	39	8.08	5
1924	119.75	209	153	86	8.38	10
1926	113.74	196	144	83	8.98	9
1927	59.07	101	74	44	9.29	5
1928	200.30	341	250	151	9.60	16
1929	50.22	85	62	38	9.92	4
1930	25.31	43	31	20	10.24	2
1931	609.37	1,021	748	471	10.56	45
1932	1,757.77	2,927	2,144	1,372	10.89	126
1933	2,529.42	4,185	3,065	1,994	11.23	178
1934	2,426.88	3,990	2,922	1,932	11.57	167
1935	11,919.80	19,468	14,259	9,581	11.92	804
1936	10,293.34	16,701	12,232	8,355	12.27	681
1937	6,048.95	9,745	7,138	4,960	12.64	392
1938	6,556.14	10,488	7,682	5,430	13.01	417
1939	5,583.45	8,868	6,495	4,672	13.38	349
1940	10,437.18	16,452	12,050	8,824	13.77	641
1941	6,166.69	9,647	7,066	5,267	14.16	372
1942	3,271.92	5,077	3,719	2,825	14.57	194
1943	689.30	1,061	777	602	14.98	40
1944	299.94	458	335	265	15.40	17
1945	6,619.87	10,017	7,337	5,903	15.82	373
1946	19,769.76	29,649	21,716	17,824	16.26	1,096
1947	17,058.69	25,346	18,564	15,553	16.71	931
1948	18,241.97	26,852	19,667	16,817	17.16	980
1949	15,589.48	22,722	16,642	14,537	17.63	825
1950	19,248.99	27,778	20,346	18,152	18.10	1,003
1951	20,475.93	29,246	21,421	19,531	18.58	1,051
1952	25,417.43	35,921	26,310	24,525	19.07	1,286
1953	29,663.93	41,457	30,365	28,963	19.58	1,479
1954	36,261.73	50,108	36,701	35,822	20.09	1,783
1955	49,123.51	67,111	49,154	49,093	20.60	2,383
1956	44,148.27	59,593	43,648	44,649	21.13	2,113
1957	42,640.31	56,850	41,639	43,642	21.67	2,014
1958	52,591.37	69,226	50,703	54,480	22.22	2,452
1959	59,138.55	76,843	56,282	61,995	22.77	2,723
1960	33,458.80	42,889	31,413	35,505	23.34	1,521
1961	40,754.37	51,526	37,739	43,770	23.91	1,831
1962	52,024.76	64,847	47,496	56,554	24.49	2,309
1963	68,713.30	84,401	61,818	75,609	25.08	3,015
1964	87,499.95	105,861	77,536	97,464	25.68	3,795
1965	61,440.39	73,180	53,600	69,281	26.29	2,635

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 333 SERVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 65-R2						
NET SALVAGE PERCENT.. -100						
1966	64,348.53	75,436	55,252	73,445	26.90	2,730
1967	58,722.27	67,702	49,587	67,858	27.53	2,465
1968	37,916.09	42,979	31,479	44,353	28.16	1,575
1969	54,270.89	60,449	44,275	64,267	28.80	2,231
1970	122,413.85	133,901	98,074	146,754	29.45	4,983
1971	94,942.93	101,925	74,653	115,233	30.11	3,827
1972	110,453.42	116,334	85,207	135,700	30.77	4,410
1973	95,836.55	98,963	72,484	119,189	31.44	3,791
1974	79,893.57	80,828	59,201	100,586	32.12	3,132
1975	80,008.42	79,245	58,042	101,975	32.81	3,108
1976	93,741.43	90,858	66,547	120,936	33.50	3,610
1977	117,619.73	111,468	81,643	153,596	34.20	4,491
1978	126,225.84	116,865	85,596	166,856	34.91	4,780
1979	159,773.00	144,435	105,789	213,757	35.62	6,001
1980	113,986.45	100,484	73,598	154,375	36.35	4,247
1981	99,105.33	85,169	62,381	135,830	37.07	3,664
1982	108,306.12	90,611	66,367	150,245	37.81	3,974
1983	156,236.47	127,151	93,130	219,343	38.55	5,690
1984	197,409.79	156,104	114,336	280,484	39.30	7,137
1985	306,774.81	235,511	172,496	441,054	40.05	11,013
1986	404,287.40	300,911	220,397	588,178	40.81	14,413
1987	385,997.80	278,158	203,732	568,264	41.58	13,667
1988	366,836.63	255,656	187,251	546,422	42.35	12,903
1989	283,752.42	190,943	139,853	427,652	43.13	9,915
1990	393,809.69	255,433	187,088	600,531	43.92	13,673
1991	477,269.30	297,959	218,235	736,304	44.71	16,468
1992	609,262.92	365,375	267,613	950,913	45.51	20,895
1993	726,390.29	417,733	305,962	1,146,819	46.31	24,764
1994	770,188.54	423,727	310,352	1,230,025	47.12	26,104
1995	636,192.32	334,154	244,746	1,027,639	47.93	21,440
1996	985,212.72	492,606	360,801	1,609,624	48.75	33,018
1997	920,358.96	436,950	320,037	1,520,681	49.57	30,677
1998	913,019.41	410,165	300,419	1,525,620	50.40	30,270
1999	4,942,937.25	2,092,741	1,532,794	8,353,080	51.24	163,019
2000	1,234,266.17	490,670	359,383	2,109,149	52.08	40,498
2001	1,275,551.01	474,122	347,263	2,203,839	52.92	41,645
2002	1,396,824.85	482,659	353,516	2,440,134	53.77	45,381
2003	83,722.85	26,714	19,566	147,880	54.63	2,707
2004	39,357.00	11,517	8,435	70,279	55.49	1,267
2005	308,100.54	82,004	60,062	556,139	56.35	9,869
2006	2,000,771.43	478,945	350,795	3,650,748	57.22	63,802
2007	2,026,185.17	430,807	315,538	3,736,832	58.09	64,328



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 333 SERVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 65-R2						
NET SALVAGE PERCENT.. -100						
2008	1,982,614.09	367,854	269,429	3,695,799	58.97	62,673
2009	2,957,136.22	468,588	343,209	5,571,063	59.85	93,084
2010	2,604,516.96	341,400	250,053	4,958,981	60.74	81,643
2011	1,951,419.02	202,362	148,217	3,754,621	61.63	60,922
2012	2,217,354.36	169,184	123,916	4,310,793	62.52	68,951
2013	2,219,901.06	107,932	79,053	4,360,749	63.42	68,760
2014	2,594,087.03	54,268	39,748	5,148,426	64.32	80,044
2015	686,958.89	2,322	1,700	1,372,217	64.89	21,147
	41,541,363.38	14,022,861	10,270,815	72,811,911		1,366,878
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						53.3 3.29

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 334 METERS AND METER INSTALLATIONS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 42-R1.5						
NET SALVAGE PERCENT.. -10						
1920	31.26	34	34			
1922	1,432.05	1,538	1,499	76	1.00	76
1923	2,710.08	2,910	2,835	146	1.00	146
1924	4,600.21	4,940	4,813	247	1.00	247
1925	8,232.98	8,841	8,614	442	1.00	442
1926	6,548.36	7,032	6,851	352	1.00	352
1927	7,234.93	7,769	7,570	388	1.00	388
1928	9,405.69	10,100	9,841	505	1.00	505
1929	7,201.30	7,733	7,534	387	1.00	387
1930	9,577.57	10,284	10,020	515	1.00	515
1931	6,123.18	6,575	6,406	329	1.00	329
1932	2,590.31	2,781	2,710	139	1.00	139
1933	2,926.13	3,142	3,061	158	1.00	158
1934	6,063.78	6,478	6,312	358	1.21	296
1935	4,090.00	4,333	4,222	277	1.55	179
1936	6,624.33	6,959	6,780	507	1.89	268
1937	6,639.27	6,917	6,739	564	2.22	254
1938	1,255.67	1,298	1,265	116	2.53	46
1939	8,657.55	8,888	8,660	863	2.80	308
1940	10,910.14	11,127	10,841	1,160	3.06	379
1941	10,999.68	11,152	10,866	1,234	3.29	375
1942	5,592.96	5,638	5,493	659	3.51	188
1943	2,840.50	2,846	2,773	352	3.74	94
1944	2,765.46	2,755	2,684	358	3.96	90
1945	5,938.27	5,879	5,728	804	4.20	191
1946	15,057.24	14,812	14,432	2,131	4.44	480
1947	16,810.99	16,427	16,005	2,487	4.69	530
1948	30,607.79	29,708	28,945	4,724	4.94	956
1949	49,854.69	48,037	46,804	8,036	5.21	1,542
1950	54,243.67	51,883	50,551	9,117	5.48	1,664
1951	62,868.26	59,688	58,156	10,999	5.75	1,913
1952	67,129.28	63,241	61,618	12,224	6.03	2,027
1953	127,446.87	119,096	116,039	24,153	6.32	3,822
1954	86,025.49	79,735	77,688	16,940	6.61	2,563
1955	108,220.99	99,485	96,931	22,112	6.90	3,205
1956	72,106.65	65,720	64,033	15,284	7.20	2,123
1957	70,291.36	63,495	61,865	15,455	7.51	2,058
1958	81,609.51	73,056	71,181	18,589	7.82	2,377
1959	70,416.89	62,446	60,843	16,616	8.14	2,041
1960	61,256.90	53,794	52,413	14,970	8.47	1,767
1961	47,649.15	41,432	40,368	12,046	8.80	1,369
1962	49,750.49	42,816	41,717	13,009	9.14	1,423

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 334 METERS AND METER INSTALLATIONS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 42-R1.5						
NET SALVAGE PERCENT.. -10						
1963	61,550.84	52,392	51,047	16,659	9.50	1,754
1964	78,331.15	65,936	64,243	21,921	9.86	2,223
1965	84,553.34	70,355	68,549	24,460	10.23	2,391
1966	78,029.07	64,149	62,502	23,330	10.61	2,199
1967	69,549.23	56,449	55,000	21,504	11.01	1,953
1968	91,401.66	73,228	71,348	29,194	11.41	2,559
1969	103,108.44	81,472	79,380	34,039	11.83	2,877
1970	102,257.39	79,649	77,604	34,879	12.26	2,845
1971	147,481.93	113,175	110,270	51,960	12.70	4,091
1972	235,106.65	177,644	173,084	85,533	13.15	6,504
1973	403,602.63	299,990	292,289	151,674	13.62	11,136
1974	313,205.29	228,865	222,990	121,536	14.10	8,620
1975	340,131.60	244,174	237,906	136,239	14.59	9,338
1976	456,974.35	322,067	313,799	188,873	15.09	12,516
1977	370,612.83	256,154	249,578	158,096	15.61	10,128
1978	499,798.13	338,504	329,814	219,964	16.14	13,629
1979	520,035.06	344,859	336,006	236,033	16.68	14,151
1980	693,714.52	450,038	438,485	324,601	17.23	18,839
1981	507,296.73	321,529	313,275	244,751	17.80	13,750
1982	329,034.03	203,633	198,405	163,532	18.37	8,902
1983	549,169.07	331,383	322,876	281,210	18.96	14,832
1984	581,792.18	341,930	333,152	306,819	19.56	15,686
1985	779,185.19	445,488	434,052	423,052	20.17	20,974
1986	782,619.51	434,745	423,584	437,297	20.79	21,034
1987	727,585.71	392,169	382,101	418,243	21.42	19,526
1988	894,372.41	467,073	455,082	528,728	22.06	23,968
1989	730,489.74	369,057	359,583	443,956	22.71	19,549
1990	846,904.93	413,228	402,620	528,975	23.37	22,635
1991	853,366.93	401,408	391,103	547,601	24.04	22,779
1992	959,507.88	434,247	423,099	632,360	24.72	25,581
1993	1,115,728.78	484,784	472,339	754,963	25.41	29,711
1994	2,682,501.03	1,117,066	1,088,389	1,862,362	26.10	71,355
1995	1,685,579.01	670,586	653,371	1,200,766	26.81	44,788
1996	1,710,173.48	648,559	631,909	1,249,282	27.52	45,395
1997	1,794,228.12	647,081	630,469	1,343,182	28.23	47,580
1998	1,201,506.27	410,348	399,814	921,843	28.96	31,832
1999	6,347,849.44	2,046,610	1,994,070	4,988,564	29.69	168,022
2000	1,840,618.40	557,759	543,440	1,481,240	30.43	48,677
2001	3,171,819.94	898,837	875,762	2,613,240	31.18	83,811
2002	3,042,998.39	802,548	781,945	2,565,353	31.93	80,343
2003	614,074.90	149,890	146,042	529,440	32.68	16,201
2004	2,903,721.80	650,222	633,530	2,560,564	33.45	76,549

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 334 METERS AND METER INSTALLATIONS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 42-R1.5						
NET SALVAGE PERCENT.. -10						
2005	55,978.21	11,406	11,113	50,463	34.22	1,475
2006	7,374,357.92	1,353,858	1,319,102	6,792,692	34.99	194,132
2007	4,532,014.49	739,457	720,474	4,264,742	35.77	119,227
2008	1,123,328.55	160,339	156,223	1,079,438	36.55	29,533
2009	28,481,547.30	3,468,511	3,379,470	27,950,232	37.35	748,333
2010	6,339,058.88	640,815	624,364	6,348,601	38.14	166,455
2011	5,317,365.51	426,166	415,226	5,433,876	38.94	139,545
2012	6,167,496.07	363,432	354,102	6,430,144	39.75	161,765
2013	7,659,623.54	288,913	281,496	8,144,090	40.56	200,791
2014	6,810,486.71	110,575	107,736	7,383,799	41.38	178,439
2015	2,436,871.05	6,380	6,217	2,674,342	41.90	63,827
	118,812,034.09	25,661,952	25,003,169	105,690,069		3,142,967
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..					33.6	2.65

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 335 FIRE HYDRANTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 65-R1.5						
NET SALVAGE PERCENT.. -30						
1880	1,816.16	2,325	2,361			
1881	1,122.54	1,437	1,459			
1882	97.80	125	127			
1884	46.05	59	60			
1885	21.58	28	28			
1887	67.27	86	87			
1888	293.17	374	381			
1889	448.66	569	583			
1890	289.80	365	377			
1891	299.48	376	388	1	2.29	
1892	272.75	340	351	4	2.63	2
1893	376.43	467	482	7	2.97	2
1894	127.91	158	163	3	3.30	1
1895	180.24	221	228	6	3.62	2
1896	39.56	48	50	1	3.92	
1897	191.19	232	239	10	4.20	2
1898	686.02	831	857	35	4.46	8
1899	23.91	29	30	1	4.71	
1900	1,515.22	1,820	1,878	92	4.95	19
1901	3,423.74	4,096	4,226	225	5.18	43
1902	1,476.56	1,760	1,816	104	5.40	19
1903	699.98	831	857	53	5.62	9
1904	915.41	1,083	1,117	73	5.85	12
1905	742.49	875	903	62	6.08	10
1906	1,313.63	1,542	1,591	117	6.31	19
1907	241.75	283	292	22	6.54	3
1908	771.75	899	928	75	6.78	11
1909	721.15	836	863	74	7.03	11
1910	2,028.02	2,341	2,415	221	7.28	30
1911	2,660.31	3,057	3,154	304	7.54	40
1912	825.61	944	974	99	7.80	13
1913	2,373.22	2,703	2,789	296	8.06	37
1914	802.09	909	938	105	8.33	13
1915	1,225.56	1,382	1,426	167	8.60	19
1916	11,121.67	12,483	12,879	1,579	8.88	178
1917	402.49	450	464	59	9.15	6
1919	497.13	550	567	79	9.72	8
1920	3,235.37	3,558	3,671	535	10.01	53
1921	3,205.83	3,507	3,618	550	10.30	53
1922	2,194.14	2,387	2,463	389	10.60	37
1923	538.97	583	602	99	10.90	9
1924	738.70	795	820	140	11.20	12

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 335 FIRE HYDRANTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 65-R1.5						
NET SALVAGE PERCENT.. -30						
1925	1,006.92	1,077	1,111	198	11.51	17
1926	4,770.42	5,075	5,236	966	11.81	82
1927	12,139.52	12,836	13,243	2,538	12.13	209
1928	9,141.51	9,608	9,913	1,971	12.45	158
1929	15,729.09	16,431	16,952	3,496	12.77	274
1930	5,891.41	6,115	6,309	1,350	13.10	103
1931	7,265.03	7,493	7,731	1,714	13.43	128
1932	4,382.86	4,491	4,634	1,064	13.77	77
1933	2,323.12	2,364	2,439	581	14.11	41
1934	9,690.77	9,795	10,106	2,492	14.46	172
1935	2,587.94	2,597	2,679	685	14.82	46
1936	11,206.48	11,166	11,520	3,048	15.18	201
1937	6,869.53	6,794	7,010	1,920	15.55	123
1938	13,500.82	13,252	13,673	3,878	15.92	244
1939	7,447.55	7,254	7,484	2,198	16.30	135
1940	12,151.68	11,741	12,114	3,683	16.69	221
1941	11,360.57	10,886	11,231	3,538	17.09	207
1942	15,360.78	14,593	15,056	4,913	17.50	281
1943	810.85	764	788	266	17.91	15
1944	10,856.32	10,133	10,455	3,658	18.33	200
1945	9,298.76	8,599	8,872	3,216	18.76	171
1946	19,985.41	18,311	18,892	7,089	19.19	369
1947	26,910.08	24,418	25,193	9,790	19.63	499
1948	36,667.90	32,935	33,980	13,688	20.09	681
1949	80,128.53	71,235	73,496	30,671	20.55	1,493
1950	115,994.35	102,052	105,291	45,502	21.01	2,166
1951	41,984.14	36,534	37,694	16,885	21.49	786
1952	27,825.10	23,946	24,706	11,467	21.97	522
1953	33,295.38	28,328	29,227	14,057	22.46	626
1954	125,146.01	105,223	108,563	54,127	22.96	2,357
1955	320,863.63	266,508	274,966	142,157	23.47	6,057
1956	180,737.84	148,240	152,945	82,014	23.99	3,419
1957	158,177.52	128,092	132,157	73,474	24.51	2,998
1958	209,668.56	167,567	172,885	99,684	25.04	3,981
1959	252,773.24	199,286	205,611	122,994	25.58	4,808
1960	257,200.43	199,948	206,294	128,067	26.13	4,901
1961	255,043.80	195,413	201,615	129,942	26.69	4,869
1962	225,493.10	170,248	175,651	117,490	27.25	4,312
1963	260,776.62	193,913	200,067	138,943	27.82	4,994
1964	270,321.50	197,876	204,156	147,262	28.40	5,185
1965	288,393.26	207,757	214,351	160,560	28.98	5,540
1966	262,247.28	185,829	191,727	149,194	29.57	5,045

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 335 FIRE HYDRANTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 65-R1.5						
NET SALVAGE PERCENT.. -30						
1967	255,458.09	177,953	183,601	148,495	30.17	4,922
1968	309,009.88	211,486	218,198	183,515	30.78	5,962
1969	319,139.20	214,527	221,336	193,545	31.39	6,166
1970	228,137.71	150,526	155,303	141,276	32.01	4,413
1971	341,743.99	221,178	228,198	216,069	32.64	6,620
1972	375,973.28	238,591	246,163	242,602	33.27	7,292
1973	534,324.03	332,133	342,674	351,947	33.92	10,376
1974	553,862.16	337,193	347,895	372,126	34.56	10,768
1975	570,464.89	339,885	350,672	390,932	35.21	11,103
1976	640,361.00	373,071	384,911	447,558	35.87	12,477
1977	722,003.72	410,968	424,011	514,594	36.54	14,083
1978	795,418.69	442,095	456,126	577,918	37.21	15,531
1979	853,194.91	462,606	477,288	631,865	37.89	16,676
1980	674,593.86	356,594	367,912	509,060	38.57	13,198
1981	667,187.82	343,468	354,369	512,975	39.26	13,066
1982	588,177.21	294,673	304,025	460,605	39.95	11,530
1983	713,398.29	347,429	358,456	568,962	40.65	13,997
1984	1,034,229.89	489,196	504,722	839,777	41.35	20,309
1985	1,161,020.02	532,671	549,577	959,749	42.06	22,819
1986	1,351,356.47	600,550	619,610	1,137,153	42.78	26,581
1987	1,590,415.14	683,880	705,585	1,361,955	43.50	31,309
1988	1,551,735.63	644,897	665,365	1,351,891	44.22	30,572
1989	1,307,954.29	524,487	541,133	1,159,208	44.95	25,789
1990	1,411,476.33	545,393	562,702	1,272,217	45.68	27,851
1991	1,109,636.26	412,563	425,657	1,016,870	46.41	21,911
1992	830,455.78	296,478	305,888	773,705	47.15	16,409
1993	1,437,798.30	491,733	507,339	1,361,799	47.90	28,430
1994	1,409,084.34	460,773	475,397	1,356,413	48.65	27,881
1995	1,586,196.90	494,893	510,600	1,551,456	49.40	31,406
1996	1,477,939.51	438,945	452,876	1,468,445	50.15	29,281
1997	1,679,958.52	473,414	488,439	1,695,507	50.91	33,304
1998	1,332,413.25	354,950	366,215	1,365,922	51.68	26,430
1999	574,028.68	144,195	148,771	597,466	52.44	11,393
2000	1,382,841.87	326,066	336,415	1,461,279	53.21	27,462
2001	2,511,567.98	553,032	570,584	2,694,454	53.99	49,907
2002	1,836,618.69	375,761	387,687	1,999,917	54.77	36,515
2003	1,534,398.50	289,992	299,196	1,695,522	55.55	30,522
2004	1,644,672.55	285,176	294,227	1,843,847	56.33	32,733
2005	1,022,141.12	161,088	166,201	1,162,582	57.12	20,353
2006	2,739,938.77	388,534	400,865	3,161,055	57.91	54,586
2007	2,247,676.61	282,760	291,734	2,630,246	58.71	44,801
2008	3,421,412.26	375,664	387,587	4,060,249	59.51	68,228

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 335 FIRE HYDRANTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 65-R1.5						
NET SALVAGE PERCENT.. -30						
2009	3,893,094.89	365,153	376,742	4,684,281	60.31	77,670
2010	3,310,347.19	256,873	265,025	4,038,426	61.12	66,074
2011	3,121,567.91	191,661	197,744	3,860,294	61.93	62,333
2012	4,331,383.79	195,783	201,996	5,428,803	62.74	86,529
2013	3,840,319.77	110,582	114,092	4,878,324	63.56	76,751
2014	4,054,212.38	50,280	51,876	5,218,600	64.38	81,059
2015	592,057.85	1,185	1,222	768,453	64.90	11,841
	75,145,897.09	19,987,451	20,621,732	77,067,934		1,486,613
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						51.8 1.98



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 339.10 MISCELLANEOUS INTANGIBLE PLANT - OTHER

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 25-SQUARE						
NET SALVAGE PERCENT.. 0						
2000	2,294.00	1,353	1,290	1,004	10.25	98
2006	1,122.25	393	375	747	16.25	46
2007	4.56	1	1	4	17.25	
	3,420.81	1,747	1,666	1,755		144
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						12.2 4.21

## MISSOURI AMERICAN WATER COMPANY

ACCOUNT 339.20 MISCELLANEOUS SOURCE OF SUPPLY - OTHER

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 25-SQUARE						
NET SALVAGE PERCENT.. 0						
2004	1,729.62	744	502	1,228	14.25	86
	1,729.62	744	502	1,228		86
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..					14.3	4.97

## MISSOURI AMERICAN WATER COMPANY

ACCOUNT 339.40 MISCELLANEOUS WATER TREATMENT - OTHER

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 30-SQUARE						
NET SALVAGE PERCENT.. 0						
2001	130,498.65	59,811	59,790	70,709	16.25	4,351
2002	1,342,722.55	570,657	570,455	772,268	17.25	44,769
	1,473,221.20	630,468	630,245	842,976		49,120
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						17.2 3.33

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 339.50 MISCELLANEOUS TRANSMISSION AND DISTRIBUTION - OTHER

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 50-R3						
NET SALVAGE PERCENT.. 0						
1956	88.06	76	52	36	6.67	5
1958	905.48	773	529	376	7.34	51
1959	342.52	290	198	145	7.69	19
1960	271.56	228	156	116	8.07	14
1961	900.89	748	512	389	8.46	46
1962	924.06	760	520	404	8.87	46
1963	178.51	145	99	80	9.29	9
1964	1,322.62	1,065	728	595	9.74	61
1966	806.86	634	434	373	10.69	35
1967	1,584.73	1,230	841	744	11.19	66
1968	1,506.86	1,154	789	718	11.72	61
1969	1,732.79	1,308	894	839	12.26	68
1970	2,638.54	1,962	1,342	1,297	12.82	101
1971	597.85	438	300	298	13.39	22
1977	106.18	70	48	58	17.21	3
1983	690.30	393	269	421	21.53	20
1986	1.18	1	1			
2006	14,552.89	2,474	1,691	12,862	41.50	310
2007	68.21	10	7	61	42.45	1
2008	66.00	9	6	60	43.42	1
2009	8,342.00	938	641	7,701	44.38	174
2010	25.00	2	2	23	45.35	1
	37,653.09	14,708	10,059	27,594		1,114

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 24.8 2.96

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 339.60 MISCELLANEOUS INTANGIBLE PLANT - SOFTWARE

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 30-SQUARE						
NET SALVAGE PERCENT.. 0						
1997	284,734.98	168,469	198,282	86,453	12.25	7,057
2001	5,685.47	2,606	3,067	2,618	16.25	161
2006	52,133.77	15,206	17,897	34,237	21.25	1,611
2007	351,890.70	90,904	106,990	244,901	22.25	11,007
2008	577,615.07	129,963	152,962	424,653	23.25	18,265
2009	144,975.18	27,787	32,704	112,271	24.25	4,630
2013	63,759.25	3,719	4,377	59,382	28.25	2,102
	1,480,794.42	438,654	516,279	964,515		44,833

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 21.5 3.03

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 340.10 OFFICE FURNITURE AND EQUIPMENT - FURNITURE

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
FULLY ACCRUED						
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
1939	21.16	20	21			
1940	58.03	55	58			
1941	136.20	129	136			
1942	292.95	278	293			
1943	30.72	29	31			
1946	28.19	27	28			
1947	1,247.96	1,186	1,248			
1948	1,854.04	1,761	1,854			
1949	2,647.59	2,515	2,648			
1950	466.40	443	466			
1951	759.33	721	759			
1952	1,034.61	983	1,035			
1953	5,347.93	5,081	5,348			
1954	2,991.19	2,842	2,991			
1955	4,099.06	3,894	4,099			
1956	17,888.77	16,994	17,889			
1957	464.30	441	464			
1958	1,341.98	1,275	1,342			
1959	2,600.79	2,471	2,601			
1960	2,140.14	2,033	2,140			
1961	3,527.61	3,351	3,528			
1962	752.78	715	753			
1963	2,508.16	2,383	2,508			
1964	19,284.23	18,320	19,284			
1965	7,326.45	6,960	7,326			
1966	6,487.23	6,163	6,487			
1967	6,605.45	6,275	6,605			
1968	6,243.40	5,931	6,243			
1969	4,597.41	4,368	4,597			
1970	1,002.57	952	1,003			
1971	462.35	439	462			
1972	2,183.46	2,074	2,183			
1973	16.82	16	17			
1974	532.54	506	533			
1976	92.48	88	92			
1977	2.80	3	3			
1978	97,208.33	92,348	97,208			
1979	48.25	46	48			
1980	36.19	34	36			
1981	207.76	197	208			
1982	243.62	231	244			

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 340.10 OFFICE FURNITURE AND EQUIPMENT - FURNITURE

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
FULLY ACCRUED						
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
1983	27,917.89	26,522	27,918			
1984	1,052.63	1,000	1,053			
1985	8,354.49	7,937	8,354			
1986	715.87	680	716			
1987	2,330.33	2,214	2,330			
1988	2.40	2	2			
1989	212.50	202	213			
1990	36,508.23	34,683	36,508			
1991	30,583.86	29,055	30,584			
1992	4,271.88	4,058	4,272			
1993	61,856.51	58,764	61,857			
1994	27,677.77	26,294	27,678			
	406,305.59	385,989	406,306			
AMORTIZED						
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
1995	64,283.72	61,070	61,084	3,199	1.00	3,199
1996	44,904.05	42,098	42,108	2,796	1.25	2,237
1997	56,323.13	49,987	49,999	6,324	2.25	2,811
1998	12,019.51	10,066	10,068	1,951	3.25	600
1999	1,816.41	1,430	1,430	386	4.25	91
2000	14,800.94	10,916	10,919	3,882	5.25	739
2001	8,550.01	5,878	5,879	2,671	6.25	427
2002	40,240.72	25,653	25,659	14,582	7.25	2,011
2003	70,729.00	41,553	41,563	29,166	8.25	3,535
2004	21,813.14	11,725	11,728	10,085	9.25	1,090
2005	2,347.00	1,144	1,144	1,203	10.25	117
2006	47,552.89	20,804	20,809	26,744	11.25	2,377
2007	315,873.17	122,401	122,430	193,443	12.25	15,791
2008	48,414.50	16,340	16,344	32,071	13.25	2,420
2009	3,391.00	975	975	2,416	14.25	170
2010	70,265.83	16,688	16,692	53,574	15.25	3,513
2011	7,483.76	1,403	1,403	6,080	16.25	374
2012	48,762.06	6,705	6,707	42,055	17.25	2,438

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 340.10 OFFICE FURNITURE AND EQUIPMENT - FURNITURE

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
AMORTIZED						
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
2013	9,216.10	806	806	8,410	18.25	461
2014	24,050.29	902	902	23,148	19.25	1,202
2015	24,994.08	150	150	24,844	19.88	1,250
	937,831.31	448,694	448,800	489,031		46,853
	1,344,136.90	834,683	855,106	489,031		46,853
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 10.4						3.49



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 340.20 OFFICE FURNITURE AND EQUIPMENT - COMPUTER HARDWARE

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
FULLY ACCRUED						
SURVIVOR CURVE.. 5-SQUARE						
NET SALVAGE PERCENT.. 0						
2001	15,017.18	12,014	15,017			
2003	1,159.73	928	1,160			
2004	17,008.60	13,607	17,009			
2005	6,310.30	5,048	6,310			
2006	598.47	479	598			
2008	154,091.02	123,273	154,091			
2009	1,444.40	1,156	1,444			
	195,629.70	156,505	195,630			
AMORTIZED						
SURVIVOR CURVE.. 5-SQUARE						
NET SALVAGE PERCENT.. 0						
2010	165,357.59	132,286	132,289	33,068	1.00	33,068
2011	278,590.59	208,943	208,948	69,643	1.25	55,714
2012	1,214,232.28	667,828	667,844	546,388	2.25	242,839
2013	707,961.42	247,786	247,792	460,169	3.25	141,590
2014	1,457,629.73	218,644	218,649	1,238,980	4.25	291,525
2015	165,706.91	3,977	3,977	161,730	4.88	33,141
	3,989,478.52	1,479,464	1,479,500	2,509,979		797,877
	4,185,108.22	1,635,969	1,675,130	2,509,979		797,877
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						3.1 19.06

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 340.30 OFFICE FURNITURE AND EQUIPMENT - COMPUTER SOFTWARE

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
FULLY ACCRUED						
SURVIVOR CURVE.. 10-SQUARE						
NET SALVAGE PERCENT.. 0						
1991	22,969.76	20,673	22,970			
1992	4,015.09	3,614	4,015			
1994	617.97	556	618			
1995	21,762.05	19,586	21,762			
1996	18,902.02	17,012	18,902			
1997	706.35	636	706			
1998	1,419.79	1,278	1,420			
	70,393.03	63,355	70,393			
AMORTIZED						
SURVIVOR CURVE.. 10-SQUARE						
NET SALVAGE PERCENT.. 0						
2005	107,094.07	96,385	96,234	10,860	1.00	10,860
2006	276,833.67	242,229	241,850	34,984	1.25	27,987
2007	59.38	46	46	13	2.25	6
2009	2,977.65	1,712	1,709	1,268	4.25	298
2010	4,874.04	2,315	2,311	2,563	5.25	488
2011	33,779.64	12,667	12,647	21,132	6.25	3,381
2012	19,271,895.44	5,299,771	5,291,479	13,980,416	7.25	1,928,333
2013	28,370,567.44	4,964,849	4,957,081	23,413,486	8.25	2,837,998
2014	3,961,413.32	297,106	296,641	3,664,772	9.25	396,192
	52,029,494.65	10,917,080	10,900,000	41,129,495		5,205,543
	52,099,887.68	10,980,435	10,970,393	41,129,495		5,205,543
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						7.9 9.99

## MISSOURI AMERICAN WATER COMPANY

ACCOUNT 340.50 OFFICE FURNITURE AND EQUIPMENT - OTHER EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2000	313,798.77	292,878	292,879	20,920	1.00	20,920
2001	58,757.11	53,861	53,861	4,896	1.25	3,917
2002	17,527.54	14,898	14,898	2,630	2.25	1,169
2003	13,594.08	10,649	10,649	2,945	3.25	906
2005	33,411.02	21,717	21,717	11,694	5.25	2,227
2006	83,925.90	48,956	48,956	34,970	6.25	5,595
2007	14,782.70	7,638	7,638	7,145	7.25	986
2012	15,419.89	2,827	2,827	12,593	12.25	1,028
	551,217.01	453,424	453,425	97,792		36,748
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						2.7 6.67

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 341.10 TRANSPORTATION EQUIPMENT - LIGHT TRUCKS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 9-L1.5						
NET SALVAGE PERCENT.. +15						
1965	693.12	524	589			
1981	84.50	64	72			
1988	9,659.33	7,298	8,210			
1991	476.00	360	405			
1993	6,870.41	5,100	5,840			
1995	3,447.31	2,458	2,930			
1996	1,050.86	732	893			
2000	99.89	62	85			
2002	711.01	410	604			
2003	215.66	119	183			
2006	18,008.00	8,623	15,156	151	3.93	38
2008	194,987.93	82,502	145,007	20,733	4.52	4,587
2010	367,153.02	126,914	223,066	89,014	5.34	16,669
2011	130,173.88	37,989	66,770	43,878	5.91	7,424
2012	757,655.18	171,737	301,847	342,160	6.60	51,842
2014	78,098.18	5,311	9,335	57,049	8.28	6,890
	1,569,384.28	450,203	780,992	552,985		87,450

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 6.3 5.57

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 341.20 TRANSPORTATION EQUIPMENT - HEAVY TRUCKS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 10-L1.5						
NET SALVAGE PERCENT.. +15						
1984	19,381.90	14,827	16,475			
1985	23,000.89	17,596	19,551			
1986	5,753.57	4,401	4,891			
1987	9,854.52	7,539	8,376			
1988	7,447.25	5,697	6,330			
1989	6,971.34	5,315	5,926			
1996	2,839.24	1,885	2,413			
1997	3,871.12	2,501	3,290			
1999	3,501.39	2,134	2,976			
2000	54,776.38	32,266	46,560			
2001	78,628.61	44,645	66,834			
2002	50,712.40	27,717	43,106			
2006	29,123.93	13,269	24,755			
2007	36,106.97	15,530	30,691			
2008	900,121.25	360,364	765,103			
2009	12,730.70	4,653	10,821			
2010	980,744.40	315,947	833,633			
2011	364,101.09	97,798	309,486			
2012	827,972.11	171,721	703,776			
2014	1,089,427.97	66,673	1,103,921	177,907-		
	4,507,067.03	1,212,478	4,008,914	177,907-		
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						0.0 0.00

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 341.30 TRANSPORTATION EQUIPMENT - AUTOS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 6-L1.5						
NET SALVAGE PERCENT.. +15						
1997	790.85	560	672			
1998	11,019.03	7,805	9,366			
1999	985.25	698	837			
2000	29.70	21	25			
2003	18,589.96	12,589	15,801			
2004	6,020.84	3,907	5,118			
2006	53,335.80	31,206	45,335			
2007	42,182.44	23,186	35,855			
2008	740,182.33	379,588	629,155			
2009	18,092.44	8,612	15,379			
2010	106,966.69	46,522	90,922			
2011	89,453.86	34,343	76,036			
2012	123,924.72	38,798	105,336			
2013	2,198.35	480	1,869			
2014	85,088.57	8,558	984,759	912,434-		
	1,298,860.83	596,873	2,016,465	912,434-		

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 0.0 0.00

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 341.40 TRANSPORTATION EQUIPMENT - OTHER

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 15-S3						
NET SALVAGE PERCENT.. +5						
2007	104,843.66	50,199	56,523	43,078	7.44	5,790
2008	254,824.77	107,485	121,025	121,059	8.34	14,515
2009	10,653.43	3,859	4,345	5,776	9.28	622
2010	309,479.46	92,906	104,610	189,395	10.26	18,460
2011	129,147.24	30,672	34,536	88,154	11.25	7,836
2012	747,465.13	130,181	146,581	563,511	12.25	46,001
2013	5,945.06	659	742	4,906	13.25	370
2014	1,822,977.32	86,591	97,499	1,634,329	14.25	114,690
	3,385,336.07	502,552	565,861	2,650,208		208,284
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						12.7 6.15

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 342 STORES EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
FULLY ACCRUED						
SURVIVOR CURVE.. 25-SQUARE						
NET SALVAGE PERCENT.. 0						
1931	1.51	1	2			
1939	79.80	77	80			
1942	0.50		1			
1947	1.30	1	1			
1951	87.41	84	87			
1953	0.53	1	1			
1955	0.09		0			
1956	6.13	6	6			
1957	5,434.81	5,217	5,435			
1959	1,417.49	1,361	1,417			
1960	1.70	2	2			
1961	1.64	2	2			
1963	307.40	295	307			
1964	0.30		0			
1971	903.58	867	904			
1972	1.45	1	1			
1977	171.07	164	171			
1979	381.68	366	382			
1985	419.71	403	420			
1989	11,787.78	11,316	11,788			
	21,005.88	20,164	21,006			
AMORTIZED						
SURVIVOR CURVE.. 25-SQUARE						
NET SALVAGE PERCENT.. 0						
1990	8,118.01	7,793	7,802	316	1.00	316
1991	1,736.79	1,650	1,652	85	1.25	68
1992	7,169.03	6,524	6,531	638	2.25	284
1993	3,506.61	3,051	3,054	452	3.25	139
1994	776.00	644	645	131	4.25	31
1995	8,137.18	6,428	6,435	1,702	5.25	324
1996	1,866.00	1,400	1,402	464	6.25	74
1997	8,960.50	6,362	6,369	2,592	7.25	358
1998	723.14	485	486	238	8.25	29
1999	5,441.78	3,428	3,432	2,010	9.25	217
2000	189,551.23	111,835	111,957	77,594	10.25	7,570
2001	3,210.32	1,766	1,768	1,442	11.25	128
2002	6,860.99	3,499	3,503	3,358	12.25	274
2004	612.59	263	263	349	14.25	24



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 342 STORES EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
AMORTIZED						
SURVIVOR CURVE.. 25-SQUARE						
NET SALVAGE PERCENT.. 0						
2006	6,349.11	2,222	2,224	4,125	16.25	254
2007	16,760.16	5,196	5,202	11,558	17.25	670
2008	115,575.79	31,205	31,239	84,337	18.25	4,621
2009	6,584.71	1,514	1,516	5,069	19.25	263
2010	15,269.43	2,901	2,904	12,365	20.25	611
2012	3,907.05	430	430	3,477	22.25	156
2013	7,276.94	509	510	6,767	23.25	291
2014	272,260.42	8,168	8,177	264,083	24.25	10,890
	690,653.78	207,273	207,500	483,154		27,592
	711,659.66	227,437	228,506	483,154		27,592
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..					17.5	3.88

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 343 TOOLS, SHOP AND GARAGE EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
FULLY ACCRUED						
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
1915	10.00	10	10			
1931	1,263.89	1,201	1,264			
1933	2.09	2	2			
1934	1,427.82	1,356	1,428			
1939	545.45	518	545			
1940	37.79	36	38			
1944	90.00	86	90			
1945	2,957.29	2,809	2,957			
1946	2,273.22	2,160	2,273			
1947	195.88	186	196			
1951	579.60	551	580			
1952	574.82	546	575			
1953	113.48	108	113			
1954	3,943.15	3,746	3,943			
1955	565.85	538	566			
1956	7,794.15	7,404	7,794			
1957	94.15	89	94			
1958	10,107.80	9,602	10,108			
1959	1,229.02	1,168	1,229			
1960	522.54	496	523			
1961	3,441.87	3,270	3,442			
1962	5,769.07	5,481	5,769			
1963	2,058.97	1,956	2,059			
1964	5,068.33	4,815	5,068			
1965	1,524.80	1,449	1,525			
1966	18,642.89	17,711	18,643			
1967	6,238.67	5,927	6,239			
1968	2,844.82	2,703	2,845			
1969	1,146.78	1,089	1,147			
1970	7,096.30	6,741	7,096			
1971	3,273.16	3,110	3,273			
1972	10,015.97	9,515	10,016			
1973	7,321.57	6,955	7,322			
1974	10,360.98	9,843	10,361			
1975	18,871.57	17,928	18,872			
1976	30,381.51	28,862	30,382			
1977	16,825.89	15,985	16,826			
1978	99,485.74	94,511	99,486			
1979	25,728.76	24,442	25,729			
1980	21,367.37	20,299	21,367			
1981	19,556.41	18,579	19,556			

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 343 TOOLS, SHOP AND GARAGE EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
FULLY ACCRUED						
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
1982	16,129.74	15,323	16,130			
1983	14,945.80	14,199	14,946			
1984	16,479.73	15,656	16,480			
1985	23,736.41	22,550	23,736			
1986	35,401.52	33,631	35,402			
1987	48,804.40	46,364	48,804			
1988	45,990.63	43,691	45,991			
1989	93,863.63	89,170	93,864			
1990	81,717.81	77,632	81,718			
1991	129,470.12	122,997	129,470			
1992	460,454.00	437,431	460,454			
1993	238,072.86	226,169	238,073			
1994	142,192.37	135,083	142,192			
	1,698,608.44	1,613,679	1,698,608			

AMORTIZED  
SURVIVOR CURVE.. 20-SQUARE  
NET SALVAGE PERCENT.. 0

1995	73,912.03	70,216	70,194	3,718	1.00	3,718
1996	102,670.31	96,253	96,222	6,448	1.25	5,158
1997	168,769.57	149,783	149,735	19,034	2.25	8,460
1998	91,054.94	76,259	76,235	14,820	3.25	4,560
1999	67,718.22	53,328	53,311	14,407	4.25	3,390
2000	240,657.38	177,485	177,428	63,229	5.25	12,044
2001	347,225.93	238,718	238,642	108,584	6.25	17,373
2002	234,255.25	149,338	149,290	84,965	7.25	11,719
2003	17,790.03	10,452	10,449	7,341	8.25	890
2004	134,456.40	72,270	72,247	62,209	9.25	6,725
2005	147,655.18	71,982	71,959	75,696	10.25	7,385
2006	474,676.14	207,671	207,605	267,072	11.25	23,740
2007	553,255.78	214,387	214,318	338,937	12.25	27,668
2008	402,237.22	135,755	135,712	266,526	13.25	20,115
2009	11,867.17	3,412	3,411	8,456	14.25	593
2010	517,244.72	122,846	122,807	394,438	15.25	25,865
2011	180,692.12	33,880	33,869	146,823	16.25	9,035
2012	220,100.29	30,264	30,254	189,846	17.25	11,006

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 343 TOOLS, SHOP AND GARAGE EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
AMORTIZED						
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
2013	596,166.48	52,165	52,148	544,018	18.25	29,809
2014	373,342.29	14,000	13,996	359,347	19.25	18,667
2015	28,085.87	169	169	27,917	19.88	1,404
	4,983,833.32	1,980,633	1,980,000	3,003,833		249,324
	6,682,441.76	3,594,312	3,678,608	3,003,833		249,324
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 12.0						3.73

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 344 LABORATORY EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
FULLY ACCRUED						
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
1936	236.77	221	237			
1940	0.46		0			
1942	21.00	20	21			
1945	9,477.53	8,846	9,478			
1946	2,450.92	2,288	2,451			
1948	6,951.27	6,488	6,951			
1949	86.00	80	86			
1955	132.66	124	133			
1956	512.91	479	513			
1957	408.62	381	409			
1958	1,686.69	1,574	1,687			
1959	502.89	469	503			
1960	0.28		0			
1961	2.44	2	2			
1962	0.07		0			
1963	2.41	2	2			
1964	1.35	1	1			
1965	101.33	95	101			
1968	9,766.70	9,116	9,767			
1969	1,988.53	1,856	1,989			
1970	302.99	283	303			
1971	11,454.11	10,690	11,454			
1972	156.62	146	157			
1973	4,414.93	4,121	4,415			
1974	1,522.82	1,421	1,523			
1975	4,601.20	4,294	4,601			
1976	62.28	58	62			
1977	645.84	603	646			
1978	1,276.39	1,191	1,276			
1979	4,102.15	3,829	4,102			
1980	905.75	845	906			
1981	600.14	560	600			
1983	3,205.94	2,992	3,206			
1984	73.69	69	74			
1985	458.68	428	459			
1987	102.52	96	103			
1988	18,488.88	17,256	18,489			
1989	14,195.10	13,249	14,195			
1990	1,075.00	1,003	1,075			
1991	5,221.61	4,873	5,222			
1992	20,328.57	18,973	20,329			

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 344 LABORATORY EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
FULLY ACCRUED						
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
1993	10,731.58	10,016	10,732			
1994	32,771.40	30,587	32,771			
1995	48,016.86	44,816	48,017			
1996	9,515.12	8,881	9,515			
1997	46,708.75	43,595	46,709			
1998	18,127.52	16,919	18,128			
1999	233,992.04	218,392	233,992			
	527,389.31	492,228	527,389			
AMORTIZED						
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2000	161,939.13	151,143	151,099	10,841	1.00	10,841
2001	23,099.37	21,174	21,168	1,932	1.25	1,546
2002	17,756.67	15,093	15,089	2,668	2.25	1,186
2003	5,691.17	4,458	4,457	1,234	3.25	380
2004	35,790.44	25,650	25,642	10,148	4.25	2,388
2005	3,394.68	2,207	2,206	1,188	5.25	226
2006	63,834.71	37,237	37,226	26,609	6.25	4,257
2007	73,370.41	37,908	37,897	35,474	7.25	4,893
2008	119,040.35	53,568	53,552	65,488	8.25	7,938
2009	3,555.11	1,363	1,363	2,193	9.25	237
2010	40,058.67	12,685	12,681	27,377	10.25	2,671
2011	85,108.36	21,277	21,271	63,838	11.25	5,674
2012	52,260.59	9,581	9,578	42,682	12.25	3,484
2013	39,111.93	4,563	4,562	34,550	13.25	2,608
2014	6,632.89	332	332	6,301	14.25	442
2015	9,811.85	78	78	9,734	14.88	654
	740,456.33	398,317	398,200	342,256		49,425
	1,267,845.64	890,545	925,589	342,256		49,425
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						6.9 3.90

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 345 POWER OPERATED EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 12-L1						
NET SALVAGE PERCENT.. +20						
1967	4,425.13	3,245	3,540			
1968	1,122.70	823	898			
1970	4,741.00	3,477	3,793			
1972	446.82	328	357			
1978	477.09	350	382			
1980	2,145.00	1,573	1,716			
1981	4,845.03	3,553	3,876			
1986	4,175.95	2,879	3,341			
1987	16,633.23	11,266	13,307			
1989	37,300.00	24,295	29,840			
1992	73,169.66	44,682	58,536			
1993	242,956.17	144,802	191,545	2,820	3.06	922
1994	13,943.28	8,106	10,723	432	3.28	132
1995	5,364.88	3,037	4,017	275	3.51	78
1996	33,995.30	18,697	24,733	2,463	3.75	657
1998	9,408.51	4,855	6,422	1,105	4.26	259
1999	981.82	490	648	137	4.52	30
2000	84,190.83	40,412	53,457	13,896	4.80	2,895
2001	15,149.42	6,979	9,232	2,888	5.09	567
2002	12,878.53	5,675	7,507	2,796	5.39	519
2003	15,933.32	6,692	8,852	3,895	5.70	683
2004	24,816.99	9,894	13,088	6,766	6.02	1,124
2005	18,145.87	6,823	9,026	5,491	6.36	863
2006	48,473.17	17,063	22,571	16,208	6.72	2,412
2007	254,423.79	83,282	110,166	93,373	7.09	13,170
2008	100,332.48	30,234	39,994	40,272	7.48	5,384
2010	198,037.42	47,529	62,871	95,559	8.40	11,376
2012	13,754.88	2,146	2,839	8,165	9.66	845
2013	204,513.78	21,269	28,135	135,476	10.44	12,977
	1,446,782.05	554,456	725,412	432,014		54,893

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 7.9 3.79

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 346.1 COMMUNICATION EQUIPMENT - NON-TELEPHONE

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
FULLY ACCRUED						
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
1953	0.11			0		
1956	0.30			0		
1957	14.12	13		14		
1958	0.88	1		1		
1959	0.62	1		1		
1960	0.73	1		1		
1962	0.16			0		
1964	0.51			1		
1966	0.06			0		
1983	1,072.65	1,001		1,073		
1984	726.19	678		726		
1985	2,686.00	2,507		2,686		
1986	1,248.28	1,165		1,248		
1987	3,124.52	2,916		3,125		
1988	556.79	520		557		
1991	1,315.97	1,228		1,316		
1992	1,691.22	1,578		1,691		
1996	10,333.85	9,645		10,334		
1997	1,862.91	1,739		1,863		
1998	42,939.26	40,076		42,939		
1999	6,406.19	5,979		6,406		
	73,981.32	69,048		73,981		

## AMORTIZED

SURVIVOR CURVE.. 15-SQUARE

NET SALVAGE PERCENT.. 0

2000	324,955.09	303,290	303,136	21,819	1.00	21,819
2001	190,946.63	175,035	174,946	16,001	1.25	12,801
2002	6,562.91	5,578	5,575	988	2.25	439
2003	71,728.54	56,187	56,158	15,570	3.25	4,791
2004	30,400.33	21,787	21,776	8,624	4.25	2,029
2005	34,960.40	22,724	22,712	12,248	5.25	2,333
2006	62,381.50	36,389	36,371	26,011	6.25	4,162
2007	324,704.15	167,765	167,680	157,024	7.25	21,658
2008	1,081,176.45	486,529	486,282	594,895	8.25	72,108
2009	44,034.51	16,880	16,871	27,163	9.25	2,937
2010	372,624.93	117,999	117,939	254,686	10.25	24,847
2011	271,490.25	67,873	67,839	203,652	11.25	18,102



## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 346.1 COMMUNICATION EQUIPMENT - NON-TELEPHONE

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
AMORTIZED						
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2012	13,624.44	2,498	2,497	11,128	12.25	908
2013	561,280.81	65,485	65,452	495,829	13.25	37,421
2014	205,434.88	10,272	10,267	195,168	14.25	13,696
	3,596,305.82	1,556,291	1,555,500	2,040,806		240,051
	3,670,287.14	1,625,339	1,629,481	2,040,806		240,051
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 8.5						6.54

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 346.2 COMMUNICATION EQUIPMENT - TELEPHONE

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
FULLY ACCRUED						
SURVIVOR CURVE.. 10-SQUARE						
NET SALVAGE PERCENT.. 0						
1996	7,426.39	6,684	7,426			
	7,426.39	6,684	7,426			
AMORTIZED						
SURVIVOR CURVE.. 10-SQUARE						
NET SALVAGE PERCENT.. 0						
2005	921.05	829	829	92	1.00	92
2006	3,938.23	3,446	3,446	492	1.25	394
2007	16,011.15	12,409	12,408	3,603	2.25	1,601
2012	40,340.05	11,094	11,093	29,247	7.25	4,034
2014	1,655.60	124	124	1,532	9.25	166
	62,866.08	27,902	27,900	34,966		6,287
	70,292.47	34,586	35,326	34,966		6,287
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						5.6 8.94

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 347 MISCELLANEOUS EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
FULLY ACCRUED						
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
1924	3,451.53	3,221	3,452			
1951	1,213.49	1,133	1,213			
1954	442.34	413	442			
1960	124.10	116	124			
1962	4,051.74	3,782	4,052			
1964	844.45	788	844			
1966	91.20	85	91			
1968	1,198.51	1,119	1,199			
1970	222.55	208	223			
1972	409.76	382	410			
1973	42.00	39	42			
1974	245.37	229	245			
1976	229.56	214	230			
1977	875.97	818	876			
1978	990.61	925	991			
1979	198.75	185	199			
1980	4,146.77	3,870	4,147			
1981	1,772.24	1,654	1,772			
1982	526.59	491	527			
1986	770.83	719	771			
1988	1,420.68	1,326	1,421			
1989	1,193.30	1,114	1,193			
1990	4,230.07	3,948	4,230			
1991	4,543.27	4,240	4,543			
1992	1,336.79	1,248	1,337			
1993	1,305.28	1,218	1,305			
1994	4,608.46	4,301	4,608			
1995	10,096.18	9,423	10,096			
1996	1,916.55	1,789	1,917			
1997	8,627.08	8,052	8,627			
1998	3,994.76	3,728	3,995			
1999	3,022.96	2,821	3,023			
	68,143.74	63,599	68,144			

## AMORTIZED

SURVIVOR CURVE.. 15-SQUARE  
NET SALVAGE PERCENT.. 0

2000	94,340.28	88,051	88,045	6,296	1.00	6,296
2001	61,588.86	56,457	56,453	5,136	1.25	4,109

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 347 MISCELLANEOUS EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
AMORTIZED						
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2002	224,007.76	190,407	190,393	33,615	2.25	14,940
2003	57,923.88	45,374	45,371	12,553	3.25	3,862
2004	34,261.77	24,554	24,552	9,710	4.25	2,285
2005	271,064.21	176,192	176,179	94,885	5.25	18,073
2006	360,251.26	210,145	210,130	150,122	6.25	24,020
2007	46,677.11	24,117	24,115	22,562	7.25	3,112
2008	117,921.73	53,065	53,061	64,861	8.25	7,862
2009	44,300.06	16,982	16,981	27,319	9.25	2,953
2010	114,355.08	36,213	36,210	78,145	10.25	7,624
2011	22,370.70	5,593	5,593	16,778	11.25	1,491
2012	61,690.07	11,310	11,309	50,381	12.25	4,113
2013	813,274.67	94,885	94,878	718,397	13.25	54,219
2014	4,023.39	201	201	3,822	14.25	268
2015	3,782.72	30	30	3,753	14.88	252
	2,331,833.55	1,033,576	1,033,500	1,298,334		155,479
	2,399,977.29	1,097,175	1,101,644	1,298,334		155,479
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						8.4 6.48

## MISSOURI AMERICAN WATER COMPANY

## ACCOUNT 348 OTHER TANGIBLE PLANT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
FULLY ACCRUED						
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
1958	28.21	27	28			
1959	0.14		0			
1983	5,540.57	5,264	5,541			
1991	20,319.67	19,304	20,320			
	25,888.59	24,595	25,889			
AMORTIZED						
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
2002	23,649.58	15,077	15,083	8,567	7.25	1,182
2004	895.98	482	482	414	9.25	45
	24,545.56	15,559	15,565	8,981		1,227
	50,434.15	40,154	41,454	8,981		1,227
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						7.3 2.43



**MISSOURI**  
**AMERICAN WATER**

## **2015 DEPRECIATION STUDY**

**CALCULATED ANNUAL DEPRECIATION  
ACCRUALS RELATED TO WASTEWATER PLANT  
AT MARCH 31, 2015**

*Prepared by:*



***Gannett Fleming***

*Excellence Delivered **As Promised***

MISSOURI AMERICAN WATER COMPANY  
St. Louis, Missouri

2015 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION  
ACCRUALS RELATED TO WASTEWATER PLANT  
AT MARCH 31, 2015

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



*Excellence Delivered **As Promised***

July 29, 2015

Missouri-American Water Company  
727 Craig Road  
St. Louis, MO 63141

Attention Mr. Frank Kartmann, President

Ladies and Gentlemen:

Pursuant to your request, we have conducted a depreciation study related to the wastewater plant of Missouri American Water Company as of March 31, 2015. 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 depreciation.

Respectfully submitted,

**GANNETT FLEMING VALUATION  
AND RATE CONSULTANTS, LLC**

A handwritten signature in blue ink that reads "John J. Spanos".

**JOHN J. SPANOS**  
Sr. Vice President

JJS:krm

059475





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## EXECUTIVE SUMMARY

Pursuant to Missouri American Water Company's ("MOAWC") request, Gannett Fleming Valuation and Rate Consultants, LLC ("Gannett Fleming") has conducted a depreciation study related to MOAWC plant as of March 31, 2015. 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.

MOAWC's accounting policy has not changed in recent years, nor were there any significant policy changes that might affect the results of the study.

Gannett Fleming recommends the calculated annual depreciation accrual rates proposed herein apply specifically to MOAWC's plant in service as of March 31, 2015 as summarized in Table 1 of the study. The study sets forth a total annual depreciation expense of \$0.66 million as applied to the depreciable original cost of \$24.8 million as of March 31, 2015.

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## PART I. INTRODUCTION

# MISSOURI AMERICAN WATER COMPANY DEPRECIATION STUDY

## PART I. INTRODUCTION

### SCOPE

This report presents the results of the depreciation study prepared for the Missouri-American Water Company as applied to wastewater plant in service as of March 31, 2015. 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 and wastewater industries, including knowledge of service life and salvage estimates used for other water and wastewater 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 and wastewater industries, and comparisons of the service life and net salvage estimates from our studies of other water and wastewater 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.

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## **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 Iowa type curves. There are four families in the Iowa 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 Iowa curves were developed at the Iowa 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,

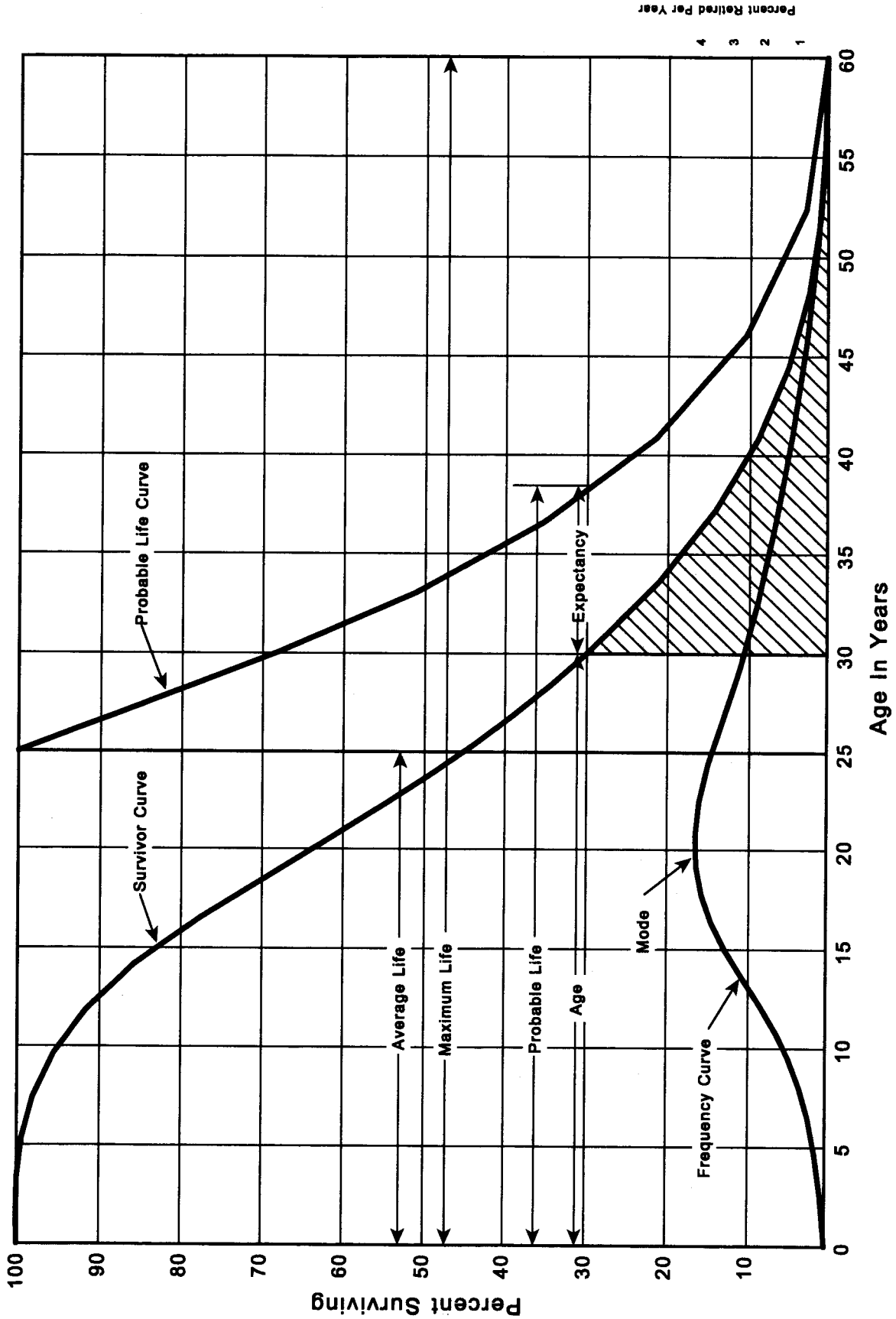


Figure 1. A Typical Survivor Curve and Derived Curves

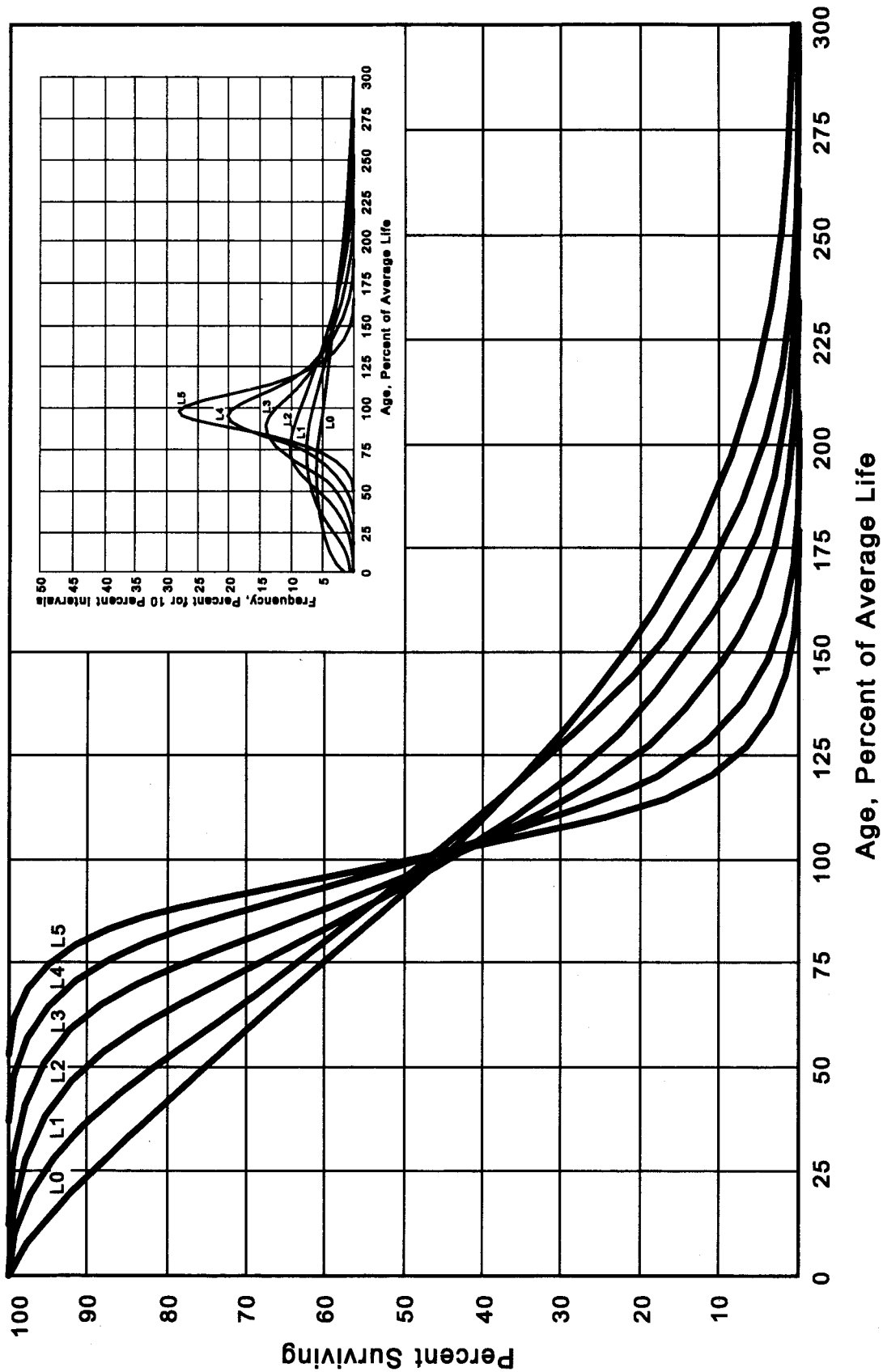


Figure 2. Left Modal or "L" Iowa Type Survivor Curves

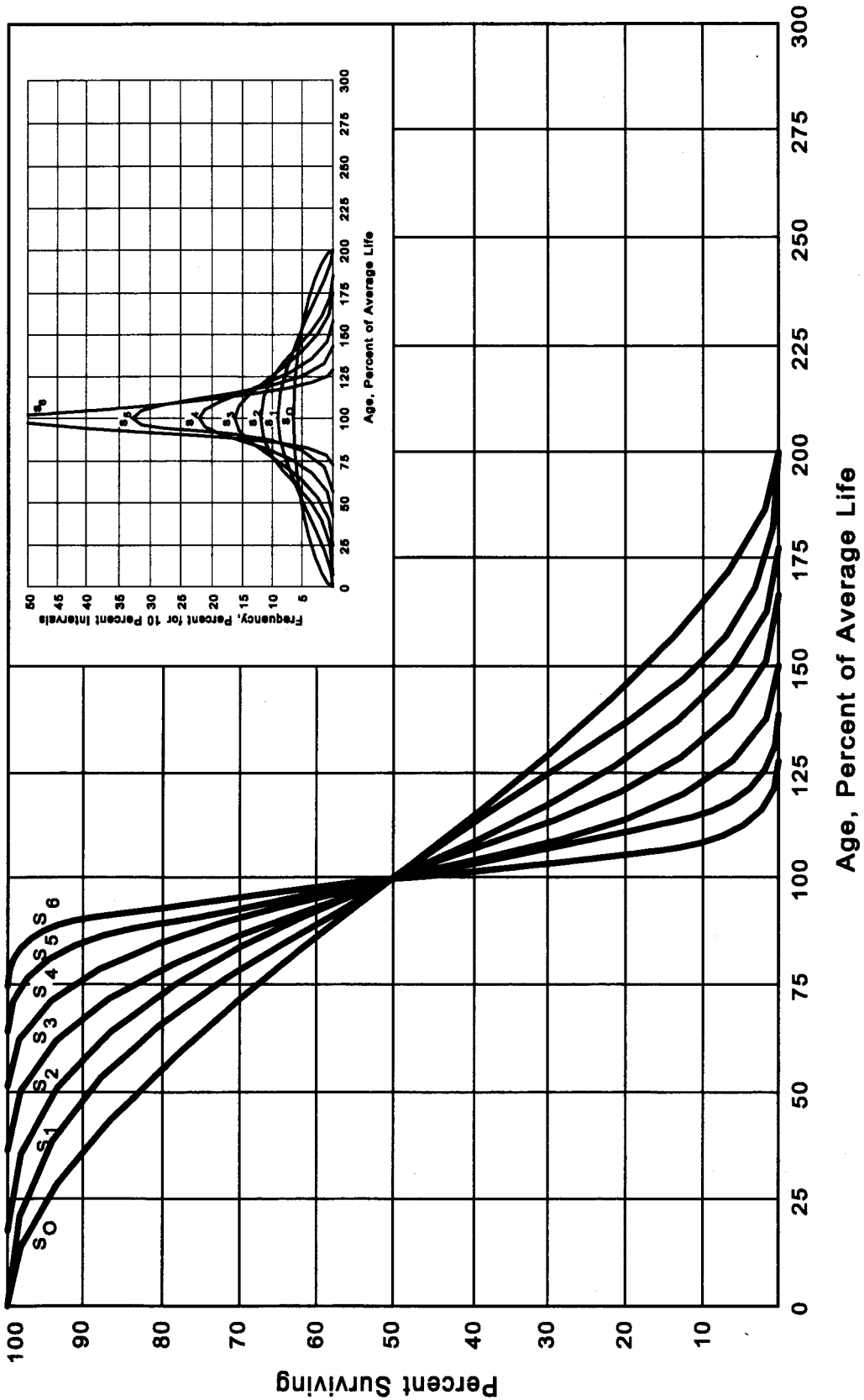


Figure 3. Symmetrical or "S" Iowa Type Survivor Curves

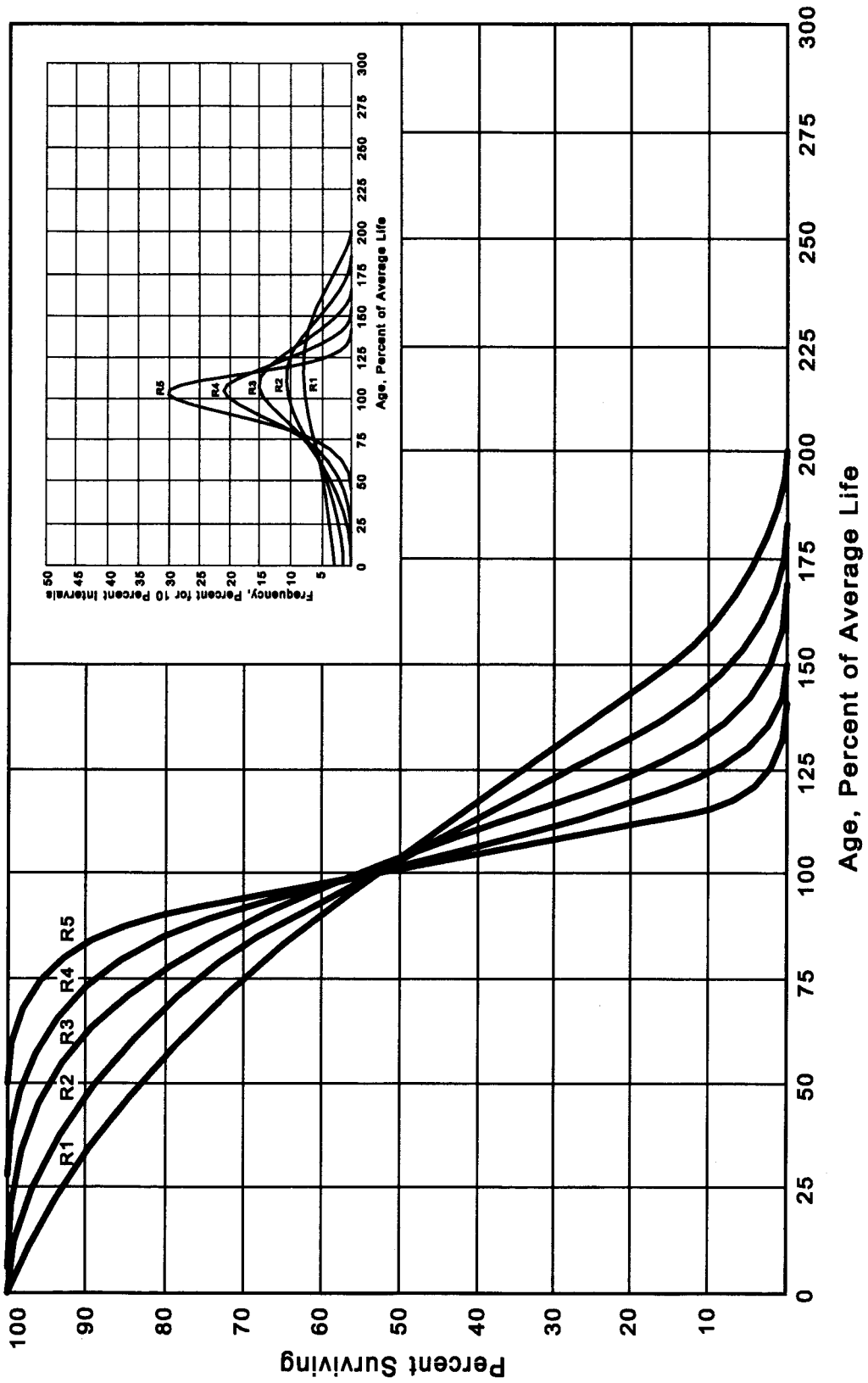


Figure 4. Right Modal or "R" Iowa Type Survivor Curves

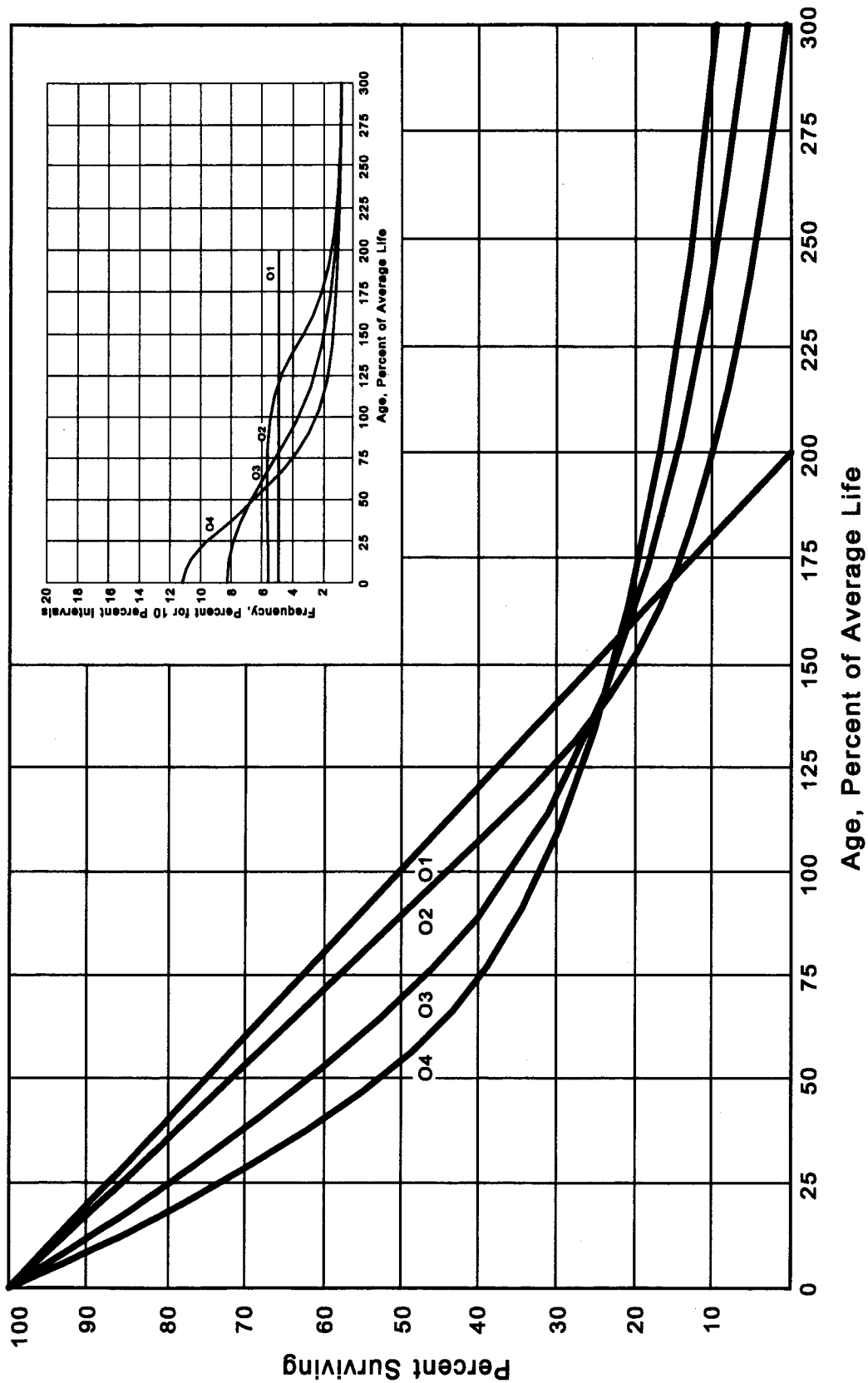


Figure 5. Origin Modal or "O" Iowa Type Survivor Curves

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."<sup>1</sup> 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,"<sup>2</sup> "Engineering Valuation and Depreciation,"<sup>3</sup> and "Depreciation Systems."<sup>4</sup>

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 experience band, 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 placement band. An example of the calculations used in the development of a life table follows. The example includes

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

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

<sup>3</sup>Marston, Anson, Robley Winfrey, and Jean C. Hempstead, *Supra* Note 1.

<sup>4</sup>Wolf, Frank K. and W. Chester Fitch. Depreciation Systems. 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

Year Placed (1)	Retirements, Thousands of Dollars										Total During		Age Interval (13)
	During Year										Age Interval	(12)	
	2005 (2)	2006 (3)	2007 (4)	2008 (5)	2009 (6)	2010 (7)	2011 (8)	2012 (9)	2013 (10)	2014 (11)			
2000	10	11	12	13	14	16	23	24	25	26	26	26	13½-14½
2001	11	12	13	15	16	18	20	21	22	19	19	44	12½-13½
2002	11	12	13	14	16	17	19	21	22	18	18	64	11½-12½
2003	8	9	10	11	11	13	14	15	16	17	17	83	10½-11½
2004	9	10	11	12	13	14	16	17	19	20	20	93	9½-10½
2005	4	9	10	11	12	13	14	15	16	20	20	105	8½-9½
2006		5	11	12	13	14	15	16	18	20	20	113	7½-8½
2007			6	12	13	15	16	17	19	19	19	124	6½-7½
2008				6	13	15	16	17	19	19	19	131	5½-6½
2009					7	14	16	17	19	20	20	143	4½-5½
2010						8	18	20	22	23	23	146	3½-4½
2011							9	20	22	25	25	150	2½-3½
2012								11	23	25	25	151	1½-2½
2013									11	24	24	153	½-1½
2014										13	13	80	0-½
<b>Total</b>	<b>53</b>	<b>68</b>	<b>86</b>	<b>106</b>	<b>128</b>	<b>157</b>	<b>196</b>	<b>231</b>	<b>273</b>	<b>308</b>	<b>1,606</b>		

Experience Band 2005-2014

Placement Band 2000-2014

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

Year Placed (1)	Acquisitions, Transfers and Sales, Thousands of Dollars														Total During Age Interval (12)	Age Interval (13)	
	During Year																
	2005 (2)	2006 (3)	2007 (4)	2008 (5)	2009 (6)	2010 (7)	2011 (8)	2012 (9)	2013 (10)	2014 (11)							
2000	-	-	-	-	-	-	60 <sup>a</sup>	-	-	-	-	-	-	-	-	-	13½-14½
2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12½-13½
2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11½-12½
2003	-	-	-	-	-	-	-	(5) <sup>b</sup>	-	-	-	-	-	-	60	-	10½-11½
2004	-	-	-	-	-	-	-	6 <sup>a</sup>	-	-	-	-	-	-	-	-	9½-10½
2005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(5)	-	8½-9½
2006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	7½-8½
2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6½-7½
2008	-	-	-	-	-	-	-	(12) <sup>b</sup>	-	-	-	-	-	-	-	-	5½-6½
2009	-	-	-	-	-	-	-	-	22 <sup>a</sup>	-	-	-	-	-	-	-	4½-5½
2010	-	-	-	-	-	-	-	(19) <sup>b</sup>	-	-	-	-	-	10	-	-	3½-4½
2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2½-3½
2012	-	-	-	-	-	-	-	-	-	(102) <sup>c</sup>	-	-	-	-	-	-	1½-2½
2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	½-1½
2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0-½
Total	-	-	-	-	-	-	60	(30)	22	(102)	(50)						

<sup>a</sup> Transfer Affecting Exposures at Beginning of Year  
<sup>b</sup> Transfer Affecting Exposures at End of Year  
<sup>c</sup> 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 exposed to retirement in this group at the beginning of the year in which they occurred, and the sales and transfers-out are considered to be removed from the plant exposed to retirement at the beginning of the following year. 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 successive transaction year. For example, the exposures for 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

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

Year Placed (1)	Exposures, Thousands of Dollars										Total at		Age Interval (13)
	Annual Survivors at the Beginning of the Year										Beginning of	Age	
	2005 (2)	2006 (3)	2007 (4)	2008 (5)	2009 (6)	2010 (7)	2011 (8)	2012 (9)	2013 (10)	2014 (11)	(12)	(13)	
2000	255	245	234	222	209	195	239	216	192	167	167	13½-14½	
2001	279	268	256	243	228	212	194	174	153	131	323	12½-13½	
2002	307	296	284	271	257	241	224	205	184	162	531	11½-12½	
2003	338	330	321	311	300	289	276	262	242	226	823	10½-11½	
2004	376	367	357	346	334	321	307	297	280	261	1,097	9½-10½	
2005	420 <sup>a</sup>	416	407	397	386	374	361	347	332	316	1,503	8½-9½	
2006		460 <sup>a</sup>	455	444	432	419	405	390	374	356	1,952	7½-8½	
2007			510 <sup>a</sup>	504	492	479	464	448	431	412	2,463	6½-7½	
2008				580 <sup>a</sup>	574	561	546	530	501	482	3,057	5½-6½	
2009					660 <sup>a</sup>	653	639	623	628	609	3,789	4½-5½	
2010						750 <sup>a</sup>	742	724	685	663	4,332	3½-4½	
2011							850 <sup>a</sup>	841	821	799	4,955	2½-3½	
2012								960 <sup>a</sup>	949	926	5,719	1½-2½	
2013									1,080 <sup>a</sup>	1,069	6,579	½-1½	
2014										1,220 <sup>a</sup>	7,490	0-½	
<b>Total</b>	<b>1,975</b>	<b>2,382</b>	<b>2,824</b>	<b>3,318</b>	<b>3,872</b>	<b>4,494</b>	<b>5,247</b>	<b>6,017</b>	<b>6,852</b>	<b>7,799</b>	<b>44,780</b>		

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 4½-5½, 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 4½	=	88.15	
Exposures at age 4½	=	3,789,000	
Retirements from age 4½ to 5½	=	143,000	
Retirement Ratio	=	$143,000 \div 3,789,000$	= 0.0377
Survivor Ratio	=	$1.000 - 0.0377$	= 0.9623
Percent surviving at age 5½	=	$(88.15) \times (0.9623)$	= 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	7,490	80	0.0107	0.9893	100.00
0.5	6,579	153	0.0233	0.9767	98.93
1.5	5,719	151	0.0264	0.9736	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	77.11
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	<u>167</u>	<u>26</u>	0.1557	0.8443	42.24
<b>Total</b>	<b><u>44,780</u></b>	<b><u>1,606</u></b>			<b>35.66</b>

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 Iowa 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 Iowa 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 Iowa 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 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 Iowa 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

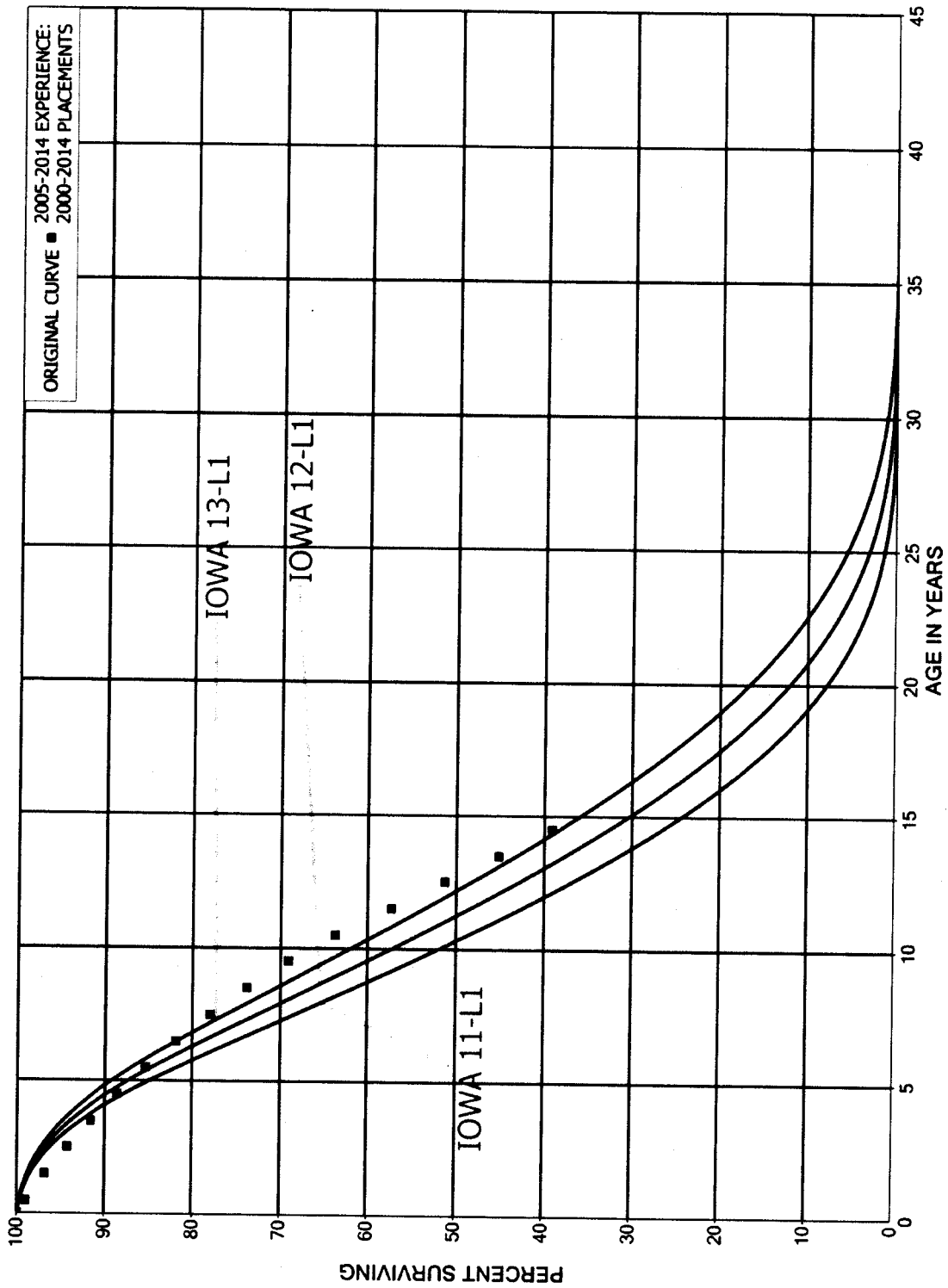


FIGURE 7. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN S0 IOWA TYPE CURVE  
ORIGINAL AND SMOOTH SURVIVOR CURVES

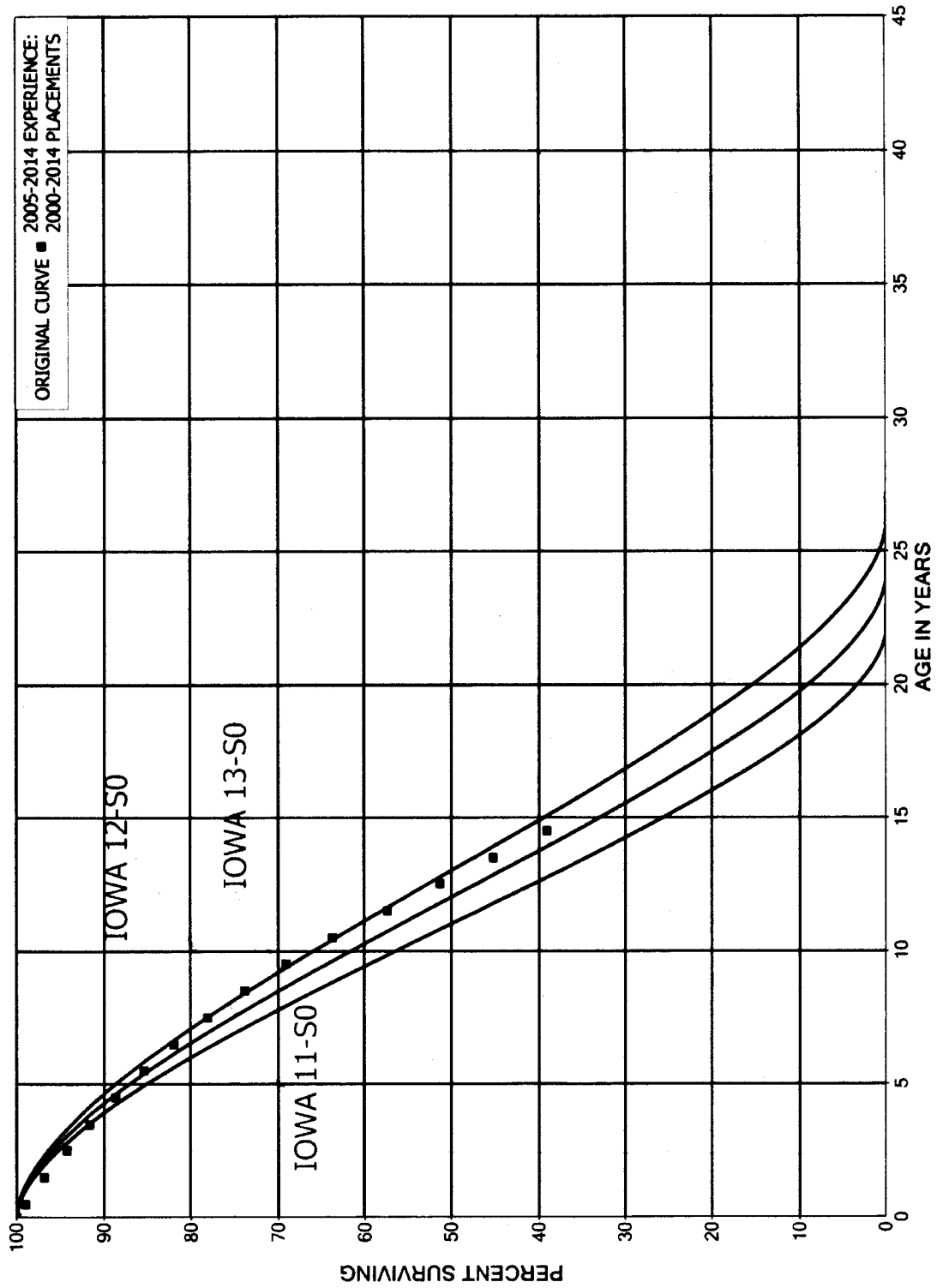


FIGURE 8. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN R1 IOWA TYPE CURVE ORIGINAL AND SMOOTH SURVIVOR CURVES

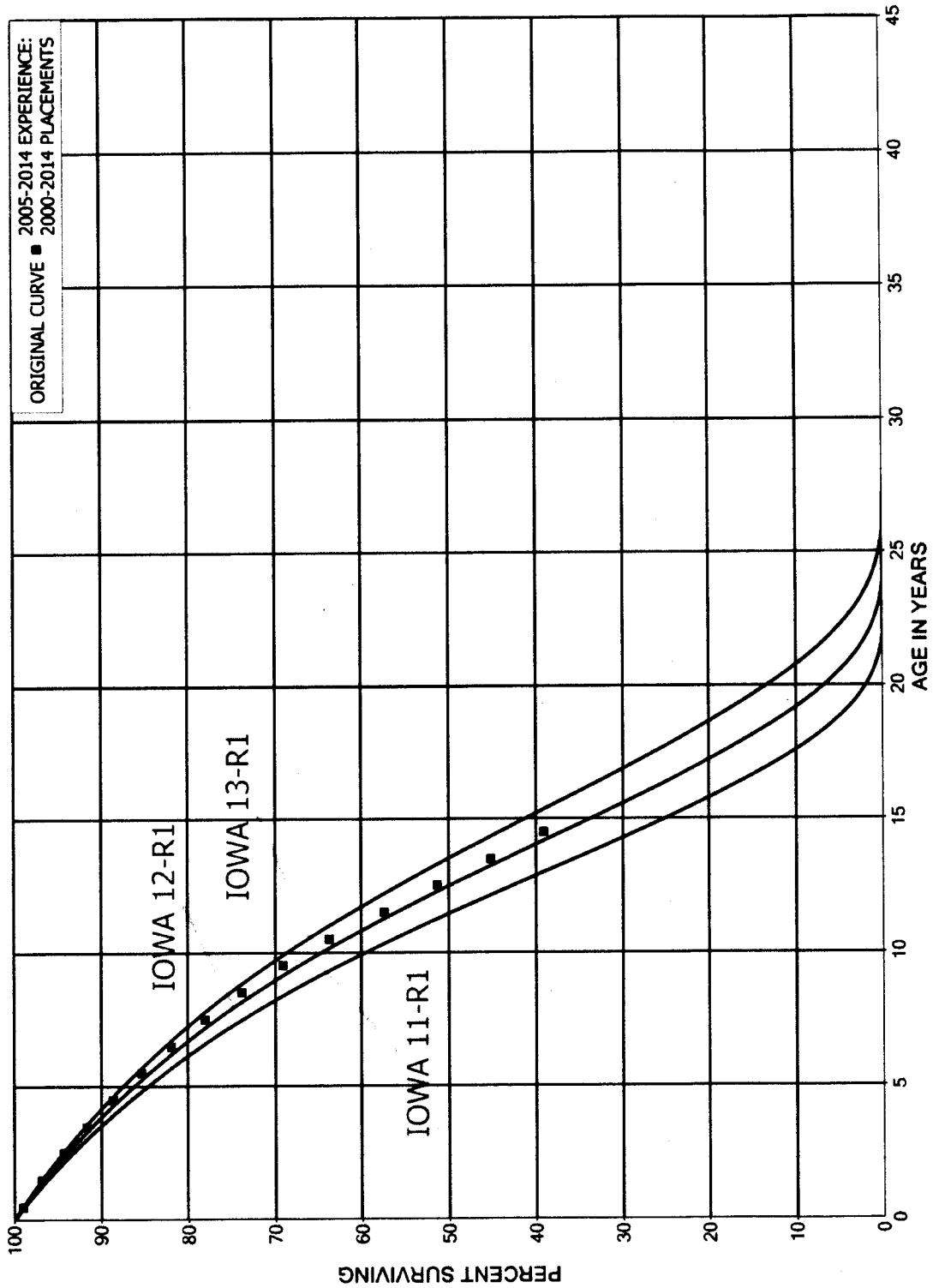
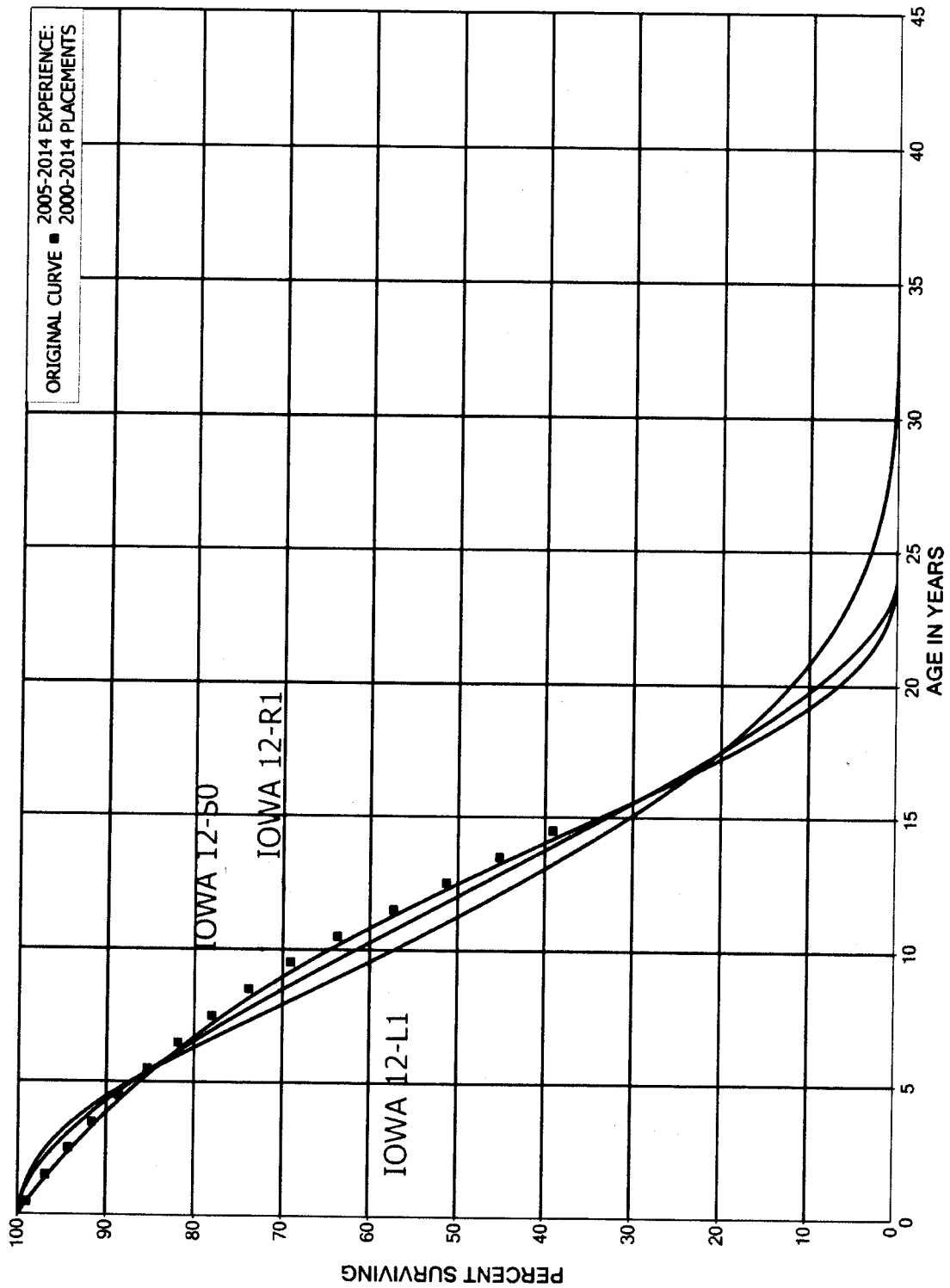


FIGURE 9. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN L1, S0 AND R1 IOWA TYPE CURVE ORIGINAL AND SMOOTH SURVIVOR CURVES



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## PART III. SERVICE LIFE CONSIDERATIONS

### PART III. SERVICE LIFE CONSIDERATIONS

#### 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 and wastewater companies.

For most of the plant accounts and subaccounts, the statistical analyses resulted in good to excellent indications of significant survivor patterns. These accounts represent 47 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.

<u>Account No.</u>	<u>Account Description</u>
361	Collection Mains
371	Pumping Equipment
380	Treatment Equipment
382	Outfall Sewer Lines

Account 361, Collection Mains, 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 70-R3 and is based on the statistical indication for the period 1965-2014 and 2000-2014. The 70-R3 is a good fit of

the significant portion of the original survivor curve as set forth on page VII-16, is consistent with management outlook for a continuation of the historical experience and is within the typical service life range of 60 to 75 years for collection mains.

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 less than 2 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 of depreciable plant in service 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 and wastewater 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 2008 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 and wastewater companies. The accounts for which the historical analyses were representative of expectations for future net salvage levels represent 48 percent of the depreciable plant balance and are presented below:

354.5	Structures and Improvements - General
355	Power Generation Equipment
361	Collection Mains
371	Pumping Equipment
380	Treatment Equipment

Account 371, Pumping Equipment, 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 2008 through 2014. These data include the retirements, cost of removal and gross salvage.

The net salvage estimate for this account is negative 5 percent and is based on the trends in cost of removal and salvage percents as shown in the tabulation on page

VIII-9. Cost of removal as a percent of the original cost retired has been low during the experience as a percentage of plant retired. The overall and most recent five-year bands averaged 2 and 6 percent removal cost, respectively. Gross salvage has been 0 percent for the 7-year period. The negative 5 percent net salvage estimate is based primarily on the overall cost of removal and gross salvage percent.

Amortization accounting is proposed for certain General Plant accounts which represent less than 2 percent of depreciable property. Future gross salvage and removal cost for these accounts will be recorded as revenue and expense, respectively. Inasmuch as there will be 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, 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 and wastewater companies.

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**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:

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

The accrued depreciation is:

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

### **Group Depreciation Procedures**

When more than a single item of property is under consideration, a group procedure for depreciation is appropriate because normally all of 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.

### **Remaining Life Annual Accruals**

For the purpose of calculating remaining life accruals as of March 31, 2015, 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 March 31, 2015, 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:

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

## **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:

	<u>Account</u>	<u>Amortization Period, Years</u>
390	Office Furniture	20
390.2	Computers and Peripherals	5
392	Stores Equipment	25
393	Tools, Shop and Garage Equipment	20
394	Laboratory Equipment	15
396	Communication Equipment	15
397	Miscellaneous Equipment	15

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.

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**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 March 31, 2015. For most plant accounts, the application of such rates to future balances that reflect additions subsequent to March 31, 2015, 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 wastewater plant in service at March 31, 2015, is presented on pages VI-5 and VI-6 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 wastewater plant.

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 and wastewater 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 were 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 March 31, 2015 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.

MISSOURI-AMERICAN WATER COMPANY

TABLE 1. ESTIMATED SURVIVOR CURVE, NET SALVAGE, ORIGINAL COST, BOOK RESERVE, AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO WASTEWATER PLANT AT MARCH 31, 2015

DEPRECIABLE GROUP (1)	SURVIVOR CURVE (2)	NET SALVAGE (3)	ORIGINAL COST AT MARCH 31, 2015 (4)	BOOK RESERVE (5)	FUTURE ACCRUALS (6)	CALCULATED ANNUAL ACCRUAL AMOUNT (7)	ANNUAL ACCRUAL RATE (8)=(7)/(4)	COMPOSITE REMAINING LIFE (9)
<b>DEPRECIABLE PLANT</b>								
<b>STRUCTURES AND IMPROVEMENTS</b>								
354.20	50-R3	(5)	1,459,882.21	258,110	1,274,766	29,611	2.03	43.1
354.30	45-R3	0	171,540.18	24,098	147,442	3,724	2.17	39.6
354.40	60-R2.5	(5)	2,385,498.32	719,340	1,785,433	34,157	1.43	52.3
354.50	35-R2.5	(5)	396,803.59	41,353	375,290	12,359	3.11	30.4
<b>TOTAL STRUCTURES AND IMPROVEMENTS</b>								
			4,413,724.30	1,042,901	3,582,931	79,851	1.81	44.9
<b>POWER GENERATING EQUIPMENT</b>								
355.00	30-R2.5	0	126,561.47	30,209	96,353	3,984	3.15	24.2
360.00	60-R2.5	(10)	6,258,358.97	1,709,661	5,174,534	102,614	1.64	50.4
361.00	70-R3	(20)	3,320,010.13	864,490	3,119,522	52,600	1.58	59.3
363.00	55-R2	(40)	131,740.52	30,741	153,695	3,777	2.87	40.7
364.00	25-S2.5	0	514,296.69	235,987	278,309	17,374	3.38	16.0
370.00	30-L2.5	0	281,494.25	101,272	180,222	8,077	2.87	22.3
371.00	15-L1.5	(5)	2,340,947.60	1,436,907	1,021,088	100,967	4.31	10.1
380.00	30-S0.5	(20)	5,683,679.20	1,484,771	5,335,644	225,656	3.97	23.6
381.00	50-R2.5	0	693,957.05	236,821	457,136	11,119	1.60	41.1
382.00	35-L2	0	217,702.26	44,275	173,427	6,612	3.04	26.2
389.10	30-R2	0	112,937.16	20,817	92,120	3,685	3.26	25.0
390.00	20-SQ	0	15,628.86	7,230	8,399	781	5.00	10.8
390.20	5-SQ	0	24,120.30	9,690	14,430	4,824	20.00	3.0
391.00	10-L2.5	5	233,340.74	167,053	54,621	8,060	3.45	6.8
392.00	25-SQ	0	25,404.64	7,900	17,505	1,015	4.00	17.2
393.00	20-SQ	0	107,452.71	30,600	76,853	5,375	5.00	14.3
394.00	LABORATORY EQUIPMENT	0	69,020.90	22,350	46,671	4,601	6.67	10.1
395.00	POWER OPERATED EQUIPMENT	0	531.98	201	331	41	7.71	8.1
396.00	COMMUNICATION EQUIPMENT	0	67,810.63	21,900	45,911	4,524	6.67	10.1
<b>MISCELLANEOUS EQUIPMENT</b>								
397.00	FULLY ACCRUED AMORTIZED	0 0	5,050.00 135,730.63	5,050 79,000	0 56,731	0 9,059	- 6.67	- 6.3
<b>TOTAL MISCELLANEOUS EQUIPMENT</b>								
			140,780.63	84,050	56,731	9,059	6.43	6.3
<b>TOTAL DEPRECIABLE PLANT</b>						<b>654,596</b>	<b>2.64</b>	<b>30.5</b>

MISSOURI-AMERICAN WATER COMPANY

TABLE 1. ESTIMATED SURVIVOR CURVE, NET SALVAGE, ORIGINAL COST, BOOK RESERVE, AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO WASTEWATER PLANT AT MARCH 31, 2015

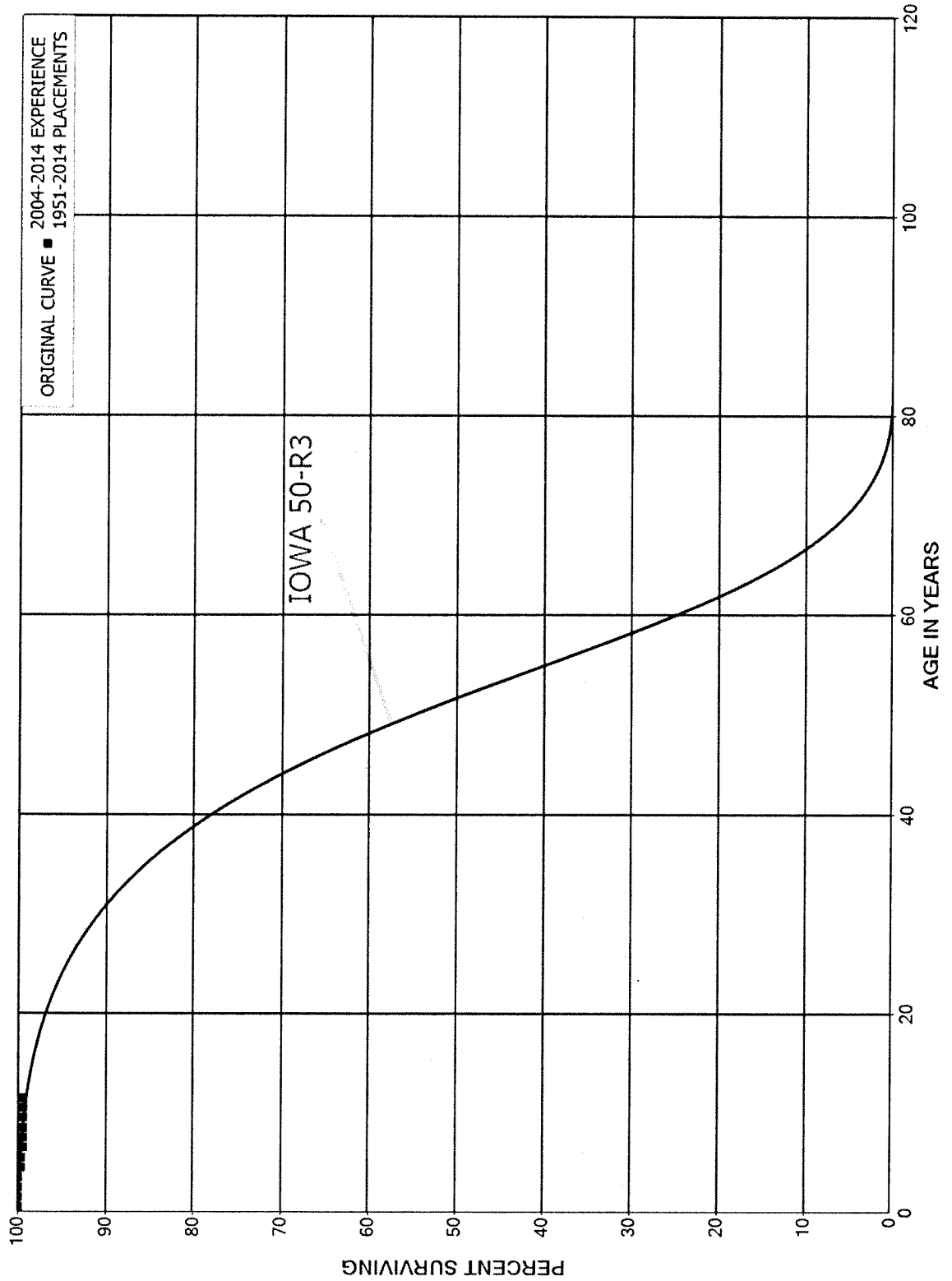
DEPRECIABLE GROUP (1)	SURVIVOR CURVE (2)	NET SALVAGE (3)	ORIGINAL COST AT MARCH 31, 2015 (4)	BOOK RESERVE (5)	FUTURE ACCRUALS (6)	CALCULATED ANNUAL ACCRUAL AMOUNT (7)	ANNUAL ACCRUAL RATE (8)=(7)/(4)	COMPOSITE REMAINING LIFE (9)
<b>UNRECOVERED RESERVE FOR AMORTIZATION</b>								
390.00	OFFICE FURNITURE AND EQUIPMENT			8,399		(1,680) *		
390.20	COMPUTERS AND PERIPHERAL			(1,625)		325 *		
392.00	STORES EQUIPMENT			6,604		(1,321) *		
393.00	TOOLS, SHOP AND GARAGE EQUIPMENT			(2,149)		430 *		
394.00	LABORATORY EQUIPMENT			(10,725)		2,145 *		
396.00	COMMUNICATION EQUIPMENT			(3,137)		627 *		
397.00	MISCELLANEOUS EQUIPMENT			(2,344)		469 *		
	<b>TOTAL UNRECOVERED RESERVE FOR AMORTIZATION</b>			<b>(4,977)</b>		<b>995</b>		
<b>NONDEPRECIABLE PLANT</b>								
351.00	ORGANIZATION		5,700.00					
352.00	FRANCHISES AND CONSENTS		5,562.00					
353.20	LAND AND LAND RIGHTS - SOURCE OF SUPPLY		30,000.00					
353.30	LAND AND LAND RIGHTS - PUMPING		9,505.00	23				
353.50	LAND AND LAND RIGHTS - WATER TREATMENT		112,645.03	2,543				
	<b>TOTAL NONDEPRECIABLE PLANT</b>		<b>163,412.03</b>	<b>2,566</b>				
	<b>TOTAL UTILITY PLANT</b>		<b>24,942,913.02</b>	<b>7,587,414</b>	<b>19,986,433</b>	<b>655,591</b>		

\* 5-YEAR AMORTIZATION OF UNRECOVERED RESERVE RELATED TO UTILIZATION OF AMORTIZATION ACCOUNTING.

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## PART VII. SERVICE LIFE STATISTICS

MISSOURI AMERICAN WATER COMPANY - WASTEWATER  
ACCOUNT 354.2 STRUCTURES AND IMPROVEMENTS - COLLECTION  
ORIGINAL AND SMOOTH SURVIVOR CURVES



MISSOURI AMERICAN WATER COMPANY - WASTEWATER  
ACCOUNT 354.2 STRUCTURES AND IMPROVEMENTS - COLLECTION

ORIGINAL LIFE TABLE

PLACEMENT BAND 1951-2014		EXPERIENCE BAND 2004-2014			
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	1,134,436		0.0000	1.0000	100.00
0.5	1,162,852		0.0000	1.0000	100.00
1.5	1,097,899		0.0000	1.0000	100.00
2.5	1,097,899		0.0000	1.0000	100.00
3.5	1,236,525	4,811	0.0039	0.9961	100.00
4.5	1,278,111		0.0000	1.0000	99.61
5.5	1,217,707	2,429	0.0020	0.9980	99.61
6.5	1,137,833		0.0000	1.0000	99.41
7.5	118,577		0.0000	1.0000	99.41
8.5	51,869		0.0000	1.0000	99.41
9.5	51,869		0.0000	1.0000	99.41
10.5	15,000		0.0000	1.0000	99.41
11.5					99.41
12.5					
13.5					
14.5					
15.5					
16.5					
17.5					
18.5					
19.5					
20.5					
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					

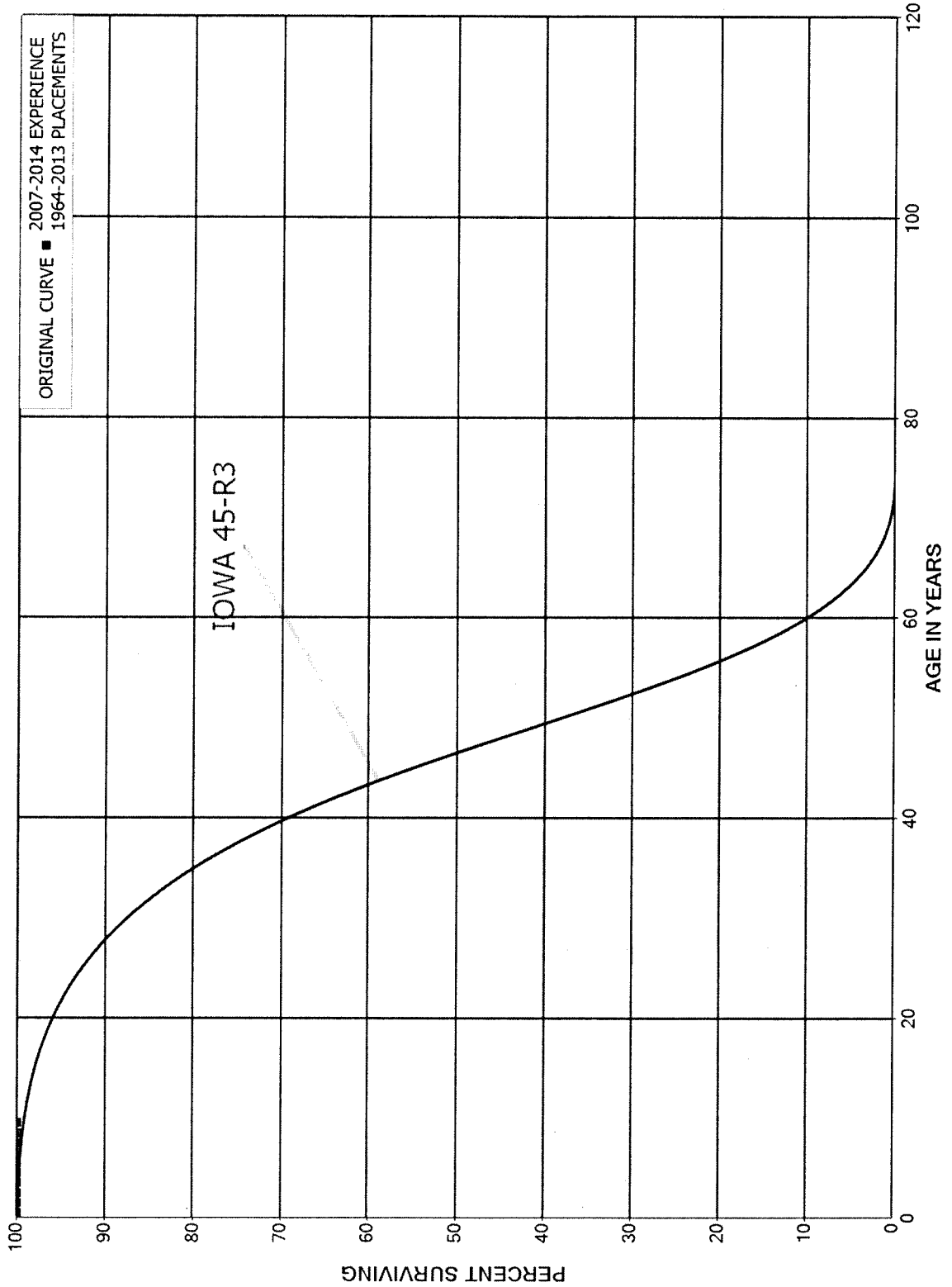


MISSOURI AMERICAN WATER COMPANY - WASTEWATER  
ACCOUNT 354.2 STRUCTURES AND IMPROVEMENTS - COLLECTION

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1951-2014			EXPERIENCE BAND 2004-2014		
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					
49.5					
50.5					
51.5					
52.5					
53.5	396,036		0.0000		
54.5					

MISSOURI AMERICAN WATER COMPANY - WASTEWATER  
ACCOUNT 354.3 STRUCTURES AND IMPROVEMENTS - PUMPING  
ORIGINAL AND SMOOTH SURVIVOR CURVES



## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 354.3 STRUCTURES AND IMPROVEMENTS - PUMPING

## ORIGINAL LIFE TABLE

## PLACEMENT BAND 1964-2013

## EXPERIENCE BAND 2007-2014

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	163,231		0.0000	1.0000	100.00
0.5	163,231		0.0000	1.0000	100.00
1.5	142,580		0.0000	1.0000	100.00
2.5	142,580		0.0000	1.0000	100.00
3.5	142,580		0.0000	1.0000	100.00
4.5	21,607		0.0000	1.0000	100.00
5.5	20,483		0.0000	1.0000	100.00
6.5	18,381		0.0000	1.0000	100.00
7.5	2,085		0.0000	1.0000	100.00
8.5	2,085		0.0000	1.0000	100.00
9.5					100.00
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					
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					

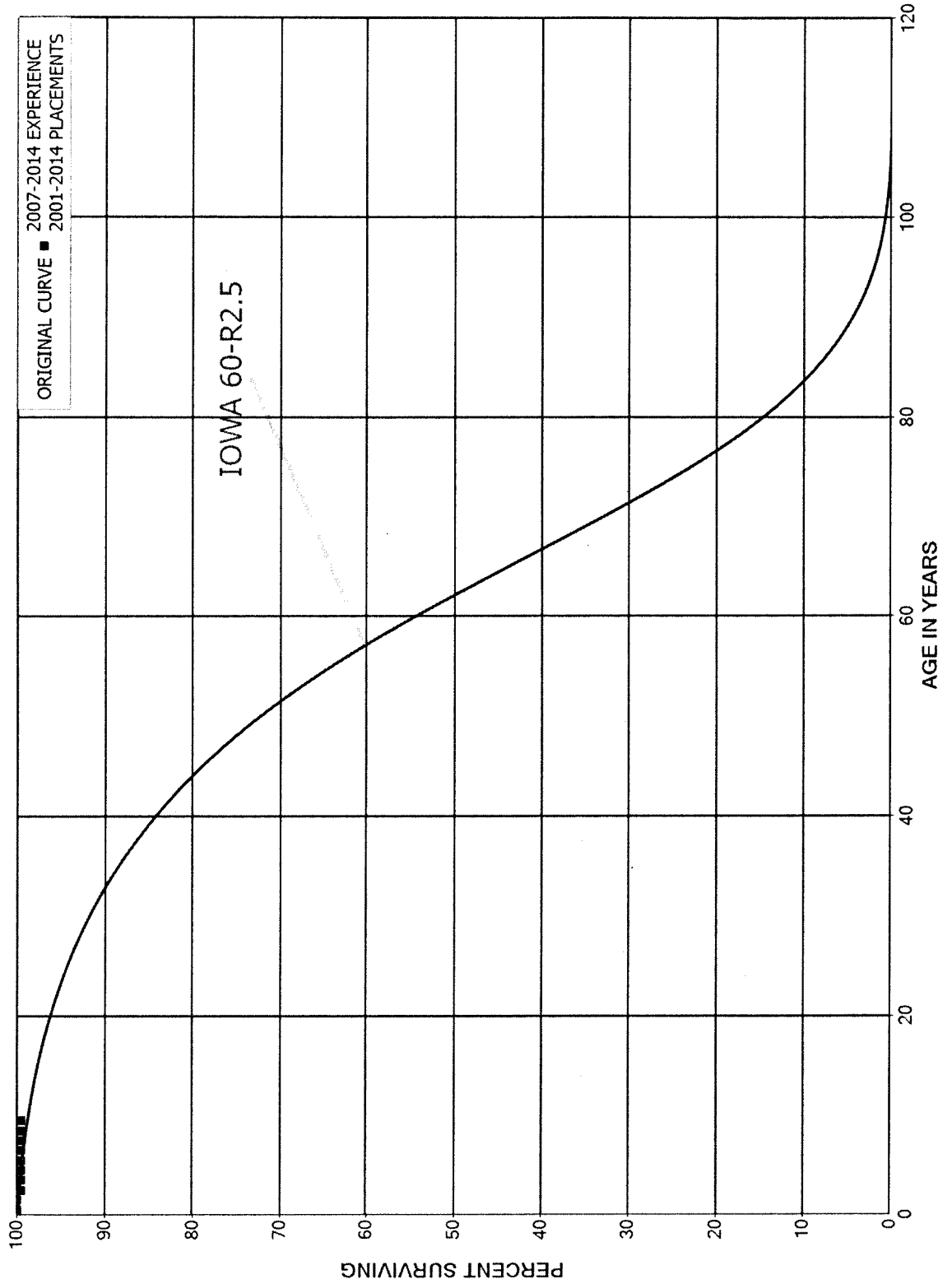
## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 354.3 STRUCTURES AND IMPROVEMENTS - PUMPING

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1964-2013			EXPERIENCE BAND 2007-2014		
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	6,224		0.0000		
46.5	6,224		0.0000		
47.5	6,224		0.0000		
48.5	6,224		0.0000		
49.5	6,224		0.0000		
50.5					

MISSOURI AMERICAN WATER COMPANY - WASTEWATER  
 ACCOUNT 354.4 STRUCTURES AND IMPROVEMENTS - TREATMENT  
 ORIGINAL AND SMOOTH SURVIVOR CURVES



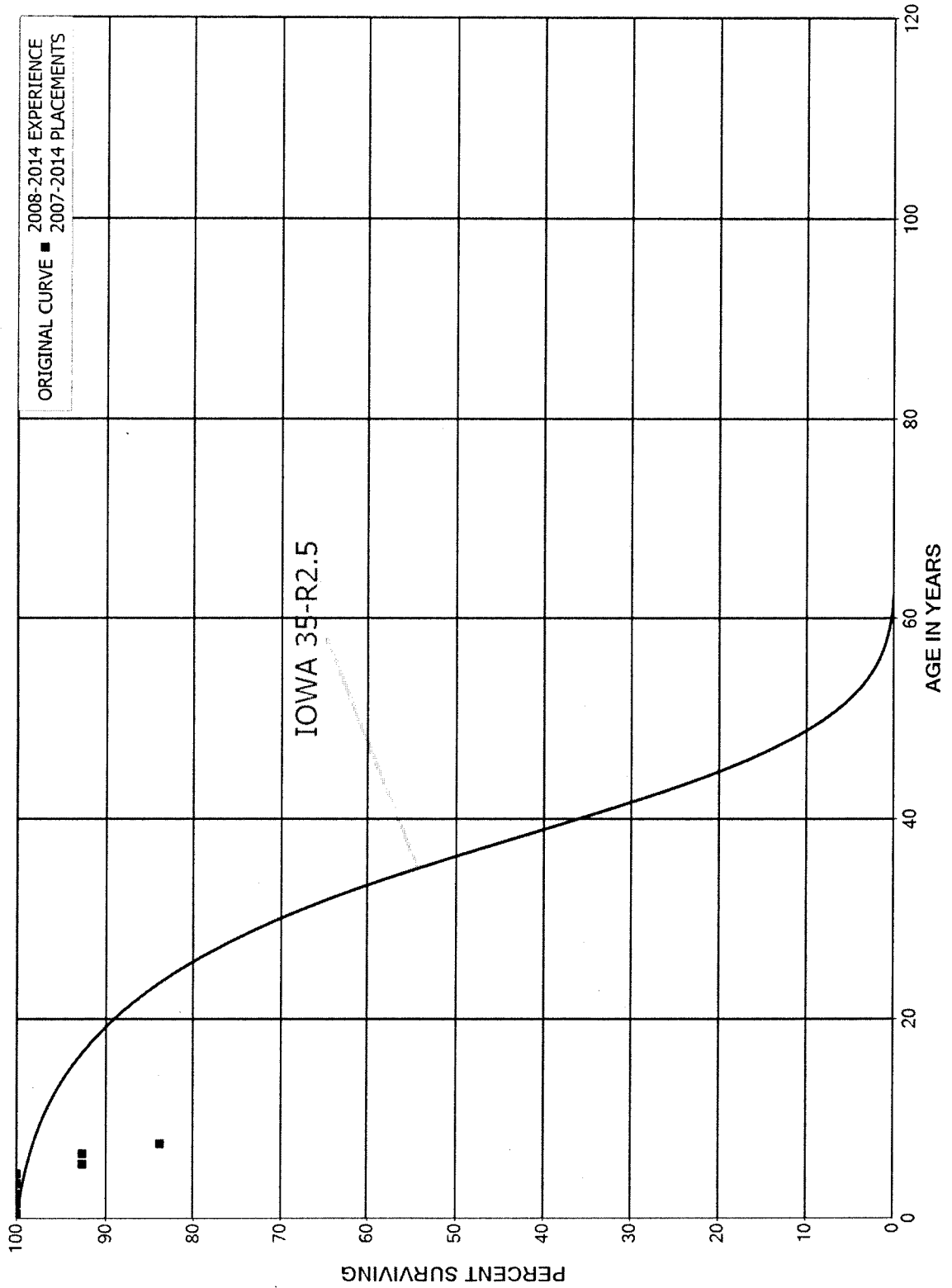
## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 354.4 STRUCTURES AND IMPROVEMENTS - TREATMENT

## ORIGINAL LIFE TABLE

PLACEMENT BAND 2001-2014			EXPERIENCE BAND 2007-2014		
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	1,188,674		0.0000	1.0000	100.00
0.5	1,129,385		0.0000	1.0000	100.00
1.5	1,032,185	5,675	0.0055	0.9945	100.00
2.5	1,029,955		0.0000	1.0000	99.45
3.5	1,329,896		0.0000	1.0000	99.45
4.5	1,333,496		0.0000	1.0000	99.45
5.5	1,409,995		0.0000	1.0000	99.45
6.5	1,345,957		0.0000	1.0000	99.45
7.5	80,100		0.0000	1.0000	99.45
8.5	76,500		0.0000	1.0000	99.45
9.5					99.45
10.5					
11.5	642,653		0.0000		
12.5	642,653		0.0000		
13.5					

MISSOURI AMERICAN WATER COMPANY - WASTEWATER  
 ACCOUNT 354.5 STRUCTURES AND IMPROVEMENTS - GENERAL  
 ORIGINAL AND SMOOTH SURVIVOR CURVES



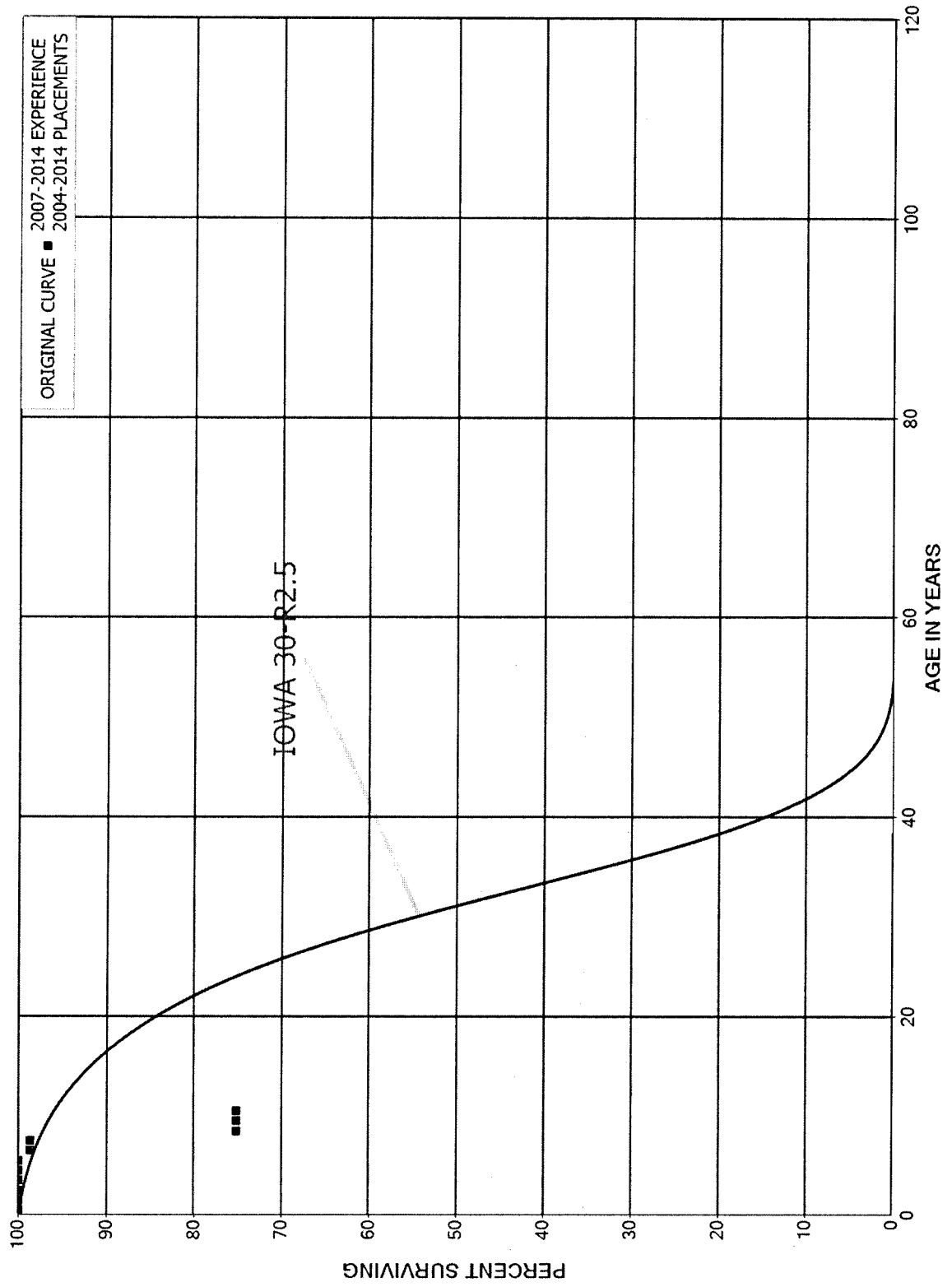
MISSOURI AMERICAN WATER COMPANY - WASTEWATER  
ACCOUNT 354.5 STRUCTURES AND IMPROVEMENTS - GENERAL

ORIGINAL LIFE TABLE

PLACEMENT BAND 2007-2014			EXPERIENCE BAND 2008-2014		
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	248,973		0.0000	1.0000	100.00
0.5	210,677		0.0000	1.0000	100.00
1.5	227,307		0.0000	1.0000	100.00
2.5	238,641		0.0000	1.0000	100.00
3.5	187,764		0.0000	1.0000	100.00
4.5	187,764	13,950	0.0743	0.9257	100.00
5.5	161,775		0.0000	1.0000	92.57
6.5	147,665	13,986	0.0947	0.9053	92.57
7.5					83.80



MISSOURI AMERICAN WATER COMPANY - WASTEWATER  
 ACCOUNT 355 POWER GENERATING EQUIPMENT  
 ORIGINAL AND SMOOTH SURVIVOR CURVES



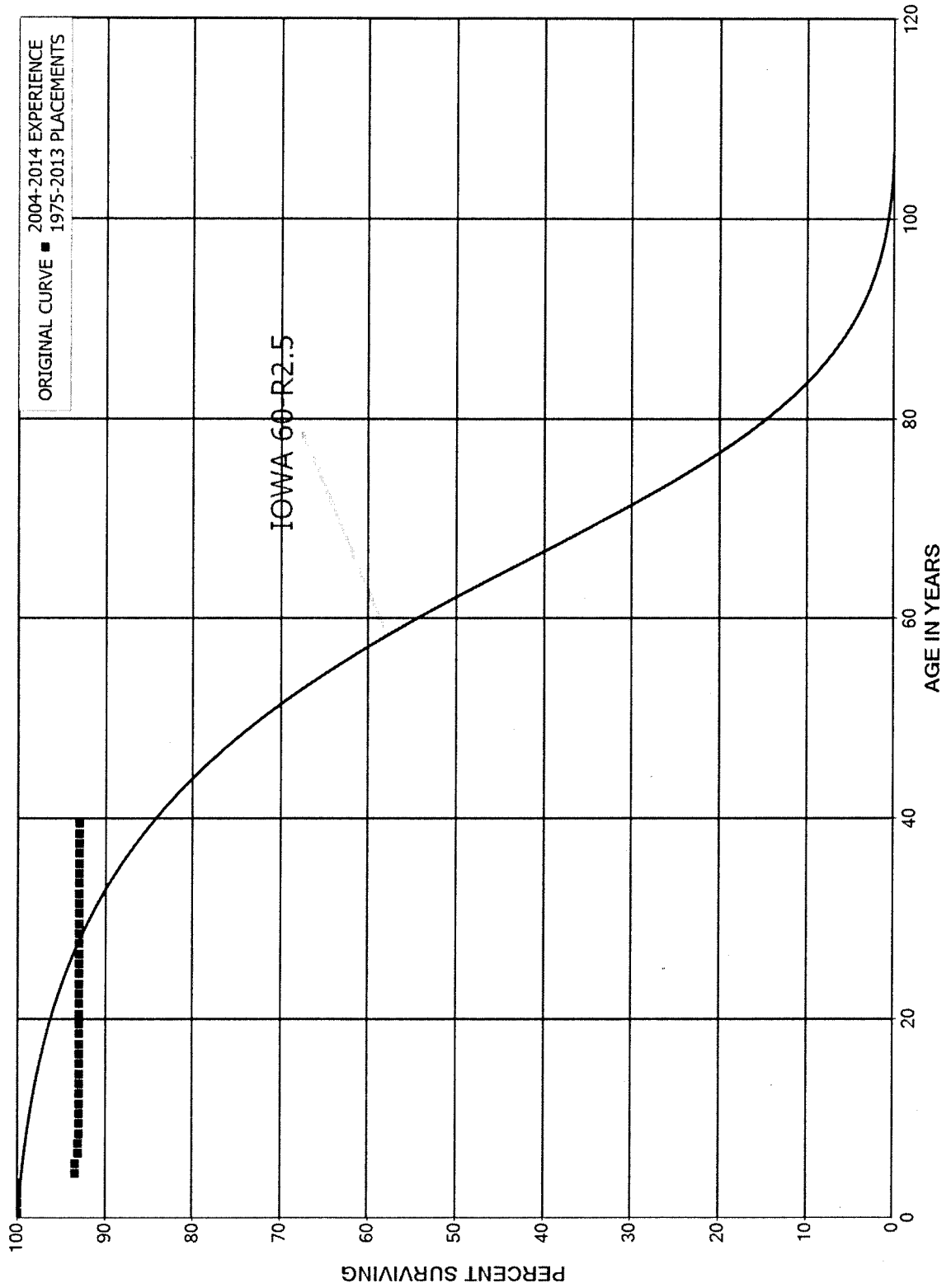
## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 355 POWER GENERATING EQUIPMENT

## ORIGINAL LIFE TABLE

PLACEMENT BAND 2004-2014			EXPERIENCE BAND 2007-2014		
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	119,805		0.0000	1.0000	100.00
0.5	114,000		0.0000	1.0000	100.00
1.5	114,000		0.0000	1.0000	100.00
2.5	116,308		0.0000	1.0000	100.00
3.5	115,268		0.0000	1.0000	100.00
4.5	73,955		0.0000	1.0000	100.00
5.5	70,564	1,015	0.0144	0.9856	100.00
6.5	71,427		0.0000	1.0000	98.56
7.5	4,899	1,163	0.2375	0.7625	98.56
8.5	3,736		0.0000	1.0000	75.16
9.5	3,736		0.0000	1.0000	75.16
10.5					75.16

MISSOURI AMERICAN WATER COMPANY - WASTEWATER  
 ACCOUNT 360 COLLECTION SEWERS  
 ORIGINAL AND SMOOTH SURVIVOR CURVES



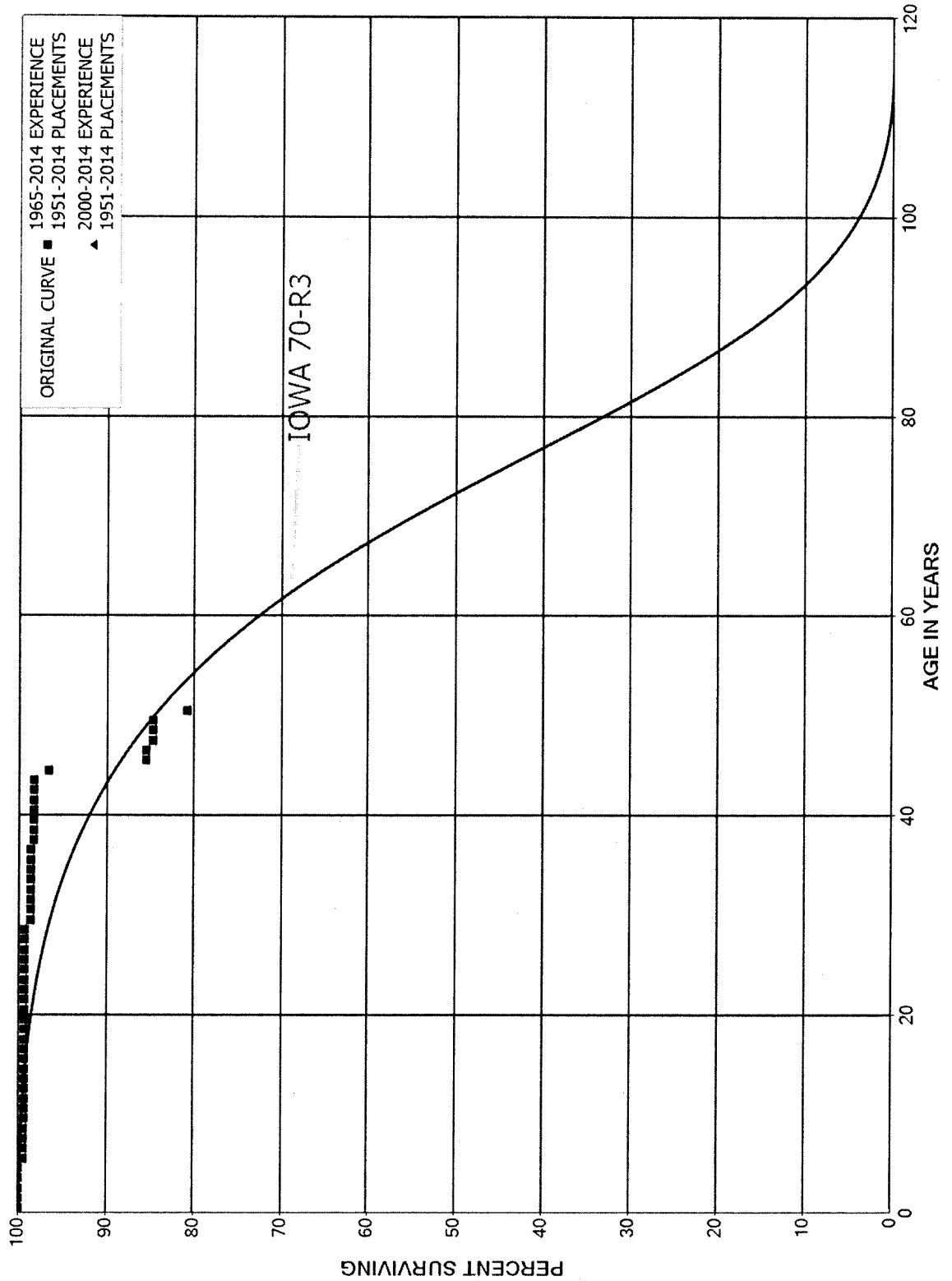
## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 360 COLLECTION SEWERS

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1975-2013			EXPERIENCE BAND 2004-2014		
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	87,558		0.0000	1.0000	100.00
0.5	366,687		0.0000	1.0000	100.00
1.5	66,002		0.0000	1.0000	100.00
2.5	124,253		0.0000	1.0000	100.00
3.5	579,712	38,559	0.0665	0.9335	100.00
4.5	1,644,948		0.0000	1.0000	93.35
5.5	2,450,733	7,848	0.0032	0.9968	93.35
6.5	2,420,942	1,008	0.0004	0.9996	93.05
7.5	3,206,938	228	0.0001	0.9999	93.01
8.5	3,903,645		0.0000	1.0000	93.00
9.5	3,100,067		0.0000	1.0000	93.00
10.5	3,100,067		0.0000	1.0000	93.00
11.5	2,860		0.0000	1.0000	93.00
12.5	2,860		0.0000	1.0000	93.00
13.5	2,860		0.0000	1.0000	93.00
14.5	2,860		0.0000	1.0000	93.00
15.5	2,860		0.0000	1.0000	93.00
16.5	2,860		0.0000	1.0000	93.00
17.5	343,155		0.0000	1.0000	93.00
18.5	2,860		0.0000	1.0000	93.00
19.5	6,503		0.0000	1.0000	93.00
20.5	6,503		0.0000	1.0000	93.00
21.5	6,503		0.0000	1.0000	93.00
22.5	6,503		0.0000	1.0000	93.00
23.5	6,503		0.0000	1.0000	93.00
24.5	8,809		0.0000	1.0000	93.00
25.5	8,809		0.0000	1.0000	93.00
26.5	8,809		0.0000	1.0000	93.00
27.5	8,809		0.0000	1.0000	93.00
28.5	8,809		0.0000	1.0000	93.00
29.5	4,038		0.0000	1.0000	93.00
30.5	4,038		0.0000	1.0000	93.00
31.5	4,038		0.0000	1.0000	93.00
32.5	4,038		0.0000	1.0000	93.00
33.5	4,038		0.0000	1.0000	93.00
34.5	1,732		0.0000	1.0000	93.00
35.5	1,732		0.0000	1.0000	93.00
36.5	1,732		0.0000	1.0000	93.00
37.5	1,732		0.0000	1.0000	93.00
38.5	1,732		0.0000	1.0000	93.00
39.5					93.00

MISSOURI AMERICAN WATER COMPANY - WASTEWATER  
 ACCOUNT 361 COLLECTING MAINS  
 ORIGINAL AND SMOOTH SURVIVOR CURVES



## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 361 COLLECTING MAINS

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1951-2014			EXPERIENCE BAND 1965-2014		
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	1,139,788		0.0000	1.0000	100.00
0.5	1,832,956		0.0000	1.0000	100.00
1.5	1,308,849		0.0000	1.0000	100.00
2.5	1,178,362		0.0000	1.0000	100.00
3.5	1,033,452		0.0000	1.0000	100.00
4.5	763,910	5,032	0.0066	0.9934	100.00
5.5	750,160		0.0000	1.0000	99.34
6.5	747,094		0.0000	1.0000	99.34
7.5	656,995		0.0000	1.0000	99.34
8.5	654,157	407	0.0006	0.9994	99.34
9.5	610,007		0.0000	1.0000	99.28
10.5	280,200		0.0000	1.0000	99.28
11.5	129,324		0.0000	1.0000	99.28
12.5	129,324		0.0000	1.0000	99.28
13.5	196,929		0.0000	1.0000	99.28
14.5	237,586		0.0000	1.0000	99.28
15.5	89,335		0.0000	1.0000	99.28
16.5	48,678		0.0000	1.0000	99.28
17.5	48,678		0.0000	1.0000	99.28
18.5	48,678		0.0000	1.0000	99.28
19.5	65,606		0.0000	1.0000	99.28
20.5	65,606		0.0000	1.0000	99.28
21.5	65,606		0.0000	1.0000	99.28
22.5	65,606		0.0000	1.0000	99.28
23.5	175,457		0.0000	1.0000	99.28
24.5	106,983		0.0000	1.0000	99.28
25.5	127,519		0.0000	1.0000	99.28
26.5	175,185		0.0000	1.0000	99.28
27.5	245,649		0.0000	1.0000	99.28
28.5	210,990	1,296	0.0061	0.9939	99.28
29.5	111,284		0.0000	1.0000	98.67
30.5	98,276		0.0000	1.0000	98.67
31.5	114,068		0.0000	1.0000	98.67
32.5	111,925		0.0000	1.0000	98.67
33.5	135,868		0.0000	1.0000	98.67
34.5	94,491		0.0000	1.0000	98.67
35.5	94,574	7	0.0001	0.9999	98.67
36.5	106,522	449	0.0042	0.9958	98.66
37.5	82,497		0.0000	1.0000	98.25
38.5	70,541	0	0.0000	1.0000	98.25

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 361 COLLECTING MAINS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1951-2014			EXPERIENCE BAND 1965-2014		
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	44,107		0.0000	1.0000	98.25
40.5	44,107		0.0000	1.0000	98.25
41.5	28,315		0.0000	1.0000	98.25
42.5	97,452		0.0000	1.0000	98.25
43.5	113,095	1,859	0.0164	0.9836	98.25
44.5	42,100	4,832	0.1148	0.8852	96.63
45.5	71,572	16	0.0002	0.9998	85.54
46.5	71,556	708	0.0099	0.9901	85.52
47.5	70,848		0.0000	1.0000	84.68
48.5	70,848		0.0000	1.0000	84.68
49.5	42,533	1,949	0.0458	0.9542	84.68
50.5					80.80

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 361 COLLECTING MAINS

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1951-2014			EXPERIENCE BAND 2000-2014		
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	1,108,033		0.0000	1.0000	100.00
0.5	1,801,201		0.0000	1.0000	100.00
1.5	1,277,095		0.0000	1.0000	100.00
2.5	1,146,607		0.0000	1.0000	100.00
3.5	1,001,697		0.0000	1.0000	100.00
4.5	732,155	5,032	0.0069	0.9931	100.00
5.5	718,405		0.0000	1.0000	99.31
6.5	715,339		0.0000	1.0000	99.31
7.5	625,240		0.0000	1.0000	99.31
8.5	622,402	407	0.0007	0.9993	99.31
9.5	578,253		0.0000	1.0000	99.25
10.5	248,445		0.0000	1.0000	99.25
11.5	97,570		0.0000	1.0000	99.25
12.5	97,570		0.0000	1.0000	99.25
13.5	165,174		0.0000	1.0000	99.25
14.5	205,831		0.0000	1.0000	99.25
15.5	57,580		0.0000	1.0000	99.25
16.5	16,924		0.0000	1.0000	99.25
17.5	19,067		0.0000	1.0000	99.25
18.5	19,067		0.0000	1.0000	99.25
19.5	35,995		0.0000	1.0000	99.25
20.5	35,995		0.0000	1.0000	99.25
21.5	35,995		0.0000	1.0000	99.25
22.5	35,995		0.0000	1.0000	99.25
23.5	147,142		0.0000	1.0000	99.25
24.5	78,668		0.0000	1.0000	99.25
25.5	99,204		0.0000	1.0000	99.25
26.5	146,870		0.0000	1.0000	99.25
27.5	217,334		0.0000	1.0000	99.25
28.5	182,675	1,296	0.0071	0.9929	99.25
29.5	82,969		0.0000	1.0000	98.54
30.5	69,961		0.0000	1.0000	98.54
31.5	85,753		0.0000	1.0000	98.54
32.5	83,610		0.0000	1.0000	98.54
33.5	107,553		0.0000	1.0000	98.54
34.5	94,491		0.0000	1.0000	98.54
35.5	94,574	7	0.0001	0.9999	98.54
36.5	106,522	449	0.0042	0.9958	98.54
37.5	82,497		0.0000	1.0000	98.12
38.5	70,541	0	0.0000	1.0000	98.12



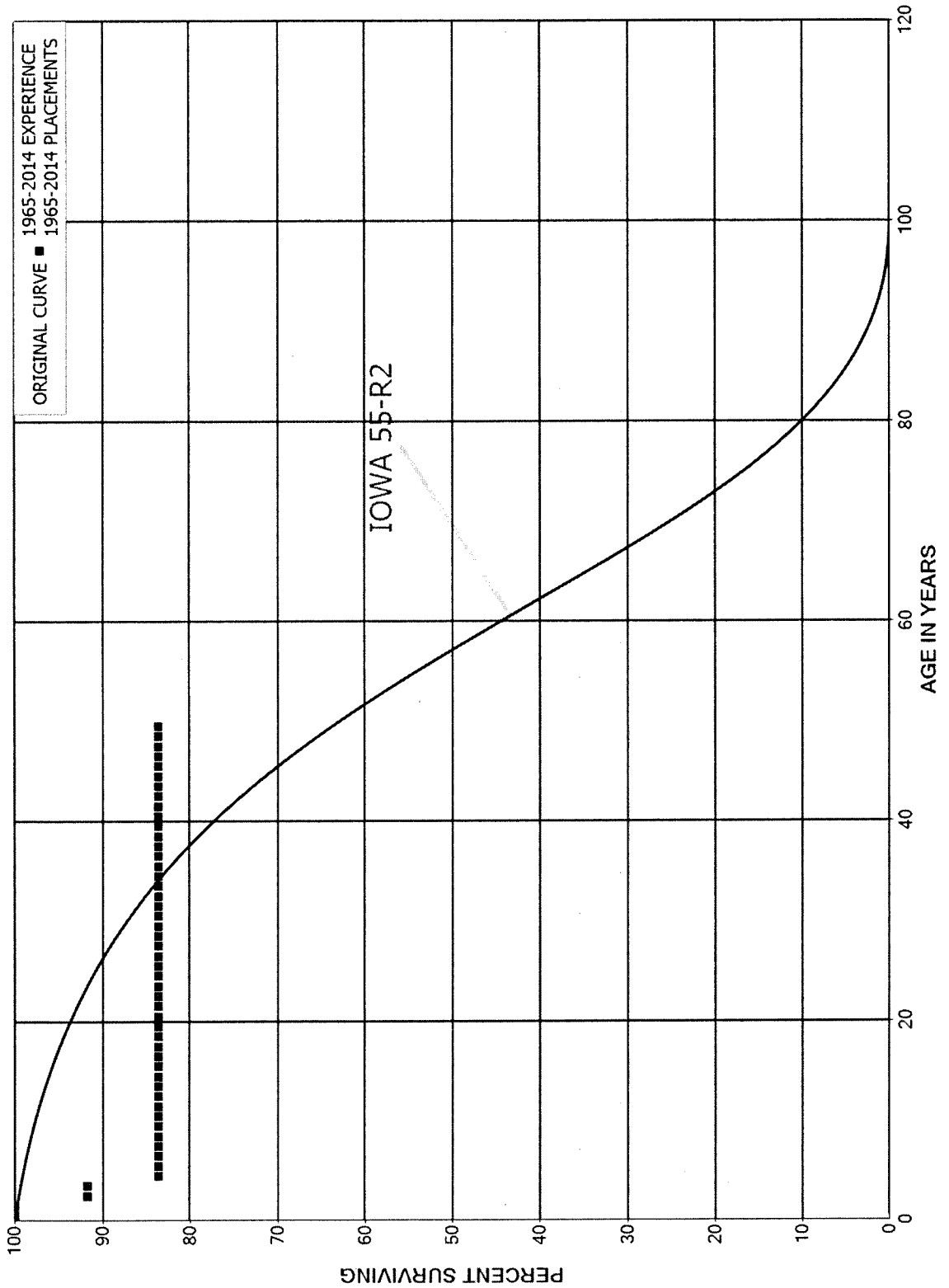
## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 361 COLLECTING MAINS

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1951-2014			EXPERIENCE BAND 2000-2014		
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	44,107		0.0000	1.0000	98.12
40.5	44,107		0.0000	1.0000	98.12
41.5	28,315		0.0000	1.0000	98.12
42.5	97,452		0.0000	1.0000	98.12
43.5	113,095	1,859	0.0164	0.9836	98.12
44.5	42,100	4,832	0.1148	0.8852	96.51
45.5	71,572	16	0.0002	0.9998	85.43
46.5	71,556	708	0.0099	0.9901	85.41
47.5	70,848		0.0000	1.0000	84.57
48.5	70,848		0.0000	1.0000	84.57
49.5	42,533	1,949	0.0458	0.9542	84.57
50.5					80.69

MISSOURI AMERICAN WATER COMPANY - WASTEWATER  
 ACCOUNT 363 SERVICES  
 ORIGINAL AND SMOOTH SURVIVOR CURVES



## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 363 SERVICES

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1965-2014			EXPERIENCE BAND 1965-2014		
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	81,108		0.0000	1.0000	100.00
0.5	67,517		0.0000	1.0000	100.00
1.5	67,465	5,580	0.0827	0.9173	100.00
2.5	28,450		0.0000	1.0000	91.73
3.5	23,942	2,131	0.0890	0.9110	91.73
4.5	16,366		0.0000	1.0000	83.57
5.5	14,309		0.0000	1.0000	83.57
6.5	10,574		0.0000	1.0000	83.57
7.5	7,951		0.0000	1.0000	83.57
8.5	7,951		0.0000	1.0000	83.57
9.5	7,951		0.0000	1.0000	83.57
10.5	7,951		0.0000	1.0000	83.57
11.5	13,432		0.0000	1.0000	83.57
12.5	13,432		0.0000	1.0000	83.57
13.5	13,432		0.0000	1.0000	83.57
14.5	13,432		0.0000	1.0000	83.57
15.5	13,432		0.0000	1.0000	83.57
16.5	13,432		0.0000	1.0000	83.57
17.5	13,432		0.0000	1.0000	83.57
18.5	13,432		0.0000	1.0000	83.57
19.5	13,432		0.0000	1.0000	83.57
20.5	13,432		0.0000	1.0000	83.57
21.5	19,054		0.0000	1.0000	83.57
22.5	19,054		0.0000	1.0000	83.57
23.5	19,054		0.0000	1.0000	83.57
24.5	19,054		0.0000	1.0000	83.57
25.5	19,054		0.0000	1.0000	83.57
26.5	34,275		0.0000	1.0000	83.57
27.5	34,275		0.0000	1.0000	83.57
28.5	34,275		0.0000	1.0000	83.57
29.5	34,275		0.0000	1.0000	83.57
30.5	34,275		0.0000	1.0000	83.57
31.5	32,843		0.0000	1.0000	83.57
32.5	32,843		0.0000	1.0000	83.57
33.5	32,843		0.0000	1.0000	83.57
34.5	32,843		0.0000	1.0000	83.57
35.5	32,843		0.0000	1.0000	83.57
36.5	17,623		0.0000	1.0000	83.57
37.5	17,623		0.0000	1.0000	83.57
38.5	17,623		0.0000	1.0000	83.57

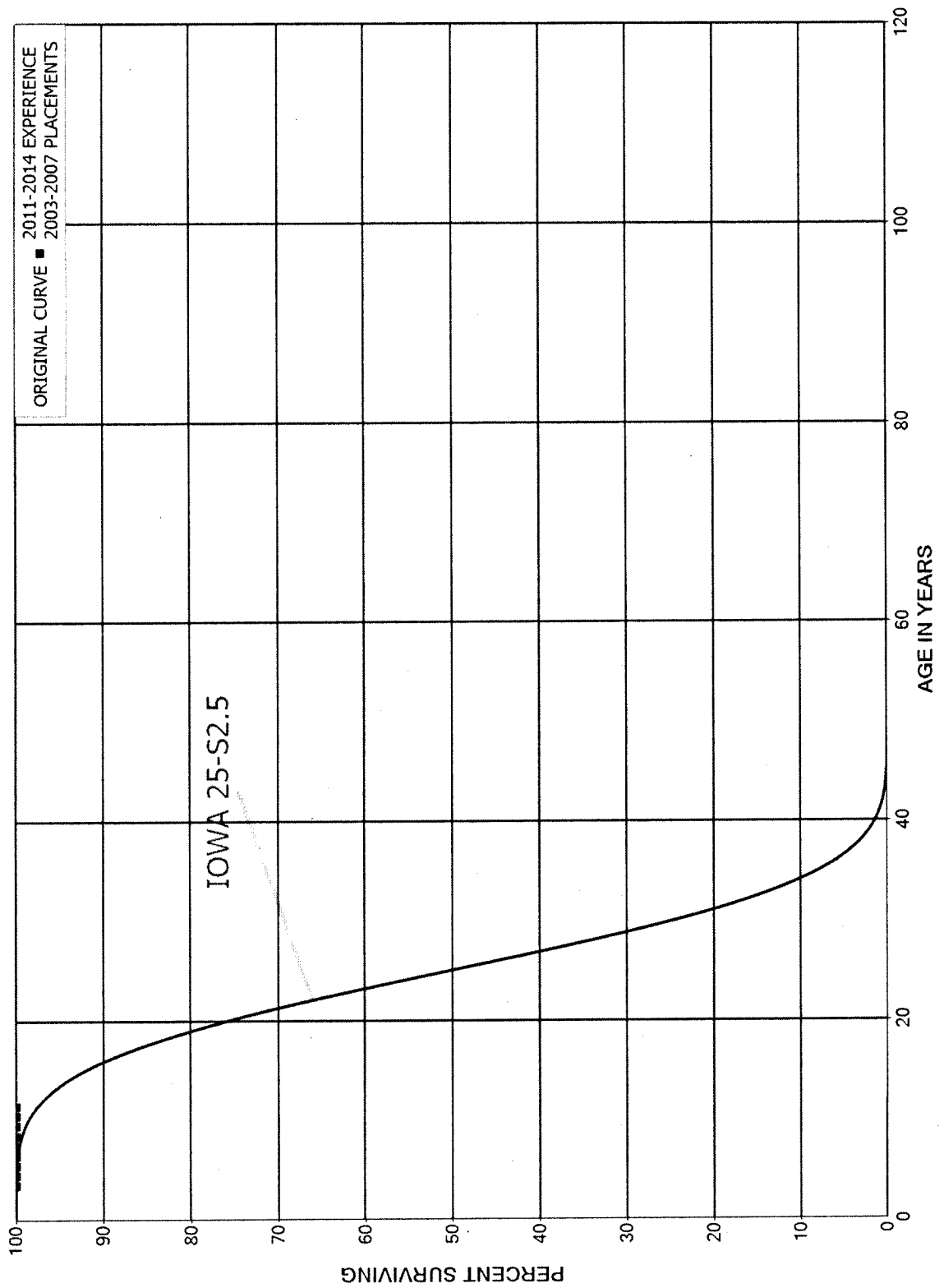
## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 363 SERVICES

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1965-2014			EXPERIENCE BAND 1965-2014		
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	17,623		0.0000	1.0000	83.57
40.5	17,623		0.0000	1.0000	83.57
41.5	7,951		0.0000	1.0000	83.57
42.5	7,951		0.0000	1.0000	83.57
43.5	7,951		0.0000	1.0000	83.57
44.5	7,951		0.0000	1.0000	83.57
45.5	7,951		0.0000	1.0000	83.57
46.5	7,951		0.0000	1.0000	83.57
47.5	7,951		0.0000	1.0000	83.57
48.5	7,951		0.0000	1.0000	83.57
49.5					83.57

MISSOURI AMERICAN WATER COMPANY - WASTEWATER  
 ACCOUNT 364 FLOW MEASURING DEVICES  
 ORIGINAL AND SMOOTH SURVIVOR CURVES



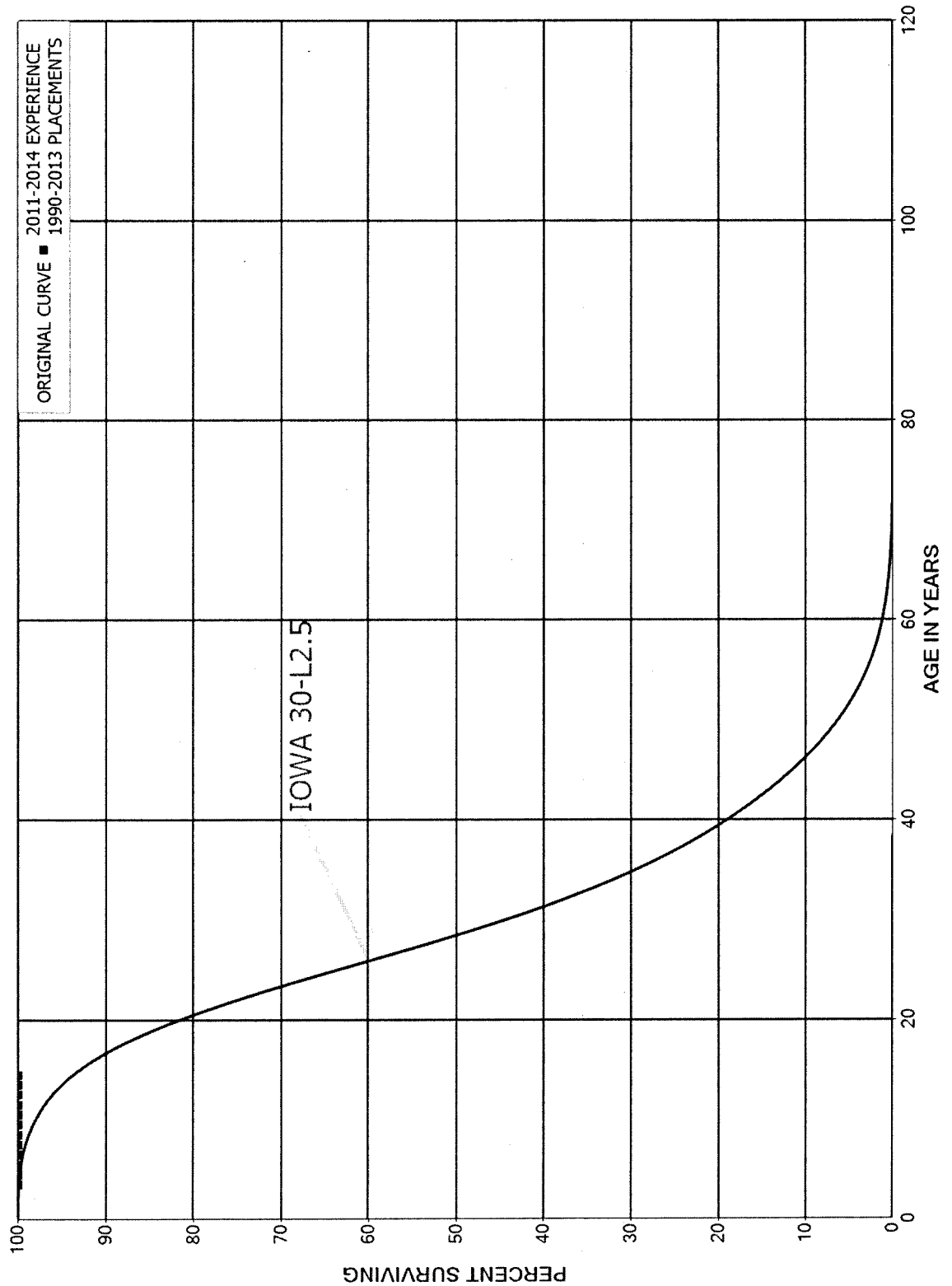
## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 364 FLOW MEASURING DEVICES

## ORIGINAL LIFE TABLE

PLACEMENT BAND 2003-2007			EXPERIENCE BAND 2011-2014		
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	309,861		0.0000	1.0000	100.00
4.5	309,861		0.0000	1.0000	100.00
5.5	319,722		0.0000	1.0000	100.00
6.5	319,722		0.0000	1.0000	100.00
7.5	204,435		0.0000	1.0000	100.00
8.5	204,435		0.0000	1.0000	100.00
9.5	194,575		0.0000	1.0000	100.00
10.5	194,575		0.0000	1.0000	100.00
11.5					100.00

MISSOURI AMERICAN WATER COMPANY - WASTEWATER  
 ACCOUNT 370 RECEIVING WELLS  
 ORIGINAL AND SMOOTH SURVIVOR CURVES



## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

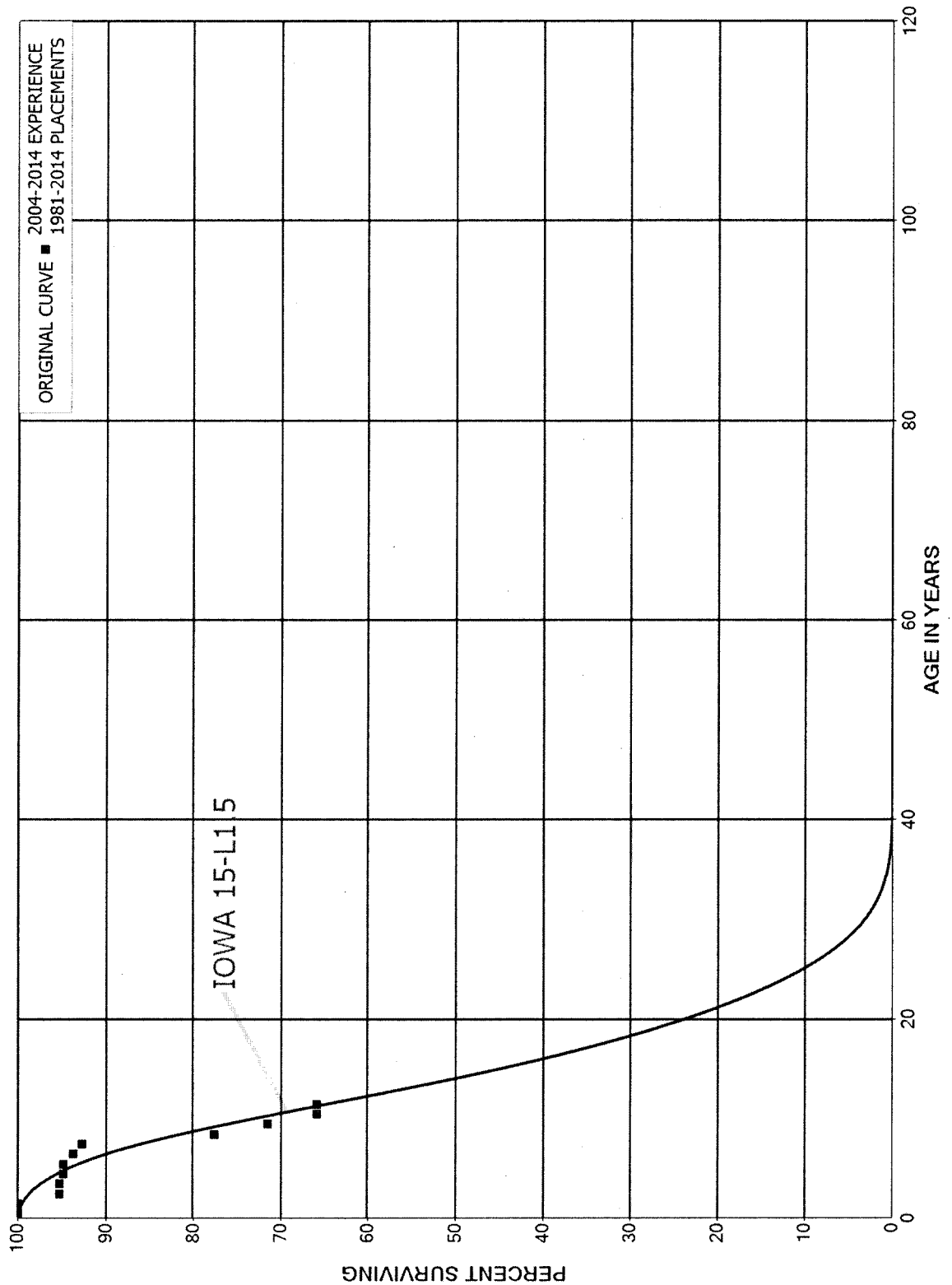
## ACCOUNT 370 RECEIVING WELLS

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1990-2013			EXPERIENCE BAND 2011-2014		
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	107,729		0.0000		
1.5					
2.5					
3.5	20,468		0.0000	1.0000	100.00
4.5	20,468		0.0000	1.0000	100.00
5.5	23,338		0.0000	1.0000	100.00
6.5	23,338		0.0000	1.0000	100.00
7.5	96,071		0.0000	1.0000	100.00
8.5	96,071		0.0000	1.0000	100.00
9.5	93,201		0.0000	1.0000	100.00
10.5	97,947		0.0000	1.0000	100.00
11.5	4,746		0.0000	1.0000	100.00
12.5	4,746		0.0000	1.0000	100.00
13.5	4,746		0.0000	1.0000	100.00
14.5					100.00
15.5					
16.5					
17.5					
18.5					
19.5					
20.5					
21.5					
22.5					
23.5	52,480		0.0000		
24.5					



MISSOURI AMERICAN WATER COMPANY - WASTEWATER  
 ACCOUNT 3.71 PUMPING EQUIPMENT  
 ORIGINAL AND SMOOTH SURVIVOR CURVES



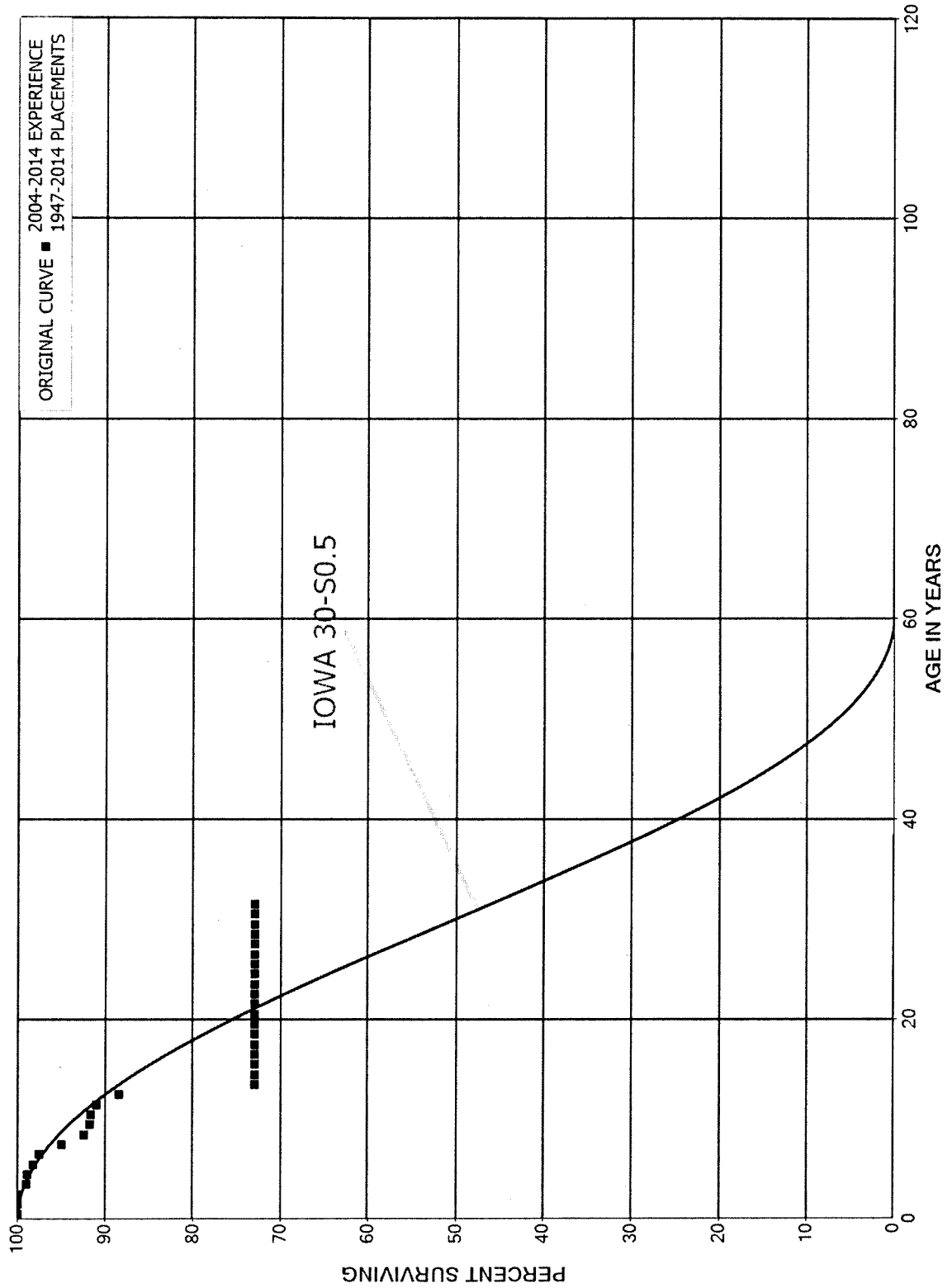
## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 371 PUMPING EQUIPMENT

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1981-2014			EXPERIENCE BAND 2004-2014		
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	1,017,080		0.0000	1.0000	100.00
0.5	1,161,766		0.0000	1.0000	100.00
1.5	1,137,004	54,136	0.0476	0.9524	100.00
2.5	1,392,133		0.0000	1.0000	95.24
3.5	1,941,441	7,973	0.0041	0.9959	95.24
4.5	1,826,701	1,191	0.0007	0.9993	94.85
5.5	1,610,267	18,948	0.0118	0.9882	94.79
6.5	1,142,344	11,865	0.0104	0.9896	93.67
7.5	94,030	15,245	0.1621	0.8379	92.70
8.5	60,417	4,790	0.0793	0.9207	77.67
9.5	47,155	3,744	0.0794	0.9206	71.51
10.5	30,413		0.0000	1.0000	65.83
11.5					65.83
12.5					
13.5					
14.5	315		0.0000		
15.5	14,934	3,000	0.2009		
16.5	11,822		0.0000		
17.5	11,822		0.0000		
18.5	14,822	3,000	0.2024		
19.5	11,822		0.0000		
20.5	11,822	1,270	0.1075		
21.5	10,903		0.0000		
22.5	10,903		0.0000		
23.5	76,298	12,000	0.1573		
24.5	10,903		0.0000		
25.5	10,903		0.0000		
26.5	351		0.0000		
27.5	351		0.0000		
28.5	351		0.0000		
29.5	351		0.0000		
30.5	351		0.0000		
31.5					

MISSOURI AMERICAN WATER COMPANY - WASTEWATER  
 ACCOUNT 380 TREATMENT EQUIPMENT  
 ORIGINAL AND SMOOTH SURVIVOR CURVES



## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 380 TREATMENT EQUIPMENT

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1947-2014			EXPERIENCE BAND 2004-2014		
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	4,311,665		0.0000	1.0000	100.00
0.5	4,343,887		0.0000	1.0000	100.00
1.5	3,830,800		0.0000	1.0000	100.00
2.5	3,810,103	40,449	0.0106	0.9894	100.00
3.5	3,305,409	3,492	0.0011	0.9989	98.94
4.5	3,632,946	25,429	0.0070	0.9930	98.83
5.5	3,706,272	22,300	0.0060	0.9940	98.14
6.5	3,685,159	99,828	0.0271	0.9729	97.55
7.5	1,169,258	31,453	0.0269	0.9731	94.91
8.5	596,650	3,821	0.0064	0.9936	92.36
9.5	309,846	583	0.0019	0.9981	91.76
10.5	139,852	899	0.0064	0.9936	91.59
11.5	69,791	2,000	0.0287	0.9713	91.00
12.5	67,791	11,871	0.1751	0.8249	88.40
13.5	40,976		0.0000	1.0000	72.92
14.5	6,620		0.0000	1.0000	72.92
15.5	9,120		0.0000	1.0000	72.92
16.5	9,120		0.0000	1.0000	72.92
17.5	6,620		0.0000	1.0000	72.92
18.5	6,620		0.0000	1.0000	72.92
19.5	9,411		0.0000	1.0000	72.92
20.5	9,411		0.0000	1.0000	72.92
21.5	102,810		0.0000	1.0000	72.92
22.5	102,810		0.0000	1.0000	72.92
23.5	299,810		0.0000	1.0000	72.92
24.5	102,810		0.0000	1.0000	72.92
25.5	102,810		0.0000	1.0000	72.92
26.5	102,810		0.0000	1.0000	72.92
27.5	102,810		0.0000	1.0000	72.92
28.5	102,810		0.0000	1.0000	72.92
29.5	93,399		0.0000	1.0000	72.92
30.5	93,399		0.0000	1.0000	72.92
31.5					72.92
32.5					
33.5					
34.5					
35.5					
36.5					
37.5					
38.5					

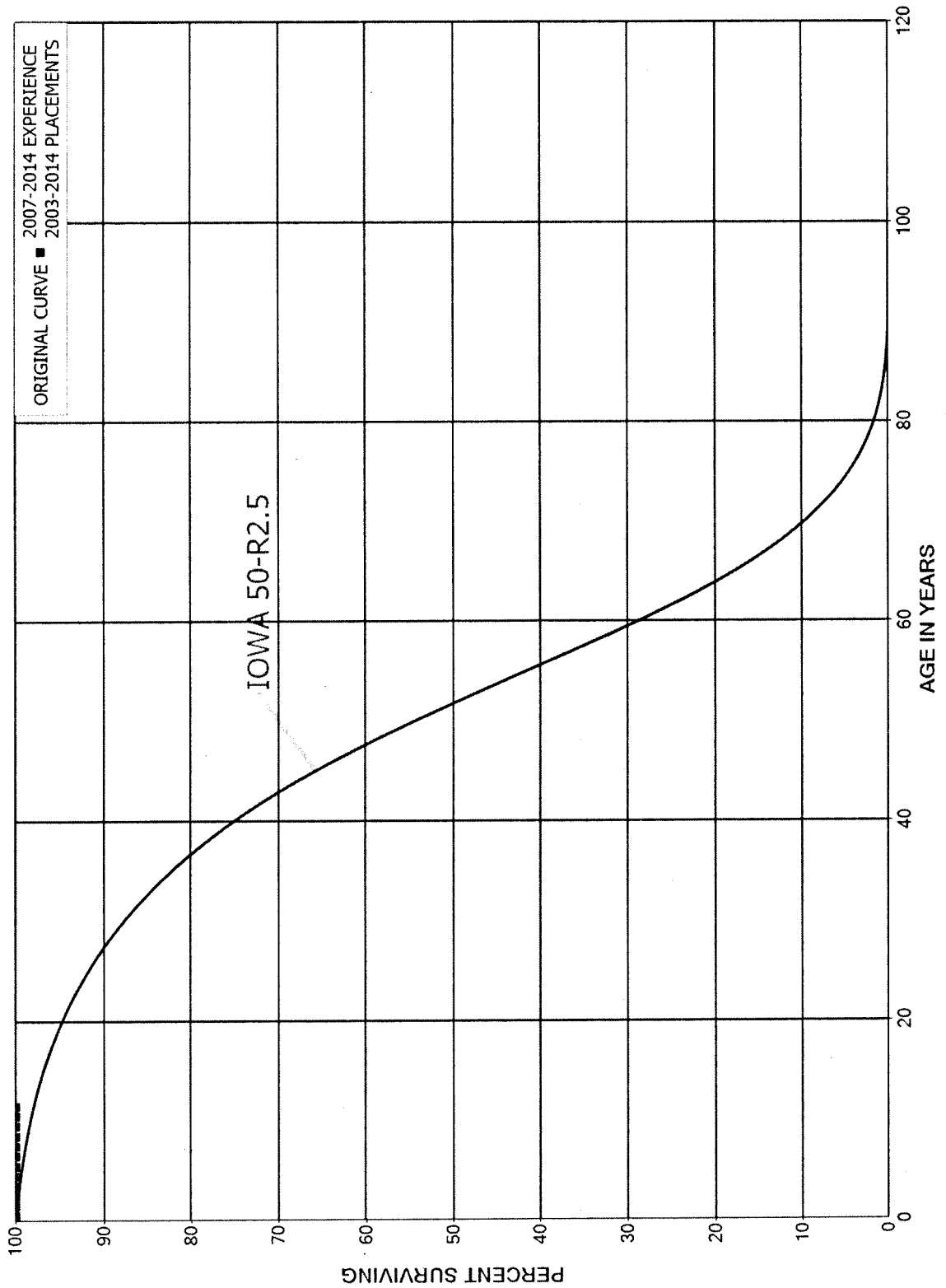
MISSOURI AMERICAN WATER COMPANY - WASTEWATER

ACCOUNT 380 TREATMENT EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1947-2014			EXPERIENCE BAND 2004-2014		
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					
49.5					
50.5					
51.5					
52.5					
53.5					
54.5					
55.5					
56.5	1,406		0.0000		
57.5					

MISSOURI AMERICAN WATER COMPANY - WASTEWATER  
 ACCOUNT 381 PLANT SEWERS  
 ORIGINAL AND SMOOTH SURVIVOR CURVES



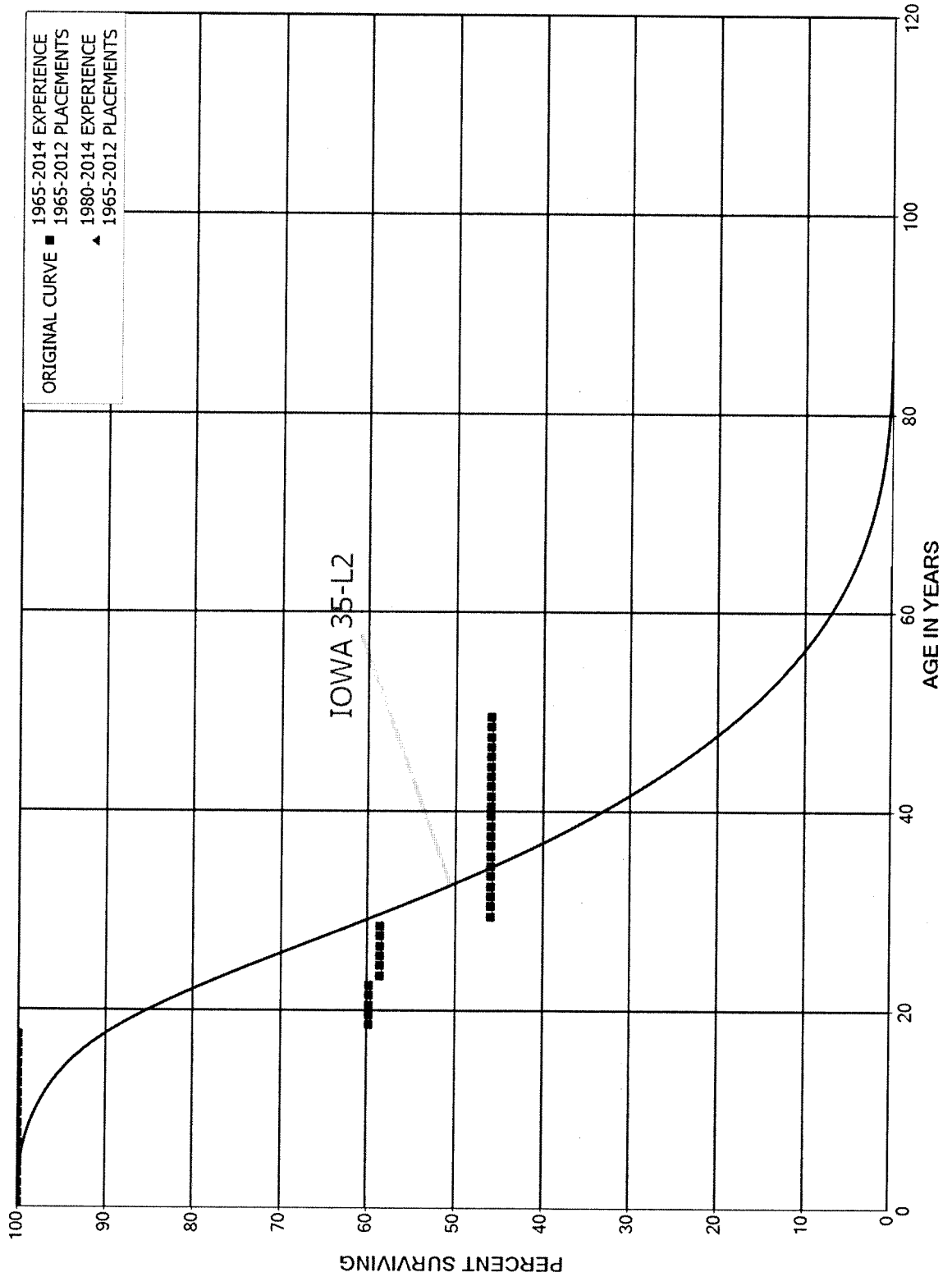
## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 381 PLANT SEWERS

## ORIGINAL LIFE TABLE

PLACEMENT BAND 2003-2014			EXPERIENCE BAND 2007-2014		
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	234,146		0.0000	1.0000	100.00
0.5	215,632		0.0000	1.0000	100.00
1.5	215,632		0.0000	1.0000	100.00
2.5	210,372		0.0000	1.0000	100.00
3.5	218,895		0.0000	1.0000	100.00
4.5	209,362		0.0000	1.0000	100.00
5.5	207,834		0.0000	1.0000	100.00
6.5	204,999	6	0.0000	1.0000	100.00
7.5	358,625		0.0000	1.0000	100.00
8.5	435,031		0.0000	1.0000	100.00
9.5	435,031		0.0000	1.0000	100.00
10.5	435,031		0.0000	1.0000	100.00
11.5					100.00

MISSOURI AMERICAN WATER COMPANY - WASTEWATER  
 ACCOUNT 382 OUTFALL SEWER LINES  
 ORIGINAL AND SMOOTH SURVIVOR CURVES





## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 382 OUTFALL SEWER LINES

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1965-2012			EXPERIENCE BAND 1965-2014		
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	97,348		0.0000	1.0000	100.00
0.5	97,348		0.0000	1.0000	100.00
1.5	98,856		0.0000	1.0000	100.00
2.5	66,776		0.0000	1.0000	100.00
3.5	106,573		0.0000	1.0000	100.00
4.5	106,573		0.0000	1.0000	100.00
5.5	105,065		0.0000	1.0000	100.00
6.5	104,755		0.0000	1.0000	100.00
7.5	98,355		0.0000	1.0000	100.00
8.5	98,355		0.0000	1.0000	100.00
9.5	98,355		0.0000	1.0000	100.00
10.5	98,355		0.0000	1.0000	100.00
11.5	34,229		0.0000	1.0000	100.00
12.5	34,229		0.0000	1.0000	100.00
13.5	34,229		0.0000	1.0000	100.00
14.5	34,229		0.0000	1.0000	100.00
15.5	34,229		0.0000	1.0000	100.00
16.5	1,922		0.0000	1.0000	100.00
17.5	1,922	771	0.4011	0.5989	100.00
18.5	1,151		0.0000	1.0000	59.89
19.5	1,151		0.0000	1.0000	59.89
20.5	1,151		0.0000	1.0000	59.89
21.5	1,151		0.0000	1.0000	59.89
22.5	1,151	25	0.0216	0.9784	59.89
23.5	1,126		0.0000	1.0000	58.59
24.5	1,126		0.0000	1.0000	58.59
25.5	1,126		0.0000	1.0000	58.59
26.5	1,126		0.0000	1.0000	58.59
27.5	1,126		0.0000	1.0000	58.59
28.5	1,436	310	0.2157	0.7843	58.59
29.5	1,126		0.0000	1.0000	45.96
30.5	1,126		0.0000	1.0000	45.96
31.5	1,126		0.0000	1.0000	45.96
32.5	1,126		0.0000	1.0000	45.96
33.5	1,126		0.0000	1.0000	45.96
34.5	1,126		0.0000	1.0000	45.96
35.5	1,126		0.0000	1.0000	45.96
36.5	1,126		0.0000	1.0000	45.96
37.5	1,126		0.0000	1.0000	45.96
38.5	977		0.0000	1.0000	45.96

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 382 OUTFALL SEWER LINES

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1965-2012			EXPERIENCE BAND 1965-2014		
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	977		0.0000	1.0000	45.96
40.5	977		0.0000	1.0000	45.96
41.5	977		0.0000	1.0000	45.96
42.5	977		0.0000	1.0000	45.96
43.5	805		0.0000	1.0000	45.96
44.5	805		0.0000	1.0000	45.96
45.5	805		0.0000	1.0000	45.96
46.5	805		0.0000	1.0000	45.96
47.5	805		0.0000	1.0000	45.96
48.5	805		0.0000	1.0000	45.96
49.5					45.96

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 382 OUTFALL SEWER LINES

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1965-2012			EXPERIENCE BAND 1980-2014		
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	95,426		0.0000	1.0000	100.00
0.5	95,426		0.0000	1.0000	100.00
1.5	96,934		0.0000	1.0000	100.00
2.5	64,854		0.0000	1.0000	100.00
3.5	104,800		0.0000	1.0000	100.00
4.5	104,800		0.0000	1.0000	100.00
5.5	103,292		0.0000	1.0000	100.00
6.5	102,983		0.0000	1.0000	100.00
7.5	96,582		0.0000	1.0000	100.00
8.5	96,754		0.0000	1.0000	100.00
9.5	96,754		0.0000	1.0000	100.00
10.5	96,754		0.0000	1.0000	100.00
11.5	32,628		0.0000	1.0000	100.00
12.5	32,628		0.0000	1.0000	100.00
13.5	32,628		0.0000	1.0000	100.00
14.5	34,229		0.0000	1.0000	100.00
15.5	34,229		0.0000	1.0000	100.00
16.5	1,922		0.0000	1.0000	100.00
17.5	1,922	771	0.4011	0.5989	100.00
18.5	1,151		0.0000	1.0000	59.89
19.5	1,151		0.0000	1.0000	59.89
20.5	1,151		0.0000	1.0000	59.89
21.5	1,151		0.0000	1.0000	59.89
22.5	1,151	25	0.0216	0.9784	59.89
23.5	1,126		0.0000	1.0000	58.59
24.5	1,126		0.0000	1.0000	58.59
25.5	1,126		0.0000	1.0000	58.59
26.5	1,126		0.0000	1.0000	58.59
27.5	1,126		0.0000	1.0000	58.59
28.5	1,436	310	0.2157	0.7843	58.59
29.5	1,126		0.0000	1.0000	45.96
30.5	1,126		0.0000	1.0000	45.96
31.5	1,126		0.0000	1.0000	45.96
32.5	1,126		0.0000	1.0000	45.96
33.5	1,126		0.0000	1.0000	45.96
34.5	1,126		0.0000	1.0000	45.96
35.5	1,126		0.0000	1.0000	45.96
36.5	1,126		0.0000	1.0000	45.96
37.5	1,126		0.0000	1.0000	45.96
38.5	977		0.0000	1.0000	45.96

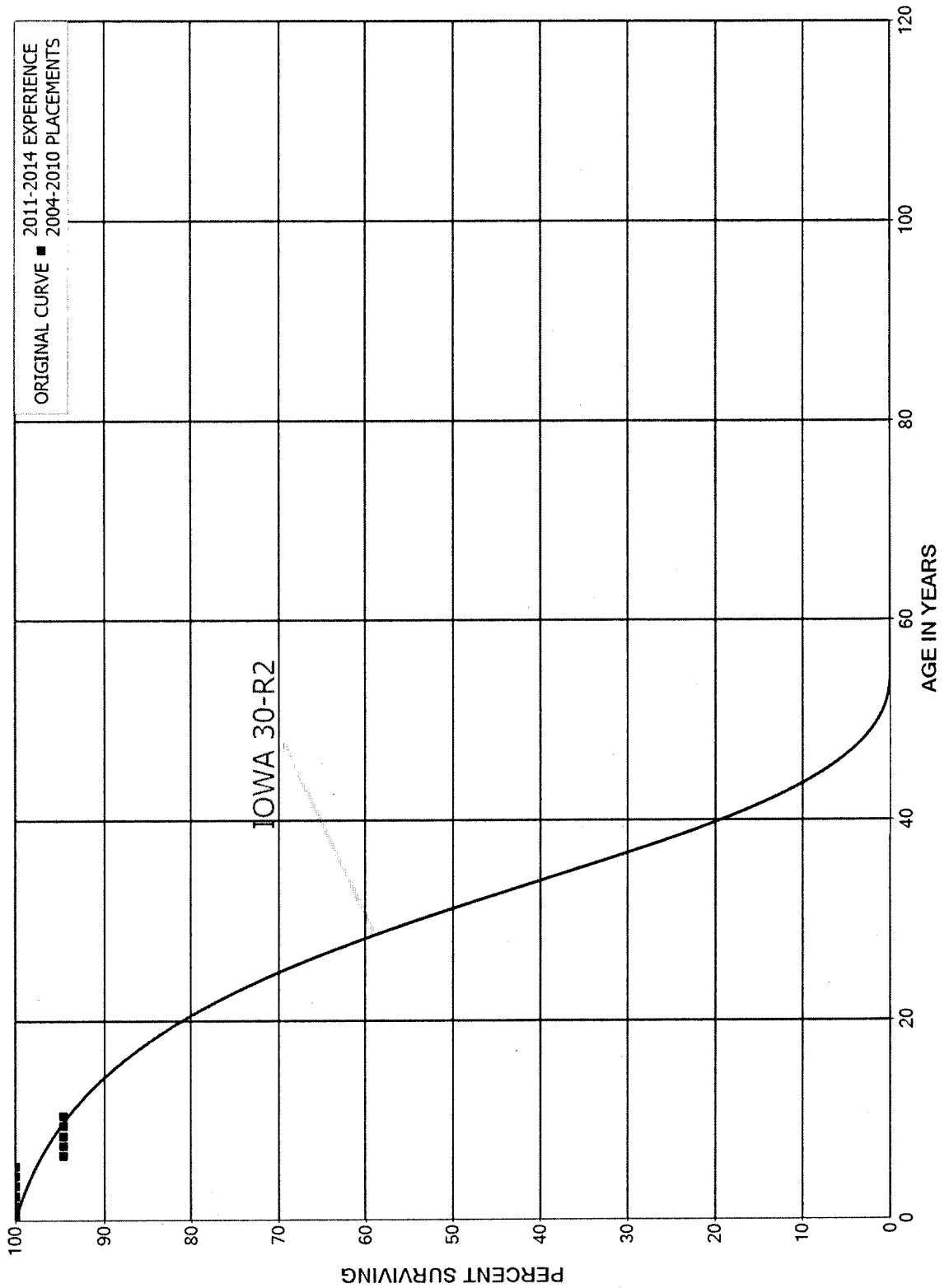
## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 382 OUTFALL SEWER LINES

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1965-2012			EXPERIENCE BAND 1980-2014		
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	977		0.0000	1.0000	45.96
40.5	977		0.0000	1.0000	45.96
41.5	977		0.0000	1.0000	45.96
42.5	977		0.0000	1.0000	45.96
43.5	805		0.0000	1.0000	45.96
44.5	805		0.0000	1.0000	45.96
45.5	805		0.0000	1.0000	45.96
46.5	805		0.0000	1.0000	45.96
47.5	805		0.0000	1.0000	45.96
48.5	805		0.0000	1.0000	45.96
49.5					45.96

MISSOURI AMERICAN WATER COMPANY - WASTEWATER  
 ACCOUNT 389.1 OTHER PLANT AND MISCELLANEOUS EQUIPMENT  
 ORIGINAL AND SMOOTH SURVIVOR CURVES



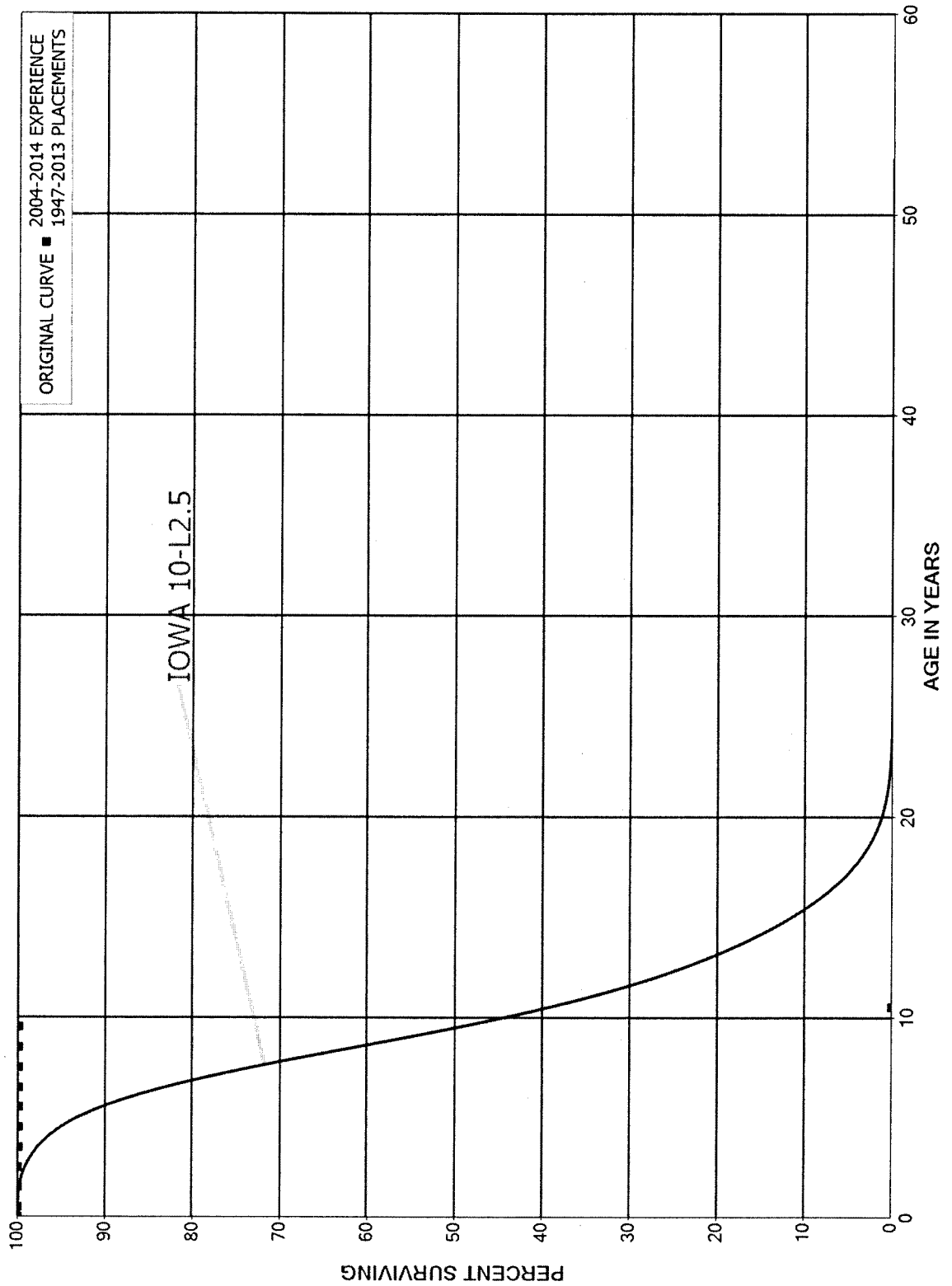
## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 389.1 OTHER PLANT AND MISCELLANEOUS EQUIPMENT

## ORIGINAL LIFE TABLE

PLACEMENT BAND 2004-2010			EXPERIENCE BAND 2011-2014		
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	38,380		0.0000	1.0000	100.00
1.5	100,794		0.0000	1.0000	100.00
2.5	103,184		0.0000	1.0000	100.00
3.5	110,560		0.0000	1.0000	100.00
4.5	72,180		0.0000	1.0000	100.00
5.5	9,766	524	0.0537	0.9463	100.00
6.5	10,277		0.0000	1.0000	94.63
7.5	2,902		0.0000	1.0000	94.63
8.5	2,902		0.0000	1.0000	94.63
9.5	2,902		0.0000	1.0000	94.63
10.5					94.63

MISSOURI AMERICAN WATER COMPANY - WASTEWATER  
 ACCOUNT 391 TRANSPORTATION EQUIPMENT  
 ORIGINAL AND SMOOTH SURVIVOR CURVES



## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 391 TRANSPORTATION EQUIPMENT

## ORIGINAL LIFE TABLE

PLACEMENT BAND 1947-2013			EXPERIENCE BAND 2004-2014		
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	69,307		0.0000	1.0000	100.00
0.5	105,742		0.0000	1.0000	100.00
1.5	113,873		0.0000	1.0000	100.00
2.5	114,002	129	0.0011	0.9989	100.00
3.5	105,370		0.0000	1.0000	99.89
4.5	115,125		0.0000	1.0000	99.89
5.5	110,842		0.0000	1.0000	99.89
6.5	110,842		0.0000	1.0000	99.89
7.5	92,260		0.0000	1.0000	99.89
8.5	62,315		0.0000	1.0000	99.89
9.5	16,245	16,245	1.0000		99.89
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					
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					



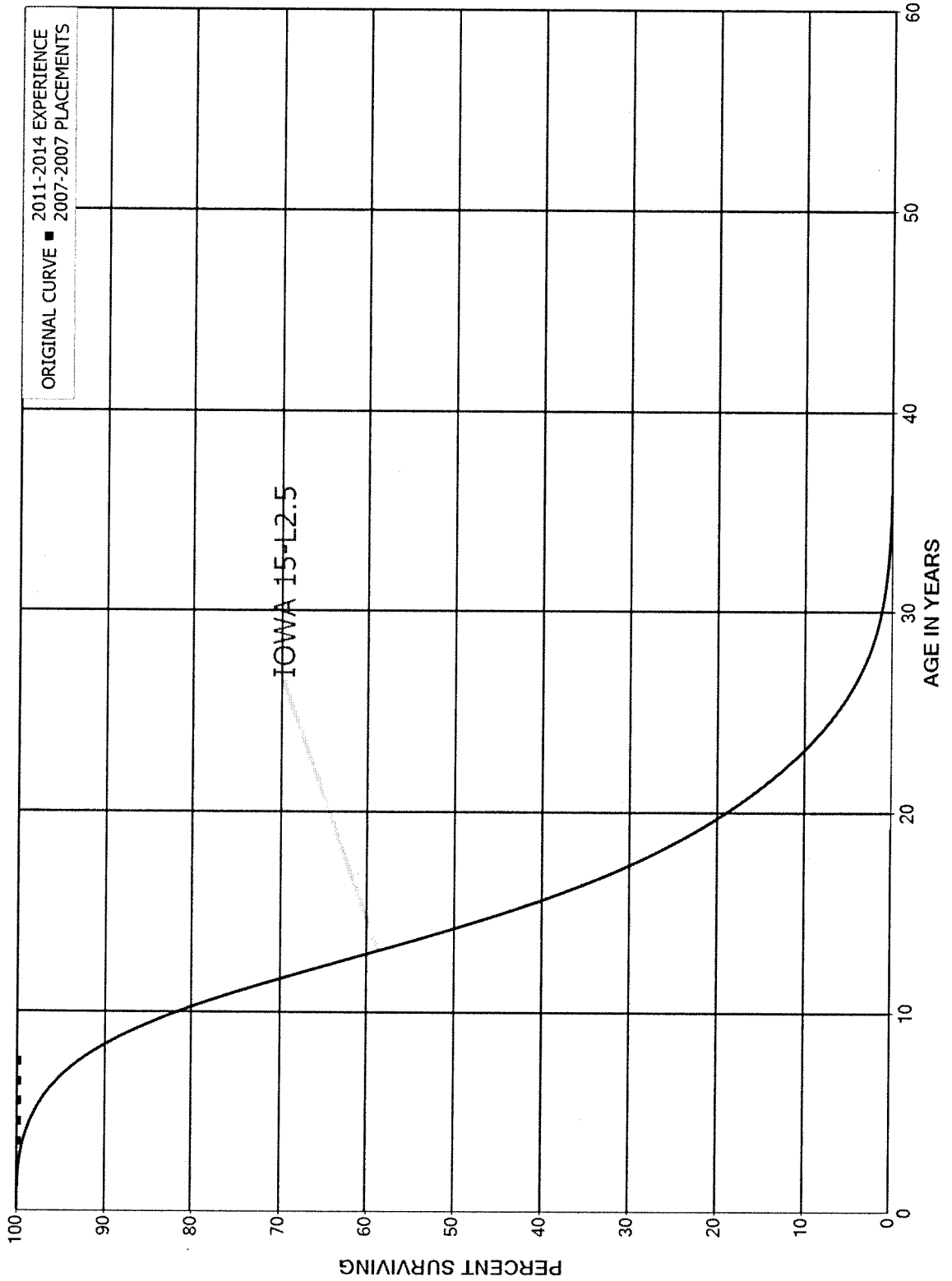
## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 391 TRANSPORTATION EQUIPMENT

## ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1947-2013			EXPERIENCE BAND 2004-2014		
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					
49.5					
50.5					
51.5					
52.5					
53.5	129		0.0000		
54.5					

MISSOURI AMERICAN WATER COMPANY - WASTEWATER  
 ACCOUNT 395 POWER OPERATED EQUIPMENT  
 ORIGINAL AND SMOOTH SURVIVOR CURVES



## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 395 POWER OPERATED EQUIPMENT

## ORIGINAL LIFE TABLE

PLACEMENT BAND 2007-2007			EXPERIENCE BAND 2011-2014		
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	532		0.0000	1.0000	100.00
4.5	532		0.0000	1.0000	100.00
5.5	532		0.0000	1.0000	100.00
6.5	532		0.0000	1.0000	100.00
7.5					100.00

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## **PART VIII. NET SALVAGE STATISTICS**

MISSOURI AMERICAN WATER COMPANY - WASTEWATER  
ACCOUNT 354.2 STRUCTURES AND IMPROVEMENTS - COLLECTION

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2008	4,811		0		0		0
2009							
2010							
2011							
2012	2,429		0		0		0
2013		2,809				2,809-	
2014							
<b>TOTAL</b>	<b>7,240</b>	<b>2,809</b>	<b>39</b>		<b>0</b>	<b>2,809-</b>	<b>39-</b>
<b>THREE-YEAR MOVING AVERAGES</b>							
08-10	1,604		0		0		0
09-11							
10-12	810		0		0		0
11-13	810	936	116		0	936-	116-
12-14	810	936	116		0	936-	116-
<b>FIVE-YEAR AVERAGE</b>							
10-14	486	562	116		0	562-	116-

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 354.4 STRUCTURES AND IMPROVEMENTS - TREATMENT

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2009	5,675		0		0		0
2010							
2011							
2012							
2013							
2014							
TOTAL	5,675		0		0		0
THREE-YEAR MOVING AVERAGES							
09-11	1,892		0		0		0
10-12							
11-13							
12-14							
FIVE-YEAR AVERAGE							
10-14							

MISSOURI AMERICAN WATER COMPANY - WASTEWATER  
ACCOUNT 354.5 STRUCTURES AND IMPROVEMENTS - GENERAL

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2014	27,936	1,513	5		0	1,513-	5-
TOTAL	27,936	1,513	5		0	1,513-	5-

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 355 POWER GENERATING EQUIPMENT

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2012	1,163	3	0		0	3-	0
2013							
2014	1,015		0		0		0
TOTAL	2,178	3	0		0	3-	0
THREE-YEAR MOVING AVERAGES							
12-14	726	1	0		0	1-	0



## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 360 COLLECTION SEWERS

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2011		44				44-	
2012	46,406		0		0		0
2013	228	125	55		0	125-	55-
2014	1,008	153-	15-		0	153	15
TOTAL	47,642	16	0		0	16-	0
THREE-YEAR MOVING AVERAGES							
11-13	15,545	56	0		0	56-	0
12-14	15,881	9-	0		0	9	0

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 361 COLLECTING MAINS

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2010	16	3,000			0	3,000-	
2011	5,746		0		0		0
2012		77				77-	
2013	1,859		0		0		0
2014	7,637	1,745	23		0	1,745-	23-
TOTAL	15,258	4,822	32		0	4,822-	32-

## THREE-YEAR MOVING AVERAGES

10-12	1,921	1,026	53		0	1,026-	53-
11-13	2,535	26	1		0	26-	1-
12-14	3,165	607	19		0	607-	19-

## FIVE-YEAR AVERAGE

10-14	3,052	964	32		0	964-	32-
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## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 363 SERVICES

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2011	2,131		0		0		0
2012		511				511-	
2013							
2014	5,580	4,543	81		0	4,543-	81-
TOTAL	7,711	5,054	66		0	5,054-	66-

## THREE-YEAR MOVING AVERAGES

11-13	710	170	24		0	170-	24-
12-14	1,860	1,684	91		0	1,684-	91-

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 371 PUMPING EQUIPMENT

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2008	51,000		0		0		0
2009	4,407		0		0		0
2010		1,976				1,976-	
2011	4,022		0		0		0
2012	33,373	203	1		0	203-	1-
2013							
2014	26,361	300	1		0	300-	1-
TOTAL	119,163	2,479	2		0	2,479-	2-

## THREE-YEAR MOVING AVERAGES

08-10	18,469	659	4		0	659-	4-
09-11	2,809	659	23		0	659-	23-
10-12	12,465	726	6		0	726-	6-
11-13	12,465	68	1		0	68-	1-
12-14	19,911	168	1		0	168-	1-

## FIVE-YEAR AVERAGE

10-14	12,751	496	4		0	496-	4-
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## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 380 TREATMENT EQUIPMENT

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2008	40,449		0		0		0
2009	16,350		0		0		0
2010	10,631	13,831	130		0	13,831-	130-
2011	93,382	12,933-	14-		0	12,933	14
2012	1,606		0		0		0
2013	28,121	37,784	134		0	37,784-	134-
2014	51,586	12,504	24		0	12,504-	24-
TOTAL	242,124	51,186	21		0	51,186-	21-

## THREE-YEAR MOVING AVERAGES

08-10	22,477	4,610	21		0	4,610-	21-
09-11	40,121	299	1		0	299-	1-
10-12	35,206	299	1		0	299-	1-
11-13	41,036	8,284	20		0	8,284-	20-
12-14	27,104	16,762	62		0	16,762-	62-

## FIVE-YEAR AVERAGE

10-14	37,065	10,237	28		0	10,237-	28-
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## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 381 PLANT SEWERS

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2014	6		0		0		0
TOTAL	6		0		0		0

MISSOURI AMERICAN WATER COMPANY - WASTEWATER  
ACCOUNT 389.1 OTHER PLANT AND MISCELLANEOUS EQUIPMENT

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2014	524		0		0		0
TOTAL	524		0		0		0

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 391 TRANSPORTATION EQUIPMENT

## SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2011	129		0		0		0
2012							
2013							
2014	16,245	225	1		0	225-	1-
TOTAL	16,374	225	1		0	225-	1-
THREE-YEAR MOVING AVERAGES							
11-13	43		0		0		0
12-14	5,415	75	1		0	75-	1-



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**PART IX. DETAILED DEPRECIATION  
CALCULATIONS**

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 354.2 STRUCTURES AND IMPROVEMENTS - COLLECTION

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 50-R3						
NET SALVAGE PERCENT.. -5						
2003	15,000.00	3,572	4,316	11,434	38.66	296
2004	36,868.80	8,052	9,729	28,983	39.60	732
2006	81,708.57	14,585	17,622	68,172	41.50	1,643
2007	1,019,255.21	161,603	195,255	874,963	42.45	20,612
2008	77,444.98	10,701	12,929	68,388	43.42	1,575
2009	60,404.30	7,129	8,614	54,811	44.38	1,235
2010	35,416.33	3,458	4,178	33,009	45.35	728
2013	118,845.07	4,293	5,187	119,600	48.28	2,477
2014	14,938.95	232	280	15,406	49.26	313
	1,459,882.21	213,625	258,110	1,274,766		29,611
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						43.1 2.03

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 354.3 STRUCTURES AND IMPROVEMENTS - PUMPING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 45-R3						
NET SALVAGE PERCENT.. 0						
1964	6,223.91	5,294	5,682	542	6.72	81
2005	2,085.00	437	469	1,616	35.57	45
2007	16,295.63	2,727	2,927	13,369	37.47	357
2008	2,102.03	307	329	1,773	38.43	46
2009	3,208.92	400	429	2,780	39.39	71
2010	120,973.05	12,500	13,415	107,558	40.35	2,666
2013	20,651.64	789	847	19,805	43.28	458
	171,540.18	22,454	24,098	147,442		3,724
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						39.6 2.17

MISSOURI AMERICAN WATER COMPANY - WASTEWATER  
ACCOUNT 354.4 STRUCTURES AND IMPROVEMENTS - TREATMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 60-R2.5						
NET SALVAGE PERCENT.. -5						
2001	642,653.00	142,494	304,428	370,358	47.33	7,825
2005	76,499.57	12,129	25,913	54,412	50.94	1,068
2006	3,600.00	513	1,096	2,684	51.85	52
2007	1,265,857.74	160,163	342,177	986,974	52.77	18,703
2008	64,037.93	7,072	15,109	52,131	53.69	971
2011	175,031.23	10,812	23,099	160,684	56.47	2,845
2013	97,199.83	2,807	5,997	96,063	58.35	1,646
2014	56,714.95	704	1,504	58,047	59.29	979
2015	3,904.07	8	17	4,082	59.88	68
	2,385,498.32	336,702	719,340	1,785,433		34,157
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						52.3 1.43

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 354.5 STRUCTURES AND IMPROVEMENTS - GENERAL

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 35-R2.5						
NET SALVAGE PERCENT.. -5						
2007	133,102.75	28,551	21,588	118,170	27.85	4,243
2008	14,110.23	2,646	2,001	12,815	28.75	446
2009	12,038.65	1,929	1,458	11,183	29.66	377
2011	196,491.30	20,691	15,645	190,671	31.49	6,055
2014	41,060.66	875	661	42,452	34.29	1,238
	396,803.59	54,692	41,353	375,290		12,359
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						30.4 3.11

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 355 POWER GENERATING EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 30-R2.5						
NET SALVAGE PERCENT.. 0						
2004	3,735.61	1,209	1,479	2,257	20.29	111
2007	66,528.17	15,767	19,286	47,242	22.89	2,064
2008	3,021.16	626	766	2,255	23.78	95
2009	3,391.35	601	735	2,656	24.68	108
2010	41,313.03	6,087	7,445	33,868	25.58	1,324
2011	1,039.87	121	148	892	26.50	34
2012	1,727.72	149	182	1,546	27.42	56
2014	5,804.56	137	168	5,637	29.29	192
	126,561.47	24,697	30,209	96,353		3,984
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						24.2 3.15

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 360 COLLECTION SEWERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 60-R2.5						
NET SALVAGE PERCENT.. -10						
1975	1,732.31	1,069	1,642	264	26.34	10
1980	2,305.65	1,269	1,949	587	29.98	20
1985	6,503.46	3,120	4,792	2,362	33.83	70
1995	2,859.96	940	1,444	1,702	42.08	40
1996	340,295.00	106,432	163,456	210,868	42.94	4,911
2003	3,091,428.10	616,081	946,165	2,454,406	49.13	49,957
2005	806,438.42	133,949	205,716	681,366	50.94	13,376
2006	1,158,064.32	173,030	265,736	1,008,135	51.85	19,443
2007	455,203.39	60,337	92,665	408,059	52.77	7,733
2008	21,943.61	2,539	3,899	20,239	53.69	377
2009	881.02	87	134	835	54.61	15
2010	62,117.69	5,079	7,800	60,529	55.54	1,090
2011	752.37	49	75	753	56.47	13
2012	2,250.61	107	164	2,312	57.41	40
2013	301,566.04	9,122	14,010	317,713	58.35	5,445
2015	4,017.02	9	14	4,405	59.88	74
	6,258,358.97	1,113,219	1,709,661	5,174,534		102,614
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						50.4 1.64

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 361 COLLECTING MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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-R3						
NET SALVAGE PERCENT.. -20						
1964	40,584.14	30,932	39,737	8,964	25.54	351
1965	28,315.13	21,236	27,281	6,697	26.25	255
1969	8,952.12	6,266	8,050	2,693	29.17	92
1970	69,136.54	47,503	61,026	21,938	29.92	733
1973	15,792.07	10,228	13,140	5,810	32.22	180
1975	26,434.14	16,409	21,080	10,641	33.79	315
1976	11,955.28	7,257	9,323	5,023	34.59	145
1977	23,576.69	13,984	17,965	10,327	35.40	292
1979	23,943.49	13,533	17,385	11,347	37.03	306
1980	41,376.93	22,797	29,287	20,365	37.86	538
1982	2,143.59	1,119	1,438	1,134	39.54	29
1984	13,007.55	6,413	8,239	7,370	41.24	179
1985	124,851.21	59,693	76,686	73,135	42.11	1,737
1986	47,665.91	22,087	28,374	28,825	42.97	671
1987	20,535.78	9,206	11,827	12,816	43.85	292
1990	109,851.00	44,235	56,827	74,994	46.51	1,612
1995	16,923.67	5,495	7,059	13,249	51.06	259
1998	40,656.74	11,263	14,469	34,319	53.84	637
1999	148,250.65	38,681	49,692	128,209	54.78	2,340
2001	80,645.83	18,429	23,675	73,100	56.67	1,290
2003	231,521.72	45,325	58,228	219,598	58.58	3,749
2004	329,807.20	59,195	76,046	319,723	59.53	5,371
2005	292,187.44	47,636	61,196	289,429	60.49	4,785
2006	80,647.89	11,807	15,168	81,609	61.46	1,328
2007	368,034.20	47,825	61,439	380,202	62.42	6,091
2008	3,065.57	347	446	3,233	63.39	51
2009	8,718.49	841	1,080	9,382	64.37	146
2010	269,542.06	21,532	27,662	295,788	65.34	4,527
2011	147,531.88	9,307	11,956	165,082	66.32	2,489
2012	133,109.45	6,161	7,915	151,816	67.30	2,256
2013	539,750.64	15,914	20,444	627,257	68.28	9,187
2014	21,479.18	272	350	25,425	69.26	367
2015	15.95		0	19	69.88	
	3,320,010.13	672,928	864,490	3,119,522		52,600

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 59.3 1.58



## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 363 SERVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 55-R2						
NET SALVAGE PERCENT.. -40						
1965	7,950.51	7,516	5,568	5,563	17.86	311
1973	9,672.06	8,011	5,935	7,606	22.46	339
1978	15,220.70	11,371	8,424	12,885	25.65	502
1983	11,103.62	7,329	5,429	10,116	29.07	348
1993	5,481.59	2,577	1,909	5,765	36.53	158
2007	2,623.03	460	341	3,331	48.11	69
2008	3,735.20	571	423	4,806	48.99	98
2009	2,057.45	269	199	2,681	49.86	54
2010	5,444.72	589	436	7,187	50.75	142
2011	5,000.04	429	318	6,682	51.63	129
2012	33,435.57	2,111	1,564	45,246	52.52	862
2013	52.04	2	1	72	53.42	1
2014	12,248.90	212	157	16,991	54.32	313
2015	17,715.09	50	37	24,764	54.89	451
	131,740.52	41,497	30,741	153,695		3,777

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 40.7 2.87

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 364 FLOW MEASURING DEVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 25-S2.5						
NET SALVAGE PERCENT.. 0						
2003	194,575.00	88,026	111,172	83,403	13.69	6,092
2005	9,860.23	3,763	4,752	5,108	15.46	330
2007	309,861.46	95,065	120,063	189,798	17.33	10,952
	514,296.69	186,854	235,987	278,309		17,374
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						16.0 3.38

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 370 RECEIVING WELLS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 30-L2.5						
NET SALVAGE PERCENT.. 0						
1990	52,480.00	32,345	40,405	12,075	11.51	1,049
2000	4,746.07	2,120	2,648	2,098	16.60	126
2003	93,201.00	34,298	42,845	50,356	18.96	2,656
2005	2,870.00	892	1,114	1,756	20.68	85
2007	20,468.18	5,131	6,410	14,058	22.48	625
2013	107,729.00	6,284	7,850	99,879	28.25	3,536
	281,494.25	81,070	101,272	180,222		8,077
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						22.3 2.87

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 371 PUMPING EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 15-L1.5						
NET SALVAGE PERCENT.. -5						
1983	351.47	305	369			
1988	10,551.51	8,442	11,079			
1990	2,395.00	1,844	2,515			
1998	112.00	71	118			
1999	315.00	193	325	6	6.24	1
2003	30,413.00	16,244	27,341	4,593	7.37	623
2004	12,997.98	6,633	11,164	2,484	7.71	322
2005	8,472.40	4,104	6,908	1,988	8.08	246
2006	69,367.93	31,562	53,123	19,713	8.50	2,319
2007	1,066,861.98	449,572	756,692	363,513	8.98	40,480
2008	479,788.65	183,375	308,645	195,133	9.54	20,454
2009	230,828.11	78,043	131,357	111,013	10.17	10,916
2010	140,240.66	40,446	68,076	79,177	10.88	7,277
2011	26,866.12	6,319	10,636	17,573	11.64	1,510
2012	9,469.03	1,684	2,834	7,108	12.46	570
2013	222,270.07	25,672	43,210	190,174	13.35	14,245
2014	29,646.69	1,494	2,515	28,614	14.28	2,004
	2,340,947.60	856,003	1,436,907	1,021,088		100,967

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 10.1 4.31

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 380 TREATMENT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 30-S0.5						
NET SALVAGE PERCENT.. -20						
1983	93,399.41	74,533	76,293	35,786	10.05	3,561
1985	9,410.64	7,193	7,363	3,930	10.89	361
1990	197,000.00	132,935	136,074	100,326	13.13	7,641
1995	6,620.28	3,803	3,893	4,051	15.64	259
1997	2,500.00	1,326	1,357	1,643	16.74	98
2000	34,355.40	15,803	16,176	25,050	18.50	1,354
2001	4,944.16	2,152	2,203	3,730	19.12	195
2003	97,977.66	37,545	38,432	79,141	20.42	3,876
2004	196,215.91	69,774	71,422	164,037	21.11	7,771
2005	290,501.82	95,168	97,415	251,187	21.81	11,517
2006	619,232.33	185,027	189,396	553,683	22.53	24,575
2007	2,416,073.18	649,440	664,777	2,234,511	23.28	95,984
2008	282.91	67	69	270	24.05	11
2010	2,325.89	402	411	2,380	25.68	93
2011	966,694.18	134,181	137,350	1,022,683	26.53	38,548
2012	20,696.85	2,144	2,195	22,641	27.41	826
2013	513,087.65	34,479	35,292	580,413	28.32	20,495
2014	144,512.58	4,219	4,319	169,096	29.27	5,777
2015	67,848.35	326	334	81,084	29.88	2,714
	5,683,679.20	1,450,517	1,484,771	5,335,644		225,656
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						23.6 3.97

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 381 PLANT SEWERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 50-R2.5						
NET SALVAGE PERCENT.. 0						
2003	435,030.81	94,141	176,638	258,393	39.18	6,595
2007	204,993.09	29,560	55,464	149,529	42.79	3,494
2008	2,835.59	357	670	2,166	43.71	50
2009	1,527.50	164	308	1,220	44.63	27
2010	9,532.99	848	1,591	7,942	45.55	174
2011	6,766.13	476	893	5,873	46.48	126
2012	5,260.18	272	510	4,750	47.41	100
2014	28,010.76	398	747	27,264	49.29	553
	693,957.05	126,216	236,821	457,136		11,119
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..					41.1	1.60

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 382 OUTFALL SEWER LINES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 35-L2						
NET SALVAGE PERCENT.. 0						
1965	805.09	576	476	329	9.98	33
1971	171.86	115	95	77	11.49	7
1976	149.25	95	78	71	12.72	6
1998	32,306.73	13,476	11,129	21,178	20.40	1,038
2003	64,126.00	19,916	16,447	47,679	24.13	1,976
2007	70,526.62	14,992	12,381	58,146	27.56	2,110
2009	1,507.96	242	200	1,308	29.39	45
2011	16,028.42	1,699	1,403	14,625	31.29	467
2012	32,080.33	2,502	2,066	30,014	32.27	930
	217,702.26	53,613	44,275	173,427		6,612
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						26.2 3.04

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 389.1 OTHER PLANT AND MISCELLANEOUS EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 30-R2						
NET SALVAGE PERCENT.. 0						
2004	2,901.71	890	983	1,919	20.80	92
2007	7,375.13	1,659	1,832	5,543	23.25	238
2008	1,866.67	368	406	1,461	24.08	61
2009	62,413.77	10,548	11,648	50,766	24.93	2,036
2010	38,379.88	5,386	5,948	32,432	25.79	1,258
	112,937.16	18,851	20,817	92,120		3,685
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						25.0 3.26



## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 390 OFFICE FURNITURE AND EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
1998	250.00	209	209	41	3.25	13
2004	7,216.00	3,879	3,882	3,334	9.25	360
2007	8,002.43	3,101	3,104	4,898	12.25	400
2008	28.81	10	10	19	13.25	1
2011	131.62	25	25	107	16.25	7
	15,628.86	7,224	7,230	8,399		781
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						10.8 5.00

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 390.2 COMPUTERS AND PERIPHERAL

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 5-SQUARE						
NET SALVAGE PERCENT.. 0						
2011	3,119.77	2,340	2,340	780	1.25	624
2013	21,000.53	7,350	7,350	13,651	3.25	4,200
	24,120.30	9,690	9,690	14,430		4,824
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						3.0 20.00

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 391 TRANSPORTATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 10-L2.5						
NET SALVAGE PERCENT.. +5						
2005	46,070.01	28,448	43,767			
2006	29,944.88	17,894	28,448			
2007	18,581.83	10,609	17,147	506	3.99	127
2009	50,353.67	24,109	38,966	8,870	4.96	1,788
2010	20,189.47	8,324	13,453	5,727	5.66	1,012
2011	25,978.49	8,737	14,121	10,559	6.46	1,635
2013	42,222.39	6,899	11,151	28,960	8.28	3,498
	233,340.74	105,020	167,053	54,621		8,060

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 6.8 3.45

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 392 STORES EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 25-SQUARE						
NET SALVAGE PERCENT.. 0						
2007	25,404.64	7,875	7,900	17,505	17.25	1,015
	25,404.64	7,875	7,900	17,505		1,015.
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						17.2 4.00

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 393 TOOLS, SHOP AND GARAGE EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
2005	560.31	273	273	287	10.25	28
2007	54,831.51	21,247	21,229	33,603	12.25	2,743
2008	14,652.49	4,945	4,941	9,711	13.25	733
2010	203.58	48	48	156	15.25	10
2011	6,594.60	1,236	1,235	5,360	16.25	330
2012	14,011.15	1,927	1,926	12,085	17.25	701
2013	6,530.97	571	570	5,961	18.25	327
2014	10,068.10	378	378	9,690	19.25	503
	107,452.71	30,625	30,600	76,853		5,375

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 14.3 5.00

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 394 LABORATORY EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2005	2,205.97	1,434	1,434	772	5.25	147
2007	21,882.33	11,306	11,307	10,575	7.25	1,459
2009	13,983.55	5,360	5,360	8,624	9.25	932
2011	10,724.47	2,681	2,681	8,043	11.25	715
2013	8,345.99	974	974	7,372	13.25	556
2014	11,878.59	594	594	11,285	14.25	792
	69,020.90	22,349	22,350	46,671		4,601
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						10.1 6.67

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 395 POWER OPERATED EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

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 15-L2.5						
NET SALVAGE PERCENT.. 0						
2007	531.98	247	201	331	8.03	41
	531.98	247	201	331		41
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						8.1 7.71

## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 396 COMMUNICATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2007	18,240.04	9,424	9,413	8,827	7.25	1,218
2010	32,320.34	10,235	10,224	22,096	10.25	2,156
2011	7,016.88	1,754	1,752	5,265	11.25	468
2014	10,233.37	512	511	9,722	14.25	682
	67,810.63	21,925	21,900	45,911		4,524
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						10.1 6.67



## MISSOURI AMERICAN WATER COMPANY - WASTEWATER

## ACCOUNT 397 MISCELLANEOUS EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AT MARCH 31, 2015

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
FULLY ACCRUED						
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
1998	5,050.00	5,050	5,050			
	5,050.00	5,050	5,050			
AMORTIZED						
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2001	6,585.00	6,036	6,032	553	1.25	442
2004	4,816.09	3,452	3,450	1,366	4.25	321
2005	7,731.70	5,026	5,023	2,709	5.25	516
2006	96,325.83	56,190	56,152	40,174	6.25	6,428
2007	13,474.25	6,962	6,957	6,517	7.25	899
2008	481.00	216	216	265	8.25	32
2009	94.27	36	36	58	9.25	6
2010	1,873.21	593	593	1,281	10.25	125
2011	260.30	65	65	195	11.25	17
2013	4,088.98	477	477	3,612	13.25	273
	135,730.63	79,053	79,000	56,731		9,059
	140,780.63	84,103	84,050	56,731		9,059
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						6.3 6.43