

ENBRIDGE GAS UTAH, WYOMING, IDAHO

SALT LAKE CITY, UTAH

DEPRECIATION STUDY

**CALCULATED ANNUAL DEPRECIATION ACCRUALS
RELATED TO GAS PLANT
AS OF DECEMBER 31, 2022**

Prepared by:



GANNETT FLEMING

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ENBRIDGE GAS UTAH, WYOMING, IDAHO
Salt Lake City, Utah

DEPRECIATION STUDY

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RELATED TO GAS PLANT
AS OF DECEMBER 31, 2022

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, LLC
Valley Forge, Pennsylvania



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April 24, 2025

Enbridge Gas Utah, Wyoming, Idaho
333 South State Street
P.O. Box 45360
Salt Lake City, UT 84145-0360

Attention Mr. Kelly Mendenhall
Director, Regulatory Affairs

Ladies and Gentlemen:

Pursuant to your request, we have conducted a depreciation study related to the gas plant of Enbridge Gas Utah, Wyoming, Idaho ("EGUWI" or the "Company") as of December 31, 2022. The attached report presents a description of the methods used in the estimation of depreciation, the summary of annual depreciation accrual rates, the statistical support for the life and net salvage estimates and the detailed tabulations of annual and accrued depreciation.

We gratefully acknowledge the assistance of EGUWI personnel in the conduct of the study.

Respectfully submitted,

GANNETT FLEMING VALUATION
AND RATE CONSULTANTS, LLC

A handwritten signature in blue ink that reads "John F. Wiedmayer".

JOHN F. WIEDMAYER
Sr. Project Manager, Depreciation Studies

JFW:mle

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ENBRIDGE GAS UTAH, WYOMING, IDAHO

DEPRECIATION STUDY

EXECUTIVE SUMMARY

Pursuant to Enbridge Gas Utah, Wyoming, Idaho's ("EGUWI" or "Company") request, Gannett Fleming Valuation and Rate Consultants, LLC ("Gannett Fleming") conducted a depreciation study related to EGUWI's gas plant as of December 31, 2022. 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 and net salvage for each depreciable group of assets.

One of the more significant changes since the previous depreciation study as of December 31, 2017 is related to net salvage. EGUWI's current depreciation rates are based on net salvage estimates approved in the most recent depreciation filing. In the current study, particularly Account 376, Mains and Account 380, Services, the net salvage data indicates costs associated with removing retired assets from service that are significantly higher than the estimates currently in use for the Company. As a result, the proposed net salvage estimates in the depreciation study are more negative than those approved in the previous depreciation study as of December 31, 2017 which was based on a settlement. However, even with the increases in cost of removal reflected in the depreciation study, the estimates proposed for many accounts are conservative when compared to the historical data.

Another significant change is related to the decrease in the service life for Account 381.21, Meters – Transponders. The Company embarked on a major transponder replacement program which started in November 2015 and was completed in 2019. Over 1 million transponders manufactured by Elster were replaced with Itron transponders during the period 2015-2019. The Elster transponders were problematic with an unusually high percentage of meter misreads or no reads. After a couple of failed attempts to read the meter automatically via the transponder during mobile drive-bys of the customer's meter, the Company typically would perform a manual read of the problematic meter or would estimate the consumption based on historic consumption patterns if the existing transponder had failed to perform properly. The Elster transponders had an average service life of less than 10 years. The Itron transponders installed during 2015-2019 were retrofitted to the existing gas meters and have a better battery and stronger communication package than the Elster transponders (i.e., 100G vs. 500G). Technological advances to the meter and meter transponders in the realm of smaller, compact meters with transponders that have more features and two-way communications are currently being developed and are being assessed by the company for future use. New Itron gas meters currently are available with the transponders integrated with the meter. These enhanced features include pressure sensing alarms, high temperature alarms, remote shut-offs, flexible RF reading options such as mobile reads or meter reads from a fixed communication network. The reduction in service life from 15 years to 12 years for transponders is based primarily on company experience with transponders and the high degree of technological obsolescence related to transponders. For instance, approximately 600,000 of the 1,000,000 Elster transponders were replaced with Itron transponders during the years 2018 and 2019. 400,000 Elster transponders were replaced with Itron transponders during the years 2015-2022. The

Elster transponders were originally installed starting in 2004 and were replaced, as they were failing, with existing 2015 technology in the form of Itron transponders. The technology that exists in 2025 is better than 2015 and newer Itron transponders are being evaluated by the company as well as by other gas utilities.

Gannett Fleming recommends the calculated annual depreciation accrual rates set forth herein apply specifically to gas plant in service as of December 31, 2022 as summarized by Table 1 shown in Part VI of the study. Supporting analysis and calculations are provided within the study.

The study results set forth an annual depreciation expense of \$124,212,745 when applied to depreciable plant balances as of December 31, 2022. The results are summarized at the functional level as follows:

SUMMARY OF ORIGINAL COST, PROPOSED ACCRUAL RATES AND AMOUNTS

FUNCTION	ORIGINAL COST AS OF DECEMBER 31, 2022	ACCRUAL RATE	ACCRUAL AMOUNT
<u>GAS PLANT</u>			
LNG Plant	197,755,294.06	2.98	5,885,729
Distribution Plant	3,502,882,981.12	2.94	102,987,537
General Plant	<u>304,769,725.46</u>	4.99	<u>15,219,199</u>
Total Gas Plant	4,005,408,000.64	3.10	124,212,745

PART I. INTRODUCTION

ENBRIDGE GAS UTAH, WYOMING, IDAHO DEPRECIATION STUDY

PART I. INTRODUCTION

SCOPE

This report sets forth the results of the depreciation study for Enbridge Gas Utah, Wyoming, Idaho ("EGUWI"), to determine the annual depreciation accrual rates and amounts for book purposes applicable to the original cost of gas plant as of December 31, 2022. The rates and amounts are based on the straight line remaining life method of depreciation. This report also describes the concepts, methods and judgments which underlie the recommended annual depreciation accrual rates related to gas plant in service as of December 31, 2022.

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 2022, a review of Company practice and outlook as they relate to plant operation and retirement, and consideration of current practice in the gas utility industry, including knowledge of service lives and net salvage estimates used for other gas companies.

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 for 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 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 use in this study.

Service Life and Net Salvage Estimates

The service life and net salvage estimates used in the depreciation or amortization calculations were based on informed judgment which incorporated a review of management's plans, policies and outlook, a general knowledge of the gas utility industry, and comparisons of the service life and net salvage estimates from our studies of other gas utilities. The use of survivor curves to reflect the expected dispersion of retirement provides a consistent method of estimating depreciation for utility 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 estimates of future experience yielded estimated survivor curves from which the average service lives were derived.

PART II. ESTIMATION OF SURVIVOR CURVES

PART II. ESTIMATION OF SURVIVOR CURVES

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

SURVIVOR CURVES

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

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

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

Iowa Type Curves

The range of survivor characteristics usually experienced by utility and industrial properties is encompassed by a system of generalized survivor curves known as the Iowa type curves. There are four families in the Iowa system, labeled in accordance with the location of the modes of the retirements (or the portion of the frequency curve with the highest level of 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. A higher number designates a higher mode curve.

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, which constitute three of the four families, was published in 1935 in the form of the Experiment Station's Bulletin 125.

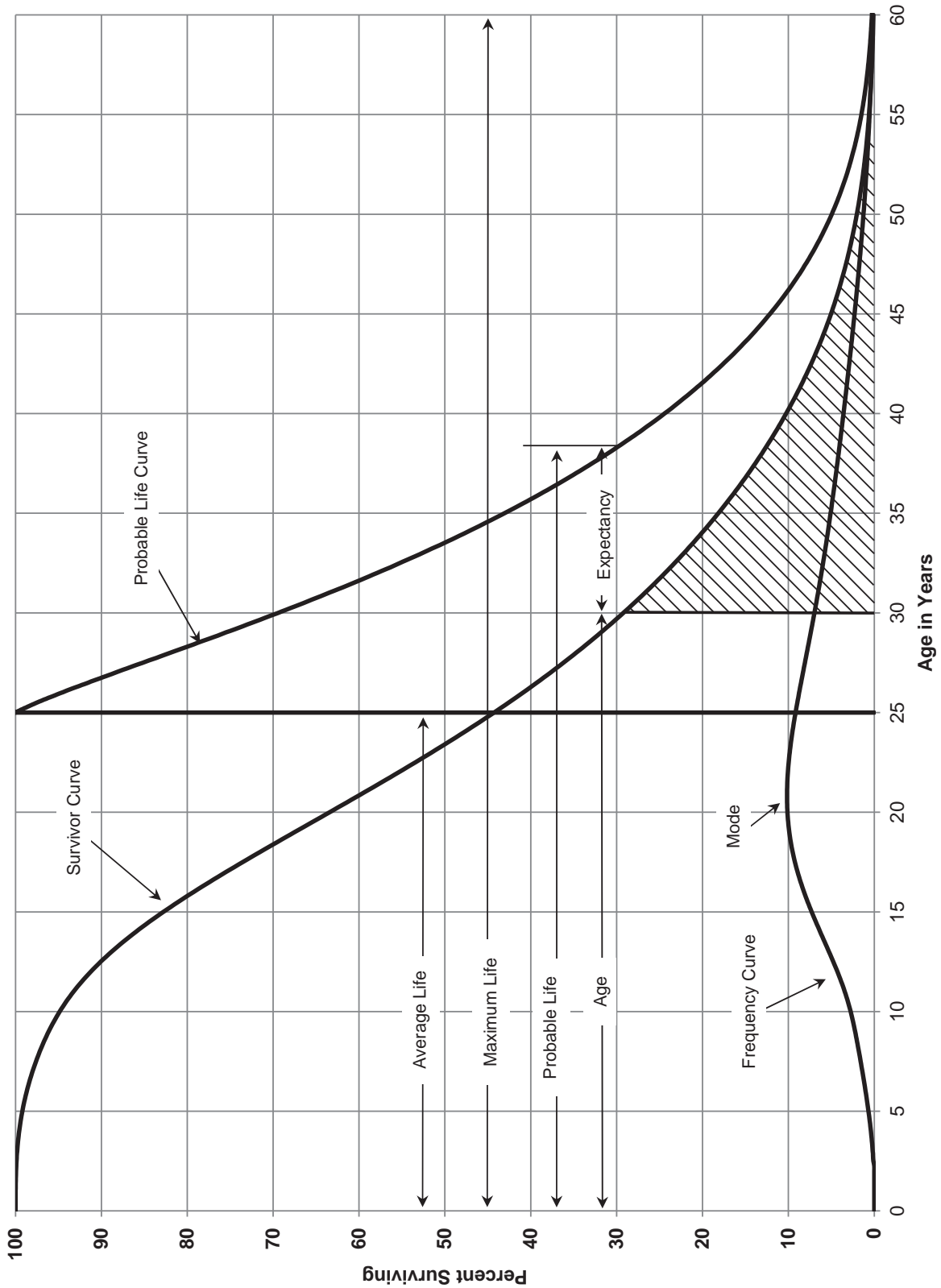


FIGURE 1. TYPICAL SURVIVOR CURVE AND DERIVED CURVES

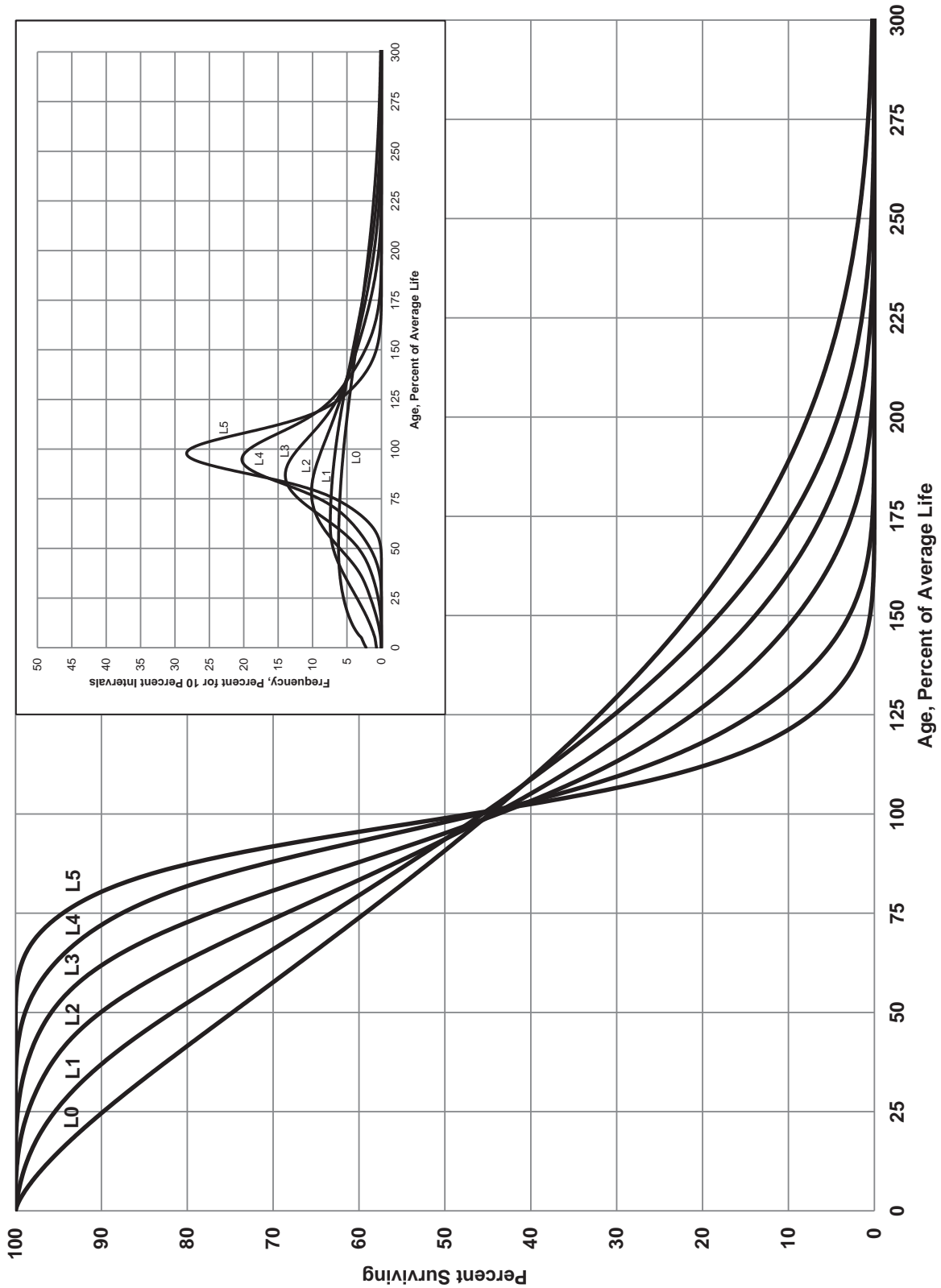


FIGURE 2. LEFT MODAL OR "L" IOWA TYPE SURVIVOR CURVES

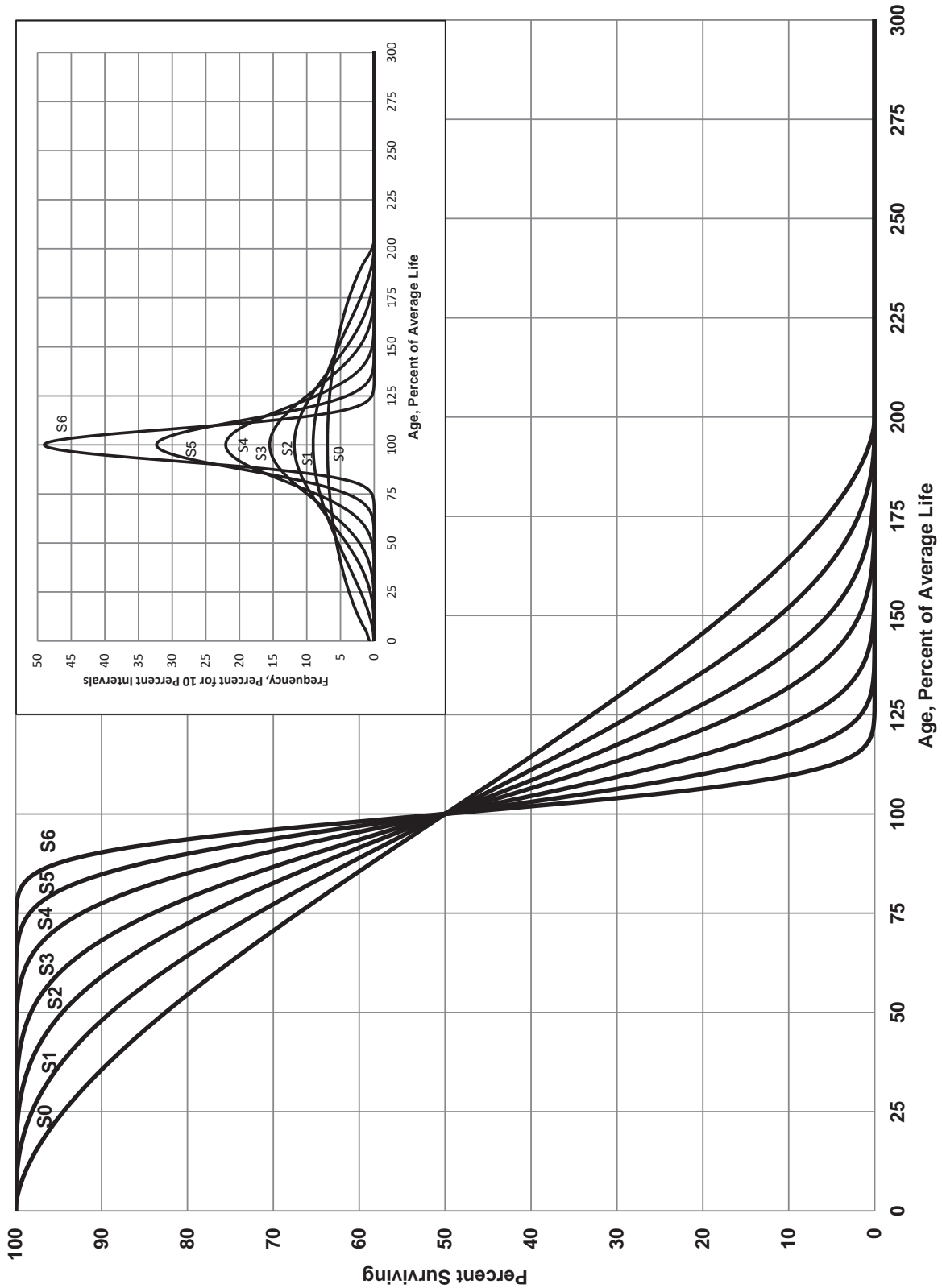


FIGURE 3. SYMMETRICAL OR "S" TYPE SURVIVOR CURVES

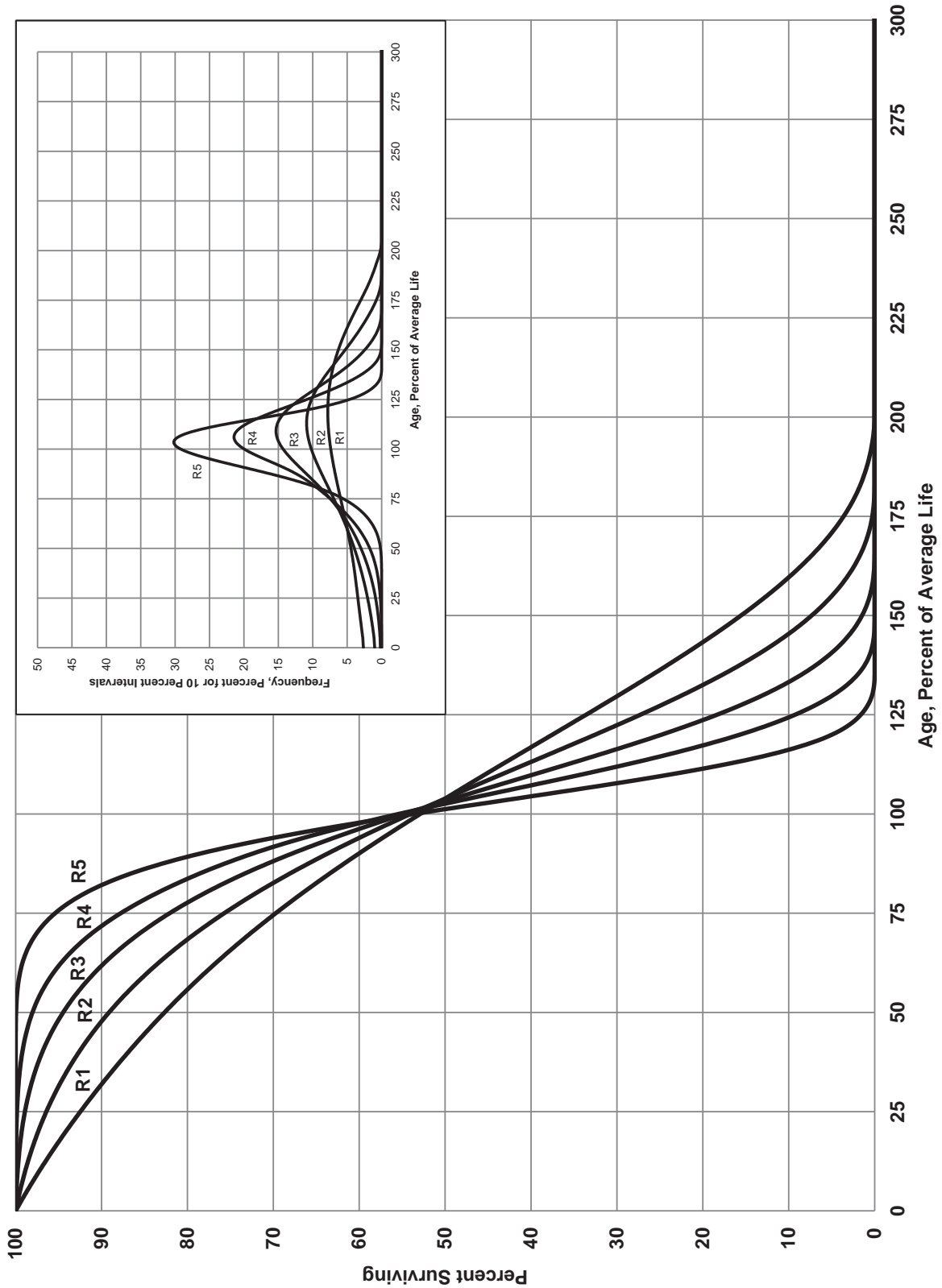


FIGURE 4. RIGHT MODAL OR "R" TYPE SURVIVOR CURVES

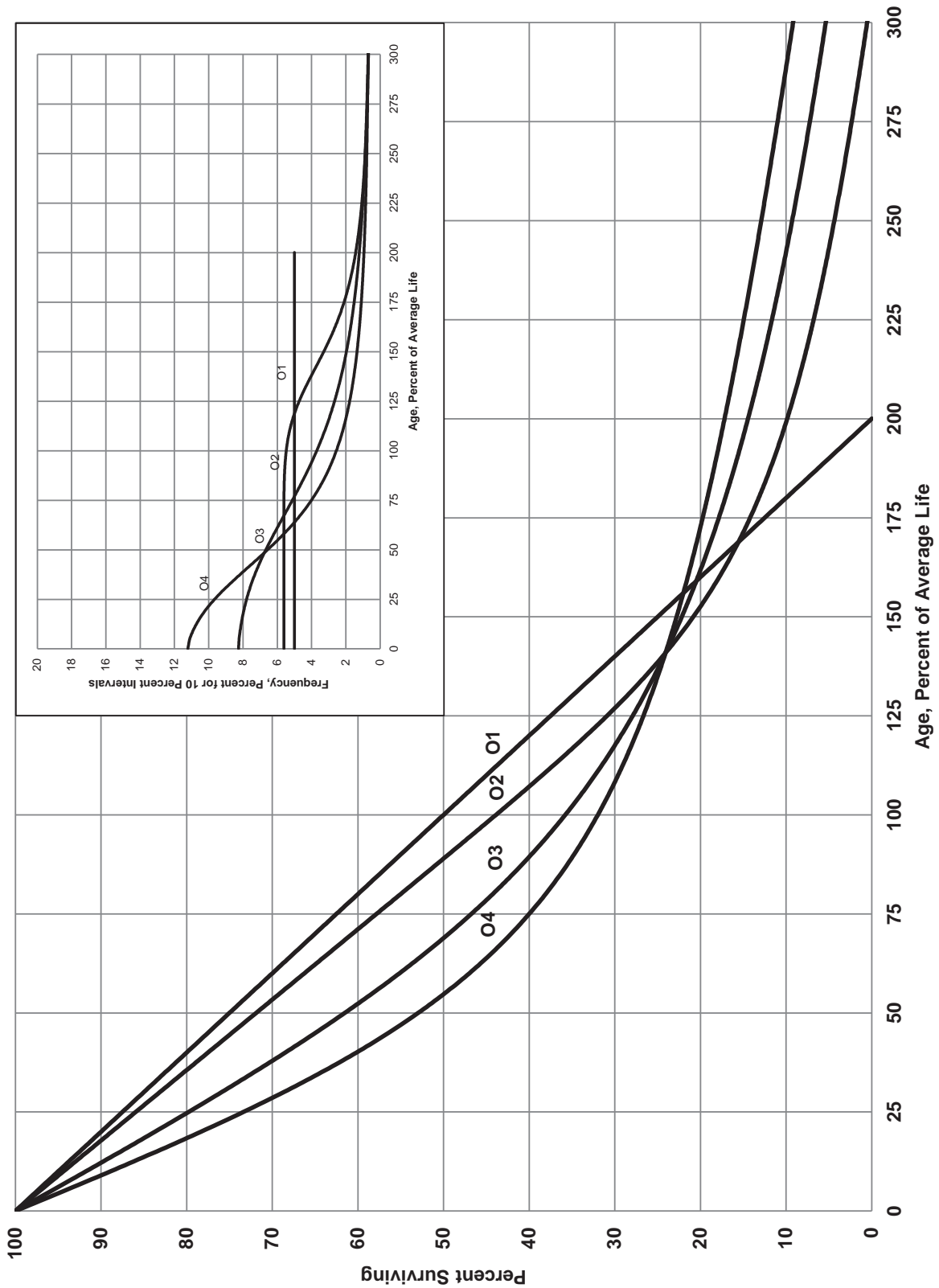


FIGURE 5. ORIGIN MODAL OR "O" IOWA TYPE SURVIVOR CURVES

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

Retirement Rate Method of Analysis

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

The average rate of retirement used in the calculation of the percent surviving for the survivor curve (life table) requires two sets of data: first, the property retired during a period of observation, identified by the property's age at retirement; and second, the property exposed to retirement at the beginning of the age intervals during the same period. The period of observation is referred to as the experience band. 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 schedules of annual aged property transactions, a schedule of plant exposed to retirement, a life table and illustrations of smoothing the stub survivor curve.

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

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

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

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

Schedules of Annual Transactions in Plant Records

The property group used to illustrate the retirement rate method is observed for the experience band 2013-2022 for which there were placements during the years 2008-2022. 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 2008 were retired in 2013. 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 2013 retirements of 2008 installations and ending with the 2022 retirements of the 2017 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 2013-2022
SUMMARIZED BY AGE INTERVAL

Experience Band 2013-2022										Placement Band 2008-2022																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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	<u>2013</u> (1)	<u>2014</u> (2)	<u>2015</u> (3)	<u>2016</u> (4)	<u>2017</u> (5)	<u>2018</u> (6)	<u>2019</u> (7)	<u>2020</u> (8)	<u>2021</u> (9)	<u>2022</u> (10)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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SCHEDULE 2. OTHER TRANSACTIONS FOR EACH YEAR 2013-2022
SUMMARIZED BY AGE INTERVAL

Experience Band 2013-2022 Placement Band 2008-2022

Acquisitions, Transfers and Sales, Thousands of Dollars												
Year Placed (1)	During Year											Age Interval (13)
	2013 (2)	2014 (3)	2015 (4)	2016 (5)	2017 (6)	2018 (7)	2019 (8)	2020 (9)	2021 (10)	2022 (11)	Total During Age Interval (12)	
2008	-	-	-	-	-	-	60 ^a	-	-	-	-	13½-14½
2009	-	-	-	-	-	-	-	-	-	-	-	12½-13½
2010	-	-	-	-	-	-	-	-	-	-	-	11½-12½
2011	-	-	-	-	-	-	-	(5) ^b	-	-	60	10½-11½
2012	-	-	-	-	-	-	-	6 ^a	-	-	-	9½-10½
2013	-	-	-	-	-	-	-	-	-	-	(5)	8½-9½
2014	-	-	-	-	-	-	-	-	-	-	6	7½-8½
2015	-	-	-	-	-	-	-	-	-	-	-	6½-7½
2016	-	-	-	-	-	-	-	(12) ^b	-	-	-	5½-6½
2017	-	-	-	-	-	-	-	-	22 ^a	-	-	4½-5½
2018	-	-	-	-	-	-	-	(19) ^b	-	-	10	3½-4½
2019	-	-	-	-	-	-	-	-	-	-	-	2½-3½
2020	-	-	-	-	-	-	-	-	-	(102) ^c	(121)	1½-2½
2021	-	-	-	-	-	-	-	-	-	-	-	½-1½
2022	-	-	-	-	-	-	-	-	-	-	-	0-½
Total	-	-	-	-	-	-	60	(30)	22	(102)	(50)	

^a Transfer Affecting Exposures at Beginning of Year

^b Transfer Affecting Exposures at End of Year

^c Sale with Continued Use

Parentheses Denote Credit Amount.

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

Schedule of Plant Exposed to Retirement

The development of the amount of plant exposed to retirement at the beginning of each age interval is illustrated in Schedule 3 on page II-14. The surviving plant at the beginning of each year from 2013 through 2022 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 2018 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 2013-2022
SUMMARIZED BY AGE INTERVAL**

Experience Band 2013-2022										Placement Band 2008-2022			
Year Placed	Exposures, Thousands of Dollars										Total at		Age Interval
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Beginning of Age Interval	Age Interval	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(13)
2008	255	245	234	222	209	195	239	216	192	167	167	13½-14½	
2009	279	268	256	243	228	212	194	174	153	131	323	12½-13½	
2010	307	296	284	271	257	241	224	205	184	162	531	11½-12½	
2011	338	330	321	311	300	289	276	262	242	226	823	10½-11½	
2012	376	367	357	346	334	321	307	297	280	261	1,097	9½-10½	
2013	420 ^a	416	407	397	386	374	361	347	332	316	1,503	8½-9½	
2014		460 ^a	455	444	432	419	405	390	374	356	1,952	7½-8½	
2015			510 ^a	504	492	479	464	448	431	412	2,463	6½-7½	
2016				580 ^a	574	561	546	530	501	482	3,057	5½-6½	
2017					660 ^a	653	639	623	628	609	3,789	4½-5½	
2018						750 ^a	742	724	685	663	4,332	3½-4½	
2019							850 ^a	841	821	799	4,955	2½-3½	
2020								960 ^a	949	926	5,719	1½-2½	
2021									1,080 ^a	1,069	6,579	½-1½	
2022										1,220 ^a	7,490	0-½	
Total	1,975	2,382	2,824	3,318	3,872	4,494	5,247	6,017	6,852	7,799	44,780		

^aAdditions during the year

For the entire experience band 2013-2022, 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 (Schedule 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 2013-2022

Placement Band 2008-2022

(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
					35.66
Total	<u>44,780</u>	<u>1,606</u>			

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.

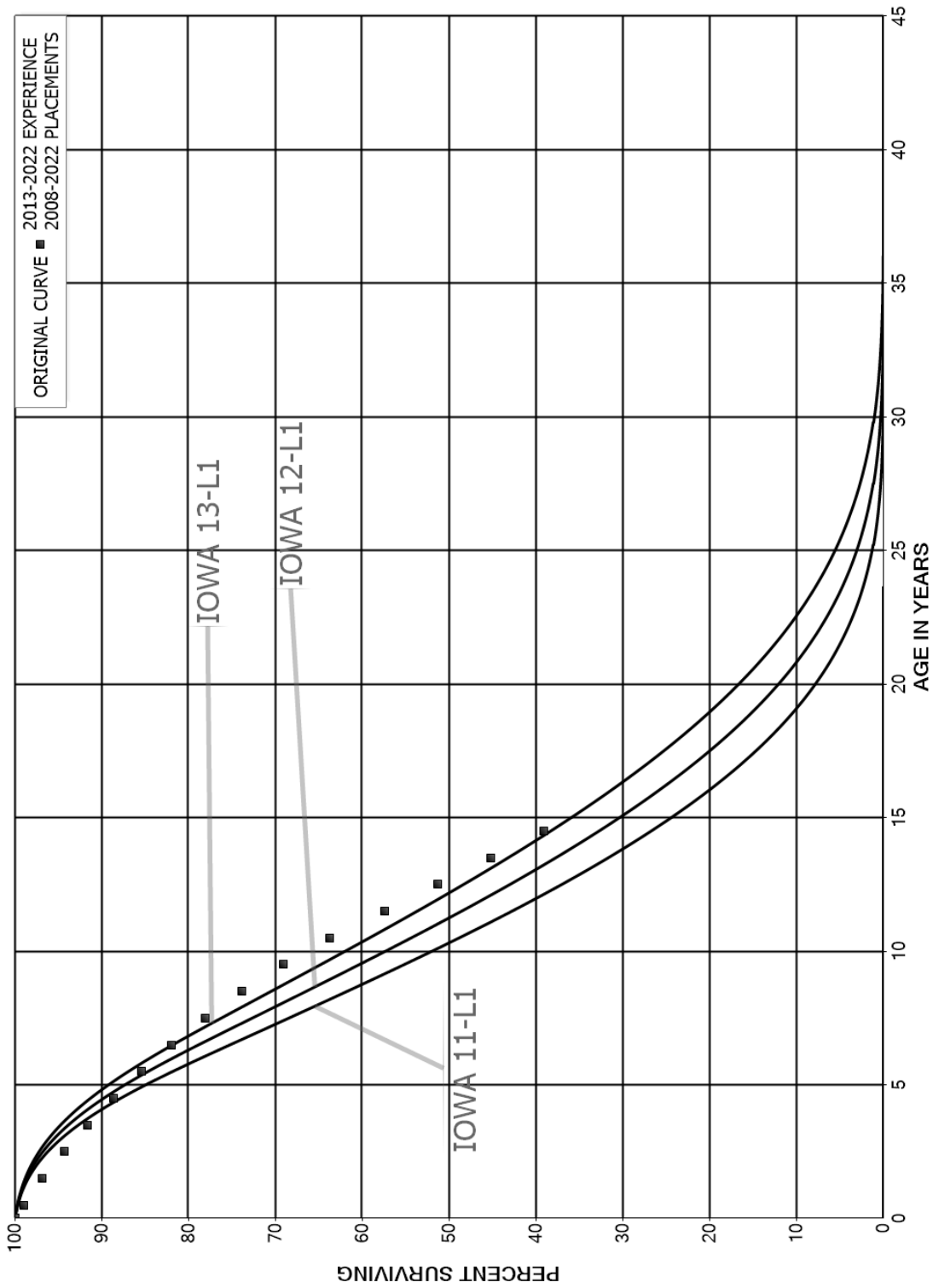
The original survivor curve is plotted from the original life table (column 6, Schedule 4). When the curve terminates at a percent surviving greater than zero, it is called a stub survivor curve. Survivor curves developed from retirement rate studies generally are stub curves.

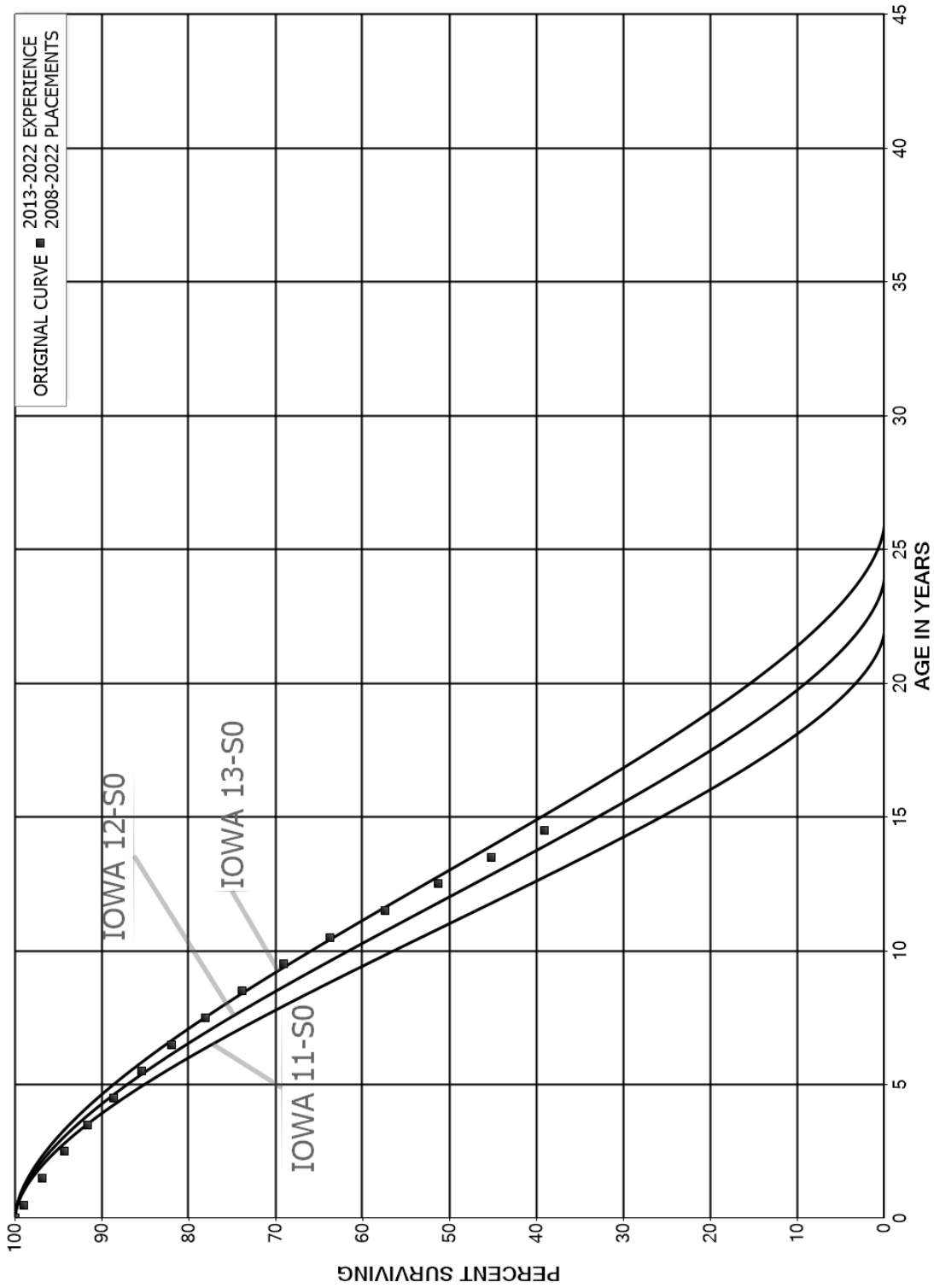
Smoothing the Original Survivor Curve

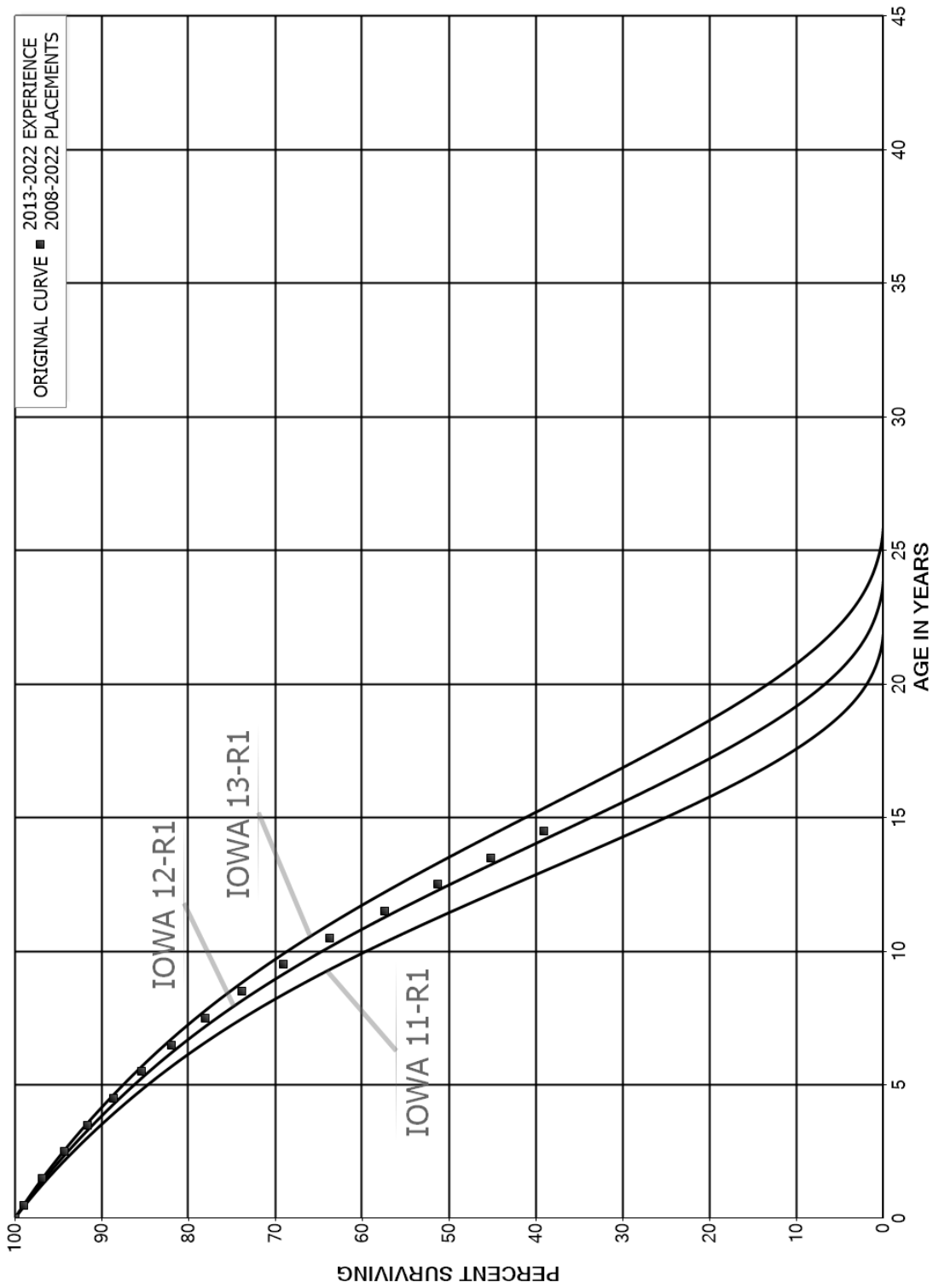
The smoothing of the original survivor curve eliminates any irregularities and serves as the basis for the preliminary extrapolation to zero percent surviving of the original stub curve. Even if the original survivor curve is complete from 100% to zero percent, it is desirable to eliminate any irregularities, 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.

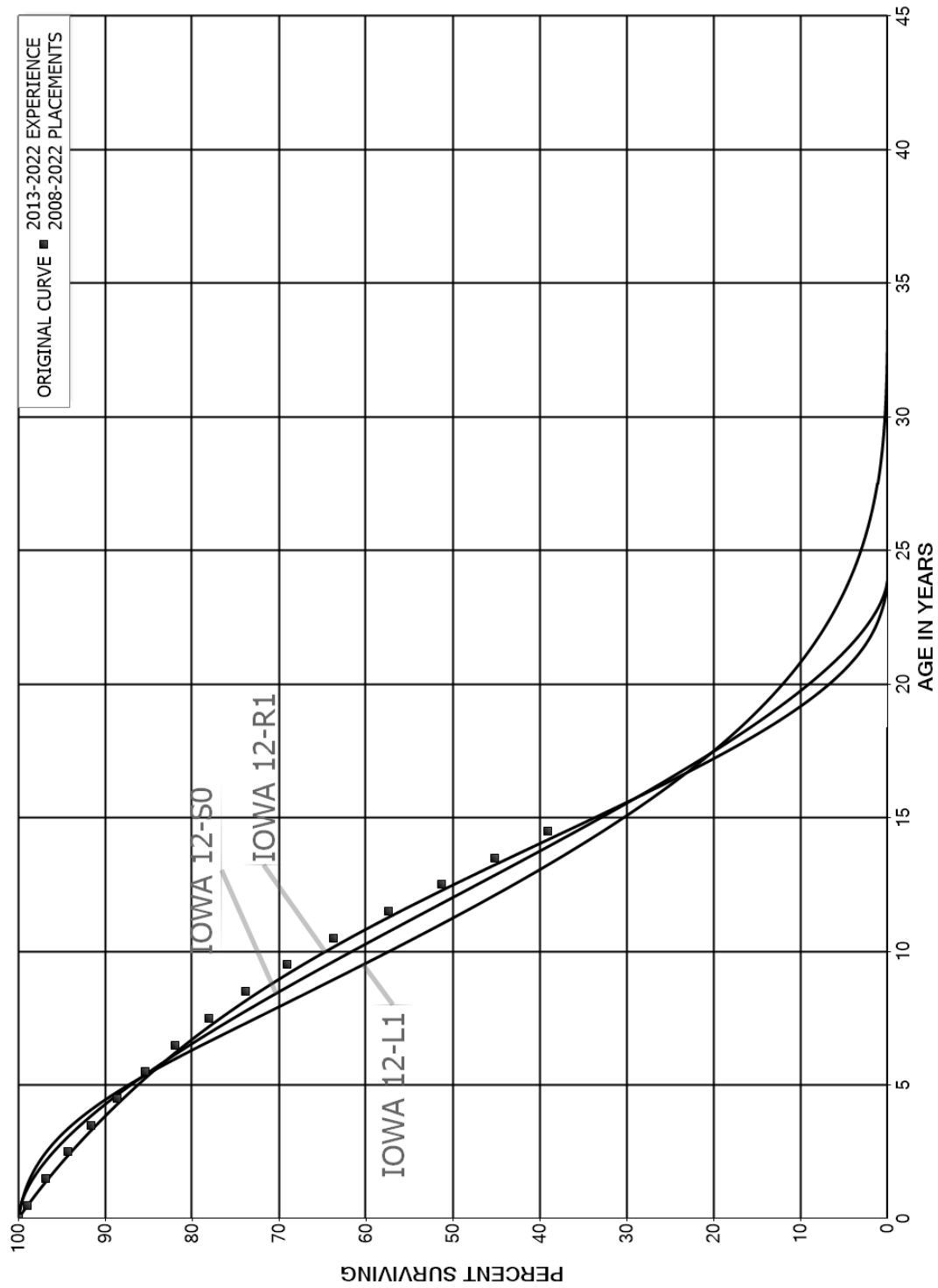
The Iowa type curves are used in this study to smooth those original stub curves which are expressed as percents surviving at ages in years. Each original survivor curve was compared to the Iowa curves using visual and mathematical matching in order to determine the better fitting smooth curves. In Figures 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.









PART III. SERVICE LIFE CONSIDERATIONS

PART III. SERVICE LIFE CONSIDERATIONS

FIELD TRIPS

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

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

July 18, 2013

Salt Lake Operations Center (DNR)
Service Line Replacement Project
Feeder Line #8 Replacement Project
Hunter Park City Gate Station

May 15, 2018

Salt Lake NGV Facility
Salt Lake Annex (Building 1078)
Salt Lake Operations Center (DNR)
Hunter Tap City Gate Station
Hunter Tap District Regulating Station
Feeder Line Replacement Project
Orange St. Warehouse / Weld Shop

SERVICE LIFE ANALYSIS

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

For many of the plant accounts and subaccounts for which survivor curves were estimated, the statistical analyses using the retirement rate method resulted in reasonable indications of the survivor patterns experienced. These accounts represent

approximately 68 percent of depreciable plant investment. Generally, the information external to the statistics led to no significant departure from the indicated survivor curves for the accounts listed below. The statistical support for the service life estimates is presented in the section beginning on page VII-2.

<u>Account No.</u>	<u>Account Description</u>
<u>GAS PLANT</u>	
DISTRIBUTION PLANT	
376.00	Mains
377.00	Compressor Station Equipment
378.00	Measuring and Regulating Station Equipment
381.00	Meters
382.00	Meter Installations
383.00	House Regulators
387.00	Other Equipment
GENERAL PLANT	
390.41	Structures and Improvements – CNG Fuel Stations
392.00	Transportation Equipment

Account 376.00, Mains is used to illustrate the manner in which the study was conducted for most of the accounts. Unaged plant accounting data have been compiled for the years 1961 through 2022. These data were coded in the course of the Company's normal recordkeeping according to plant account or property group, type of transaction and year in which the transaction took place. The computed mortality method was used to simulate aged retirements and balances for each year starting with 1961. The simulated aged retirements and balances were analyzed by the retirement rate method of life analysis in the same manner as if actual aged property accounting data were available to study.

The survivor curve estimate for 376.00, Mains, is the 70-R3 and is based on the statistical indication for the period 1961 through 2022. The previous survivor curve estimate was the Iowa 67-R2.5. The 70-R3 is a reasonably good fit of the significant

portion of the original survivor curve through age 62 as set forth on page VII-6 and is consistent with management outlook.

EGUWI's distribution system has been comprised of many different material types of distribution mains over the years. Prior to 1960, cast iron and bare steel were the primary pipeline material. In the 1960's, improvements in installation practices and the advent of pipeline coatings brought about the use of coated steel pipe. Finally, plastic pipe was introduced in the 1970's and it continues as the primary choice for distribution mains today.

Though widely used in the gas industry, there were inherent problems with cast iron and bare steel pipe. Cast iron pipe is vulnerable to breakage from ground movement either from natural or man-made sources. In addition, the joints on cast iron mains were prone to leak as they were mechanically coupled together. Bare steel pipe is susceptible to corrosion as it has no exterior coating. In 1970, the federal government prohibited the use of bare steel pipe because of its tendency to corrode. In order to combat corrosion, EGUWI and other gas companies began using coated steel pipe and later began to install cathodic protection on their pipelines. Cathodic protection is a procedure by which underground metal pipe is protected against corrosion by applying electrical current to the pipe.

Enbridge Gas UWI has implemented in recent years an aggressive and proactive Feeder Line and Intermediate High Pressure (IHP) Replacement Program. Feeder Lines targeted for replacement are steel pipe ranging in size from 8 to 24 inches in diameter that operate under pressures ranging from 300 to 400 psig. All pre-1970 Feeder Line pipe is planned to be replaced by 2038. Feeder Lines deliver gas to the Intermediate High Pressure distribution system. The IHP distribution system can be viewed as the backbone of the distribution system providing critical feeds to Salt Lake City, Ogden, and

Provo. The IHP mains targeted for replacement are steel mains ranging in size from 8 to 24 inches in diameter that operate at an average pressure of 45 psig. Additionally, the lines being targeted for replacement are steel pipe installed prior to 1970. In 2011, the company implemented a Distribution Integrity Management Plan (DIMP) that requires gas companies to assess and manage risks to pipelines. Large diameter, older steel pipe were identified by the company to have the highest risk based on a scoring metric that evaluates risks and consequences. EGUWI has approximately 37 miles of older (pre-1970) large diameter IHP steel mains that the company is evaluating for replacement. At the current rate of replacement (pre-DIMP), the company estimates that it would take 25 years to replace this older pipe. The company is accelerating the rate of replacement related to the older vintage IHP steel pipe and will complete the replacement in nearly half the time as it would have taken originally.

EGUWI replaced all of its remaining cast iron mains in the mid 1980's and replaced all of its remaining bare steel mains in the mid 1990's. The proposed average service life estimate of 70 years is within the typical service life range of 55 to 75 years used for mains by other gas companies.

Similar studies were performed for the remaining significant mass plant accounts. Each of the judgments represented a consideration of statistical analyses of aged plant activity, management's outlook for the future, and the typical range of lives used by other gas companies. The results of the statistical analyses are presented in account sequence in Part VII of the report.

For Account 381.21, Meters - Transponders, the company has changed out the entire population of 1 million+ Elster transponders with Itron transponders. The initial set of meter transponders were installed in 2004 and were manufactured by Elster. During the period 2012-2015 the company had been experiencing an increasing level of

transponder failures resulting in an increasing number of manual meter reads. In 2014, nearly 10 percent of the customer consumption information was obtained through manual meter reads or estimates due to transponder failure. In 2015, the Company decided to replace all 1 million+ Elster transponders with transponders manufactured by Itron. The replacement program began in November of 2015 and was completed in 2019. The Elster transponders experienced an average service life of less than 10 years. The Itron transponders installed 2015-2019, although physically capable of lasting longer than 10 years, are subject to a higher degree of obsolescence as better, more advanced transponders are available and are currently being evaluated by the company and the industry. The new, recently developed Itron meters are lighter, more compact and have integrated transponders with additional safety features that will automatically shut-off the gas if it detects unusually high volumes of gas or extreme temperatures. Additionally, the new Itron gas meters are equipped with a better battery and stronger communication package that allows two-way communications using either mobile readers or a fixed network AMR/AMI system. The survivor curve estimate for Account 381.21 is 12-S3. The previous estimate was the Iowa 15-S4.

Generally, the survivor curve estimates for the remainder of the accounts, where the service life indications resulting from the historical service life analyses were inconclusive, were based on judgments which considered the nature of the plant and equipment, review of available historical retirement data and a general knowledge of the service lives for similar equipment in other gas utility companies.

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 through 2022. For most plant accounts, the historical net salvage data were available for the years 1990 through 2022. 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 future net salvage are expressed as percentages of surviving plant in service, i.e., all future retirements. In cases in which removal costs are expected to exceed salvage receipts, a negative net salvage percentage is estimated. 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 gas companies. Also considered were the dual impacts of the age of retirements and inflation has on net salvage, as well as expectations with respect to future removal requirements.

Account 37600, Mains, is used to illustrate the manner in which the study was conducted. Depreciation reserve accounting data were compiled for the years 1990 through 2022. These data include the retirements, cost of removal and gross salvage.

The net salvage estimate for this account is negative forty-seven percent and is based on company experience as shown in the tabulation on pages VIII-4 and VIII-5. The

overall band during the period studied averaged negative 58 percent which is higher than the previous estimate of negative 38 percent. The most recent 5-year net salvage experienced by EGUWI averaged negative 112 percent. The net salvage estimate typical for this account ranges from negative 40 percent to negative 75 percent. Questar's engineering management indicated that the majority of mains are retired in place and management expects that this will continue in the future. However, some of the mains that are removed are coated with a coal-tar wrap containing asbestos felt (a roofing paper type of material) which requires special handling and can be expensive to dispose of relative to other mains not containing asbestos. Gas utilities have long used hot-applied coal-tar coatings on buried steel pipe to mitigate the effects of corrosion. This type of coating was used in the gas industry until more modern and durable coatings were developed in the 1970s and 1980s. The negative forty-seven percent net salvage estimate for Account 376.00, Mains is primarily based on the results of the net salvage analyses, is within the typical industry range and is consistent with management's outlook for net salvage to continue at levels slightly higher than those realized in the past. In the future, there is an expectation of continued cost of removal associated with safely disconnecting and retiring in place the existing pipe and minimal gross salvage. Some of the retired pipe needs to be filled with a concrete slurry type of material before it can be safely retired in place in Utah.

The net salvage estimates for the remaining plant accounts were estimated using the above-described process of historical indications, judgment and reviewing the typical range of estimates used by other gas companies. The results of the net salvage analyses for each plant account are presented in account sequence beginning in the section titled "Net Salvage Statistics," page VIII-2.

PART V. CALCULATION OF ANNUAL AND ACCRUED DEPRECIATION

PART V. CALCULATION OF ANNUAL AND ACCRUED DEPRECIATION

The recommended annual depreciation rates were calculated as of December 31, 2022 based on gas plant and the accumulated provision for depreciation (book reserve) balances as of that date, the straight line method of depreciation, the average service life procedure, and the average remaining life basis. Use of the remaining life basis recognizes the current status of the accumulated provision for depreciation and aims to allocate the previously unallocated depreciable cost over the remaining 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

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 this study, the average service life procedure was used and a description of this procedure is presented below.

Average Service Life Procedure

In the average service life procedure, the rate of annual depreciation is based on the average service 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 service life is balanced by the cost recouped subsequent to average life. The accrued depreciation is based on the average service life of the group and the average remaining life of each vintage within the group derived from the area under the survivor curve between the attained age of the vintage and the maximum age.

Remaining Life Annual Accruals

The remaining life annual accrual for each vintage is determined by dividing future book accruals (original cost less depreciation reserve less future net salvage) by the average remaining life of the vintage. Each vintage's average remaining life is a directly weighted average derived from the estimated survivor curve in accordance with the average service life procedure. The average service life of each vintage is defined by the estimated survivor curve, and the average remaining life is defined by the attained age and the estimated survivor curve.

Calculated Accrued Depreciation

The calculated accrued depreciation, used to allocate the book depreciation reserve among vintages within each plant account, 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 and net salvage were used on a whole life basis for future depreciation 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:

$$\text{Ratio} = \left(1 - \frac{\text{Average Remaining Life Expectancy}}{\text{Average Service Life}}\right) (1 - \text{Net Salvage, Percent}).$$

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 electric plant in service. The accounts and their amortization periods are as follows:

<u>ACCT</u>	<u>TITLE</u>	<u>AMORTIZATION PERIOD, YEARS</u>
391.01	Furniture and Equipment	20
391.03	Computer Equipment - Hardware	5
391.04	Computer Software	5
393.00	Stores Equipment	20
394.10	Small Tools	25
394.20	Garage Equipment	20
394.40	CNG Equipment	20
397.10	Mobile Radio	5
397.30	Base Stations	10
397.50	Communication Eq – Other	10
398.00	Miscellaneous Equipment	15

For calculating annual amortization amounts as of December 31, 2022, the book depreciation reserve for each plant account or subaccount is assigned or allocated to vintages. The book reserve assigned to vintages with an age greater than the amortization period is set equal to the vintage's original cost. The remaining book reserve is allocated among vintages with an age less than the amortization period in proportion to the calculated accrued amortization. The calculated accrued amortization is equal to the original cost multiplied by the ratio of the vintage age to its amortization period. The annual amortization amount is determined by dividing the future amortizations (original cost less allocated book reserve) by the remaining period of amortization for the vintage. Gannett Fleming recommends that reserve imbalances for the five general plant accounts subject to amortization accounting be amortized over a five-year period. Gannett Fleming recommends that NSPI use the whole life amortization rate, i.e., 5, 10 and 20 percent for plant accounts with 20, 10 and 5 year amortization periods.

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 gas plant in service as of December 31, 2022. For most plant accounts, the application of such rates to future balances that reflect additions subsequent to December 31, 2022, is reasonable for a period of up to three to five years.

DESCRIPTION OF STATISTICAL SUPPORT

The service life and salvage estimates were based on judgment which incorporated statistical analyses of retirement data, discussions with management and consideration of estimates made for other gas utility companies. The results of the statistical analyses 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 net salvage data are presented in the Part VIII 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.

DESCRIPTION OF SUMMARY TABULATIONS

A summary of the results of the study as applied to the original cost of gas plant at December 31, 2022 is presented in Table 1, page VI-5 of this report. Table 1 sets forth the estimated survivor curve and net salvage percent, original cost, book reserve and the calculated annual remaining life depreciation accrual amounts and rates based on the straight-line method and the average service life procedure for each account.

DESCRIPTION OF DETAILED TABULATIONS

The tables of the calculated annual depreciation applicable to depreciable assets as of December 31, 2022 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.

ENBRIDGE GAS UTAH, WYOMING, IDAHO
TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVE, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE
AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO GAS PLANT AS OF DECEMBER 31, 2022

DEPRECIABLE GROUP (1)	PROBABLE RETIREMENT DATE (2)	SURVIVOR CURVE (3)	NET SALVAGE PERCENT (4)	ORIGINAL COST AS OF DECEMBER 31, 2022 (5)	BOOK DEPRECIATION RESERVE (6)	FUTURE ACCRUALS (7)	CALCULATED ANNUAL ACCRUAL AMOUNT (8)	ACCRUAL RATE (9)=(8)/(5)	COMPOSITE REMAINING LIFE (10)=(7)/(6)
DEPRECIABLE GAS PLANT									
LNG PLANT									
382.00	12-2062	60-R3	*	59,006,481.57	290,519	64,626,611	1,673,397	2.84	38.6
	12-2062	46-R2.5	*	138,748,812.49	726,987	151,886,697	4,212,332	3.04	36.1
				197,755,294.06	1,007,516	216,523,308	5,885,729	2.98	
TOTAL LNG PLANT									
DISTRIBUTION PLANT									
374.21		75-R3	0	5,872,928.75	720,621	5,152,308	80,154	1.36	64.3
375.00		40-S0.5	(10)	20,814,218.87	3,281,109	19,614,532	681,241	3.27	28.8
376.00		70-R3	(60)	2,336,473,911.14	481,328,079	3,257,030,179	56,536,055	2.42	57.6
377.00		25-S1	(20)	16,266,291.89	4,613,040	14,906,510	884,218	5.44	16.9
378.00		38-R1	(35)	159,642,864.99	31,244,359	184,273,509	5,904,257	3.70	31.2
380.00		60-R3	(110)	486,031,121.69	295,239,979	725,425,377	17,700,783	3.64	41.0
381.00		30-R3	(5)	244,633,029.89	45,710,110	211,154,571	10,872,369	4.44	19.4
381.30		12-S3	(15)	55,538,039.91	18,299,527	45,969,219	6,771,374	12.19	6.7
382.00		50-R3	(5)	158,135,306.47	54,750,122	111,312,950	3,198,197	2.02	34.8
383.00		40-R2.5	(5)	11,455,958.97	9,741,057	2,275,722	31,461	1.15	17.3
384.00		50-R2	(5)	1,429,588,325.42	1,844,463	1,429,588,325.42	1,844,463	1.27	17.3
387.00		14-L3	0	4,787,298.53	2,821,721	1,965,538	172,135	3.60	11.4
				3,502,882,981.12	949,249,858	4,590,564,912	102,987,537	2.94	
TOTAL DISTRIBUTION PLANT									
GENERAL PLANT									
390.00		100-R1	*	2,581,371.02	770,954	1,810,417	60,730	2.35	29.8
		75-S1	0	45,082,638.40	26,116,315	18,966,323	676,599	1.50	28.0
		100-R1	*	2,411,734.12	1,426,427	985,307	40,735	1.69	24.2
		100-R1	0	4,986,331.38	2,746,839	2,239,492	92,356	1.85	24.2
		100-R1	*	1,086,241.24	598,519	507,722	19,519	2.77	26.0
		100-R1	*	1,083,144.20	521,545	571,599	30,304	2.77	18.9
		100-R1	*	681,342.37	610,730	70,612	6,868	1.01	10.3
		100-R1	*	2,203,586.87	1,533,992	669,595	71,528	3.25	9.4
		100-R1	0	6,203,505.72	1,402,466	4,801,040	127,508	2.06	37.7
		100-R1	*	3,768,108.17	565,977	3,203,132	79,454	2.11	40.3
		100-R1	0	9,666,686.60	1,709,316	8,956,370	177,152	1.60	46.5
		100-R1	0	8,894,455.11	1,709,316	7,185,139	102,845	2.18	32.6
		100-R1	*	3,454,472.84	82,639	3,371,834	75,346	2.18	44.8
		100-R1	*	4,154,391.15	400,625	3,753,766	84,211	2.03	44.6
		100-R1	*	2,430,619.38	527,975	1,902,644	50,508	2.08	37.7
		40-R1	0	14,143,222.64	4,546,979	9,596,244	306,699	2.17	31.3
				108,142,848.61	44,130,247	65,012,601	2,004,959	1.84	
390.41		20-S1	0	349,719.62	288,795	60,925	5,227	1.49	11.7
				108,492,568.23	44,419,042	65,073,526	2,010,186	1.84	
TOTAL ACCOUNT 390									
391.01		20-SQ	0	70,090.11	70,090	0	0	-	-
				12,905,498.37	3,925,825	8,979,673	644,839	5.00	13.9
TOTAL OFFICE FURNITURE AND EQUIPMENT									
391.03		5-SQ	0	12,975,588.48	3,995,915	8,979,673	644,839	4.97	
				756,385.91	756,386	0	0	-	-
				3,010,275.20	734,022	2,276,253	602,005	20.00	3.8
TOTAL OFFICE FURNITURE AND EQUIPMENT - COMPUTER HARDWARE									
391.04		5-SQ	0	2,619,903.62	2,619,904	0	0	-	-
				28,833,738.90	21,470,146	7,363,593	5,765,984	20.00	1.3
TOTAL OFFICE FURNITURE AND EQUIPMENT - COMPUTER SOFTWARE									
				31,453,642.52	24,090,050	7,363,593	5,765,984	18.33	
				48,195,892.11	29,576,373	18,619,519	7,012,828	14.55	

ENBRIDGE GAS UTAH, WYOMING, IDAHO

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVE, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO GAS PLANT AS OF DECEMBER 31, 2022

	DEPRECIABLE GROUP	PROBABLE REMAINING USEFUL LIFE (2)	SURVIVOR CURVE (3)	NET SALVAGE PERCENT (4)	ORIGINAL COST DECEMBER 31, 2022 (5)	BOOK DEPRECIATION RESERVE (6)	FUTURE ACCRUALS (7)	CALCULATED ANNUAL		COMPOSITE REMAINING LIFE (10)-(7)/(8)
								AMOUNT (8)	ACCRUAL RATE (9)=(6)/(8)	
392.00	TRANSPORTATION EQUIPMENT		12-L2.5	10	65,031,663.32	33,487,800	25,040,697	2,927,389	4.50	8.6
393.00	STORES EQUIPMENT FULLY ACCRUED AMORTIZED		20-SQ	0	7,521.07 49,876.84	7,521 26,575	0 23,302	0 2,493	- 5.00	- 9.3
	TOTAL STORES EQUIPMENT				57,397.91	34,096	23,302	2,493	4.34	
394.10	TOOLS SHOP AND GARAGE EQUIPMENT - SMALL TOOLS FULLY ACCRUED AMORTIZED		25-SQ	0	71,139.95 18,678,225.03	71,200 3,100,283	0 15,577,942	0 747,951	- 4.00	- 20.8
	TOTAL TOOLS, SHOP AND GARAGE EQUIPMENT - SMALL TOOLS				18,749,424.98	3,171,483	15,577,942	747,951	3.99	
394.20	TOOLS SHOP AND GARAGE EQUIPMENT - GARAGE EQUIPMENT FULLY ACCRUED AMORTIZED		20-SQ	0	116,032.00 2,314,180.12	116,032 562,203	0 1,751,977	0 115,648	- 5.00	- 15.1
394.40	TOTAL TOOLS, SHOP AND GARAGE EQUIPMENT - GARAGE EQUIPMENT				2,430,212.12	678,235	1,751,977	115,648	4.76	
	TOOLS SHOP AND GARAGE EQUIPMENT - CNG EQUIPMENT		20-SQ	0	17,056,267.90	9,190,024	7,866,244	852,458	5.00	9.2
	TOTAL ACCOUNT 394				38,235,905.00	13,039,742	25,196,163	1,716,057	4.49	
395.00	POWER OPERATED EQUIPMENT		15-L3	15	18,185,102.46	12,702,362	2,754,975	231,229	1.27	11.9
397.10	COMMUNICATION EQUIPMENT - MOBILE RADIO FULLY ACCRUED AMORTIZED		5-SQ	0	1,394,014.19 325,367.08	1,394,014 238,565	0 86,802	0 65,058	- 20.00	- 1.3
	TOTAL COMMUNICATION EQUIPMENT - MOBILE RADIO				1,719,381.27	1,632,579	86,802	65,058	3.78	
397.30	COMMUNICATION EQUIPMENT - BASE STATIONS FULLY ACCRUED AMORTIZED		10-SQ	0	7,129,305.39 6,272,440.86	7,129,303 3,630,337	0 2,442,104	0 627,036	- 10.00	- 3.9
	TOTAL COMMUNICATION EQUIPMENT - BASE STATIONS				13,401,744.25	10,959,640	2,442,104	627,036	4.68	
397.50	COMMUNICATION EQUIPMENT - OTHER FULLY ACCRUED AMORTIZED		10-SQ	0	1,180,136.64 515,953.26	1,180,137 300,319	0 215,634	0 51,574	- 10.00	- 4.2
	TOTAL COMMUNICATION EQUIPMENT - OTHER				1,696,089.90	1,480,456	215,634	51,574	3.04	
	TOTAL ACCOUNT 397				16,817,215.42	14,072,675	2,744,540	743,668	4.42	
398.00	MISCELLANEOUS EQUIPMENT FULLY ACCRUED AMORTIZED		15-SQ	0	122,640.20 8,631,340.81	122,640 1,668,981	0 6,982,360	0 575,349	- 6.67	- 12.1
	TOTAL MISCELLANEOUS EQUIPMENT				8,753,981.01	1,791,621	6,962,360	575,349	6.57	
	TOTAL GENERAL				304,769,725.46	149,123,711	146,415,082	15,219,199	4.99	

ENBRIDGE GAS UTAH, WYOMING, IDAHO

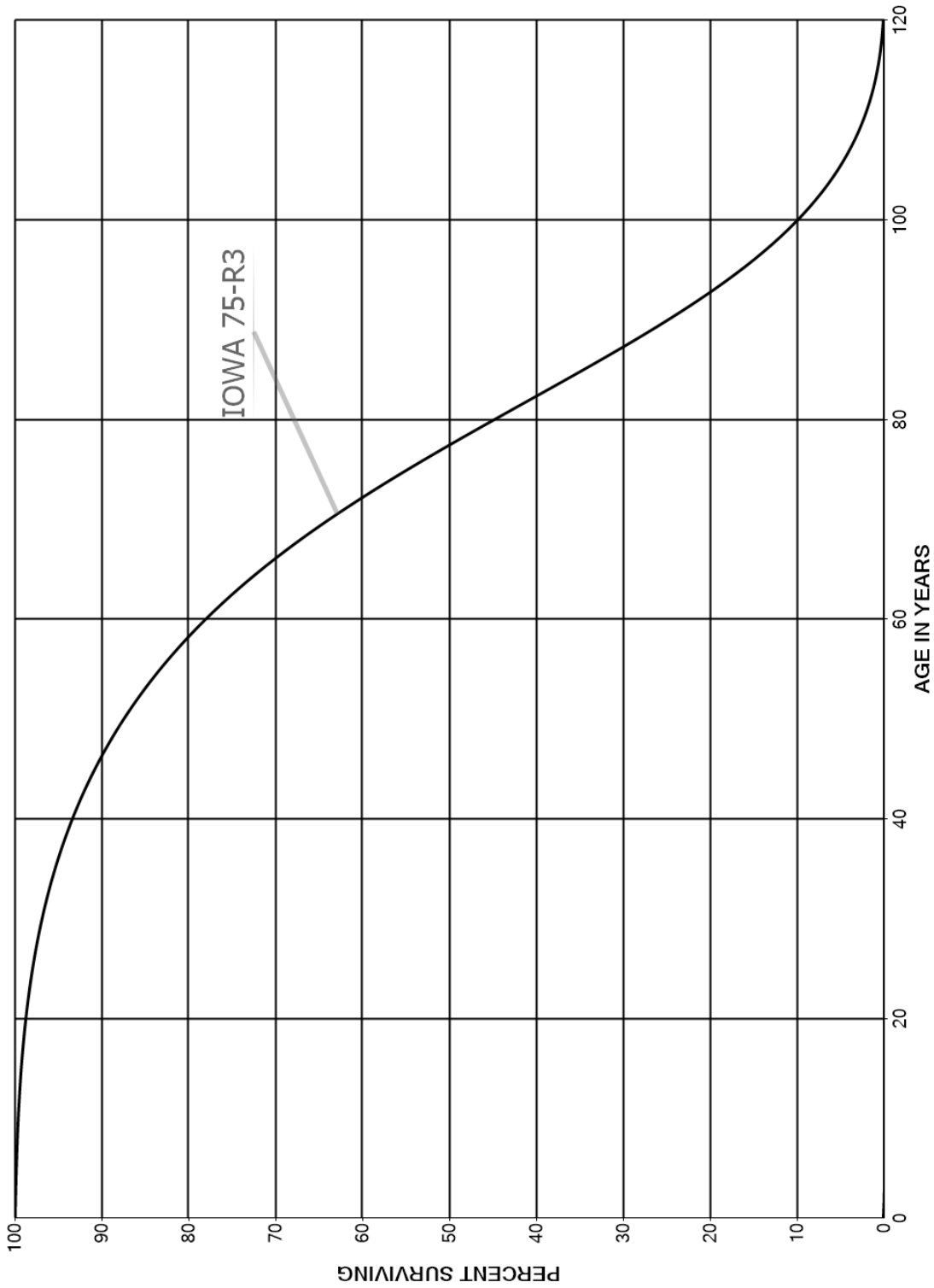
TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVE, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO GAS PLANT AS OF DECEMBER 31, 2022

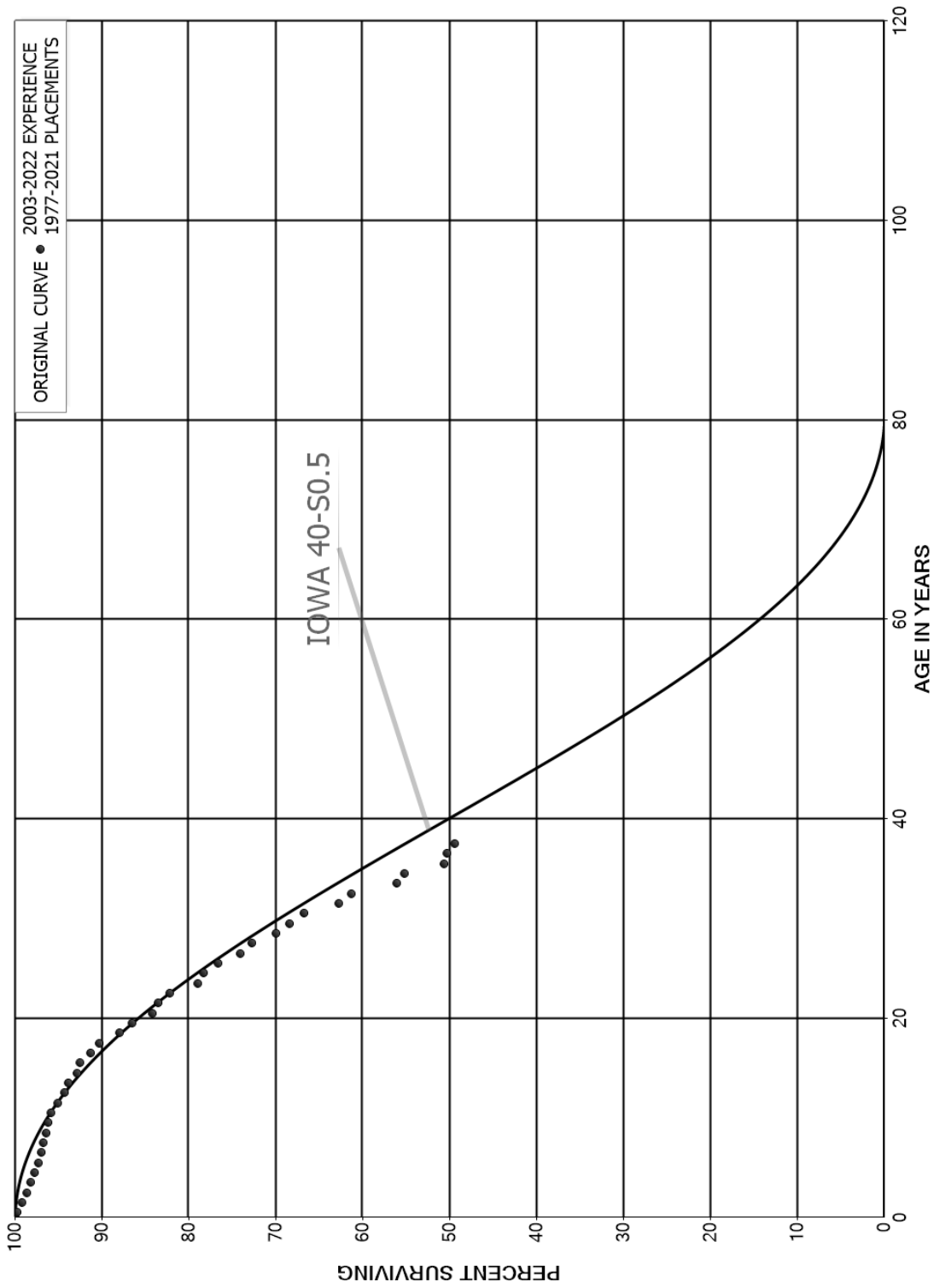
DEPRECIABLE GROUP (1)	PROBABLE RETIREMENT DATE (2)	SURVIVOR CURVE (3)	NET SALVAGE PERCENT (4)	ORIGINAL COST AS OF DECEMBER 31, 2022 (5)	BOOK DEPRECIATION RESERVE (6)	FUTURE ACCRUALS (7)	CALCULATED ANNUAL ACCRUAL AMOUNT (8)	ACCRUAL RATE (9)=(8)/(5)	COMPOSITE REMAINING LIFE (10)=(7)/(6)
UNRECOVERED RESERVE TO BE AMORTIZED									
381.01 OFFICE FURNITURE AND EQUIPMENT					1,469,595		(253,319)	**	
381.03 OFFICE FURNITURE AND EQUIPMENT - COMPUTER HARDWARE					(202,085)		40,417	**	
381.04 OFFICE FURNITURE AND EQUIPMENT - COMPUTER SOFTWARE					(4,056,164)		811,633	**	
383.00 STORES EQUIPMENT					3,550		(710)	**	
384.10 TOOLS SHOP AND GARAGE EQUIPMENT - SMALL TOOLS					7,817,811		(1,563,562)	**	
384.20 TOOLS SHOP AND GARAGE EQUIPMENT - GARAGE EQUIPMENT					1,077,591		(215,518)	**	
384.40 TOOLS SHOP AND GARAGE EQUIPMENT - SHOP EQUIPMENT					4,000,763		(800,153)	**	
387.10 COMMUNICATION EQUIPMENT - MOBILE RADIO					(3,828)		766	**	
387.30 COMMUNICATION EQUIPMENT - BASE STATIONS					(727,174)		145,435	**	
387.50 COMMUNICATION EQUIPMENT - OTHER					(56,243)		11,249	**	
388.00 MISCELLANEOUS EQUIPMENT					(9,923,210)		1,984,642	**	
TOTAL UNRECOVERED RESERVE TO BE AMORTIZED					(601,394)		120,280		
TOTAL DEPRECIABLE PLANT				4,005,408,000.64	1,098,779,691	4,943,503,302	124,212,745	3.10	
NONDEPRECIABLE AND ACCOUNTS NOT STUDIED									
PRODUCTION PLANT				88,668,474.48	72,534,309				
FRANCHISES AND CONSENTS				69,625.96	75,514				
MISCELLANEOUS INTANGIBLE PLANT				3,966,487.31	451,919				
STORAGE ARO				25,130.40	4,174				
LAND AND LAND RIGHTS				992,000.00	992,000				
LAND				33,546,281.97					
ASSET RETIREMENT COSTS, DISTRIBUTION				0.00	6,385,010				
LAND AND LAND RIGHTS				9,939,287.83					
OTHER TANGIBLE PROPERTY				0.00					
ARC - NO FUNCTION				2,197,918.55					
TOTAL NONDEPRECIABLE AND ACCOUNTS NOT STUDIED				139,404,216.50	80,442,926				
TOTAL GAS PLANT				4,144,812,217.14	1,179,222,617				

* INDICATES INTERIM SURVIVOR CURVE. EACH LOCATION HAS A UNIQUE TERMINAL DATE.

** 5-YEAR AMORTIZATION OF RESERVE RELATED TO AMORTIZATION ACCOUNTING.

PART VII. SERVICE LIFE STATISTICS





PLACEMENT BAND 1977-2021

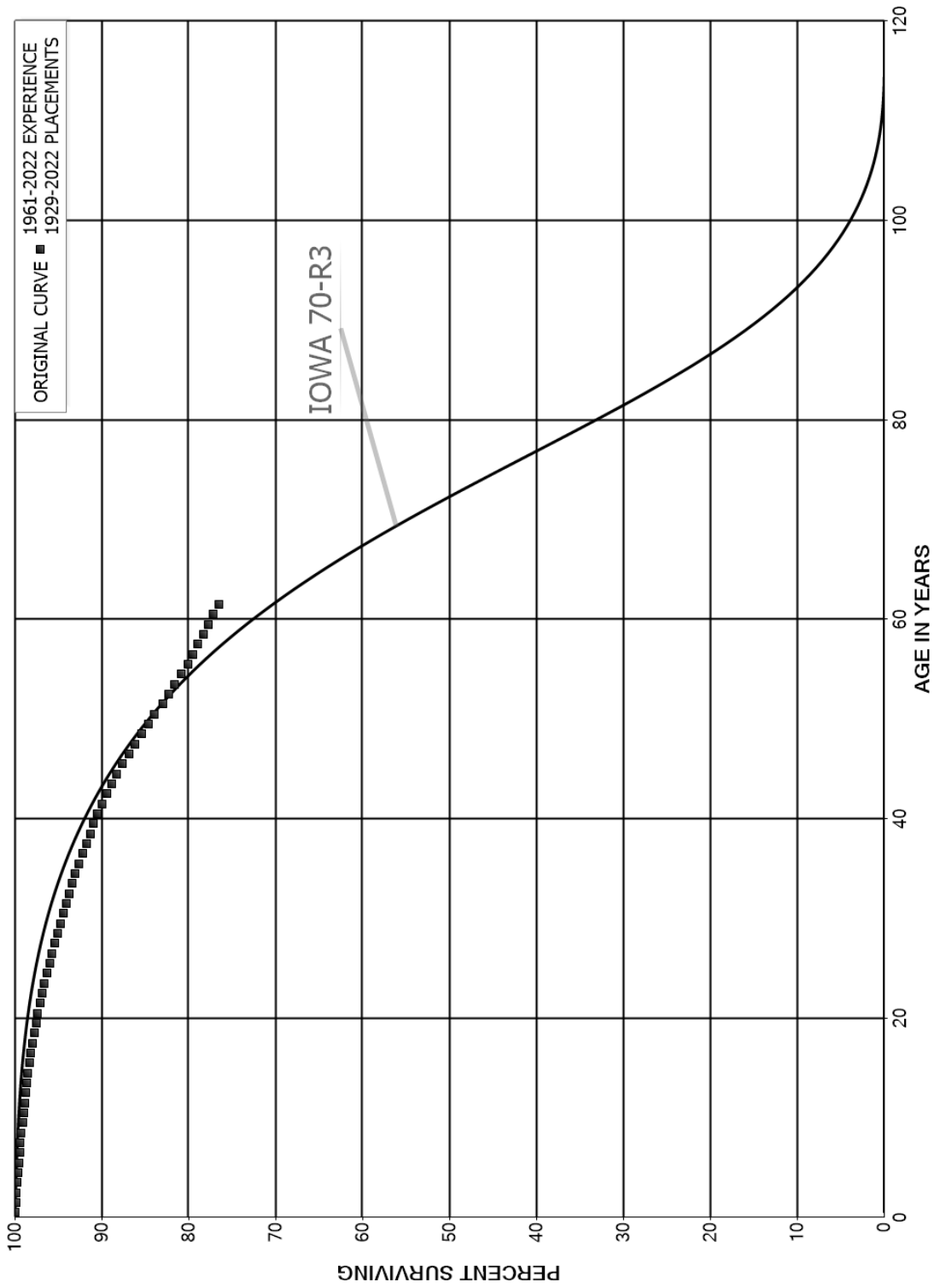
EXPERIENCE BAND 2003-2022

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	16,908,708	42,785	0.0025	0.9975	100.00
0.5	16,926,317	88,567	0.0052	0.9948	99.75
1.5	16,840,767	104,871	0.0062	0.9938	99.23
2.5	16,499,950	65,857	0.0040	0.9960	98.61
3.5	14,070,825	65,499	0.0047	0.9953	98.21
4.5	13,928,430	63,907	0.0046	0.9954	97.76
5.5	13,430,079	43,416	0.0032	0.9968	97.31
6.5	13,312,262	34,772	0.0026	0.9974	96.99
7.5	10,063,693	33,897	0.0034	0.9966	96.74
8.5	9,822,801	19,208	0.0020	0.9980	96.41
9.5	7,318,046	29,660	0.0041	0.9959	96.23
10.5	5,832,649	44,174	0.0076	0.9924	95.84
11.5	5,068,342	42,848	0.0085	0.9915	95.11
12.5	4,946,744	25,035	0.0051	0.9949	94.31
13.5	5,243,007	57,444	0.0110	0.9890	93.83
14.5	5,068,698	18,182	0.0036	0.9964	92.80
15.5	5,105,421	63,271	0.0124	0.9876	92.47
16.5	5,488,628	63,439	0.0116	0.9884	91.32
17.5	5,566,198	142,506	0.0256	0.9744	90.27
18.5	5,308,302	88,146	0.0166	0.9834	87.96
19.5	5,170,124	140,867	0.0272	0.9728	86.49
20.5	4,986,381	39,416	0.0079	0.9921	84.14
21.5	4,789,372	72,803	0.0152	0.9848	83.47
22.5	4,492,484	176,026	0.0392	0.9608	82.20
23.5	4,519,670	39,691	0.0088	0.9912	78.98
24.5	3,877,947	83,504	0.0215	0.9785	78.29
25.5	3,825,154	126,597	0.0331	0.9669	76.60
26.5	3,562,473	66,400	0.0186	0.9814	74.07
27.5	3,201,100	118,262	0.0369	0.9631	72.69
28.5	1,708,767	39,177	0.0229	0.9771	70.00
29.5	1,533,169	37,821	0.0247	0.9753	68.40
30.5	1,347,379	79,815	0.0592	0.9408	66.71
31.5	1,235,110	29,843	0.0242	0.9758	62.76
32.5	1,095,708	91,928	0.0839	0.9161	61.24
33.5	710,495	11,622	0.0164	0.9836	56.10
34.5	661,457	54,784	0.0828	0.9172	55.19
35.5	546,890	3,444	0.0063	0.9937	50.62
36.5	211,575	3,946	0.0187	0.9813	50.30
37.5	109,014	28,731	0.2636	0.7364	49.36
38.5	67,729	601	0.0089	0.9911	36.35

PLACEMENT BAND 1977-2021

EXPERIENCE BAND 2003-2022

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	56,097	1,995	0.0356	0.9644	36.03
40.5	50,796	774	0.0152	0.9848	34.75
41.5	45,066	10	0.0002	0.9998	34.22
42.5	43,853	40	0.0009	0.9991	34.21
43.5	1,306		0.0000	1.0000	34.18
44.5	759		0.0000	1.0000	34.18
45.5					34.18



PLACEMENT BAND 1929-2022

EXPERIENCE BAND 1961-2022

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	2,253,412,134	904,710	0.0004	0.9996	100.00
0.5	2,179,947,634	1,755,442	0.0008	0.9992	99.96
1.5	2,037,678,165	1,637,235	0.0008	0.9992	99.88
2.5	1,853,407,154	1,581,730	0.0009	0.9991	99.80
3.5	1,774,090,685	1,590,332	0.0009	0.9991	99.71
4.5	1,627,146,654	1,508,599	0.0009	0.9991	99.62
5.5	1,515,219,778	1,425,356	0.0009	0.9991	99.53
6.5	1,383,306,634	1,371,005	0.0010	0.9990	99.44
7.5	1,236,803,985	1,365,301	0.0011	0.9989	99.34
8.5	1,124,289,753	1,317,447	0.0012	0.9988	99.23
9.5	1,031,817,871	1,170,919	0.0011	0.9989	99.11
10.5	946,700,258	1,237,525	0.0013	0.9987	99.00
11.5	887,425,523	1,153,090	0.0013	0.9987	98.87
12.5	826,241,053	1,129,183	0.0014	0.9986	98.74
13.5	800,033,774	1,065,438	0.0013	0.9987	98.61
14.5	702,143,095	1,095,706	0.0016	0.9984	98.48
15.5	610,066,242	1,149,423	0.0019	0.9981	98.32
16.5	558,055,361	1,058,213	0.0019	0.9981	98.14
17.5	526,057,613	1,016,351	0.0019	0.9981	97.95
18.5	498,114,963	1,075,190	0.0022	0.9978	97.76
19.5	462,913,429	995,498	0.0022	0.9978	97.55
20.5	432,251,841	1,060,680	0.0025	0.9975	97.34
21.5	407,971,602	961,721	0.0024	0.9976	97.10
22.5	366,611,110	985,619	0.0027	0.9973	96.87
23.5	341,839,044	1,080,000	0.0032	0.9968	96.61
24.5	324,173,047	1,031,888	0.0032	0.9968	96.31
25.5	298,972,721	898,806	0.0030	0.9970	96.00
26.5	283,362,609	991,279	0.0035	0.9965	95.71
27.5	267,011,296	913,134	0.0034	0.9966	95.38
28.5	255,972,436	852,804	0.0033	0.9967	95.05
29.5	244,691,554	855,385	0.0035	0.9965	94.74
30.5	220,922,525	768,393	0.0035	0.9965	94.40
31.5	211,181,249	809,982	0.0038	0.9962	94.08
32.5	203,357,822	708,101	0.0035	0.9965	93.72
33.5	183,509,832	705,955	0.0038	0.9962	93.39
34.5	169,546,177	690,316	0.0041	0.9959	93.03
35.5	138,305,971	651,922	0.0047	0.9953	92.65
36.5	133,474,422	635,801	0.0048	0.9952	92.21
37.5	127,308,290	608,268	0.0048	0.9952	91.78
38.5	120,225,215	562,428	0.0047	0.9953	91.34

PLACEMENT BAND 1929-2022

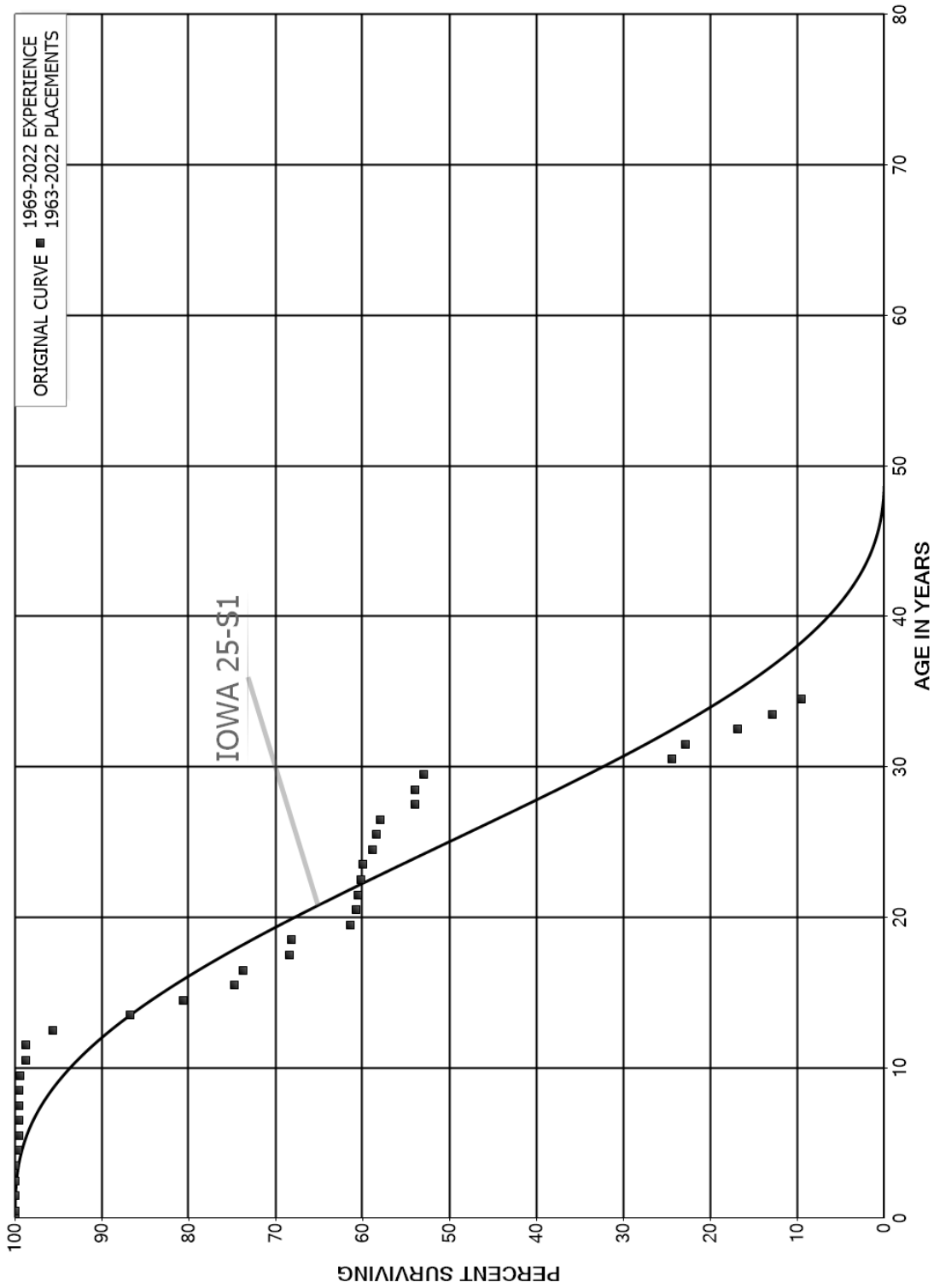
EXPERIENCE BAND 1961-2022

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	114,528,172	577,657	0.0050	0.9950	90.91
40.5	108,680,192	579,363	0.0053	0.9947	90.45
41.5	100,671,016	600,118	0.0060	0.9940	89.97
42.5	92,862,361	603,354	0.0065	0.9935	89.43
43.5	85,061,944	535,165	0.0063	0.9937	88.85
44.5	78,976,772	599,465	0.0076	0.9924	88.29
45.5	73,575,002	632,319	0.0086	0.9914	87.62
46.5	69,089,402	545,170	0.0079	0.9921	86.87
47.5	65,185,175	606,563	0.0093	0.9907	86.18
48.5	62,785,626	563,681	0.0090	0.9910	85.38
49.5	59,151,497	500,115	0.0085	0.9915	84.62
50.5	56,594,425	602,525	0.0106	0.9894	83.90
51.5	52,615,716	471,365	0.0090	0.9910	83.01
52.5	50,335,979	421,716	0.0084	0.9916	82.26
53.5	48,327,714	457,472	0.0095	0.9905	81.57
54.5	46,353,810	395,261	0.0085	0.9915	80.80
55.5	44,818,440	324,299	0.0072	0.9928	80.11
56.5	39,780,237	319,290	0.0080	0.9920	79.53
57.5	35,943,974	275,502	0.0077	0.9923	78.89
58.5	32,301,690	236,179	0.0073	0.9927	78.29
59.5	28,360,560	214,252	0.0076	0.9924	77.72
60.5	24,699,522	183,894	0.0074	0.9926	77.13
61.5	22,405,883	191,345	0.0085	0.9915	76.56
62.5	18,608,856	136,862	0.0074	0.9926	75.90
63.5	16,155,740	130,360	0.0081	0.9919	75.34
64.5	14,319,810	126,602	0.0088	0.9912	74.74
65.5	9,888,365	101,551	0.0103	0.9897	74.08
66.5	8,478,051	80,061	0.0094	0.9906	73.31
67.5	7,198,288	80,364	0.0112	0.9888	72.62
68.5	6,038,638	71,297	0.0118	0.9882	71.81
69.5	5,198,424	46,092	0.0089	0.9911	70.96
70.5	4,632,365	43,662	0.0094	0.9906	70.33
71.5	4,069,227	38,274	0.0094	0.9906	69.67
72.5	3,461,763	32,555	0.0094	0.9906	69.02
73.5	2,938,858	21,705	0.0074	0.9926	68.37
74.5	2,434,108	17,618	0.0072	0.9928	67.86
75.5	1,870,796	14,593	0.0078	0.9922	67.37
76.5	1,168,617	98,509	0.0843	0.9157	66.85
77.5	988,472	337,691	0.3416	0.6584	61.21
78.5	650,781	282,248	0.4337	0.5663	40.30

PLACEMENT BAND 1929-2022

EXPERIENCE BAND 1961-2022

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	368,533	143,011	0.3881	0.6119	22.82
80.5	225,522	139,513	0.6186	0.3814	13.97
81.5	86,009	37,159	0.4320	0.5680	5.33
82.5	48,849	31,880	0.6526	0.3474	3.02
83.5	16,970	705	0.0415	0.9585	1.05
84.5	16,265	834	0.0513	0.9487	1.01
85.5	15,431	674	0.0437	0.9563	0.96
86.5	14,757	690	0.0468	0.9532	0.91
87.5	14,067	238	0.0169	0.9831	0.87
88.5	13,829	13,829	1.0000		0.86
89.5					



PLACEMENT BAND 1963-2022

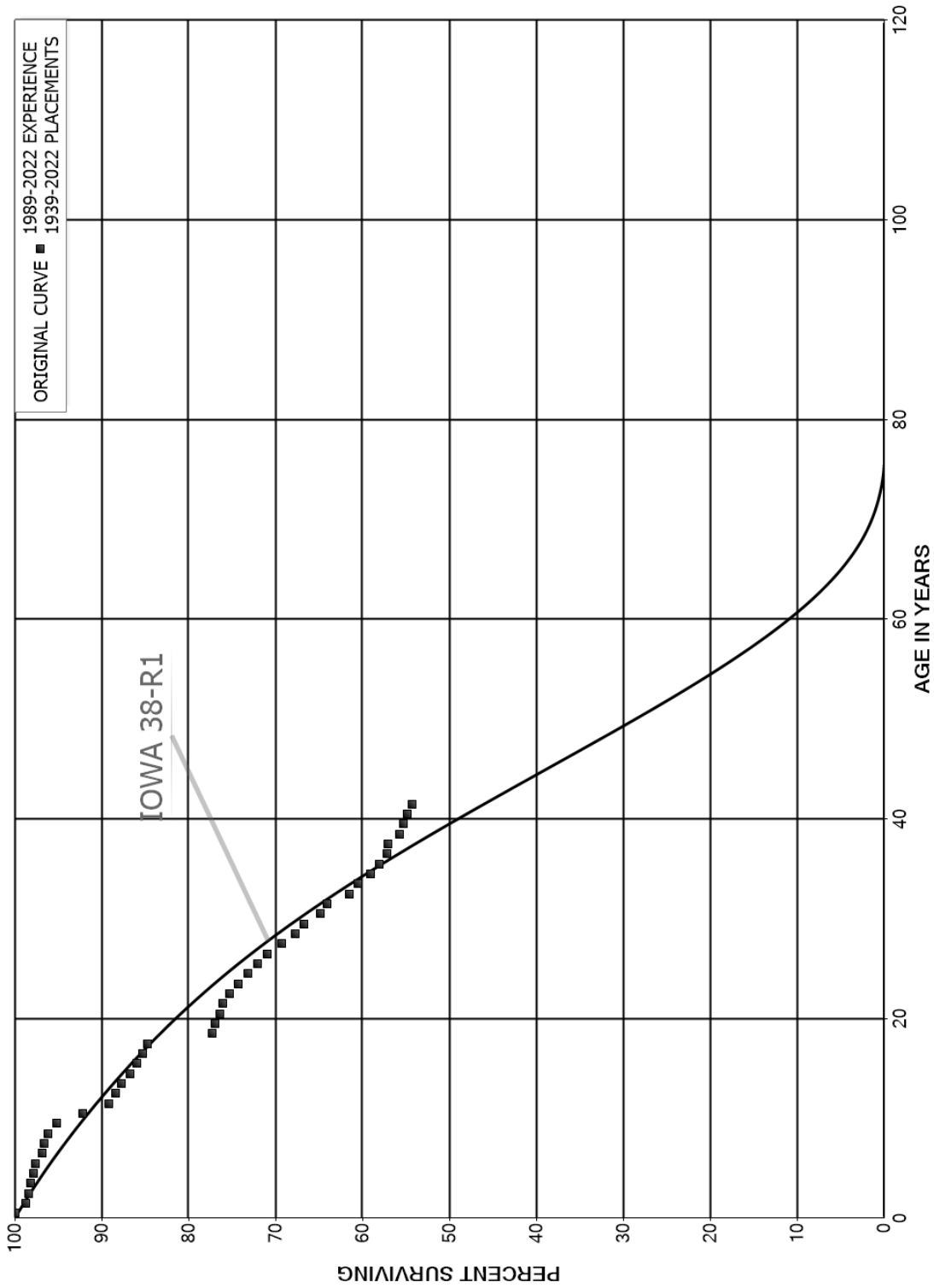
EXPERIENCE BAND 1969-2022

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	20,901,980	101	0.0000	1.0000	100.00
0.5	20,935,925	324	0.0000	1.0000	100.00
1.5	20,831,526	267	0.0000	1.0000	100.00
2.5	20,831,259	9,257	0.0004	0.9996	100.00
3.5	20,428,069	76,720	0.0038	0.9962	99.95
4.5	19,655,042	6,370	0.0003	0.9997	99.58
5.5	19,871,745	693	0.0000	1.0000	99.54
6.5	19,812,797	1,570	0.0001	0.9999	99.54
7.5	19,720,272	7,425	0.0004	0.9996	99.53
8.5	16,646,978	12,911	0.0008	0.9992	99.50
9.5	5,861,189	40,071	0.0068	0.9932	99.42
10.5	5,466,493	3,050	0.0006	0.9994	98.74
11.5	5,463,444	169,648	0.0311	0.9689	98.68
12.5	5,276,859	491,245	0.0931	0.9069	95.62
13.5	4,760,372	334,350	0.0702	0.9298	86.72
14.5	4,361,494	320,587	0.0735	0.9265	80.63
15.5	3,934,117	50,256	0.0128	0.9872	74.70
16.5	3,883,861	279,243	0.0719	0.9281	73.75
17.5	3,475,991	15,650	0.0045	0.9955	68.44
18.5	3,277,698	326,491	0.0996	0.9004	68.14
19.5	2,920,436	30,956	0.0106	0.9894	61.35
20.5	2,889,481	7,041	0.0024	0.9976	60.70
21.5	2,882,440	18,224	0.0063	0.9937	60.55
22.5	2,864,216	12,587	0.0044	0.9956	60.17
23.5	2,851,629	51,561	0.0181	0.9819	59.90
24.5	2,800,068	18,046	0.0064	0.9936	58.82
25.5	2,782,022	23,194	0.0083	0.9917	58.44
26.5	2,758,827	189,426	0.0687	0.9313	57.95
27.5	2,569,401	2,346	0.0009	0.9991	53.97
28.5	2,567,055	46,921	0.0183	0.9817	53.93
29.5	2,520,134	1,356,735	0.5384	0.4616	52.94
30.5	1,163,400	77,693	0.0668	0.9332	24.44
31.5	1,085,707	285,873	0.2633	0.7367	22.81
32.5	799,834	188,974	0.2363	0.7637	16.80
33.5	610,859	157,736	0.2582	0.7418	12.83
34.5	453,124	102,267	0.2257	0.7743	9.52
35.5	350,857	46,312	0.1320	0.8680	7.37
36.5	304,544	15,171	0.0498	0.9502	6.40
37.5	289,373	1,935	0.0067	0.9933	6.08
38.5	287,439	53,788	0.1871	0.8129	6.04

PLACEMENT BAND 1963-2022

EXPERIENCE BAND 1969-2022

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	233,651	63,081	0.2700	0.7300	4.91
40.5	170,570	5,365	0.0315	0.9685	3.58
41.5	165,205	125	0.0008	0.9992	3.47
42.5	165,080	6,675	0.0404	0.9596	3.47
43.5	158,405	1,444	0.0091	0.9909	3.33
44.5	156,961	24	0.0002	0.9998	3.30
45.5	156,938	125,221	0.7979	0.2021	3.30
46.5	31,716	23,248	0.7330	0.2670	0.67
47.5	8,468	176	0.0208	0.9792	0.18
48.5	8,292	8,292	1.0000		0.17
49.5					



PLACEMENT BAND 1939-2022

EXPERIENCE BAND 1989-2022

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	154,181,682	102,751	0.0007	0.9993	100.00
0.5	145,831,304	1,780,991	0.0122	0.9878	99.93
1.5	137,276,910	426,003	0.0031	0.9969	98.71
2.5	126,239,351	239,489	0.0019	0.9981	98.41
3.5	122,260,957	474,169	0.0039	0.9961	98.22
4.5	110,901,276	295,511	0.0027	0.9973	97.84
5.5	104,307,298	835,783	0.0080	0.9920	97.58
6.5	92,376,461	211,895	0.0023	0.9977	96.80
7.5	85,132,358	304,897	0.0036	0.9964	96.57
8.5	74,218,026	789,415	0.0106	0.9894	96.23
9.5	51,830,184	1,670,337	0.0322	0.9678	95.20
10.5	44,960,464	1,431,293	0.0318	0.9682	92.14
11.5	39,644,253	368,966	0.0093	0.9907	89.20
12.5	37,383,328	282,809	0.0076	0.9924	88.37
13.5	34,609,656	371,987	0.0107	0.9893	87.70
14.5	32,468,270	297,322	0.0092	0.9908	86.76
15.5	27,886,894	235,910	0.0085	0.9915	85.97
16.5	22,920,994	150,030	0.0065	0.9935	85.24
17.5	21,386,600	1,868,269	0.0874	0.9126	84.68
18.5	18,725,239	68,569	0.0037	0.9963	77.28
19.5	17,568,044	133,832	0.0076	0.9924	77.00
20.5	12,322,260	59,664	0.0048	0.9952	76.42
21.5	10,967,066	111,807	0.0102	0.9898	76.05
22.5	9,126,085	116,500	0.0128	0.9872	75.27
23.5	8,436,131	127,480	0.0151	0.9849	74.31
24.5	7,516,271	111,915	0.0149	0.9851	73.19
25.5	7,180,410	120,022	0.0167	0.9833	72.10
26.5	6,736,942	151,900	0.0225	0.9775	70.89
27.5	5,971,483	136,879	0.0229	0.9771	69.29
28.5	5,447,602	81,092	0.0149	0.9851	67.70
29.5	4,408,906	122,516	0.0278	0.9722	66.70
30.5	4,014,489	49,274	0.0123	0.9877	64.84
31.5	3,818,226	154,037	0.0403	0.9597	64.05
32.5	3,553,340	56,590	0.0159	0.9841	61.46
33.5	3,296,073	74,588	0.0226	0.9774	60.48
34.5	3,122,544	54,499	0.0175	0.9825	59.12
35.5	2,732,966	40,679	0.0149	0.9851	58.08
36.5	2,509,102	8,700	0.0035	0.9965	57.22
37.5	2,270,843	51,740	0.0228	0.9772	57.02
38.5	2,077,504	17,774	0.0086	0.9914	55.72

PLACEMENT BAND 1939-2022

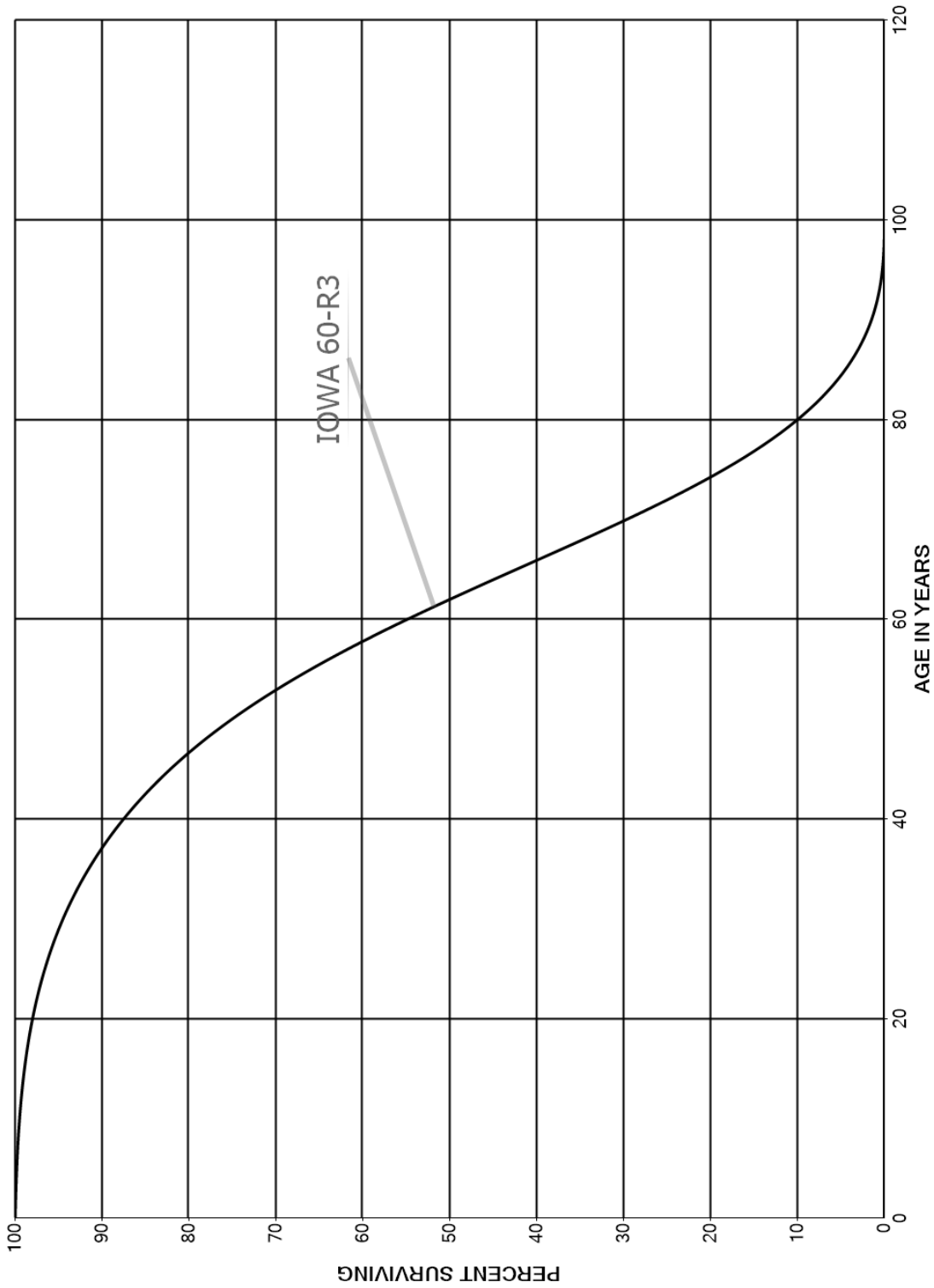
EXPERIENCE BAND 1989-2022

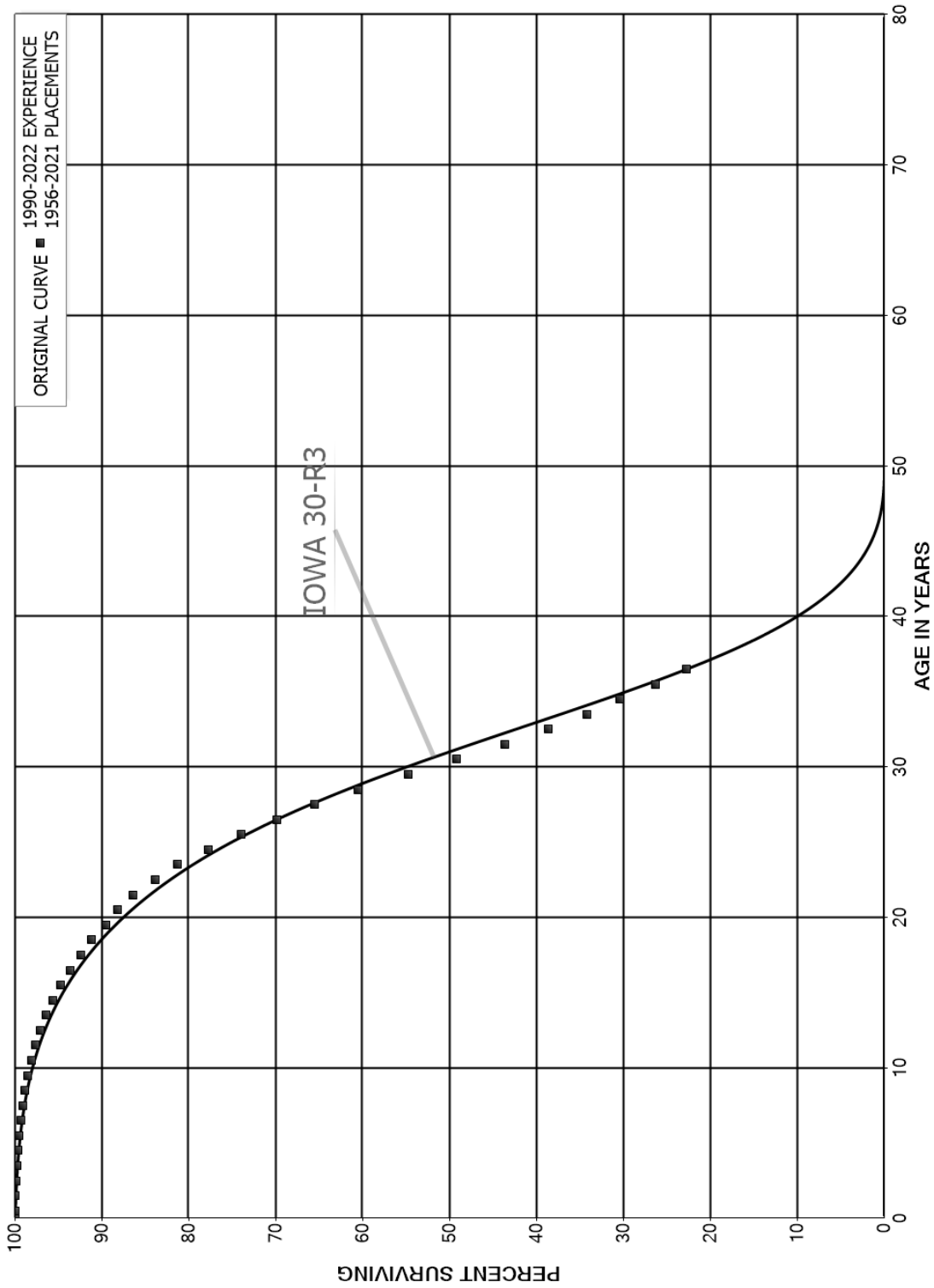
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	1,866,567	14,722	0.0079	0.9921	55.25
40.5	1,647,233	17,172	0.0104	0.9896	54.81
41.5	1,523,435	23,611	0.0155	0.9845	54.24
42.5	1,545,557	32,044	0.0207	0.9793	53.40
43.5	1,455,418	23,379	0.0161	0.9839	52.29
44.5	1,681,304	12,615	0.0075	0.9925	51.45
45.5	1,183,147	21,459	0.0181	0.9819	51.06
46.5	1,121,837	10,237	0.0091	0.9909	50.14
47.5	1,087,456	5,567	0.0051	0.9949	49.68
48.5	1,056,380	17,347	0.0164	0.9836	49.43
49.5	985,159	14,448	0.0147	0.9853	48.61
50.5	959,111	728	0.0008	0.9992	47.90
51.5	926,296	6,794	0.0073	0.9927	47.87
52.5	861,179	44,477	0.0516	0.9484	47.51
53.5	807,183	18,464	0.0229	0.9771	45.06
54.5	767,766	8,006	0.0104	0.9896	44.03
55.5	720,266	1,482	0.0021	0.9979	43.57
56.5	692,695	3,178	0.0046	0.9954	43.48
57.5	645,979	1,140	0.0018	0.9982	43.28
58.5	603,961	10,380	0.0172	0.9828	43.21
59.5	526,166	12,215	0.0232	0.9768	42.46
60.5	461,357		0.0000	1.0000	41.48
61.5	425,383		0.0000	1.0000	41.48
62.5	397,227		0.0000	1.0000	41.48
63.5	383,731	2,266	0.0059	0.9941	41.48
64.5	353,625		0.0000	1.0000	41.23
65.5	305,651		0.0000	1.0000	41.23
66.5	279,759		0.0000	1.0000	41.23
67.5	259,404		0.0000	1.0000	41.23
68.5	210,407		0.0000	1.0000	41.23
69.5	166,884		0.0000	1.0000	41.23
70.5	55,413		0.0000	1.0000	41.23
71.5	52,546		0.0000	1.0000	41.23
72.5	51,169		0.0000	1.0000	41.23
73.5	42,660		0.0000	1.0000	41.23
74.5	7,257		0.0000	1.0000	41.23
75.5	556		0.0000	1.0000	41.23
76.5	540		0.0000	1.0000	41.23
77.5	450		0.0000	1.0000	41.23
78.5	450		0.0000	1.0000	41.23

PLACEMENT BAND 1939-2022

EXPERIENCE BAND 1989-2022

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	450		0.0000	1.0000	41.23
80.5	263		0.0000	1.0000	41.23
81.5	28		0.0000	1.0000	41.23
82.5	28		0.0000	1.0000	41.23
83.5					41.23





PLACEMENT BAND 1956-2021

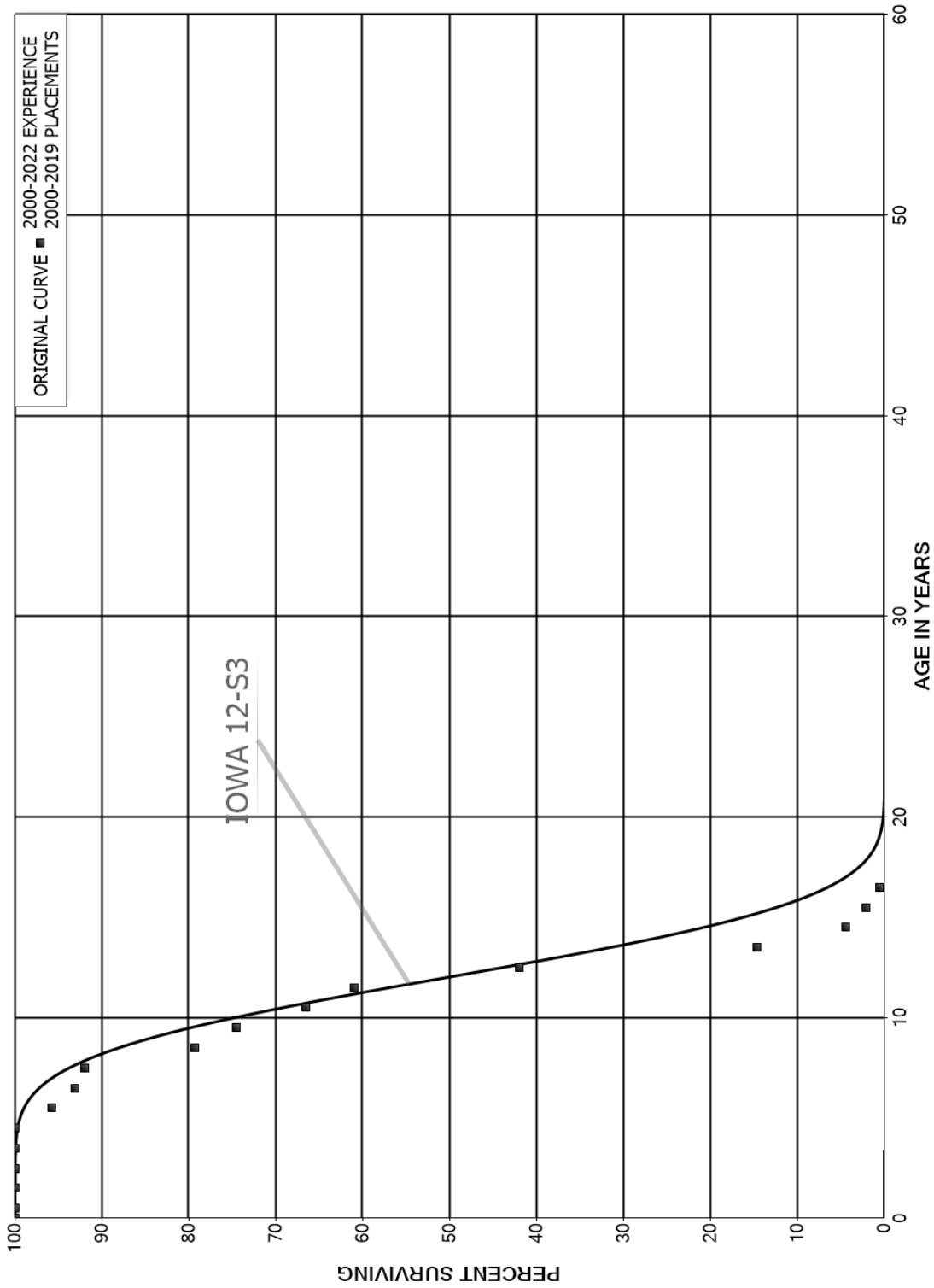
EXPERIENCE BAND 1990-2022

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	201,889,554	44,338	0.0002	0.9998	100.00
0.5	202,418,720	107,698	0.0005	0.9995	99.98
1.5	169,730,802	139,531	0.0008	0.9992	99.92
2.5	149,010,393	167,695	0.0011	0.9989	99.84
3.5	139,402,781	155,110	0.0011	0.9989	99.73
4.5	128,861,392	182,479	0.0014	0.9986	99.62
5.5	123,786,368	218,831	0.0018	0.9982	99.48
6.5	120,120,964	255,264	0.0021	0.9979	99.30
7.5	115,628,228	310,968	0.0027	0.9973	99.09
8.5	113,518,256	362,781	0.0032	0.9968	98.82
9.5	99,670,233	396,006	0.0040	0.9960	98.51
10.5	89,142,338	433,960	0.0049	0.9951	98.12
11.5	78,561,791	472,850	0.0060	0.9940	97.64
12.5	74,191,584	503,278	0.0068	0.9932	97.05
13.5	70,547,218	549,984	0.0078	0.9922	96.39
14.5	66,991,166	672,132	0.0100	0.9900	95.64
15.5	63,012,131	707,008	0.0112	0.9888	94.68
16.5	58,721,029	800,372	0.0136	0.9864	93.62
17.5	54,780,687	668,992	0.0122	0.9878	92.34
18.5	50,594,247	935,167	0.0185	0.9815	91.22
19.5	45,992,252	699,194	0.0152	0.9848	89.53
20.5	42,056,557	860,471	0.0205	0.9795	88.17
21.5	35,592,805	1,058,550	0.0297	0.9703	86.37
22.5	26,668,242	797,749	0.0299	0.9701	83.80
23.5	24,171,800	1,075,873	0.0445	0.9555	81.29
24.5	21,155,198	1,014,660	0.0480	0.9520	77.67
25.5	18,522,418	1,025,541	0.0554	0.9446	73.95
26.5	16,143,299	996,632	0.0617	0.9383	69.85
27.5	13,742,938	1,049,940	0.0764	0.9236	65.54
28.5	11,605,445	1,108,298	0.0955	0.9045	60.53
29.5	9,638,995	989,877	0.1027	0.8973	54.75
30.5	7,851,510	882,857	0.1124	0.8876	49.13
31.5	6,395,091	729,543	0.1141	0.8859	43.61
32.5	5,228,317	601,473	0.1150	0.8850	38.63
33.5	4,338,640	482,633	0.1112	0.8888	34.19
34.5	3,413,460	456,776	0.1338	0.8662	30.38
35.5	2,648,684	361,707	0.1366	0.8634	26.32
36.5	1,945,485	302,201	0.1553	0.8447	22.72
37.5	1,554,240	272,922	0.1756	0.8244	19.19
38.5	1,048,871	219,335	0.2091	0.7909	15.82

PLACEMENT BAND 1956-2021

EXPERIENCE BAND 1990-2022

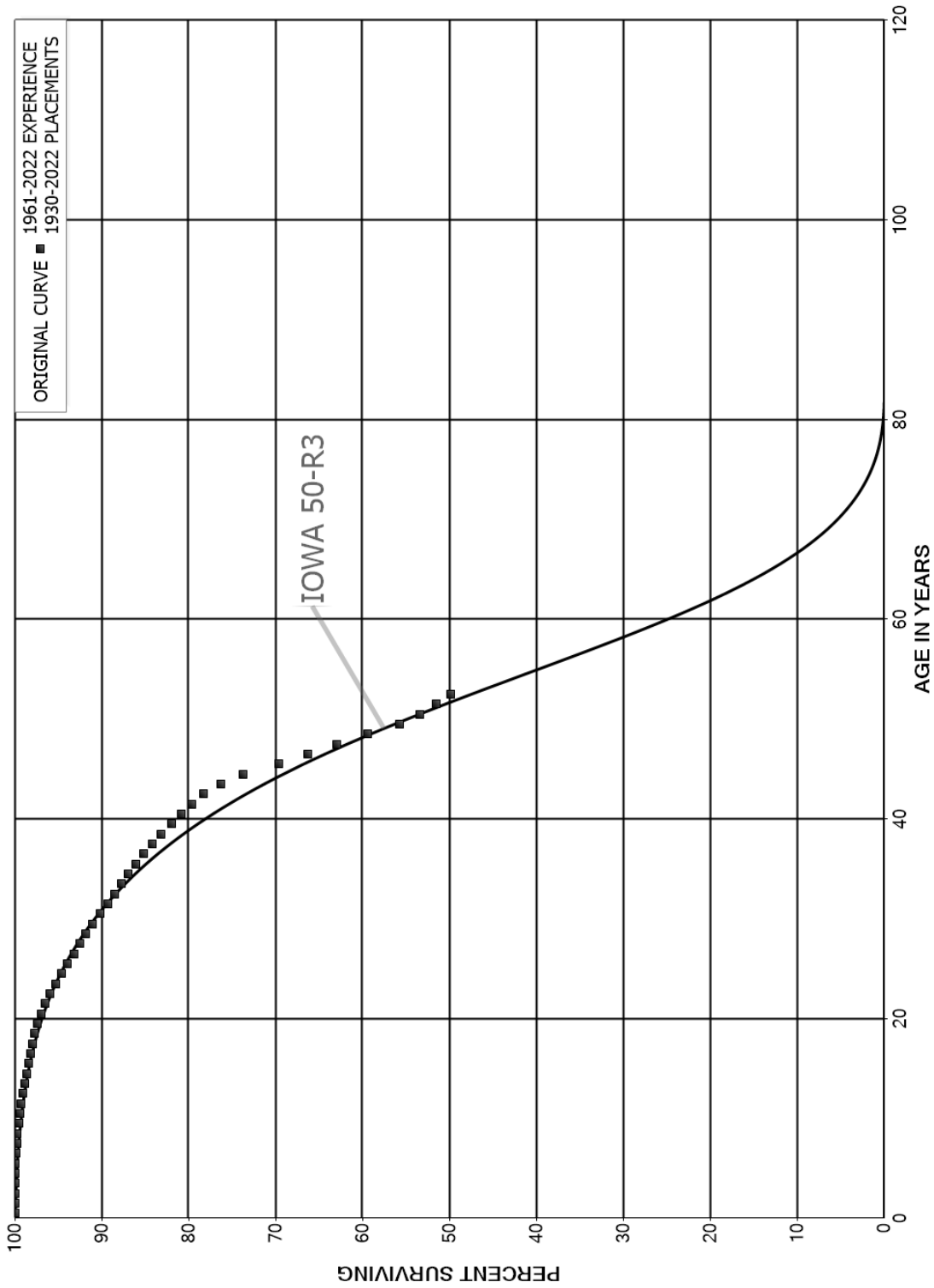
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	773,652	176,770	0.2285	0.7715	12.51
40.5	515,768	111,160	0.2155	0.7845	9.66
41.5	288,230	87,002	0.3018	0.6982	7.57
42.5	164,835	51,255	0.3109	0.6891	5.29
43.5	64,370	26,331	0.4090	0.5910	3.64
44.5	15,360	7,620	0.4961	0.5039	2.15
45.5					1.09



PLACEMENT BAND 2000-2019

EXPERIENCE BAND 2000-2022

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	134,483,118		0.0000	1.0000	100.00
0.5	134,483,118		0.0000	1.0000	100.00
1.5	143,480,436		0.0000	1.0000	100.00
2.5	143,480,436	4,094	0.0000	1.0000	100.00
3.5	137,687,880		0.0000	1.0000	100.00
4.5	122,493,599	5,226,026	0.0427	0.9573	100.00
5.5	96,786,097	2,659,711	0.0275	0.9725	95.73
6.5	80,937,871	982,210	0.0121	0.9879	93.10
7.5	78,213,331	10,785,667	0.1379	0.8621	91.97
8.5	67,427,663	4,080,914	0.0605	0.9395	79.29
9.5	63,346,749	6,812,743	0.1075	0.8925	74.49
10.5	56,534,006	4,718,031	0.0835	0.9165	66.48
11.5	51,815,975	16,171,556	0.3121	0.6879	60.93
12.5	35,644,419	23,187,827	0.6505	0.3495	41.91
13.5	12,456,593	8,672,323	0.6962	0.3038	14.65
14.5	3,784,270	2,033,771	0.5374	0.4626	4.45
15.5	1,750,499	1,292,306	0.7383	0.2617	2.06
16.5	458,193	21,878	0.0477	0.9523	0.54
17.5	436,315	436,315	1.0000		0.51
18.5					



PLACEMENT BAND 1930-2022

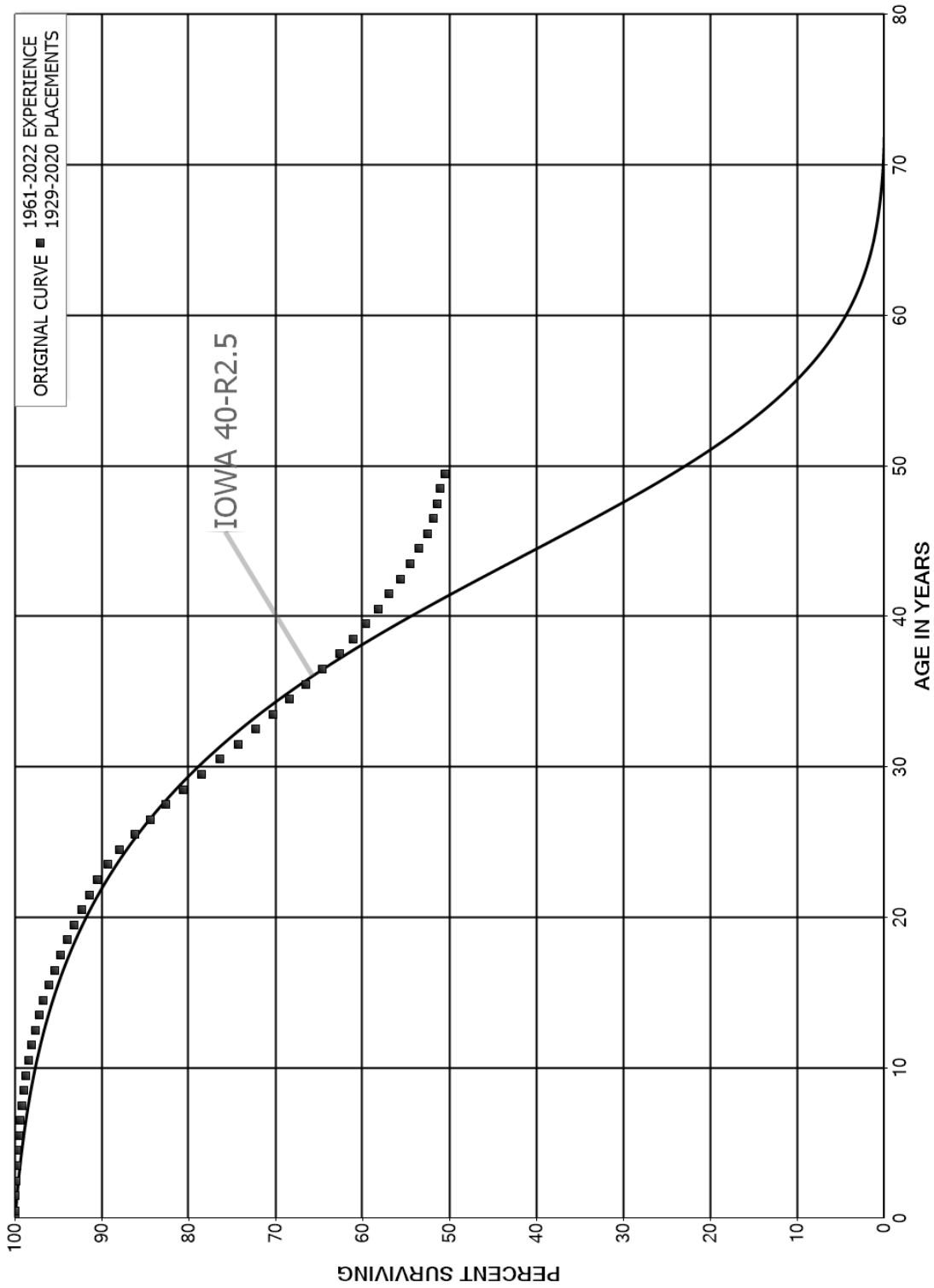
EXPERIENCE BAND 1961-2022

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	165,045,050	468	0.0000	1.0000	100.00
0.5	165,169,942	10,361	0.0001	0.9999	100.00
1.5	165,565,968	10,911	0.0001	0.9999	99.99
2.5	166,069,907	36,831	0.0002	0.9998	99.99
3.5	166,343,288	30,916	0.0002	0.9998	99.96
4.5	138,438,814	58,054	0.0004	0.9996	99.95
5.5	126,968,425	73,956	0.0006	0.9994	99.90
6.5	116,598,440	99,123	0.0009	0.9991	99.85
7.5	107,195,123	96,216	0.0009	0.9991	99.76
8.5	100,210,227	137,761	0.0014	0.9986	99.67
9.5	99,994,909	140,904	0.0014	0.9986	99.53
10.5	99,545,849	154,133	0.0015	0.9985	99.39
11.5	99,066,340	161,550	0.0016	0.9984	99.24
12.5	98,954,523	197,037	0.0020	0.9980	99.08
13.5	94,587,408	240,587	0.0025	0.9975	98.88
14.5	89,286,458	166,093	0.0019	0.9981	98.63
15.5	84,210,265	226,334	0.0027	0.9973	98.45
16.5	81,430,033	179,696	0.0022	0.9978	98.18
17.5	74,931,865	217,113	0.0029	0.9971	97.97
18.5	68,583,823	220,775	0.0032	0.9968	97.68
19.5	58,922,300	230,792	0.0039	0.9961	97.37
20.5	43,526,464	215,100	0.0049	0.9951	96.99
21.5	42,954,141	246,141	0.0057	0.9943	96.51
22.5	37,224,644	251,163	0.0067	0.9933	95.95
23.5	36,990,096	259,631	0.0070	0.9930	95.31
24.5	35,151,977	256,489	0.0073	0.9927	94.64
25.5	33,073,141	252,327	0.0076	0.9924	93.95
26.5	31,052,810	241,998	0.0078	0.9922	93.23
27.5	29,796,251	223,361	0.0075	0.9925	92.50
28.5	27,508,444	238,302	0.0087	0.9913	91.81
29.5	25,314,791	227,841	0.0090	0.9910	91.01
30.5	23,727,348	227,931	0.0096	0.9904	90.19
31.5	22,359,324	202,733	0.0091	0.9909	89.33
32.5	20,862,993	196,793	0.0094	0.9906	88.52
33.5	19,271,144	173,443	0.0090	0.9910	87.68
34.5	18,130,966	170,543	0.0094	0.9906	86.89
35.5	16,644,222	174,911	0.0105	0.9895	86.08
36.5	15,443,646	177,262	0.0115	0.9885	85.17
37.5	13,965,800	177,997	0.0127	0.9873	84.19
38.5	12,684,775	172,698	0.0136	0.9864	83.12

PLACEMENT BAND 1930-2022

EXPERIENCE BAND 1961-2022

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	11,459,649	166,982	0.0146	0.9854	81.99
40.5	10,361,791	151,816	0.0147	0.9853	80.80
41.5	9,309,726	160,578	0.0172	0.9828	79.61
42.5	8,254,549	202,309	0.0245	0.9755	78.24
43.5	7,150,461	246,061	0.0344	0.9656	76.32
44.5	6,042,974	334,439	0.0553	0.9447	73.69
45.5	5,009,404	239,981	0.0479	0.9521	69.62
46.5	4,196,644	213,764	0.0509	0.9491	66.28
47.5	3,543,717	195,865	0.0553	0.9447	62.90
48.5	2,929,194	181,748	0.0620	0.9380	59.43
49.5	2,376,858	98,353	0.0414	0.9586	55.74
50.5	1,975,489	69,643	0.0353	0.9647	53.43
51.5	1,688,859	56,784	0.0336	0.9664	51.55
52.5	1,425,688	51,072	0.0358	0.9642	49.82
53.5	1,232,350	42,313	0.0343	0.9657	48.03
54.5	1,066,851	36,421	0.0341	0.9659	46.38
55.5	902,354	33,059	0.0366	0.9634	44.80
56.5	743,727	26,767	0.0360	0.9640	43.16
57.5	590,434	17,412	0.0295	0.9705	41.61
58.5	456,543	9,568	0.0210	0.9790	40.38
59.5	339,254	7,911	0.0233	0.9767	39.53
60.5	250,482	6,501	0.0260	0.9740	38.61
61.5	176,461	5,394	0.0306	0.9694	37.61
62.5	100,772	4,603	0.0457	0.9543	36.46
63.5	41,949	3,734	0.0890	0.9110	34.79
64.5	15,386	3,031	0.1970	0.8030	31.70
65.5	12,355	2,719	0.2201	0.7799	25.45
66.5	9,636	2,659	0.2759	0.7241	19.85
67.5	6,977	2,542	0.3643	0.6357	14.37
68.5	4,435	1,300	0.2931	0.7069	9.14
69.5	3,135	1,051	0.3352	0.6648	6.46
70.5	2,084	955	0.4583	0.5417	4.29
71.5	1,129	724	0.6413	0.3587	2.33
72.5	405	405	1.0000		0.83
73.5					



PLACEMENT BAND 1929-2020

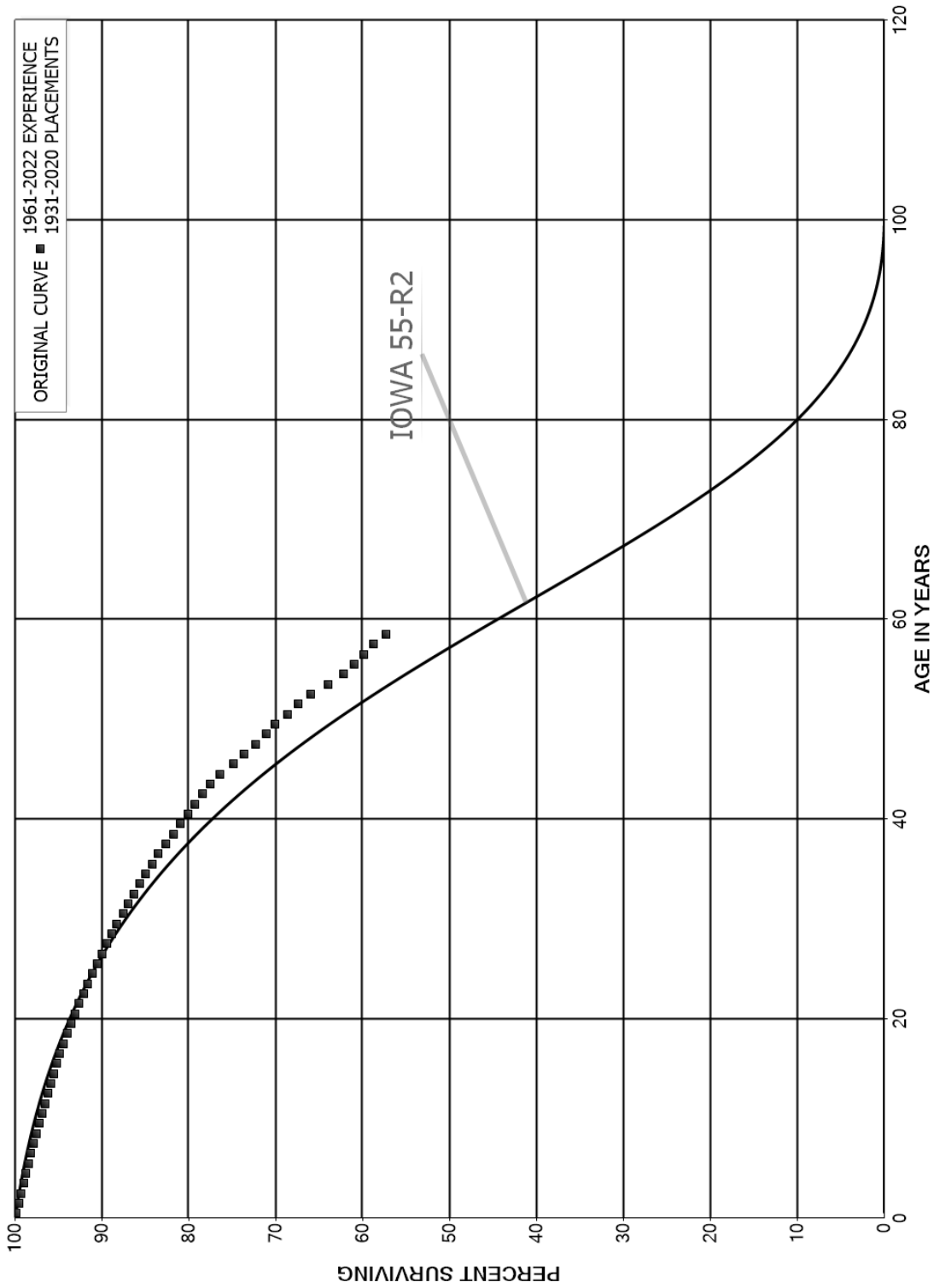
EXPERIENCE BAND 1961-2022

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	14,477,725	2,860	0.0002	0.9998	100.00
0.5	14,588,062	7,011	0.0005	0.9995	99.98
1.5	14,682,914	9,509	0.0006	0.9994	99.93
2.5	14,745,469	13,565	0.0009	0.9991	99.87
3.5	14,814,418	14,447	0.0010	0.9990	99.78
4.5	14,874,232	21,060	0.0014	0.9986	99.68
5.5	14,920,004	26,465	0.0018	0.9982	99.54
6.5	14,953,691	25,510	0.0017	0.9983	99.36
7.5	14,982,317	35,693	0.0024	0.9976	99.19
8.5	14,995,345	39,559	0.0026	0.9974	98.95
9.5	14,999,637	44,949	0.0030	0.9970	98.69
10.5	14,994,154	55,094	0.0037	0.9963	98.40
11.5	14,974,577	62,836	0.0042	0.9958	98.04
12.5	14,943,708	61,985	0.0041	0.9959	97.63
13.5	14,910,494	81,728	0.0055	0.9945	97.22
14.5	14,854,661	97,160	0.0065	0.9935	96.69
15.5	14,780,802	98,203	0.0066	0.9934	96.05
16.5	14,703,570	110,719	0.0075	0.9925	95.42
17.5	14,611,726	108,450	0.0074	0.9926	94.70
18.5	14,520,265	130,336	0.0090	0.9910	94.00
19.5	14,405,218	129,013	0.0090	0.9910	93.15
20.5	14,170,379	135,770	0.0096	0.9904	92.32
21.5	14,043,847	147,170	0.0105	0.9895	91.43
22.5	12,992,909	177,657	0.0137	0.9863	90.47
23.5	12,075,676	177,727	0.0147	0.9853	89.24
24.5	10,906,058	211,066	0.0194	0.9806	87.92
25.5	9,754,926	212,515	0.0218	0.9782	86.22
26.5	8,966,575	186,625	0.0208	0.9792	84.34
27.5	8,157,626	199,011	0.0244	0.9756	82.59
28.5	7,580,120	193,542	0.0255	0.9745	80.57
29.5	6,653,332	181,322	0.0273	0.9727	78.52
30.5	5,989,609	164,557	0.0275	0.9725	76.38
31.5	5,389,869	147,106	0.0273	0.9727	74.28
32.5	4,846,875	135,184	0.0279	0.9721	72.25
33.5	4,364,826	113,183	0.0259	0.9741	70.24
34.5	3,844,602	106,737	0.0278	0.9722	68.41
35.5	3,247,209	92,224	0.0284	0.9716	66.52
36.5	2,822,505	85,994	0.0305	0.9695	64.63
37.5	2,653,986	66,633	0.0251	0.9749	62.66
38.5	2,224,391	53,050	0.0238	0.9762	61.08

PLACEMENT BAND 1929-2020

EXPERIENCE BAND 1961-2022

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	1,766,932	41,609	0.0235	0.9765	59.63
40.5	1,609,638	34,514	0.0214	0.9786	58.22
41.5	1,217,935	28,284	0.0232	0.9768	56.97
42.5	976,734	20,883	0.0214	0.9786	55.65
43.5	821,264	15,127	0.0184	0.9816	54.46
44.5	593,666	10,204	0.0172	0.9828	53.46
45.5	440,205	6,267	0.0142	0.9858	52.54
46.5	347,975	2,974	0.0085	0.9915	51.79
47.5	230,478	1,305	0.0057	0.9943	51.35
48.5	153,941	1,679	0.0109	0.9891	51.06
49.5	105,270	85	0.0008	0.9992	50.50
50.5	59,915		0.0000	1.0000	50.46
51.5	33,063		0.0000	1.0000	50.46
52.5	15,805		0.0000	1.0000	50.46
53.5	8,005		0.0000	1.0000	50.46
54.5	1,283		0.0000	1.0000	50.46
55.5					50.46



PLACEMENT BAND 1931-2020

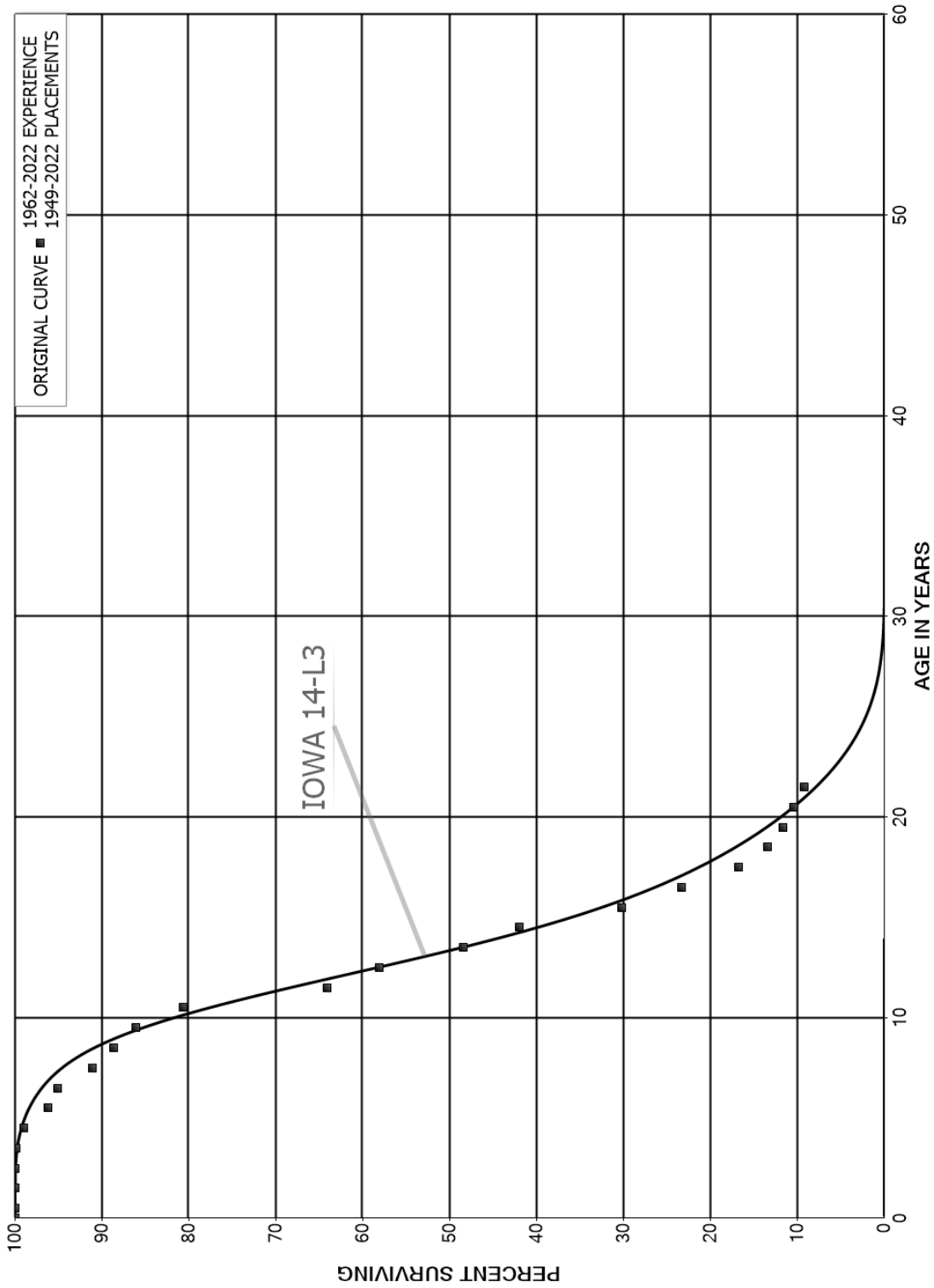
EXPERIENCE BAND 1961-2022

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	3,505,552	4,625	0.0013	0.9987	100.00
0.5	3,523,997	11,549	0.0033	0.9967	99.87
1.5	3,544,488	9,492	0.0027	0.9973	99.54
2.5	3,588,749	12,072	0.0034	0.9966	99.27
3.5	3,599,015	9,285	0.0026	0.9974	98.94
4.5	3,602,511	10,720	0.0030	0.9970	98.69
5.5	3,602,204	9,585	0.0027	0.9973	98.39
6.5	3,535,830	10,397	0.0029	0.9971	98.13
7.5	3,454,268	11,598	0.0034	0.9966	97.84
8.5	3,429,221	11,836	0.0035	0.9965	97.51
9.5	3,405,674	12,936	0.0038	0.9962	97.18
10.5	3,341,348	11,147	0.0033	0.9967	96.81
11.5	3,334,409	11,560	0.0035	0.9965	96.48
12.5	3,307,513	11,073	0.0033	0.9967	96.15
13.5	3,297,362	11,180	0.0034	0.9966	95.83
14.5	3,261,116	10,366	0.0032	0.9968	95.50
15.5	2,788,030	11,836	0.0042	0.9958	95.20
16.5	2,560,444	11,722	0.0046	0.9954	94.79
17.5	2,550,912	11,520	0.0045	0.9955	94.36
18.5	2,523,544	11,584	0.0046	0.9954	93.93
19.5	2,500,059	11,415	0.0046	0.9954	93.50
20.5	2,104,045	11,239	0.0053	0.9947	93.08
21.5	2,092,805	11,255	0.0054	0.9946	92.58
22.5	1,907,012	10,672	0.0056	0.9944	92.08
23.5	1,896,340	11,384	0.0060	0.9940	91.57
24.5	1,875,711	11,547	0.0062	0.9938	91.02
25.5	1,843,104	11,025	0.0060	0.9940	90.46
26.5	1,809,333	9,932	0.0055	0.9945	89.92
27.5	1,588,915	9,882	0.0062	0.9938	89.42
28.5	1,516,603	10,256	0.0068	0.9932	88.87
29.5	1,402,671	11,256	0.0080	0.9920	88.26
30.5	1,339,849	9,932	0.0074	0.9926	87.56
31.5	1,249,476	9,366	0.0075	0.9925	86.91
32.5	1,159,528	9,175	0.0079	0.9921	86.26
33.5	1,080,551	8,085	0.0075	0.9925	85.57
34.5	1,026,767	8,556	0.0083	0.9917	84.93
35.5	935,313	8,405	0.0090	0.9910	84.23
36.5	845,525	8,371	0.0099	0.9901	83.47
37.5	790,337	8,716	0.0110	0.9890	82.64
38.5	732,066	7,239	0.0099	0.9901	81.73

PLACEMENT BAND 1931-2020

EXPERIENCE BAND 1961-2022

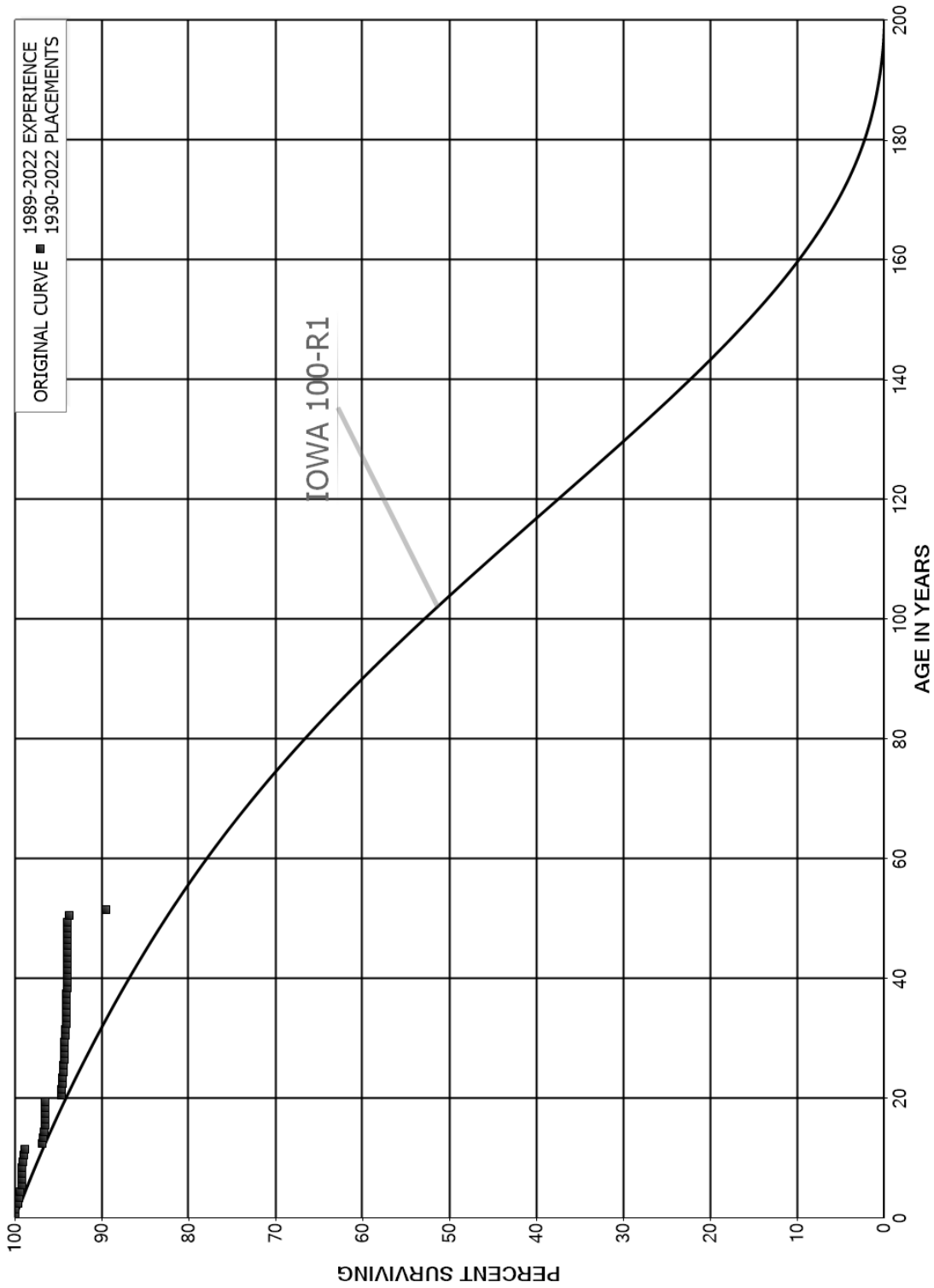
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	640,289	6,414	0.0100	0.9900	80.92
40.5	589,719	6,341	0.0108	0.9892	80.11
41.5	546,002	5,637	0.0103	0.9897	79.25
42.5	505,954	6,236	0.0123	0.9877	78.43
43.5	451,489	6,298	0.0139	0.9861	77.47
44.5	402,930	8,069	0.0200	0.9800	76.38
45.5	362,391	6,149	0.0170	0.9830	74.86
46.5	330,147	6,013	0.0182	0.9818	73.59
47.5	301,057	4,758	0.0158	0.9842	72.24
48.5	275,389	4,196	0.0152	0.9848	71.10
49.5	248,974	5,169	0.0208	0.9792	70.02
50.5	226,371	3,794	0.0168	0.9832	68.57
51.5	204,852	4,561	0.0223	0.9777	67.42
52.5	183,514	5,462	0.0298	0.9702	65.92
53.5	166,770	4,601	0.0276	0.9724	63.95
54.5	152,269	3,028	0.0199	0.9801	62.19
55.5	137,351	2,603	0.0190	0.9810	60.95
56.5	120,484	2,052	0.0170	0.9830	59.80
57.5	105,577	2,695	0.0255	0.9745	58.78
58.5	90,457	1,955	0.0216	0.9784	57.28
59.5	78,724	1,266	0.0161	0.9839	56.04
60.5	69,720	829	0.0119	0.9881	55.14
61.5	61,310	638	0.0104	0.9896	54.48
62.5	52,411	912	0.0174	0.9826	53.92
63.5	40,826	365	0.0090	0.9910	52.98
64.5	23,870	308	0.0129	0.9871	52.50
65.5	17,217	239	0.0139	0.9861	51.83
66.5	13,653	208	0.0153	0.9847	51.11
67.5	10,926	99	0.0090	0.9910	50.33
68.5	8,655	78	0.0091	0.9909	49.87
69.5	4,042	18	0.0044	0.9956	49.42
70.5	2,836	10	0.0036	0.9964	49.20
71.5	2,055	3	0.0014	0.9986	49.02
72.5	1,439	0	0.0000	1.0000	48.96
73.5	968		0.0000	1.0000	48.95
74.5	616		0.0000	1.0000	48.95
75.5	350		0.0000	1.0000	48.95
76.5	157		0.0000	1.0000	48.95
77.5	27		0.0000	1.0000	48.95
78.5					48.95



PLACEMENT BAND 1949-2022

EXPERIENCE BAND 1962-2022

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	5,922,023	3	0.0000	1.0000	100.00
0.5	5,534,195	1,013	0.0002	0.9998	100.00
1.5	5,378,495	3,209	0.0006	0.9994	99.98
2.5	5,305,684	5,880	0.0011	0.9989	99.92
3.5	4,604,883	37,659	0.0082	0.9918	99.81
4.5	4,009,585	112,949	0.0282	0.9718	99.00
5.5	3,891,826	46,070	0.0118	0.9882	96.21
6.5	3,495,172	148,173	0.0424	0.9576	95.07
7.5	2,597,005	70,049	0.0270	0.9730	91.04
8.5	2,157,169	60,638	0.0281	0.9719	88.58
9.5	2,054,177	130,224	0.0634	0.9366	86.09
10.5	1,924,409	394,227	0.2049	0.7951	80.63
11.5	1,505,895	141,923	0.0942	0.9058	64.12
12.5	1,205,067	200,410	0.1663	0.8337	58.07
13.5	826,230	110,144	0.1333	0.8667	48.42
14.5	596,815	167,790	0.2811	0.7189	41.96
15.5	420,547	95,184	0.2263	0.7737	30.16
16.5	313,443	89,128	0.2844	0.7156	23.34
17.5	224,063	44,306	0.1977	0.8023	16.70
18.5	163,696	21,500	0.1313	0.8687	13.40
19.5	137,788	15,199	0.1103	0.8897	11.64
20.5	86,382	9,714	0.1125	0.8875	10.35
21.5	49,247	11,808	0.2398	0.7602	9.19
22.5	37,116	5,053	0.1361	0.8639	6.99
23.5	32,063	3,766	0.1175	0.8825	6.04
24.5	20,835	4,677	0.2245	0.7755	5.33
25.5	15,880	993	0.0625	0.9375	4.13
26.5	14,396	1,418	0.0985	0.9015	3.87
27.5	5,560	432	0.0777	0.9223	3.49
28.5	3,592	583	0.1623	0.8377	3.22
29.5	2,523	1,181	0.4681	0.5319	2.70
30.5	731	37	0.0506	0.9494	1.43
31.5					1.36



PLACEMENT BAND 1930-2022

EXPERIENCE BAND 1989-2022

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	55,754,364		0.0000	1.0000	100.00
0.5	55,405,776	25,360	0.0005	0.9995	100.00
1.5	51,213,591	190,699	0.0037	0.9963	99.95
2.5	54,157,284	50,681	0.0009	0.9991	99.58
3.5	52,355,133	47,795	0.0009	0.9991	99.49
4.5	49,568,625	95,939	0.0019	0.9981	99.40
5.5	47,718,067		0.0000	1.0000	99.21
6.5	32,966,950	5,484	0.0002	0.9998	99.21
7.5	30,720,144	17,246	0.0006	0.9994	99.19
8.5	25,511,962	7,967	0.0003	0.9997	99.13
9.5	19,021,137	38,520	0.0020	0.9980	99.10
10.5	21,131,661	10,769	0.0005	0.9995	98.90
11.5	21,445,551	432,420	0.0202	0.9798	98.85
12.5	21,210,007	31,189	0.0015	0.9985	96.86
13.5	21,723,658	23,262	0.0011	0.9989	96.72
14.5	40,975,519	51,095	0.0012	0.9988	96.61
15.5	42,938,959	160	0.0000	1.0000	96.49
16.5	42,245,402	2,727	0.0001	0.9999	96.49
17.5	42,626,980	2,484	0.0001	0.9999	96.49
18.5	42,514,564	12,266	0.0003	0.9997	96.48
19.5	40,667,259	786,460	0.0193	0.9807	96.45
20.5	41,450,123	9,302	0.0002	0.9998	94.59
21.5	41,912,341	12,395	0.0003	0.9997	94.57
22.5	42,252,712	29,729	0.0007	0.9993	94.54
23.5	42,099,377	14,463	0.0003	0.9997	94.47
24.5	36,482,038	8,868	0.0002	0.9998	94.44
25.5	36,843,120	53,539	0.0015	0.9985	94.42
26.5	35,090,448	7,925	0.0002	0.9998	94.28
27.5	29,439,477		0.0000	1.0000	94.26
28.5	13,064,226	2,695	0.0002	0.9998	94.26
29.5	11,435,444	9,298	0.0008	0.9992	94.24
30.5	10,897,777	4,692	0.0004	0.9996	94.16
31.5	12,719,716	1,948	0.0002	0.9998	94.12
32.5	12,776,097	6,380	0.0005	0.9995	94.11
33.5	14,150,284		0.0000	1.0000	94.06
34.5	12,997,698	5,136	0.0004	0.9996	94.06
35.5	12,962,891	1,353	0.0001	0.9999	94.02
36.5	10,120,165	157	0.0000	1.0000	94.01
37.5	8,133,350	330	0.0000	1.0000	94.01
38.5	5,613,040	485	0.0001	0.9999	94.01

PLACEMENT BAND 1930-2022

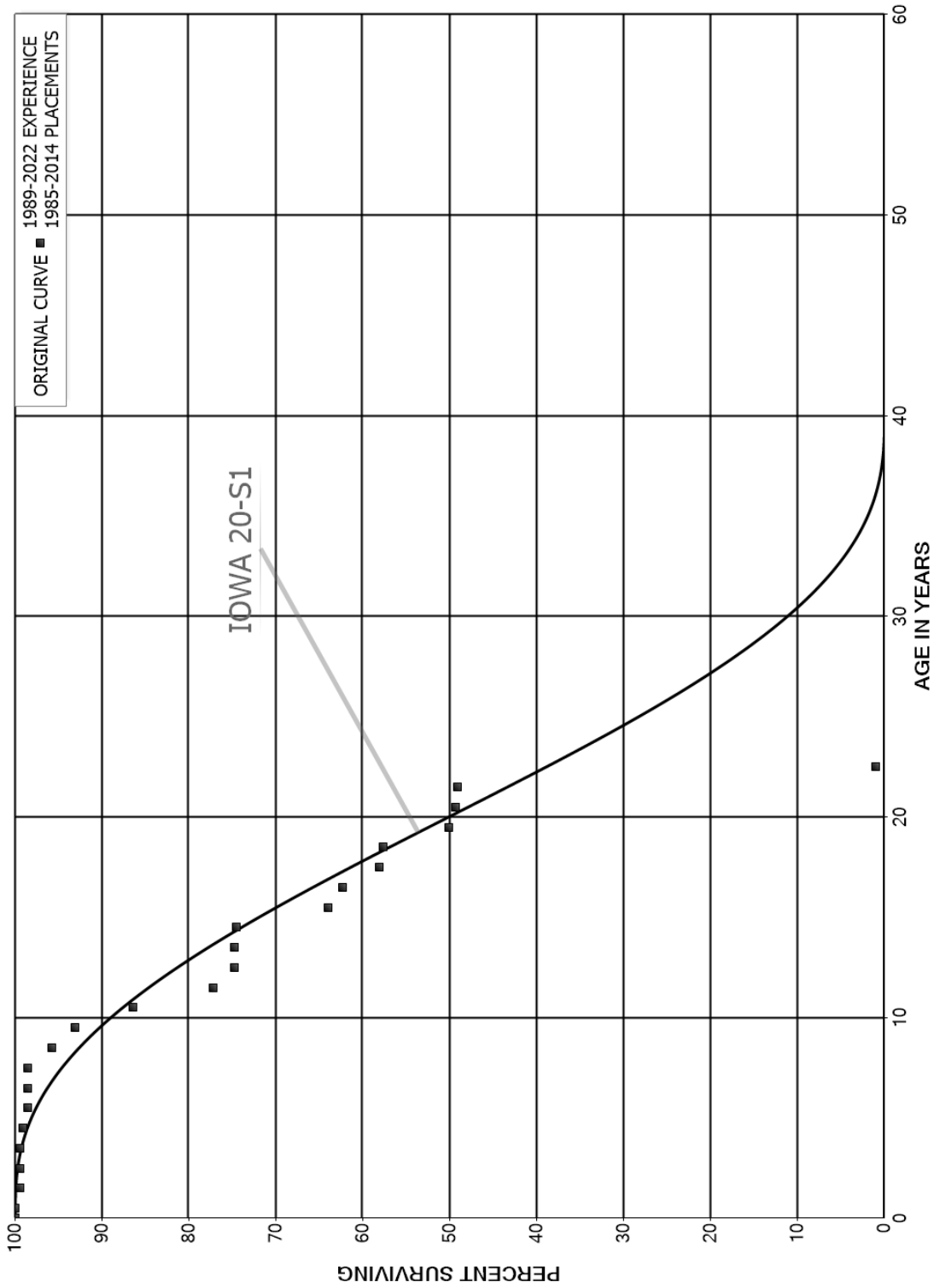
EXPERIENCE BAND 1989-2022

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	5,279,965	54	0.0000	1.0000	94.00
40.5	5,103,630		0.0000	1.0000	94.00
41.5	4,850,026	279	0.0001	0.9999	94.00
42.5	4,929,861		0.0000	1.0000	93.99
43.5	4,879,191	148	0.0000	1.0000	93.99
44.5	5,008,479		0.0000	1.0000	93.99
45.5	4,972,882		0.0000	1.0000	93.99
46.5	4,863,244		0.0000	1.0000	93.99
47.5	1,451,961		0.0000	1.0000	93.99
48.5	1,296,472		0.0000	1.0000	93.99
49.5	1,280,294	4,164	0.0033	0.9967	93.99
50.5	1,265,475	56,513	0.0447	0.9553	93.68
51.5	479,560		0.0000	1.0000	89.50
52.5	346,863		0.0000	1.0000	89.50
53.5	357,369		0.0000	1.0000	89.50
54.5	354,906		0.0000	1.0000	89.50
55.5	323,003		0.0000	1.0000	89.50
56.5	181,640		0.0000	1.0000	89.50
57.5	184,272		0.0000	1.0000	89.50
58.5	57,340		0.0000	1.0000	89.50
59.5	63,241		0.0000	1.0000	89.50
60.5	60,148		0.0000	1.0000	89.50
61.5	60,195		0.0000	1.0000	89.50
62.5	60,691		0.0000	1.0000	89.50
63.5	60,691		0.0000	1.0000	89.50
64.5	60,528		0.0000	1.0000	89.50
65.5	58,847		0.0000	1.0000	89.50
66.5	59,021		0.0000	1.0000	89.50
67.5	49,759		0.0000	1.0000	89.50
68.5	49,686		0.0000	1.0000	89.50
69.5	13,708		0.0000	1.0000	89.50
70.5	13,597		0.0000	1.0000	89.50
71.5	10,960		0.0000	1.0000	89.50
72.5	8,679		0.0000	1.0000	89.50
73.5	2,778		0.0000	1.0000	89.50
74.5	2,778		0.0000	1.0000	89.50
75.5	2,731		0.0000	1.0000	89.50
76.5	2,235		0.0000	1.0000	89.50
77.5	2,238		0.0000	1.0000	89.50
78.5	5,395		0.0000	1.0000	89.50

PLACEMENT BAND 1930-2022

EXPERIENCE BAND 1989-2022

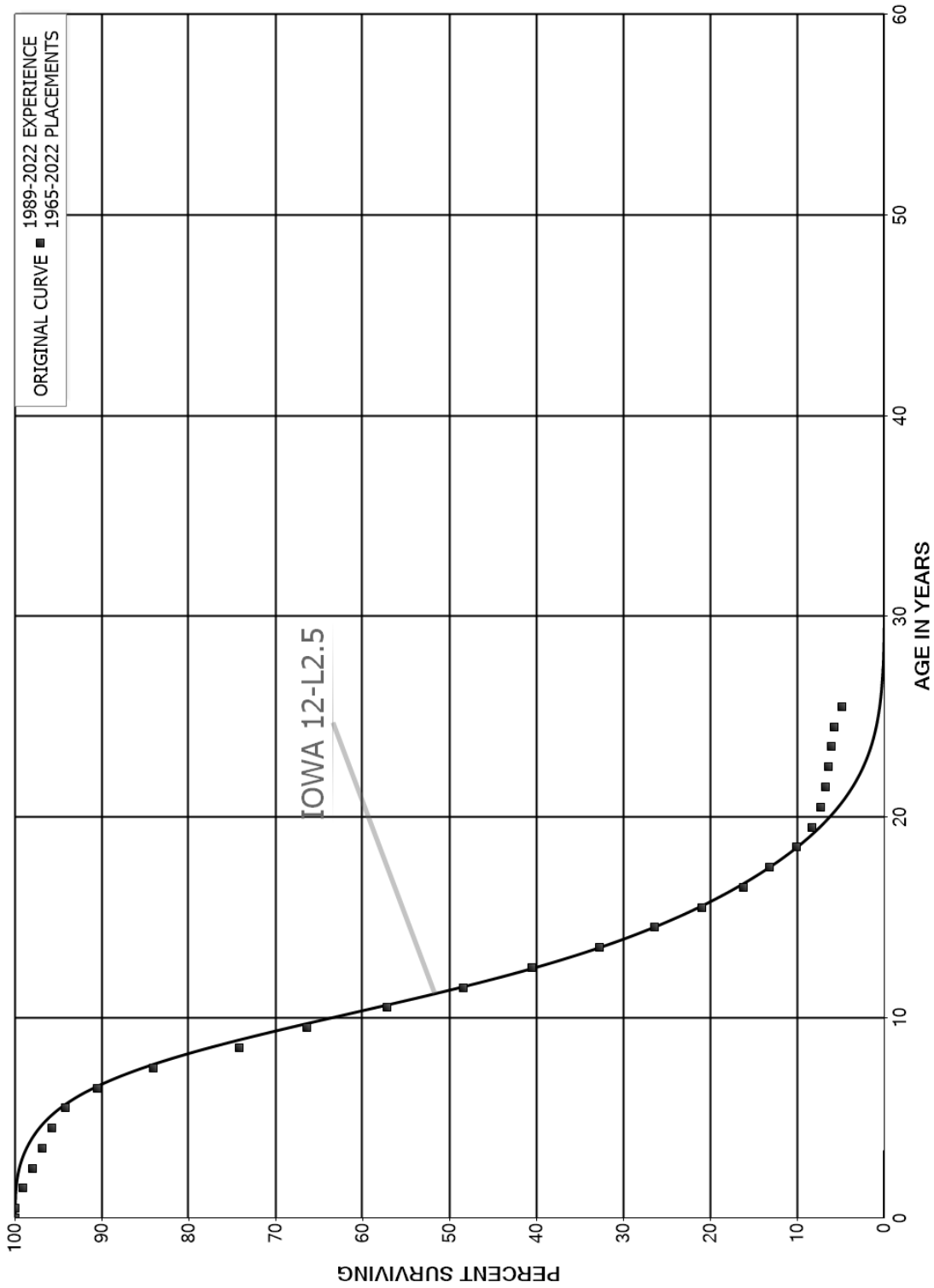
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	5,395		0.0000	1.0000	89.50
80.5	5,000		0.0000	1.0000	89.50
81.5	3,160		0.0000	1.0000	89.50
82.5	3,160		0.0000	1.0000	89.50
83.5	3,160		0.0000	1.0000	89.50
84.5	3,160		0.0000	1.0000	89.50
85.5	3,160		0.0000	1.0000	89.50
86.5	3,160		0.0000	1.0000	89.50
87.5	3,160		0.0000	1.0000	89.50
88.5	3,160		0.0000	1.0000	89.50
89.5	3,160		0.0000	1.0000	89.50
90.5	3,160		0.0000	1.0000	89.50
91.5	3,156		0.0000	1.0000	89.50
92.5					89.50



PLACEMENT BAND 1985-2014

EXPERIENCE BAND 1989-2022

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	4,329,677		0.0000	1.0000	100.00
0.5	4,910,858	28,728	0.0058	0.9942	100.00
1.5	4,012,772		0.0000	1.0000	99.42
2.5	2,557,305		0.0000	1.0000	99.42
3.5	2,678,722	10,815	0.0040	0.9960	99.42
4.5	2,140,714	10,935	0.0051	0.9949	99.01
5.5	1,910,921		0.0000	1.0000	98.51
6.5	1,755,736	971	0.0006	0.9994	98.51
7.5	1,754,765	47,751	0.0272	0.9728	98.45
8.5	1,613,205	46,148	0.0286	0.9714	95.77
9.5	1,567,056	112,760	0.0720	0.9280	93.03
10.5	1,432,312	151,486	0.1058	0.8942	86.34
11.5	1,280,826	41,703	0.0326	0.9674	77.21
12.5	1,239,123		0.0000	1.0000	74.69
13.5	1,239,123	3,070	0.0025	0.9975	74.69
14.5	1,236,053	175,190	0.1417	0.8583	74.51
15.5	1,053,164	27,976	0.0266	0.9734	63.95
16.5	1,025,188	68,359	0.0667	0.9333	62.25
17.5	956,829	8,310	0.0087	0.9913	58.10
18.5	942,882	123,114	0.1306	0.8694	57.59
19.5	818,960	13,452	0.0164	0.9836	50.07
20.5	795,635	3,829	0.0048	0.9952	49.25
21.5	759,319	744,148	0.9800	0.0200	49.01
22.5	15,171	2,753	0.1815	0.8185	0.98
23.5	12,418	8,606	0.6930	0.3070	0.80
24.5	3,812		0.0000	1.0000	0.25
25.5	3,812		0.0000	1.0000	0.25
26.5	181,235		0.0000	1.0000	0.25
27.5	181,235	3,812	0.0210	0.9790	0.25
28.5					0.24



PLACEMENT BAND 1965-2022

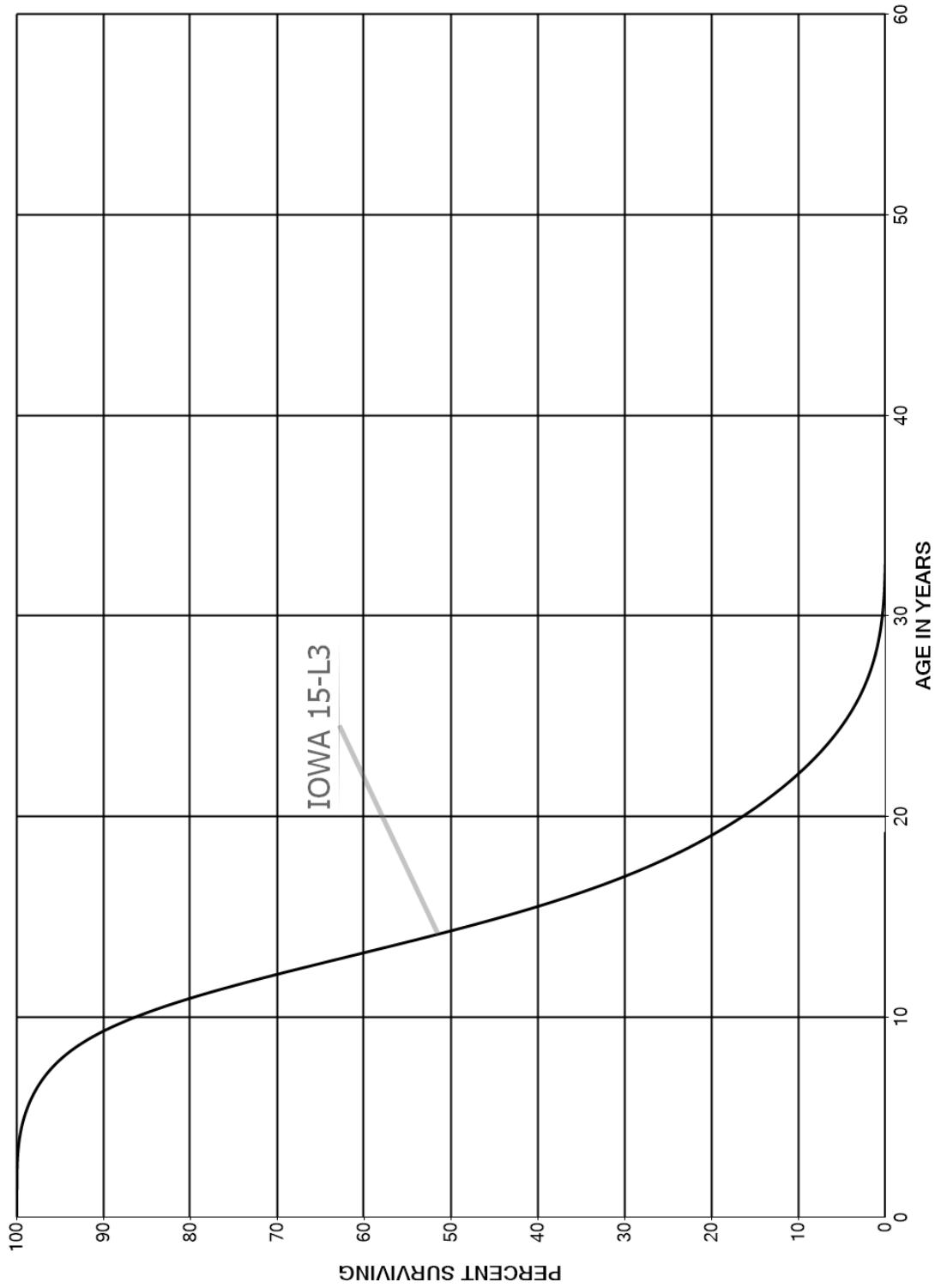
EXPERIENCE BAND 1989-2022

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	114,474,395	28,698	0.0003	0.9997	100.00
0.5	111,073,532	1,031,903	0.0093	0.9907	99.97
1.5	109,215,423	1,232,532	0.0113	0.9887	99.05
2.5	102,595,127	1,154,443	0.0113	0.9887	97.93
3.5	98,592,465	1,134,425	0.0115	0.9885	96.83
4.5	95,193,485	1,560,671	0.0164	0.9836	95.71
5.5	91,935,744	3,518,661	0.0383	0.9617	94.14
6.5	84,725,578	6,063,954	0.0716	0.9284	90.54
7.5	73,975,674	8,739,173	0.1181	0.8819	84.06
8.5	61,549,723	6,411,956	0.1042	0.8958	74.13
9.5	52,293,544	7,304,866	0.1397	0.8603	66.41
10.5	41,102,306	6,291,116	0.1531	0.8469	57.13
11.5	32,283,510	5,259,144	0.1629	0.8371	48.39
12.5	24,280,445	4,674,141	0.1925	0.8075	40.50
13.5	16,923,004	3,280,072	0.1938	0.8062	32.71
14.5	11,814,975	2,415,093	0.2044	0.7956	26.37
15.5	8,131,896	1,876,296	0.2307	0.7693	20.98
16.5	5,848,883	1,090,799	0.1865	0.8135	16.14
17.5	4,422,836	1,028,192	0.2325	0.7675	13.13
18.5	3,254,015	593,980	0.1825	0.8175	10.08
19.5	2,519,147	278,834	0.1107	0.8893	8.24
20.5	2,125,250	180,629	0.0850	0.9150	7.33
21.5	1,833,595	78,073	0.0426	0.9574	6.70
22.5	1,641,946	81,234	0.0495	0.9505	6.42
23.5	1,470,573	94,499	0.0643	0.9357	6.10
24.5	1,215,017	193,562	0.1593	0.8407	5.71
25.5	924,647	1,729	0.0019	0.9981	4.80
26.5	805,059	3,899	0.0048	0.9952	4.79
27.5	600,290	178,484	0.2973	0.7027	4.77
28.5	421,806	36	0.0001	0.9999	3.35
29.5	370,010	17,763	0.0480	0.9520	3.35
30.5	309,882		0.0000	1.0000	3.19
31.5	309,882		0.0000	1.0000	3.19
32.5	57,264	4,148	0.0724	0.9276	3.19
33.5	53,116		0.0000	1.0000	2.96
34.5	53,116		0.0000	1.0000	2.96
35.5	53,116		0.0000	1.0000	2.96
36.5	53,116	45,641	0.8593	0.1407	2.96
37.5	7,475	1,328	0.1777	0.8223	0.42
38.5	6,146	1,328	0.2161	0.7839	0.34

PLACEMENT BAND 1965-2022

EXPERIENCE BAND 1989-2022

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	1,311		0.0000	1.0000	0.27
40.5	1,311	1,311	1.0000		0.27
41.5					



PART VIII. NET SALVAGE STATISTICS

1993	306,590	55,765	18		0	55,765-	18-
1994	92,193		0		0		0
1995	57,696	17,045	30	85,316	148	68,271	118
1996							
1997							
1998							
1999							
2000							
2001							
2002	250,182	80,176-	32-	64,395	26	144,571	58
2003	383,005	22,688	6	322,499	84	299,812	78
2004	38,718	21,481	55		0	21,481-	55-
2005	69,016	658	1		0	658-	1-
2006	99,773	27,294	27	45,574	46	18,280	18
2007	17,107	10,290	60		0	10,290-	60-
2008	176,844	5,259	3		0	5,259-	3-
2009	42,610	2,869	7		0	2,869-	7-
2010	5,953-	3,778	63-		0	3,778-	63
2011	291,382	13,023	4	30,627	11	17,604	6
2012	860,897	68,128	8		0	68,128-	8-
2013	425,347	39,202	9		0	39,202-	9-
2014	875,814	66,372	8	299,614	34	233,242	27
2015	757,039	24,452	3		0	24,452-	3-
2016	46,352	33,310	72		0	33,310-	72-
2017	728,551	455,182	62		0	455,182-	62-
2018	59,137		0		0		0
2019	55,822	341	1		0	341-	1-
2020	1,007,460	7-	0		0	7	0
2021	54,406	242	0		0	242-	0
2022	51,558	10,617	21		0	10,617-	21-
TOTAL	6,741,545	797,814	12	848,025	13	50,211	1

THREE-YEAR MOVING AVERAGES

93-95	152,160	24,270	16	28,439	19	4,169	3
94-96	49,963	5,682	11	28,439	57	22,757	46
95-97	19,232	5,682	30	28,439	148	22,757	118
96-98							
97-99							
98-00							
99-01							

THREE-YEAR MOVING AVERAGES

00-02	83,394	26,725-	32-	21,465	26	48,190	58
01-03	211,062	19,163-	9-	128,965	61	148,127	70
02-04	223,968	12,002-	5-	128,965	58	140,967	63
03-05	163,579	14,942	9	107,500	66	92,558	57
04-06	69,169	16,478	24	15,191	22	1,286-	2-
05-07	61,965	12,747	21	15,191	25	2,444	4
06-08	97,908	14,281	15	15,191	16	910	1
07-09	78,853	6,139	8		0	6,139-	8-
08-10	71,167	3,969	6		0	3,969-	6-
09-11	109,346	6,557	6	10,209	9	3,652	3
10-12	382,109	28,310	7	10,209	3	18,101-	5-
11-13	525,875	40,118	8	10,209	2	29,909-	6-
12-14	720,686	57,901	8	99,871	14	41,970	6
13-15	686,067	43,342	6	99,871	15	56,529	8
14-16	559,735	41,378	7	99,871	18	58,493	10
15-17	510,647	170,982	33		0	170,982-	33-
16-18	278,013	162,831	59		0	162,831-	59-
17-19	281,170	151,841	54		0	151,841-	54-
18-20	374,140	111	0		0	111-	0
19-21	372,563	192	0		0	192-	0
20-22	371,141	3,617	1		0	3,617-	1-

FIVE-YEAR AVERAGE

18-22	245,677	2,239	1		0	2,239-	1-
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1984	626,976	198,879	32	139,760	22	59,119-	9-
1985	65,549	140,972	215	62,654	96	78,317-	119-
1986		305,686		13-		305,699-	
1987	936,713	166,322	18		0	166,322-	18-
1988	766,357	212,374	28	9,319	1	203,055-	26-
1989	994,001	311,400	31	21,388	2	290,012-	29-
1990	457,924	239,732	52	16,325	4	223,407-	49-
1991	715,210	276,364	39	288	0	276,076-	39-
1992	485,342	359,361	74	912	0	358,449-	74-
1993	743,247	401,446	54	437	0	401,010-	54-
1994	606,406	260,333	43	8,227	1	252,106-	42-
1995	410,942	258,812	63	1,361	0	257,451-	63-
1996	311,239	271,115	87	2,794	1	268,321-	86-
1997	219,868	378,368	172	327-	0	378,695-	172-
1998	811,788	338,746	42	48,008	6	290,738-	36-
1999							
2000	76		0		0		0
2001							
2002	2,124,885	776,522	37	2,092	0	774,429-	36-
2003	1,898,076	723,624	38	2,055	0	721,570-	38-
2004	1,228,582	255,636	21		0	255,636-	21-
2005	1,124,094	162,640	14		0	162,640-	14-
2006	1,135,259	251,108	22	97,176	9	153,931-	14-
2007	1,150,094	319,015	28		0	319,015-	28-
2008	4,370,918	2,952,375	68	6,200	0	2,946,175-	67-
2009	1,232,509	765,223	62		0	765,223-	62-
2010	1,293,562	362,912	28		0	362,912-	28-
2011	3,930,753	956,975	24		0	956,975-	24-
2012	3,674,394	888,874	24		0	888,874-	24-
2013	2,072,831	1,324,325	64		0	1,324,325-	64-
2014	2,772,560	1,222,490	44	30,279	1	1,192,211-	43-
2015	2,793,711	1,791,269	64	5,233	0	1,786,036-	64-
2016	2,529,015	2,383,567	94	17,680	1	2,365,887-	94-
2017	2,555,449	1,548,187	61	9,509	0	1,538,678-	60-
2018	397,079		0		0		0
2019	2,170,428	5,126,356	236		0	5,126,356-	236-
2020	4,108,955	691,568	17		0	691,568-	17-
2021	1,205,378	2,222,270	184		0	2,222,270-	184-
2022	1,575,667	2,567,876	163		0	2,567,876-	163-
TOTAL	53,495,837	31,412,721	59	481,359	1	30,931,363-	58-

THREE-YEAR MOVING AVERAGES

84-86	230,842	215,179	93	67,467	29	147,712-	64-
85-87	334,087	204,327	61	20,880	6	183,446-	55-
86-88	567,690	228,128	40	3,102	1	225,025-	40-
87-89	899,024	230,032	26	10,236	1	219,796-	24-
88-90	739,427	254,502	34	15,678	2	238,824-	32-
89-91	722,378	275,832	38	12,667	2	263,165-	36-
90-92	552,825	291,819	53	5,842	1	285,977-	52-
91-93	647,933	345,724	53	546	0	345,178-	53-
92-94	611,665	340,380	56	3,192	1	337,188-	55-
93-95	586,865	306,864	52	3,341	1	303,522-	52-
94-96	442,862	263,420	59	4,127	1	259,293-	59-
95-97	314,016	302,765	96	1,276	0	301,489-	96-
96-98	447,632	329,410	74	16,825	4	312,585-	70-
97-99	343,885	239,038	70	15,894	5	223,144-	65-
98-00	270,621	112,915	42	16,003	6	96,913-	36-
99-01	25		0		0		0
00-02	708,320	258,841	37	697	0	258,143-	36-
01-03	1,340,987	500,049	37	1,382	0	498,666-	37-
02-04	1,750,514	585,261	33	1,382	0	583,878-	33-
03-05	1,416,917	380,633	27	685	0	379,948-	27-
04-06	1,162,645	223,128	19	32,392	3	190,736-	16-
05-07	1,136,483	244,254	21	32,392	3	211,862-	19-
06-08	2,218,757	1,174,166	53	34,459	2	1,139,707-	51-
07-09	2,251,174	1,345,537	60	2,067	0	1,343,471-	60-
08-10	2,298,996	1,360,170	59	2,067	0	1,358,103-	59-
09-11	2,152,275	695,037	32		0	695,037-	32-
10-12	2,966,236	736,254	25		0	736,254-	25-
11-13	3,225,993	1,056,725	33		0	1,056,725-	33-
12-14	2,839,928	1,145,230	40	10,093	0	1,135,137-	40-
13-15	2,546,367	1,446,028	57	11,838	0	1,434,191-	56-
14-16	2,698,429	1,799,109	67	17,731	1	1,781,378-	66-
15-17	2,626,058	1,907,674	73	10,808	0	1,896,867-	72-
16-18	1,827,181	1,310,585	72	9,063	0	1,301,522-	71-
17-19	1,707,652	2,224,848	130	3,170	0	2,221,678-	130-
18-20	2,225,488	1,939,308	87		0	1,939,308-	87-
19-21	2,494,921	2,680,065	107		0	2,680,065-	107-
20-22	2,296,667	1,827,238	80		0	1,827,238-	80-

FIVE-YEAR AVERAGE

18-22	1,891,502	2,121,614	112		0	2,121,614-	112-
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1984		1,661			1,661-	
1985		2,225			2,225-	
1986						
1987		55			55-	
1988	2,500		0	0		0
1989	11,682		0	0		0
1990	89,834	2,048	2	0	2,048-	2-
1991		445			445-	
1992						
1993	11,644		0	0		0
1994						
1995	160,341	3,109	2	0	3,109-	2-
1996						
1997		646			646-	
1998		2,215			2,215-	
1999						
2000						
2001						
2002	171,403	571	0	0	571-	0
2003	365,110	13,603	4	0	13,603-	4-
2004						
2005	48,924	1,639	3	0	1,639-	3-
2006	25,739		0	0		0
2007	75,358	442	1	0	442-	1-
2008						
2009	1,000	15,235		0	15,235-	
2010						
2011						
2012						
2013	725	71	10	0	71-	10-
2014	24,597	6,126	25	0	6,126-	25-
2015						
2016						
2017	4,055,385	935,808	23	0	935,808-	23-
2018						
2019						
2020						
2021		8,162			8,162-	
2022		142			142-	
TOTAL	5,044,242	994,203	20	0	994,203-	20-

THREE-YEAR MOVING AVERAGES

84-86		1,295				1,295-	
85-87		760				760-	
86-88	833	18	2	0		18-	2-
87-89	4,727	18	0	0		18-	0
88-90	34,672	683	2	0		683-	2-
89-91	33,839	831	2	0		831-	2-
90-92	29,945	831	3	0		831-	3-
91-93	3,881	148	4	0		148-	4-
92-94	3,881		0	0			0
93-95	57,328	1,036	2	0		1,036-	2-
94-96	53,447	1,036	2	0		1,036-	2-
95-97	53,447	1,252	2	0		1,252-	2-
96-98		953				953-	
97-99		953				953-	
98-00		738				738-	
99-01							
00-02	57,134	190	0	0		190-	0
01-03	178,838	4,724	3	0		4,724-	3-
02-04	178,838	4,724	3	0		4,724-	3-
03-05	138,011	5,081	4	0		5,081-	4-
04-06	24,887	546	2	0		546-	2-
05-07	50,007	694	1	0		694-	1-
06-08	33,699	147	0	0		147-	0
07-09	25,453	5,226	21	0		5,226-	21-
08-10	333	5,078		0		5,078-	
09-11	333	5,078		0		5,078-	
10-12							
11-13	242	24	10	0		24-	10-
12-14	8,441	2,065	24	0		2,065-	24-
13-15	8,441	2,065	24	0		2,065-	24-
14-16	8,199	2,042	25	0		2,042-	25-
15-17	1,351,795	311,936	23	0		311,936-	23-
16-18	1,351,795	311,936	23	0		311,936-	23-
17-19	1,351,795	311,936	23	0		311,936-	23-
18-20							
19-21		2,721				2,721-	
20-22		2,768				2,768-	

FIVE-YEAR AVERAGE

18-22	1,661	1,661-
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1984	142,377	16,790	12	19,568	14	2,779	2
1985	8,220	26,681	325	474	6	26,208-	319-
1986		38,242		576		37,667-	
1987		17,334		5,659		11,675-	
1988	797,874	92,117	12	93,193	12	1,076	0
1989	98,927	59,417	60	29,816	30	29,601-	30-
1990	137,263	45,240	33	9,984	7	35,256-	26-
1991	69,832	22,728	33	2,511	4	20,217-	29-
1992	91,289	17,630	19	7,154	8	10,476-	11-
1993	91,713	60,972	66	14,674	16	46,298-	50-
1994	140,616	73,685	52	12,013	9	61,672-	44-
1995	255,709	18,732	7	1,829	1	16,903-	7-
1996	213,180	69,084	32	19,052	9	50,032-	23-
1997	41,133	48,710	118		0	48,710-	118-
1998	44,782	66,918	149	12,109	27	54,808-	122-
1999							
2000							
2001							
2002	317,634	81,176	26		0	81,176-	26-
2003	408,965	210,909	52	1,646	0	209,263-	51-
2004	138,752	30,396	22		0	30,396-	22-
2005	591,355	71,912	12	3,083	1	68,829-	12-
2006	298,409	84,878	28	4,212	1	80,666-	27-
2007	252,743	84,721	34		0	84,721-	34-
2008	46,733	6,700	14		0	6,700-	14-
2009	219,930	40,298	18	2,500	1	37,798-	17-
2010	103,088	37,031	36		0	37,031-	36-
2011	178,560	62,085	35		0	62,085-	35-
2012	813,337	238,507	29		0	238,507-	29-
2013	2,079,086	463,568	22	27,985	1	435,583-	21-
2014	358,731	304,587	85		0	304,587-	85-
2015	589,862	272,596	46		0	272,596-	46-
2016	1,098,184	343,676	31		0	343,676-	31-
2017	2,213,650	362,488	16		0	362,488-	16-
2018	2,017,253		0		0		0
2019	276,621	78,488	28		0	78,488-	28-
2020	460,363	174,363	38		0	174,363-	38-
2021	304,744	520,750	171		0	520,750-	171-
2022	476,586	65,196	14		0	65,196-	14-
TOTAL	15,377,500	4,208,606	27	268,038	2	3,940,568-	26-

THREE-YEAR MOVING AVERAGES

84-86	50,199	27,238	54	6,873	14	20,365-	41-
85-87	2,740	27,419		2,236	82	25,183-	919-
86-88	265,958	49,231	19	33,142	12	16,089-	6-
87-89	298,934	56,289	19	42,889	14	13,400-	4-
88-90	344,688	65,591	19	44,331	13	21,260-	6-
89-91	102,007	42,462	42	14,104	14	28,358-	28-
90-92	99,461	28,533	29	6,550	7	21,983-	22-
91-93	84,278	33,777	40	8,113	10	25,664-	30-
92-94	107,873	50,762	47	11,280	10	39,482-	37-
93-95	162,679	51,130	31	9,506	6	41,624-	26-
94-96	203,168	53,834	26	10,965	5	42,869-	21-
95-97	170,007	45,509	27	6,960	4	38,548-	23-
96-98	99,698	61,571	62	10,387	10	51,184-	51-
97-99	28,638	38,543	135	4,036	14	34,506-	120-
98-00	14,927	22,306	149	4,036	27	18,269-	122-
99-01							
00-02	105,878	27,059	26		0	27,059-	26-
01-03	242,199	97,362	40	549	0	96,813-	40-
02-04	288,450	107,494	37	549	0	106,945-	37-
03-05	379,691	104,406	27	1,576	0	102,829-	27-
04-06	342,839	62,395	18	2,432	1	59,964-	17-
05-07	380,836	80,504	21	2,432	1	78,072-	21-
06-08	199,295	58,766	29	1,404	1	57,362-	29-
07-09	173,135	43,906	25	833	0	43,073-	25-
08-10	123,250	28,010	23	833	1	27,177-	22-
09-11	167,192	46,472	28	833	0	45,638-	27-
10-12	364,995	112,541	31		0	112,541-	31-
11-13	1,023,661	254,720	25	9,328	1	245,392-	24-
12-14	1,083,718	335,554	31	9,328	1	326,226-	30-
13-15	1,009,226	346,917	34	9,328	1	337,589-	33-
14-16	682,259	306,953	45		0	306,953-	45-
15-17	1,300,565	326,254	25		0	326,254-	25-
16-18	1,776,362	235,388	13		0	235,388-	13-
17-19	1,502,508	146,992	10		0	146,992-	10-
18-20	918,079	84,284	9		0	84,284-	9-
19-21	347,243	257,867	74		0	257,867-	74-
20-22	413,897	253,436	61		0	253,436-	61-

FIVE-YEAR AVERAGE

18-22	707,113	167,759	24		0	167,759-	24-
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1984	863,328	635,309	74	22,032	3	613,277-	71-
1985	115,998	678,535	585	5,097	4	673,438-	581-
1986	1,678,806	623,332	37	3,349	0	619,982-	37-
1987	656,344	521,526	79	1,833	0	519,694-	79-
1988	814,397	688,816	85	84,818	10	603,997-	74-
1989	1,254,872	644,648	51	15,608	1	629,040-	50-
1990	888,760	596,275	67	24,927	3	571,348-	64-
1991	713,961	442,716	62	17,083	2	425,632-	60-
1992	468,144	379,711	81	4,777	1	374,935-	80-
1993	752,222	426,867	57	28,833	4	398,035-	53-
1994	707,517	484,031	68	36,834	5	447,198-	63-
1995	586,315	409,882	70	5,106	1	404,776-	69-
1996	302,171	376,451	125		0	376,451-	125-
1997		69,383		600		68,783-	
1998		641,465		7,920		633,545-	
1999							
2000							
2001							
2002	1,285,666	1,210,373	94		0	1,210,373-	94-
2003	110,916	375,529	339	31,705	29	343,825-	310-
2004	105,240	96,928	92	133,329	127	36,401	35
2005	190,644	63,518	33	159,528	84	96,010	50
2006	673,584	74,315-	11-	70,837	11	145,152	22
2007	322,881	240,023	74	199,180	62	40,843-	13-
2008	236,163	399,358	169	178,610	76	220,748-	93-
2009	369,858	582,247	157	121,121	33	461,126-	125-
2010	204,536	976,147	477	91,790	45	884,357-	432-
2011	689,189	1,804,184	262	156,276	23	1,647,908-	239-
2012	136,525	999,682	732	125,788	92	873,894-	640-
2013	129,082	1,347,360			0	1,347,360-	
2014	157,187	1,722,167		178,563	114	1,543,604-	982-
2015	152,316	1,779,183		180,735	119	1,598,448-	
2016	230,906	1,618,804	701	183,785	80	1,435,019-	621-
2017	158,136	2,008,832		195,280	123	1,813,552-	
2018	244,735		0		0		0
2019	157,285	2,155,242		1,276,986	812	878,257-	558-
2020	59,170	8,999	15		0	8,999-	15-
2021	66,612		0		0		0
2022	224,028		0		0		0
TOTAL	15,707,492	24,933,213	159	3,542,331	23	21,390,882-	136-

THREE-YEAR MOVING AVERAGES

84-86	886,044	645,725	73	10,160	1	635,566-	72-
85-87	817,049	607,798	74	3,426	0	604,371-	74-
86-88	1,049,849	611,225	58	30,000	3	581,224-	55-
87-89	908,537	618,330	68	34,086	4	584,244-	64-
88-90	986,009	643,246	65	41,784	4	601,462-	61-
89-91	952,531	561,213	59	19,206	2	542,007-	57-
90-92	690,288	472,901	69	15,596	2	457,305-	66-
91-93	644,776	416,432	65	16,898	3	399,534-	62-
92-94	642,628	430,203	67	23,481	4	406,722-	63-
93-95	682,018	440,260	65	23,591	3	416,669-	61-
94-96	532,001	423,455	80	13,980	3	409,475-	77-
95-97	296,162	285,239	96	1,902	1	283,337-	96-
96-98	100,724	362,433	360	2,840	3	359,593-	357-
97-99		236,950		2,840		234,109-	
98-00		213,822		2,640		211,182-	
99-01							
00-02	428,555	403,458	94		0	403,458-	94-
01-03	465,527	528,634	114	10,568	2	518,066-	111-
02-04	500,607	560,944	112	55,011	11	505,932-	101-
03-05	135,600	178,659	132	108,187	80	70,471-	52-
04-06	323,156	28,711	9	121,232	38	92,521	29
05-07	395,703	76,409	19	143,182	36	66,773	17
06-08	410,876	188,355	46	149,542	36	38,813-	9-
07-09	309,634	407,209	132	166,304	54	240,906-	78-
08-10	270,186	652,584	242	130,507	48	522,077-	193-
09-11	421,194	1,120,860	266	123,062	29	997,797-	237-
10-12	343,416	1,260,005	367	124,618	36	1,135,387-	331-
11-13	318,265	1,383,742	435	94,021	30	1,289,721-	405-
12-14	140,931	1,356,403	962	101,450	72	1,254,953-	890-
13-15	146,195	1,616,237		119,766	82	1,496,471-	
14-16	180,136	1,706,718	947	181,028	100	1,525,690-	847-
15-17	180,453	1,802,273	999	186,600	103	1,615,673-	895-
16-18	211,259	1,209,212	572	126,355	60	1,082,857-	513-
17-19	186,719	1,388,025	743	490,755	263	897,270-	481-
18-20	153,730	721,414	469	425,662	277	295,752-	192-
19-21	94,356	721,414	765	425,662	451	295,752-	313-
20-22	116,603	3,000	3		0	3,000-	3-

FIVE-YEAR AVERAGE

18-22	150,366	432,848	288	255,397	170	177,451-	118-
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1984	301,649		0	20	0	20	0
1985	81,043		0		0		0
1986							
1987		34-				34	
1988	1,100-	1,847	168-	24,018		22,171	
1989	5,678,079	7	0		0	7-	0
1990	320,929		0		0		0
1991	277,647		0		0		0
1992	259,738	19,598	8	1,542	1	18,055-	7-
1993	383,536	28,549	7	517	0	28,031-	7-
1994	423,742	31,361	7		0	31,361-	7-
1995	488,059	28	0		0	28-	0
1996	578,564	22	0	18	0	4-	0
1997							
1998	799,744	29,541	4		0	29,541-	4-
1999							
2000							
2001							
2002	1,944,796	21,891	1		0	21,891-	1-
2003	7,842,009	343	0		0	343-	0
2004	965		0		0		0
2005	1,557	962	62		0	962-	62-
2006							
2007							
2008							
2009	373,760	103,091	28		0	103,091-	28-
2010	406,546	114,504	28		0	114,504-	28-
2011	496,039	126,571	26		0	126,571-	26-
2012	620,628	155,563	25		0	155,563-	25-
2013	1,032,975	132,370	13		0	132,370-	13-
2014	795,957	62,668	8		0	62,668-	8-
2015	1,208,015	49,894	4		0	49,894-	4-
2016	1,111,799	75,767	7		0	75,767-	7-
2017	1,111,112	109,891	10		0	109,891-	10-
2018	519,636		0		0		0
2019	1,122,117	683,381	61		0	683,381-	61-
2020	750,281	12,240	2		0	12,240-	2-
2021	641,674	6,993	1		0	6,993-	1-
2022	490,481		0		0		0
TOTAL	30,061,975	1,767,046	6	26,115	0	1,740,930-	6-

THREE-YEAR MOVING AVERAGES

84-86	127,564		0	7	0	7	0
85-87	27,014	11-	0		0	11	0
86-88	367-	604	165-	8,006		7,402	
87-89	1,892,326	607	0	8,006	0	7,399	0
88-90	1,999,303	618	0	8,006	0	7,388	0
89-91	2,092,218	2	0		0	2-	0
90-92	286,104	6,532	2	514	0	6,018-	2-
91-93	306,974	16,049	5	687	0	15,362-	5-
92-94	355,672	26,502	7	687	0	25,816-	7-
93-95	431,779	19,979	5	172	0	19,807-	5-
94-96	496,788	10,470	2	6	0	10,464-	2-
95-97	355,541	17	0	6	0	11-	0
96-98	459,436	9,854	2	6	0	9,848-	2-
97-99	266,581	9,847	4		0	9,847-	4-
98-00	266,581	9,847	4		0	9,847-	4-
99-01							
00-02	648,265	7,297	1		0	7,297-	1-
01-03	3,262,268	7,411	0		0	7,411-	0
02-04	3,262,590	7,411	0		0	7,411-	0
03-05	2,614,843	435	0		0	435-	0
04-06	841	321	38		0	321-	38-
05-07	519	321	62		0	321-	62-
06-08							
07-09	124,587	34,364	28		0	34,364-	28-
08-10	260,102	72,532	28		0	72,532-	28-
09-11	425,448	114,722	27		0	114,722-	27-
10-12	507,738	132,213	26		0	132,213-	26-
11-13	716,547	138,168	19		0	138,168-	19-
12-14	816,520	116,867	14		0	116,867-	14-
13-15	1,012,315	81,644	8		0	81,644-	8-
14-16	1,038,590	62,776	6		0	62,776-	6-
15-17	1,143,642	78,517	7		0	78,517-	7-
16-18	914,182	61,886	7		0	61,886-	7-
17-19	917,622	264,424	29		0	264,424-	29-
18-20	797,345	231,874	29		0	231,874-	29-
19-21	838,024	234,205	28		0	234,205-	28-
20-22	627,479	6,411	1		0	6,411-	1-

FIVE-YEAR AVERAGE

18-22	704,838	140,523	20	0	140,523-	20-
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2009	547,152		0	0		0
2010						
2011						
2012	11,353,552		0	0		0
2013	2,928,750	585,376	20	0	585,376-	20-
2014	2,513,849		0	0		0
2015	5,969,829		0	0		0
2016	9,844,810		0	0		0
2017	7,531,954		0	0		0
2018						
2019	28,323,659	19,172,511	68	0	19,172,511-	68-
2020	18,071,816		0	0		0
2021						
2022						
TOTAL	87,085,372	19,757,887	23	0	19,757,887-	23-
THREE-YEAR MOVING AVERAGES						
09-11	182,384		0	0		0
10-12	3,784,517		0	0		0
11-13	4,760,768	195,125	4	0	195,125-	4-
12-14	5,598,717	195,125	3	0	195,125-	3-
13-15	3,804,143	195,125	5	0	195,125-	5-
14-16	6,109,496		0	0		0
15-17	7,782,198		0	0		0
16-18	5,792,255		0	0		0
17-19	11,951,871	6,390,837	53	0	6,390,837-	53-
18-20	15,465,158	6,390,837	41	0	6,390,837-	41-
19-21	15,465,158	6,390,837	41	0	6,390,837-	41-
20-22	6,023,939		0	0		0
FIVE-YEAR AVERAGE						
18-22	9,279,095	3,834,502	41	0	3,834,502-	41-

2002	200,188	431,988	216		0	431,988-	216-
2003	3,749,908	65,510-	2-		0	65,510	2
2004	2,344	2,377-	101-		0	2,377	101
2005	46,380	1,421	3		0	1,421-	3-
2006	740	1,000	135		0	1,000-	135-
2007	105,900	7,388-	7-		0	7,388	7
2008	1,036		0	2,800	270	2,800	270
2009	741,724	47,772	6		0	47,772-	6-
2010							
2011	66,896	12,428	19		0	12,428-	19-
2012	22,845	4,907	21		0	4,907-	21-
2013	129,391	8,867	7		0	8,867-	7-
2014	122,084	7,853	6	1,325	1	6,529-	5-
2015	62,495	4,933	8		0	4,933-	8-
2016	1,499,387	766	0		0	766-	0
2017	128,074	62,607	49		0	62,607-	49-
2018	614,309		0		0		0
2019	6,509	2,676	41		0	2,676-	41-
2020	45,881		0		0		0
2021							
2022	117,063		0		0		0
TOTAL	7,663,153	511,945	7	4,125	0	507,820-	7-

THREE-YEAR MOVING AVERAGES

02-04	1,317,480	121,367	9		0	121,367-	9-
03-05	1,266,211	22,155-	2-		0	22,155	2
04-06	16,488	15	0		0	15-	0
05-07	51,007	1,656-	3-		0	1,656	3
06-08	35,892	2,129-	6-	933	3	3,063	9
07-09	282,886	13,462	5	933	0	12,528-	4-
08-10	247,587	15,924	6	933	0	14,991-	6-
09-11	269,540	20,067	7		0	20,067-	7-
10-12	29,914	5,778	19		0	5,778-	19-
11-13	73,044	8,734	12		0	8,734-	12-
12-14	91,440	7,209	8	442	0	6,768-	7-
13-15	104,657	7,218	7	442	0	6,776-	6-
14-16	561,322	4,518	1	442	0	4,076-	1-
15-17	563,319	22,769	4		0	22,769-	4-
16-18	747,256	21,124	3		0	21,124-	3-
17-19	249,631	21,761	9		0	21,761-	9-

THREE-YEAR MOVING AVERAGES

18-20	222,233	892	0	0	892-	0
19-21	17,463	892	5	0	892-	5-
20-22	54,315		0	0		0

FIVE-YEAR AVERAGE

18-22	156,752	535	0	0	535-	0
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2002	209,347	5,743	3	0	5,743-	3-
2003	659,281	77	0	0	77-	0
2004						
2005						
2006						
2007						
2008	2,055	204	10	0	204-	10-
2009						
2010	758	16,620		0	16,620-	
2011						
2012	10,224	890	9	0	890-	9-
2013	136,176		0	0		0
2014	196,348	1,367	1	0	1,367-	1-
2015	115,071		0	0		0
2016	114,003		0	0		0
2017	69,159		0	0		0
2018						
2019						
2020						
2021						
2022						
TOTAL	1,512,421	24,900	2	0	24,900-	2-
THREE-YEAR MOVING AVERAGES						
02-04	289,543	1,940	1	0	1,940-	1-
03-05	219,760	26	0	0	26-	0
04-06						
05-07						
06-08	685	68	10	0	68-	10-
07-09	685	68	10	0	68-	10-
08-10	938	5,608	598	0	5,608-	598-
09-11	253	5,540		0	5,540-	
10-12	3,661	5,837	159	0	5,837-	159-
11-13	48,800	297	1	0	297-	1-
12-14	114,249	752	1	0	752-	1-
13-15	149,198	456	0	0	456-	0
14-16	141,807	456	0	0	456-	0
15-17	99,411		0	0		0
16-18	61,054		0	0		0
17-19	23,053		0	0		0

THREE-YEAR MOVING AVERAGES

18-20
19-21
20-22

FIVE-YEAR AVERAGE

18-22

2002	10,640	4,317	41		0	4,317-	41-
2003	66,679	1,377	2	67	0	1,310-	2-
2004	7,771	548	7		0	548-	7-
2005	37,734	2,884	8		0	2,884-	8-
2006	93	668	716		0	668-	716-
2007							
2008	1,036		0		0		0
2009							
2010							
2011	38,552	4,791	12		0	4,791-	12-
2012	31,574	1,060	3		0	1,060-	3-
2013	9,477		0		0		0
2014	13,289	2,650	20		0	2,650-	20-
2015	277		0		0		0
2016	12,878	9,162	71		0	9,162-	71-
2017	510		0		0		0
2018							
2019							
2020							
2021							
2022							
TOTAL	230,510	27,457	12	67	0	27,390-	12-

THREE-YEAR MOVING AVERAGES

02-04	28,363	2,080	7	22	0	2,058-	7-
03-05	37,395	1,603	4	22	0	1,581-	4-
04-06	15,199	1,366	9		0	1,366-	9-
05-07	12,609	1,184	9		0	1,184-	9-
06-08	376	223	59		0	223-	59-
07-09	345		0		0		0
08-10	345		0		0		0
09-11	12,851	1,597	12		0	1,597-	12-
10-12	23,375	1,950	8		0	1,950-	8-
11-13	26,534	1,950	7		0	1,950-	7-
12-14	18,113	1,237	7		0	1,237-	7-
13-15	7,681	883	11		0	883-	11-
14-16	8,815	3,937	45		0	3,937-	45-
15-17	4,555	3,054	67		0	3,054-	67-
16-18	4,463	3,054	68		0	3,054-	68-
17-19	170		0		0		0

THREE-YEAR MOVING AVERAGES

18-20
19-21
20-22

FIVE-YEAR AVERAGE

18-22

2002	771,161	2,673	0	0	2,673-	0
2003	6,870	855	12	0	855-	12-
2004						
2005	53,349		0	0		0
2006	140,816		0	0		0
2007						
2008						
2009						
2010						
2011						
2012						
2013	32,258		0	0		0
2014						
2015	7,141		0	0		0
2016	32,912	12,045	37	0	12,045-	37-
2017						
2018						
2019	900	559	62	0	559-	62-
2020						
2021						
2022		50,626			50,626-	
TOTAL	1,045,407	66,759	6	0	66,759-	6-

THREE-YEAR MOVING AVERAGES

02-04	259,343	1,176	0	0	1,176-	0
03-05	20,073	285	1	0	285-	1-
04-06	64,722		0	0		0
05-07	64,722		0	0		0
06-08	46,939		0	0		0
07-09						
08-10						
09-11						
10-12						
11-13	10,753		0	0		0
12-14	10,753		0	0		0
13-15	13,133		0	0		0
14-16	13,351	4,015	30	0	4,015-	30-
15-17	13,351	4,015	30	0	4,015-	30-
16-18	10,971	4,015	37	0	4,015-	37-
17-19	300	186	62	0	186-	62-

THREE-YEAR MOVING AVERAGES

18-20	300	186	62	0	186-	62-
19-21	300	186	62	0	186-	62-
20-22		16,875			16,875-	

FIVE-YEAR AVERAGE

18-22	180	10,237	0	10,237-
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1984	931,923		0	276,946	30	276,946	30
1985							
1986	1,057,577		0	212,623	20	212,623	20
1987	501,767		0	56,699	11	56,699	11
1988	963,527		0	172,527	18	172,527	18
1989	693,252		0	120,433	17	120,433	17
1990	570,984		0	75,867	13	75,867	13
1991	759,269		0	96,160	13	96,160	13
1992	592,521	1,924	0	92,897	16	90,973	15
1993	1,285,600	2,946	0	223,066	17	220,120	17
1994	1,077,844	10,566	1	453,644	42	443,078	41
1995	1,355,706	10,257	1	194,236	14	183,979	14
1996	211,497	6,474	3		0	6,474-	3-
1997	2,186,366		0	450,359	21	450,359	21
1998	1,424,130	1,843	0	199,822	14	197,980	14
1999	892,332		0	164,911	18	164,911	18
2000	2,894,908		0	339,051	12	339,051	12
2001	1,088,536		0	131,528	12	131,528	12
2002	2,242,493	1,926	0	255,453	11	253,527	11
2003	2,712,302	37,941	1	173,020	6	135,079	5
2004	1,955,389	87-	0	170,124	9	170,211	9
2005	2,495,784		0	266,343	11	266,343	11
2006	2,809,621		0	96,621	3	96,621	3
2007	1,880,459		0	269,370	14	269,370	14
2008	1,922,393		0	125,633	7	125,633	7
2009	1,372,996		0	95,726	7	95,726	7
2010	3,546,656		0	409,272	12	409,272	12
2011	1,098,369		0	147,813	13	147,813	13
2012	4,266,148		0	330,361	8	330,361	8
2013	1,882,025		0	213,102	11	213,102	11
2014	1,108,668		0	100,690	9	100,690	9
2015	2,905,766		0	231,210	8	231,210	8
2016	682,201		0	69,248	10	69,248	10
2017	3,905,671		0	445,362	11	445,362	11
2018	7,856,388		0	944,970	12	944,970	12
2019	2,819,873		0	146,535	5	146,535	5
2020	2,801,444		0	329,397	12	329,397	12
2021	778,890		0	263,743	34	263,743	34
2022	292,957		0	37,850	13	37,850	13
TOTAL	69,824,231	73,791	0	8,382,613	12	8,308,823	12

THREE-YEAR MOVING AVERAGES

84-86	663,167		0	163,190	25	163,190	25
85-87	519,781		0	89,774	17	89,774	17
86-88	840,957		0	147,283	18	147,283	18
87-89	719,515		0	116,553	16	116,553	16
88-90	742,588		0	122,942	17	122,942	17
89-91	674,502		0	97,487	14	97,487	14
90-92	640,925	641	0	88,308	14	87,667	14
91-93	879,130	1,623	0	137,375	16	135,751	15
92-94	985,322	5,146	1	256,536	26	251,390	26
93-95	1,239,717	7,923	1	290,316	23	282,392	23
94-96	881,682	9,099	1	215,960	24	206,861	23
95-97	1,251,190	5,577	0	214,865	17	209,288	17
96-98	1,273,998	2,772	0	216,727	17	213,955	17
97-99	1,500,943	614	0	271,697	18	271,083	18
98-00	1,737,123	614	0	234,595	14	233,981	13
99-01	1,625,259		0	211,830	13	211,830	13
00-02	2,075,312	642	0	242,011	12	241,369	12
01-03	2,014,444	13,289	1	186,667	9	173,378	9
02-04	2,303,395	13,260	1	199,532	9	186,272	8
03-05	2,387,825	12,618	1	203,163	9	190,544	8
04-06	2,420,265	29-	0	177,696	7	177,725	7
05-07	2,395,288		0	210,778	9	210,778	9
06-08	2,204,158		0	163,875	7	163,875	7
07-09	1,725,283		0	163,576	9	163,576	9
08-10	2,280,681		0	210,210	9	210,210	9
09-11	2,006,007		0	217,604	11	217,604	11
10-12	2,970,391		0	295,815	10	295,815	10
11-13	2,415,514		0	230,426	10	230,426	10
12-14	2,418,947		0	214,718	9	214,718	9
13-15	1,965,486		0	181,667	9	181,667	9
14-16	1,565,545		0	133,716	9	133,716	9
15-17	2,497,879		0	248,607	10	248,607	10
16-18	4,148,087		0	486,526	12	486,526	12
17-19	4,860,644		0	512,289	11	512,289	11
18-20	4,492,568		0	473,634	11	473,634	11
19-21	2,133,402		0	246,558	12	246,558	12
20-22	1,291,097		0	210,330	16	210,330	16

FIVE-YEAR AVERAGE

18-22	2,909,910		0	344,499	12	344,499	12
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2008	144,335	0	10,368	7	10,368	7
2009	347,450	0	29,626	9	29,626	9
2010	138,392	0	15,793	11	15,793	11
2011	510,148	0	51,942	10	51,942	10
2012	571,052	0	58,916	10	58,916	10
2013	143,667	0	25,505	18	25,505	18
2014	341,022	0	156,396	46	156,396	46
2015	115,254	0	28,249	25	28,249	25
2016	63,576	0		0		0
2017	314,612	0	39,224	12	39,224	12
2018	175,635	0	332,016	189	332,016	189
2019	231,686	0	51,485	22	51,485	22
2020	258,615	0	115,734	45	115,734	45
2021	79,756	0	92,667	116	92,667	116
2022	216,337	0	10,686	5	10,686	5
TOTAL	3,651,537	0	1,018,606	28	1,018,606	28
THREE-YEAR MOVING AVERAGES						
08-10	210,059	0	18,596	9	18,596	9
09-11	331,997	0	32,454	10	32,454	10
10-12	406,530	0	42,217	10	42,217	10
11-13	408,289	0	45,454	11	45,454	11
12-14	351,914	0	80,272	23	80,272	23
13-15	199,981	0	70,050	35	70,050	35
14-16	173,284	0	61,548	36	61,548	36
15-17	164,481	0	22,491	14	22,491	14
16-18	184,608	0	123,747	67	123,747	67
17-19	240,644	0	140,908	59	140,908	59
18-20	221,978	0	166,412	75	166,412	75
19-21	190,019	0	86,629	46	86,629	46
20-22	184,903	0	73,029	39	73,029	39
FIVE-YEAR AVERAGE						
18-22	192,406	0	120,518	63	120,518	63

PART IX. DETAILED DEPRECIATION CALCULATIONS

INTERIM SURVIVOR CURVE.. IOWA 60-R3
PROBABLE RETIREMENT YEAR.. 12-2062
NET SALVAGE PERCENT.. -10

2022	59,006,481.57	401,126	280,519	64,626,611	38.62	1,673,397
	59,006,481.57	401,126	280,519	64,626,611		1,673,397

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 38.6 2.84

INTERIM SURVIVOR CURVE.. IOWA 45-R2.5
PROBABLE RETIREMENT YEAR.. 12-2062
NET SALVAGE PERCENT.. -10

2022	138,748,812.49	674,597	726,997	151,896,697	36.06	4,212,332
	138,748,812.49	674,597	726,997	151,896,697		4,212,332
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						36.1 3.04

SURVIVOR CURVE.. IOWA 75-R3
NET SALVAGE PERCENT.. 0

1930	672.35	595	520	152	8.68	18
1940	1,096.43	922	805	291	11.96	24
1948	10.90	9	8	3	15.37	
1949	105.68	83	73	33	15.85	2
1950	88.30	69	60	28	16.35	2
1954	1.60	1	1	1	18.45	
1956	67.58	50	44	24	19.58	1
1957	2.60	2	2	1	20.16	
1960	936.35	662	578	358	21.98	16
1961	6.00	4	3	3	22.60	
1962	583.00	402	351	232	23.24	10
1963	8,606.61	5,865	5,123	3,484	23.89	146
1964	929.65	625	546	384	24.55	16
1965	2,550.96	1,693	1,479	1,072	25.22	43
1966	7,395.35	4,842	4,230	3,165	25.89	122
1967	4,810.95	3,106	2,713	2,098	26.58	79
1968	479.54	305	266	214	27.28	8
1969	202.00	127	111	91	27.98	3
1970	2,899.60	1,790	1,564	1,336	28.70	47
1971	7,934.44	4,822	4,212	3,722	29.42	127
1972	1,460.42	873	763	697	30.15	23
1973	1,780.55	1,047	915	866	30.89	28
1974	3,457.72	1,999	1,746	1,712	31.64	54
1975	879.25	500	437	442	32.39	14
1976	4,441.94	2,479	2,165	2,277	33.15	69
1977	4,652.88	2,549	2,227	2,426	33.92	72
1978	3,045.44	1,636	1,429	1,616	34.70	47
1979	5,464.01	2,878	2,514	2,950	35.49	83
1980	4,212.25	2,175	1,900	2,312	36.28	64
1981	8,161.33	4,126	3,604	4,557	37.08	123
1982	1,613.27	798	697	916	37.88	24
1983	19,550.37	9,462	8,265	11,285	38.70	292
1984	68,555.18	32,431	28,329	40,226	39.52	1,018
1985	3,163.52	1,462	1,277	1,887	40.34	47
1986	919.00	414	362	557	41.18	14
1987	10,191.22	4,481	3,914	6,277	42.02	149
1988	20,225.87	8,667	7,571	12,655	42.86	295
1989	1,528.40	637	556	972	43.72	22
1990	7,629.64	3,096	2,704	4,926	44.57	111
1991	9,694.31	3,821	3,338	6,356	45.44	140
1992	969.86	371	324	646	46.31	14
1994	3,456.38	1,241	1,084	2,372	48.07	49

SURVIVOR CURVE.. IOWA 75-R3
NET SALVAGE PERCENT.. 0

1995	1,398.00	486	425	973	48.95	20
1996	2,249.80	754	659	1,591	49.85	32
1997	9,464.25	3,061	2,674	6,790	50.74	134
1998	131,256.58	40,864	35,696	95,561	51.65	1,850
2000	3,661.15	1,051	918	2,743	53.47	51
2001	158,627.32	43,591	38,078	120,549	54.39	2,216
2002	10,920.58	2,867	2,504	8,417	55.31	152
2003	164,268.32	41,088	35,891	128,377	56.24	2,283
2004	2,343.87	557	487	1,857	57.17	32
2006	21,676.92	4,610	4,027	17,650	59.05	299
2007	235,159.03	47,062	41,110	194,049	59.99	3,235
2008	118,450.00	22,206	19,397	99,053	60.94	1,625
2009	615.00	108	94	521	61.89	8
2010	124,342.61	20,160	17,610	106,733	62.84	1,698
2011	132,214.73	19,744	17,247	114,968	63.80	1,802
2012	191,385.21	26,130	22,825	168,560	64.76	2,603
2013	859,908.64	106,285	92,842	767,067	65.73	11,670
2014	1,920,686.36	212,812	185,896	1,734,790	66.69	26,013
2015	280,033.29	27,407	23,941	256,092	67.66	3,785
2016	350,742.32	29,789	26,021	324,721	68.63	4,731
2017	715,078.39	51,393	44,894	670,184	69.61	9,628
2019	214,013.68	9,817	8,575	205,439	71.56	2,871
	5,872,928.75	824,959	720,621	5,152,308		80,154

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 64.3 1.36

SURVIVOR CURVE.. IOWA 40-S0.5
NET SALVAGE PERCENT.. -10

1930	19,646.50	21,611	21,611			
1931	101.00	111	111			
1932	250.57	276	276			
1933	8,090.61	8,900	8,900			
1937	286.89	316	316			
1938	634.63	698	698			
1941	46.39	51	51			
1942	21.20	23	23			
1944	6,011.49	6,522	3,965	2,648	0.55	2,648
1945	149.12	160	97	67	0.90	67
1946	3,188.15	3,397	2,065	1,442	1.25	1,154
1947	1,887.23	1,993	1,212	864	1.59	543
1948	14,926.51	15,627	9,499	6,920	1.93	3,585
1949	11,880.79	12,327	7,493	5,576	2.27	2,456
1950	10,176.42	10,464	6,361	4,833	2.61	1,852
1951	4,674.70	4,763	2,895	2,247	2.95	762
1952	10,329.10	10,430	6,340	5,022	3.28	1,531
1953	18,705.39	18,714	11,376	9,200	3.62	2,541
1954	16,865.25	16,720	10,164	8,388	3.95	2,124
1955	1,124.89	1,105	672	565	4.29	132
1956	14,988.85	14,583	8,865	7,623	4.62	1,650
1957	36,525.31	35,196	21,395	18,783	4.96	3,787
1958	10,458.38	9,983	6,069	5,435	5.29	1,027
1959	1,695.28	1,602	974	891	5.63	158
1961	43,313.30	40,129	24,394	23,251	6.31	3,685
1962	18,106.16	16,606	10,095	9,822	6.65	1,477
1963	26,244.49	23,817	14,478	14,391	7.00	2,056
1964	18,278.08	16,416	9,979	10,127	7.34	1,380
1965	32,670.77	29,029	17,646	18,292	7.69	2,379
1966	20,970.20	18,431	11,204	11,863	8.04	1,475
1967	40,072.88	34,823	21,169	22,911	8.40	2,728
1968	16,279.32	13,990	8,504	9,403	8.75	1,075
1969	23,645.32	20,086	12,210	13,800	9.11	1,515
1970	9,130.31	7,663	4,658	5,385	9.48	568
1971	15,152.66	12,568	7,640	9,028	9.84	917
1972	5,810.37	4,760	2,894	3,497	10.21	343
1973	39,514.58	31,958	19,427	24,039	10.59	2,270
1974	5,604.98	4,475	2,720	3,445	10.97	314
1975	8,797.65	6,931	4,213	5,464	11.35	481
1976	1,626.51	1,264	768	1,021	11.74	87
1977	333.89	256	156	211	12.13	17
1978	8,148.24	6,158	3,743	5,220	12.52	417

SURVIVOR CURVE.. IOWA 40-S0.5
NET SALVAGE PERCENT.. -10

1979	2,552.23	1,901	1,156	1,651	12.92	128
1980	2,938.38	2,155	1,310	1,922	13.33	144
1981	2,977.49	2,150	1,307	1,968	13.74	143
1982	69,228.11	49,193	29,904	46,247	14.16	3,266
1983	26,106.73	18,243	11,090	17,627	14.59	1,208
1984	2,376.11	1,632	992	1,622	15.02	108
1985	27,896.71	18,834	11,449	19,237	15.45	1,245
1986	101,020.51	66,951	40,699	70,424	15.90	4,429
1987	256,151.89	166,595	101,271	180,496	16.35	11,040
1988	104,234.44	66,502	40,426	74,232	16.80	4,419
1989	118,258.52	73,920	44,935	85,149	17.27	4,930
1990	177,522.64	108,670	66,059	129,216	17.74	7,284
1991	51,122.75	30,620	18,614	37,621	18.22	2,065
1992	648,826.17	379,872	230,920	482,789	18.71	25,804
1993	207,257.38	118,494	72,031	155,952	19.21	8,118
1994	70,695.25	39,427	23,967	53,798	19.72	2,728
1995	24,203.09	13,152	7,995	18,628	20.24	920
1996	72,152.35	38,156	23,195	56,173	20.77	2,705
1997	63,311.89	32,558	19,792	49,851	21.30	2,340
1998	41,444.95	20,686	12,575	33,014	21.85	1,511
1999	4,863.57	2,353	1,430	3,920	22.41	175
2000	173,334.06	81,129	49,317	141,350	22.98	6,151
2001	175,376.15	79,239	48,169	144,745	23.57	6,141
2002	334,762.25	145,822	88,644	279,594	24.16	11,573
2003	134,682.53	56,408	34,290	113,861	24.77	4,597
2004	195,467.51	78,534	47,740	167,274	25.39	6,588
2005	191,126.76	73,426	44,635	165,604	26.03	6,362
2006	382,450.85	140,092	85,160	335,536	26.68	12,576
2007	67,109.47	23,364	14,203	59,617	27.34	2,181
2008	123,136.64	40,534	24,640	110,810	28.03	3,953
2009	112,776.97	34,983	21,266	102,789	28.72	3,579
2010	256,720.34	74,552	45,319	237,073	29.44	8,053
2011	807,319.56	218,239	132,665	755,387	30.17	25,038
2012	1,481,484.14	370,334	225,122	1,404,511	30.91	45,439
2013	2,678,010.45	612,729	372,471	2,573,340	31.68	81,229
2014	2,181,972.97	451,832	274,664	2,125,506	32.47	65,461
2015	3,553,827.81	657,725	399,824	3,509,387	33.27	105,482
2016	249,020.90	40,404	24,561	249,362	34.10	7,313
2017	595,035.03	82,799	50,333	604,206	34.94	17,293
2018	953,256.37	109,839	66,770	981,812	35.81	27,417
2019	2,378,648.19	215,862	131,220	2,485,293	36.70	67,719

SURVIVOR CURVE.. IOWA 40-S0.5

NET SALVAGE PERCENT.. -10

2020	526,199.90	34,584	21,023	557,797	37.61	14,831
2021	321,582.44	12,912	7,849	345,892	38.54	8,975
2022	339,412.06	4,574	2,781	370,572	39.51	9,379

20,814,218.87	5,376,912	3,281,109	19,614,532	681,241
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COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 28.8 3.27

SURVIVOR CURVE.. IOWA 70-R3
NET SALVAGE PERCENT.. -60

1947	34,922.19	46,505	36,353	19,523	11.74	1,663
1948	39,786.35	52,609	41,124	22,534	12.15	1,855
1949	166,009.46	217,956	170,375	95,240	12.56	7,583
1950	336,745.76	438,809	343,014	195,779	12.99	15,072
1951	16,372.54	21,170	16,548	9,648	13.43	718
1952	26,719.67	34,268	26,787	15,964	13.89	1,149
1953	214,765.83	273,134	213,507	130,118	14.36	9,061
1954	637,003.66	803,134	627,805	391,401	14.84	26,375
1955	712,806.12	890,563	696,147	444,343	15.34	28,966
1956	659,836.83	816,688	638,400	417,339	15.85	26,331
1957	4,820,294.46	5,908,833	4,618,897	3,093,574	16.37	188,978
1958	928,528.75	1,126,758	880,780	604,866	16.91	35,770
1959	1,189,865.53	1,428,924	1,116,981	786,804	17.46	45,063
1960	2,755,194.90	3,272,863	2,558,376	1,849,936	18.03	102,603
1961	5,021,322.86	5,899,371	4,611,501	3,422,616	18.60	184,012
1962	2,494,196.72	2,896,700	2,264,332	1,726,383	19.19	89,963
1963	4,581,054.80	5,257,512	4,109,764	3,219,924	19.79	162,705
1964	2,743,727.79	3,109,983	2,431,054	1,958,910	20.41	95,978
1965	6,507,073.13	7,283,445	5,693,423	4,717,894	21.03	224,341
1966	3,086,659.46	3,409,796	2,665,416	2,273,239	21.67	104,903
1967	1,306,806.49	1,424,189	1,113,279	977,611	22.32	43,800
1968	1,143,476.12	1,228,935	960,651	868,911	22.98	37,812
1969	3,041,349.24	3,222,078	2,518,678	2,347,481	23.65	99,259
1970	1,653,547.71	1,726,119	1,349,296	1,296,380	24.33	53,283
1971	2,278,854.45	2,342,918	1,831,444	1,814,723	25.02	72,531
1972	1,541,233.65	1,559,901	1,219,365	1,246,609	25.72	48,468
1973	2,259,424.96	2,250,134	1,758,915	1,856,165	26.43	70,229
1974	2,370,473.77	2,322,268	1,815,302	1,977,456	27.14	72,861
1975	2,883,094.83	2,776,351	2,170,256	2,442,696	27.87	87,646
1976	3,565,274.46	3,372,978	2,636,635	3,067,804	28.61	107,228
1977	5,099,020.43	4,737,683	3,703,417	4,455,016	29.35	151,789
1978	6,231,847.55	5,682,049	4,441,621	5,529,335	30.11	183,638
1979	6,989,370.17	6,251,293	4,886,596	6,296,396	30.87	203,965
1980	7,990,894.59	7,006,416	5,476,871	7,308,560	31.64	230,991
1981	7,137,512.10	6,130,952	4,792,526	6,627,493	32.42	204,426
1982	5,267,535.10	4,430,713	3,463,460	4,964,596	33.20	149,536
1983	4,541,365.55	3,737,943	2,921,926	4,344,259	33.99	127,810
1984	6,975,557.16	5,613,928	4,388,372	6,772,519	34.79	194,669
1985	5,794,404.74	4,556,071	3,561,452	5,709,596	35.60	160,382
1986	3,707,447.42	2,845,599	2,224,387	3,707,529	36.42	101,799
1987	28,990,518.68	21,708,100	16,969,083	29,415,747	37.24	789,897
1988	11,605,661.16	8,470,090	6,621,015	11,948,043	38.07	313,844

SURVIVOR CURVE.. IOWA 70-R3
NET SALVAGE PERCENT.. -60

1989	22,776,754.95	16,185,709	12,652,266	23,790,542	38.91	611,425
1990	8,467,015.25	5,854,298	4,576,267	8,970,957	39.75	225,684
1991	7,071,510.99	4,752,055	3,714,651	7,599,767	40.60	187,186
1992	22,441,225.65	14,639,219	11,443,384	24,462,577	41.46	590,028
1993	10,577,707.62	6,692,389	5,231,398	11,692,934	42.32	276,298
1994	10,212,727.59	6,258,359	4,892,119	11,448,245	43.19	265,067
1995	12,054,739.54	7,144,699	5,584,966	13,702,617	44.07	310,928
1996	15,817,574.38	9,056,763	7,079,614	18,228,505	44.95	405,528
1997	24,762,599.07	13,674,502	10,689,271	28,930,888	45.84	631,128
1998	22,264,161.90	11,842,041	9,256,848	26,365,811	46.73	564,216
1999	18,477,272.87	9,447,651	7,385,169	22,178,468	47.63	465,641
2000	41,073,324.77	20,146,959	15,748,749	49,968,571	48.54	1,029,431
2001	24,520,576.77	11,517,609	9,003,242	30,229,681	49.45	611,318
2002	29,727,502.71	13,345,033	10,431,727	37,132,277	50.36	737,337
2003	32,012,607.77	13,690,640	10,701,886	40,518,286	51.29	789,984
2004	27,272,140.61	11,089,507	8,668,597	34,966,828	52.21	669,734
2005	28,645,359.20	11,039,234	8,629,299	37,203,276	53.14	700,099
2006	50,214,078.58	18,272,301	14,283,341	66,059,185	54.08	1,221,509
2007	91,270,929.08	31,251,166	24,428,837	121,604,650	55.02	2,210,190
2008	99,441,933.90	31,912,110	24,945,493	134,161,601	55.96	2,397,455
2009	26,462,624.19	7,917,617	6,189,151	36,151,048	56.91	635,232
2010	61,487,517.54	17,062,048	13,337,294	85,042,734	57.86	1,469,802
2011	59,294,488.13	15,166,107	11,855,249	83,015,932	58.81	1,411,596
2012	85,106,604.85	19,899,967	15,555,678	120,614,890	59.77	2,017,984
2013	92,232,241.97	19,542,905	15,276,564	132,295,023	60.73	2,178,413
2014	112,461,942.36	21,335,380	16,677,731	163,261,377	61.70	2,646,051
2015	146,727,602.11	24,582,156	19,215,715	215,548,448	62.67	3,439,420
2016	132,306,037.66	19,234,123	15,035,191	196,654,469	63.64	3,090,108
2017	114,567,690.88	14,114,740	11,033,402	172,274,903	64.61	2,666,381
2018	159,382,626.08	16,065,769	12,558,510	242,453,692	65.59	3,696,504
2019	112,270,151.80	8,827,128	6,900,110	172,732,133	66.56	2,595,134
2020	205,461,268.63	11,551,854	9,030,010	319,708,020	67.54	4,733,610
2021	133,732,685.18	4,523,374	3,535,893	210,436,403	68.52	3,071,168
2022	136,531,129.42	1,529,149	1,195,326	217,254,481	69.51	3,125,514
2,336,473,911.14 615,750,290 481,328,079 3,257,030,179						56,536,055

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 57.6 2.42

SURVIVOR CURVE.. IOWA 25-S1
NET SALVAGE PERCENT.. -20

2004	638,779.63	428,340	314,291	452,245	11.03	41,001
2005	203,175.04	131,072	96,173	147,637	11.56	12,771
2007	13,495.11	7,993	5,865	10,329	12.66	816
2013	10,430,958.54	4,215,776	3,093,289	9,423,861	16.58	568,387
2014	2,972,943.12	1,094,519	803,094	2,764,438	17.33	159,517
2015	88,029.11	29,071	21,331	84,304	18.12	4,653
2016	56,339.80	16,415	12,044	55,564	18.93	2,935
2017	709,023.09	177,312	130,101	720,727	19.79	36,419
2018	542,437.19	112,740	82,722	568,203	20.67	27,489
2019	377,664.36	61,816	45,357	407,840	21.59	18,890
2021	133,721.33	9,564	7,017	153,449	23.51	6,527
2022	99,725.57	2,393	1,756	117,915	24.50	4,813
	16,266,291.89	6,287,011	4,613,040	14,906,510		884,218
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 16.9						5.44

SURVIVOR CURVE.. IOWA 38-R1
NET SALVAGE PERCENT.. -35

1939	28.27	38	38			
1941	234.29	316	316			
1942	187.43	253	253			
1945	90.11	122	122			
1946	15.86	21	21			
1947	6,701.18	8,975	7,727	1,320	0.30	1,320
1948	35,402.75	47,001	40,467	7,327	0.63	7,327
1949	8,509.20	11,200	9,643	1,844	0.95	1,844
1950	1,376.97	1,796	1,546	313	1.29	243
1951	2,866.91	3,704	3,189	681	1.63	418
1952	111,470.75	142,723	122,882	27,604	1.96	14,084
1953	43,523.65	55,232	47,554	11,203	2.28	4,914
1954	48,996.28	61,654	53,083	13,062	2.58	5,063
1955	20,355.32	25,397	21,866	5,614	2.88	1,949
1956	25,891.78	32,029	27,576	7,378	3.18	2,320
1957	47,973.84	58,850	50,669	14,096	3.47	4,062
1958	27,840.99	33,856	29,149	8,436	3.77	2,238
1959	13,495.81	16,263	14,002	4,217	4.08	1,034
1960	28,155.88	33,629	28,954	9,056	4.38	2,068
1961	35,974.09	42,558	36,642	11,923	4.70	2,537
1962	52,593.96	61,641	53,072	17,930	5.01	3,579
1963	67,414.41	78,220	67,346	23,663	5.34	4,431
1964	40,878.65	46,952	40,425	14,761	5.67	2,603
1965	43,538.64	49,497	42,616	16,161	6.00	2,694
1966	26,087.98	29,343	25,264	9,955	6.34	1,570
1967	39,494.17	43,931	37,824	15,493	6.69	2,316
1968	20,952.53	23,038	19,835	8,451	7.05	1,199
1969	9,519.78	10,346	8,908	3,944	7.41	532
1970	58,322.35	62,615	53,910	24,825	7.78	3,191
1971	32,087.13	34,027	29,297	14,021	8.15	1,720
1972	11,599.11	12,144	10,456	5,203	8.53	610
1973	53,902.09	55,686	47,945	24,823	8.92	2,783
1974	25,509.48	25,992	22,379	12,059	9.32	1,294
1975	24,588.59	24,704	21,270	11,925	9.72	1,227
1976	40,038.44	39,643	34,132	19,920	10.13	1,966
1977	169,914.38	165,700	142,665	86,719	10.55	8,220
1978	66,363.09	63,703	54,847	34,743	10.98	3,164
1979	58,184.47	54,964	47,323	31,226	11.41	2,737
1980	44,785.31	41,590	35,808	24,652	11.86	2,079
1981	113,528.84	103,614	89,210	64,054	12.31	5,203
1982	265,291.25	237,789	204,732	153,411	12.77	12,013
1983	205,842.40	181,066	155,895	121,992	13.24	9,214

SURVIVOR CURVE.. IOWA 38-R1
NET SALVAGE PERCENT.. -35

1984	144,388.88	124,598	107,277	87,648	13.71	6,393
1985	181,721.53	153,651	132,291	113,033	14.20	7,960
1986	201,988.16	167,270	144,017	128,667	14.69	8,759
1987	383,016.17	310,243	267,114	249,958	15.20	16,445
1988	148,135.31	117,306	100,998	98,985	15.71	6,301
1989	224,023.06	173,260	149,174	153,257	16.23	9,443
1990	145,682.25	109,876	94,601	102,070	16.77	6,086
1991	207,624.33	152,611	131,395	148,898	17.31	8,602
1992	319,028.46	228,265	196,532	234,156	17.86	13,111
1993	956,206.51	665,138	572,672	718,207	18.42	38,991
1994	429,098.09	289,948	249,640	329,642	18.98	17,368
1995	717,982.94	470,351	404,964	564,313	19.56	28,850
1996	430,082.05	272,736	234,821	345,790	20.15	17,161
1997	348,485.67	213,686	183,980	286,476	20.74	13,813
1998	912,099.81	539,842	464,794	766,541	21.34	35,920
1999	664,305.43	378,553	325,927	570,885	21.96	25,997
2000	1,862,634.40	1,020,382	878,531	1,636,025	22.58	72,455
2001	1,442,134.46	758,252	652,842	1,294,040	23.20	55,778
2002	5,166,276.46	2,598,898	2,237,605	4,736,868	23.84	198,694
2003	1,180,346.10	566,940	488,125	1,105,342	24.48	45,153
2004	890,784.94	407,283	350,664	851,896	25.13	33,900
2005	1,432,640.46	621,957	535,494	1,398,571	25.78	54,250
2006	4,746,667.74	1,949,378	1,678,380	4,729,621	26.44	178,881
2007	4,390,511.83	1,698,614	1,462,477	4,464,714	27.11	164,689
2008	1,949,986.63	708,006	609,581	2,022,901	27.78	72,819
2009	2,567,598.95	871,140	750,036	2,716,223	28.45	95,474
2010	2,004,148.63	631,541	543,746	2,161,855	29.13	74,214
2011	4,231,941.03	1,231,349	1,060,170	4,652,950	29.81	156,087
2012	5,364,871.48	1,429,467	1,230,746	6,011,830	30.50	197,109
2013	21,708,621.41	5,252,043	4,521,917	24,784,722	31.19	794,637
2014	10,772,449.30	2,338,338	2,013,268	12,529,539	31.89	392,899
2015	7,342,530.11	1,411,231	1,215,045	8,697,371	32.59	266,872
2016	11,466,355.48	1,918,694	1,651,962	13,827,618	33.29	415,369
2017	6,767,932.68	961,730	828,032	8,308,677	34.00	244,373
2018	10,978,826.29	1,283,238	1,104,845	13,716,570	34.71	395,176
2019	10,315,675.20	941,826	810,896	13,115,266	35.43	370,174

SURVIVOR CURVE.. IOWA 38-R1
NET SALVAGE PERCENT.. -35

2020	10,869,774.61	710,525	611,749	14,062,447	36.16	388,895
2021	10,482,438.54	413,359	355,895	13,795,397	36.89	373,960
2022	13,364,321.20	175,727	151,298	17,890,536	37.63	475,433

159,642,864.99	36,289,074	31,244,359	184,273,509	5,904,257
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COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 31.2 3.70

SURVIVOR CURVE.. IOWA 60-R3
NET SALVAGE PERCENT.. -110

1929	231.44	471	443	43	1.88	23
1930	139.04	282	265	27	2.13	13
1931	288.55	582	547	59	2.37	25
1932	124.88	251	236	26	2.63	10
1934	356.82	710	667	82	3.13	26
1936	120.97	239	225	29	3.65	8
1937	153.64	302	284	39	3.90	10
1938	12.81	25	23	4	4.16	1
1939	107.33	209	196	29	4.42	7
1940	658.23	1,275	1,198	184	4.67	39
1941	71.50	138	130	20	4.93	4
1942	302.48	580	545	90	5.19	17
1943	1,505.66	2,875	2,702	460	5.45	84
1944	26.46	50	47	9	5.71	2
1945	97.83	185	174	31	5.98	5
1946	1,880.98	3,539	3,327	623	6.25	100
1947	283.51	531	499	96	6.52	15
1948	25,739.02	47,926	45,049	9,003	6.80	1,324
1949	6,841.42	12,669	11,909	2,458	7.09	347
1950	296,413.90	545,905	513,139	109,330	7.38	14,814
1951	229,272.46	419,762	394,567	86,905	7.69	11,301
1952	282,368.43	513,913	483,067	109,907	8.00	13,738
1953	624,142.58	1,128,735	1,060,987	249,712	8.33	29,977
1954	582,755.26	1,046,949	984,110	239,676	8.67	27,644
1955	701,427.07	1,251,561	1,176,441	296,556	9.02	32,878
1956	566,091.95	1,002,949	942,751	246,042	9.38	26,230
1957	846,018.16	1,487,632	1,398,343	378,295	9.76	38,760
1958	717,062.40	1,251,090	1,175,998	329,833	10.15	32,496
1959	1,272,800.16	2,202,453	2,070,260	602,620	10.56	57,066
1960	619,149.35	1,062,275	998,516	301,698	10.98	27,477
1961	2,216,053.72	3,767,972	3,541,815	1,111,898	11.42	97,364
1962	859,179.31	1,447,337	1,360,466	443,811	11.87	37,389
1963	1,194,339.13	1,992,269	1,872,691	635,421	12.34	51,493
1964	1,036,393.69	1,711,041	1,608,343	568,084	12.83	44,278
1965	918,570.64	1,500,433	1,410,376	518,622	13.33	38,906
1966	809,820.27	1,308,068	1,229,556	471,067	13.85	34,012
1967	761,308.25	1,215,576	1,142,616	456,131	14.38	31,720
1968	841,023.03	1,326,678	1,247,049	519,099	14.93	34,769
1969	877,191.38	1,366,526	1,284,506	557,596	15.49	35,997
1970	657,993.60	1,011,703	950,980	430,807	16.07	26,808
1971	916,891.04	1,390,826	1,307,347	618,124	16.66	37,102
1972	949,238.72	1,419,641	1,334,433	658,968	17.27	38,157

SURVIVOR CURVE.. IOWA 60-R3
NET SALVAGE PERCENT.. -110

1973	1,587,522.55	2,339,759	2,199,324	1,134,473	17.89	63,414
1974	1,926,021.14	2,795,537	2,627,746	1,416,898	18.53	76,465
1975	5,113,611.76	7,305,781	6,867,281	3,871,304	19.18	201,841
1976	1,326,191.26	1,864,085	1,752,201	1,032,801	19.84	52,057
1977	3,915,956.95	5,412,467	5,087,605	3,135,905	20.51	152,896
1978	4,401,214.63	5,978,359	5,619,532	3,623,019	21.19	170,978
1979	4,455,108.32	5,942,477	5,585,804	3,769,923	21.89	172,221
1980	4,299,329.76	5,627,793	5,290,007	3,738,585	22.60	165,424
1981	5,475,151.00	7,028,961	6,607,076	4,890,741	23.32	209,723
1982	4,132,948.29	5,200,311	4,888,183	3,791,008	24.05	157,630
1983	4,196,277.90	5,171,254	4,860,870	3,951,314	24.79	159,391
1984	3,536,230.94	4,266,286	4,010,219	3,415,866	25.53	133,798
1985	5,013,153.73	5,914,734	5,559,726	4,967,897	26.29	188,965
1986	1,663,984.40	1,918,408	1,803,263	1,691,104	27.06	62,495
1987	15,822,167.60	17,809,432	16,740,492	16,486,060	27.84	592,172
1988	6,601,872.38	7,248,480	6,813,419	7,050,513	28.63	246,263
1989	2,358,544.98	2,524,367	2,372,852	2,580,092	29.42	87,699
1990	4,840,995.13	5,044,109	4,741,357	5,424,733	30.23	179,449
1991	8,696,941.16	8,815,280	8,286,178	9,977,398	31.04	321,437
1992	9,030,649.08	8,894,286	8,360,442	10,603,921	31.86	332,829
1993	8,206,722.69	7,844,453	7,373,621	9,860,497	32.69	301,636
1994	8,789,611.09	8,143,197	7,654,434	10,803,749	33.53	322,211
1995	7,951,997.13	7,130,556	6,702,573	9,996,621	34.38	290,768
1996	10,438,348.68	9,049,453	8,506,296	13,414,236	35.23	380,762
1997	383,806.67	321,189	301,911	504,083	36.09	13,967
1998	17,096,452.31	13,786,579	12,959,095	22,943,455	36.96	620,764
1999	9,859,895.01	7,647,266	7,188,270	13,517,510	37.84	357,228
2000	26,178,626.41	19,498,024	18,327,734	36,647,381	38.72	946,472
2001	16,343,060.03	11,663,110	10,963,079	23,357,347	39.61	589,683
2002	17,147,427.76	11,696,998	10,994,933	25,014,665	40.51	617,494
2003	8,677,203.96	5,645,762	5,306,898	12,915,230	41.41	311,887
2004	6,713,179.11	4,154,162	3,904,825	10,192,851	42.32	240,852
2005	6,416,278.31	3,763,744	3,537,840	9,936,344	43.24	229,795
2006	5,621,348.84	3,116,476	2,929,422	8,875,411	44.16	200,983
2007	5,993,075.37	3,129,626	2,941,783	9,643,675	45.08	213,924
2008	6,740,769.56	3,298,259	3,100,294	11,055,322	46.02	240,229
2009	9,483,420.68	4,328,167	4,068,386	15,846,797	46.96	337,453
2010	7,671,788.42	3,249,056	3,054,045	13,056,711	47.90	272,583
2011	13,375,493.92	5,219,693	4,906,402	23,182,135	48.85	474,558
2012	11,842,082.18	4,227,623	3,973,877	20,894,496	49.80	419,568
2013	12,145,311.39	3,932,130	3,696,120	21,809,034	50.75	429,735
2014	14,279,360.41	4,143,256	3,894,574	26,092,083	51.71	504,585

SURVIVOR CURVE.. IOWA 60-R3
NET SALVAGE PERCENT.. -110

2015	24,863,183.82	6,369,948	5,987,617	46,225,069	52.68	877,469
2016	16,420,570.80	3,655,219	3,435,829	31,047,370	53.64	578,810
2017	22,829,163.62	4,298,891	4,040,867	43,900,377	54.62	803,742
2018	19,605,240.21	3,026,069	2,844,442	38,326,562	55.59	689,451
2019	17,377,501.67	2,092,130	1,966,558	34,526,196	56.56	610,435
2020	5,772,761.82	497,035	467,203	11,655,597	57.54	202,565
2021	2,676,457.57	138,659	130,336	5,490,225	58.52	93,818
2022	27,922,662.22	479,069	450,315	58,187,276	59.51	977,773
	486,031,121.69	314,092,098	295,239,979	725,425,377		17,700,783

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 41.0 3.64

SURVIVOR CURVE.. IOWA 30-R3
NET SALVAGE PERCENT.. -5

1970	53,598.27	56,278	56,278			
1975	51,329.66	52,531	34,726	19,170	0.76	19,170
1976	191,941.52	194,821	128,787	72,752	1.00	72,752
1980	550.00	539	356	222	2.02	110
1982	8,383.59	8,060	5,328	3,475	2.53	1,374
1983	57,239.03	54,512	36,035	24,066	2.79	8,626
1984	29,703.05	28,007	18,514	12,674	3.06	4,142
1985	1,543,904.78	1,441,158	952,682	668,418	3.33	200,726
1986	1,161,636.94	1,072,535	709,003	510,716	3.62	141,082
1987	847,097.53	773,228	511,145	378,307	3.92	96,507
1988	1,125,727.92	1,014,558	670,677	511,337	4.25	120,315
1989	767,826.70	682,601	451,236	354,982	4.60	77,170
1990	1,159,209.50	1,015,120	671,048	546,122	4.98	109,663
1991	1,399,891.13	1,206,291	797,423	672,463	5.38	124,993
1992	2,143,795.31	1,814,294	1,199,345	1,051,640	5.82	180,694
1993	1,976,769.03	1,640,415	1,084,402	991,205	6.29	157,584
1994	2,624,901.99	2,132,348	1,409,596	1,346,551	6.79	198,314
1995	3,281,134.63	2,603,428	1,721,005	1,724,186	7.33	235,223
1996	3,010,378.13	2,329,581	1,539,977	1,620,920	7.89	205,440
1997	3,791,630.88	2,855,843	1,887,864	2,093,348	8.48	246,857
1998	4,303,009.39	3,147,666	2,080,775	2,437,385	9.10	267,845
1999	4,491,619.61	3,183,435	2,104,420	2,611,781	9.75	267,875
2000	3,878,609.84	2,656,640	1,756,180	2,316,360	10.43	222,086
2003	34,442.46	21,000	13,882	22,283	12.58	1,771
2004	3,041,129.13	1,773,272	1,172,227	2,020,959	13.34	151,496
2005	3,502,216.36	1,946,520	1,286,753	2,390,574	14.12	169,304
2006	4,262,729.35	2,251,361	1,488,270	2,987,596	14.91	200,375
2007	4,221,646.19	2,108,516	1,393,841	3,038,887	15.73	193,191
2008	3,663,921.95	1,724,778	1,140,170	2,706,948	16.55	163,562
2009	3,687,823.24	1,626,330	1,075,091	2,797,123	17.40	160,754
2010	4,763,897.17	1,957,469	1,293,991	3,708,101	18.26	203,072
2011	11,136,812.67	4,233,102	2,798,306	8,895,347	19.14	464,752
2012	11,259,418.54	3,928,935	2,597,235	9,225,154	20.03	460,567
2013	14,091,567.09	4,473,319	2,957,102	11,839,043	20.93	565,649
2014	2,975,963.65	848,904	561,171	2,563,591	21.85	117,327
2015	4,871,186.87	1,230,966	813,734	4,301,012	22.78	188,806
2016	3,777,666.57	831,667	549,776	3,416,774	23.71	144,107
2017	5,965,385.91	1,114,931	737,029	5,526,626	24.66	224,113
2018	11,172,287.12	1,712,712	1,132,194	10,598,707	25.62	413,689
2019	20,807,847.66	2,490,699	1,646,485	20,201,755	26.58	760,036

SURVIVOR CURVE.. IOWA 30-R3
NET SALVAGE PERCENT.. -5

2020	29,073,937.96	2,493,192	1,648,133	28,879,502	27.55	1,048,258
2021	37,382,270.08	1,923,318	1,271,415	37,979,969	28.53	1,331,229
2022	27,040,991.49	463,658	306,503	28,086,538	29.51	951,763

	244,633,029.89	69,118,538	45,710,110	211,154,571		10,872,369
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COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 19.4 4.44

SURVIVOR CURVE.. IOWA 12-S3
NET SALVAGE PERCENT.. -15

2015	1,742,330.61	1,188,844	786,217	1,217,463	4.88	249,480
2016	13,188,514.34	7,975,154	5,274,202	9,892,589	5.69	1,738,592
2017	20,481,476.26	10,638,499	7,035,551	16,518,147	6.58	2,510,357
2018	15,194,280.77	6,523,353	4,314,084	13,159,339	7.52	1,749,912
2019	1,776,651.60	595,925	394,103	1,649,046	8.50	194,005
2020	3,119,465.98	747,360	494,250	3,093,136	9.50	325,593
2022	35,320.35	1,693	1,120	39,498	11.50	3,435
	55,538,039.91	27,670,828	18,299,527	45,569,219		6,771,374
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 6.7						12.19

SURVIVOR CURVE.. IOWA 50-R3
NET SALVAGE PERCENT.. -5

1930	4,471.28	4,695	4,695			
1931	681.92	716	716			
1932	1,701.52	1,787	1,787			
1933	173.67	182	182			
1934	92.17	97	97			
1935	7,665.93	8,049	8,049			
1936	3,372.50	3,541	3,541			
1937	1,595.46	1,675	1,675			
1938	126.49	133	133			
1939	397.94	415	418			
1940	703.25	731	738			
1941	66.33	69	70			
1942	24.37	25	26			
1943	163.61	168	172			
1944	107.11	109	112			
1945	16.17	16	17			
1946	216.81	219	228			
1947	55.19	55	58			
1948	1,756.47	1,755	1,844			
1949	322.44	320	339			
1950	866.69	857	907	3	2.93	1
1951	483.95	476	504	4	3.19	1
1952	4,257.41	4,162	4,403	67	3.45	19
1953	38,384.32	37,313	39,472	832	3.71	224
1954	15,102.00	14,601	15,446	411	3.96	104
1955	3,924.90	3,773	3,991	130	4.22	31
1956	17,785.73	17,002	17,986	689	4.48	154
1957	20,403.76	19,393	20,515	909	4.74	192
1958	46,424.38	43,871	46,409	2,337	5.00	467
1959	42,264.83	39,701	41,998	2,380	5.27	452
1960	24,090.77	22,488	23,789	1,506	5.55	271
1961	23,689.66	21,974	23,245	1,629	5.83	279
1962	20,989.27	19,337	20,456	1,583	6.13	258
1963	20,783.73	19,016	20,116	1,707	6.43	265
1964	34,121.27	30,991	32,784	3,043	6.75	451
1965	21,120.07	19,036	20,137	2,039	7.08	288
1966	11,665.23	10,431	11,034	1,214	7.42	164
1967	13,464.22	11,935	12,625	1,512	7.79	194
1968	9,960.64	8,752	9,258	1,201	8.16	147
1969	9,480.66	8,250	8,727	1,228	8.56	143
1970	8,829.85	7,608	8,048	1,223	8.97	136
1971	29,967.06	25,550	27,028	4,437	9.40	472

SURVIVOR CURVE.. IOWA 50-R3
NET SALVAGE PERCENT.. -5

1972	7,908.51	6,668	7,054	1,250	9.85	127
1973	26,376.21	21,979	23,251	4,444	10.32	431
1974	26,782.14	22,041	23,316	4,805	10.81	444
1975	685,592.70	556,893	589,110	130,762	11.32	11,551
1976	724,978.94	580,817	614,418	146,810	11.85	12,389
1977	908,304.01	717,388	758,890	194,829	12.39	15,725
1978	1,086,858.04	845,402	894,310	246,891	12.96	19,050
1979	1,097,004.61	839,933	888,524	263,331	13.54	19,448
1980	1,085,616.09	817,534	864,830	275,067	14.14	19,453
1981	1,521,583.35	1,126,352	1,191,513	406,150	14.75	27,536
1982	1,068,448.08	776,559	821,484	300,386	15.39	19,518
1983	1,222,877.98	872,364	922,832	361,190	16.03	22,532
1984	1,235,215.46	863,786	913,757	383,219	16.70	22,947
1985	1,406,233.07	963,298	1,019,026	457,519	17.38	26,324
1986	1,155,791.29	774,993	819,828	393,753	18.07	21,790
1987	1,462,137.03	958,913	1,014,388	520,856	18.77	27,749
1988	1,117,324.64	715,881	757,296	415,895	19.49	21,339
1989	1,600,720.76	1,001,059	1,058,972	621,785	20.22	30,751
1990	1,351,504.03	823,917	871,582	547,497	20.97	26,109
1991	1,086,737.88	645,392	682,729	458,346	21.72	21,102
1992	1,432,213.53	827,404	875,271	628,553	22.49	27,948
1993	2,014,227.31	1,131,069	1,196,503	918,436	23.26	39,486
1994	2,129,014.40	1,160,206	1,227,326	1,008,139	24.05	41,918
1995	1,742,282.23	920,186	973,420	855,976	24.85	34,446
1996	1,934,533.15	988,817	1,046,022	985,238	25.66	38,396
1997	2,008,185.62	991,883	1,049,265	1,059,330	26.48	40,005
1998	1,716,094.94	817,702	865,007	936,893	27.31	34,306
2000	5,805,638.85	2,560,287	2,708,403	3,387,518	29.00	116,811
2001	376,965.97	159,434	168,657	227,157	29.86	7,607
2002	15,660,879.86	6,337,488	6,704,121	9,739,803	30.73	316,948
2003	10,037,059.18	3,878,320	4,102,687	6,436,225	31.60	203,678
2004	6,324,533.33	2,325,594	2,460,133	4,180,627	32.49	128,674
2005	6,583,379.45	2,297,731	2,430,658	4,481,890	33.38	134,269
2006	2,736,065.63	903,230	955,483	1,917,386	34.28	55,933
2007	5,231,720.96	1,627,118	1,721,249	3,772,058	35.19	107,191
2008	5,392,636.23	1,572,978	1,663,977	3,998,291	36.11	110,725
2009	4,280,679.63	1,165,929	1,233,380	3,261,334	37.03	88,073
2011	322,566.33	75,258	79,612	259,083	38.89	6,662
2012	257,017.80	54,837	58,009	211,860	39.84	5,318
2013	109,605.40	21,222	22,450	92,636	40.78	2,272
2014	7,341,898.17	1,273,526	1,347,201	6,361,792	41.74	152,415
2015	9,875,066.17	1,515,921	1,603,619	8,765,200	42.69	205,322

SURVIVOR CURVE.. IOWA 50-R3

NET SALVAGE PERCENT.. -5

2016	11,169,433.53	1,487,098	1,573,129	10,154,776	43.66	232,588
2017	12,348,602.23	1,395,145	1,475,856	11,490,176	44.62	257,512
2018	20,772,748.64	1,923,764	2,035,057	19,776,329	45.59	433,787
2019	1,472.18	106	112	1,434	46.57	31
2021	5,260.56	163	172	5,352	48.52	110
2022	225,759.34	2,323	2,458	234,589	49.51	4,738

158,155,306.47	51,757,182	54,750,122	111,312,950	3,198,197
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COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 34.8 2.02

SURVIVOR CURVE.. IOWA 40-R2.5
NET SALVAGE PERCENT.. -5

1975	1,663,955.23	1,454,068	1,747,153			
1976	2,742.18	2,374	2,879			
1977	6,376.01	5,463	6,695			
1978	2,843.88	2,411	2,986			
1979	1,092.08	915	1,147			
1980	2,684.63	2,221	2,819			
1981	101,466.51	82,861	106,540			
1982	520.59	419	546	1	9.33	
1983	267,253.97	211,936	276,126	4,491	9.79	459
1984	311,120.64	242,802	316,340	10,337	10.27	1,007
1985	344,550.40	264,369	344,440	17,338	10.77	1,610
1986	154,474.29	116,377	151,625	10,573	11.30	936
1987	523,250.23	386,787	503,935	45,478	11.84	3,841
1988	343,958.54	249,108	324,556	36,600	12.41	2,949
1989	304,711.28	216,044	281,478	38,469	12.99	2,961
1990	329,905.31	228,711	297,982	48,419	13.59	3,563
1991	417,150.48	282,406	367,939	70,069	14.21	4,931
1992	505,941.74	334,016	435,181	96,058	14.85	6,469
1993	692,068.86	445,087	579,892	146,780	15.50	9,470
1994	586,025.63	366,581	477,609	137,718	16.17	8,517
1995	610,437.51	370,795	483,099	157,860	16.86	9,363
1996	593,687.85	349,712	455,631	167,741	17.56	9,552
1997	931,371.46	531,266	692,173	285,767	18.27	15,641
1998	969,969.05	534,695	696,640	321,828	19.00	16,938
1999	693,713.23	368,934	480,674	247,725	19.74	12,549
2000	943,098.92	482,996	629,283	360,971	20.49	17,617
2001	612.50	301	392	251	21.25	12
2002	119,952.80	56,583	73,721	52,229	22.03	2,371
2020	19,615.17	1,210	1,576	19,020	37.65	505
	11,444,550.97	7,591,448	9,741,057	2,275,722		131,261

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 17.3 1.15

SURVIVOR CURVE.. IOWA 55-R2
NET SALVAGE PERCENT.. -5

1953	22,021.99	19,175	21,391	1,732	9.39	184
1954	5,473.56	4,730	5,277	470	9.73	48
1955	1,739.16	1,491	1,663	163	10.08	16
1956	8,541.22	7,268	8,108	860	10.43	82
1957	13,440.95	11,342	12,653	1,460	10.80	135
1958	7,769.43	6,501	7,252	906	11.17	81
1959	15,081.58	12,510	13,955	1,881	11.55	163
1960	6,863.80	5,641	6,293	914	11.95	76
1961	6,906.76	5,624	6,274	978	12.35	79
1962	6,637.46	5,352	5,970	999	12.76	78
1963	7,536.38	6,017	6,712	1,201	13.18	91
1964	19,953.66	15,763	17,584	3,367	13.62	247
1965	20,410.52	15,952	17,795	3,636	14.06	259
1966	5,279.33	4,081	4,553	990	14.51	68
1967	5,586.60	4,268	4,761	1,105	14.98	74
1968	5,133.88	3,876	4,324	1,067	15.45	69
1969	4,069.95	3,035	3,386	887	15.94	56
1970	17,211.94	12,670	14,134	3,939	16.44	240
1971	18,885.69	13,719	15,304	4,526	16.95	267
1972	3,098.39	2,220	2,477	776	17.47	44
1973	16,663.36	11,774	13,134	4,363	17.99	243
1974	20,383.05	14,188	15,827	5,575	18.54	301
1975	21,371.64	14,651	16,344	6,096	19.09	319
1976	11,250.28	7,592	8,469	3,344	19.65	170
1977	8,409.03	5,583	6,228	2,601	20.22	129
1978	15,042.78	9,822	10,957	4,838	20.80	233
1979	20,989.89	13,464	15,020	7,019	21.40	328
1980	28,988.91	18,263	20,373	10,065	22.00	458
1981	31,443.01	19,443	21,690	11,325	22.61	501
1982	11,043.06	6,698	7,472	4,123	23.23	177
1983	84,291.22	50,094	55,882	32,624	23.87	1,367
1984	37,217.38	21,663	24,166	14,912	24.51	608
1985	32,914.95	18,751	20,918	13,643	25.16	542
1986	150,105.46	83,620	93,282	64,329	25.82	2,491
1987	145,228.71	79,045	88,178	64,312	26.49	2,428
1988	3,001.34	1,595	1,779	1,372	27.17	50
1989	63,546.48	32,938	36,744	29,980	27.85	1,076
1990	170,470.47	86,080	96,026	82,968	28.55	2,906
1991	119,869.21	58,926	65,735	60,128	29.25	2,056
1992	69,500.23	33,223	37,062	35,913	29.96	1,199
1993	209,272.07	97,163	108,390	111,346	30.68	3,629
1994	58,921.65	26,536	29,602	32,266	31.41	1,027

SURVIVOR CURVE.. IOWA 55-R2
NET SALVAGE PERCENT.. -5

1995	56,444.84	24,623	27,468	31,799	32.15	989
1996	22,278.63	9,404	10,491	12,902	32.89	392
1997	21,545.76	8,786	9,801	12,822	33.64	381
1998	9,438.11	3,712	4,141	5,769	34.40	168
2000	89,611.68	32,608	36,376	57,716	35.94	1,606
2002	477,855.77	159,556	177,992	323,757	37.51	8,631
2003	12,093.79	3,853	4,298	8,400	38.31	219
2004	16,024.36	4,861	5,423	11,403	39.11	292
2006	218,948.97	59,647	66,539	163,357	40.73	4,011
2007	467,085.26	119,937	133,794	356,646	41.55	8,584
2008	28,170.95	6,787	7,571	22,008	42.38	519
2009	2,435.82	548	611	1,947	43.21	45
2010	14,309.20	2,991	3,337	11,688	44.05	265
2012	56,183.91	9,921	11,067	47,926	45.75	1,048
2013	16,880.80	2,707	3,020	14,705	46.60	316
2014	20,452.09	2,944	3,284	18,191	47.46	383
2015	94,888.38	12,082	13,478	86,155	48.33	1,783
2016	66,971.41	7,415	8,272	62,048	49.20	1,261
2017	233.86	22	25	221	50.08	4
2020	38.00	2	2	38	52.75	1
	3,223,458.02	1,344,753	1,500,134	1,884,497		55,493

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 34.0 1.72

SURVIVOR CURVE.. IOWA 14-L3
NET SALVAGE PERCENT.. 0

1948	87.57	88	88			
1973	4,714.70	4,715	4,715			
1987	63,799.18	63,799	63,799			
1989	22,398.28	22,398	22,398			
1991	51,756.05	50,314	51,756			
1992	33,856.77	32,454	33,857			
1993	1,342.95	1,270	1,343			
1994	7,498.56	6,984	7,499			
1995	5,878.35	5,391	5,878			
1997	9,176.29	8,141	9,176			
1998	30,426.65	26,536	30,427			
1999	5,144.18	4,402	5,144			
2001	26,136.35	21,469	26,136			
2002	14,044.14	11,275	14,044			
2003	38,839.24	30,461	38,839			
2006	9,537.62	6,983	9,538			
2007	11,539.99	8,284	11,540			
2008	16,115.22	11,373	16,115			
2009	21,424.34	14,859	21,424			
2010	140,574.30	95,491	140,574			
2011	39,626.44	26,182	39,626			
2013	236,675.70	141,837	236,676			
2014	343,543.13	190,666	343,543			
2015	630,274.78	316,486	577,739	52,536	6.97	7,537
2016	351,546.59	156,189	285,120	66,427	7.78	8,538
2017	5,570.37	2,125	3,879	1,691	8.66	195
2018	426,490.16	134,647	245,796	180,694	9.58	18,862
2019	697,872.66	172,975	315,763	382,110	10.53	36,288
2020	71,077.92	12,642	23,078	48,000	11.51	4,170
2021	1,076,483.32	115,334	210,539	865,944	12.50	69,276
2022	393,806.73	14,063	25,672	368,135	13.50	27,269
	4,787,258.53	1,709,833	2,821,721	1,965,538		172,135

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 11.4 3.60

SL ANNEX

INTERIM SURVIVOR CURVE.. IOWA 100-R1
PROBABLE RETIREMENT YEAR.. 6-2054
NET SALVAGE PERCENT.. 0

2006	15,496.55	5,140	6,434	9,062	29.66	306
2010	17,356.21	4,761	5,960	11,396	29.76	383
2011	619,022.05	159,881	200,143	418,879	29.78	14,066
2012	1,621,956.42	391,346	489,898	1,132,059	29.81	37,976
2015	216,340.56	40,213	50,340	166,001	29.87	5,557
2016	65,735.29	10,864	13,600	52,135	29.90	1,744
2017	25,463.94	3,658	4,579	20,885	29.92	698
	2,581,371.02	615,863	770,954	1,810,417		60,730

SL OPS OFFICE

INTERIM SURVIVOR CURVE.. IOWA 75-S1
PROBABLE RETIREMENT YEAR.. 6-2054
NET SALVAGE PERCENT.. 0

1930	3,156.37	2,470	3,092	64	16.25	4
1931	3.33	3	3			
1941	1,840.22	1,372	1,718	123	18.78	7
1942	394.84	293	367	28	18.99	1
1946	495.73	362	453	43	19.82	2
1947	46.94	34	43	4	20.01	
1949	5,900.87	4,246	5,315	586	20.41	29
1950	2,280.91	1,634	2,045	235	20.60	11
1951	2,637.31	1,880	2,353	284	20.79	14
1952	111.02	79	99	12	20.98	1
1953	1,227.34	867	1,085	142	21.17	7
1954	73.23	51	64	9	21.35	
1956	220.31	153	192	29	21.71	1
1957	1,680.92	1,163	1,456	225	21.89	10
1958	163.21	112	140	23	22.07	1
1962	3,092.88	2,083	2,608	485	22.76	21
1964	129,212.51	86,023	107,686	21,527	23.10	932
1965	6.00	4	5	1	23.26	
1966	137,876.33	90,683	113,519	24,357	23.43	1,040
1967	20,150.16	13,170	16,487	3,664	23.59	155
1968	818.00	531	665	153	23.75	6
1969	596.60	385	482	115	23.92	5
1970	11,736.13	7,518	9,411	2,325	24.07	97
1971	9,291.12	5,909	7,397	1,894	24.23	78
1972	8,929.27	5,637	7,057	1,873	24.39	77

SL OPS OFFICE
INTERIM SURVIVOR CURVE.. IOWA 75-S1
PROBABLE RETIREMENT YEAR.. 6-2054
NET SALVAGE PERCENT.. 0

1973	14,809.80	9,279	11,616	3,194	24.55	130
1974	153,968.36	95,738	119,847	34,121	24.70	1,381
1975	3,287,034.74	2,027,147	2,537,636	749,399	24.86	30,145
1976	112,523.65	68,832	86,166	26,358	25.01	1,054
1977	69,910.88	42,402	53,080	16,831	25.16	669
1978	3,940.12	2,368	2,964	976	25.31	39
1979	39,131.46	23,307	29,176	9,955	25.46	391
1980	3,694.25	2,179	2,728	967	25.61	38
1981	217,745.00	127,187	159,216	58,529	25.76	2,272
1982	35,018.60	20,244	25,342	9,677	25.91	373
1983	336,110.42	192,245	240,657	95,453	26.05	3,664
1984	1,511,217.65	854,714	1,069,954	441,264	26.20	16,842
1985	252,919.69	141,405	177,015	75,905	26.34	2,882
1986	2,504,590.49	1,383,110	1,731,414	773,177	26.49	29,188
1987	70,158.42	38,259	47,894	22,265	26.63	836
1988	1,126,782.23	606,445	759,164	367,618	26.77	13,732
1989	1,733,129.75	920,049	1,151,742	581,388	26.91	21,605
1990	381,574.38	199,632	249,905	131,670	27.05	4,868
1991	45,353.49	23,372	29,258	16,096	27.19	592
1992	463,241.19	234,919	294,078	169,163	27.33	6,190
1993	695,595.37	346,845	434,190	261,406	27.47	9,516
1994	16,337,663.01	8,001,207	10,016,122	6,321,541	27.61	228,958
1995	3,347,208.23	1,609,405	2,014,696	1,332,513	27.74	48,036
1996	1,308,269.97	616,679	771,975	536,295	27.88	19,236
1998	1,184,350.09	534,710	669,364	514,986	28.15	18,294
2000	44,879.43	19,302	24,163	20,717	28.41	729
2001	1,044,177.71	437,364	547,504	496,674	28.54	17,403
2002	79,413.89	32,324	40,464	38,950	28.67	1,359
2003	206,082.56	81,341	101,825	104,258	28.80	3,620
2004	742,357.18	283,618	355,041	387,317	28.92	13,393
2005	117,461.61	43,314	54,222	63,240	29.05	2,177
2006	971,866.86	344,945	431,811	540,056	29.17	18,514
2007	304,717.48	103,744	129,869	174,848	29.29	5,970
2008	93,808.18	30,531	38,220	55,589	29.41	1,890
2009	127,754.51	39,548	49,507	78,247	29.53	2,650
2010	309,744.46	90,768	113,626	196,119	29.65	6,614
2011	287,661.70	79,369	99,356	188,305	29.76	6,327
2012	33,880.14	8,731	10,930	22,950	29.87	768
2013	355,609.17	84,951	106,344	249,265	29.98	8,314
2014	117,316.82	25,675	32,141	85,176	30.09	2,831

SL OPS OFFICE
INTERIM SURVIVOR CURVE.. IOWA 75-S1
PROBABLE RETIREMENT YEAR.. 6-2054
NET SALVAGE PERCENT.. 0

2015	1,163,208.67	229,920	287,820	875,389	30.20	28,986
2016	2,989,163.93	525,286	657,567	2,331,597	30.30	76,950
2017	13,455.39	2,052	2,569	10,887	30.40	358
2019	502,195.92	51,445	64,400	437,796	30.58	14,316
	45,082,638.40	20,862,569	26,116,315	18,966,323		676,599

SPRINGVILLE SERVICE CENTER
INTERIM SURVIVOR CURVE.. IOWA 100-R1
PROBABLE RETIREMENT YEAR.. 6-2048
NET SALVAGE PERCENT.. 0

1953	34,750.44	24,590	30,782	3,968	22.76	174
1966	3,597.36	2,397	3,001	597	23.33	26
1968	1,717.93	1,132	1,417	301	23.40	13
1970	121,181.32	78,883	98,748	22,434	23.47	956
1971	721,791.62	466,804	584,357	137,434	23.51	5,846
1972	1,888.40	1,214	1,520	369	23.54	16
1973	1,236.16	789	988	248	23.57	11
1975	62,599.64	39,393	49,313	13,286	23.64	562
1976	172.74	108	135	38	23.67	2
1979	11,543.61	7,038	8,810	2,733	23.76	115
1980	140.54	85	106	34	23.79	1
1981	8,959.29	5,369	6,721	2,238	23.81	94
1982	5,672.41	3,367	4,215	1,458	23.84	61
1983	1,996.42	1,174	1,470	527	23.87	22
1984	7,246.88	4,218	5,280	1,967	23.89	82
1985	8,983.88	5,174	6,477	2,507	23.92	105
1986	1,092.15	622	779	314	23.94	13
1987	68,714.66	38,704	48,451	20,264	23.96	846
1988	10,186.02	5,668	7,095	3,091	23.99	129
1989	4,581.59	2,518	3,152	1,429	24.01	60
1990	32,275.56	17,505	21,913	10,362	24.03	431
1991	76,283.78	40,812	51,090	25,194	24.05	1,048
1992	131,634.31	69,411	86,890	44,744	24.07	1,859
1993	24,158.74	12,547	15,707	8,452	24.09	351
1994	63,871.68	32,648	40,870	23,002	24.11	954
1995	1,887.32	949	1,188	699	24.13	29
1996	5,500.42	2,715	3,399	2,102	24.15	87
1998	14,260.22	6,769	8,474	5,787	24.19	239

SPRINGVILLE SERVICE CENTER
INTERIM SURVIVOR CURVE.. IOWA 100-R1
PROBABLE RETIREMENT YEAR.. 6-2048
NET SALVAGE PERCENT.. 0

2000	93,373.32	42,416	53,097	40,276	24.22	1,663
2001	2,132.31	945	1,183	949	24.24	39
2004	5,465.82	2,228	2,789	2,677	24.29	110
2005	34,984.55	13,811	17,289	17,696	24.30	728
2009	3,973.23	1,334	1,670	2,303	24.37	95
2010	47,914.02	15,302	19,155	28,759	24.38	1,180
2011	3,993.30	1,205	1,508	2,485	24.40	102
2013	460,553.70	121,351	151,910	308,643	24.43	12,634
2015	151,675.30	33,485	41,917	109,758	24.46	4,487
2016	152,151.48	30,041	37,606	114,545	24.47	4,681
2017	27,592.00	4,756	5,954	21,638	24.49	884
	2,411,734.12	1,139,477	1,426,427	985,307		40,735

OGDEN SERVICE CENTER
INTERIM SURVIVOR CURVE.. IOWA 100-R1
PROBABLE RETIREMENT YEAR.. 6-2048
NET SALVAGE PERCENT.. 0

1993	2,027.45	1,053	1,318	709	24.09	29
1994	1,710.45	874	1,094	616	24.11	26
1995	35,379.25	17,781	22,259	13,121	24.13	544
1996	240.20	119	149	91	24.15	4
1997	26,555.52	12,861	16,100	10,456	24.17	433
1998	4,216,491.89	2,001,569	2,505,617	1,710,875	24.19	70,727
2000	36,665.56	16,656	20,850	15,815	24.22	653
2004	9,639.14	3,930	4,920	4,719	24.29	194
2005	34,984.55	13,811	17,289	17,696	24.30	728
2010	73,734.94	23,549	29,479	44,256	24.38	1,815
2015	114,335.69	25,242	31,599	82,737	24.46	3,383
2016	76,505.71	15,105	18,909	57,597	24.47	2,354
2017	358,061.03	61,715	77,256	280,805	24.49	11,466
	4,986,331.38	2,194,265	2,746,839	2,239,492		92,356

LOGAN SERVICE CENTER
INTERIM SURVIVOR CURVE.. IOWA 100-R1
PROBABLE RETIREMENT YEAR.. 6-2050
NET SALVAGE PERCENT.. 0

1998	3,924.00	1,788	2,238	1,686	25.96	65
2000	975,007.25	424,518	531,423	443,584	26.00	17,061
2001	10,841.22	4,603	5,762	5,079	26.02	195
2003	38,340.25	15,398	19,276	19,065	26.06	732
2004	29,302.80	11,406	14,278	15,024	26.08	576
2005	25,724.00	9,685	12,124	13,600	26.10	521
2013	3,885.57	968	1,212	2,674	26.24	102
2015	5,501.76	1,143	1,431	4,071	26.28	155
2016	777.39	144	180	597	26.30	23
2017	2,937.00	475	595	2,342	26.31	89
	1,096,241.24	470,128	588,519	507,722		19,519

CEDAR CITY SERVICE CENTER
INTERIM SURVIVOR CURVE.. IOWA 100-R1
PROBABLE RETIREMENT YEAR.. 6-2042
NET SALVAGE PERCENT.. 0

2003	428,959.16	209,160	261,832	167,127	18.80	8,890
2004	80,577.58	38,264	47,900	32,678	18.81	1,737
2007	5,907.84	2,554	3,197	2,711	18.83	144
2008	18,501.72	7,703	9,643	8,859	18.84	470
2011	37,367.23	13,537	16,946	20,421	18.87	1,082
2012	81,084.54	27,707	34,684	46,400	18.88	2,458
2013	62,952.47	20,130	25,199	37,753	18.89	1,999
2014	6,875.48	2,038	2,551	4,324	18.90	229
2015	275,654.27	74,890	93,749	181,905	18.90	9,625
2016	5,686.82	1,390	1,740	3,947	18.91	209
2017	89,577.09	19,254	24,103	65,474	18.92	3,461
	1,093,144.20	416,627	521,545	571,599		30,304

FILLMORE SERVICE CENTER
INTERIM SURVIVOR CURVE.. IOWA 100-R1
PROBABLE RETIREMENT YEAR.. 6-2033
NET SALVAGE PERCENT.. 0

1992	7,733.65	5,667	7,094	640	10.27	62
1993	644,380.08	468,232	586,145	58,235	10.27	5,670

FILLMORE SERVICE CENTER
INTERIM SURVIVOR CURVE.. IOWA 100-R1
PROBABLE RETIREMENT YEAR.. 6-2033
NET SALVAGE PERCENT.. 0

1996	2,214.00	1,563	1,957	257	10.28	25
1998	4,296.54	2,964	3,710	586	10.29	57
2004	5,995.00	3,771	4,721	1,274	10.30	124
2017	16,723.10	5,674	7,103	9,620	10.34	930
	681,342.37	487,871	610,730	70,612		6,868

ST GEORGE SERVICE CENTER
INTERIM SURVIVOR CURVE.. IOWA 100-R1
PROBABLE RETIREMENT YEAR.. 6-2032
NET SALVAGE PERCENT.. 0

1988	254,800.00	197,019	246,634	8,166	9.30	878
1989	106,027.33	81,468	101,984	4,044	9.30	435
1990	31,417.12	23,973	30,010	1,407	9.31	151
1991	5,450.44	4,130	5,170	280	9.31	30
1992	101,208.97	76,129	95,300	5,909	9.31	635
1993	57,789.02	43,109	53,965	3,824	9.32	410
1994	37,274.43	27,576	34,520	2,754	9.32	295
1995	5,683.26	4,167	5,216	467	9.32	50
1996	12,448.86	9,042	11,319	1,130	9.32	121
1998	39,912.55	28,377	35,523	4,389	9.33	470
2000	102,020.63	70,802	88,632	13,389	9.33	1,435
2001	15,570.98	10,661	13,346	2,225	9.33	238
2003	3,983.97	2,644	3,310	674	9.34	72
2004	31,922.44	20,822	26,066	5,857	9.34	627
2005	12,048.17	7,712	9,654	2,394	9.34	256
2006	144,000.88	90,267	112,999	31,002	9.34	3,319
2007	22,279.11	13,635	17,069	5,210	9.35	557
2008	43,019.88	25,667	32,131	10,889	9.35	1,165
2012	91,969.07	47,688	59,697	32,272	9.36	3,448
2013	149,918.10	74,067	92,719	57,199	9.36	6,111
2015	253,410.78	110,523	138,356	115,055	9.36	12,292
2016	233,698.83	93,779	117,395	116,304	9.37	12,412
2017	447,732.05	162,146	202,979	244,753	9.37	26,121
	2,203,586.87	1,225,403	1,533,992	669,595		71,528

EMERGENCY TRAINING FACILITY
INTERIM SURVIVOR CURVE.. IOWA 100-R1
PROBABLE RETIREMENT YEAR.. 6-2063
NET SALVAGE PERCENT.. 0

2011	32,736.19	6,947	8,696	24,040	37.57	640
2012	1,957,753.61	386,793	484,198	1,473,556	37.61	39,180
2013	3,111,448.42	567,559	710,485	2,400,963	37.65	63,771
2014	235,861.08	39,327	49,231	186,631	37.68	4,953
2015	556,498.13	83,514	104,545	451,953	37.72	11,982
2016	50,856.99	6,761	8,464	42,393	37.76	1,123
2017	256,301.89	29,411	36,817	219,484	37.80	5,806
2022	2,049.41	24	30	2,019	37.98	53
	6,203,505.72	1,120,336	1,402,466	4,801,040		127,508

TOOELE OFFICE
INTERIM SURVIVOR CURVE.. IOWA 100-R1
PROBABLE RETIREMENT YEAR.. 6-2066
NET SALVAGE PERCENT.. 0

2016	2,691,564.79	336,069	420,700	2,270,865	40.30	56,349
2017	1,077,544.38	116,052	145,277	932,267	40.35	23,105
	3,769,109.17	452,121	565,977	3,203,132		79,454

EAGLE MOUNTAIN SERVICE CENTER
INTERIM SURVIVOR CURVE.. IOWA 100-R1
PROBABLE RETIREMENT YEAR.. 6-2076
NET SALVAGE PERCENT.. 0

2016	9,829,258.51	1,017,820	1,274,134	8,555,125	48.48	176,467
2017	37,428.09	3,336	4,176	33,252	48.55	685
	9,866,686.60	1,021,156	1,278,310	8,588,377		177,152

ORANGE ST. WAREHOUSE / WELD SHOP
INTERIM SURVIVOR CURVE.. IOWA 100-R1
PROBABLE RETIREMENT YEAR.. 6-2063
NET SALVAGE PERCENT.. 0

2008	14,845.29	3,753	4,698	10,147	37.45	271
2013	727,360.93	132,678	166,090	561,271	37.65	14,908
2014	3,288,632.63	548,347	686,435	2,602,197	37.68	69,060

ORANGE ST. WAREHOUSE / WELD SHOP
INTERIM SURVIVOR CURVE.. IOWA 100-R1
PROBABLE RETIREMENT YEAR.. 6-2063
NET SALVAGE PERCENT.. 0

2015	349,917.43	52,512	65,736	284,182	37.72	7,534
2016	12,099.92	1,609	2,014	10,086	37.76	267
2017	591,595.31	67,886	84,982	506,614	37.80	13,402
	4,984,451.51	806,785	1,009,955	3,974,497		105,442

ROCK SPRINGS OFFICE
INTERIM SURVIVOR CURVE.. IOWA 100-R1
PROBABLE RETIREMENT YEAR.. 6-2071
NET SALVAGE PERCENT.. 0

2021	1,692,077.91	48,867	61,173	1,630,905	44.72	36,469
2022	1,762,394.93	17,148	21,466	1,740,929	44.78	38,877
	3,454,472.84	66,015	82,639	3,371,834		75,346

EVANSTON OFFICE
INTERIM SURVIVOR CURVE.. IOWA 100-R1
PROBABLE RETIREMENT YEAR.. 6-2071
NET SALVAGE PERCENT.. 0

2017	2,937.00	286	358	2,579	44.51	58
2018	3,078,374.44	250,672	313,798	2,764,576	44.56	62,042
2019	1,073,079.71	69,074	86,469	986,611	44.62	22,111
	4,154,391.15	320,032	400,625	3,753,766		84,211

PARK CITY OFFICE
INTERIM SURVIVOR CURVE.. IOWA 100-R1
PROBABLE RETIREMENT YEAR.. 6-2063
NET SALVAGE PERCENT.. 0

2013	1,762,532.45	321,504	402,467	1,360,065	37.65	36,124
2015	668,086.93	100,260	125,508	542,579	37.72	14,384
	2,430,619.38	421,764	527,975	1,902,644		50,508

ALL OTHER
SURVIVOR CURVE.. IOWA 40-R1
NET SALVAGE PERCENT.. 0

1955	11,102.51	9,967	11,103			
1967	47,730.68	38,065	47,665	65	8.10	8
1973	132.05	98	123	9	10.44	1
1974	1,520.79	1,108	1,387	133	10.85	12
1975	61,157.08	43,926	55,004	6,153	11.27	546
1976	34.79	25	31	3	11.70	
1977	22,199.78	15,462	19,362	2,838	12.14	234
1978	1.18	1	1			
1980	57,525.22	38,110	47,722	9,804	13.50	726
1981	144,542.29	94,061	117,784	26,759	13.97	1,915
1982	138,617.24	88,542	110,873	27,744	14.45	1,920
1983	14,118.37	8,849	11,081	3,038	14.93	203
1984	1,136,814.79	698,288	874,400	262,414	15.43	17,007
1985	71,680.56	43,134	54,013	17,668	15.93	1,109
1986	368,351.78	216,959	271,677	96,674	16.44	5,880
1987	18,792.41	10,824	13,554	5,239	16.96	309
1988	54,977.68	30,939	38,742	16,236	17.49	928
1989	113,545.56	62,365	78,094	35,452	18.03	1,966
1990	561,897.87	300,896	376,784	185,114	18.58	9,963
1991	293,291.86	153,025	191,619	101,673	19.13	5,315
1992	157,108.72	79,733	99,842	57,267	19.70	2,907
1993	307,550.93	151,699	189,958	117,593	20.27	5,801
1994	4,511.90	2,160	2,705	1,807	20.85	87
1995	17,071.52	7,921	9,919	7,153	21.44	334
1996	355,573.35	159,652	199,917	155,656	22.04	7,062
1997	38,787.70	16,834	21,080	17,708	22.64	782
1998	185,134.87	77,479	97,020	88,115	23.26	3,788
1999	374,985.10	151,119	189,232	185,753	23.88	7,779
2000	80,204.22	31,059	38,892	41,312	24.51	1,686
2001	653,485.45	242,770	303,998	349,487	25.14	13,902
2002	18,428.73	6,551	8,203	10,226	25.78	397
2003	188,291.30	63,878	79,988	108,303	26.43	4,098
2004	243,506.81	78,592	98,413	145,093	27.09	5,356
2005	22,584.87	6,917	8,662	13,923	27.75	502
2006	343,573.73	99,550	124,657	218,917	28.41	7,706
2007	72,470.80	19,785	24,775	47,696	29.08	1,640
2008	86,549.55	22,178	27,771	58,778	29.75	1,976
2009	136,337.90	32,619	40,846	95,492	30.43	3,138
2010	28,761.31	6,392	8,004	20,757	31.11	667
2011	269,264.35	55,199	69,121	200,144	31.80	6,294
2012	82,379.80	15,467	19,368	63,012	32.49	1,939

ALL OTHER
SURVIVOR CURVE.. IOWA 40-R1
NET SALVAGE PERCENT.. 0

2013	76,186.87	12,990	16,266	59,921	33.18	1,806
2014	666,344.40	101,951	127,664	538,681	33.88	15,900
2015	497,093.85	67,356	84,344	412,750	34.58	11,936
2016	349,288.53	41,216	51,611	297,678	35.28	8,438
2017	268,515.75	26,852	33,624	234,892	36.00	6,525
2018	316,378.93	26,022	32,585	283,794	36.71	7,731
2019	523,581.38	33,640	42,124	481,457	37.43	12,863
2020	962,403.51	44,271	55,436	906,967	38.16	23,767
2021	3,327,850.72	92,348	115,639	3,212,212	38.89	82,597
2022	370,981.30	3,432	4,298	366,684	39.63	9,253
	14,143,222.64	3,632,276	4,546,979	9,596,244		306,699
	109,142,848.61	35,252,688	44,130,247	65,012,601		2,004,959
	COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 32.4					1.84

SURVIVOR CURVE.. IOWA 20-S1
NET SALVAGE PERCENT.. 0

1994	177,423.47	147,971	177,423			
2001	32,486.83	23,049	31,030	1,457	5.81	251
2002	9,873.02	6,807	9,164	709	6.21	114
2003	807.56	540	727	81	6.63	12
2004	5,637.43	3,647	4,910	727	7.06	103
2007	7,698.00	4,438	5,975	1,723	8.47	203
2012	21,984.15	9,585	12,903	9,081	11.28	805
2014	93,809.16	34,662	46,663	47,146	12.61	3,739
	349,719.62	230,699	288,795	60,925		5,227

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 11.7 1.49

FULLY ACCRUED
NET SALVAGE PERCENT.. 0

2002	70,090.11	70,090	70,090
	70,090.11	70,090	70,090

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

2003	17,395.02	16,960	16,960	435	0.50	435
2004	1,057,917.03	978,573	978,573	79,344	1.50	52,896
2005	59,782.53	52,310	52,310	7,473	2.50	2,989
2006	45,318.68	37,388	37,388	7,931	3.50	2,266
2007	248,632.67	192,690	192,690	55,943	4.50	12,432
2008	99,186.76	71,910	71,910	27,277	5.50	4,959
2009	7,078.58	4,778	4,778	2,301	6.50	354
2010	145,894.48	91,184	91,184	54,710	7.50	7,295
2011	266,603.34	153,297	153,297	113,306	8.50	13,330
2012	1,178,824.13	618,883	618,883	559,941	9.50	58,941
2013	449,606.77	213,563	213,563	236,044	10.50	22,480
2014	550,660.23	234,031	234,031	316,629	11.50	27,533
2015	210,370.41	78,889	78,889	131,481	12.50	10,518
2016	628,978.29	204,418	204,418	424,560	13.50	31,449
2017	223,624.23	61,497	61,497	162,127	14.50	11,181
2018	337,203.45	75,871	75,871	261,332	15.50	16,860
2019	2,671,277.23	467,474	467,474	2,203,803	16.50	133,564
2020	510,751.46	63,844	63,844	446,907	17.50	25,538
2021	4,067,107.27	305,033	305,033	3,762,074	18.50	203,355
2022	129,285.81	3,232	3,232	126,054	19.50	6,464
	12,905,498.37	3,925,825	3,925,825	8,979,673		644,839
	12,975,588.48	3,995,915	3,995,915	8,979,673		644,839

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 13.9 4.97

FULLY ACCRUED
NET SALVAGE PERCENT.. 0

2018	756,385.91	756,386	756,386
	756,385.91	756,386	756,386

AMORTIZED
SURVIVOR CURVE.. 5-SQUARE
NET SALVAGE PERCENT.. 0

2019	24,213.28	16,949	16,953	7,261	1.50	4,841
2020	530,465.62	265,233	265,290	265,176	2.50	106,070
2021	1,030,614.08	309,184	309,251	721,364	3.50	206,104
2022	1,424,982.22	142,498	142,529	1,282,454	4.50	284,990
	3,010,275.20	733,864	734,022	2,276,253		602,005
	3,766,661.11	1,490,250	1,490,408	2,276,253		602,005

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 3.8 15.98

FULLY ACCRUED
NET SALVAGE PERCENT.. 0

2012	2,619,903.62	2,619,904	2,619,904
	2,619,903.62	2,619,904	2,619,904

AMORTIZED
SURVIVOR CURVE.. 5-SQUARE
NET SALVAGE PERCENT.. 0

2013	2,234,914.68	2,234,915	2,234,915			
2014	3,364,614.73	3,364,615	3,364,615			
2015	8,344,013.21	8,344,013	8,344,013			
2016	6,720,767.77	6,720,768	6,720,768			
2017	1,376,358.16	1,376,358	1,376,358			
2018	2,782,076.19	2,503,869	277,599-	3,059,676	0.50	3,059,676
2019	3,596,969.37	2,517,879	279,153-	3,876,122	1.50	2,584,081
2021	414,024.79	124,207	13,771-	427,795	3.50	122,227
	28,833,738.90	27,186,624	21,470,146	7,363,593		5,765,984
	31,453,642.52	29,806,528	24,090,050	7,363,593		5,765,984
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 1.3 18.33						

SURVIVOR CURVE.. IOWA 12-L2.5
NET SALVAGE PERCENT.. +10

1990	252,617.49	221,103	227,356			
1992	42,365.27	36,032	38,129			
1993	40,125.93	33,615	36,113			
1995	200,869.83	162,855	180,783			
1996	117,835.00	94,121	106,052			
1998	159,350.48	123,815	143,415			
1999	97,530.65	74,684	87,778			
2000	108,923.56	82,182	98,031			
2001	106,783.24	79,207	96,105			
2002	107,702.33	78,353	96,932			
2003	138,066.34	98,476	124,260			
2004	166,847.66	116,252	150,163			
2005	337,681.57	229,707	303,913			
2006	375,821.80	248,887	338,240			
2007	1,231,177.17	793,182	1,108,059			
2008	1,934,771.92	1,213,108	1,710,279	31,016	3.64	8,521
2009	2,648,433.17	1,618,863	2,282,325	101,265	3.85	26,303
2010	2,944,490.52	1,755,652	2,475,174	174,867	4.05	43,177
2011	2,686,415.63	1,565,509	2,207,105	210,669	4.23	49,804
2012	3,983,585.02	2,255,717	3,180,182	405,045	4.45	91,021
2013	2,775,525.91	1,515,445	2,136,523	361,450	4.72	76,578
2014	3,908,878.19	2,022,844	2,851,870	666,120	5.10	130,612
2015	4,772,926.80	2,290,991	3,229,912	1,065,722	5.60	190,308
2016	4,569,792.55	1,981,019	2,792,904	1,319,909	6.22	212,204
2017	2,393,304.17	908,266	1,280,503	873,471	6.94	125,860
2018	3,005,783.22	958,102	1,350,763	1,354,442	7.75	174,767
2019	3,770,109.91	952,884	1,343,406	2,049,693	8.63	237,508
2020	6,123,753.00	1,125,258	1,586,425	3,924,953	9.55	410,990
2021	10,293,630.90	1,150,344	1,621,792	7,642,476	10.51	727,162
2022	5,736,564.09	215,138	303,308	4,859,600	11.50	422,574
	65,031,663.32	24,001,611	33,487,800	25,040,697		2,927,389

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 8.6 4.50

FULLY ACCRUED
NET SALVAGE PERCENT.. 0

1990	584.64	585	585
2001	6,936.43	6,936	6,936
	7,521.07	7,521	7,521

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

2011	28,807.41	16,564	16,566	12,242	8.50	1,440
2013	21,069.43	10,008	10,009	11,060	10.50	1,053
	49,876.84	26,572	26,575	23,302		2,493
	57,397.91	34,093	34,096	23,302		2,493

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 9.3 4.34

FULLY ACCRUED
NET SALVAGE PERCENT.. 0

2012	71,199.95	71,200	71,200
	71,199.95	71,200	71,200

AMORTIZED
SURVIVOR CURVE.. 25-SQUARE
NET SALVAGE PERCENT.. 0

2013	876,342.72	333,010	331,374	544,969	15.50	35,159
2014	1,697,131.33	577,025	574,190	1,122,942	16.50	68,057
2015	1,258,640.80	377,592	375,737	882,904	17.50	50,452
2016	1,402,395.60	364,623	362,831	1,039,564	18.50	56,193
2017	2,482,183.96	546,080	543,397	1,938,787	19.50	99,425
2018	520,508.55	93,692	93,232	427,277	20.50	20,843
2019	2,322,267.96	325,118	323,520	1,998,748	21.50	92,965
2020	3,044,887.75	304,489	302,993	2,741,895	22.50	121,862
2021	2,312,167.98	138,730	138,048	2,174,120	23.50	92,516
2022	2,761,698.38	55,234	54,963	2,706,736	24.50	110,479
	18,678,225.03	3,115,593	3,100,283	15,577,942		747,951
	18,749,424.98	3,186,793	3,171,483	15,577,942		747,951
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 20.8						3.99

FULLY ACCRUED
NET SALVAGE PERCENT.. 0

2002	116,032.00	116,032	116,032
	116,032.00	116,032	116,032

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

2003	9,107.20	8,880	8,867	240	0.50	240
2004	47,894.45	44,302	44,239	3,655	1.50	2,437
2005	101,571.22	88,875	88,749	12,822	2.50	5,129
2006	21,403.23	17,658	17,633	3,770	3.50	1,077
2007	24,733.43	19,168	19,141	5,593	4.50	1,243
2008	34,302.69	24,869	24,834	9,469	5.50	1,722
2009	53,060.71	35,816	35,765	17,295	6.50	2,661
2011	5,923.16	3,406	3,401	2,522	8.50	297
2012	20,662.58	10,848	10,833	9,830	9.50	1,035
2013	128,311.04	60,948	60,862	67,449	10.50	6,424
2014	29,049.54	12,346	12,329	16,721	11.50	1,454
2015	47,131.18	17,674	17,649	29,482	12.50	2,359
2016	46,367.34	15,069	15,048	31,320	13.50	2,320
2017	1,305.00	359	358	947	14.50	65
2018	205,612.43	46,263	46,197	159,415	15.50	10,285
2019	366,886.17	64,205	64,114	302,772	16.50	18,350
2020	532,393.49	66,549	66,455	465,939	17.50	26,625
2021	196,078.87	14,706	14,685	181,394	18.50	9,805
2022	442,386.39	11,060	11,044	431,342	19.50	22,120
	2,314,180.12	563,001	562,203	1,751,977		115,648
	2,430,212.12	679,033	678,235	1,751,977		115,648

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 15.1 4.76

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

2008	40,118.11	29,086	29,096	11,022	5.50	2,004
2009	1,270,382.16	857,508	857,790	412,592	6.50	63,476
2010	5,728,020.69	3,580,013	3,581,191	2,146,830	7.50	286,244
2011	1,745,257.91	1,003,523	1,003,853	741,405	8.50	87,224
2012	3,637,158.05	1,909,508	1,910,136	1,727,022	9.50	181,792
2013	329,390.41	156,460	156,512	172,878	10.50	16,465
2014	1,612,310.00	685,232	685,457	926,853	11.50	80,596
2015	2,249,222.78	843,459	843,737	1,405,486	12.50	112,439
2017	444,407.79	122,212	122,252	322,156	14.50	22,218
	17,056,267.90	9,187,001	9,190,024	7,866,244		852,458

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 9.2 5.00

SURVIVOR CURVE.. IOWA 15-L3
NET SALVAGE PERCENT.. +15

1973	985.42	838	838			
1979	835.16	710	710			
1980	25,905.40	22,020	22,020			
1982	1,866.35	1,586	1,586			
1984	44,623.76	37,930	37,930			
1985	24,375.24	20,719	20,719			
1986	20,526.34	17,447	17,447			
1987	20,957.21	17,695	17,814			
1988	65,768.75	54,823	55,903			
1989	152,293.07	125,393	129,449			
1990	15,712.97	12,777	13,356			
1991	54,005.18	43,334	45,904			
1992	143,104.07	113,286	121,638			
1993	64,806.99	50,569	55,086			
1994	127,456.76	97,938	108,338			
1995	64,693.18	48,940	54,989			
1996	45,564.22	33,901	38,730			
1997	22,369.13	16,365	19,014			
1998	120,053.06	86,262	102,045			
1999	102,673.56	72,320	87,273			
2000	125,586.66	86,680	106,749			
2001	210,216.00	142,112	178,684			
2002	110,431.98	73,029	93,867			
2003	46,591.43	30,125	39,603			
2004	18,218.77	11,532	15,486			
2005	324,917.66	201,426	276,180			
2006	1,042,080.24	634,803	885,768			
2007	906,969.71	543,756	770,924			
2008	161,584.24	95,319	137,347			
2009	143,309.34	82,995	121,813			
2010	625,743.36	353,170	531,882			
2011	3,473,450.31	1,893,484	2,952,433			
2012	1,614,361.89	837,966	1,372,208			
2013	183,839.13	89,383	156,263			
2014	1,375,554.55	615,010	1,169,221			
2015	600,493.35	241,939	478,728	31,691	7.89	4,017
2016	889,537.67	315,546	624,375	131,732	8.74	15,072
2017	467,251.51	142,185	281,343	115,821	9.63	12,027
2018	1,709,236.87	430,044	850,934	601,917	10.56	57,000
2019	1,251,025.81	246,702	488,153	575,219	11.52	49,932

SURVIVOR CURVE.. IOWA 15-L3
NET SALVAGE PERCENT.. +15

2020	130,723.18	18,519	36,644	74,471	12.50	5,958
2021	804,125.12	68,351	135,247	548,259	13.50	40,612
2022	851,277.86	24,117	47,721	675,865	14.50	46,611

18,185,102.46	8,053,046	12,702,362	2,754,975	231,229
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COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 11.9 1.27

FULLY ACCRUED
NET SALVAGE PERCENT.. 0

2010	474,548.60	474,549	474,549
2011	710,241.44	710,241	710,241
2012	96,463.11	96,463	96,463
2013	36,181.79	36,182	36,182
2014	69,930.69	69,931	69,931
2015	6,648.56	6,649	6,648
	1,394,014.19	1,394,015	1,394,014

AMORTIZED
SURVIVOR CURVE.. 5-SQUARE
NET SALVAGE PERCENT.. 0

2018	136,402.37	122,762	114,833	21,569	0.50	21,569
2019	188,964.71	132,275	123,732	65,233	1.50	43,489
	325,367.08	255,037	238,565	86,802		65,058
	1,719,381.27	1,649,052	1,632,579	86,802		65,058

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 1.3 3.78

FULLY ACCRUED
NET SALVAGE PERCENT.. 0

2002	1,126.87	1,127	1,127
2004	22,666.24	22,666	22,666
2005	11,085.25	11,085	11,085
2007	7,554.57	7,555	7,555
2008	1,990,043.75	1,990,044	1,990,044
2009	690,858.32	690,858	690,858
2010	459,683.24	459,683	459,683
2011	905,578.70	905,579	905,579
2012	3,040,706.45	3,040,706	3,040,706
	7,129,303.39	7,129,303	7,129,303

AMORTIZED
SURVIVOR CURVE.. 10-SQUARE
NET SALVAGE PERCENT.. 0

2013	1,138,199.71	1,081,290	1,054,180	84,020	0.50	84,020
2014	1,353,833.17	1,150,758	1,121,906	231,927	1.50	154,618
2015	277,884.51	208,413	203,188	74,697	2.50	29,879
2016	710,980.56	462,137	450,550	260,430	3.50	74,409
2017	1,111,785.42	611,482	596,151	515,634	4.50	114,585
2018	166,797.71	75,059	73,177	93,621	5.50	17,022
2019	650,425.72	227,649	221,941	428,484	6.50	65,921
2020	4,029.77	1,007	982	3,048	7.50	406
2021	681,202.93	102,180	99,618	581,585	8.50	68,422
2022	177,301.36	8,865	8,643	168,659	9.50	17,754
	6,272,440.86	3,928,840	3,830,337	2,442,104		627,036
	13,401,744.25	11,058,143	10,959,640	2,442,104		627,036

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 3.9 4.68

FULLY ACCRUED
NET SALVAGE PERCENT.. 0

2008	249,930.53	249,931	249,931
2009	375,323.31	375,323	375,323
2010	172,342.40	172,342	172,342
2011	47,372.12	47,372	47,372
2012	335,168.28	335,168	335,169
	1,180,136.64	1,180,136	1,180,137

AMORTIZED
SURVIVOR CURVE.. 10-SQUARE
NET SALVAGE PERCENT.. 0

2013	100,258.72	95,246	92,547	7,712	0.50	7,712
2014	74,540.89	63,360	61,564	12,976	1.50	8,651
2015	66,464.66	49,848	48,435	18,029	2.50	7,212
2016	470.99	306	297	174	3.50	50
2017	31,119.30	17,116	16,631	14,488	4.50	3,220
2018	171,712.06	77,270	75,080	96,632	5.50	17,569
2019	7,872.99	2,756	2,678	5,195	6.50	799
2022	63,513.65	3,176	3,086	60,428	9.50	6,361
	515,953.26	309,078	300,319	215,634		51,574
	1,696,089.90	1,489,214	1,480,456	215,634		51,574

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 4.2 3.04

FULLY ACCRUED
NET SALVAGE PERCENT.. 0

2001	112,115.27	112,115	112,115
2007	10,524.93	10,525	10,525
	122,640.20	122,640	122,640

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

2008	2,251.55	2,177	2,177	75	0.50	75
2010	22,242.74	18,536	18,536	3,707	2.50	1,483
2011	3,350.69	2,569	2,569	782	3.50	223
2012	85,354.61	59,748	59,748	25,607	4.50	5,690
2013	5,388.46	3,413	3,413	1,975	5.50	359
2014	51,905.15	29,413	29,413	22,492	6.50	3,460
2015	2,500.00	1,250	1,250	1,250	7.50	167
2016	57,774.11	25,035	25,035	32,739	8.50	3,852
2017	18,520.63	6,791	6,791	11,730	9.50	1,235
2018	339,601.65	101,880	101,880	237,722	10.50	22,640
2019	5,021,009.40	1,171,552	1,171,552	3,849,457	11.50	334,735
2020	16,136.40	2,689	2,689	13,447	12.50	1,076
2021	2,156,314.07	215,631	215,631	1,940,683	13.50	143,754
2022	848,991.35	28,297	28,297	820,694	14.50	56,600
	8,631,340.81	1,668,981	1,668,981	6,962,360		575,349
	8,753,981.01	1,791,621	1,791,621	6,962,360		575,349
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 12.1						6.57