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Case No.: WR-2010-0131
Date: April 15, 2010

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. WR-2010-0131

Rebuttal Testimony of

JOHN J. SPANOS

on Behalf of

MISSOURI-AMERICAN WATER COMPANY

Jefferson City, Missouri

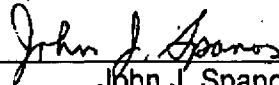
MAWC Exhibit No. 119
Date 5-17-10 Reporter KF
File No. WR-2010-0131

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

IN THE MATTER OF MISSOURI-AMERICAN) WATER COMPANY FOR AUTHORITY TO) FILE TARIFFS REFLECTING INCREASED) RATES FOR WATER AND SEWER) SERVICE)	CASE NO. WR-2010-0131 CASE NO. SR-2010-0135
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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 "Rebuttal Testimony of John J. Spanos" that said testimony and schedules were prepared by him and/or under his direction and supervision; that if inquires 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 14th day of April 2010.



Notary Public

My commission expires:

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Cheryl Ann Rutber, Notary Public
East Pennsboro Twp., Cumberland County
My Commission Expires Feb. 20, 2011
Member, Pennsylvania Association of Notaries

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MISSOURI-AMERICAN WATER COMPANY

DIRECT TESTIMONY OF
JOHN J. SPANOS

Line No.

INTRODUCTION

1 1. Q. Please state your name and address.

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

4 2. Q. Have you previously submitted testimony in this proceeding?

5 A. Yes, I have. My direct testimony and Exhibit No. JJS-1 were submitted with
6 the rate filing of Missouri-American Water Company (referred to herein as
7 "the Company") on November 1, 2009.

8 3. Q. What is the purpose of your rebuttal testimony?

9 A. The purpose of my rebuttal testimony is to respond to the direct testimony of
10 Guy C. Gilbert of the Missouri Public Service Commission Staff (Staff).

11 4. Q. What are the subjects of your rebuttal testimony?

12 A. The subjects of my rebuttal testimony are the use of life spans of major
13 facilities, the remaining life method of depreciation, and the utilization of
14 general plant amortization.

15 5. Q. Do these subjects impact all asset classes equally?

16 A. No, they do not. Some asset classes are only affected by one subject and
17 others by multiple subjects. However, the difference between Staff's proposal
18 and my depreciation study in annual expense is primarily due to the lifespan
19 approach and the remaining life method. Consequently, the magnitude of the

1 difference is not as much a concern of this rebuttal as the concepts, methods
2 and parameters of how depreciation is being calculated going forward.

3 THE LIFE SPAN PROCEDURE

4 6. Q. Explain the importance of the life span procedure.

5 A. The use of the life span procedure is the most appropriate method for
6 matching recovery of plant in service to the life characteristics of assets at
7 major structures. For example, the life characteristics of assets at a treatment
8 plant will experience some interim retirements over the life of the facility and
9 then many assets will be concurrently retired at final retirement. Therefore,
10 capital recovery should reflect these life characteristics, which can only be
11 accomplished with a life span component in the depreciation parameters. In
12 many cases, the life span is an estimate far into the future until management
13 determines the facility needs to be replaced or retired. If you wait until
14 management determines the actual date, then intergenerational inequities will
15 occur over the last few years when depreciation is drastically increased to
16 obtain full recovery at the time of recovery. The lack of a life span and
17 consequential depreciation recovery flaw is quite obvious if we review the
18 history of the St. Joe treatment plant.

19 7. Q. Are there any other issues relating to Staff's proposal relating to accounts you
20 have utilized the life span approach?

21 A. Yes, there are. Staff's proposal of calculating rates with the use of my interim
22 survivor curve without the use of the life span approach is inaccurate,
23 because Staff has ignored the many retirements associated with final
24 retirement of a facility. Therefore, if you eliminate the life span approach, you

1 must analyze life characteristics as though all plant in service is part of a
2 mass account. Consequently, the proposed life for Accounts 304.20,
3 Structures and Improvements – Power and Pumping; 304.30, Structures and
4 Improvements – Water Treatment; and 306. Lake, River and Other Intakes
5 must be shorter than what Staff has proposed in order to include all
6 retirements. Additionally, final retirements for Accounts 304.80, Structures
7 and Improvements - Miscellaneous and 309.0, Supply Mains, should be
8 included in the life analyses.

9 8. Q. Can you explain the flaws in Staff's life estimates?

10 A. Yes, I can. Staff has attempted to compare my interim survivor curves with
11 truncation to their survivor curves without properly analyzing all the data. The
12 life analyses in the Depreciation Study for Accounts 304.20, 304.30 and 306,
13 represent an interim survivor curve, and therefore, only interim retirements
14 are considered when determining the survivor curve. This is an important
15 distinction because all final retirements, such as those related to the St.
16 Joseph plant final retirement, were not considered. A critical focus in the
17 analyses for these accounts which should be truncated, and thus, should
18 have recovery with a concurrent date. Consequently, if Staff is going to
19 ignore the life span approach in recovery, then their analyses must reflect the
20 St. Joseph retirements for life analyses. The retirements coded as final for
21 Account 304.20, 304.30 and 306 in the service life file equals \$2,067,689 as
22 compared to the regular (interim) retirement of \$1,986,768. In addition to
23 these three life span accounts, retirements in Accounts 304.61, Structures

1 and Improvements – Office Buildings, 304.80 and 309.00 were coded as final
2 since these accounts are quite often life spanned in other jurisdictions.

3 With this necessary correction that Staff would need to make to their life
4 analyses, the revised life tables and survivor curves without truncation for
5 each of the accounts discussed above are set forth to this testimony as JJS-
6 R2. The recommended survivor curves using this approach as compared to
7 the depreciation study are as follows:

<u>Account</u>	<u>Depreciation Study Survivor Curve</u>	<u>Rebuttal Testimony Survivor Curve</u>
304.20	75-R2.5	70-R2
304.30	80-R3	70-R3
304.61	50-R1	35-S0.5
304.80	50-R2.5	30-S0.5
306.00	65-R1.5	35-L0.5
309.00	70-R3	60-R3

8
9 Therefore, if Staff is recommending to ignore the life span procedure, then all
10 retirements must be considered in their analyses. As can be seen from the
11 attached curves and life tables, the life characteristics are quite different.

12 9. Q. Has the life span approach been in effect for some of the assets?

13 A. Yes, it has. The life span approach was utilized and approved for some of
14 the facilities in the old St. Louis County Operations.

15 10. Q. What are your conclusions regarding the use of the life span approach?

16 A. During the life of a water facility, interim additions, replacements, and
17 retirements occur regularly. At the time of the final retirement of a water
18 facility, all of the structures and equipment are retired, regardless of whether
19 they were part of the original installation or were added as recently as a year
20 or two prior to the plant's retirement. The life span approach reflects the

1 unique average lives that are experienced by each year of installation at a
2 water facility by recognizing the period of time between each installation and
3 the final retirement of the plant. Conversely, Staff's approach of applying a
4 single average life or average survivor curve to all installation years of an
5 entire water facility account does not recognize the unique survivor
6 characteristics of each installation year. For example, the Parkville facility
7 began operation in 1960 and there have been subsequent plant additions
8 made each year since 1960 in Account 304.3, Structures and Improvements
9 – Water Treatment. For these plant additions, 1960 through 2008, there is a
10 unique service life and survivor curve for each vintage under the life span
11 approach for a total of 49 different survivor curves. Under the Staff's
12 approach, there is **one** average service life and survivor curve used to
13 describe the life characteristics of all assets within Account 304.3, Structures
14 and Improvements – Water Treatment, at Parkville. Further, the use of a
15 single average life is only applicable for one year, as with each year of
16 betterments and replacements, the overall average life of the water facility
17 changes. Thus, depreciation based on the use of the life span approach,
18 rather than the use of a single average life, results in a more accurate
19 reflection of the loss in service value of a water facility.

20 11. Q. Please describe what you mean by the term "depreciation".

21 A. "Depreciation", as defined in the Commission's Uniform System of
22 Accounts (USOA), refers to the loss in service value not restored by current
23 maintenance, incurred in connection with the consumption or prospective
24 retirement of utility plant in the course of service from causes which can be

1 reasonably anticipated or contemplated, against which the Company is not
2 protected by insurance. Among the causes to be given consideration are
3 wear and tear, decay, action of the elements, inadequacy, obsolescence,
4 changes in the art, changes in demand, and the requirements of public
5 authorities. Depreciation accrual rates are used to allocate, for accounting
6 and ratemaking purposes, the service values of assets over their service
7 lives. As a result, each year of service and each generation of customers are
8 charged with the portion of the asset that it or they consume or use.

9 12. Q. Does the Uniform System of Accounts prescribe a method of Depreciation
10 Accounting?

11 A. Yes. The Uniform Systems of Accounts for water companies includes General
12 Instruction 11, Accounting to be on accrual basis, which states "The utility is
13 required to keep its accounts on the accrual basis." Further, General
14 Instruction 22, Depreciation Accounting, of the water system states "Utilities
15 must use a method of depreciation that allocates in a systematic and rational
16 manner the service value of depreciable property over the service life of the
17 property." (Emphasis added).

18 13. Q. Based on the instructions in the Uniform System of Accounts, what do you
19 conclude that it requires regarding the allocation of service value of water
20 facilities?

21 A. The USOA requires that the allocation of service value be systematic and
22 rational. The allocation of water facility costs based on a single average life
23 that cannot possibly be correct and is not rational since some of the initial
24 plant equipment installed on day one of plant's life will survive for the full life

1 span of the plant, while subsequent additions will not be in service for as long
2 as the initial additions. The allocation of water facility costs using the life span
3 approach in which the lives of each installation year reflect the concurrent
4 retirement of all facilities at the end of the plant's life is rational and, therefore,
5 compliant with the USOA.

6 14. Q. Do authoritative texts on depreciation support your conclusion that the service
7 value of water facilities should be allocated based on the use of the life span
8 approach?

9 A. Yes, they do. Authoritative texts on the subject of depreciation support the
10 proposal to use the life span approach for power plants. Public Utility
11 Depreciation Practices, published in 1996 by the National Association of
12 Regulatory Utility Commissioners states:

13 Life span property generally has the following characteristics:

- 14 1. Large individual units,
- 15 2. Forecasted overall life or estimated retirement date,
- 16 3. Units experience interim retirements, and
- 17 4. Future additions are integral part of initial installation.

18
19 The following classes of utility property may be most appropriately studied
20 under this method, taking into consideration the availability of plant
21 accounting data, and particularly the number of units of property involved:
22 buildings, electric power plants.

23
24 Depreciation Systems states:

25
26 Depreciation professionals use the term life span to describe both a
27 unit of property and a group of property that will be retired as a unit.
28 Examples of a unit of property are a hydroelectric dam or the building
29 housing electrical generating equipment. Examples of a group of
30 property that will be retired as a unit include the turbines, generators,
31 and other equipment used to generate electrical power and housed in
32 either the dam or building. The dispersion pattern of retirements from

¹ Public Utility Depreciation Practices. Page 141. National Association of Regulatory Utility Commissioners. 1996.

1 a group of life span property differs from the pattern of other (mass)
2 property, because much of the life span property is retired
3 simultaneously (unlike mass property). The resulting survivor curve is
4 truncated (and instantaneously reaches zero percent surviving) rather
5 than gradually curving to zero percent surviving.²
6

7 15. Q. What method for allocation of water facility service value has Missouri
8 American Water Company (MAWC) proposed in this proceeding?

9 A. MAWC has proposed, consistent with authoritative texts and the USOA, the
10 use of the life span method of allocating the service value of water facilities
11 over the life of the facility.

12 16. Q. Please describe the addition and retirement activity that occurs during the
13 course of a water facility's life span.

14 A. The first addition at a water facility is its initial construction, a substantial
15 expenditure. Throughout the life of this initial expenditure, betterments and
16 replacements take place. For example, after the initial installation in 1960,
17 many capital expenditures have taken place at Parkville each year,
18 representing a betterment. Also, many of the capital expenditures included a
19 retirement or replacement of original investment. The retirement of a portion
20 of the original investment represents an interim retirement. This type of
21 activity occurs in almost every year of a water facility's life span in varying
22 degrees of magnitude. Interim plant additions are made for various reasons,
23 at times to replace worn or unreliable components of the facility and other
24 times made to comply with new water quality standards. After a period of 60,
25 70 or more years, it becomes uneconomic to continue to make improvements
26 to keep the facility running and the entire facility is retired. This retirement

² Depreciation Systems, Wolf, Frank K. and W. Chester Fitch. Page 255. Iowa State University Press. 1994.

1 includes the original construction as well as all of the interim betterments and
2 replacements.

3 17. Q. Given this pattern of additions and retirements, how can the survivor
4 characteristics of water facility be described?

5 A. The survivor characteristics of water facilities can be described through the
6 use of interim survivor curves truncated at the date of final retirement of the
7 entire facility. The interim survivor curve describes the rate of interim
8 retirements from the date of installation to the date of final retirement. These
9 interim retirements are the result of retirements of equipment with lives that
10 are less than the overall life span of the plant. These retirements would be of
11 items such as pumps, motors, control equipment and numerous other items.
12 The interim survivor curve, graphically depicted, begins at 100 percent
13 surviving at the date of installation and decreases gradually throughout most
14 of the life span. At the date of final retirement, the interim survivor curve is
15 truncated, reducing the percent surviving to 0 percent. The age at which
16 truncation occurs is different for every year of installation, resulting in a
17 different average service life for each vintage.

18 18. Q. Do the final retirement dates represent a date certain for the retirement of the
19 plants?

20 A. No, it does not. The estimated final retirement dates should not be
21 interpreted as a firm commitment to retire these plants on these dates, but
22 rather, as reasonable estimates based on currently available information.
23 The estimated final retirement dates, like other estimates used for capital
24 recovery purposes, are subject to modification in the future as circumstances

1 dictate. The estimated final retirement dates are based on current information
2 and a consideration of all relevant factors. The nature of using estimates is
3 that there is always a degree of uncertainty associated with them. The only
4 time you can precisely determine the service life of an asset or facility is after
5 it has been retired and you can look back and state with certainty that the
6 pumping equipment was in service for 35 years. However, for purposes of
7 determining appropriate depreciation rates we need to estimate things like
8 service lives and net salvage percents.

9 19. Q. Is it necessary for management to have replacement plans in effect for these
10 units in order to estimate a final retirement date?

11 A. No, it would be premature for management to be making such plans at this
12 point in time. Such plans need not occur until the time to retirement
13 approximates the lead time for construction of the replacement water facility.
14 For water facilities, two to three years is a reasonable lead time.

15 20. Q. Has MAWC previously retired water facilities?

16 A. Yes, it has. The St. Joseph water treatment facility was retired in 2000.

17 21. Q. Do you believe that the plants currently in service can live indefinitely?

18 A. Absolutely not. Although the sites may be used for a significant period of time
19 into the future, the depreciable assets will be retired as they become
20 uneconomic due to deterioration, regulation, and obsolescence.

21 22. Q. Do customer equity considerations support the use of the life span method for
22 water facilities?

1 A. Yes, they do. The life span method provides for a better match of
2 depreciation expense with service value rendered than does the use of a
3 single average survivor curve for all installation years.

4 23. Q. Please explain.

5 A. The life span method develops and uses a unique average service life for
6 each installation year. As a result of the decision to cease operations at a
7 water facility, all property of varying ages are retired concurrently. Therefore,
8 the older installation years have longer average service lives than the
9 younger installation years. Under the life span approach, the original cost of
10 an older installation year is recovered during the average life of that
11 installation year. The original cost of a younger installation year is recovered
12 during its average life. In comparison, the use of a single average service life
13 and survivor curve that is somewhere between the longer lives of the older
14 installation year, and the shorter lives of the younger installation years, results
15 in the over recovery of cost for the older installation years and the under
16 recovery of cost for the younger installation years.

17 24. Q. What is the policy of other regulatory commissions regarding the life span
18 approach for water facilities?

19 A. Virtually all other regulatory commissions use the life span approach for major
20 facilities such as water treatment plants. Gannett Fleming has assisted
21 utilities in all 50 states, 10 Canadian provinces and 3 Canadian territories and
22 we are not aware of a jurisdiction that denies the life span approach for
23 treatment facilities such as the Missouri Public Service Commission.

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REMAINING LIFE METHOD

25. Q. Does the Depreciation Study JJS-1 present remaining life rates?

A. Yes, it does.

26. Q. Why are remaining life rates better than whole life rates?

A. The remaining life rates are developed to assure full recovery, no more and no less. There is no need to compare the theoretical reserve to the actual book reserve because it is already factored into the rate, and the remaining life rate of all surviving assets compensate for over or under recovered assets of the past. None of the past recovery issues are considered in the whole life method.

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GENERAL PLANT AMORTIZATION

27. Q. Is the implementation of General Plant Amortization recommended in your depreciation study?

A. Yes, it is.

28. Q. Is general plant amortization widely utilized among utilities?

A. Yes, it is. General plant amortization was first implemented in 1991 in Florida. Since that time, almost all utilities across the United States and Canada have received approval and begun implementation of the methodology.

29. Q. What is the advantage of the implementation of general plant amortization?

A. There are two primary benefits to general plant amortization. First, the accrual rate will remain constant over time and thus, annual expense will be constant. Second, the need for continual asset inventories and extensive record keeping for many assets with little plant value will be gone. The assets

1 that are considered for general plant amortization represent less than three
2 percent of the plant in service.

3 30. Q. Has Staff's whole life approach to general plant covered both benefits of
4 general plant amortization?

5 A. No, it has not. The whole life rate does a good job of establishing a constant
6 rate over time, but there are more benefits to general plant amortization.
7 First, the whole life rate, as prescribed by Staff, does not insure full recovery
8 of the assets unless each and every asset stays in service the same number
9 of years as the rate has been established. Secondly, and probably more
10 importantly, the Staff approach does not eliminate the incredible burden on
11 the property departments of major inventories and continual record keeping of
12 many assets with very little value.

13 SUMMARY

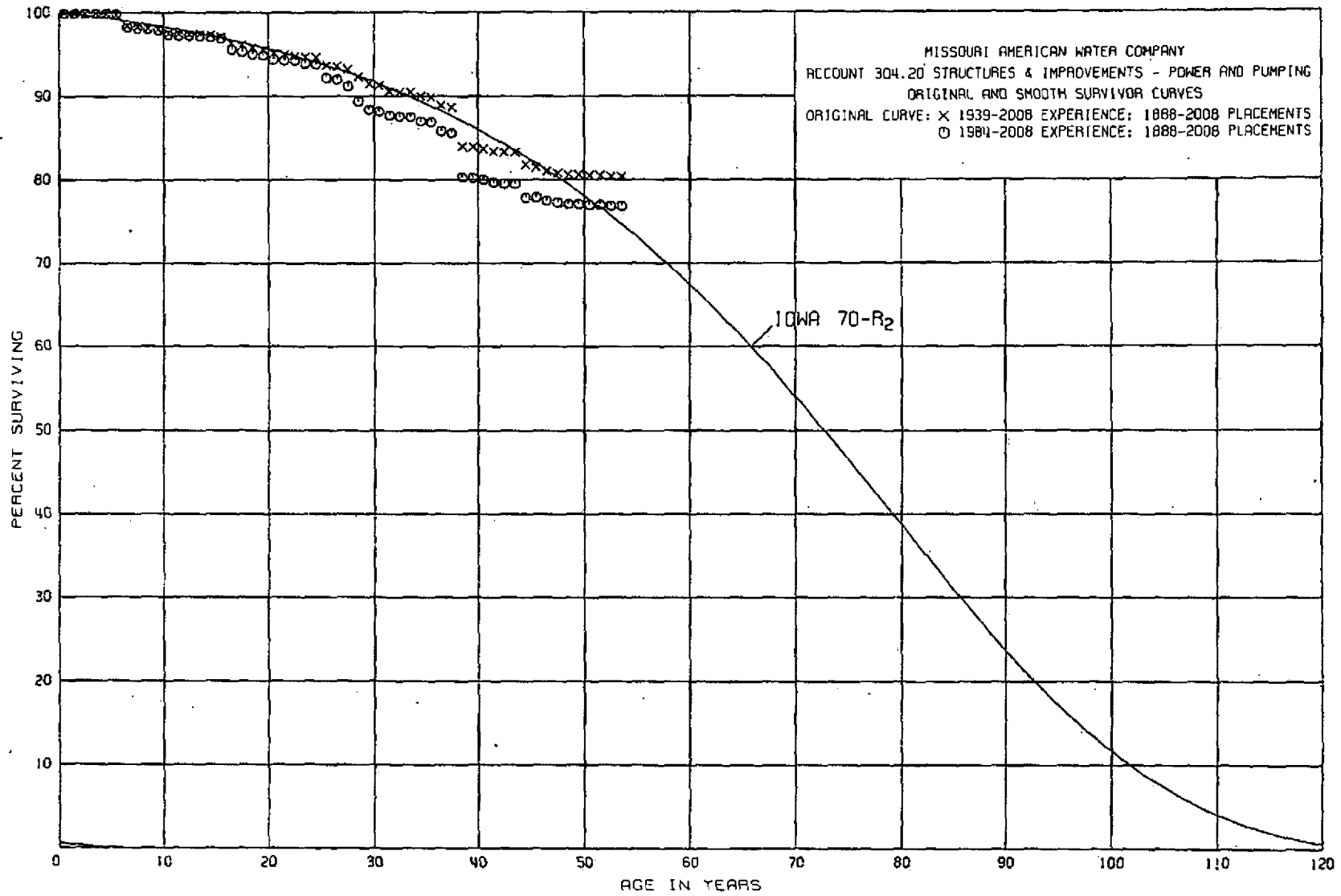
14 31. Q. Can you summarize your opinions regarding the depreciation issues?

15 A. The difference between Staff and the Company is small; however, deviation
16 from my study to Staff's study must include a few revisions. First, if the life
17 span procedure is not used then life estimates must include the appropriate
18 data for Account 304.20, 304.20, 305 and 306. Second, the utilization of
19 general plant amortization is a necessity for the property accounting
20 department as the personnel cannot accurately keep track of all those small
21 assets and complete their other duties.

22 32. Q. Does this conclude your rebuttal testimony?

23 A. Yes, it does.

JJS-R2



MISSOURI AMERICAN WATER COMPANY

ACCOUNT 304.20 STRUCTURES & IMPROVEMENTS - POWER AND PUMPING

ORIGINAL LIFE TABLE

AVG AGE RET 25.5 1 EXPERIENCE ANALYSIS
 PLACEMENT BAND 1888-2008 EXPERIENCE BAND 1939-2008

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	19,900,545	409	0.0000	1.0000	100.00
0.5	16,840,714	7,661	0.0005	0.9995	100.00
1.5	15,929,458	1,913	0.0001	0.9999	99.95
2.5	15,446,719	916	0.0001	0.9999	99.94
3.5	15,404,395	14,436	0.0009	0.9991	99.93
4.5	15,371,063	16,871	0.0011	0.9989	99.84
5.5	15,317,993	206,057	0.0135	0.9865	99.73
6.5	14,473,866	12,569	0.0009	0.9991	98.38
7.5	14,493,639	22,890	0.0016	0.9984	98.29
8.5	9,859,300	13,175	0.0013	0.9987	98.13
9.5	9,431,862	44,450	0.0047	0.9953	98.00
10.5	8,690,963	9,134	0.0011	0.9989	97.54
11.5	7,367,228	1,767	0.0002	0.9998	97.43
12.5	7,338,724	2,970	0.0004	0.9996	97.41
13.5	7,292,916	8,723	0.0012	0.9988	97.37
14.5	7,157,858	7,837	0.0011	0.9989	97.25
15.5	6,168,695	56,251	0.0091	0.9909	97.14
16.5	6,104,879	13,071	0.0021	0.9979	96.26
17.5	5,009,195	14,655	0.0029	0.9971	96.06
18.5	4,774,038	12,888	0.0027	0.9973	95.78
19.5	4,066,095	17,495	0.0043	0.9957	95.52
20.5	3,862,281	5,327	0.0014	0.9986	95.11
21.5	3,714,146	5,666	0.0015	0.9985	94.98
22.5	3,138,489	5,492	0.0017	0.9983	94.84
23.5	2,991,703	3,341	0.0011	0.9989	94.68
24.5	2,922,049	28,359	0.0097	0.9903	94.58
25.5	2,874,241	1,566	0.0005	0.9995	93.66
26.5	2,751,351	11,463	0.0042	0.9958	93.61
27.5	2,691,127	26,469	0.0098	0.9902	93.22
28.5	2,554,536	23,468	0.0092	0.9908	92.31
29.5	2,386,624	5,349	0.0022	0.9978	91.46
30.5	2,338,374	16,864	0.0072	0.9928	91.26
31.5	2,326,125	2,107	0.0009	0.9991	90.60
32.5	2,315,298	1,966	0.0008	0.9992	90.52
33.5	2,271,583	11,849	0.0052	0.9948	90.45
34.5	2,224,183	954	0.0004	0.9996	89.98
35.5	2,191,380	24,672	0.0113	0.9887	89.94
36.5	2,157,913	5,220	0.0024	0.9976	88.92
37.5	2,133,766	113,748	0.0533	0.9467	88.71
38.5	2,016,971	2,655	0.0013	0.9987	83.98

MISSOURI AMERICAN WATER COMPANY

ACCOUNT 304.20 STRUCTURES & IMPROVEMENTS - POWER AND PUMPING

ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 25.5 1 EXPERIENCE ANALYSIS
 PLACEMENT BAND 1888-2008 EXPERIENCE BAND 1939-2008

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	74,006	155	0.0021	0.9979	65.52
80.5	73,851		0.0000	1.0000	65.38
81.5	73,790		0.0000	1.0000	65.38
82.5	68,011		0.0000	1.0000	65.38
83.5	68,011	302	0.0044	0.9956	65.38
84.5	67,709	300	0.0044	0.9956	65.09
85.5	67,409	76	0.0011	0.9989	64.80
86.5	67,333		0.0000	1.0000	64.73
87.5	62,537		0.0000	1.0000	64.73
88.5	62,537		0.0000	1.0000	64.73
89.5	62,537	1,005	0.0161	0.9839	64.73
90.5	61,532		0.0000	1.0000	63.69
91.5	61,532	7,755	0.1260	0.8740	63.69
92.5	53,778	508	0.0094	0.9906	55.67
93.5	52,950		0.0000	1.0000	55.15
94.5	50,075	1,667	0.0333	0.9667	55.15
95.5	48,408		0.0000	1.0000	53.31
96.5	48,408		0.0000	1.0000	53.31
97.5	47,287		0.0000	1.0000	53.31
98.5	40,331		0.0000	1.0000	53.31
99.5	39,714		0.0000	1.0000	53.31
100.5	39,714		0.0000	1.0000	53.31
101.5	39,714	6,823	0.1718	0.8282	53.31
102.5	32,891		0.0000	1.0000	44.15
103.5	32,891		0.0000	1.0000	44.15
104.5	32,891		0.0000	1.0000	44.15
105.5	23,016		0.0000	1.0000	44.15
106.5	23,016		0.0000	1.0000	44.15
107.5	23,016		0.0000	1.0000	44.15
108.5	16,980	6,502	0.3829	0.6171	44.15
109.5	10,478		0.0000	1.0000	27.24
110.5	6,726		0.0000	1.0000	27.24
111.5	6,726		0.0000	1.0000	27.24
112.5	6,726		0.0000	1.0000	27.24
113.5	6,726		0.0000	1.0000	27.24
114.5	6,726		0.0000	1.0000	27.24
115.5	6,726		0.0000	1.0000	27.24
116.5	2,100		0.0000	1.0000	27.24
117.5	2,100		0.0000	1.0000	27.24
118.5	2,100		0.0000	1.0000	27.24

MISSOURI AMERICAN WATER COMPANY

ACCOUNT 304.20 STRUCTURES & IMPROVEMENTS - POWER AND PUMPING

ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 25.5		1		EXPERIENCE ANALYSIS	
PLACEMENT BAND 1888-2008				EXPERIENCE BAND 1939-2008	
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	2,100		0.0000	1.0000	27.24
120.5					27.24
TOTAL	310,338,709	933,424			

MISSOURI AMERICAN WATER COMPANY

ACCOUNT 304.20 STRUCTURES & IMPROVEMENTS - POWER AND PUMPING

ORIGINAL LIFE TABLE

AVG AGE RET 26.2
 PLACEMENT BAND 1888-2008

2

EXPERIENCE ANALYSIS
 EXPERIENCE BAND 1984-2008

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	17,029,057	111	0.0000	1.0000	100.00
0.5	13,998,241	6,499	0.0005	0.9995	100.00
1.5	13,210,334	817	0.0001	0.9999	99.95
2.5	12,778,927	916	0.0001	0.9999	99.94
3.5	12,910,292	6,711	0.0005	0.9995	99.93
4.5	13,051,069	16,135	0.0012	0.9988	99.88
5.5	13,065,276	200,804	0.0154	0.9846	99.76
6.5	12,224,260	11,862	0.0010	0.9990	98.22
7.5	12,117,705	20,312	0.0017	0.9983	98.12
8.5	7,528,517	1,790	0.0002	0.9998	97.95
9.5	7,144,584	44,368	0.0062	0.9938	97.93
10.5	6,475,043	6,677	0.0010	0.9990	97.32
11.5	5,162,937	141	0.0000	1.0000	97.22
12.5	5,171,937	2,320	0.0004	0.9996	97.22
13.5	5,102,231	8,086	0.0016	0.9984	97.18
14.5	5,005,371	5,871	0.0012	0.9988	97.02
15.5	4,063,327	55,446	0.0136	0.9864	96.90
16.5	4,031,403	13,071	0.0032	0.9968	95.58
17.5	2,969,607	7,381	0.0025	0.9975	95.27
18.5	2,772,267	2,458	0.0009	0.9991	95.03
19.5	2,087,651	11,353	0.0054	0.9946	94.94
20.5	1,925,072	1,913	0.0010	0.9990	94.43
21.5	1,887,750	1,884	0.0010	0.9990	94.34
22.5	1,339,122	4,410	0.0033	0.9967	94.25
23.5	1,288,824	1,439	0.0011	0.9989	93.94
24.5	1,224,117	21,872	0.0179	0.9821	93.84
25.5	1,190,521	1,516	0.0013	0.9987	92.16
26.5	1,103,649	10,164	0.0092	0.9908	92.04
27.5	1,300,212	25,683	0.0198	0.9802	91.19
28.5	2,038,874	22,910	0.0112	0.9888	89.38
29.5	1,949,422	4,490	0.0023	0.9977	88.38
30.5	1,902,854	10,361	0.0054	0.9946	88.18
31.5	1,892,024	1,807	0.0010	0.9990	87.70
32.5	1,886,022	1,816	0.0010	0.9990	87.61
33.5	1,868,442	11,602	0.0062	0.9938	87.52
34.5	1,894,345	854	0.0005	0.9995	86.98
35.5	1,887,689	24,572	0.0130	0.9870	86.94
36.5	1,877,924	5,220	0.0028	0.9972	85.81
37.5	1,856,425	113,748	0.0613	0.9387	85.57
38.5	1,741,016	2,655	0.0015	0.9985	80.32

MISSOURI AMERICAN WATER COMPANY

ACCOUNT 304.20 STRUCTURES & IMPROVEMENTS - POWER AND PUMPING

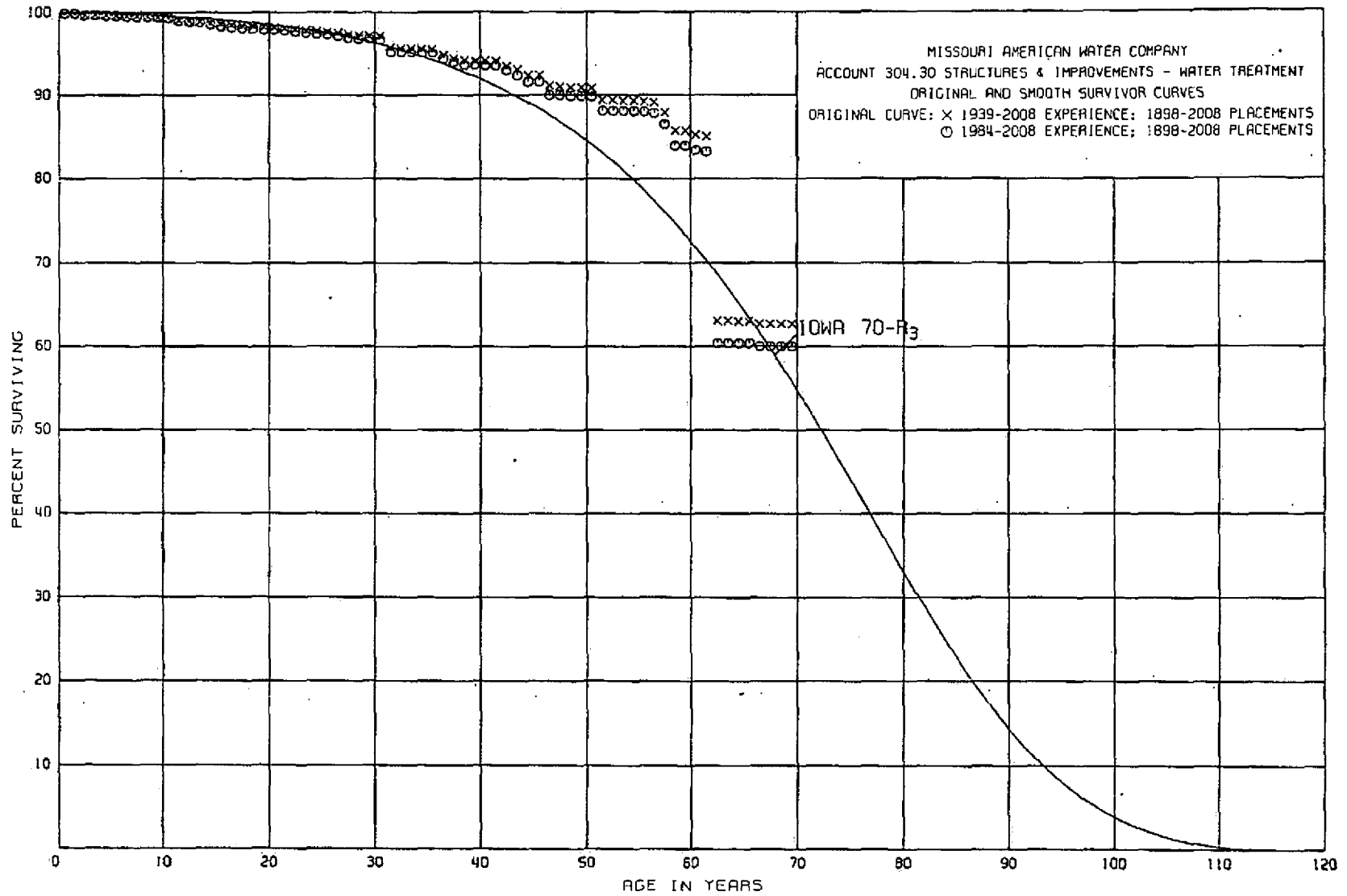
ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 26.2
PLACEMENT BAND 1888-2008

2

EXPERIENCE ANALYSIS
EXPERIENCE BAND 1984-2008

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	30,502	155	0.0051	0.9949	59.36
80.5	43,402		0.0000	1.0000	59.06
81.5	43,341		0.0000	1.0000	59.06
82.5	37,563		0.0000	1.0000	59.06
83.5	43,900	302	0.0069	0.9931	59.06
84.5	43,598	300	0.0069	0.9931	58.65
85.5	48,914	76	0.0016	0.9984	58.25
86.5	48,838		0.0000	1.0000	58.16
87.5	44,042		0.0000	1.0000	58.16
88.5	44,042		0.0000	1.0000	58.16
89.5	44,042	1,005	0.0228	0.9772	58.16
90.5	43,037		0.0000	1.0000	56.83
91.5	47,894	7,755	0.1619	0.8381	56.83
92.5	46,642	508	0.0109	0.9891	47.63
93.5	45,814		0.0000	1.0000	47.11
94.5	42,939	1,667	0.0388	0.9612	47.11
95.5	48,408		0.0000	1.0000	45.28
96.5	48,408		0.0000	1.0000	45.28
97.5	47,287		0.0000	1.0000	45.28
98.5	40,331		0.0000	1.0000	45.28
99.5	39,714		0.0000	1.0000	45.28
100.5	39,714		0.0000	1.0000	45.28
101.5	39,714	6,823	0.1718	0.8282	45.28
102.5	32,891		0.0000	1.0000	37.50
103.5	32,891		0.0000	1.0000	37.50
104.5	32,891		0.0000	1.0000	37.50
105.5	23,016		0.0000	1.0000	37.50
106.5	23,016		0.0000	1.0000	37.50
107.5	23,016		0.0000	1.0000	37.50
108.5	16,980	6,502	0.3829	0.6171	37.50
109.5	10,478		0.0000	1.0000	23.14
110.5	6,726		0.0000	1.0000	23.14
111.5	6,726		0.0000	1.0000	23.14
112.5	6,726		0.0000	1.0000	23.14
113.5	6,726		0.0000	1.0000	23.14
114.5	6,726		0.0000	1.0000	23.14
115.5	6,726		0.0000	1.0000	23.14
116.5	2,100		0.0000	1.0000	23.14
117.5	2,100		0.0000	1.0000	23.14
118.5	2,100		0.0000	1.0000	23.14



MISSOURI AMERICAN WATER COMPANY

ACCOUNT 304.30 STRUCTURES & IMPROVEMENTS - WATER TREATMENT

ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 28.5 1 EXPERIENCE ANALYSIS
 PLACEMENT BAND 1898-2008 EXPERIENCE BAND 1939-2008

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	8,215,508	4,820	0.0006	0.9994	94.12
40.5	5,001,990	438	0.0001	0.9999	94.06
41.5	4,651,602	25,858	0.0056	0.9944	94.05
42.5	4,622,084	22,073	0.0048	0.9952	93.52
43.5	4,547,624	31,579	0.0069	0.9931	93.07
44.5	3,596,583	1,012	0.0003	0.9997	92.43
45.5	3,594,800	51,465	0.0143	0.9857	92.40
46.5	3,528,657	3,721	0.0011	0.9989	91.08
47.5	3,521,694	1,778	0.0005	0.9995	90.98
48.5	3,178,853	1,886	0.0006	0.9994	90.93
49.5	3,065,632	1,657	0.0005	0.9995	90.88
50.5	3,061,182	49,201	0.0161	0.9839	90.83
51.5	2,993,308		0.0000	1.0000	89.37
52.5	2,650,564	1,973	0.0007	0.9993	89.37
53.5	1,837,038	90	0.0000	1.0000	89.31
54.5	1,820,684	2,171	0.0012	0.9988	89.31
55.5	918,635	1,431	0.0016	0.9984	89.20
56.5	906,093	11,691	0.0129	0.9871	89.06
57.5	893,315	22,321	0.0250	0.9750	87.91
58.5	867,204	340	0.0004	0.9996	85.71
59.5	866,671	4,963	0.0057	0.9943	85.68
60.5	861,688	1,692	0.0020	0.9980	85.19
61.5	817,595	211,263	0.2584	0.7416	85.02
62.5	606,232		0.0000	1.0000	63.05
63.5	606,134	66	0.0001	0.9999	63.05
64.5	605,324		0.0000	1.0000	63.04
65.5	605,324	3,264	0.0054	0.9946	63.04
66.5	601,846	6	0.0000	1.0000	62.70
67.5	601,424		0.0000	1.0000	62.70
68.5	601,273	186	0.0003	0.9997	62.70
69.5	279,149	7	0.0000	1.0000	62.68
70.5	276,065		0.0000	1.0000	62.68
71.5	273,863	165	0.0006	0.9994	62.68
72.5	234,714	1,339	0.0057	0.9943	62.64
73.5	233,024	541	0.0023	0.9977	62.28
74.5	253,843	31,732	0.1250	0.8750	62.14
75.5	221,581		0.0000	1.0000	54.37
76.5	218,723		0.0000	1.0000	54.37
77.5	218,059		0.0000	1.0000	54.37
78.5	218,059		0.0000	1.0000	54.37

MISSOURI AMERICAN WATER COMPANY

ACCOUNT 304.30 STRUCTURES & IMPROVEMENTS - WATER TREATMENT

ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 28.5 1 EXPERIENCE ANALYSIS
 PLACEMENT BAND 1898-2008 EXPERIENCE BAND 1939-2008

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	196,065		0.0000	1.0000	54.37
80.5	196,027		0.0000	1.0000	54.37
81.5	121,243		0.0000	1.0000	54.37
82.5	102,247		0.0000	1.0000	54.37
83.5	74,606		0.0000	1.0000	54.37
84.5	74,606		0.0000	1.0000	54.37
85.5	45,225		0.0000	1.0000	54.37
86.5	45,225		0.0000	1.0000	54.37
87.5	45,225	3,965	0.0877	0.9123	54.37
88.5	41,260		0.0000	1.0000	49.60
89.5	41,260	342	0.0083	0.9917	49.60
90.5	40,918	395	0.0097	0.9903	49.19
91.5	40,523		0.0000	1.0000	48.71
92.5	40,438		0.0000	1.0000	48.71
93.5	40,438		0.0000	1.0000	48.71
94.5	40,438		0.0000	1.0000	48.71
95.5	33,068		0.0000	1.0000	48.71
96.5	33,068		0.0000	1.0000	48.71
97.5	33,068		0.0000	1.0000	48.71
98.5	33,068		0.0000	1.0000	48.71
99.5	33,068		0.0000	1.0000	48.71
100.5	33,068		0.0000	1.0000	48.71
101.5	33,068	2,045	0.0618	0.9382	48.71
102.5	31,024		0.0000	1.0000	45.70
103.5	31,024		0.0000	1.0000	45.70
104.5	31,024		0.0000	1.0000	45.70
105.5	1,856		0.0000	1.0000	45.70
106.5					45.70
TOTAL	1,350,241,493	1,803,788			

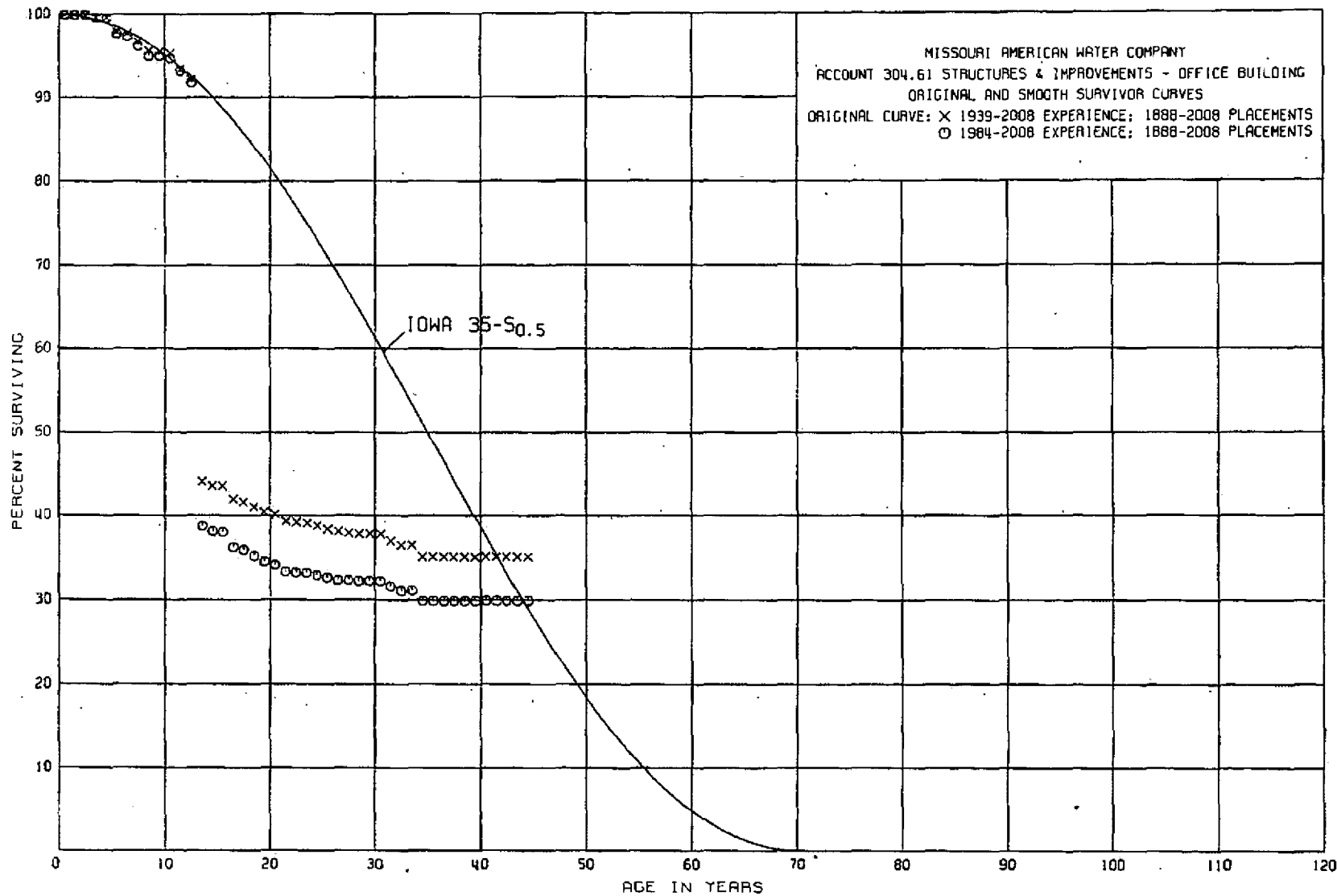
MISSOURI AMERICAN WATER COMPANY

ACCOUNT 304.30 STRUCTURES & IMPROVEMENTS - WATER TREATMENT

ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 29.4 2 EXPERIENCE ANALYSIS
 PLACEMENT BAND 1898-2008 EXPERIENCE BAND 1984-2008

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	162,076		0.0000	1.0000	51.16
80.5	191,205		0.0000	1.0000	51.16
81.5	118,277		0.0000	1.0000	51.16
82.5	99,281		0.0000	1.0000	51.16
83.5	71,640		0.0000	1.0000	51.16
84.5	71,640		0.0000	1.0000	51.16
85.5	45,225		0.0000	1.0000	51.16
86.5	45,225		0.0000	1.0000	51.16
87.5	45,225	3,965	0.0877	0.9123	51.16
88.5	41,260		0.0000	1.0000	46.67
89.5	41,260	342	0.0083	0.9917	46.67
90.5	40,918	395	0.0097	0.9903	46.28
91.5	40,523		0.0000	1.0000	45.83
92.5	40,438		0.0000	1.0000	45.83
93.5	40,438		0.0000	1.0000	45.83
94.5	40,438		0.0000	1.0000	45.83
95.5	33,068		0.0000	1.0000	45.83
96.5	33,068		0.0000	1.0000	45.83
97.5	33,068		0.0000	1.0000	45.83
98.5	33,068		0.0000	1.0000	45.83
99.5	33,068		0.0000	1.0000	45.83
100.5	33,068		0.0000	1.0000	45.83
101.5	33,068	2,045	0.0618	0.9382	45.83
102.5	31,024		0.0000	1.0000	43.00
103.5	31,024		0.0000	1.0000	43.00
104.5	31,024		0.0000	1.0000	43.00
105.5	1,856		0.0000	1.0000	43.00
106.5					43.00
TOTAL	1,081,027,211	1,666,681			



MISSOURI AMERICAN WATER COMPANY

ACCOUNT 304.61 STRUCTURES & IMPROVEMENTS - OFFICE BUILDING

ORIGINAL LIFE TABLE

AVG AGE RET 13.0
 PLACEMENT BAND 1888-2008

1

EXPERIENCE ANALYSIS
 EXPERIENCE BAND 1939-2008

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	8,741,247		0.0000	1.0000	100.00
0.5	3,204,409		0.0000	1.0000	100.00
1.5	2,265,953	497	0.0002	0.9998	100.00
2.5	2,218,615	7,808	0.0035	0.9965	99.98
3.5	2,205,095	955	0.0004	0.9996	99.63
4.5	2,045,467	34,022	0.0166	0.9834	99.59
5.5	1,988,384	5,105	0.0026	0.9974	97.94
6.5	1,947,127	19,684	0.0101	0.9899	97.69
7.5	1,884,339	20,916	0.0111	0.9889	96.70
8.5	1,850,555	1,662	0.0009	0.9991	95.63
9.5	1,841,997	4,444	0.0024	0.9976	95.54
10.5	1,796,872	35,366	0.0197	0.9803	95.31
11.5	1,725,637	22,369	0.0130	0.9870	93.43
12.5	1,643,564	858,969	0.5226	0.4774	92.22
13.5	754,251	8,886	0.0118	0.9882	44.03
14.5	660,325	882	0.0013	0.9987	43.51
15.5	623,695	21,938	0.0352	0.9648	43.45
16.5	558,914	4,767	0.0085	0.9915	41.92
17.5	544,757	7,952	0.0146	0.9854	41.56
18.5	389,512	4,939	0.0127	0.9873	40.95
19.5	384,573	3,335	0.0087	0.9913	40.43
20.5	368,385	7,183	0.0195	0.9805	40.08
21.5	361,202	727	0.0020	0.9980	39.30
22.5	296,762	750	0.0025	0.9975	39.22
23.5	289,140	2,516	0.0087	0.9913	39.12
24.5	284,063	2,780	0.0098	0.9902	38.78
25.5	279,084	2,002	0.0072	0.9928	38.40
26.5	242,269	1,660	0.0069	0.9931	38.12
27.5	239,684	443	0.0018	0.9982	37.86
28.5	238,720		0.0000	1.0000	37.79
29.5	231,270		0.0000	1.0000	37.79
30.5	231,270	4,733	0.0205	0.9795	37.79
31.5	231,738	3,594	0.0155	0.9845	37.02
32.5	228,145		0.0000	1.0000	36.45
33.5	227,490	8,378	0.0368	0.9632	36.45
34.5	219,113		0.0000	1.0000	35.11
35.5	216,660	61	0.0003	0.9997	35.11
36.5	216,599		0.0000	1.0000	35.10
37.5	130,837		0.0000	1.0000	35.10
38.5	130,837		0.0000	1.0000	35.10

MISSOURI AMERICAN WATER COMPANY

ACCOUNT 304.61 STRUCTURES & IMPROVEMENTS - OFFICE BUILDING

ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 13.0 1 EXPERIENCE ANALYSIS
 PLACEMENT BAND 1888-2008 EXPERIENCE BAND 1939-2008

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	130,540		0.0000	1.0000	35.10
40.5	130,540		0.0000	1.0000	35.10
41.5	130,771		0.0000	1.0000	35.10
42.5	130,659		0.0000	1.0000	35.10
43.5	118,381		0.0000	1.0000	35.10
44.5	118,221	229	0.0019	0.9981	35.10
45.5	65,047		0.0000	1.0000	35.03
46.5	31,252		0.0000	1.0000	35.03
47.5	31,252		0.0000	1.0000	35.03
48.5	6,402		0.0000	1.0000	35.03
49.5	6,402		0.0000	1.0000	35.03
50.5	7,051		0.0000	1.0000	35.03
51.5	7,002		0.0000	1.0000	35.03
52.5	5,056		0.0000	1.0000	35.03
53.5	4,492		0.0000	1.0000	35.03
54.5	4,492		0.0000	1.0000	35.03
55.5	4,492		0.0000	1.0000	35.03
56.5	4,492		0.0000	1.0000	35.03
57.5	4,465		0.0000	1.0000	35.03
58.5	4,465		0.0000	1.0000	35.03
59.5	4,465		0.0000	1.0000	35.03
60.5	4,465		0.0000	1.0000	35.03
61.5	4,465	95	0.0213	0.9787	35.03
62.5	4,370		0.0000	1.0000	34.28
63.5	4,370		0.0000	1.0000	34.28
64.5	4,370		0.0000	1.0000	34.28
65.5	4,370		0.0000	1.0000	34.28
66.5	3,963		0.0000	1.0000	34.28
67.5	3,963		0.0000	1.0000	34.28
68.5	3,963		0.0000	1.0000	34.28
69.5	3,963		0.0000	1.0000	34.28
70.5	3,963		0.0000	1.0000	34.28
71.5	3,963		0.0000	1.0000	34.28
72.5	3,963		0.0000	1.0000	34.28
73.5	3,879		0.0000	1.0000	34.28
74.5	3,879		0.0000	1.0000	34.28
75.5	3,879		0.0000	1.0000	34.28
76.5	3,879		0.0000	1.0000	34.28
77.5	3,879		0.0000	1.0000	34.28
78.5	3,879		0.0000	1.0000	34.28

MISSOURI AMERICAN WATER COMPANY

ACCOUNT 304.61 STRUCTURES & IMPROVEMENTS - OFFICE BUILDING

ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 13.0 1 EXPERIENCE ANALYSIS
 PLACEMENT BAND 1888-2008 EXPERIENCE BAND 1939-2008

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	34.28
80.5	3,173		0.0000	1.0000	34.28
81.5	2,306		0.0000	1.0000	34.28
82.5	2,306		0.0000	1.0000	34.28
83.5	2,306		0.0000	1.0000	34.28
84.5	2,306		0.0000	1.0000	34.28
85.5	2,084		0.0000	1.0000	34.28
86.5	2,074		0.0000	1.0000	34.28
87.5	2,074		0.0000	1.0000	34.28
88.5	2,074		0.0000	1.0000	34.28
89.5	2,074		0.0000	1.0000	34.28
90.5	2,074		0.0000	1.0000	34.28
91.5	2,074		0.0000	1.0000	34.28
92.5	2,074		0.0000	1.0000	34.28
93.5	2,074		0.0000	1.0000	34.28
94.5	2,074		0.0000	1.0000	34.28
95.5	2,074		0.0000	1.0000	34.28
96.5	2,074		0.0000	1.0000	34.28
97.5	2,074		0.0000	1.0000	34.28
98.5	2,074		0.0000	1.0000	34.28
99.5	1,176		0.0000	1.0000	34.28
100.5	1,176		0.0000	1.0000	34.28
101.5	1,176		0.0000	1.0000	34.28
102.5	1,176		0.0000	1.0000	34.28
103.5	1,176		0.0000	1.0000	34.28
104.5	1,176		0.0000	1.0000	34.28
105.5	1,176		0.0000	1.0000	34.28
106.5	1,176		0.0000	1.0000	34.28
107.5	1,176		0.0000	1.0000	34.28
108.5	1,176		0.0000	1.0000	34.28
109.5	1,176		0.0000	1.0000	34.28
110.5	1,176		0.0000	1.0000	34.28
111.5	945		0.0000	1.0000	34.28
112.5	945		0.0000	1.0000	34.28
113.5	945		0.0000	1.0000	34.28
114.5	945		0.0000	1.0000	34.28
115.5	945		0.0000	1.0000	34.28
116.5	945		0.0000	1.0000	34.28
117.5	945		0.0000	1.0000	34.28
118.5	945		0.0000	1.0000	34.28

MISSOURI AMERICAN WATER COMPANY

ACCOUNT 304.61 STRUCTURES & IMPROVEMENTS - OFFICE BUILDING

ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 13.0 1 EXPERIENCE ANALYSIS
 PLACEMENT BAND 1888-2008 EXPERIENCE BAND 1939-2008

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	34.28
120.5					34.28
TOTAL	45,033,859	1,099,647			

MISSOURI AMERICAN WATER COMPANY

ACCOUNT 304.61 STRUCTURES & IMPROVEMENTS - OFFICE BUILDING

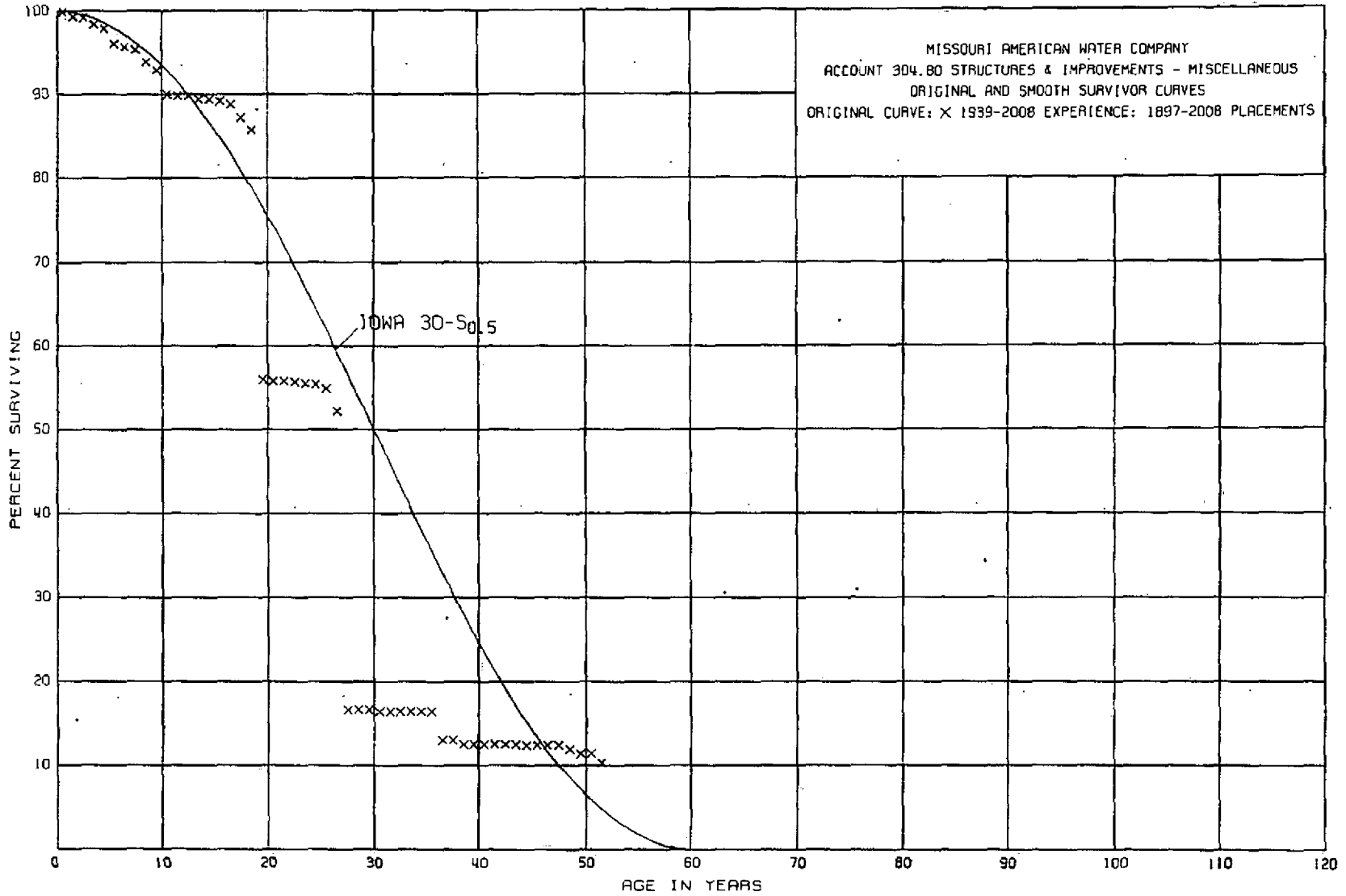
ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 13.0
PLACEMENT BAND 1888-2008

2

EXPERIENCE ANALYSIS
EXPERIENCE BAND 1984-2008

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	28.66
80.5	1,997		0.0000	1.0000	28.66
81.5	1,130		0.0000	1.0000	28.66
82.5	1,130		0.0000	1.0000	28.66
83.5	1,130		0.0000	1.0000	28.66
84.5	1,130		0.0000	1.0000	28.66
85.5	908		0.0000	1.0000	28.66
86.5	1,129		0.0000	1.0000	28.66
87.5	1,129		0.0000	1.0000	28.66
88.5	1,129		0.0000	1.0000	28.66
89.5	1,129		0.0000	1.0000	28.66
90.5	1,129		0.0000	1.0000	28.66
91.5	1,129		0.0000	1.0000	28.66
92.5	1,129		0.0000	1.0000	28.66
93.5	1,129		0.0000	1.0000	28.66
94.5	1,129		0.0000	1.0000	28.66
95.5	2,074		0.0000	1.0000	28.66
96.5	2,074		0.0000	1.0000	28.66
97.5	2,074		0.0000	1.0000	28.66
98.5	2,074		0.0000	1.0000	28.66
99.5	1,176		0.0000	1.0000	28.66
100.5	1,176		0.0000	1.0000	28.66
101.5	1,176		0.0000	1.0000	28.66
102.5	1,176		0.0000	1.0000	28.66
103.5	1,176		0.0000	1.0000	28.66
104.5	1,176		0.0000	1.0000	28.66
105.5	1,176		0.0000	1.0000	28.66
106.5	1,176		0.0000	1.0000	28.66
107.5	1,176		0.0000	1.0000	28.66
108.5	1,176		0.0000	1.0000	28.66
109.5	1,176		0.0000	1.0000	28.66
110.5	1,176		0.0000	1.0000	28.66
111.5	945		0.0000	1.0000	28.66
112.5	945		0.0000	1.0000	28.66
113.5	945		0.0000	1.0000	28.66
114.5	945		0.0000	1.0000	28.66
115.5	945		0.0000	1.0000	28.66
116.5	945		0.0000	1.0000	28.66
117.5	945		0.0000	1.0000	28.66
118.5	945		0.0000	1.0000	28.66



MISSOURI AMERICAN WATER COMPANY

ACCOUNT 304.80 STRUCTURES & IMPROVEMENTS - MISCELLANEOUS

ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 19.0		1		EXPERIENCE ANALYSIS	
PLACEMENT BAND 1897-2008				EXPERIENCE BAND 1939-2008	
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	118,589	79	0.0007	0.9993	12.50
40.5	118,510		0.0000	1.0000	12.49
41.5	119,291		0.0000	1.0000	12.49
42.5	118,611		0.0000	1.0000	12.49
43.5	118,611	602	0.0051	0.9949	12.49
44.5	118,009		0.0000	1.0000	12.43
45.5	118,009		0.0000	1.0000	12.43
46.5	116,739		0.0000	1.0000	12.43
47.5	100,047	4,592	0.0459	0.9541	12.43
48.5	90,155	3,538	0.0392	0.9608	11.86
49.5	80,833		0.0000	1.0000	11.40
50.5	80,329	7,565	0.0942	0.9058	11.40
51.5	51,161		0.0000	1.0000	10.33
52.5	51,161		0.0000	1.0000	10.33
53.5	51,161		0.0000	1.0000	10.33
54.5	51,161		0.0000	1.0000	10.33
55.5	51,150		0.0000	1.0000	10.33
56.5	51,054		0.0000	1.0000	10.33
57.5	42,393		0.0000	1.0000	10.33
58.5	42,277	296	0.0070	0.9930	10.33
59.5	41,981	68	0.0016	0.9984	10.26
60.5	41,914	40	0.0010	0.9990	10.24
61.5	40,137		0.0000	1.0000	10.23
62.5	39,411		0.0000	1.0000	10.23
63.5	39,411	17	0.0004	0.9996	10.23
64.5	37,779		0.0000	1.0000	10.23
65.5	22,452		0.0000	1.0000	10.23
66.5	22,452		0.0000	1.0000	10.23
67.5	22,452		0.0000	1.0000	10.23
68.5	22,452		0.0000	1.0000	10.23
69.5	22,452		0.0000	1.0000	10.23
70.5	21,364	38	0.0018	0.9982	10.23
71.5	21,326		0.0000	1.0000	10.21
72.5	20,789	250	0.0120	0.9880	10.21
73.5	20,539		0.0000	1.0000	10.09
74.5	20,539	11,936	0.5811	0.4189	10.09
75.5	8,603		0.0000	1.0000	4.23
76.5	8,603		0.0000	1.0000	4.23
77.5	8,509		0.0000	1.0000	4.23
78.5	8,509		0.0000	1.0000	4.23

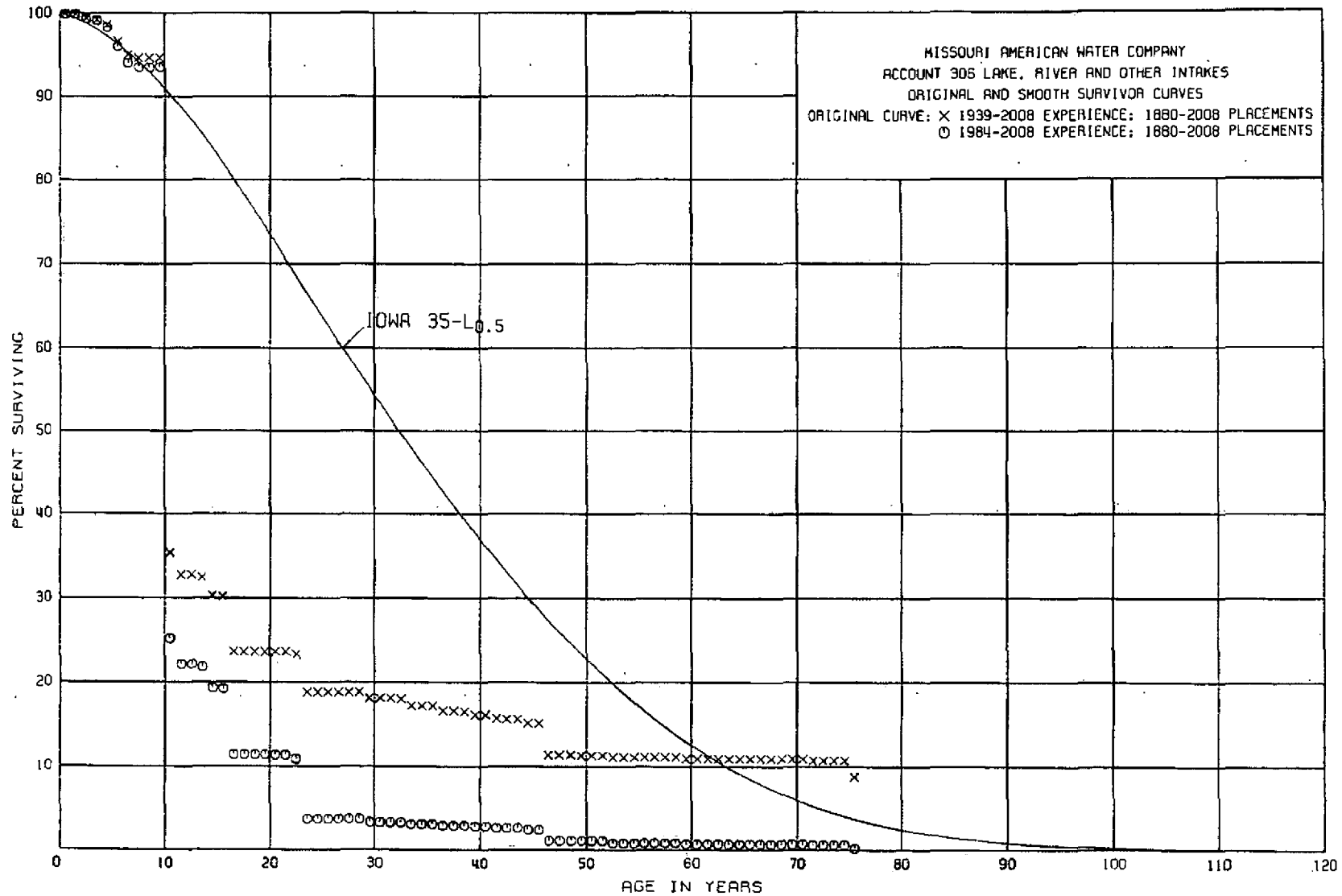
MISSOURI AMERICAN WATER COMPANY

ACCOUNT 304.80 STRUCTURES & IMPROVEMENTS - MISCELLANEOUS

ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 19.0 1 EXPERIENCE ANALYSIS
 PLACEMENT BAND 1897-2008 EXPERIENCE BAND 1939-2008

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	8,157		0.0000	1.0000	4.23
80.5	8,052		0.0000	1.0000	4.23
81.5	6,488		0.0000	1.0000	4.23
82.5	5,826		0.0000	1.0000	4.23
83.5	5,826		0.0000	1.0000	4.23
84.5	5,826		0.0000	1.0000	4.23
85.5	5,826		0.0000	1.0000	4.23
86.5	5,826		0.0000	1.0000	4.23
87.5	5,826	1,477	0.2535	0.7465	4.23
88.5	4,349		0.0000	1.0000	3.16
89.5	4,349		0.0000	1.0000	3.16
90.5	4,349		0.0000	1.0000	3.16
91.5	4,349		0.0000	1.0000	3.16
92.5	4,349		0.0000	1.0000	3.16
93.5	4,349		0.0000	1.0000	3.16
94.5	4,349		0.0000	1.0000	3.16
95.5	4,252		0.0000	1.0000	3.16
96.5	2,320		0.0000	1.0000	3.16
97.5	2,320		0.0000	1.0000	3.16
98.5	2,298	66	0.0287	0.9713	3.16
99.5	2,232		0.0000	1.0000	3.07
100.5	2,232		0.0000	1.0000	3.07
101.5	942		0.0000	1.0000	3.07
102.5	942	782	0.8301	0.1699	3.07
103.5	160		0.0000	1.0000	0.52
104.5	160		0.0000	1.0000	0.52
105.5	160		0.0000	1.0000	0.52
106.5					0.52
TOTAL	74,297,179	1,331,679			



MISSOURI AMERICAN WATER COMPANY

ACCOUNT 306 LAKE, RIVER AND OTHER INTAKES

ORIGINAL LIFE TABLE

AVG AGE RET 23.3 1 EXPERIENCE ANALYSIS
 PLACEMENT BAND 1880-2008 EXPERIENCE BAND 1939-2008

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	2,161,191		0.0000	1.0000	100.00
0.5	2,096,422		0.0000	1.0000	100.00
1.5	1,603,150	10,275	0.0064	0.9936	100.00
2.5	1,592,875	1,900	0.0012	0.9988	99.36
3.5	1,590,975	11,144	0.0070	0.9930	99.24
4.5	1,276,872	24,844	0.0195	0.9805	98.55
5.5	1,252,028	21,193	0.0169	0.9831	96.63
6.5	1,230,835	5,623	0.0046	0.9954	95.00
7.5	1,218,886		0.0000	1.0000	94.56
8.5	1,218,886		0.0000	1.0000	94.56
9.5	1,221,041	764,059	0.6257	0.3743	94.56
10.5	456,982	34,808	0.0762	0.9238	35.39
11.5	422,174	473	0.0011	0.9989	32.69
12.5	421,782	3,268	0.0077	0.9923	32.65
13.5	449,395	29,765	0.0662	0.9338	32.40
14.5	417,746	1,000	0.0024	0.9976	30.26
15.5	416,746	90,407	0.2169	0.7831	30.19
16.5	326,339		0.0000	1.0000	23.64
17.5	326,339		0.0000	1.0000	23.64
18.5	326,339		0.0000	1.0000	23.64
19.5	326,339		0.0000	1.0000	23.64
20.5	257,469		0.0000	1.0000	23.64
21.5	257,469	3,240	0.0126	0.9874	23.64
22.5	252,303	48,966	0.1941	0.8059	23.34
23.5	203,337		0.0000	1.0000	18.81
24.5	203,371		0.0000	1.0000	18.81
25.5	203,371		0.0000	1.0000	18.81
26.5	205,165		0.0000	1.0000	18.81
27.5	205,397		0.0000	1.0000	18.81
28.5	209,166	8,039	0.0384	0.9616	18.81
29.5	201,731		0.0000	1.0000	18.09
30.5	201,834	147	0.0007	0.9993	18.09
31.5	201,956	784	0.0039	0.9961	18.08
32.5	210,932	10,068	0.0477	0.9523	18.01
33.5	200,865		0.0000	1.0000	17.15
34.5	200,865		0.0000	1.0000	17.15
35.5	216,714	7,268	0.0335	0.9665	17.15
36.5	231,476	100	0.0004	0.9996	16.58
37.5	243,668	954	0.0039	0.9961	16.57
38.5	244,320	6,032	0.0247	0.9753	16.51

MISSOURI AMERICAN WATER COMPANY
ACCOUNT 306 LAKE, RIVER AND OTHER INTAKES

ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 23.3		1		EXPERIENCE ANALYSIS	
PLACEMENT BAND 1880-2008				EXPERIENCE BAND 1939-2008	
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	15,520	14,937	0.9624	0.0376	1.54
120.5					0.06
TOTAL	34,513,597	1,316,798			

MISSOURI AMERICAN WATER COMPANY
 ACCOUNT 306 LAKE, RIVER AND OTHER INTAKES

ORIGINAL LIFE TABLE

AVG AGE RET 23.3 2 EXPERIENCE ANALYSIS
 PLACEMENT BAND 1880-2008 EXPERIENCE BAND 1984-2008

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	1,936,268		0.0000	1.0000	100.00
0.5	1,871,500		0.0000	1.0000	100.00
1.5	1,378,228	10,275	0.0075	0.9925	100.00
2.5	1,367,953	1,900	0.0014	0.9986	99.25
3.5	1,366,053	11,144	0.0082	0.9918	99.11
4.5	1,051,950	24,844	0.0236	0.9764	98.30
5.5	1,027,105	21,193	0.0206	0.9794	95.98
6.5	1,058,146	5,623	0.0053	0.9947	94.00
7.5	1,046,197		0.0000	1.0000	93.50
8.5	1,046,197		0.0000	1.0000	93.50
9.5	1,046,197	764,059	0.7303	0.2697	93.50
10.5	282,138	34,808	0.1234	0.8766	25.22
11.5	248,267	473	0.0019	0.9981	22.11
12.5	259,073	3,268	0.0126	0.9874	22.07
13.5	255,806	29,765	0.1164	0.8836	21.79
14.5	224,157	1,000	0.0045	0.9955	19.25
15.5	223,157	90,407	0.4051	0.5949	19.16
16.5	141,200		0.0000	1.0000	11.40
17.5	141,200		0.0000	1.0000	11.40
18.5	141,200		0.0000	1.0000	11.40
19.5	141,200		0.0000	1.0000	11.40
20.5	72,330		0.0000	1.0000	11.40
21.5	74,513	3,240	0.0435	0.9565	11.40
22.5	73,670	48,966	0.6647	0.3353	10.90
23.5	24,705		0.0000	1.0000	3.65
24.5	30,878		0.0000	1.0000	3.65
25.5	30,878		0.0000	1.0000	3.65
26.5	75,243		0.0000	1.0000	3.65
27.5	85,528		0.0000	1.0000	3.65
28.5	85,528	8,039	0.0940	0.9060	3.65
29.5	148,633		0.0000	1.0000	3.31
30.5	149,711	147	0.0010	0.9990	3.31
31.5	149,564	784	0.0052	0.9948	3.31
32.5	150,206	10,068	0.0670	0.9330	3.29
33.5	140,139		0.0000	1.0000	3.07
34.5	140,139		0.0000	1.0000	3.07
35.5	142,416	7,268	0.0510	0.9490	3.07
36.5	135,149	100	0.0007	0.9993	2.91
37.5	139,039	954	0.0069	0.9931	2.91
38.5	138,915	6,032	0.0434	0.9566	2.89

MISSOURI AMERICAN WATER COMPANY

ACCOUNT 306 LAKE, RIVER AND OTHER INTAKES

ORIGINAL LIFE TABLE, CONT.

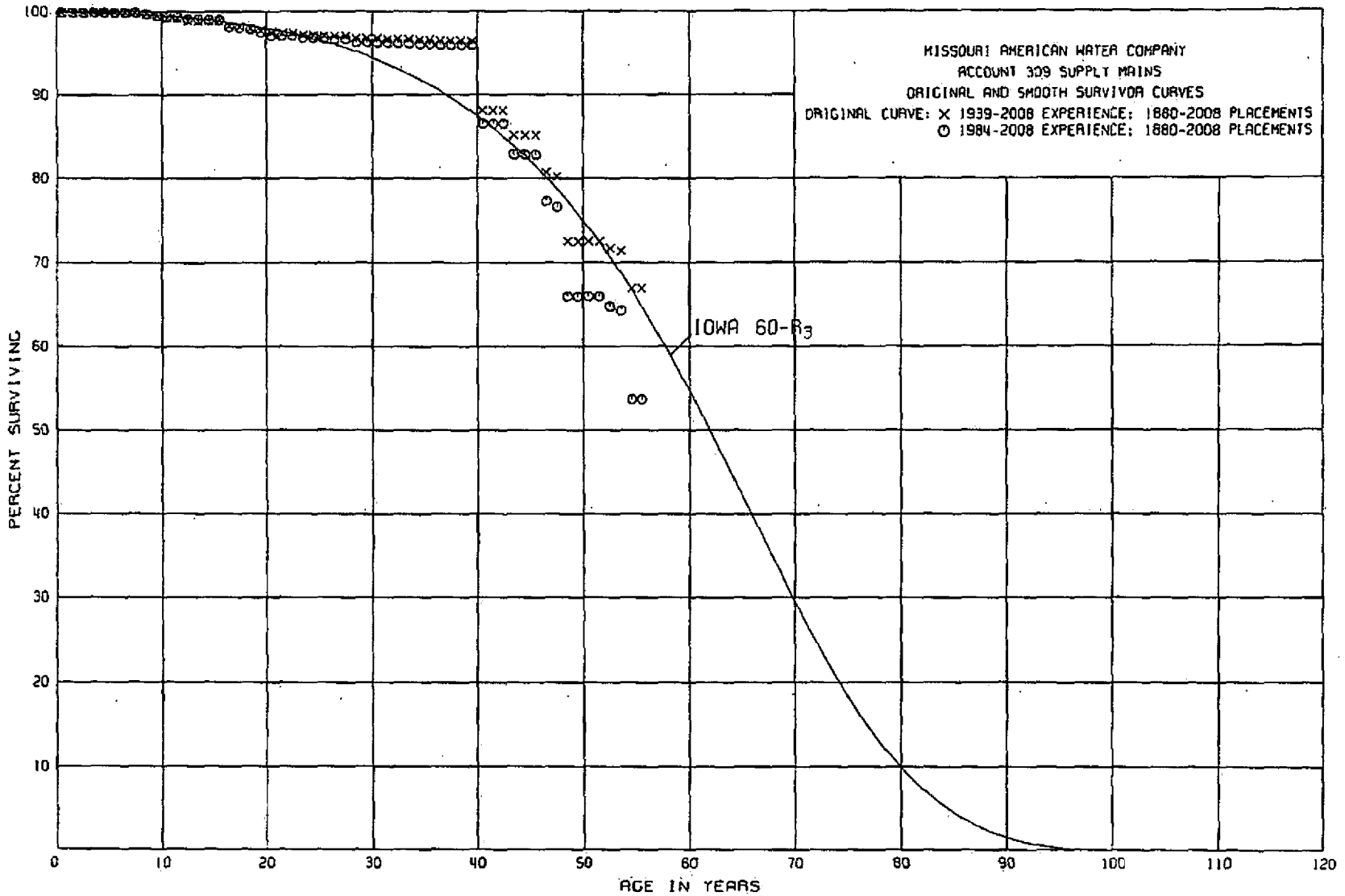
AVG AGE RET 23.3 2 EXPERIENCE ANALYSIS
 PLACEMENT BAND 1880-2008 EXPERIENCE BAND 1984-2008

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	132,882		0.0000	1.0000	2.76
40.5	134,871	6,173	0.0458	0.9542	2.76
41.5	128,698	1,000	0.0078	0.9922	2.63
42.5	127,864		0.0000	1.0000	2.61
43.5	127,947	8,667	0.0677	0.9323	2.61
44.5	119,280		0.0000	1.0000	2.43
45.5	119,280	63,877	0.5355	0.4645	2.43
46.5	53,220	146	0.0027	0.9973	1.13
47.5	53,073		0.0000	1.0000	1.13
48.5	53,073	1,593	0.0300	0.9700	1.13
49.5	51,480		0.0000	1.0000	1.10
50.5	51,480		0.0000	1.0000	1.10
51.5	7,215	2,278	0.3157	0.6843	1.10
52.5	4,937		0.0000	1.0000	0.75
53.5	4,937		0.0000	1.0000	0.75
54.5	7,092		0.0000	1.0000	0.75
55.5	7,092		0.0000	1.0000	0.75
56.5	7,092		0.0000	1.0000	0.75
57.5	7,172		0.0000	1.0000	0.75
58.5	38,053	3,755	0.0987	0.9013	0.75
59.5	34,298		0.0000	1.0000	0.68
60.5	34,298		0.0000	1.0000	0.68
61.5	34,298		0.0000	1.0000	0.68
62.5	32,262		0.0000	1.0000	0.68
63.5	31,432		0.0000	1.0000	0.68
64.5	31,432		0.0000	1.0000	0.68
65.5	29,443		0.0000	1.0000	0.68
66.5	29,443		0.0000	1.0000	0.68
67.5	31,152		0.0000	1.0000	0.68
68.5	31,070		0.0000	1.0000	0.68
69.5	31,104		0.0000	1.0000	0.68
70.5	31,104	2,155	0.0693	0.9307	0.68
71.5	30,742		0.0000	1.0000	0.63
72.5	30,974		0.0000	1.0000	0.63
73.5	34,743	80	0.0023	0.9977	0.63
74.5	35,268	27,126	0.7691	0.2309	0.63
75.5	8,245		0.0000	1.0000	0.15
76.5	8,514		0.0000	1.0000	0.15
77.5	18,275		0.0000	1.0000	0.15
78.5	18,275		0.0000	1.0000	0.15

MISSOURI AMERICAN WATER COMPANY
ACCOUNT 306 LAKE, RIVER AND OTHER INTAKES

ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 23.3		2		EXPERIENCE ANALYSIS		
PLACEMENT BAND 1880-2008					EXPERIENCE BAND 1984-2008	
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	15,520	14,937	0.9624	0.0376	0.02	
120.5					0.00	
TOTAL	22,200,245	1,316,798				



MISSOURI AMERICAN WATER COMPANY

ACCOUNT 309 SUPPLY MAINS

ORIGINAL LIFE TABLE

AVG AGE RET 49.4
PLACEMENT BAND 1880-2008

1

EXPERIENCE ANALYSIS
EXPERIENCE BAND 1939-2008

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	21,270,422	846	0.0000	1.0000	100.00
0.5	21,142,246		0.0000	1.0000	100.00
1.5	17,281,700	134	0.0000	1.0000	100.00
2.5	17,278,433	1,157	0.0001	0.9999	100.00
3.5	17,277,276	2,020	0.0001	0.9999	99.99
4.5	17,275,256	840	0.0000	1.0000	99.98
5.5	17,239,635	5,982	0.0003	0.9997	99.98
6.5	17,114,913	13,110	0.0008	0.9992	99.95
7.5	17,125,857	30,763	0.0018	0.9982	99.87
8.5	7,270,752	11,476	0.0016	0.9984	99.69
9.5	7,255,237	26,892	0.0037	0.9963	99.53
10.5	7,167,869	9	0.0000	1.0000	99.16
11.5	7,136,805	16,190	0.0023	0.9977	99.16
12.5	7,120,498	900	0.0001	0.9999	98.93
13.5	7,082,583	983	0.0001	0.9999	98.92
14.5	7,021,514	2,071	0.0003	0.9997	98.91
15.5	4,442,213	26,220	0.0059	0.9941	98.88
16.5	4,375,924	3,277	0.0007	0.9993	98.30
17.5	4,111,195	8,768	0.0021	0.9979	98.23
18.5	4,052,748	12,057	0.0030	0.9970	98.02
19.5	3,897,598	9,535	0.0024	0.9976	97.73
20.5	3,846,158	2,967	0.0008	0.9992	97.50
21.5	3,826,130	80	0.0000	1.0000	97.42
22.5	3,794,168	7,617	0.0020	0.9980	97.42
23.5	3,040,406	2,166	0.0007	0.9993	97.23
24.5	2,730,349	1,033	0.0004	0.9996	97.16
25.5	2,727,433	985	0.0004	0.9996	97.12
26.5	2,660,392		0.0000	1.0000	97.08
27.5	2,657,324	9,017	0.0034	0.9966	97.08
28.5	2,579,889		0.0000	1.0000	96.75
29.5	2,572,856		0.0000	1.0000	96.75
30.5	2,572,617	862	0.0003	0.9997	96.75
31.5	2,484,676	1,000	0.0004	0.9996	96.72
32.5	2,477,376	296	0.0001	0.9999	96.68
33.5	2,509,483	2,861	0.0011	0.9989	96.67
34.5	2,503,529		0.0000	1.0000	96.56
35.5	2,297,539	1,115	0.0005	0.9995	96.56
36.5	2,254,472		0.0000	1.0000	96.51
37.5	1,821,560	368	0.0002	0.9998	96.51
38.5	1,820,078	1,159	0.0006	0.9994	96.49

MISSOURI AMERICAN WATER COMPANY

ACCOUNT 309 SUPPLY MAINS

ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 49.4 1 EXPERIENCE ANALYSIS
 PLACEMENT BAND 1880-2008 EXPERIENCE BAND 1939-2008

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	221,321		0.0000	1.0000	54.02
80.5	221,321		0.0000	1.0000	54.02
81.5	221,321		0.0000	1.0000	54.02
82.5	221,321		0.0000	1.0000	54.02
83.5	221,321		0.0000	1.0000	54.02
84.5	221,321	58,264	0.2633	0.7367	54.02
85.5	163,057		0.0000	1.0000	39.80
86.5	163,057		0.0000	1.0000	39.80
87.5	163,057		0.0000	1.0000	39.80
88.5	163,057	30	0.0002	0.9998	39.80
89.5	163,027	3,205	0.0197	0.9803	39.79
90.5	159,822		0.0000	1.0000	39.01
91.5	159,822	144	0.0009	0.9991	39.01
92.5	159,678		0.0000	1.0000	38.97
93.5	159,678		0.0000	1.0000	38.97
94.5	159,678	34,101	0.2136	0.7864	38.97
95.5	125,577		0.0000	1.0000	30.65
96.5	106,528		0.0000	1.0000	30.65
97.5	106,528		0.0000	1.0000	30.65
98.5	106,528		0.0000	1.0000	30.65
99.5	106,528	729	0.0068	0.9932	30.65
100.5	105,799		0.0000	1.0000	30.44
101.5	105,799		0.0000	1.0000	30.44
102.5	105,799		0.0000	1.0000	30.44
103.5	105,799		0.0000	1.0000	30.44
104.5	105,799	30,331	0.2867	0.7133	30.44
105.5	75,467	39	0.0005	0.9995	21.71
106.5	75,428	3,575	0.0474	0.9526	21.70
107.5	45,725		0.0000	1.0000	20.67
108.5	45,725	293	0.0064	0.9936	20.67
109.5	45,432		0.0000	1.0000	20.54
110.5	45,432		0.0000	1.0000	20.54
111.5	45,362		0.0000	1.0000	20.54
112.5	45,362		0.0000	1.0000	20.54
113.5	45,362		0.0000	1.0000	20.54
114.5	45,362	3,911	0.0862	0.9138	20.54
115.5	41,451		0.0000	1.0000	18.77
116.5	41,451		0.0000	1.0000	18.77
117.5	34,583		0.0000	1.0000	18.77
118.5	34,583		0.0000	1.0000	18.77

MISSOURI AMERICAN WATER COMPANY

ACCOUNT 309 SUPPLY MAINS

ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 51.6 2 EXPERIENCE ANALYSIS
 PLACEMENT BAND 1880-2008 EXPERIENCE BAND 1984-2008

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	111,545		0.0000	1.0000	15.43
80.5	114,750		0.0000	1.0000	15.43
81.5	114,750		0.0000	1.0000	15.43
82.5	144,537		0.0000	1.0000	15.43
83.5	145,266		0.0000	1.0000	15.43
84.5	145,266	58,264	0.4011	0.5989	15.43
85.5	87,001		0.0000	1.0000	9.24
86.5	87,071		0.0000	1.0000	9.24
87.5	87,071		0.0000	1.0000	9.24
88.5	117,402	30	0.0003	0.9997	9.24
89.5	117,372	3,205	0.0273	0.9727	9.24
90.5	114,167		0.0000	1.0000	8.99
91.5	114,167	144	0.0013	0.9987	8.99
92.5	121,185		0.0000	1.0000	8.98
93.5	121,185		0.0000	1.0000	8.98
94.5	121,185	34,101	0.2814	0.7186	8.98
95.5	87,084		0.0000	1.0000	6.45
96.5	68,034		0.0000	1.0000	6.45
97.5	68,034		0.0000	1.0000	6.45
98.5	71,945		0.0000	1.0000	6.45
99.5	71,945	729	0.0101	0.9899	6.45
100.5	71,216		0.0000	1.0000	6.38
101.5	71,216		0.0000	1.0000	6.38
102.5	71,350		0.0000	1.0000	6.38
103.5	105,799		0.0000	1.0000	6.38
104.5	105,799	30,331	0.2867	0.7133	6.38
105.5	75,467	39	0.0005	0.9995	4.55
106.5	75,428	3,575	0.0474	0.9526	4.55
107.5	45,725		0.0000	1.0000	4.33
108.5	45,725	293	0.0064	0.9936	4.33
109.5	45,432		0.0000	1.0000	4.30
110.5	45,432		0.0000	1.0000	4.30
111.5	45,362		0.0000	1.0000	4.30
112.5	45,362		0.0000	1.0000	4.30
113.5	45,362		0.0000	1.0000	4.30
114.5	45,362	3,911	0.0862	0.9138	4.30
115.5	41,451		0.0000	1.0000	3.93
116.5	41,451		0.0000	1.0000	3.93
117.5	34,583		0.0000	1.0000	3.93
118.5	34,583		0.0000	1.0000	3.93

MISSOURI AMERICAN WATER COMPANY

ACCOUNT 309 SUPPLY MAINS

ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 51.6 2 EXPERIENCE ANALYSIS
 PLACEMENT BAND 1880-2008 EXPERIENCE BAND 1984-2008

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	34,583	29,368	0.8492	0.1508	3.93
120.5	5,215		0.0000	1.0000	0.59
121.5	5,215		0.0000	1.0000	0.59
122.5	5,215		0.0000	1.0000	0.59
123.5	5,215		0.0000	1.0000	0.59
124.5	5,215		0.0000	1.0000	0.59
125.5	5,215		0.0000	1.0000	0.59
126.5	5,215		0.0000	1.0000	0.59
127.5	5,081		0.0000	1.0000	0.59
128.5					0.59
TOTAL	246,966,761	752,332			